SDMS US EPA REGION V -1

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L16302000005
ST. CLAIR
SAUGET - SAUGET
LAB - DATA

SUBSURFACE
ORGANICS

SUBSURFACE SOIL ORGANICS

CASE NARRATIVE

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-GS-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
Director of Analytical Services

APC/drb
Enclosures

ecology and environment, inc.
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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	1 GL ORGANICS - 9oz	METALS & CYANIDE - 9oz	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-69-70	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.

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CHAIN-OF-CUSTODY RECORD

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

STATION NUMBER	DATE	TIME	SAMPLE TYPE: COMP	GRAB	AIR	SAMPLE INFORMATION: EXPECTED COMPOUNDS (Concentration)*	STATION LOCATION	NUMBER OF CONTAINERS	HSL ORGANICS - 802	METALS & CYANIDE - 803	VOLATILE ORGANICS - 120 ML				REMARKS
AC-01-59	2-6-87	1445	X			UNKNOWN / OVA SCREEN 85 PPM	BORING 0-1, 15'-25'	4	1	1	2				
AC-02-60	2-17-87	1000	X			UNKNOWN / OVA SCREEN 740 PPM	BORING 0-2, 20'-30'	4	1	1	2				SLIGHT ORGANIC ODOR
AC-03-61	2-17-87	1300	X			UNKNOWN / OVA SCREEN: 420 PPM	BORING 0-3, 10'-20'	4	1	1	2				SLIGHT ORGANIC ODOR
AC-04-62	2-17-87	1500	X			UNKNOWN / OVA SCREEN - >1000 PPM	BORING 0-4, 0'-10'	4	1	1	2				STRONG ORGANIC ODOR
AC-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
AC-05-64	2-17-87	1630	X			UNKNOWN / OVA SCREEN >1000 PPM	BORING 0-5, 8.5'-20'	4	1	1	2				DUPLICATE OF AC-05-63
AC-06-65	2-18-87	0900	X			UNKNOWN / BLANK	SOIL BLANK	4	1	1	2				
AC-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

Page 1 of 1

Project No.	Project Name	Project Manager
IC 3140	LAKE CREEK / SUGAR SITES	MIKE MILLER

Samplers: (Signatures)	Field Team Leader
Daniel T Sewall	DAN SEWALL

STATION NUMBER	DATE	TIME	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE TYPE AIR	SAMPLE INFORMATION / EXPECTED COMPOUNDS (Concentration)*	STATION LOCATION	NUMBER OF CONTAINERS	VOA's 2250 ml's (9 oz)	MISC. & SEMIVOLATILE ORGANICS (8 oz)	VOLATILE ORGANICS (120 ml)			REMARKS
IC-P1-S3	2-11-87	0930	X			UNKNOWN / OVA SCREEN >1000 PPM	BORINGS P1-P4 0'-10'	4	1	1	2			SCREEN POSSIBLY DUE TO METHANE
IC-P3-S4	2-11-87	1030	X			UNKNOWN / OVA SCREEN 360 PPM	BORINGS P1-P4 25'-35'	4	1	1	2			SLIGHT ORGANIC ODOR
IC-P5-S5	2-11-87	1230	X			UNKNOWN / OVA SCREEN 180 PPM	BORING P-5 10'-25'	4	1	1	2			SLIGHT ORGANIC ODOR
IC-P5-S6	2-11-87	1230	X			UNKNOWN / OVA SCREEN 180 PPM	BORING P-5 10'-25'	4	1	1	2			DUPLICATE OF IC-P5-S5
IC-D2-S7	2-13-87	0800	X			UNKNOWN - SUSPECTED LOW	BORING I-12 3½'-12½' FT	4	1	1	2			BACKGROUND LOCATION
IC-D2-S8	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: 2-14-87/1600	Received For Laboratory By: (Signature)	Relinquished By: (Signature)	Date/Time:	Received For Laboratory By: (Signature)	Date: 2-13-87

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CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project No.:	Project Name:	Project Manager:
1L3140	ACME CREEK / SAUGET SITES	MIKE MILLER
Samplers: (Signatures)		**Field Team Leader:**
Daniel F. Sewell		DAN SEWELL

STATION NUMBER	DATE	TIME	SAMPLE TYPE COMP	GRAB	AIR	SAMPLE INFORMATION / EXPECTED COMPOUNDS (Concentration)*	STATION LOCATION	NUMBER OF CONTAINERS	1016 ORGANICS - 8 OZ	METALS & CA - 8 OZ	VOA'S - 120 ML	REMARKS	E&E #
AC-09-13	2-26-87	1430	X			UNKNOWN / OVA SCREEN 2.3ppm	BORING 9-9 0'-10'	4	1	1	2		1437
AC-09-13	2-26-87	1545	X			UNKNOWN / OVA SCREEN 6.0ppm	BORING 9-9 10'-15'	4	1	1	2		1438
AC-09-14	2-26-87	1620	X			UNKNOWN / OVA SCREEN 21.0ppm	BORING 9-10 5'-10'	4	1	1	2	STRONG ORGANIC ODOR	1439
AC-10-13	2-26-87	1700	X			UNKNOWN / OVA SCREEN 8.4ppm	BORING 9-10 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:
Daniel F. Sewell	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:
						225159092
Relinquished By: (Signature)	Date/Time:	Received For Laboratory By: (Signature)	Relinquished By: (Signature)	Date/Time:	Received For Laboratory By: (Signature)	Date:
	2-28-87	Rick Ward				2-27-87

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2340-5

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 ____

	VOLATILE			SEMI-VOLATILE								PESTICIDE
SMO TRAFFIC NO.	TOLUENE-D8 (81-117)	BFB (74-121)	1,2 DICHLOROETHANE-D4 (70-121)	NITRO-BENZENE-D5 (23-120)	2-FLUORO-BIPHENYL (30-115)	TERPHENYL-D14 (18-137)			PHENOL-D5 (24-113)	2-FLUORO-PHENOL (25-121)	2,4,6 TRIBROMO PHENOL (19-122)	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-I12-57	113	104	100									
DC-I12-58	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

	VOLATILE			SEMI-VOLATILE								PESTICIDE
SMO TRAFFIC NO.	TOLUENE-D8 (81-117)	BFB (74-121)	1,2 DICHLOROETHANE-D4 (70-121)	NITROBENZENE-D5 (23-120)	2-FLUOROBIPHENYL (30-115)	TERPHENYL-D14 (18-137)			PHENOL-D5 (24-113)	2-FLUOROPHENOL (25-121)	2,4,6 TRIBROMOPHENOL (19-122)	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

	VOLATILE								SEMI-VOLATILE					PESTICIDE	
SMO TRAFFIC NO.	TOLUENE-D8 (81-117)	BFB (74-121)	1,2 DICHLOROETHANE-D4 (70-121)	NITROBENZENE-D5 (23-120)	2-FLUOROBIPHENYL (30-115)	TERPHENYL-D14 (18-137)			PHENOL-D5 (24-113)	2-FLUOROPHENOL (25-121)	2,4,6 TRIBROMOPHENOL (19-122)	DIBUTYLCHLORENDATE ** (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	2/22		
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: _____

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=250.0,250.0,250.0,25
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=250.0,250.0,250.0,25
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: U-4906; U-4923 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
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

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

tr. r: E & E, INC. Calibration Date: ~~01/28/87~~ 1-27-87

tract No: IL-3140

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

Laboratory ID:		>C6596	>C6597	>C6598	>C6601	>C6600				
Compound		RF 20.00	RF 50.00	RF 100.00	RF 150.00	RF 200.00	$\overline{RF}$	% RSD	CCC	SPCC
LOROMETHANE	50	2.12447	2.61562	2.64220	2.23683	2.53305	2.43043	9.666		**
OMOMETHANE	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		
~~TRICHLOROFLUOROMETHANE~~	~~101~~	~~3.07777~~	~~3.77541~~	~~3.79944~~	~~3.77883~~	~~3.77628~~	~~3.74954~~	~~3.869~~		
RBON DISULFIDE	76	5.41111	5.19185	5.31658	5.22865	5.51722	5.33308	2.500		
1-DICHLORCETHENE	61	3.52165	3.34397	3.38225	3.31844	3.46913	3.40709	2.518	*	
1-DICHLORCETHANE	63	3.87093	3.60100	3.72198	3.74062	3.77956	3.74282	2.615		**
ANS-1,2-DICHLORCETHENE	96	1.75784	1.64597	1.69829	1.66798	1.72785	1.69959	2.642		
LOROFORM	83	2.62984	2.50538	2.52604	2.50948	2.49531	2.53321	2.177	*	
2-DICHLORCETHANE	62	3.20370	3.18262	3.20115	3.20444	3.12406	3.18319	1.076		
~~2-DICHLOROETHANE-D4(SURR)~~	~~65~~	~~2.90354~~	~~2.96437~~	~~3.05385~~	~~2.97179~~	~~2.98837~~	~~2.98697~~	~~2.870~~		(Conc=50.0,50.0,50.0,50.0,50.0)
BUTANONE	72	.04995	.04035	.03750	.03895	.03268	.03989	15.859		
1,1-TRICHLORCETHANE	97	.64838	.63406	.61422	.64709	.64371	.63749	2.222		
RBON TETRACHLORIDE	117	.69068	.66160	.64699	.67838	.67099	.66973	2.474		
NYL ACETATE	43	.73237	.73455	.65905	.82546	.59143	.70857	12.440		
OMODICHLOROMETHANE	83	.65377	.65186	.63465	.68810	.65161	.65600	2.979		
2-DICHLOROPROPANE	63	.44836	.43485	.42752	.46544	.44045	.44332	3.277	*	
ANS-1,3-DICHLOROPROPENE	75	.77151	.78890	.76792	.84197	.79552	.79316	3.736		
ICHLORCETHENE	130	.44261	.41135	.40221	.41760	.41742	.41824	3.586		
BROMOCHLOROMETHANE	129	.48132	.49985	.48904	.52508	.48709	.49648	3.493		
,1,2-TRICHLORCETHANE	97	.32534	.32254	.30479	.32191	.29501	.31392	4.241		
NZENE	78	1.25996	1.20022	1.17115	1.20860	1.18181	1.20435	2.858		
S-1,3-DICHLOROPROPENE	75	.42302	.42904	.41924	.45784	.42248	.43032	3.668		
-CHLORCETHYLVINYLETHER	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		
ETRACHLORCETHENE	164	.52835	.47793	.46854	.49696	.48933	.49222	4.656		
,1,2,2-TETRACHLORCETHANE	83	.49533	.54849	.53286	.58165	.52036	.53574	6.011		**
~~TOLUENE-D8 (SURR)~~	~~98~~	~~1.42845~~	~~1.49014~~	~~1.49892~~	~~1.50788~~	~~1.48179~~	~~1.48178~~	~~2.161~~		(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

e No: U-4900, U-4922 U-4911, U-4989 Instrument ID: HP-5995C

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

tract No: IL-3140

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

Laboratory ID:		>C6596	>C6597	>C6598	>C6601	>C6600				
Compound		RF 20.00	RF 50.00	RF 100.00	RF 150.00	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)
YRENE	104	1.28684	1.24583	1.20802	1.24619	1.22491	1.24236	2.377		
TAL XYLENES	91	1.88691	1.75995	1.70230	1.72756	1.73928	1.76320	4.096		

- 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 (**)

HSL Compounds

se No: V-4906; 4928; 4971; 4989. Instrument ID: HP-5970D

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

nt. . No: IL-3140

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

Compound			Laboratory ID: >D0036 RF 20.00	>D0037 RF 50.00	>D0038 RF 80.00	>D0039 RF 120.00	>D0040 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	*	
2-METHYL PHENOL		108	.94183	1.07660	1.05407	1.08273	1.00266	1.03158	5.743		
2-CHLOROPHENOL		128	1.07483	1.16854	1.16604	1.17284	1.10940	1.13833	3.865		
4-METHYL PHENOL		108	.96587	1.08143	1.13309	1.12036	1.07834	1.07582	6.129		
2-NITROPHENOL		139	.17264	.20916	.21365	.21306	.20457	.20262	8.462	*	
2,4-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%

Laboratory ID:		>D0965	>D0966	>D0967	>D0968	>D0969				
Compound		RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RF}$	% RSD	CCC	SPCC
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	1.46874	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	2.47658	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	.29447	.24392	.26045	.25805	.23955	.25909	8.420	*	
2-METHYLNAPHTHALENE	142	.67945	.60785	.66493	.68192	.59005	.64484	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	.37111	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	.31339	.30497	.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

s No: V-4906, 4928, 4971, 4999 Instrument ID: HP-5970D

Contractor: E & E, INC. Calibration Date: 11/17/86

Contract No: IL-3140

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

Laboratory ID:		>D0965	>D0966	>D0967	>D0968	>D0969				
Compound		RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RF}$	% RSD	CCC	SPCC
PHENANTHRENE	178	1.06803	.96082	1.02609	1.02304	.99723	1.01505	3.896		
ANTHRACENE	178	1.03629	.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	2.55714	2.57294	2.60959	2.82056	2.68642	3.814		
TERPHENYL-D14 (SURR)	244	1.42937	1.47810	1.43324	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	1.05697	.98495	1.15488	1.16496	1.18217	1.10877	7.441		*
INDENO(1,2,3-CD)PYRENE	276	.67778	.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

V-4906, V-4928

Case No: V-4971, V-4984 Calibration Date: 02/20/87

Co. ntractor: 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	.50887	26.16		
DIBROMOCHLOROMETHANE	129	.55837	.56802	1.73		
1,1,2-TRICHLOROETHANE	97	.36234	.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: V-4906; V-4923 V-4971; V-4989 Calibration Date: 02/20/87

Contractor: E & EM INC. Time: 11:04

Contract No: FL-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	.92398	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 Data
HSL Compounds

ase No: V-4906, V-4928 V-4971, V-4989 Calibration Date: 02/23/87

ontractor: E & E, INC. Time: 12:40

ontract No: IL-3140 Laboratory ID: >C6910

nstrument 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
-BROMOFLUOROBENZENE(SURR)	95 .72214	.73687	2.04		
TYRENE	104 1.24236	1.35623	9.17		
OTAL 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

ase No: V-4906; V-4928 V-4971; V-4989 Calibration Date: 03/04/87

ontractor: E & EM INC. Time: 09:42

ontract No: IL-3140 Laboratory ID: >C7038

nstrument 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
HLOROMETHANE	50	2.30296	1.06652	53.69		**
ROMOMETHANE	94	1.43187	.73716	48.52		
JINYL 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-DICHLOROETHENE	61	3.02810	3.07012	1.39	*	
,1-DICHLOROETHANE	63	3.36439	3.22058	4.27		**
RANS-1,2-DICHLOROETHENE	96	1.55781	1.79942	15.51		
HLOROFORM	83	3.56796	3.50665	1.72	*	
,2-DICHLOROETHANE	62	3.55680	2.87829	19.06		
,2-DICHLOROETHANE-D4(SURR)	65	2.99858	2.39776	20.04		
-BUTANONE	72	.06799	.07021	3.28		
,1,1-TRICHLOROETHANE	97	.59787	.61162	2.30		
ARBON TETRACHLORIDE	117	.59043	.67081	13.61		
JINYL ACETATE	43	1.19023	.72658	38.95		
ROMODICHLOROMETHANE	83	.65552	.63945	2.45		
,2-DICHLOROPROPANE	63	.46960	.41212	12.24	*	
RANS-1,3-DICHLOROPROPENE	75	.70349	.78026	10.91		
RICHLOROETHENE	130	.40336	.42680	5.81		
IBROMOCHLOROMETHANE	129	.55837	.54018	3.26		
1,1,2-TRICHLOROETHANE	97	.36234	.34701	4.36		
ENZENE	78	1.16600	1.21633	4.32		
IS-1,3-DICHLOROPROPENE	75	.52628	.43300	17.73		
2-CHLOROETHYLVINYLETHER	63	.33081	.20804	37.11		
ROMOFORM	173	.62246	.46463	25.35		**
4-METHYL-2-PENTANONE	43	1.12348	.57096	49.18		
2-HEXANONE	43	.92839	.51827	44.17		
TETRACHLOROETHENE	164	.47024	.47865	1.79		
1,1,2,2-TETRACHLOROETHANE	83	.80065	.63169	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

V-4906, V-4923

ase No: V-4911, V-4989 Calibration Date: 03/04/87

or tor: E & EM INC. Time: 09:42

ontract No: IL-3140 Laboratory ID: >C7038

nstrument 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 (**)

HSL Compounds

Case No: U-4906, U-4928, U-4911, 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

$\overline{RF}$ - 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

V-4906; V-4928

Lab File 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~~ BJM 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: V-4906; 4928; 4971; 4989 Calibration Date: 03/04/87

Contractor: 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
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

Contractor: 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: V-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~~ .14762	~~26.93~~ 21.36	*	

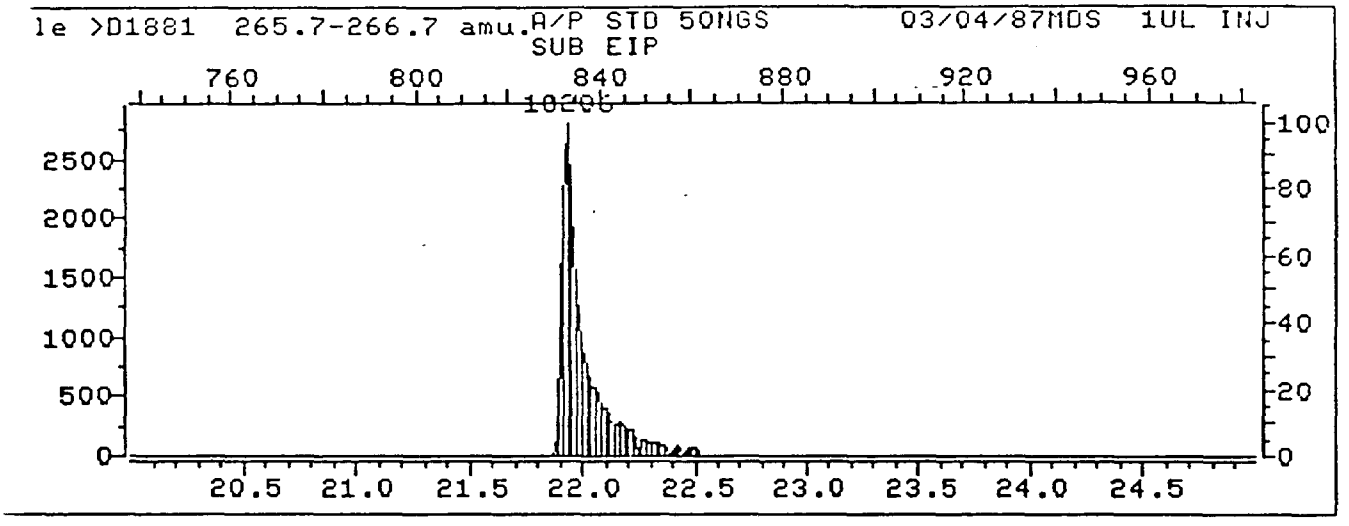
see manual integ.!

↑ This RF was used to Quant.

- 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



eak #	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 GJK

Continuing Calibration Check
HSL Compounds

Case No: V-4906, 4928, 4971, 4989 Calibration Date: 03/05/87

Contractor: 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

Contractor: 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

ıtractor: 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: V-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: V-4906;4928;4971;4989

Contractor: E & E, INC.

Contract No: II-3140

Instrument ID: HP-5970D

Calibration Date: 03/17/87

Time: 14:45

Laboratory ID: >D2018

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	*	
2,4,5-TRICHLOROPHENOL		196	.48930	.39815	18.63		
2,4,6-TRIBROMOPHENOL	(SURR)	330	.32584	.23854	26.79		
2,4-DINITROPHENOL		184	.17071	.17875	4.71		**
4-NITROPHENOL		139	.32314	.18872	41.60		**
4,6-DINITRO-2-METHYLPHENOL		198	.12041	.14988	24.48		
PENTACHLOROPHENOL		266	.18773	.18346	2.27	*	

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

  Average Response Factor from Initial Calibration Form VI

- % 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
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: V-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: V-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~~ BJK 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

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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
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: I2-3140

Laboratory ID: >D2107

Instrument ID: HP-5970D

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

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	0.28				

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 I D	Time of Analysis	Percent Diff	SMO Sample No	Lab I D	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	Φ				
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	22:26	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				

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 ID	Time of Analysis	Endrin	4,4'- DDT	Combined(1)
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					
Eval Mix B					

(1) See Exhibit E Section 7.5.4

(2) See Exhibit E Section 7.3.1.2.2

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
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				
PCB1242	↓ 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	~~0~~				
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 RI	34	20:01	INF				
IND MIX A	35	21:04	0.18				
IND MIX B	36	22:08	0.18				

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(1)
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 2/26	9	5:37	0.25				
1274.03.19AI	10	6:41	DL				
1276.03.19AI	11	7:46	DL				
1277.03.19AI	12	8:50	DL				
1278.03.19AI	13	9:55	DL				
PCB 1016/1260	14	11:02	0.46				
BLANK 3/3	15	12:08	0.38				
1427.03.19AI	16	13:12	DL				
1276.03.19AI	17	14:22	DL				
1277.03.19AI	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

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 HALOGEN 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	655		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

PESTICIDE/PCB STANDARDS SUMMARY

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

Contract No. IL-3140 QC Column SP2250/SP2401 QC 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)

PESTICIDE/PCB STANDARDS SUMMARY

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

Contract No. IL-3140 QC Column OV-1 QC 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	2.34	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)

PESTICIDE/PCB STANDARDS SUMMARY

Case No. V-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 → 22:08 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		9.97	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 IX

PESTICIDE/PCB STANDARDS SUMMARY

Case No. V-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	TIME OF ANALYSIS	LABORATORY ID
	3/16/87	0:12 → 4:32	RUN 4 → RUN 8
	3/17/87	11:02	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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* SEE EXHIBIT E, PART 7

** 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)

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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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

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 Gaitowicz

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	(.031)[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 ng/L	D0036	6-19-86	1632
	50 ng/L	D0037		1736
	80 ng/L	D0038		1836
	120 ng/L	D0039		1928
	160 ng/L	D0040		2024

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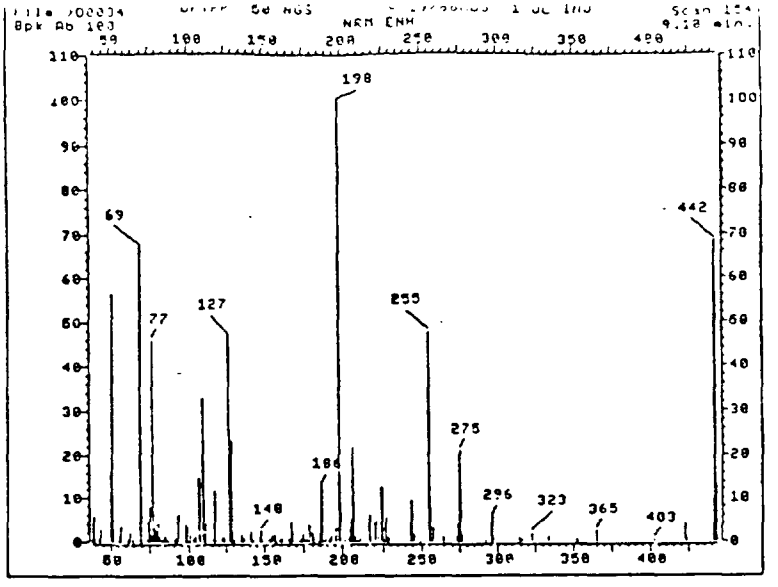

>D0034 DFTPP 50 NGS 6/19/86MDS 1 UL INJ
154 NRM ENH

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	.22
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	5.25
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
.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	69.07
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;4928 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 Skrtowicz

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

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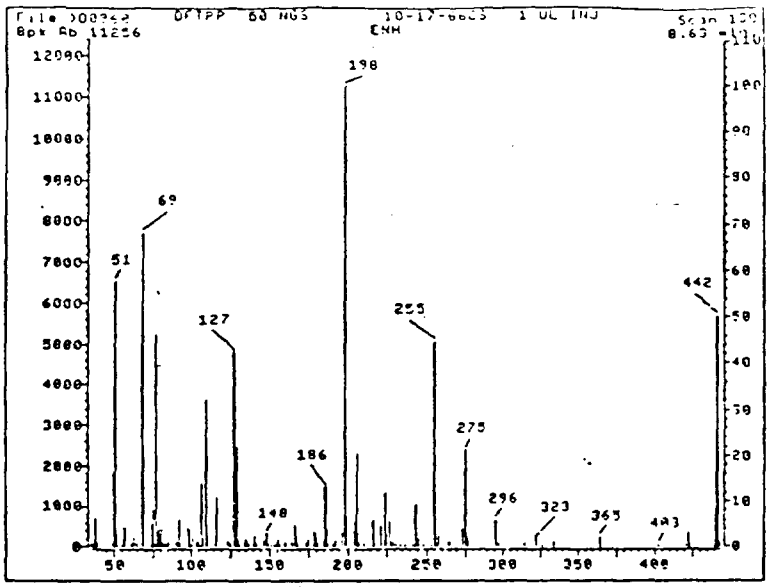

>D0960 DFTPP 50 NGS 10-17-86CS 1 UL INJ
130 NRM ENH

File: >D0960 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	192.95	1.34	253.20	.39
38.05	1.42	91.90	.80	142.70	.07	196.05	2.84	255.00	44.25
39.05	6.27	93.00	5.85	144.15	.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	.44
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	2.01
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	58.14
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 : >D0960

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: DFTPPD 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

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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

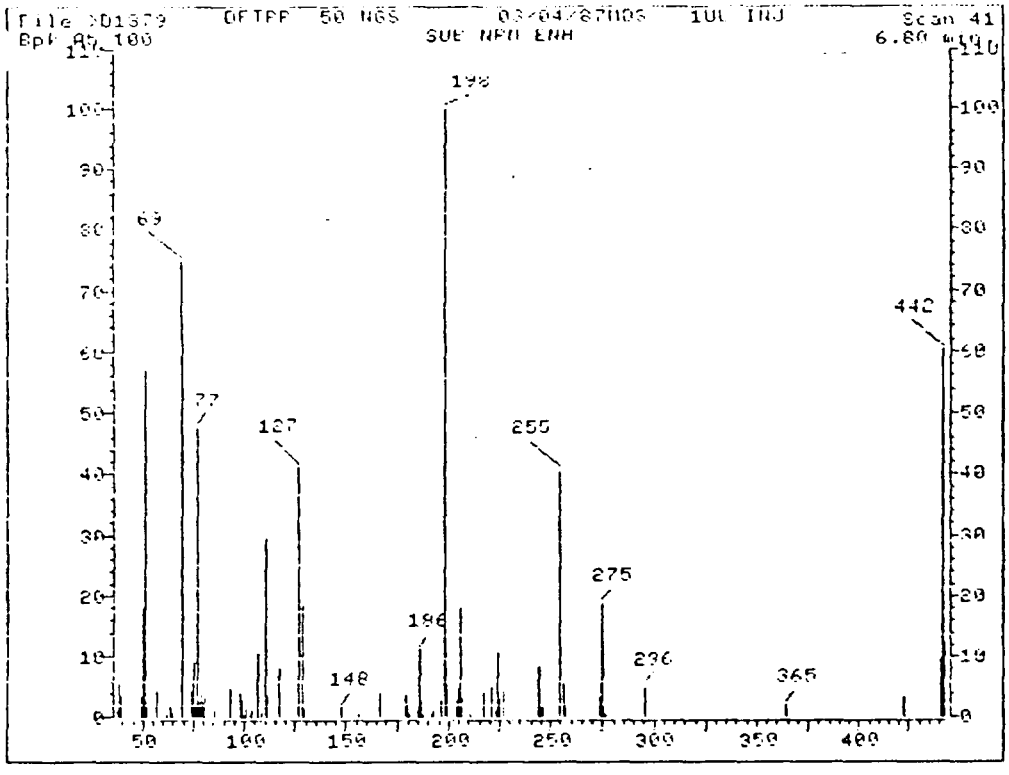
Lab ID D1879 Data Release Authorized By: CStojowicz

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 (20.45)[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	129.20	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: MTDUN No. of extra records: 1
Source temp.: 0 Analyzer temp.: 245 Transfer line temp. : 280

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

V-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

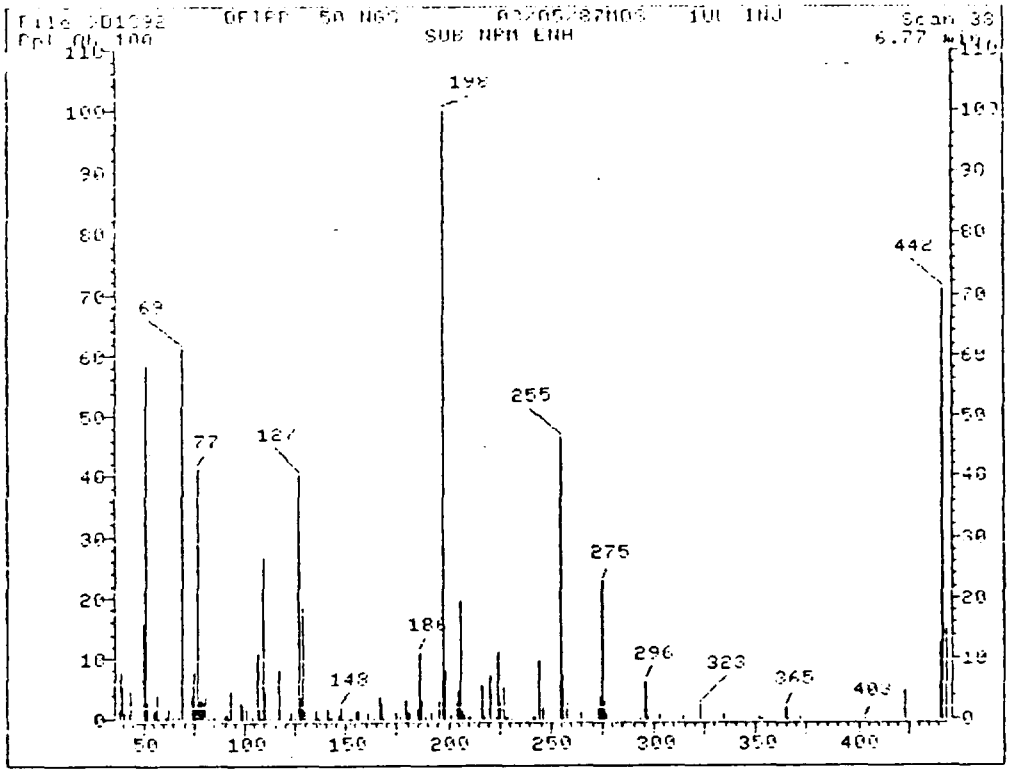
Lab ID >D1892 Data Release Authorized By: C Wojtowicz

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 parentheses is % mass 69
[2] Value in parentheses 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-PI-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 DFIPP 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	.25	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	.04
74.95	7.25	125.15	.04	179.00	2.92	230.95	.19	372.10	.32
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	12.58
78.95	3.42	130.00	1.41	185.95	11.00	244.90	.29	442.00	20.73
80.05	2.90	134.00	.21	186.85	2.94	246.00	2.08	443.00	14.86
81.15	3.67	135.00	1.29	188.95	.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

V-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

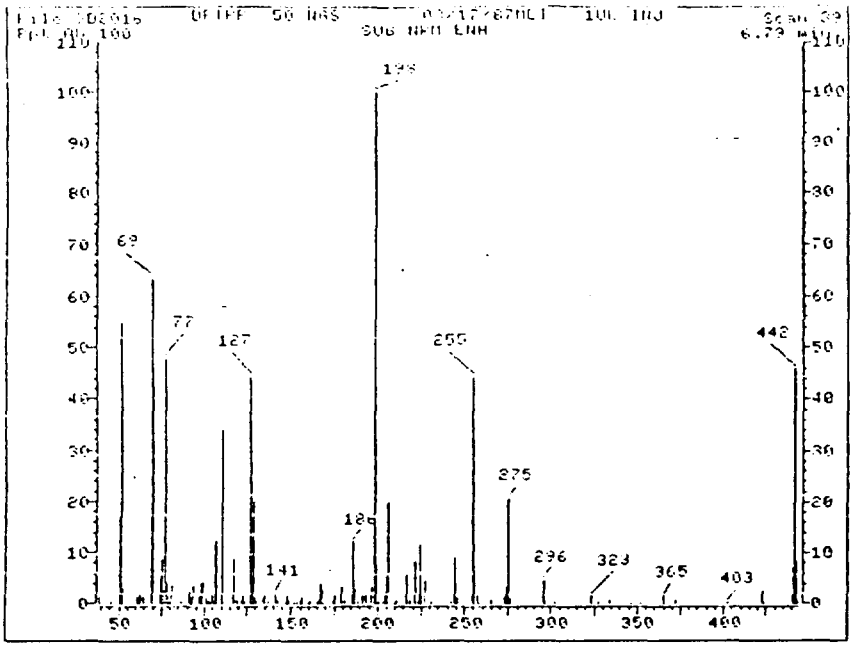
Lab ID >D2016 Data Release Authorized By: C. Hightower

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 (VE.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



>U2016 DFTPP 50 NGS 03/17/87MEI 1UL INJ
39 SUB NRM ENH

File: >U2016 Scan #: 39 Retn. time: 6.29

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	.27	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	45.25
96.20	1.58	140.90	2.12	193.10	1.29	256.05	6.02	443.00	8.36
97.90	4.30	141.00	.69	196.00	3.31	257.95	1.91	444.10	.59
98.90	4.40	145.00	.46	198.00	100.00				

MS data file header from : >U2016

Sample: DFTPP 50 NGS Operator: USER8 MS 3/17/87 15:20
Misc : 03/17/87MEI 1UL INJ BIL# 1
Sys. #: 1 MS model: 70 SW/HW rev.: CA ALS # : 0
Method file: DFTPPD Tuning file: 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

V-4906; 4928 Decafluorotriphenylphosphine (DFTPP)

Case No. 4911; 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 Stojowicz

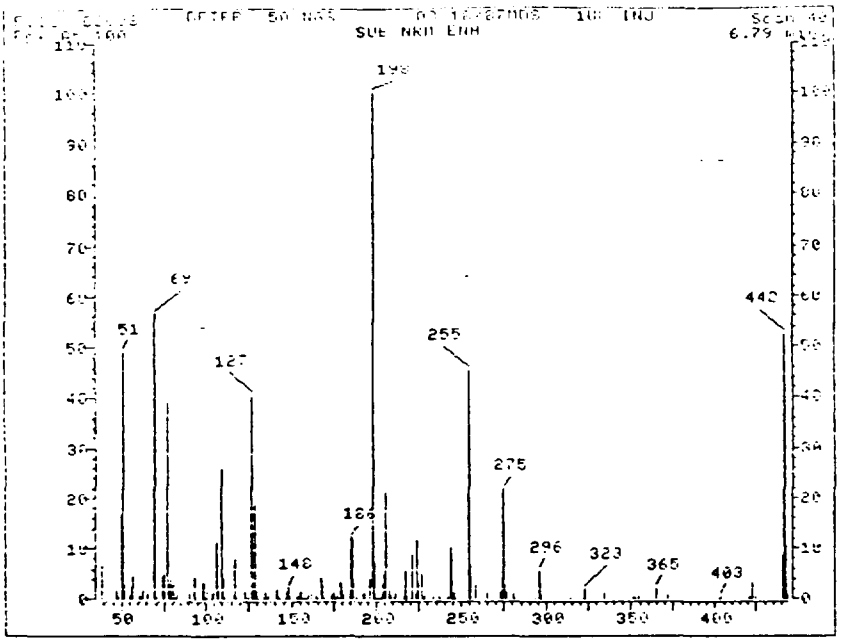
m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	49.22
68	less than 2.0% of mass 69	0.00 (0.00)[1]
69	mass 69 relative abundance	56.62
70	less than 2.0% of mass 69	0.36 (0.63)[1]
127	40.0 - 60.0% of mass 198	40.46
197	less than 1.0% of mass 198	0.00
198	base peak, 100% relative 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



>D7038 DFTPP 50 NGS 03/18/87MDS 1UL INJ
40 SUB NRM ENH

File: >D7038 Scan #: 40 Retn. time: 6.79

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
[illegible]	.14	103.90	1.01	153.10	.17	201.05	.30	258.95	.23
39.05	6.42	105.00	1.22	154.00	.30	201.55	.21	265.00	1.08
[illegible]	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	2.22	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	324.65	.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	.14
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
82.05	.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
83.05	.13	140.20	.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	57.38
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 : >D7038

Sample: DFTPP 50 NGS Operator: USER MS 3/18/87 11:00
Date : 03/18/87MS 1UL INJ BTL# 1
Sys. #: 1 MS model: 70 SW/HW rev.: CA ALS # : 0
Method file: DFTPPD Tuning file: MTUNE No. of extra records: 1
Source temp.: 0 Analyzer temp.: 225 Transfer line temp.: 70

Chromatographic temperatures : 150. 300. 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)

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

Instrument ID HP5970D Date 03-26-87 Time 10:28

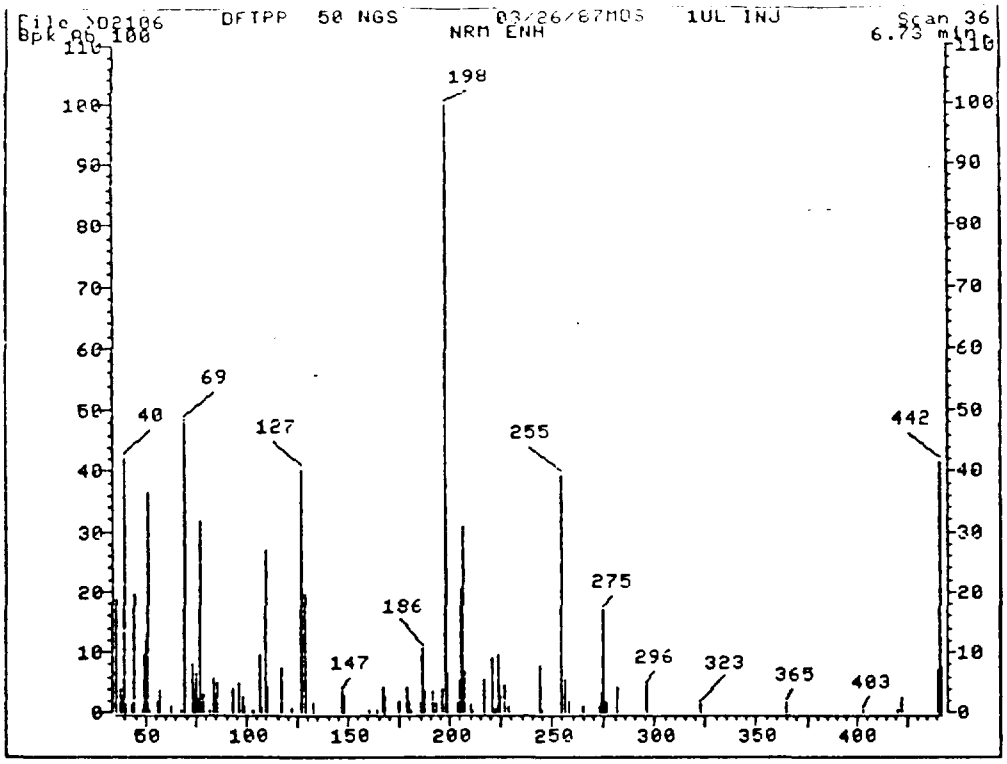
Lab ID 7D2106 Data Release Authorized By: C. Wojtowicz

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: MTDDN 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. V-4906; 4928; 4971; 4989 Contractor ENERGY & ENVIRONMENT INC. Contract No. IL-3140

Instrument ID HP5995C Date 7-14-86 Time 1426

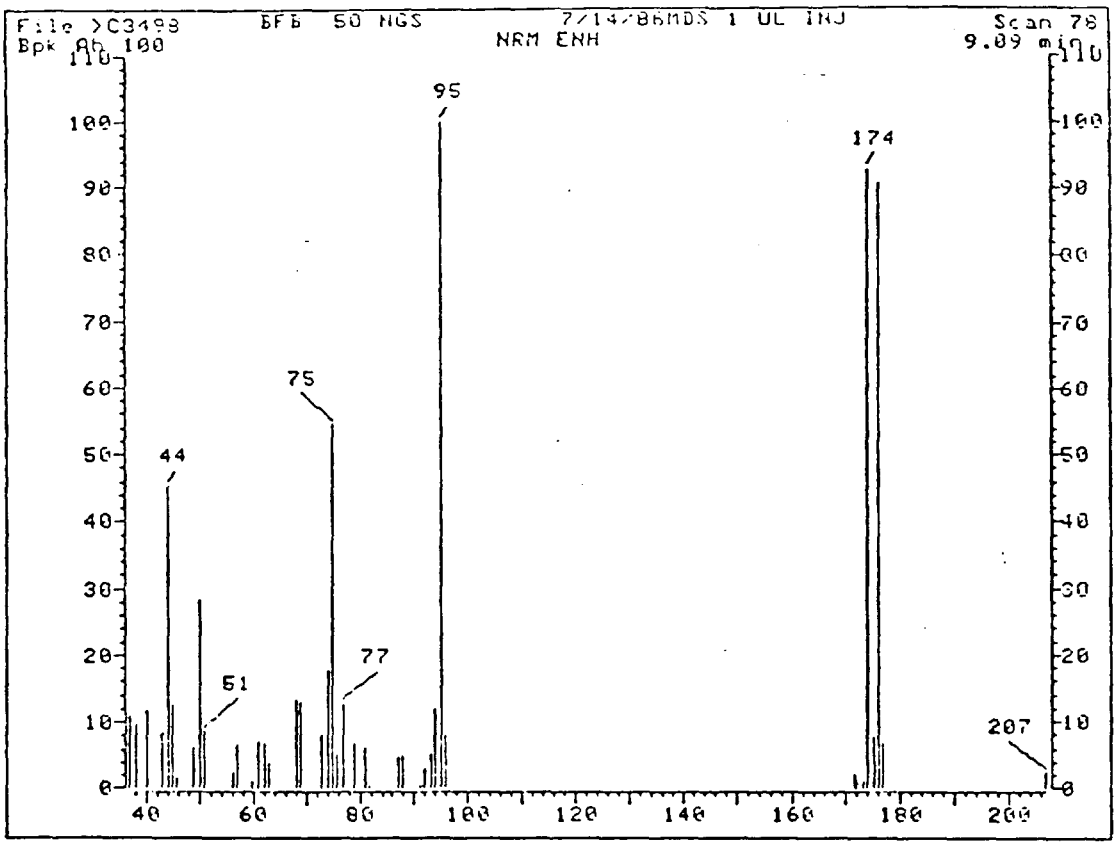
Lab ID C3498 Data Release Authorized By: C Gojtowicz

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



>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:
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 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

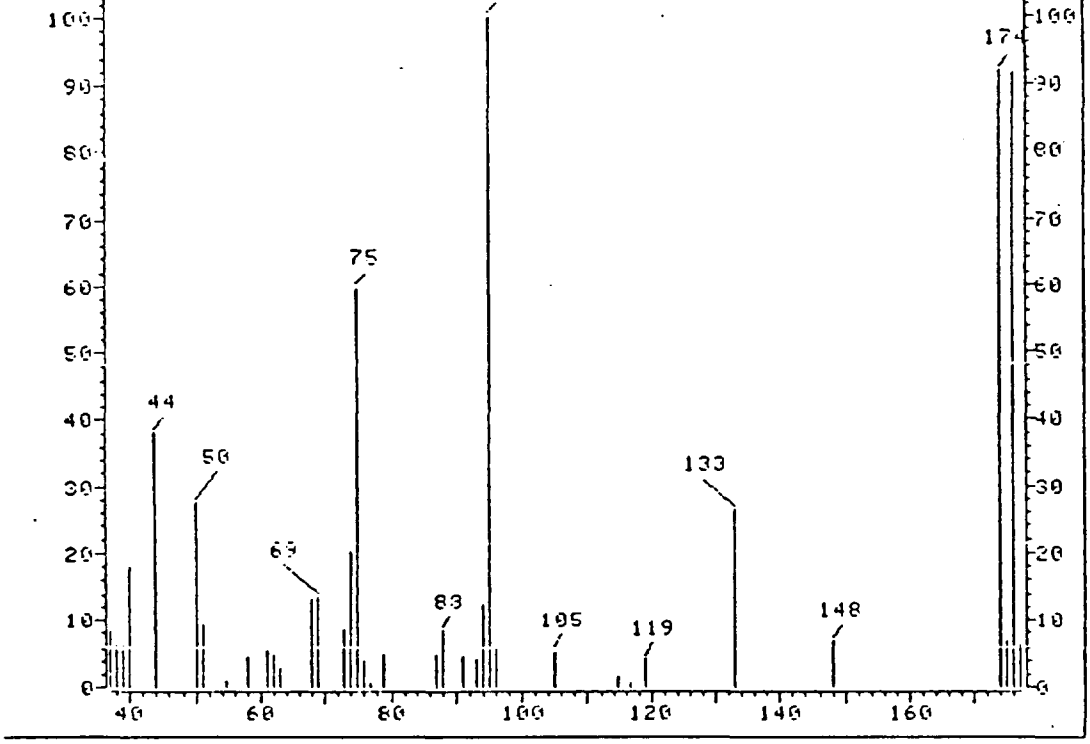
Lab ID C6595 Data Release Authorized By: C Zoytowicz

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



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

Instrument ID 11P5995C Date 2/20/87 Time 10:33

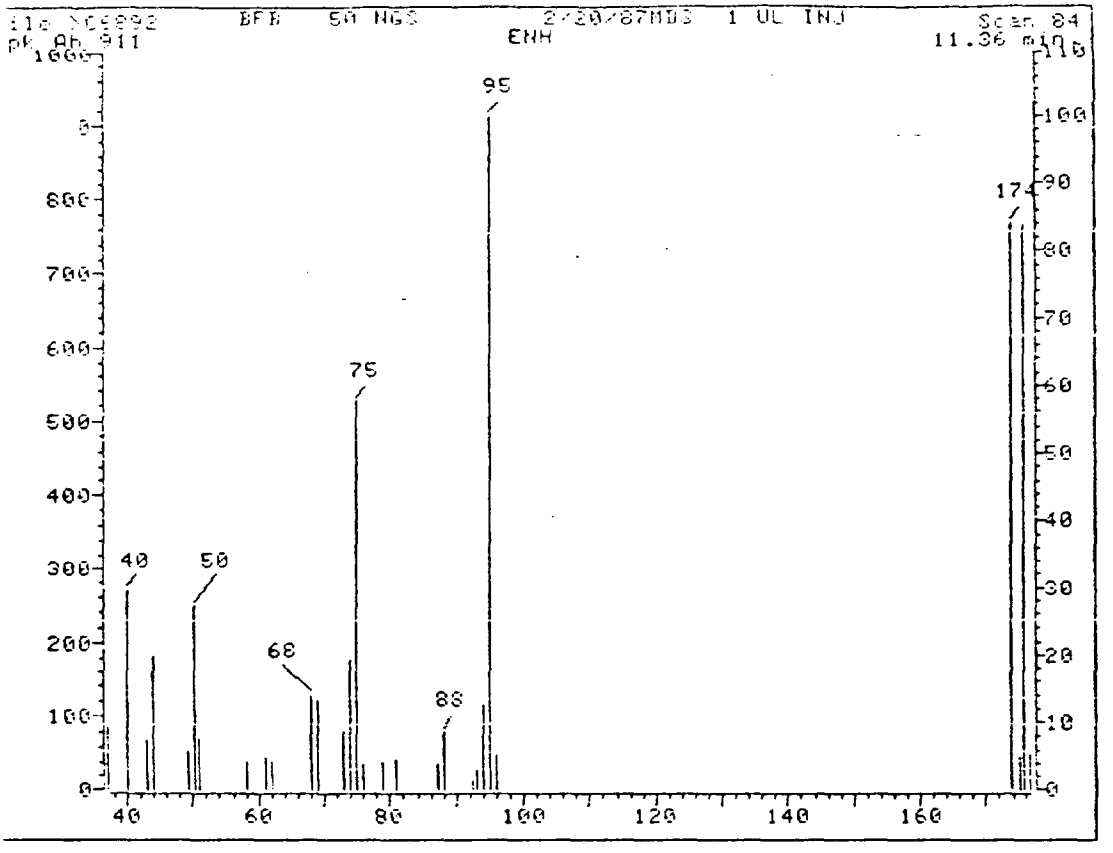
Lab ID >C6892 Data Release Authorized By: C Wojtowicz

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 CalibCheck >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-I2-58	1037 >C6898	2-20-87	16:04
DC-I2-57	1036 >C6899	2-20-87	16:56
DC-P5-55MS	1034 MS >C6900	2-20-87	17:48
DC-P5-55MSD	1034 MSD >C6901	2-20-87	18:40
DC-P1-53	1032 >C6902	2-20-87	19:36



>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 (4906, 4928) Contractor Ecology & Environment Contract No. IL-3140

Instrument ID HP5995C Date 2/23/87 Time 12:12

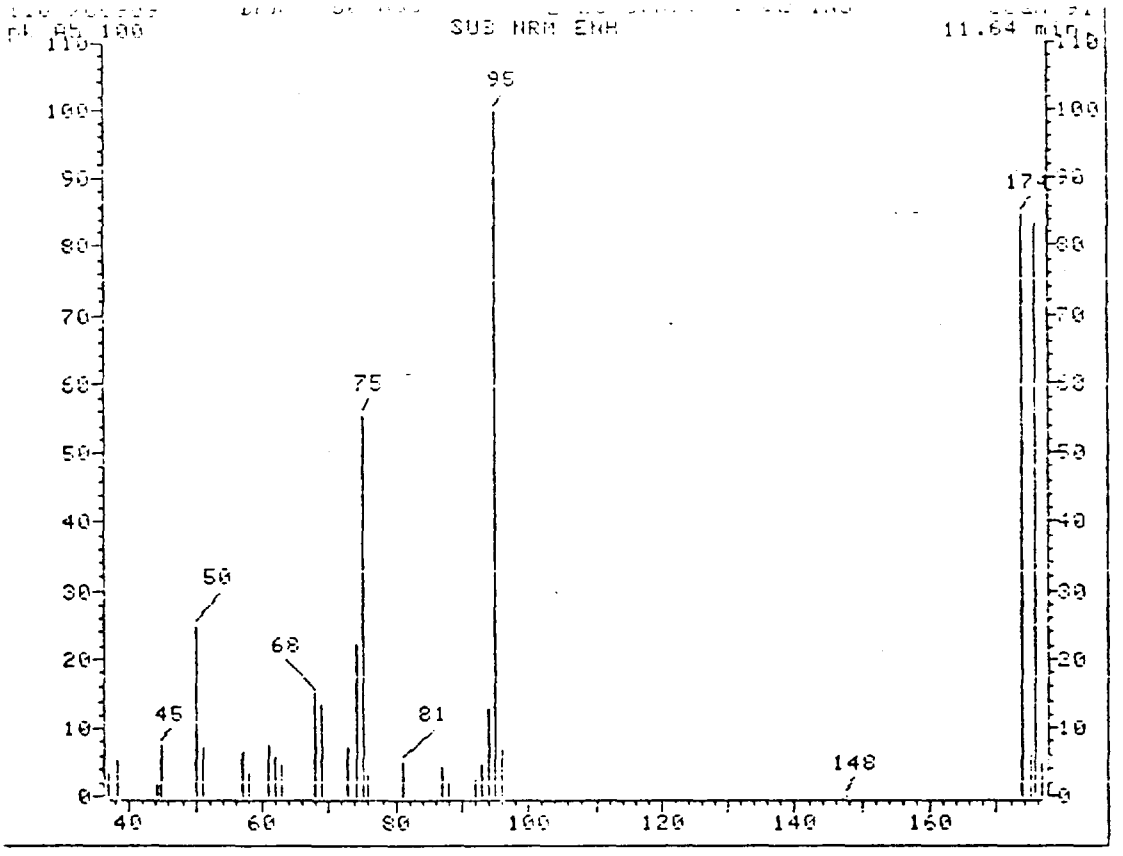
Lab ID YC6909 Data Release Authorized By: C Hoytowicz

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 YC6910	2-23-87	12:40
C6920	Method Blank	2-23-87	22:07
DC-04-62	1113 YC6921	2-23-87	23:01



>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

Continuing Calibration Check
HSL Compounds

Case No: V-4906; V-4928; V-4911; V-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	2.00391	36.16		
CARBON DISULFIDE	76	3.82990	2.25803	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	3.55680	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 (**)

Case No: V-4906; V-4928 V-4971; V-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	.69749	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 (**)

GC/MS TUNING AND MASS CALIBRATION

Bromofluorobenzene (BFB)

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

Instrument ID HP5995C Date 2/24/87 Time 14:31

Lab ID >C6939 Data Release Authorized By: C Stojowicz

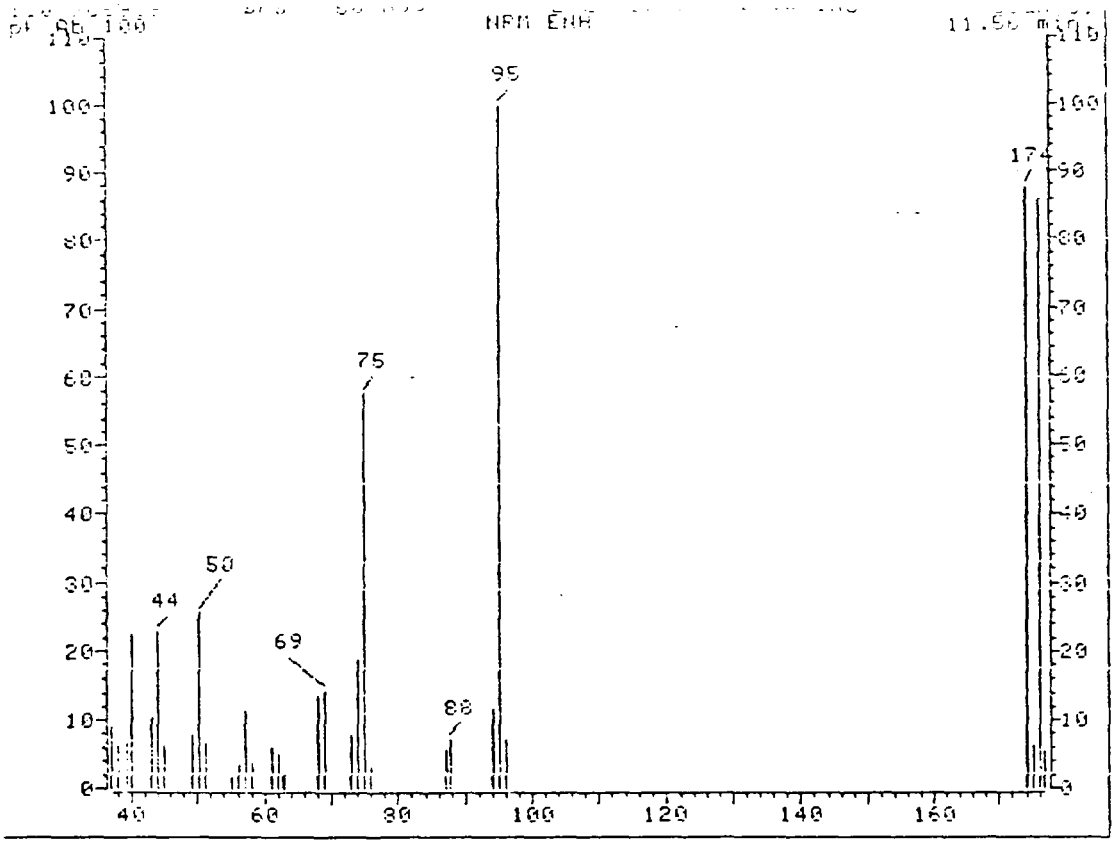
m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE	
50	15.0 - 40.0% of the base peak	25.66	
75	30.0 - 60.0% of the base peak	57.63	
95	Base peak, 100% relative abundance	100.00	
96	5.0 - 9.0% of the base peak	7.23	
173	Less than 1.0% of the base peak	0.00	
174	Greater than 50.0% of the base peak	87.57	
175	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



>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

Continuing Calibration Check
HSL Compounds

V-4906, V-4928
se V-4971, V-4989 Calibration Date: 02/26/87

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

ntract No: IL-3140 Laboratory ID: >C6963

strument ID: HP-5995C Initial Calibration Date: ~~01/28/87~~ RJK 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		**
BROMOMETHANE	94	1.10748	1.52053	37.30		
VINYL CHLORIDE	62	1.37999	1.44532	4.73	*	
CHLOROETHANE	64	.91582	.92353	.84		
METHYLENE CHLORIDE	84	1.88105	1.72788	8.14		
ETONE	43	.56188	.89036	58.46		
ICHLOROFLUOROMETHANE	101	3.74934	3.86132	2.99		
RBON 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		**
ANS-1,2-DICHLOROETHENE	96	1.69959	1.61050	5.24		
LOROFORM	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		
RBON TETRACHLORIDE	117	.66973	.67774	1.20		
NYL ACETATE	43	.70857	.56820	19.81		
OMODICHLOROMETHANE	83	.65600	.64980	.94		
2-DICHLOROPROPANE	63	.44332	.40112	9.52	*	
ANS-1,3-DICHLOROPROPENE	75	.79316	.77290	2.56		
ICHLOROETHENE	130	.41824	.40108	4.10		
BROMOCHLOROMETHANE	129	.49648	.47087	5.16		
1,2-TRICHLOROETHANE	97	.31392	.30953	1.40		
NZENE	78	1.20435	1.20423	.01		
S-1,3-DICHLOROPROPENE	75	.43032	.42630	.94		
-CHLOROETHYLVINYLETHER	63	.15885	.15464	2.65		
OMOFORM	173	.38425	.34279	10.79		**
-METHYL-2-PENTANONE	43	.44365	.35345	20.33		
-HEXANONE	43	.32465	.30629	5.65		
TRACHLOROETHENE	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	*	
LOROBENZENE	112	1.19479	1.06016	11.27		**
THYLBENZENE	91	2.06981	1.97256	4.70	*	

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

- Average Response Factor from Initial Calibration Form VI

Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

se V-4906; V-4928
V-4971; V-4989

Calibration Date: 02/26/87

ntractor: E & E, INC.

Time: 14:00

ntract No: IL-3140

Laboratory ID: >C6963

strument 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
-BROMOFLUOROBENZENE(SURR)	95	.72214	.67854	6.04		
STYRENE	104	1.24236	1.14376	7.94		
TOTAL XYLENES	91	1.76320	1.61522	8.39		

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

- Average Response Factor from Initial Calibration Form VI

)iff - % Difference from original average or curve

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]

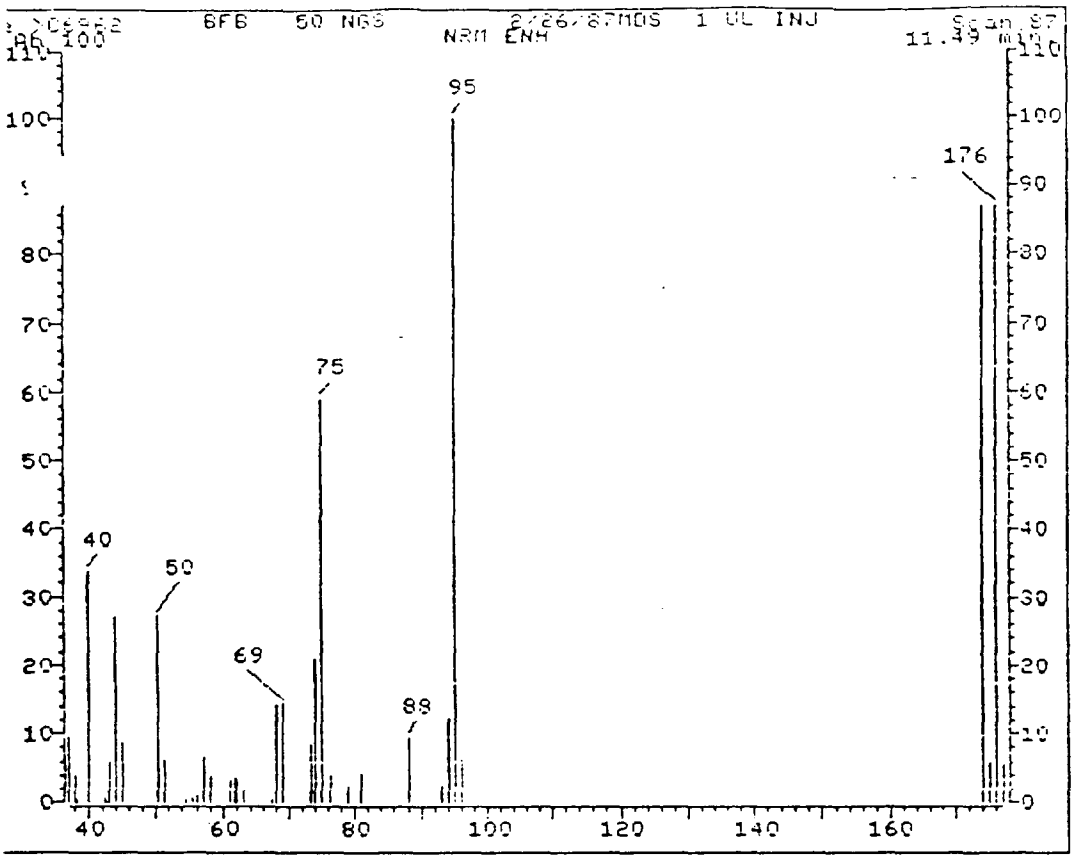
THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

[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



6962 BFB 50 NGS 2/26/87MDS 1 UL INJ
87 NRM ENH

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

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
7.10	9.63	45.10	8.89	61.15	3.40	74.05	21.04	94.00	12.27
8.00	3.82	50.10	27.28	61.75	3.50	75.05	59.02	95.10	100.00
8.20	.56	51.20	6.24	62.05	3.41	76.15	3.78	96.10	6.13
0.10	33.78	54.50	.25	63.05	2.13	79.05	2.25	174.00	86.77
2.20	.60	55.65	.82	67.35	.24	81.05	4.19	175.00	5.72
2.60	.21	56.25	.94	68.05	14.28	88.05	9.52	176.00	86.96
3.10	5.87	57.15	6.60	69.15	14.42	93.00	2.37	177.00	5.38
4.10	26.85	58.05	3.92	73.15	8.32				

data file header from : >C6962

mple: BFB 50 NGS Operator: USER8 MS 2/26/87 13:25
sc : 2/26/87MDS 1 UL INJ
s. #: 1 MS model: 96 SW/HW rev.: CA ALS # : 0
Method file: BFB001 Tuning file: MTCU4 No. of extra records: 1
ource 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 (4906, 4928) 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 Zoytowicz

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]

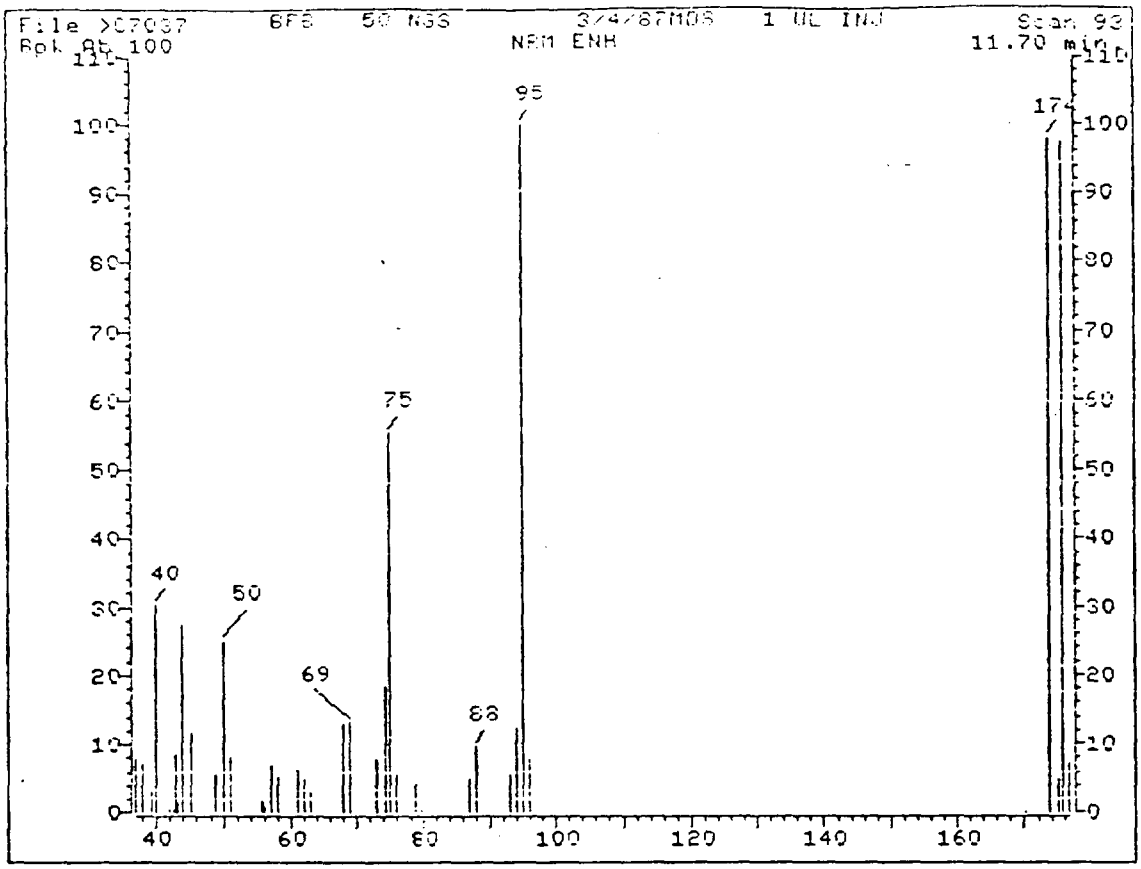
THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

[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: 9o 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. 4906,4928 4971, 4989 Contractor Ecology & Environment Contract No. IL-3140

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

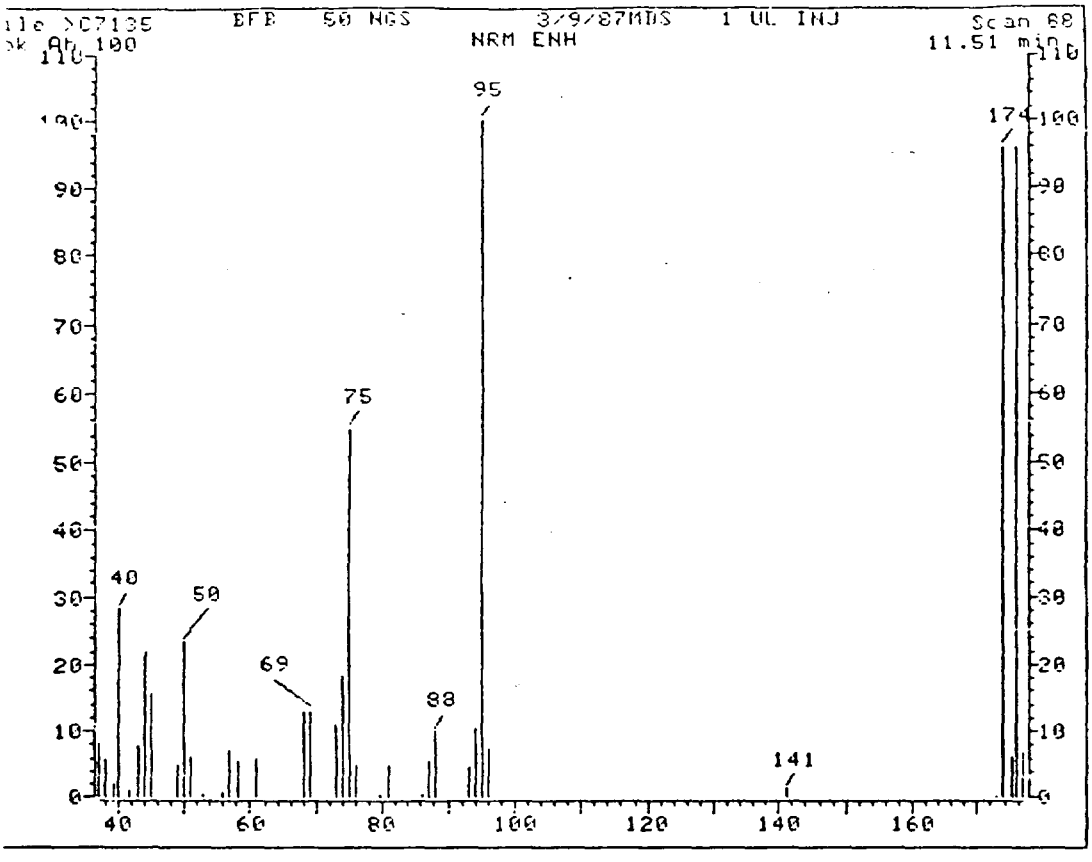
Lab ID >C7135 Data Release Authorized By: C Stoytowicz

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
C7138	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



:7135 BFB 50 NGS 3/9/87MDS 1 UL INJ
88 NRM ENH

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

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
7.20	7.98	49.00	4.87	67.95	12.87	80.95	4.81	96.10	7.50
8.00	5.86	50.10	23.39	68.95	13.00	86.35	.43	141.05	1.21
9.30	1.97	51.00	6.15	73.05	10.89	87.05	5.45	172.70	.24
0.00	28.13	53.10	.41	74.05	18.48	88.05	9.97	173.90	95.88
1.80	1.16	55.75	.74	75.05	54.94	93.00	4.66	175.00	6.17
2.90	7.67	57.05	7.05	76.05	5.03	94.20	10.48	175.90	95.82
4.10	21.74	58.05	5.67	79.75	.48	95.00	100.00	176.90	6.78
5.10	15.31	60.95	5.97						

data file header from : >C7135

mple: BFB 50 NGS Operator: USER8 MS 3/09/87 10:02
sc : 3/9/87MDS 1 UL INJ
s. #: 1 MS model: 96 SW/HW rev.: CA ALS # : 0
M 1 file: BFB001 Tuning file: MTCV4 No. of extra records: 1
ource 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 DATA

SAMPLE NUMBER DC-P1-53

DC - P1-53

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.
Case No: U-4906, 4928, 4971, 4989

Lab Sample ID No: 1032
QC Report No:

Sample Matrix: Soil
Contract No: IL-3140

Data Release Authorized By: C Stojowicz
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 10.2

Percent Moisture: (Not Decanted) 20

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	820 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	10
107-06-2	1, 2-Dichloroethane	5u
78-93-3	2-Butanone	150 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	39
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	39
591-78-6	2-Hexanone	30
127-18-4	Tetrachloroethene	5u
79-34-5	1, 1, 2, 2 Tetrachloroethane	5u
108-88-3	Toluene	330
108-90-7	Chlorobenzene	110
100-41-4	Ethylbenzene	95
100-42-5	Styrene	5u
	Total Xylenes	360

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/ml 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

Laboratory Name Ecology & Environment, Inc

Case No IL-3140

Sample Number
DC-P1-53

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low (Medium) (Circle One)

Date Extracted/Prepared 2-16-87

Date Analyzed 03-05-87

Conc/Dil Factor: 100

Percent Moisture (Decanted) 20

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	3100 J
111-44-4	bis(2-Chloroethyl)Ether	16000u
95-57-8	2-Chlorophenol	16000u
541-73-1	1 3-Dichlorobenzene	16000u
106-46-7	1 4-Dichlorobenzene	7100 J
100-51-6	Benzyl Alcohol	16000u
95-50-1	1 2-Dichlorobenzene	2900 J
95-48-7	2-Methylphenol	16000u
39638-32-9	bis(2-chloroisopropyl)Ether	16000u
106-44-5	4-Methylphenol	16000u
621-64-7	N-Nitroso-Di-n-Propylamine	16000u
67-72-1	Hexachloroethane	16000u
98-95-3	Nitrobenzene	16000u
78-59-1	Isophorone	16000u
88-75-5	2-Nitrophenol	16000u
105-67-9	2 4-Dimethylphenol	16000u
65-85-0	Benzoic Acid	80000u
111-91-1	bis(2-Chloroethoxy)Methane	16000u
120-83-2	2 4-Dichlorophenol	16000u
120-82-1	1 2 4-Trichlorobenzene	16000u
91-20-3	Naphthalene	16000u
106-47-8	4-Chloroaniline	16000u
87-68-3	Hexachlorobutadiene	16000u
59-50-7	4-Chloro-3-Methylphenol	16000u
91-57-6	2-Methylnaphthalene	16000u
77-47-4	Hexachlorocyclopentadiene	16000u
88-06-2	2 4 6-Trichlorophenol	16000u
95-95-4	2 4 5-Trichlorophenol	80000u
91-58-7	2-Chloronaphthalene	16000u
88-74-4	2-Nitroaniline	80000u
-11-3	Dimethyl Phthalate	16000u
208-96-8	Acenaphthylene	16000u
99-09-2	3-Nitroaniline	80000u

CAS Number		ug/l or (ug/Kg) (Circle One)
83-32-9	Acenaphthene	16000u
51-28-5	2 4-Dinitrophenol	80000u
100-02-7	4-Nitrophenol	80000u
132-64-9	Dibenzofuran	16000u
121-14-2	2 4-Dinitrotoluene	16000u
606-20-2	2 6-Dinitrotoluene	16000u
84-66-2	Diethylphthalate	16000u
7005-72-3	4-Chlorophenyl-phenylether	16000u
86-73-7	Fluorene	16000u
100-01-6	4-Nitroaniline	80000u
534-52-1	4 6-Dinitro-2-Methylphenol	80000u
86-30-6	N-Nitrosodiphenylamine (1)	16000u
101-55-3	4-Bromophenyl-phenylether	16000u
118-74-1	Hexachlorobenzene	16000u
87-86-5	Pentachlorophenol	80000u
85-01-8	Phenanthrene	16000u
120-12-7	Anthracene	16000u
84-74-2	Di-n-Butylphthalate	13000 J
206-44-0	Fluoranthene	16000u
129-00-0	Pyrene	16000u
85-68-7	Butylbenzylphthalate	16000u
91-94-1	3 3-Dichlorobenzidine	32000u
56-55-3	Benzo(a)Anthracene	16000u
117-81-7	bis(2-Ethylhexyl)Phthalate	16000u
218-01-9	Chrysene	16000u
117-84-0	Di-n-Octyl Phthalate	16000u
205-99-2	Benzo(b)Fluoranthene	16000u
207-08-9	Benzo(k)Fluoranthene	16000u
50-32-8	Benzo(a)Pyrene	16000u
193-39-5	Indeno(1,2,3-cd)Pyrene	16000u
53-70-3	Dibenz(a,h)Anthracene	16000u
191-24-2	Benzo(g,h,i)Perylene	16000u

(1) Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No V-4906, 4928, 4971, 4989

Sample Number
DC-P1-53

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 50

Percent Moisture (decanted) 20

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	4000 U
319-85-7	Beta-BHC	4000 U
319-86-8	Delta-BHC	4000 U
58-89-9	Gamma-BHC (Lindane)	4000 U
76-44-8	Heptachlor	4000 U
309-00-2	Aldrin	4000 U
1024-57-3	Heptachlor Epoxide	4000 U
959-98-8	Endosulfan I	4000 U
60-57-1	Dieldrin	8000 U
72-55-9	4,4'-DDE	8000 U
72-20-8	Endrin	8000 U
33213-65-9	Endosulfan II	8000 U
72-54-8	4,4'-DDD	8000 U
1031-07-8	Endosulfan Sulfate	8000 U
50-29-3	4,4'-DDT	8000 U
72-43-5	Methoxychlor	40,000 U
53494-70-5	Endrin Ketone	8000 U
57-74-9	Chlordane	40,000 U
8001-35-2	Toxaphene	80,000 U
12674-11-2	Aroclor-1016	40,000 U
11104-28-2	Aroclor-1221	40,000 U
11141-16-5	Aroclor-1232	40,000 U
53469-21-9	Aroclor-1242	40,000 U
12672-29-6	Aroclor-1248	40,000 U
11097-69-1	Aroclor-1254	80,000 U
11096-82-5	Aroclor-1260	80,000 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 1,000 V_i 4

Laboratory Name Ecology & Environment Inc.

Case No 4906, 4926, 4971, 4989

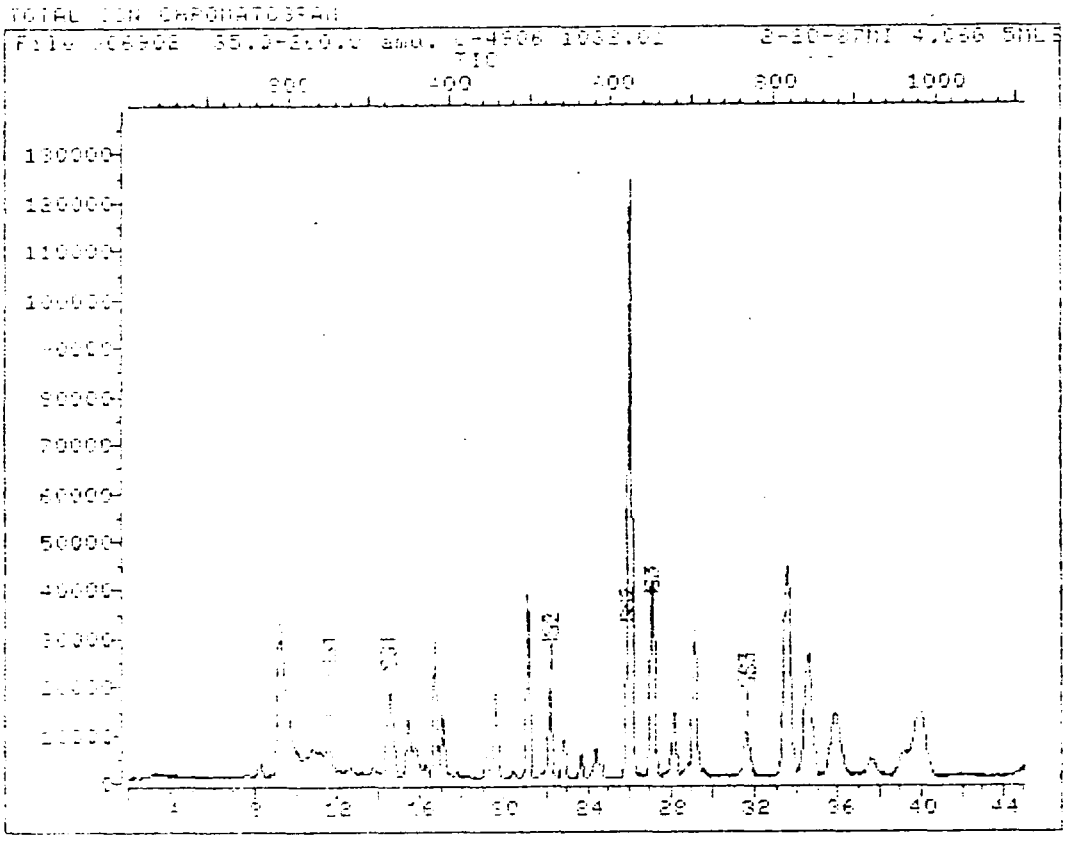
Sample Number DC-P1-53

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number HLC-IC	Estimated Concentration (ug/l or ug/kg)
1.	14898794	2-Butanol	VOA	15.4	77 J
2.		Unknown hydrocarbon	VOA	16.7	120 J
3.		Hexene isomer	VOA	17.1	39 BJ
4.		Hexene isomer	VOA	19.2	14 J
5.		Unknown hydrocarbon	VOA	28.2	21 J
6.		Hexane isomer	VOA	21.2	100 BJ
7.		Unknown hydrocarbon	VOA	35.9	40 J
8.					
9.					
10.	629505	Tridecane	BNA	18.98	130,000 J
11.		Unknown hydrocarbon		19.22	63,000 J
12.		Unknown hydrocarbon		19.32	58,000 J
13.	544763	Hexadecane		19.77	150,000 J
14.		Unknown hydrocarbon		20.48	52,000 J
15.		Unknown hydrocarbon		21.22	70,000 J
16.		Unknown hydrocarbon		21.30	82,000 J
17.	5504519	5-Propyl-Tridecane		21.85	140,000 J
18.		Unknown hydrocarbon		21.95	47,000 J
19.		Unknown hydrocarbon		22.73	71,000 J
20.		Unknown hydrocarbon		22.61	170,000 J
21.		Unknown hydrocarbon		23.93	110,000 J
22.		Unknown hydrocarbon		24.46	52,000 J
23.		Unknown hydrocarbon		25.20	160,000 J
24	10544500	Molecular Sulfur		25.34	85,000 J
25.		Unknown hydrocarbon		26.41	76,000 J
26.		Unknown hydrocarbon		27.98	110,000 J
27.		Unknown hydrocarbon		29.07	77,000 J
28.		Unknown hydrocarbon		30.77	57,000 J
29.		Unknown hydrocarbon		33.04	97,000 J
30					

TOTAL ION CHROMATOGRAM

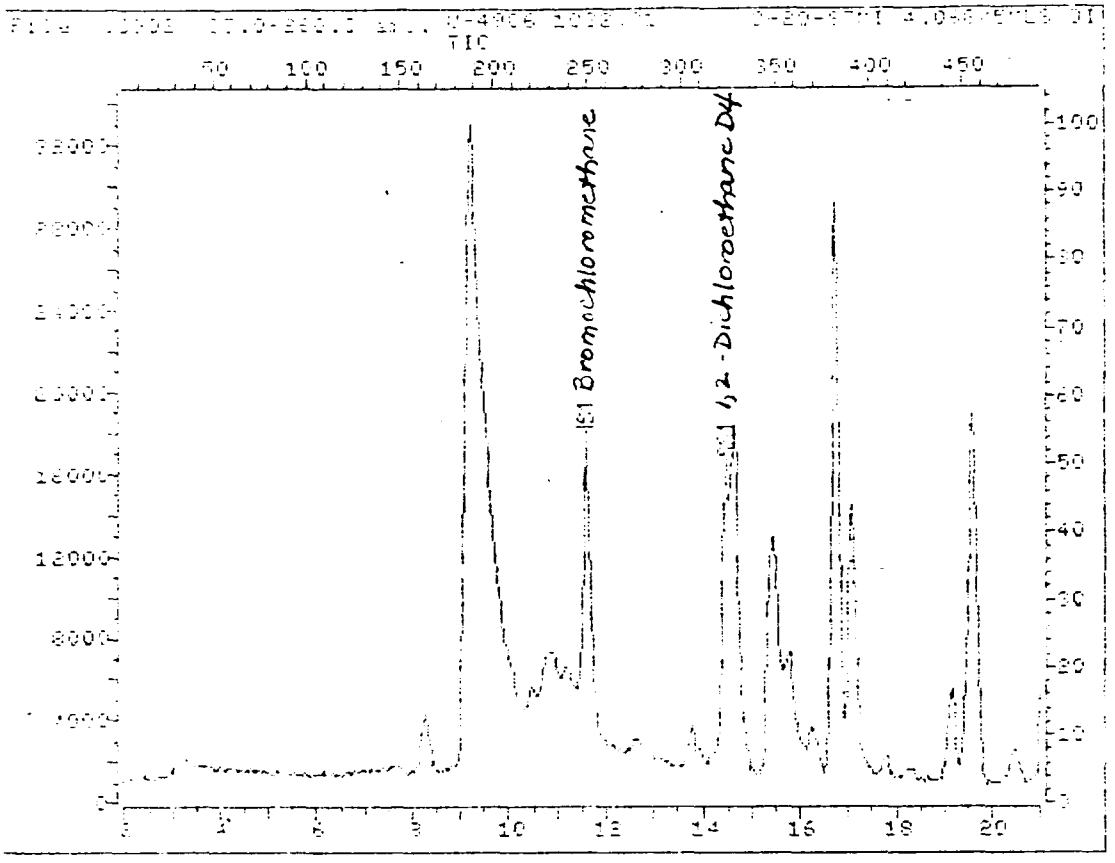


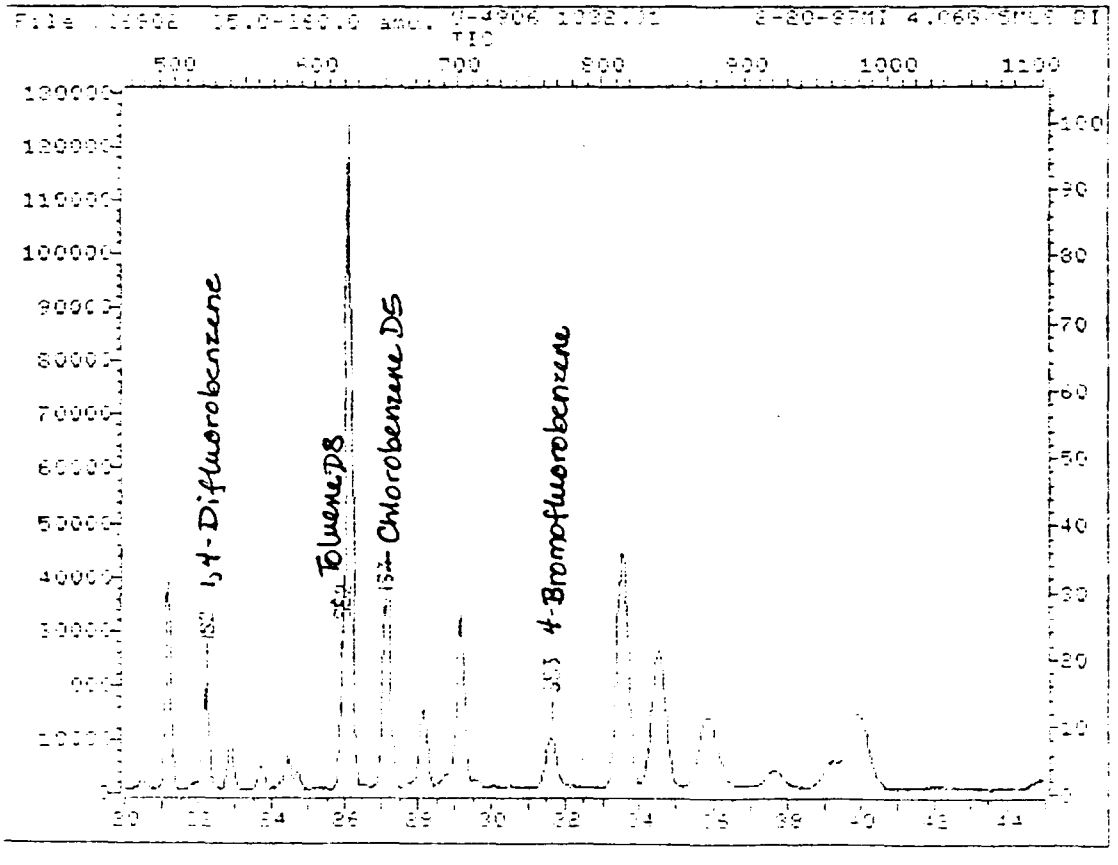
Data File: 006902::D3
Name: U-4906 1032.01 DC-P1-53
Misc: 2-20-87MI 4.06G/5MLS DI + 10UL IS/SS

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

Operator ID: USER3
Quant Time: 870220 20:22
Injected at: 870220 19:36

DC-P1-53


TIC
Bromochloromethane
1,2-Dichloroethane D4


TIC
1,4-Difluorobenzene
Toluene D8
Chlorobenzene D5
4-Bromofluorobenzene

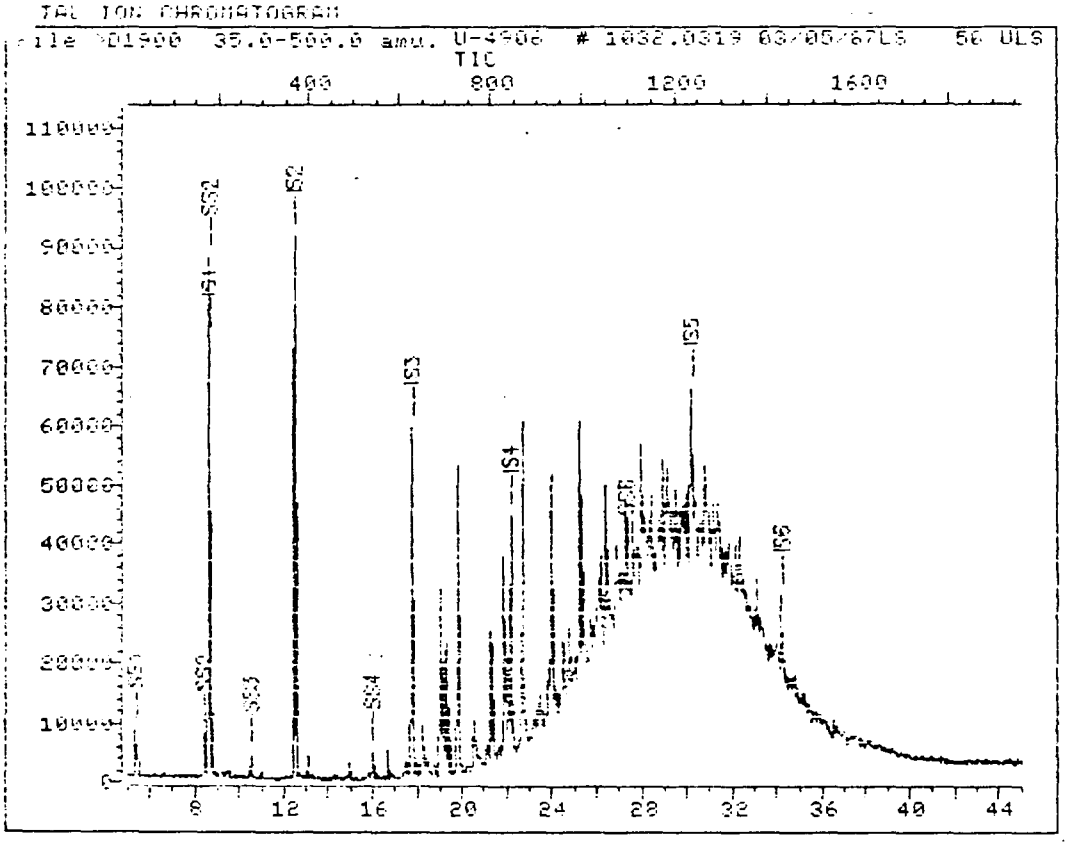
QUANT REPORT

Operator ID: USER1 Quant Rev: 4 Quant Time: 870220 20:22
Output File: HD6902::32 Injected at: 870220 19:36
Data File: HD6902::07 Dilution Factor: 1.00
Name: U-4906 1032.11 DC-P1-53
Misc: 2-20-87MI 4.0ml/5ML1 DI - 10UL IS/SS

ID File: HD4CP6::00
Title: (40) 10 FILE FOR 8010/8020 (CONT. CAL.)
Last Calibration: 870220 12:09

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.57	249	16848	250.00 NGS	100
6)	METHYLENE CHLORIDE		84	8.27	164	6674	57.01 NGS	100
7)	ACETONE		43	9.28	190	695427	3335.55 NGS	100
8)	TRICHLOROFLUOROETHANE		101	10.43	221	3186	19.57 NGS	87
12)	CHLOROFORM		83	13.74	305	8371	42.10 NGS	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.42	327	51464	222.33 NGS	81
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.20	523	75755	250.00 NGS	100
17)	2-BUTANONE		72	14.63	328	23673	210.32 NGS	100
18)	2-BUTANONE		72	14.61	326	3681	27.37 NGS	100
27)	BENZENE		78	19.60	486	66273	160.01 NGS	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.05	648	49881	250.00 NGS	100
32)	4-METHYL-2-PENTANONE		43	22.86	540	39282	160.57 NGS	99
32)	4-METHYL-2-PENTANONE		43	23.71	562	10569	42.14 NGS	64
33)	2-HEXANONE		43	24.71	590	10306	42.33 NGS	100
33)	2-HEXANONE		43	24.41	580	23870	101.93 NGS	100
36)	TOLUENE-D8	(SURR)	98	25.99	613	69243	242.43 NGS	96
37)	TOLUENE		92	26.09	623	285537	1330.05 NGS	99
38)	CHLOROBENZENE		112	27.17	651	116541	444.63 NGS	99
39)	ETHYLBENZENE		91	29.16	702	171199	384.38 NGS	95
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.60	765	30091	185.04 NGS	100
41)	STYRENE		104	33.42	812	4403	16.15 NGS	100
41)	STYRENE		104	34.65	841	4733	17.31 NGS	100
42)	TOTAL XYLENES		91	33.50	814	325788	887.39 NGS	100
42)	TOTAL XYLENES		91	34.55	841	219588	595.42 NGS	100
43)	1,3-DICHLOROBENZENE		146	39.25	962	31535	31535.00 NO CALIB	100
43)	1,3-DICHLOROBENZENE		146	39.91	979	109000	109000.0 NO CALIB	100
44)	1,2-DICHLOROBENZENE			39.25	962	31535	31535.00 NO CALIB	100
44)	1,2-DICHLOROBENZENE			39.91	979	105855	105855.0 NO CALIB	100
45)	1,4-DICHLOROBENZENE		146	39.25	962	31535	31535.00 NO CALIB	100
45)	1,4-DICHLOROBENZENE		146	39.91	979	119965	119965.0 NO CALIB	100

* Compound is ISTD

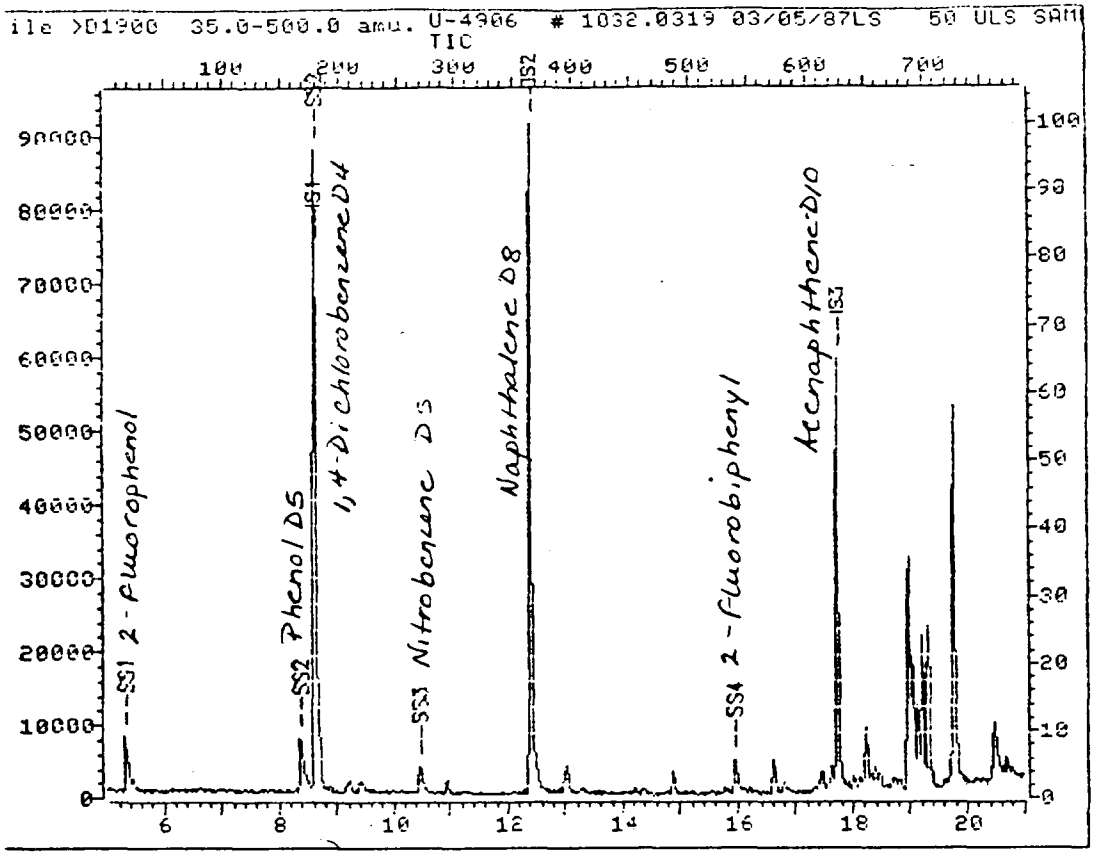


Data File: >D1900::D3
Name: U-4906 # 1032.0319 DC-P1-53
Misc: 03/05/87LS 50 ULS SAMPLE + 450 ULS MECL2 + 5 ULS IS BTL# 2

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870305 17:22

Operator ID: USER6
Quant Time: 870305 19:33
Injected at: 870305 18:46

DC-P1-53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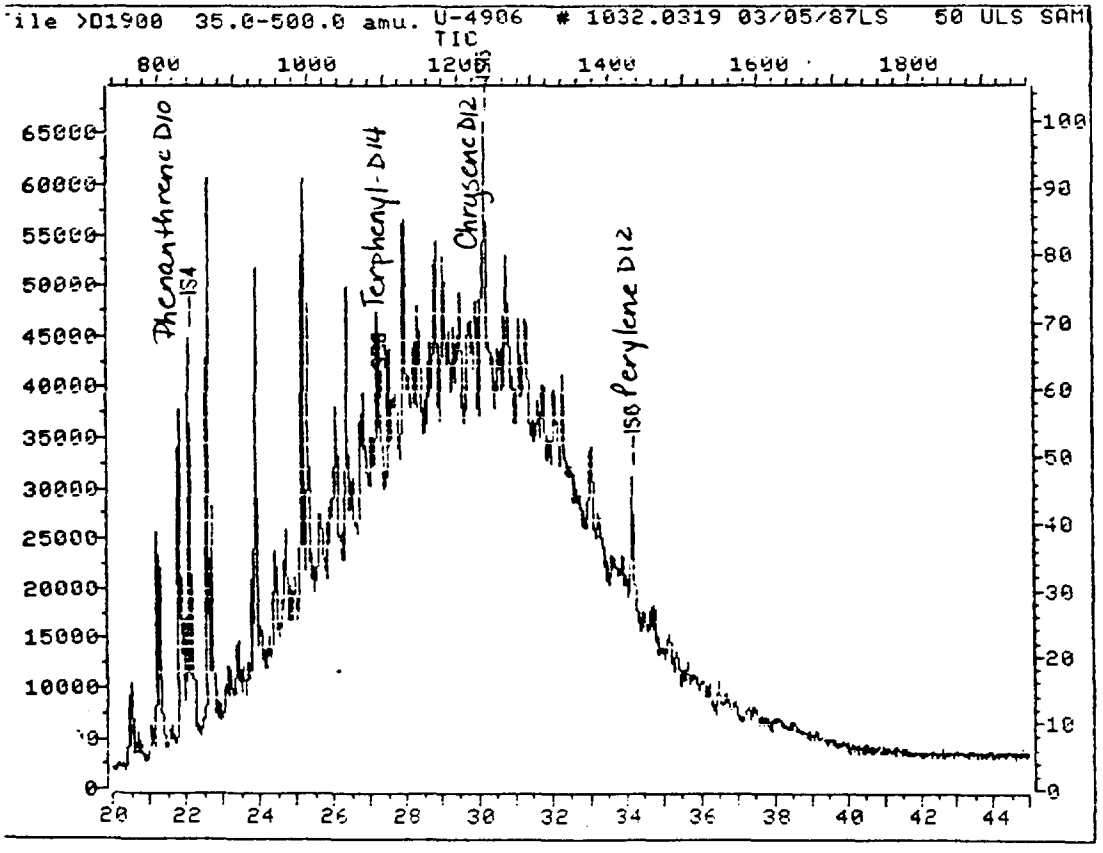
TIC
2-Fluorophenol
Phenol D5
1,4-Dichlorobenzene D4
Nitrobenzene D5
Naphthalene D8
2-Fluorobiphenyl
Acenaphthene D10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TIC
Phenanthrene D10
p-Terphenyl-D14
Chrysene D12
Perylene D12

QUANT REPORT

Operator ID: USER6 Quant Rev: 4 -- Quant Time: 870305 19:33
Output File: ^D1900::U2 Injected at: 870305 18:46
Data File: >D1900::D3 Dilution Factor: 10.00
Name: U-4906 # 1032.0319 DC-D1-53
Misc: 03/05/87LS 50 ULS SAMPLE + 450 ULS MECL2 + 5 ULS IS BTL# 2

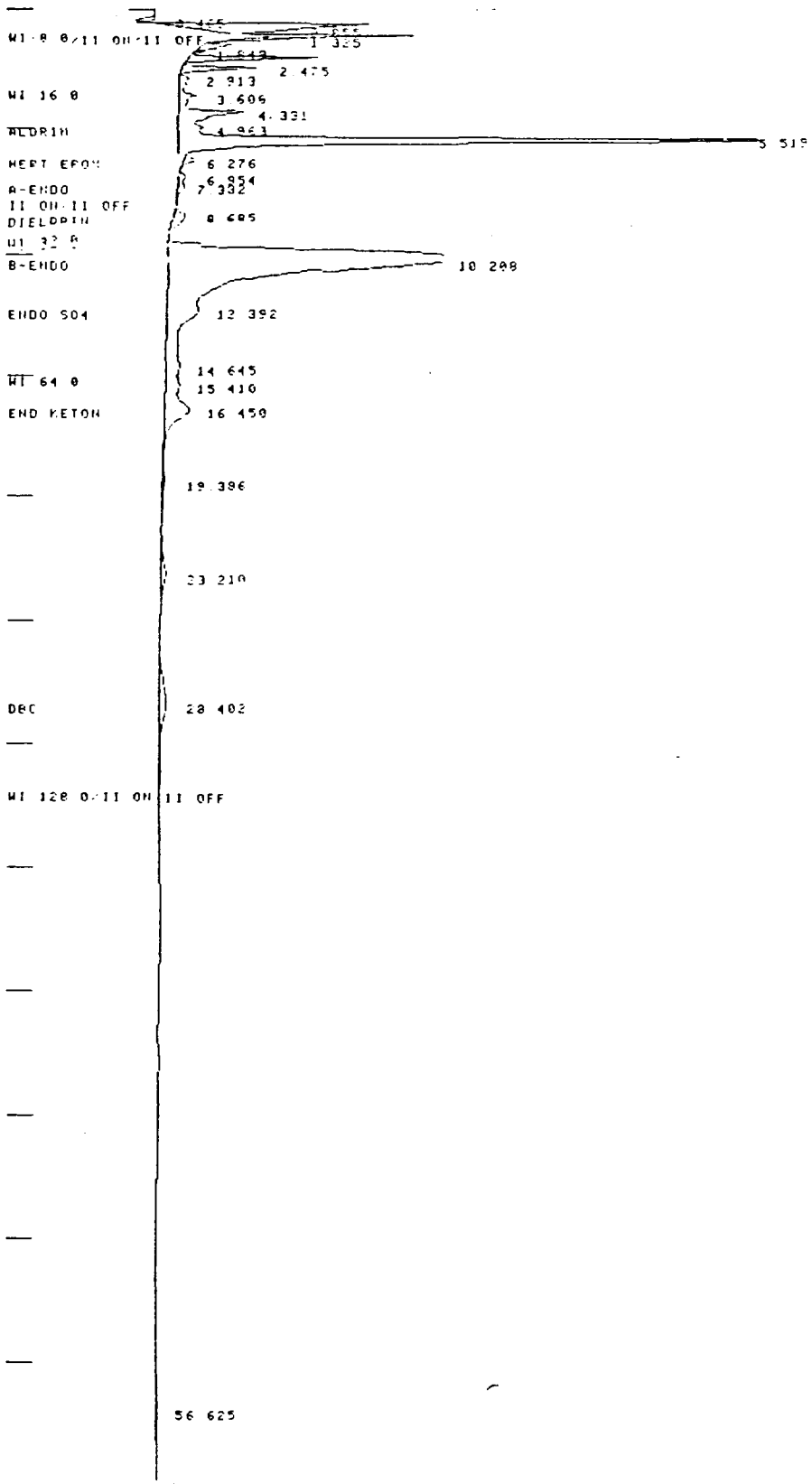
ID File: BNAUR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870305 17:22

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	8.61	178	44770	40.00 UG/L	86
2)	PHENOL-D5	(SURR)	99	8.56	166	11296	66.31 UG/L 74 ✓	95
2)	PHENOL-D5	(SURR)	99	8.63	179	1314	7.71 UG/L	76
5)	2-FLUOROPHENOL	(SURR)	112	5.31	16	7098	92.50 UG/L 93 ✓	84
6)	PHENOL		94	8.40	168	1698	9.41 UG/L 495	79
~~9)~~	~~1,3-DICHLOROBENZENE~~		~~146~~	~~8.57~~	~~181~~	~~3545~~	~~21.99 UG/L~~	~~99~~
10)	1,4-DICHLOROBENZENE		146	8.67	181	3545	21.42 UG/L 495	98
12)	1,2-DICHLOROBENZENE		146	9.20	207	1409	8.61 UG/L 495	90
19)	*NAPHTHALENE-D8	(IS)	136	12.42	365	130179	40.00 UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	10.46	269	5292	38.16 UG/L 76 ✓	92
34)	*ACENAPHTHENE-D10	(IS)	162	17.73	626	37078	40.00 UG/L	99
38)	2-FLUOROBIPHENYL	(SURR)	172	15.94	538	7398	49.41 UG/L 99 ✓	93
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~17.73~~	~~626~~	~~7012~~	~~44.64 UG/L~~	~~100~~
~~42)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~17.73~~	~~626~~	~~4594~~	~~210.81 UG/L~~	~~100~~
55)	*PHENANTHRENE-D10	(IS)	188	22.12	841	33656	40.00 UG/L	89
63)	DI-N-BUTYLPHTHALATE		149	24.21	968	3108	39.26 UG/L 495	96
65)	*CHRYSENE-D12	(IS)	240	30.17	1235	23828	40.00 UG/L	100
68)	TERPHENYL-D14	(SURR)	244	27.29	1094	2088	44.65 UG/L 89 ✓	100
74)	*PERYLENE-D12	(IS)	264	34.18	1431	20892	40.00 UG/L	100

* Compound is ISTD

2,4,6-Tribromophenol (surr) not present ok
Report Diluted out

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



CHANNEL: 1A - 1 TITLE: RUN# 17 22:07 23 FEB 87 DC- P1-53

SAMPLE: 1032 METHOD: CEPA CALCULATION: ES - ANALYS

117

SS 625

CHANNEL: 1A - 1 TITLE: RUN: 17 22:07 23 FEB 87

SAMPLE: 1032 METHOD: CCFR CALCULATION: ES - ANALYS DC-f1-53

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.325		20775	BV	3.44
2		0.0000	1.545		22262	VV	5.44
3		0.0000	2.102		119903	VV	6.44
4	B-BHC	2756.292	2.475	0.095	75860	VV	7.19
5		0.0000	3.608		43625	VV	13.19
6		0.0000	4.331		111303	VV	13.00
7		0.0000	4.575		45378	VV	? 20.44
8	ALDRIN	655.0016	4.963	-0.097	51172	VV	? 18.69
9		0.0000	5.519		1393391	VV	12.56
10	HEPT EPOX	331.4945	6.276	0.156	24315	T	22.50
11	4,4' DDE	768.2549	8.685	-0.095	54674	BB	35.88
12	B-ENDO	26900.67	10.208	0.199	1863788	BV	45.31
13	ENDO SO4	4241.201	12.392	-0.388	226781	VV	? 71.31
14	4,4' DDT	2061.385	14.645	0.455	97696	VV	?116.81
15		0.0000	15.410		60128	VV	? 74.50
16	CHLORDANE	2166.497	16.450	0.110	165065	VB	46.38
17		0.0000	23.210		44877	BB	61.31
18	DDD	1776.638	28.492	0.092	102670	BB	111.19

TOTALS: 41657.43 0.616 9524266

REJECTED PKS: 30 REJECTED PKS: 12

DIVISOR: 0.15000 MULTIPLIER: 50000.0000

NOISE: 11.4 OFFSET: -11

RSCL: 2 OTAL: 2 INJ: 1

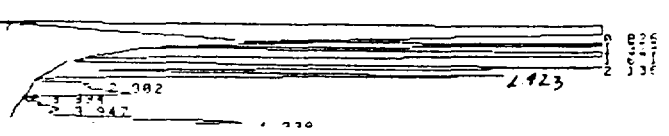
NOTES:
NOTEBOOK:259-115,116 ANALYST: RICHARD SAMSON
SECURE AREA: B J068:H-4872,4906
INST: VARIAN 6000 ZA ECD 10X1
COLUMN: 6' GLASS 9MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% SP-1
CARRIER GAS: N2 @ 60 ML/MIN
DET: 300 C INJ: 220 C
200 C ISOTHERMAL 4 UL INJECTION

POST RUN:
SAVE FILE: BAU DC1189

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

MI 8 0/11 ON/11 OFF

B-BHC



SAMPLE NUMBER DC-P2-54

DC-P2-54

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.
Case No: U-4906, 4928, 4971, 4989.
Lab Sample ID No: 1033
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: CStoltowicz
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 8.0
Percent Moisture: (Not Decanted) 16

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	4BJ
67-64-1	Acetone	870BE
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	64B
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	24 B
591-78-6	2-Hexanone	2 BJ
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.

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

... — 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 ... 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.

... — 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., 10B. 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/ml 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 IL-3140

Sample Number DC-P2-54

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) 16

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
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	130 J
206-44-0	Fluoranthene	330u
129-00-0	Pyrene	330u
95-68-7	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 V-4906, 4928, 4971, 4989

Sample Number
DC-P2-54

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) 16

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_t = 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_t 4

Laboratory Name Ecology & Environment Inc.

Case No II-4906, 4928, 4971, 4989

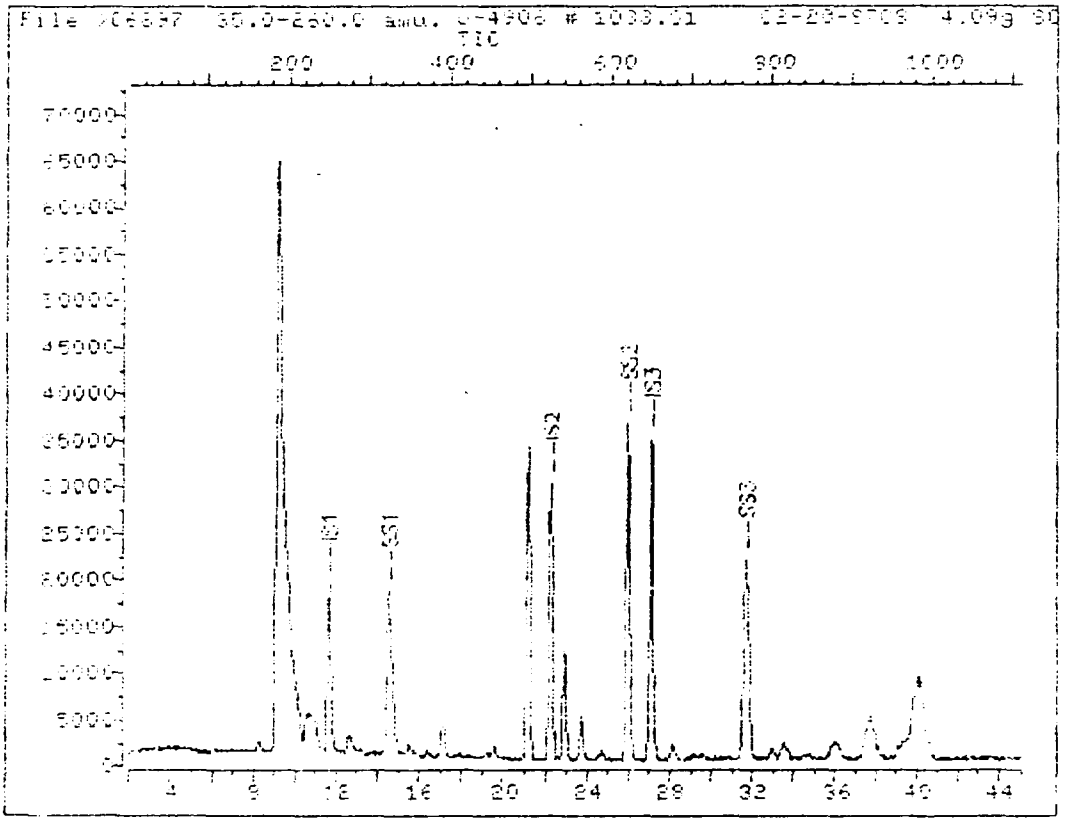
Sample Number DC-P2-54

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	(RT) or Scan Number MCC-IC	Estimated Concentration (ug/l or ug/kg)
1.		Hexane isomer	VOA	21.2	66 BJ
2.		Unknown alcohol (?)	VOA	23.7	10 J
3.		Unknown alcohol (?)	VOA	37.8	19 J
4.		Dichlorobenzene isomers	VOA	40.1	62 J
5.					
6.		Unknown	BNA	19.4	1200 J
7.		Unknown hydrocarbon	BNA	20.3	220 J
8.		Unknown	BNA	21.0	1400 J
9.		Unknown hydrocarbon	BNA	21.1	630 J
10.		Unknown	BNA	22.4	1100 J
11.	17312775	2,3-Dimethyl Undecane	BNA	23.2	470 J
12.	544763	Hexadecane	BNA	24.0	560 J
13.		Unknown hydrocarbon	BNA	25.3	330 J
14.		Unknown	BNA	25.7	250 J
15.		Unknown hydrocarbon	BNA	26.6	230 J
16.	10544500	Molecular Sulfur	BNA	26.7	290 J
17.		Unknown	BNA	29.3	1100 J
18.		Unknown hydrocarbon	BNA	31.1	640 J
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

TOTAL ION CHROMATOGRAM



Data File: >Ce897::07
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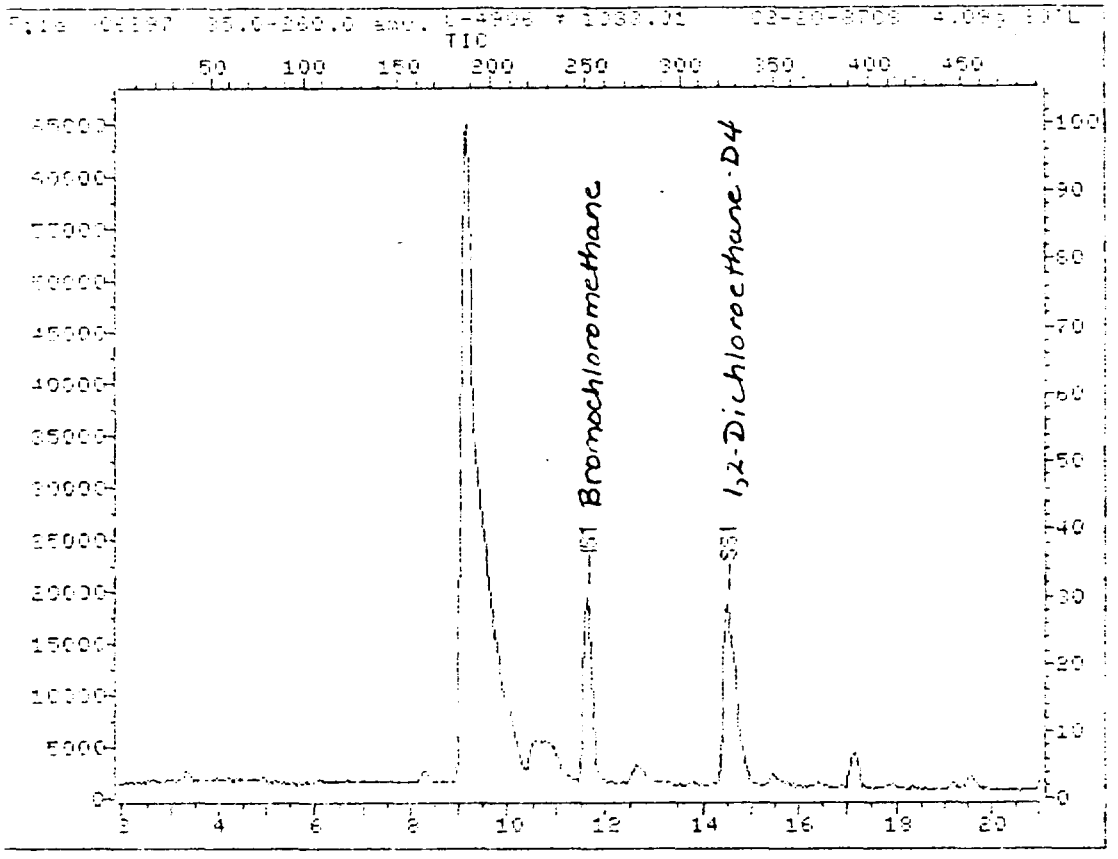
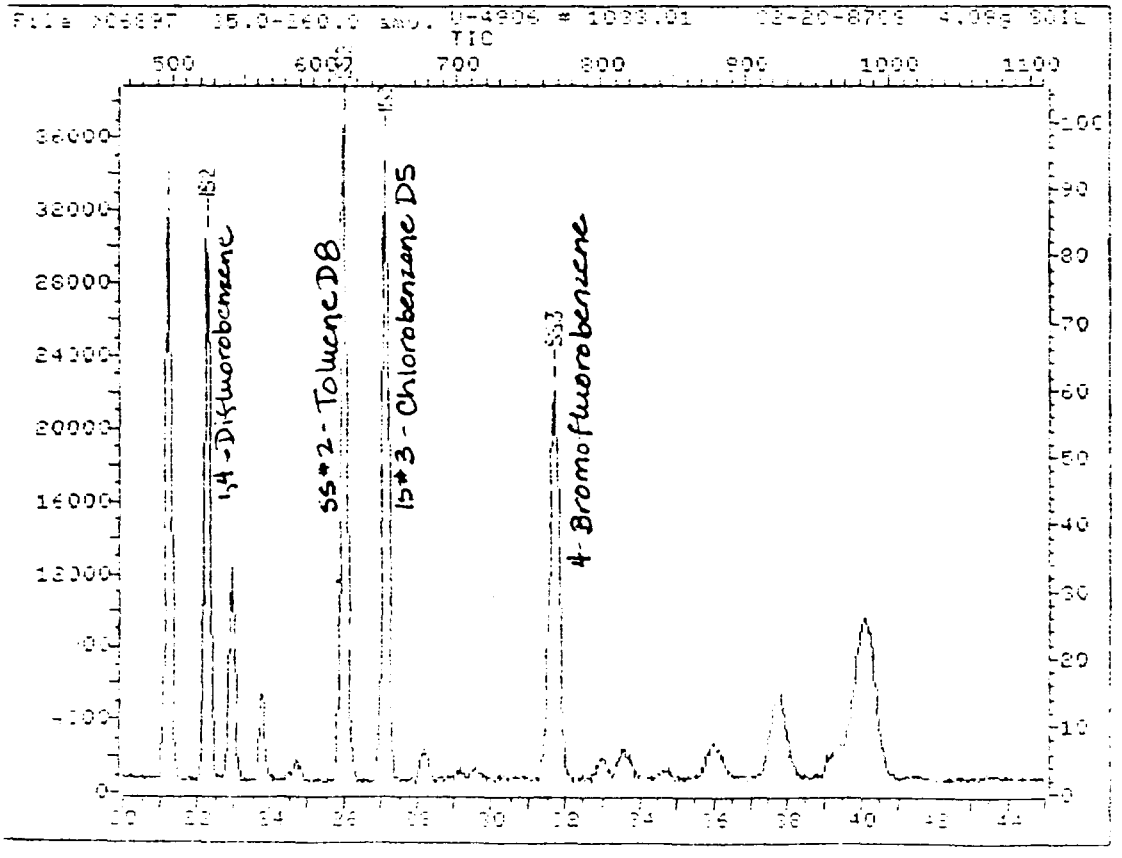
Misc: 12-21-8709 4.09g SOIL IN 5ML DI + 10UL IS/SS

Id File: VOACRS::02
Title: VOA IC FILE FOR HP-5995 (CONT. CAL.
Last Calibration: 870220 12:09

Operator ID: USER8
Quant Time: 870220 15:38
Injected at: 870220 14:52

DC-P2-54


TIC
Bromochloromethane
1,2-Dichloroethane-D4


TIC
1,4-Difluorobenzene
55*2-Toluene D8
15*3-Chlorobenzene D5
4-Bromofluorobenzene

QUANT REPORT

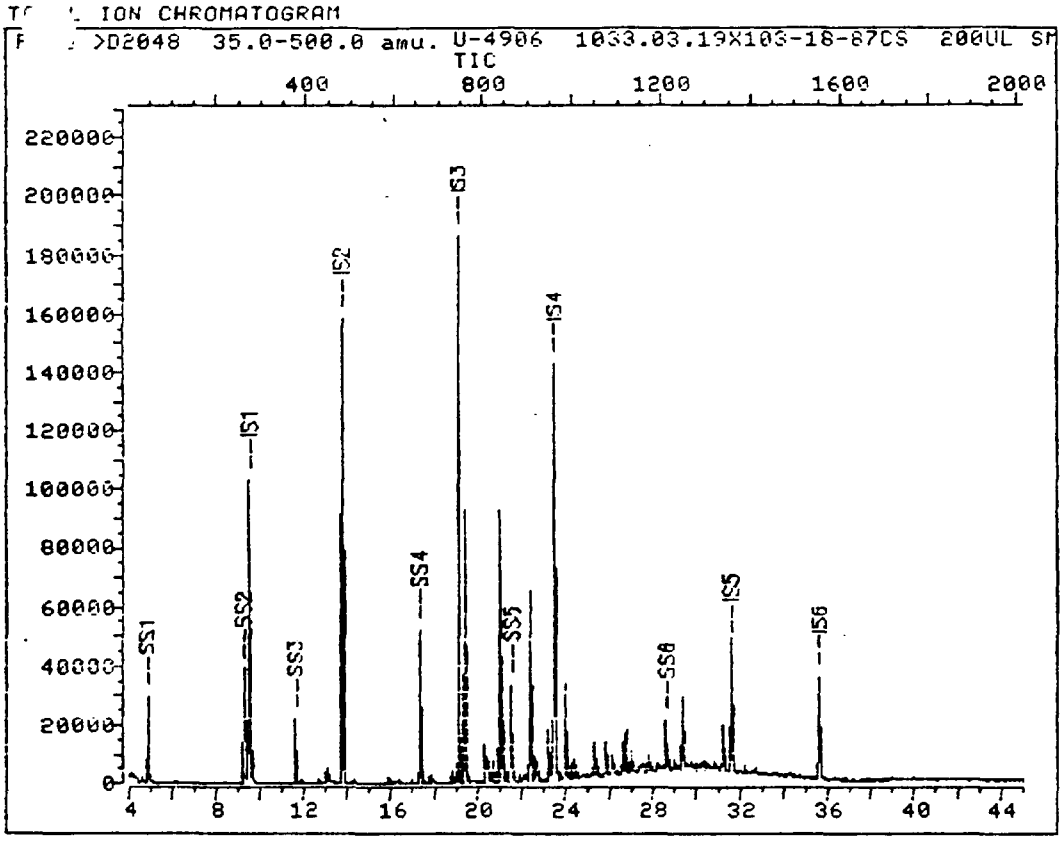
Operator ID: USERS Quant Rev: 4 Quant Time: 870220 15:38
Output File: \C6897::02 Injected at: 870220 14:52
Data File: \C6897::07 Dilution Factor: 1.00
Name: U-4906 # 1077.01 DC-P2-54
Misc: 02-20-87CS 4.09g SOIL IN 5ML DI + 10UL IS/SS

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	11.65	251	26422	250.00	NGS	100
6)	METHYLENE CHLORIDE		84	8.31	165	2847	15.51	NGS	100
7)	ACETONE		43	9.16	187	1161252	3551.61	NGS E	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.52	325	75793	208.79	NGS	92
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.24	524	123885	250.00	NGS 84	100
17)	2-BUTANONE		72	14.67	329	16553	260.96	NGS	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.09	649	104561	250.00	NGS	100
32)	4-METHYL-2-PENTANONE		43	22.90	541	50177	97.85	NGS	90
~~33)~~	~~2-HEXANONE~~		~~43~~	~~23.75~~	~~563~~	~~2467~~	~~20.13~~	~~NGS~~ 100	100
33)	2-HEXANONE		43	24.53	583	3331	8.12	NGS	100
36)	TOLUENE-D8	(SURR)	98	25.97	620	143721	240.05	NGS 96	93
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.68	767	74663	219.03	NGS 80	100
43)	1,3-DICHLOROBENZENE		146	39.32	964	10267	10267.00	NO CALIB	100
43)	1,3-DICHLOROBENZENE		146	40.02	982	16466	16466.00	NO CALIB	100
44)	1,2-DICHLOROBENZENE			39.32	964	10267	10267.00	NO CALIB	100
44)	1,2-DICHLOROBENZENE			40.02	982	16466	16466.00	NO CALIB	100
45)	1,4-DICHLOROBENZENE		146	39.32	964	10267	10267.00	NO CALIB	100
45)	1,4-DICHLOROBENZENE		146	40.02	982	16466	16466.00	NO CALIB	100

* Compound is ISTD

ok
cw

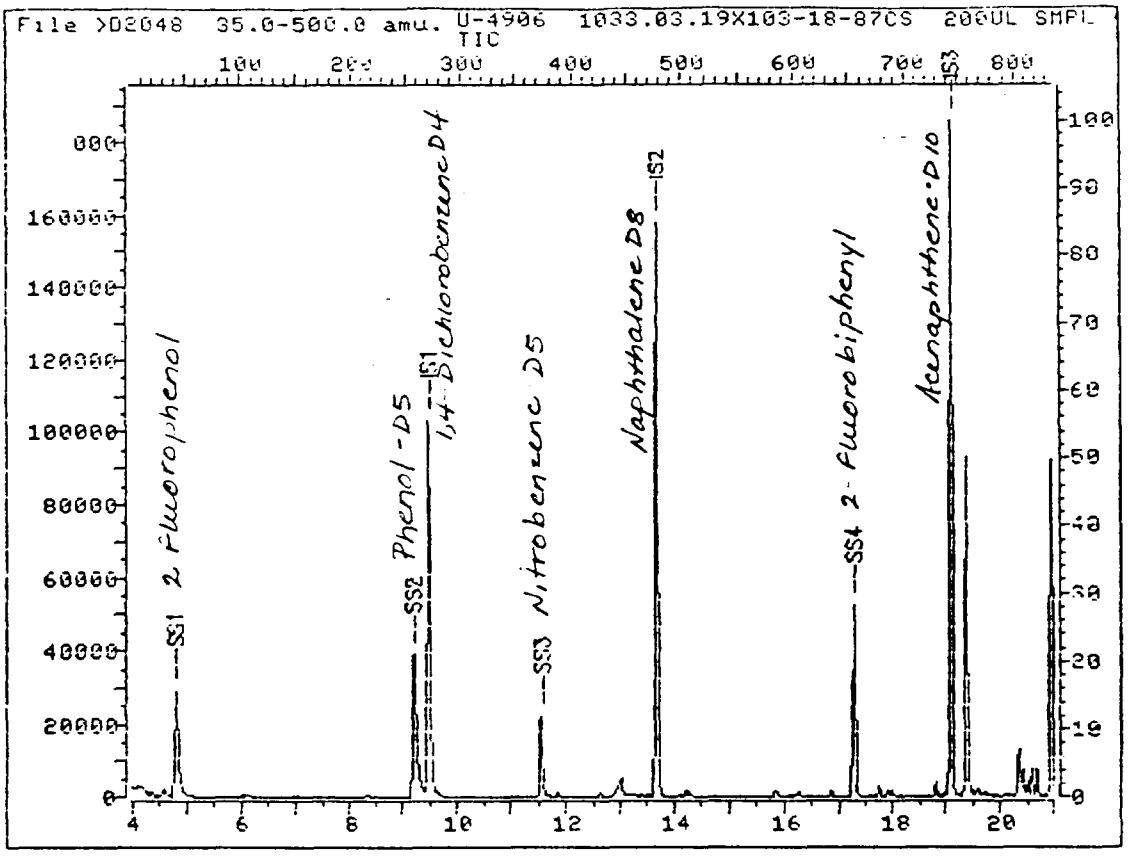


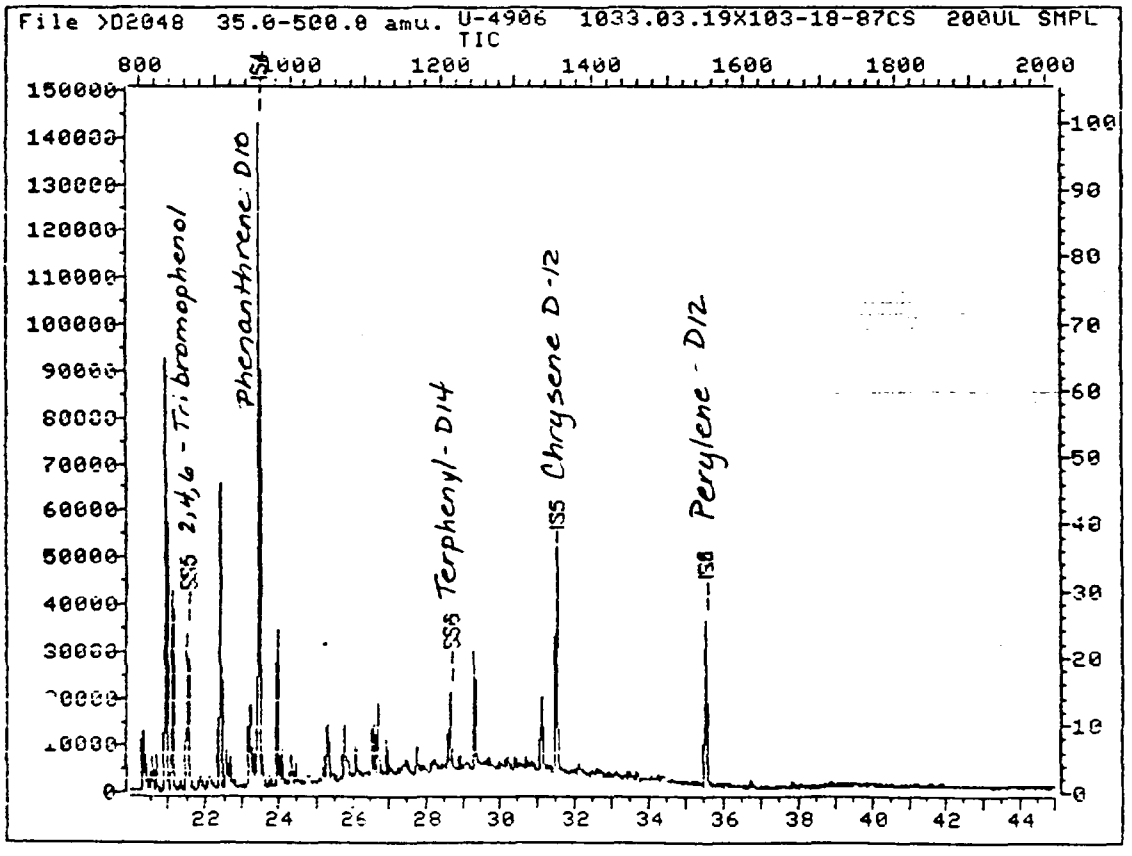
Data File: >D2048::D1
Name: U-4906 1033.03.19X1 DC-P2-54
Misc: 03-18-87CS 200UL SMPL + 200UL A/P + 4UL IS (2X) BTL# 7

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

Operator ID: USER8
Quant Time: 870318 21:25
Injected at: 870318 20:37

DC-P2-54


File >D2048 35.0-500.0 amu. U-4906 1033.03.19X103-18-87CS 200UL SMPL
TIC
2 Fluorophenol
SS1
Phenol-D5
SS2
1,4-Dichlorobenzene D4
IS1
Nitrobenzene D5
SS3
Naphthalene D8
IS2
2-Fluorobiphenyl
SS4
Acenaphthene-D10
IS3


File >D2048 35.0-500.0 amu. U-4906 1033.03.19X103-18-87CS 200UL SMPL
TIC
2,4,6-Tribromophenol
SS5
Phenanthrene-D10
IS4
Terphenyl-D14
SS6
Chrysene D-12
IS5
Perylene-D12
IS6

QUANT REPORT

erator ID: USER8 Quant Rev: 4 Quant Time: 870318 21:25
tput File: ^D2048::Q2 Injected at: 870318 20:37
ta File: >D2048::D1 Dilution Factor: 2.00
me: U-4906 1033.03.19X1 DC-P2-54
sc: 03-18-87CS 200UL SMPL + 200UL A/P + 4UL IS (2X) BTL# 7

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

	Compound		R.T.	Scan#	Area	Conc	Units		q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.48	271	52269	40.00	UG/L	84
2)	PHENOL-D5	(SURR)	99	9.19	257	43291	45.96	UG/L	96
5)	2-FLUOROPHENOL	(SURR)	112	4.79	41	27855	46.02	UG/L	85
6)	PHENOL		94	9.23	259	14426	13.72	UG/L yes	63
7)	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.55~~	~~373~~	~~3841~~	~~4.31~~	~~UG/L~~ cw	98
9)	*NAPHTHALENE-D8	(IS)	136	13.67	477	186161	40.00	UG/L	100
0)	NITROBENZENE-D5	(SURR)	82	11.55	373	23320	25.71	UG/L	88
4)	*ACENAPHTHENE-D10	(IS)	162	19.11	744	108593	40.00	UG/L	95
3)	2-FLUOROBIPHENYL	(SURR)	172	17.28	654	43150	26.09	UG/L	96
1)	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.11~~	~~744~~	~~20245~~	~~11.46~~	~~UG/L~~ cw	100
8)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.54	863	9827	39.99	UG/L	99
2)	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.11~~	~~744~~	~~14505~~	~~34.57~~	~~UG/L~~ cw	100
5)	*PHENANTHRENE-D10	(IS)	188	23.49	959	138496	40.00	UG/L	82
3)	DI-N-BUTYLPHTHALATE		149	26.08	1086	7036	3.75	UG/L yes	97
5)	*CHRYSENE-D12	(IS)	240	31.52	1353	48765	40.00	UG/L	100
8)	TERPHENYL-D14	(SURR)	244	28.65	1212	14643	22.52	UG/L	100
4)	*PERYLENE-D12	(IS)	264	35.54	1550	35690	40.00	UG/L	100

* Compound is ISTD

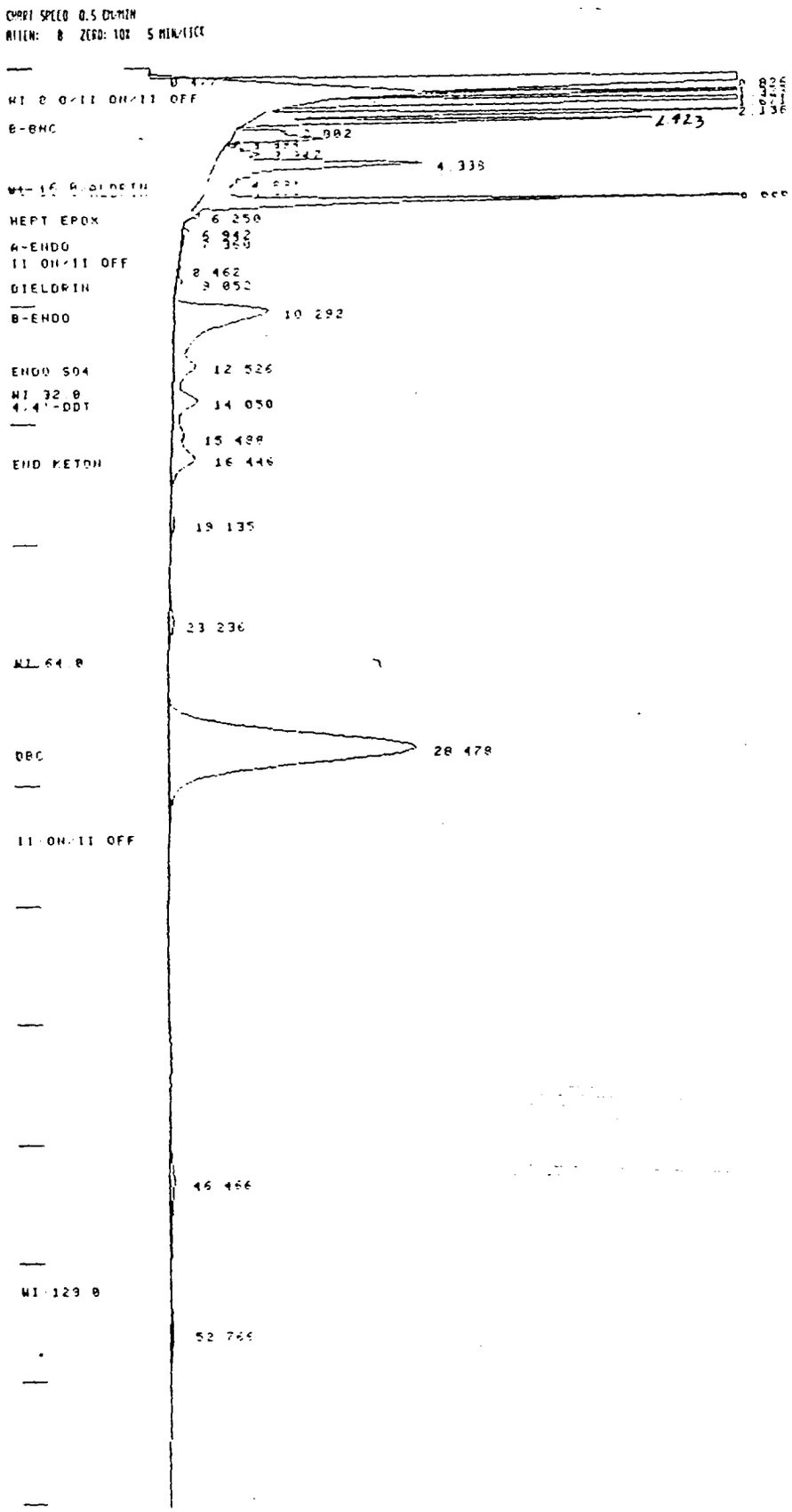
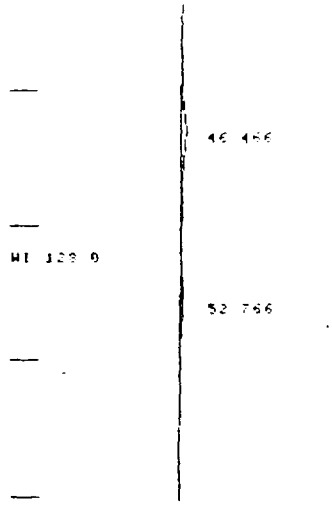


CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 10% 5 MIN/TICK
WI 8 0/II ON/II OFF
B-BHC
2.423
4.338
HEPT EPOX
6 250
A-ENDO
II ON/II OFF
8 462
DIELDRIN
B-ENDO
10 292
ENDO SO4
12 526
WI 32 0
4,4'-DDT
14 050
15 488
END KETON
16 446
19 135
23 236
WI 64 0
DBC
28 478
II ON/II OFF
46 466
WI 129 0
52 766

DC-P2-54



CHANNEL: 1A - 1 TITLE: RUN# 18 23:11 23 FEB 87

DC-P2-54

SAMPLE: 1033 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/[illegible]	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.326		1136362	BV	5.25
2		0.0000	1.671		1623187	VB	5.31
3	[illegible]	219.6709	2.136	-0.104	958924	BV	6.13
4	[illegible]	281.2327	2.423	0.043	387011	VV	6.50
5	[illegible]	11.6381	2.802	0.122	43859	VV	? 7.94
6		0.0000	2.920		43092	VV	? 6.44
7		0.0000	3.148		153903	VV	? 14.63
8		0.0000	3.733		25411	VV	? 10.13
9	[illegible]	21.9111	3.947	-0.173	73692	VV	? 13.13
10		0.0000	4.338		544793	VV	14.25
11		0.0000	5.526		2131555	VV	12.56
12	[illegible]	204.2868	10.292	0.282	787691	BV	50.81
13	[illegible]	55.3677	12.526	-0.254	148030	VV	? 47.19
14	[illegible]	64.1334	14.050	-0.148	151975	VV	39.25
15		0.0000	15.488		62948	VV	? 62.63
16		0.0000	19.135		21642	BB	42.63
17		0.0000	23.236		44270	BB	61.00
18	DBC	958.0945	28.478	0.168	2768362	BB	83.31
19		0.0000	46.466		81520	BB	122.00
20		0.0000	52.766		30577	BB	98.63
TOTALS:		1816.335		-0.056	11138834		

DETECTED PKS: 33 REJECTED PKS: 13

DIVISOR: 0.15000 MULTIPLIER: 1000.00000

NOISE: 11.4 OFFSET: -22

RACK: 2 VIAL: 3 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

POST RUN:
SAVE FILE: RAW DC1190

SAMPLE NUMBER DC-P5-55

DC-P5-55

Organics Analysis Data Sheet
(Page 1)

ıbc ·tory.Name: ecology and environment, inc.

ıb Sample ID No: 1034

ımple Matrix: Soil

ıta Release Authorized By: C Stojtowicz

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

QC Report No:

Contract No: IL-3140

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)
4-87-3	Chloromethane	10u
4-83-9	Bromomethane	10u
5-01-4	Vinyl Chloride	10u
5-00-3	Chloroethane	10u
5-09-2	Methylene Chloride	2 BJ
7-64-1	Acetone	270 BE
5-15-0	Carbon Disulfide	5u
5-35-4	1, 1-Dichloroethene	5u
5-34-3	1, 1-Dichloroethane	5u
56-60-5	Trans-1, 2-Dichloroethene	5u
7-66-3	Chloroform	5u
07-06-2	1, 2-Dichloroethane	5u
3-93-3	2-Butanone	18 B
-55-6	1, 1, 1-Trichloroethane	5u
-23-5	Carbon Tetrachloride	5u
08-05-4	Vinyl Acetate	10u
-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.

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

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.

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. [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

Laboratory Name Ecology & Environment, Inc

Case No IL-3140

Sample Number
DC-P5-55

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) 19

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
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	51 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-P5-55

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) 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	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_l = 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_l 4

Laboratory Name Ecology & Environment Inc.

Case No U-4906, 4928, 4971, 4989

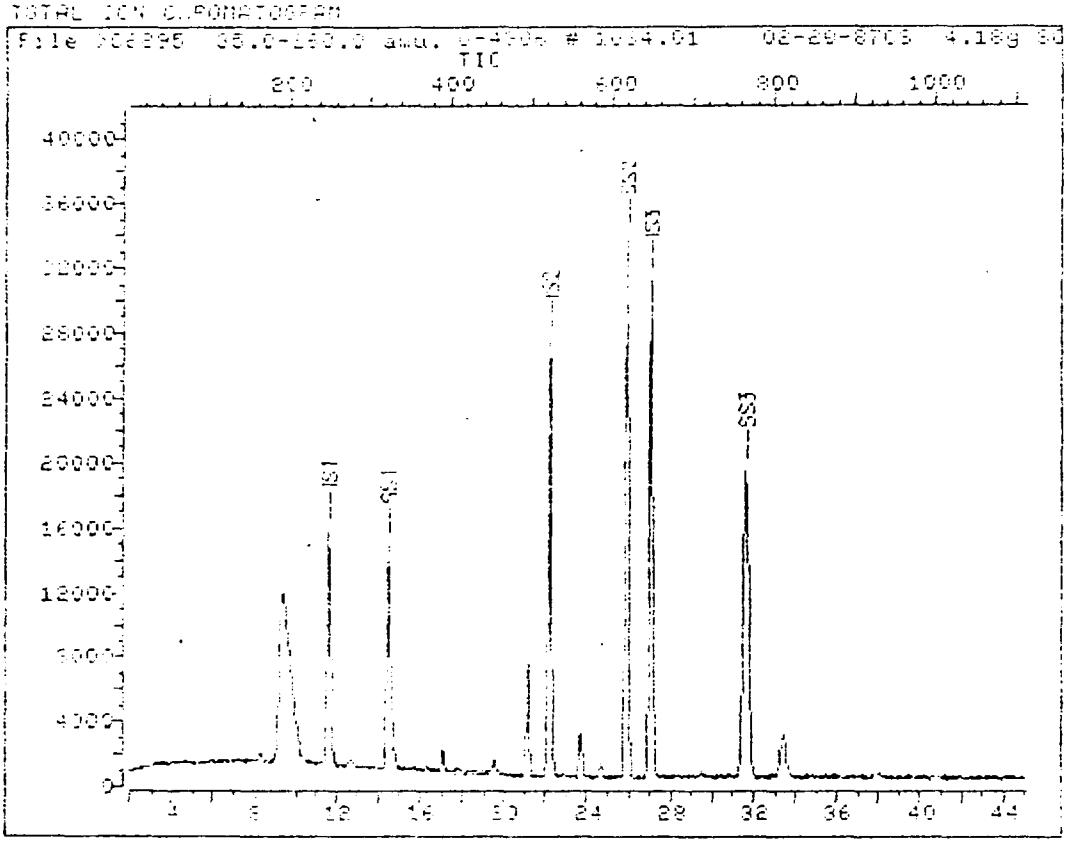
Sample Number
DC-P5-55

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	(RT) or Scan Number MCAC	Estimated Concentration (ug/l or ug/kg)
1.		Hexane isomer	VOA	21.2	16 BJ
2.					
3.		No TIC's in BNA fraction			
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.					
30.					

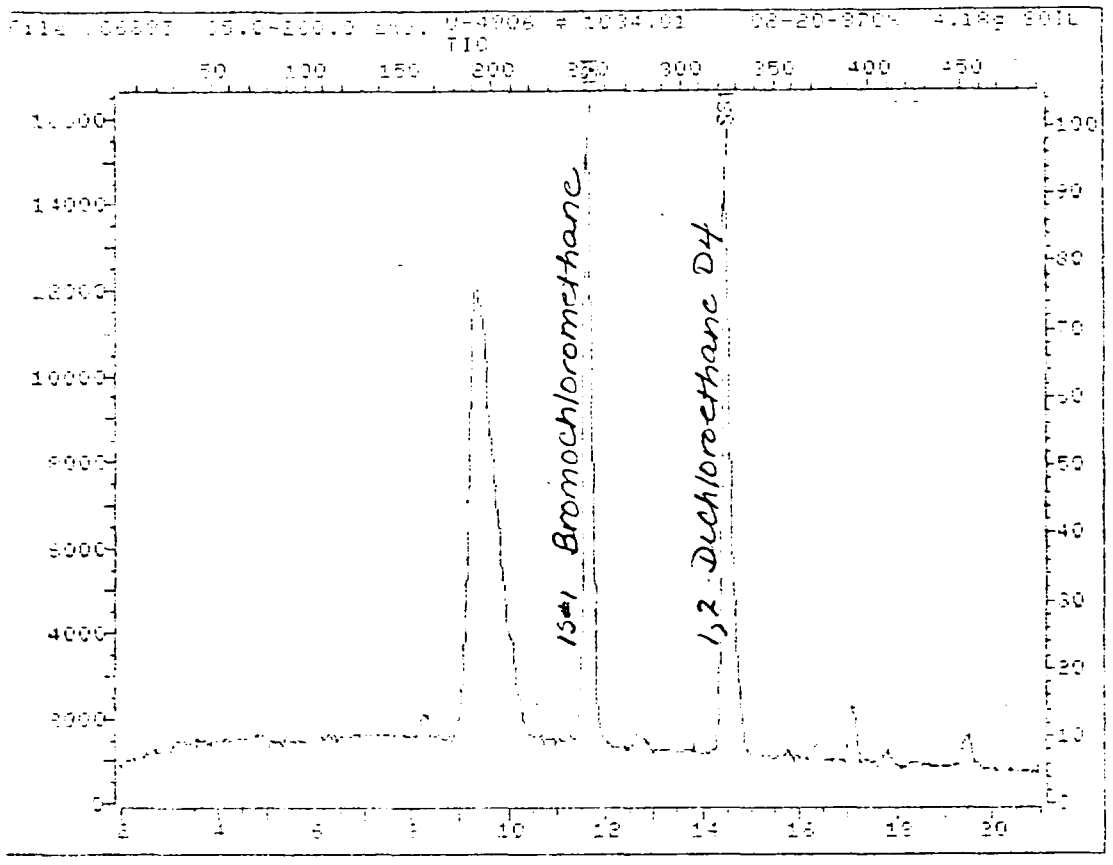
TOTAL ION CHROMATOGRAM



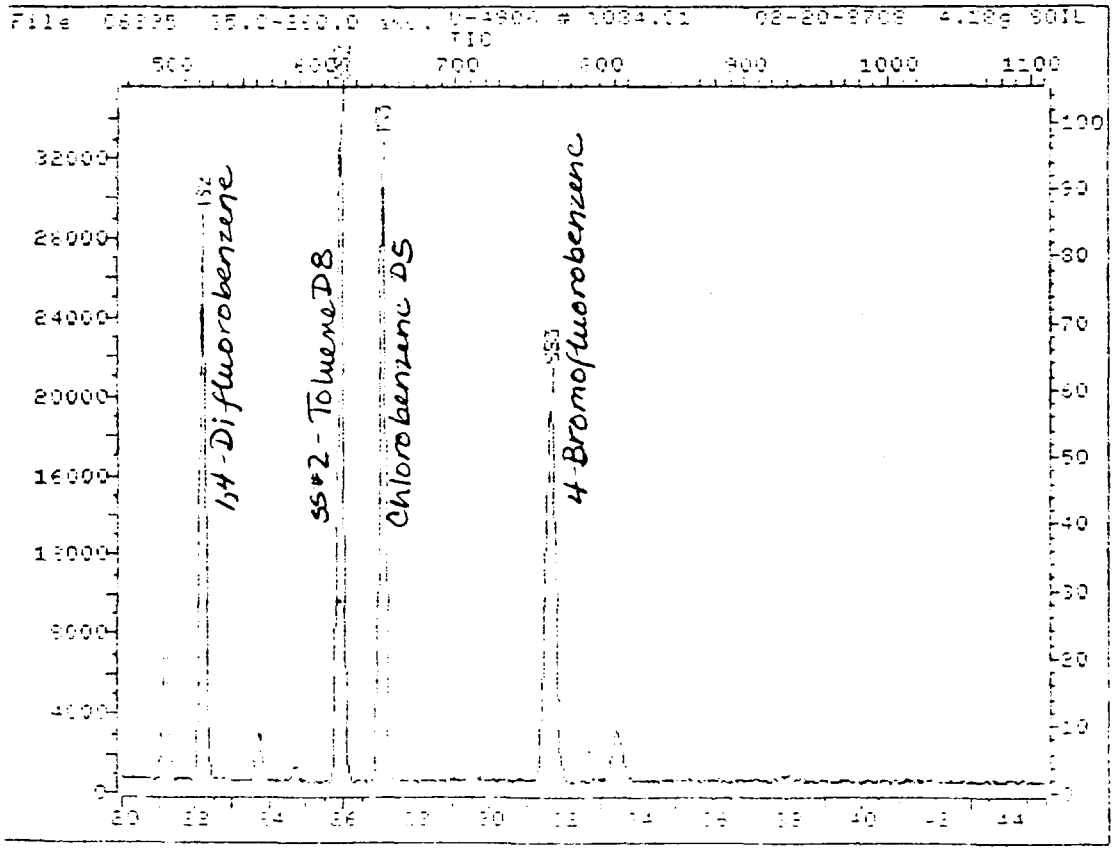
Data File: 06895::D3
Name: U-4906 # 1034.01 DC-P5-55
Misc: 02-20-87CS 4.18g SOIL IN 5ML DI + 10UL IS/SS

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

Operator ID: USER8
Quant Time: 870220 13:54
Injected at: 870220 13:08


TIC
1,4-Bromochloromethane
1,2-Dichloroethane D4

DC-P5-55


TIC
1,4-Difluorobenzene
SS#2-Toluene D8
Chlorobenzene D5
4-Bromofluorobenzene

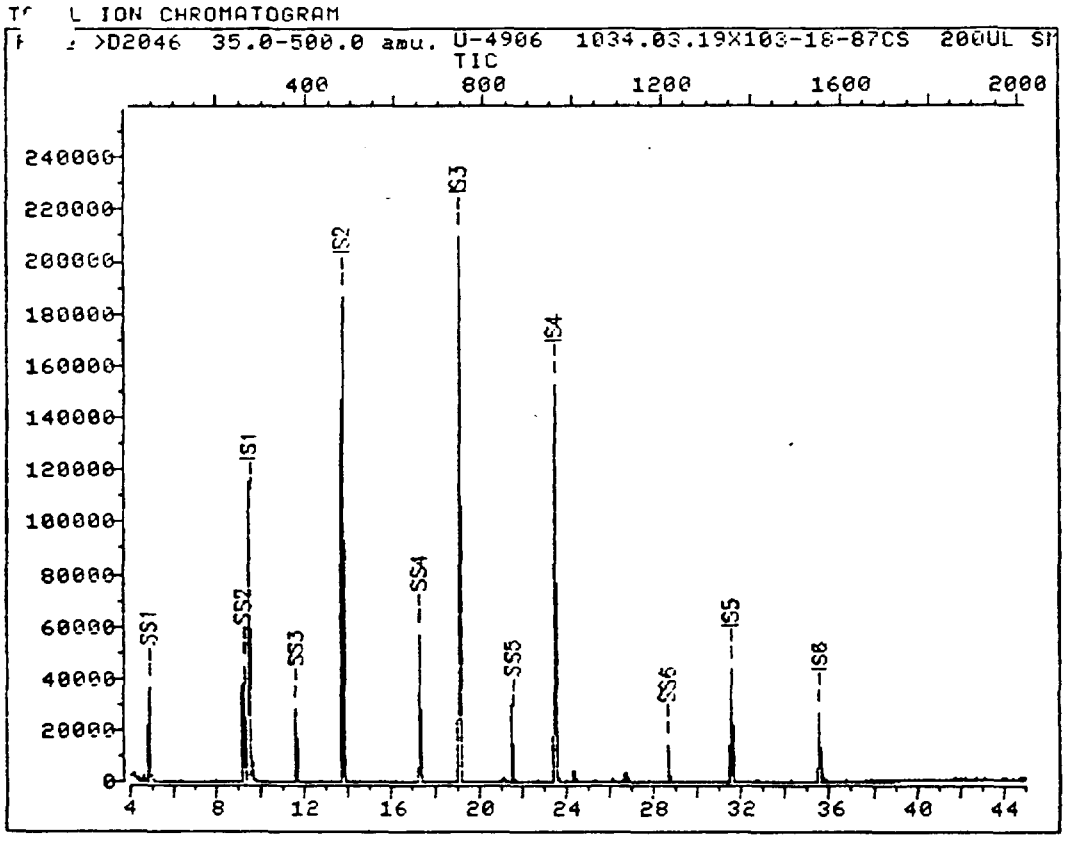
QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 870220 13:54
Output File: ^C6895::02 Injected at: 870220 13:08
Data File: >C6895::03 Dilution Factor: 1.00
Name: U-4906 # 1034.01 DC-P5-55
Misc: 02-20-87CS 14.13g SOIL IN 5ML DI + 10UL IS/SS

ID File: VOACRS::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	11.65	251	20129	250.00	NGS	100
6)	METHYLENE CHLORIDE	84	8.27	164	1396	9.98	NGS	100
7)	ACETONE	43	9.36	192	282988	1136.08	NGS	100
15)	1,2-DICHLOROETHANE-D4(SURR)	65	14.49	324	58089	210.05	NGS 84 ✓	83
16)	*1,4-DIFLUOROBENZENE (IS)	114	22.20	523	109528	250.00	NGS	100
17)	2-BUTANONE	72	14.67	329	4188	74.68	NGS	100
31)	*CHLOROBENZENE-D5 (IS)	117	27.05	648	91854	250.00	NGS	100
~~33)~~	~~2-HEXANONE~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~NGS~~	~~100~~
36)	TOLUENE-D8 (SURR	98	25.92	619	127392	242.21	NGS 97 ✓	95
40)	4-BROMOFLUOROBENZENE(SURR)	95	31.64	766	65014	217.10	NGS 87 ✓	100

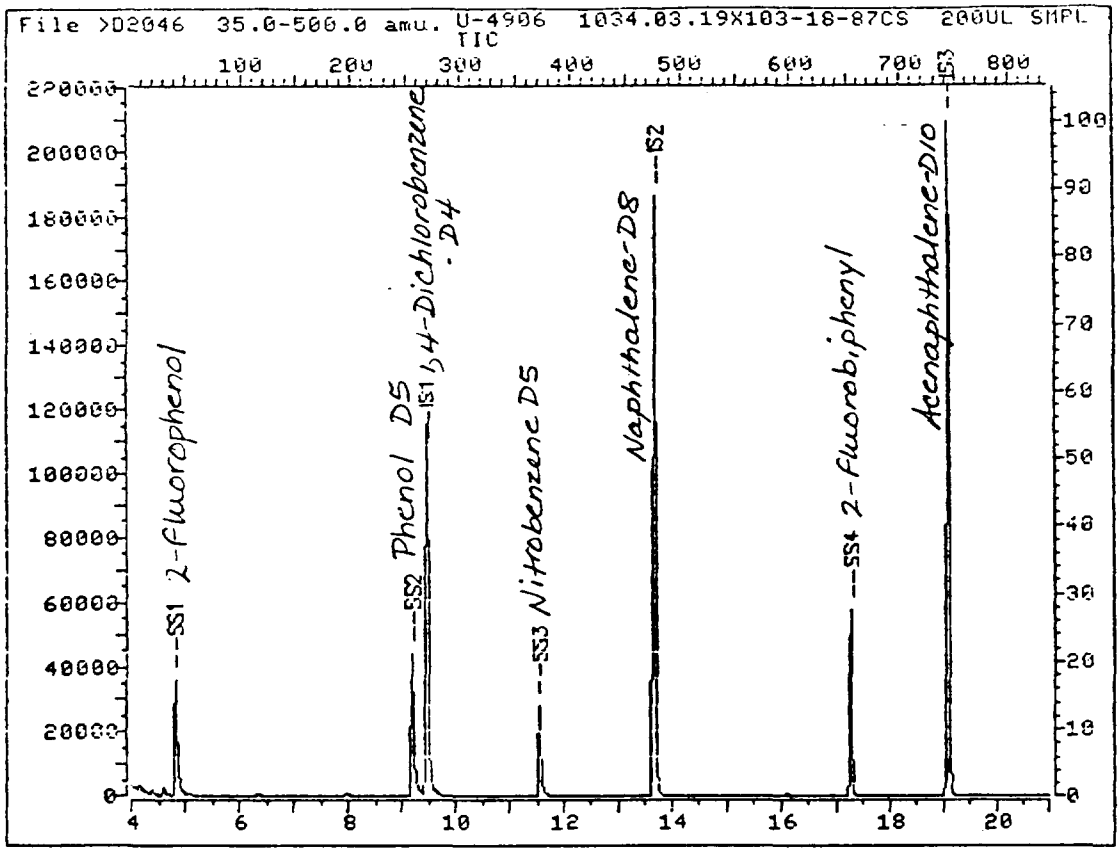
* Compound is ISTD



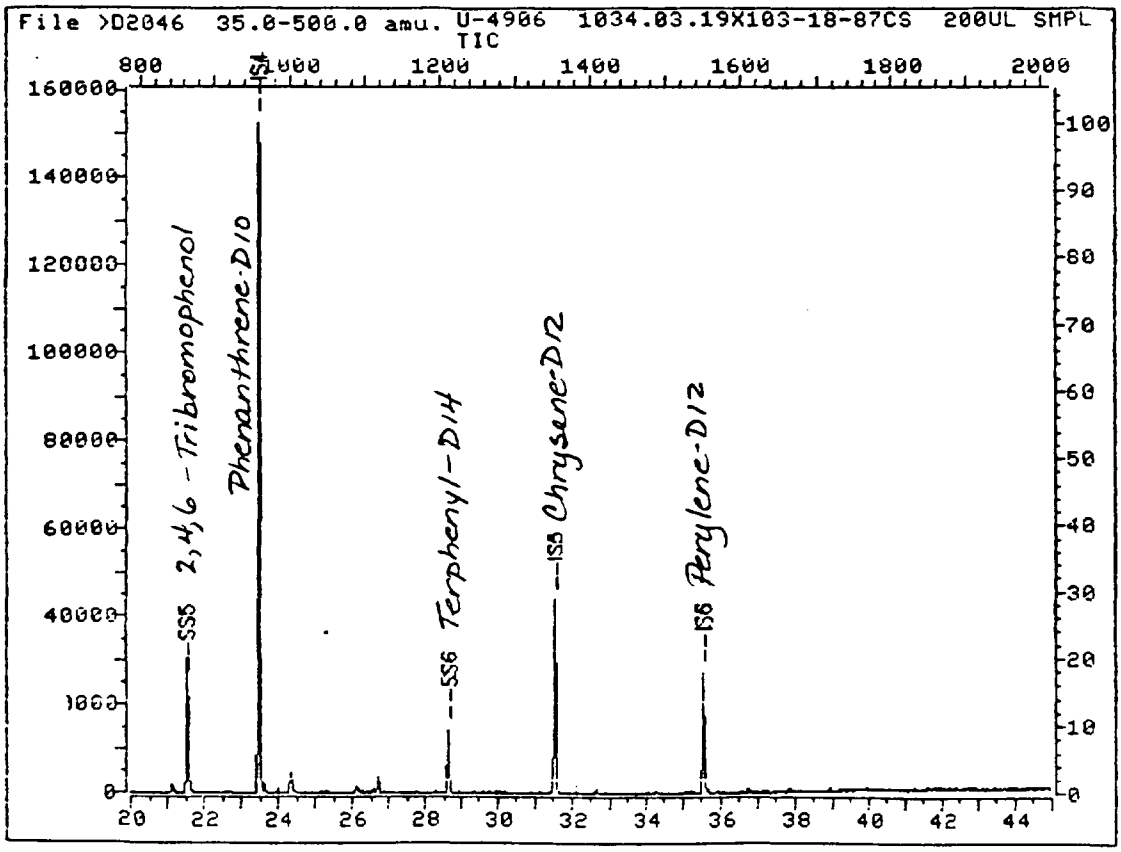
Data File: >D2046::D1
Name: U-4906 1034.03.19X1 DC-P5-55
Misc: 03-18-87CS 200UL SMPL + 200UL A/P + 4UL IS (2X) BTL# 5

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

Operator ID: USER8
Quant Time: 870318 19:32
Injected at: 870318 18:44


File >D2046 35.0-500.0 amu. U-4906 1034.03.19X103-18-87CS 200UL SMPL
TIC
SS1 2-Fluorophenol
SS2 Phenol D5
IS1 1,4-Dichlorobenzene-D4
SS3 Nitrobenzene D5
IS2 Naphthalene-D8
SS4 2-Fluorobiphenyl
IS3 Acenaphthalene-D10

DC-P5-55


File >D2046 35.0-500.0 amu. U-4906 1034.03.19X103-18-87CS 200UL SMPL
TIC
SS5 2,4,6-Tribromophenol
Phenanthrene-D10
SS6 Terphenyl-D14
IS5 Chrysene-D12
IS6 Perylene-D12

QUANT REPORT

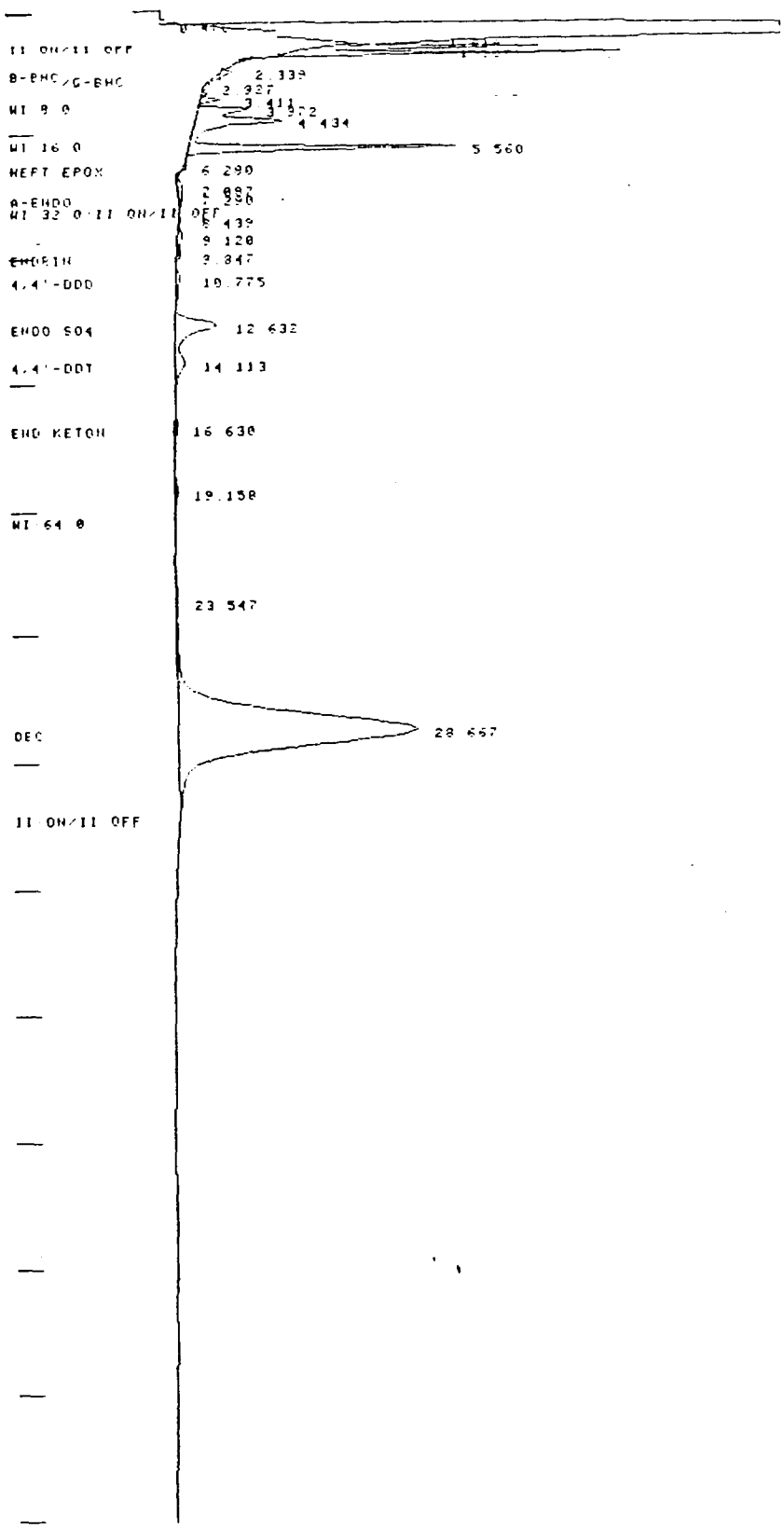
perator ID: USER8 Quant Rev: 4 Quant Time: 870318 19:32
utput File: ^D2046::Q2 Injected at: 870318 18:44
ata File: >D2046::D1 Dilution Factor: 2.00
ame: U-4906 1034.03.19X1 DC-P5-55
isc: 03-18-87CS 200UL SMPL + 200UL A/P + 4UL IS (2X) BTL# 5

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

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.47	270	63423	40.00 UG/L	88
2)	PHENOL-D5	(SURR)	99	9.20	257	47325	41.41 UG/L	98
5)	2-FLUOROPHENOL	(SURR)	112	4.80	41	32394	44.11 UG/L	75
17)	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~78~~	~~11.55~~	~~372~~	~~4470~~	~~4.15~~ UG/L CW	87
19)	*NAPHTHALENE-D8	(IS)	136	13.68	477	228761	40.00 UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	11.55	372	26382	23.67 UG/L	92
24)	*ACENAPHTHENE-D10	(IS)	162	19.10	743	133597	40.00 UG/L	95
33)	2-FLUOROBIPHENYL	(SURR)	172	17.29	654	51069	25.10 UG/L	94
31)	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.10~~	~~743~~	~~25897~~	~~11.92~~ UG/L CW	100
33)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.53	862	10862	35.93 UG/L	99
32)	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.10~~	~~743~~	~~18079~~	~~35.02~~ UG/L CW	100
35)	*PHENANTHRENE-D10	(IS)	188	23.48	958	179063	40.00 UG/L	92
39)	DI-N-BUTYLPHTHALATE		149	26.11	1087	3718	1.53 UG/L-JES	98
55)	*CHRYSENE-D12	(IS)	240	31.53	1353	52845	40.00 UG/L	100
58)	TERPHENYL-D14	(SURR)	244	28.66	1212	16291	23.12 UG/L	100
64)	*PERYLENE-D12	(IS)	264	35.54	1550	32816	40.00 UG/L	100

* Compound is ISTD

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



CHANNEL: 1A - 1 TITLE: RUN 20 1:19 21 FEB 87 DC-P5-55

SAMPLE: 1031 METHOD: CEFA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	WI.2 (SEC)
1		0.0000	1.279		145059	BV	4.13

DC-P5-55

CHANNEL: IR - 1 TITLE: RUN 30 1:19 24 FEB 87

SAMPLE: 1031 METHOD: CEFA CALCULATION: CS - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.276		145059	BV	4.13
2		0.0000	1.567		365420	VB	4.86
3		0.0020	3.411		23936	VB	7.44
4	[illegible]	28.9329	3.922	-0.148	97308	BV	12.75
5		0.0000	4.434		282639	VV	16.13
6		0.0000	5.560		415010	VB	12.25
7	[illegible]	6.1880	10.778	-0.125	20435	VV	34.63
8	[illegible]	66.5414	12.632	-0.148	477904	VV	31.69
9	[illegible]	21.7537	14.113	-0.077	51549	VB	39.13
10	DBC	878.9686	28.667	0.357	2537443	VB	83.13

TOTALS: 1002.284 -0.141 4577241

DETECTED PKS: 29 REJECTED PKS: 19

DIVISOR: 0.15000 MULTIPLIER: 1000.00000

NOISE: 11.4 OFFSET: 3

RACK: 2 VIAL: 5 INJ: 1

NOTES:
NOTEBOOK:259-115,116 ANALYST: RICHARD SAMSON
SECURE AREA: 0 JOB#:0-4672,1996
INST: VARIAN 6000 ZR 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 DC1192

CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 102 5 MIN/TICK

SAMPLE NUMBER DC-P5-56

DC - P5 - 56

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.
Case No: U-4906, 4928, 4971, 4989.
Lab Sample ID No: 1035
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 8.4
Percent Moisture: (Not Decanted) 20

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	4BJ
67-64-1	Acetone	330 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	21 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.

alue	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. Simple component pesticides ≥40 ng/ml 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

Laboratory Name Ecology & Environment, Inc

Case No IL-3140

Sample Number
DC-P5-56

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared 03-05-87

Date Analyzed 03-26-87

Conc/Dil Factor 2

Percent Moisture (Decanted) 20

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
-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	260 J
206-44-0	Fluoranthene	330u
129-00-0	Pyrene	330u
85-68-7	Butylbenzylphthalate	330u
91-94-1	3,3-Dichlorobenzidine	1600u
56-55-3	Benzo(a)Anthracene	330u
117-81-7	bis(2-Ethylhexyl)Phthalate	180 J
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 V-4906, 4928, 4971, 4989

Sample Number
DC-P5-56

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) 20

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_t = 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

Laboratory Name Ecology & Environment Inc.

Case No U-4906, 4928, 4971, 4989

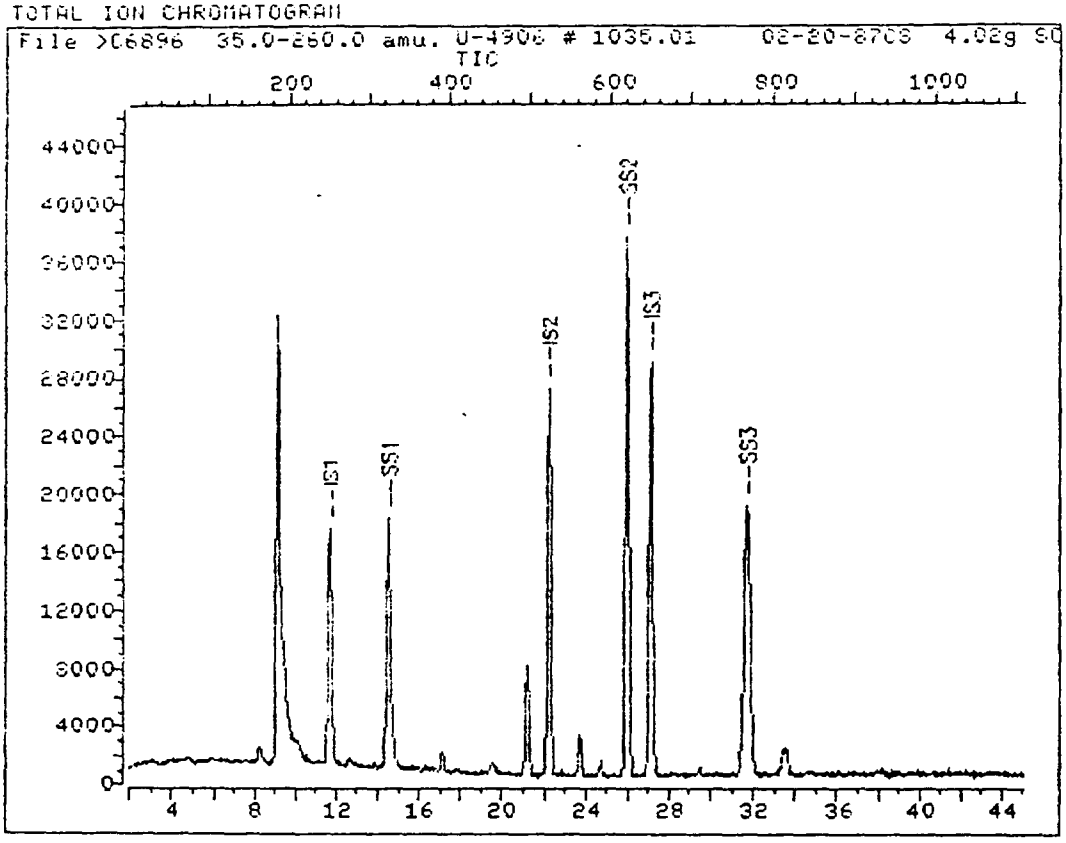
Sample Number DC-P5-56

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number MCC-IC	Estimated Concentration (ug/l or ug/kg)
1.		Hexane isomer	VOA	21.2	17 BJ
2.					
3.		No TIC's in BNA fraction			
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.					
30.					

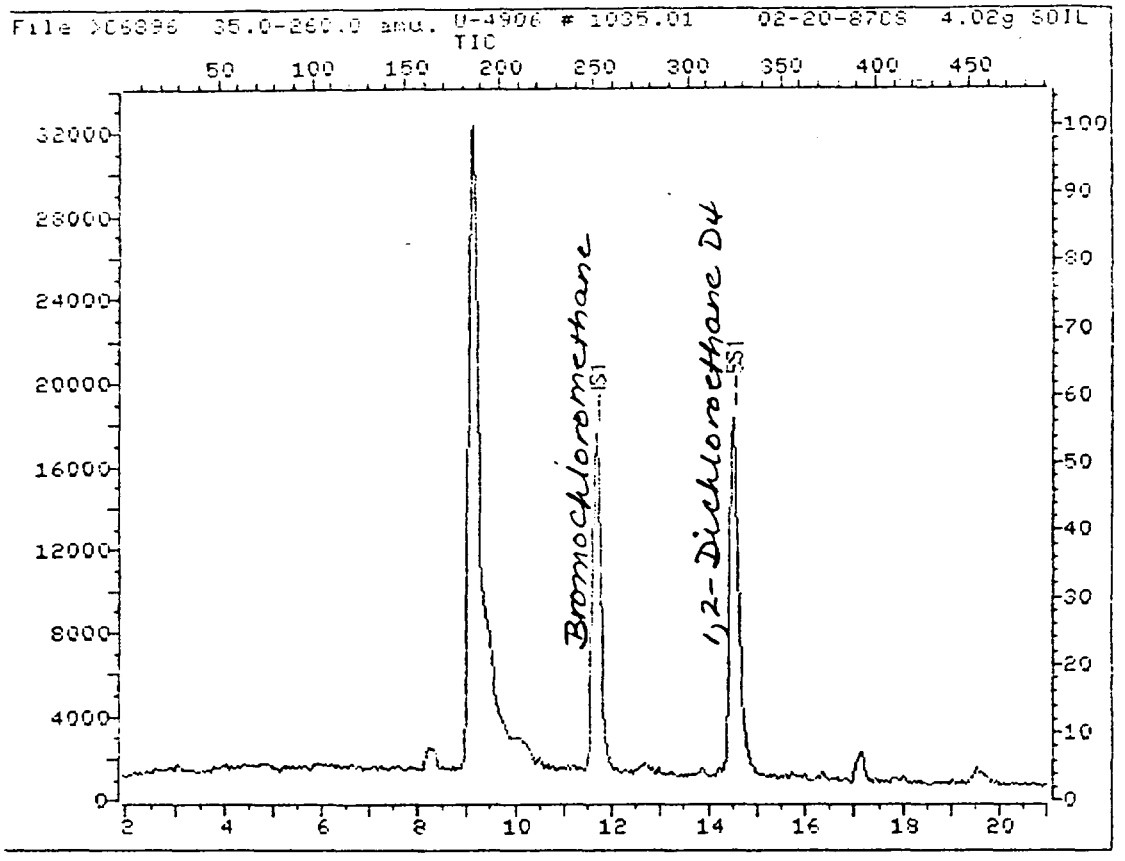
TOTAL ION CHROMATOGRAM



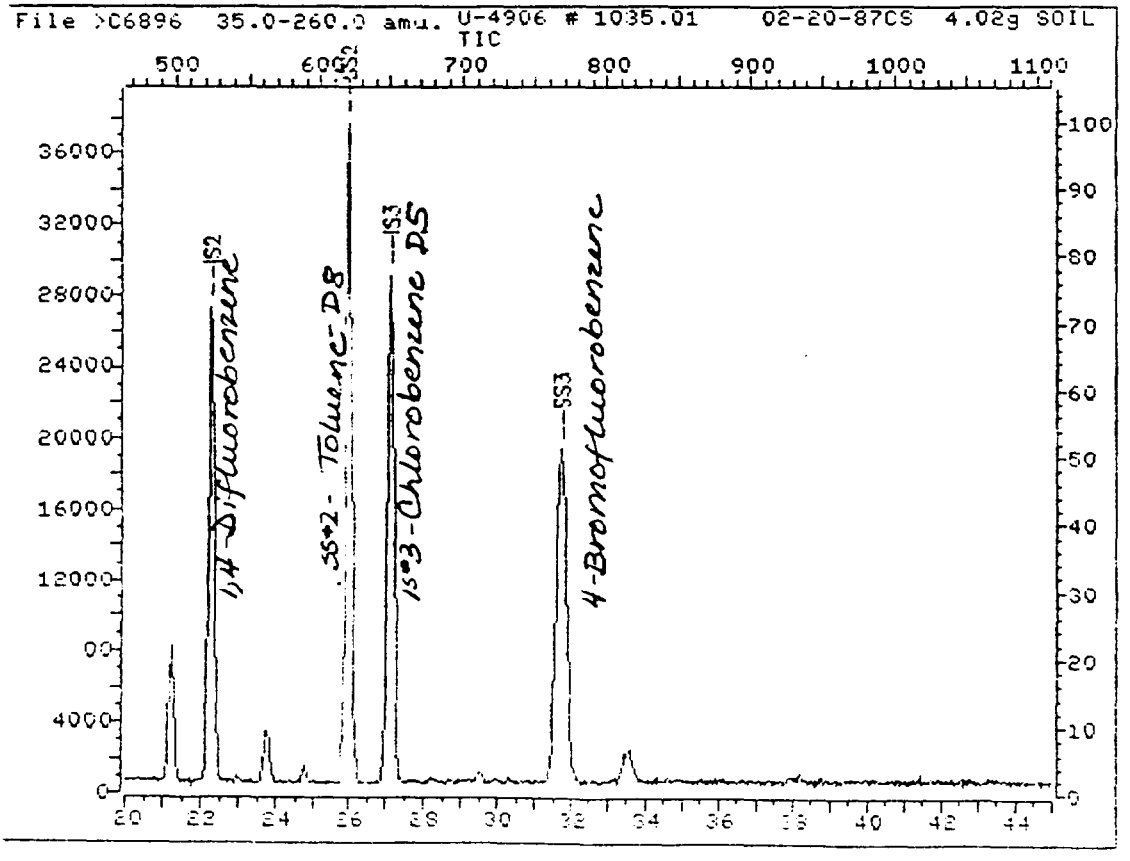
Data File: >C6896::D3
Name: U-4906 # 1035.01 DC-PS-56
Misc: 02-20-87CS 4.02g SOIL IN 5ML DI + 10UL IS/SS

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

Operator ID: USER8
Quant Time: 870220 14:46
Injected at: 870220 14:00


File >C6896 35.0-260.0 amu. U-4906 # 1035.01 02-20-87CS 4.02g SOIL
TIC
Bromochloromethane
IS1
1,2-Dichloroethane D4
SS1

DC-P5-56


File >C6896 35.0-260.0 amu. U-4906 # 1035.01 02-20-87CS 4.02g SOIL
TIC
1,4-Difluorobenzene
IS2
SS2
Toluene-D8
IS3
Chlorobenzene D5
SS3
4-Bromofluorobenzene

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 870220 14:46
Output File: ^C6896::02 Injected at: 870220 14:00
Data File: ^C6896::D3 Dilution Factor: 1.00
Name: U-4906 # 1035.01 DC-P5-56
Misc: 02-20-87CS 4.00g SOIL IN 5ML DI 10UL IS/SS

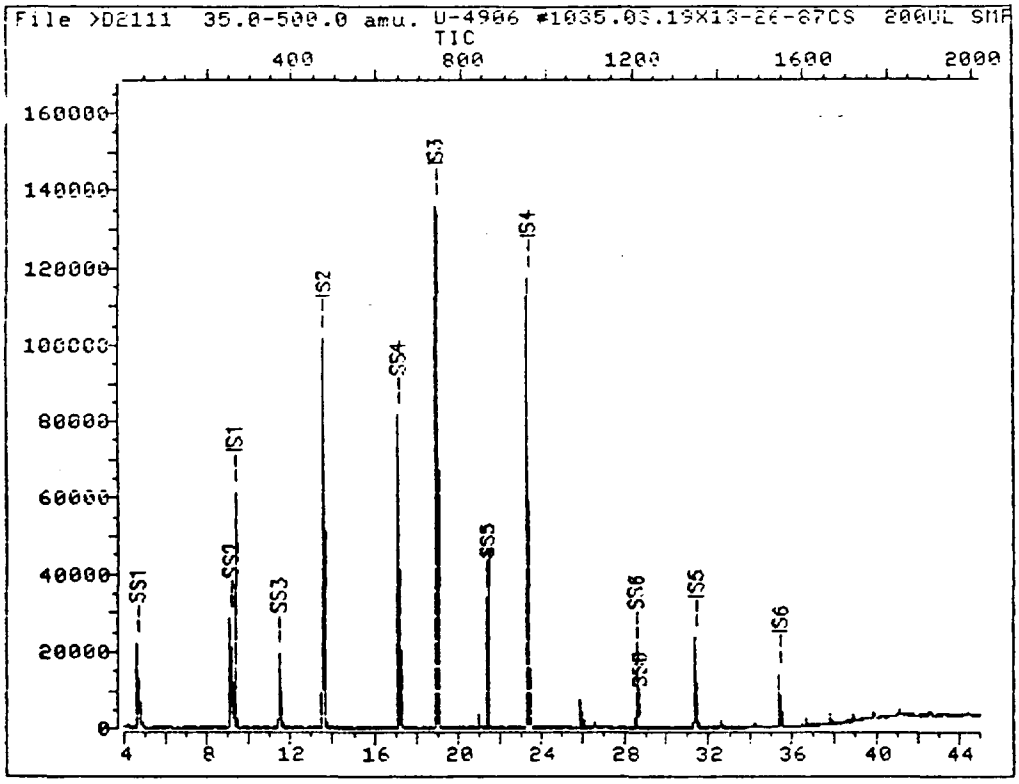
ID File: VOACPS::02
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870220 12:09

	Compound			R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.68	252	23560	250.00	NGS	100
6)	METHYLENE CHLORIDE		84	8.27	164	2872	17.54	NGS	100
7)	ACETONE		43	9.12	186	392061	1344.75	NGS	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.52	325	76149	235.25	NGS 94	83
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.24	524	110213	250.00	NGS	100
17)	2-BUTANONE		72	14.63	328	4661	82.60	NGS	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.13	650	87784	250.00	NGS	100
~~33)~~	~~2-HEXANONE~~		~~43~~	~~13.72~~	~~363~~	~~4916~~	~~14.27~~	~~NGS~~ no cut	~~100~~
36)	TOLUENE-D8	(SURR)	98	25.96	620	141328	281.16	NGS 112	94
40)	4-BROMOFLUOROBENZENE	(SURR)	93	31.72	768	69458	242.70	NGS 97	100

* Compound is ISTD

OK
CW

TOTAL ION CHROMATOGRAM

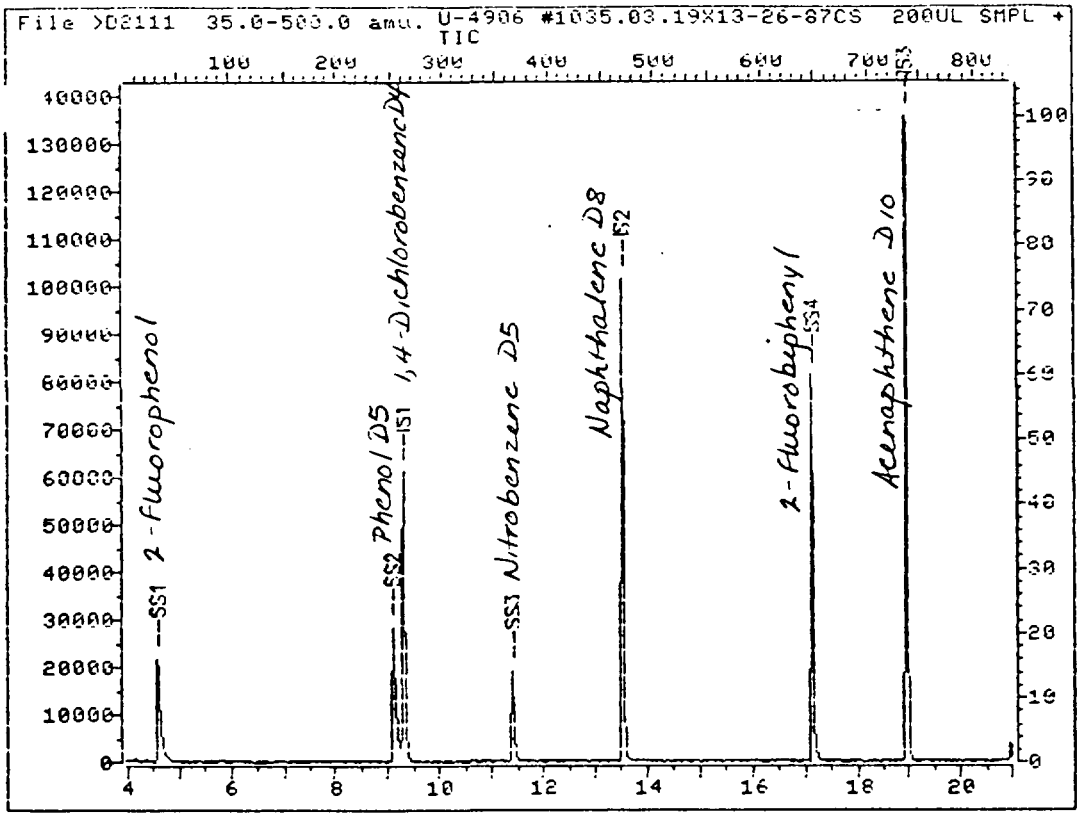


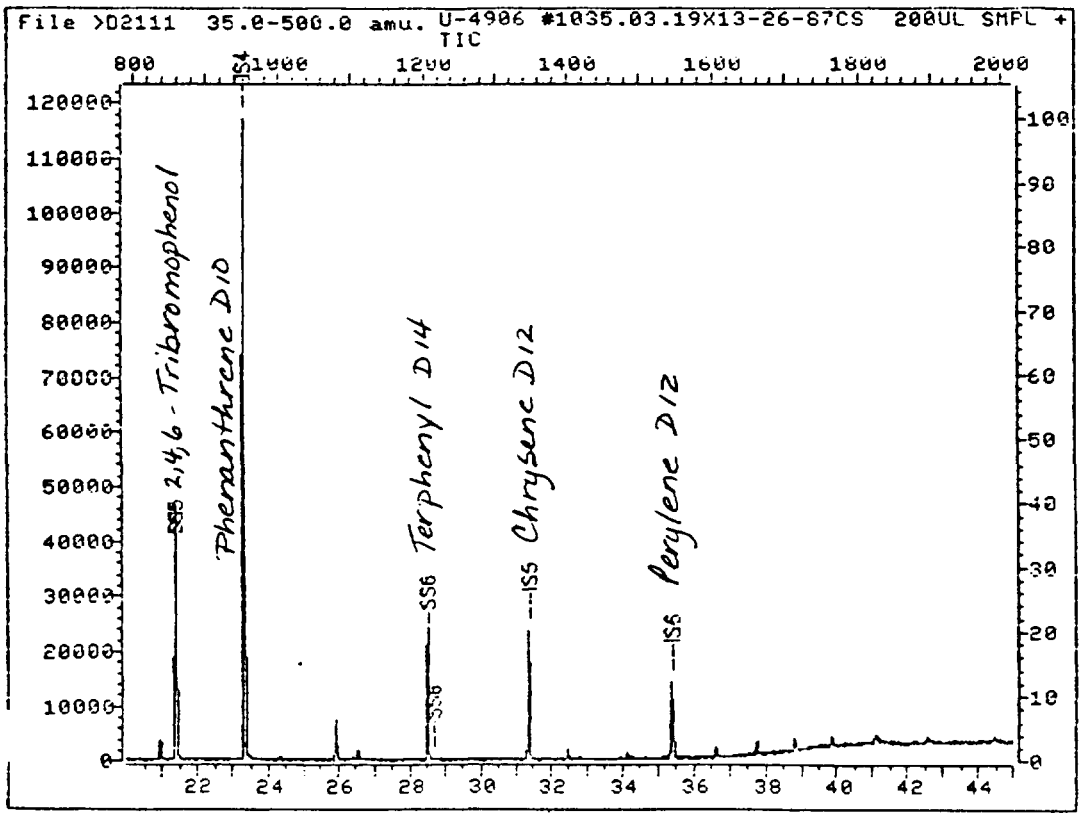
Data File: >D2111::D3
Name: U-4906 #1035.03.19X1 DC-PS-56
Misc: 3-26-87CS 200UL SMPL + 200UL MECL2 + 4UL IS (2X) BTL# 1

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870326 13:30

Operator ID: USER6
Quant Time: 870326 15:55
Injected at: 870326 15:07

DC-P5-56


File >D2111 35.0-500.0 amu. U-4906 #1035.03.19X13-26-87CS 200UL SMPL +
TIC
2-Fluorophenol
Phenol D5
1,4-Dichlorobenzene D4
Nitrobenzene D5
Naphthalene D8
2-Fluorobiphenyl
Acenaphthene D10


File >D2111 35.0-500.0 amu. U-4906 #1035.03.19X13-26-87CS 200UL SMPL +
TIC
2,4,6-Tribromophenol
Phenanthrene D10
Terphenyl D14
Chrysene D12
Perylene D12

QUANT REPORT

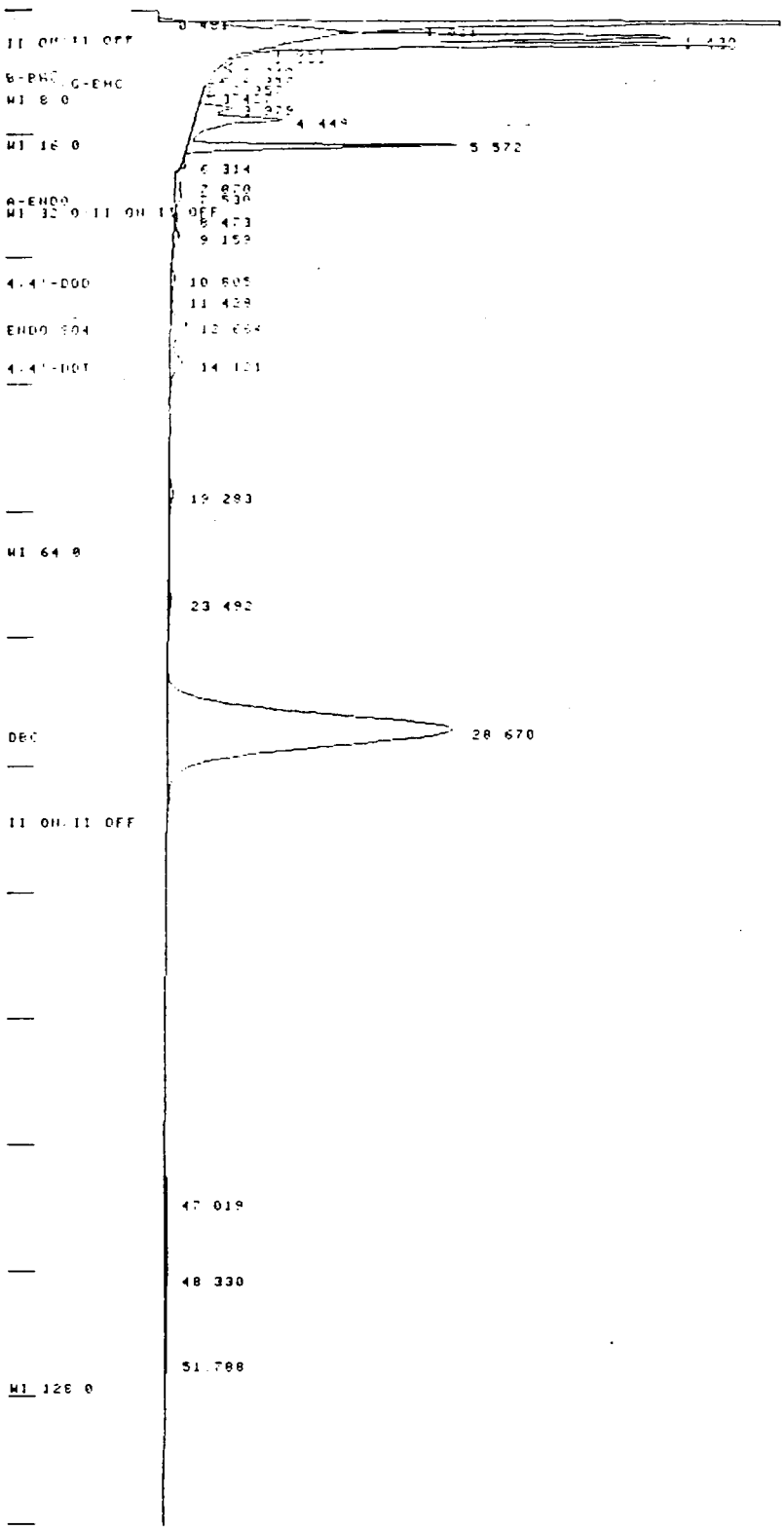
Operator ID: USER6 Quant Rev: 4 Quant Time: 870326 15:55
Output File: ^D2111::Q2 Injected at: 870326 15:07
Data File: >D2111::D3 Dilution Factor: 2.00
Name: U-4906 #1035.03.19X1 DC-P5-56
Misc: 3-26-87CS 200UL SMPL + 200UL MECL2 + 4UL IS (2X) BTL# 1

ID File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870326 13:30

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.29	262	37398	40.00 UG/L	89
2)	PHENOL-D5	(SURR)	99	9.09	252	46177	85.62 UG/L	89
5)	2-FLUOROPHENOL	(SURR)	112	4.59	31	29708	83.49 UG/L	85
17)	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.39~~	~~365~~	~~2969~~	~~2.96~~ UG/L cw	76
19)	*NAPHTHALENE-D8	(IS)	136	13.53	470	136801	40.00 UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	11.39	365	21378	46.86 UG/L	88
34)	*ACENAPHTHENE-D10	(IS)	162	18.95	736	99307	40.00 UG/L	95
38)	2-FLUOROBIPHENYL	(SURR)	172	17.15	648	77147	46.35 UG/L	93
41)	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.95~~	~~736~~	~~10766~~	~~12.30~~ UG/L cw	100
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.39	856	17697	81.31 UG/L	97
52)	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.95~~	~~736~~	~~13088~~	~~38.30~~ UG/L cw	100
55)	*PHENANTHRENE-D10	(IS)	188	23.32	951	151526	40.00 UG/L	90
63)	DI-N-BUTYLPHTHALATE		149	25.95	1080	12179	7.89 UG/L	96
65)	*CHRYSENE-D12	(IS)	240	31.39	1347	29684	40.00 UG/L	100
68)	TERPHENYL-D14	(SURR)	244	28.50	1205	26881	58.39 UG/L	100
68)	~~TERPHENYL-D14~~	(SURR)	~~244~~	~~28.66~~	~~1213~~	~~63~~	~~.14~~ UG/L cw	100
72)	BIS(2-ETHYLHEXYL)PHTHALATE		149	32.49	1401	1459	5.34 UG/L	97
74)	*PERYLENE-D12	(IS)	264	35.40	1544	17004	40.00 UG/L	100

* Compound is ISTD

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



CHANNEL: 1A - 1 TITLE: RUN# 21 2:23 24 FEB 87

DC-P5-56

SAMPLE: 1035 METHOD: CEPA CALCULATION: CS - ANALYS

PEAK NO	PEAK NAME	RESULT UG/MG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.285		196249	BV	4.19
2		0.0000	1.430		261856	VV	4.63
3		0.0000	1.574		352447	VV	4.55
4	[illegible]	15.7645	2.349	-0.031	21694	BV	6.91
5		0.0000	3.427		27004	VA	7.19
6	[illegible]	19.8967	3.979	-0.141	66917	BV	17.58

M1 128 9

51 788

CHANNEL: 1A - 1 TITLE: RUN# 21 2:23 24 FEB 87 DC-P5-56

SAMPLE: 1035 METHOD: CEPA CALCULATION: CS - ANALYS

PEAK NO	PEAK NAME	RESULT US/MG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.285		195249	BV	4.19
2		0.0000	1.430		261856	VV	4.63
3		0.0000	1.574		392447	VV	4.56
4	[illegible]	15.7646	2.349	-0.031	21694	BV	6.91
5		0.0000	3.427		27054	VB	7.19
6	[illegible]	19.8367	3.979	-0.141	66917	BV	17.88
7		0.0000	4.449		233800	VV	15.63
8		0.0000	5.572		427957	VB	12.19
9	[illegible]	6.4661	7.530	-0.048	22400	VB	? 39.06
10	[illegible]	6.4291	9.159	0.349	24213	VV	19.38
11	[illegible]	31.7750	12.664	-0.116	84953	VV	35.38
12	[illegible]	27.8845	14.121	-0.069	66077	VB	37.56
13		0.0000	19.283		29432	BB	56.31
14		0.0000	23.492		21952	BB	? 59.38
15	DEC	1030.909	28.670	0.360	2978757	BB	82.38
16		0.0000	47.019		40612	BV	?125.38
17		0.0000	48.330		45741	VV	162.69

TOTALS: 1139.185 0.312 4942111

DETECTED PKS: 33 REJECTED PKS: 16

DIVISOR: 0.15000 MULTIPLIER: 1000.00000

NOISE: 11.4 OFFSET: -17

RACK: 2 VIAL: 6 INJ: 1

NOTES:
NOTEBOOK:253-115,116 ANALYST: RICHARD SAMSON
SECURE AREA: 0 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

POST RUN:
SAVE FILE: RAW DC1193

SAMPLE NUMBER DC-F12-57

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: CStojowicz
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/ml 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 V-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_l = 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_l 1,000 V_t 4

Laboratory Name Ecology & Environment Inc.

Case No II-4906, 4928, 4971, 4989

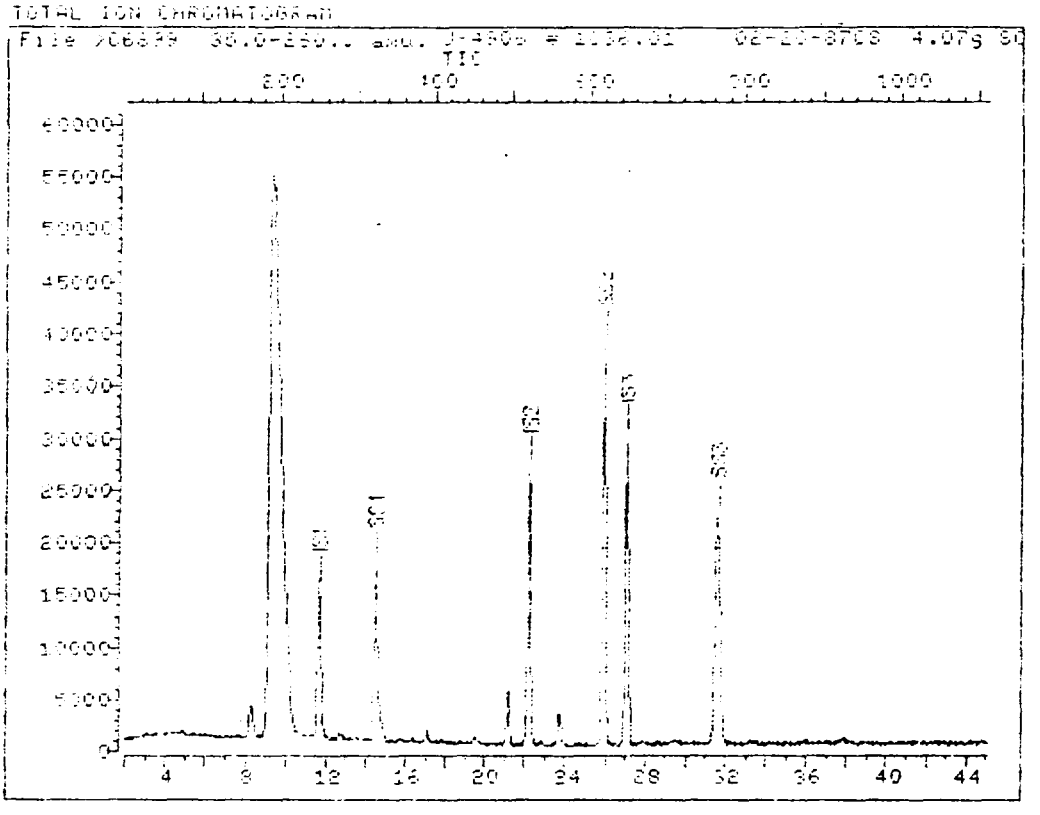
Sample Number DC-I12-57

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	(RT) or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.		Hexane isomer	VOA	21.2	12 BJ
2.		Unknown alcohol (?)	VOA	23.7	7 ~~B~~ 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					

TOTAL ION CHROMATOGRAM

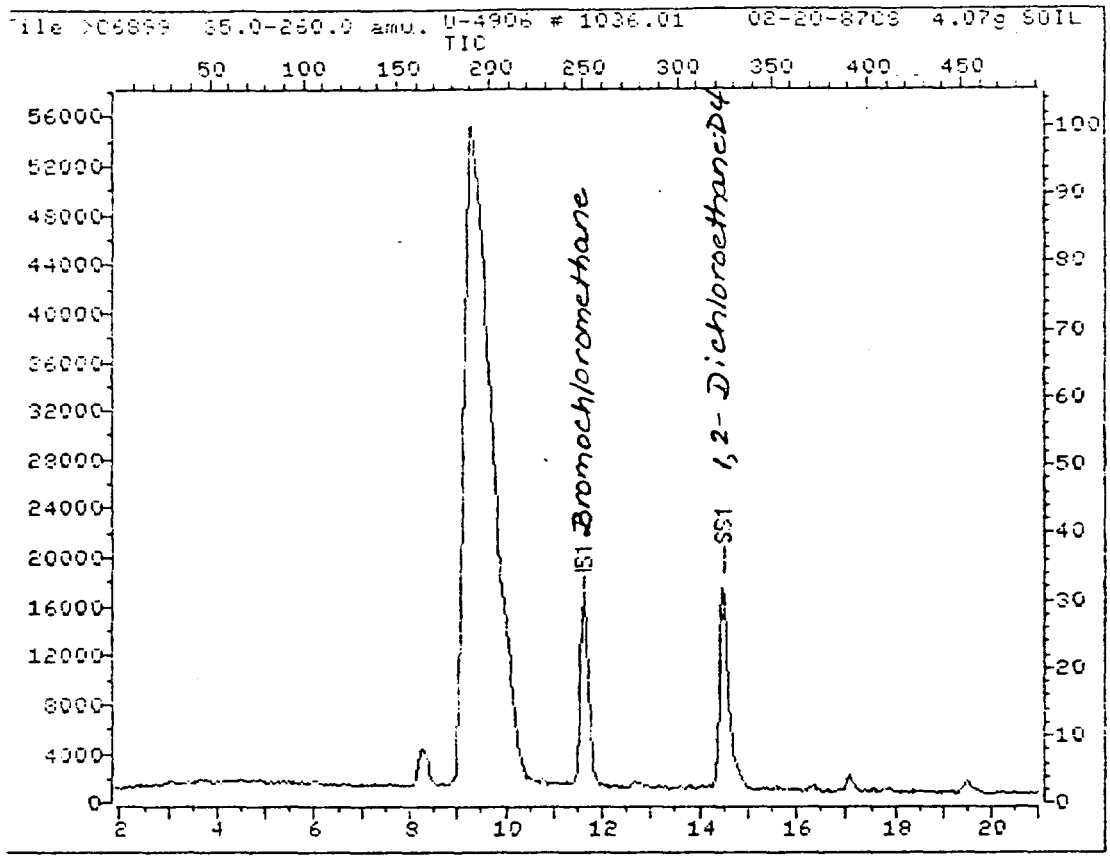


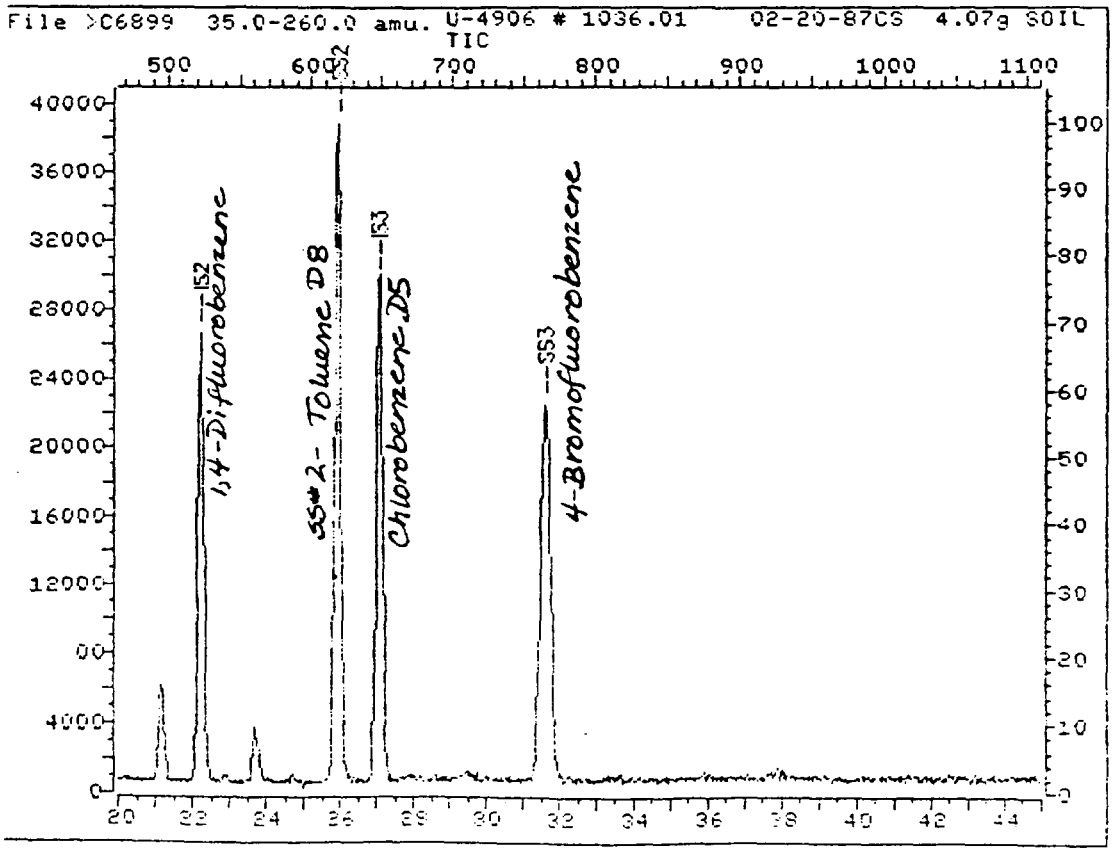
Data File: >C6899::D3
Name: U-490s # 1036.01 DC-I12-57
Misc: 02-20-87CS 4.07g SOIL IN 5ML DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870220 12:0[illegible]

Operator ID: USER3
Quant Time: 870220 17:41
Injected at: 870220 16:56

DC-I12-57


File >C6899 35.0-260.0 amu. U-4906 # 1036.01 02-20-87CS 4.07g SOIL
TIC
Bromochloromethane
1,2-Dichloroethane-D4
IS1
SS1


File >C6899 35.0-260.0 amu. U-4906 # 1036.01 02-20-87CS 4.07g SOIL
TIC
1,4-Difluorobenzene
SS# 2- Toluene D8
Chlorobenzene-D5
4-Bromofluorobenzene
IS2
IS3
SS3

QUANT REPORT

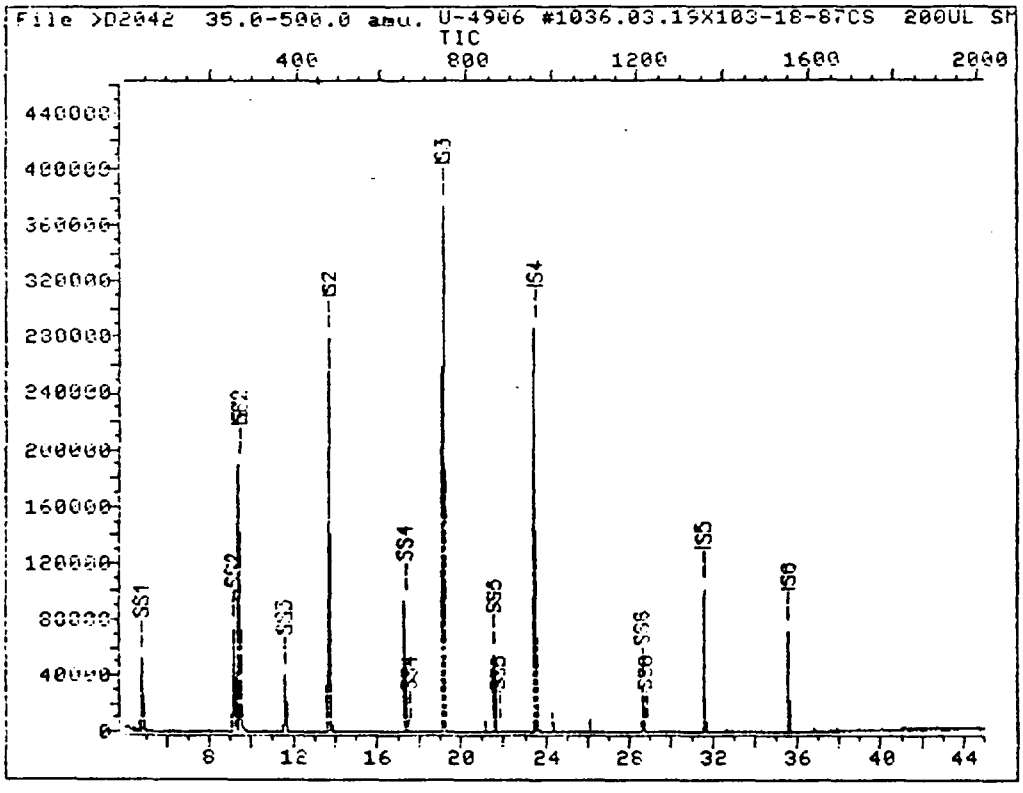
Operator ID: USER8 Quant Rev: 4 Quant Time: 870220 17:42
Output File: ^C6899::02 Injected at: 870220 16:56
Data File: ^C6899::03 Dilution Factor: 1.00
Name: U-4906 # 1036.01 DC-I12-57
Misc: 02-20-87CS 4.07g SOIL IN 5ML DI - 10UL IS/SS

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	11.61	250	21720	250.00	NGS	100
6)	METHYLENE CHLORIDE		84	8.27	164	9156	60.66	NGS	100
7)	ACETONE		43	9.32	191	1435364	5340.31	NGS E	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.48	324	74859	250.86	NGS 100	85 V
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.20	523	108268	250.00	NGS	100
17)	2-BUTANONE		72	14.67	329	2482	44.77	NGS	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.05	648	91175	250.00	NGS	100
~~32)~~	~~4-METHYL-2-PENTANONE~~		~~43~~	~~23.71~~	~~562~~	~~4935~~	~~11.04~~	~~NGS~~ no CW	58
~~33)~~	~~2-HEXANONE~~		~~43~~	~~23.71~~	~~562~~	~~4935~~	~~13.79~~	~~NGS~~	100
36)	TOLUENE-D8	(SURR)	98	25.93	619	147676	282.87	NGS 113	94
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.60	765	77221	259.79	NGS 104	100

* Compound is ISTD

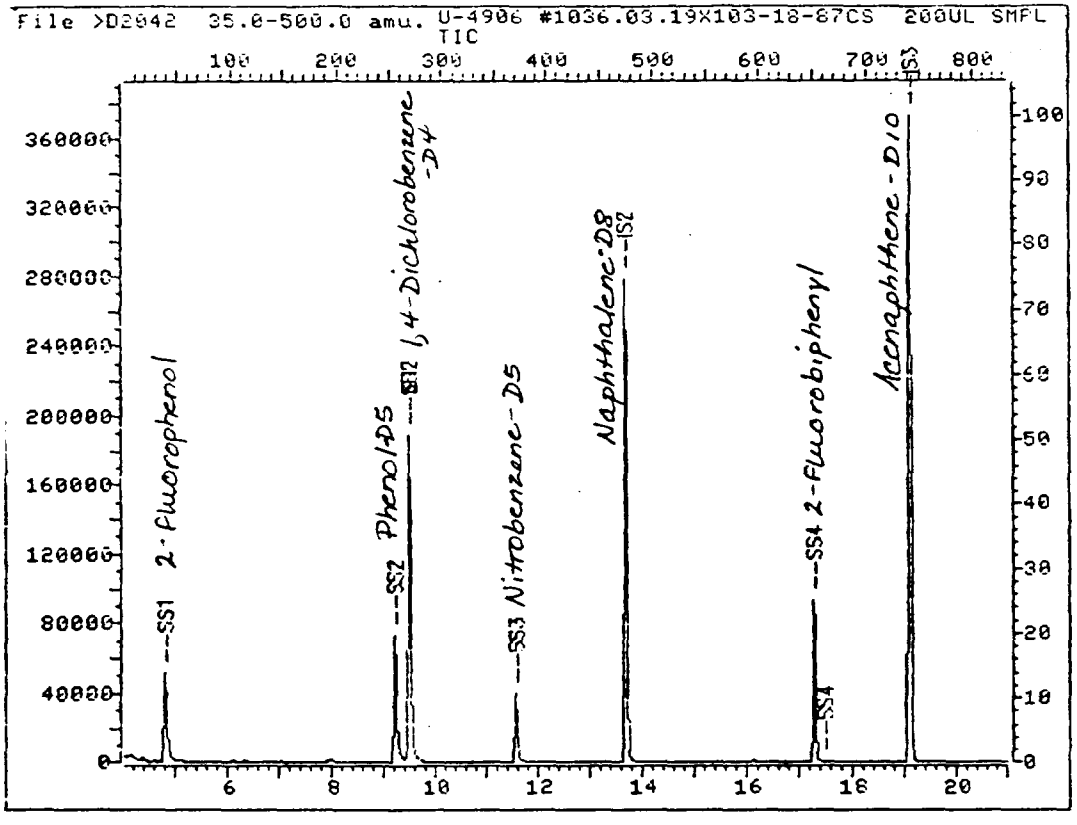
TOTAL ION CHROMATOGRAM



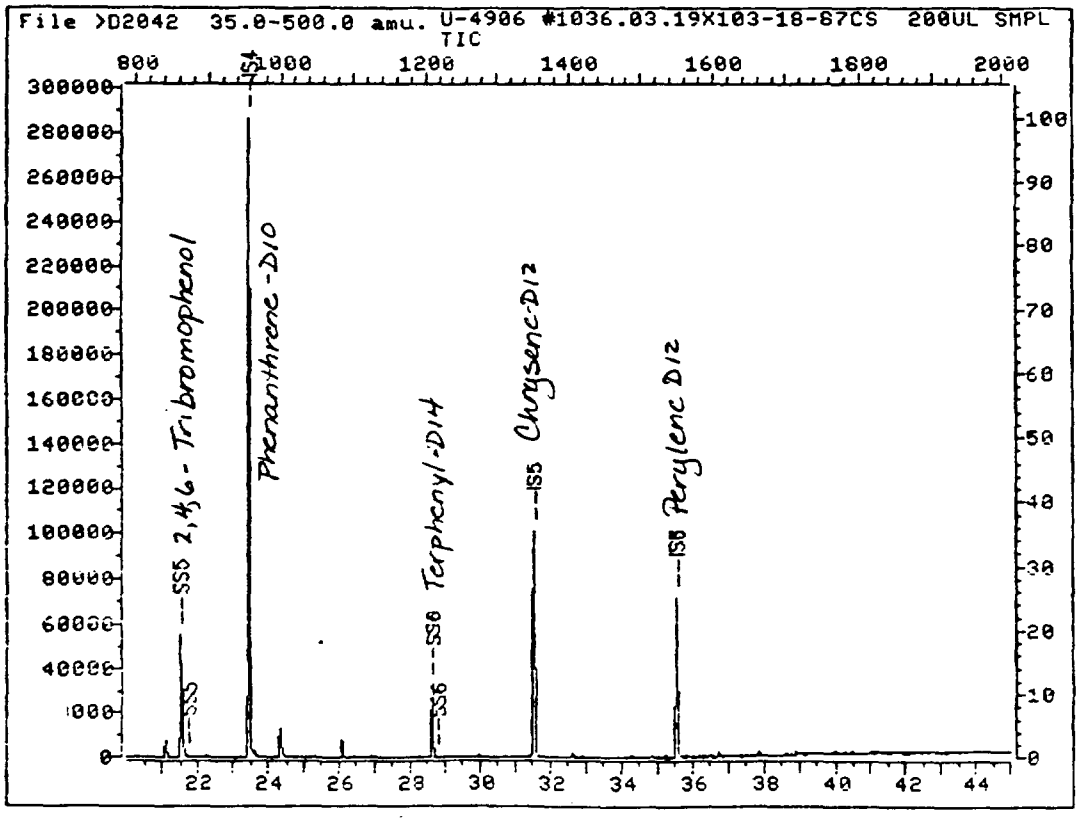
Data File: >D2042::D1
Name: U-4906 #1036.03.19X1 DC-512-57
Misc: 03-18-87CS 200UL SMPL + 200UL A/P + 4UL IS (2X) BTL# 1

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

Operator ID: USER8
Quant Time: 870318 15:48
Injected at: 870318 15:00


File >D2042 35.0-500.0 amu. U-4906 #1036.03.19X103-18-87CS 200UL SMPL
TIC
2-Fluorophenol
Phenol-D5
1,4-Dichlorobenzene-D4
Nitrobenzene-D5
Naphthalene-D8
2-Fluorobiphenyl
Acenaphthene-D10

DC-I12-57


File >D2042 35.0-500.0 amu. U-4906 #1036.03.19X103-18-87CS 200UL SMPL
TIC
2,4,6-Tribromophenol
Phenanthrene-D10
Terphenyl-D14
Chrysene-D12
Perylene D12

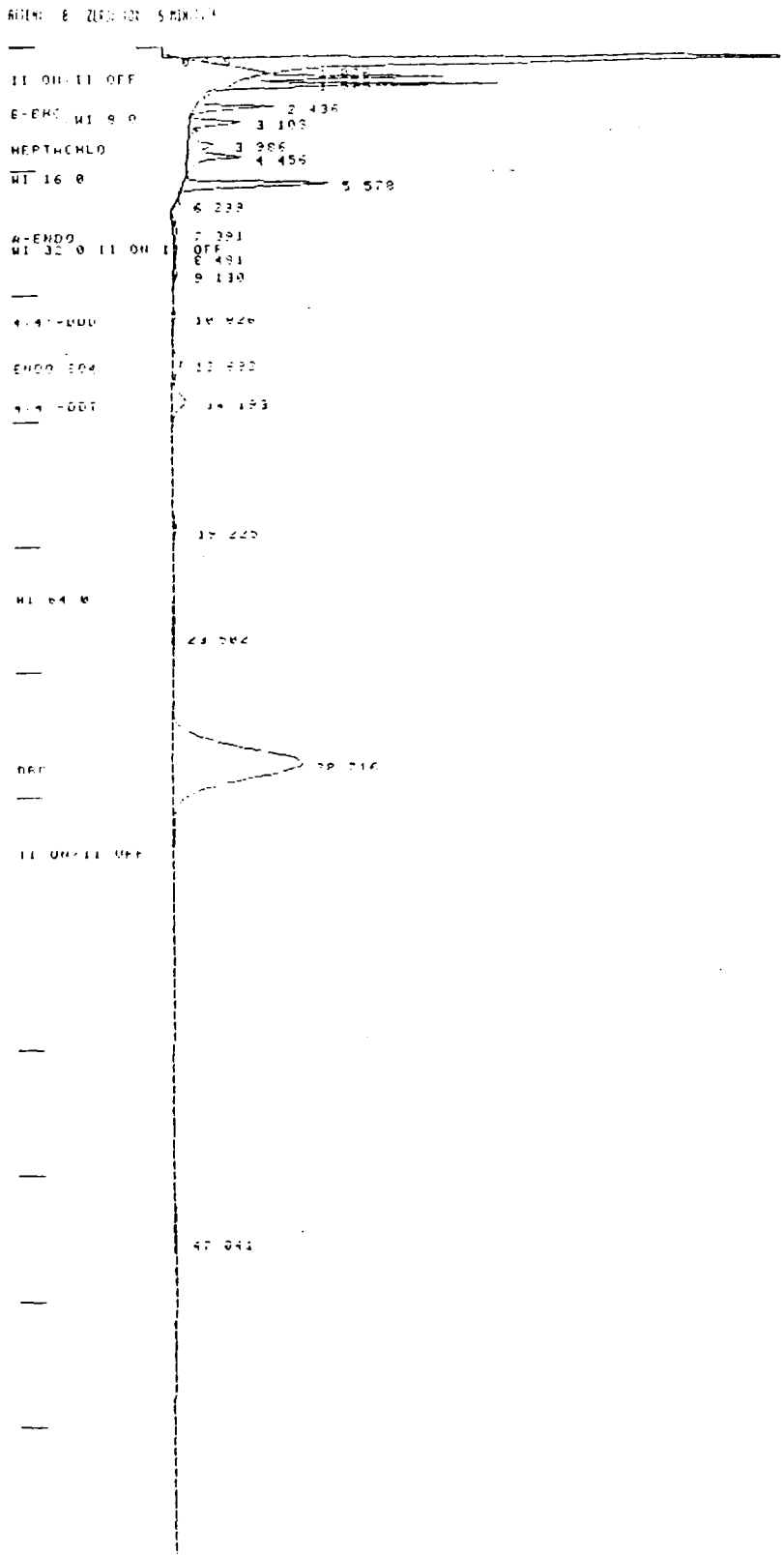
QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 870318 15:48
Output File: ^D2042::02 Injected at: 870318 15:00
Data File: >D2042::01 Dilution Factor: 2.00
Name: U-4906 #1936.03.19X1 DC-I12-57
Misc: 03-18-87CS 200UL SMPL + 200UL A/P + 40UL IS (2X) BTL# 1

ID File: BNAOR::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	268	99864	40.00 UG/L	85
2)	PHENOL-D5	(SURR)	99	9.19	254	74800	41.56 UG/L	97
2)	PHENOL-D5	(SURR)	99	9.47	268	1912	1.06 UG/L	70
5)	2-FLUOROPHENOL	(SURR)	112	4.79	38	48221	41.70 UG/L	76
17)	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.55~~	~~327~~	~~6548~~	~~3.84 UG/L~~	96
19)	*NAPHTHALENE-D8	(IS)	136	13.67	474	361294	40.00 UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	11.55	370	40888	23.23 UG/L	90
34)	*ACENAPHTHENE-D10	(IS)	162	19.11	741	213876	40.00 UG/L	93
38)	2-FLUOROBIPHENYL	(SURR)	172	17.27	651	83664	25.68 UG/L	96
~~39)~~	~~2-FLUOROBIPHENYL~~	~~(SURR)~~	~~172~~	~~17.48~~	~~661~~	~~278~~	~~.89 UG/L~~	84
41)	DIMETHYL PHTHALATE		~~163~~	~~19.11~~	~~741~~	~~40638~~	~~11.68~~ UG/L	100
43)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.53	860	18797	38.84 UG/L	98
43)	~~2,4,6-TRIBROMOPHENOL~~	~~(SURR)~~	~~330~~	~~21.74~~	~~874~~	~~251~~	~~.52 UG/L~~	92
50)	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.11~~	~~741~~	~~28786~~	~~34.83 UG/L~~	100
55)	*PHENANTHRENE-D10	(IS)	188	23.49	956	294937	40.00 UG/L	91
~~64)~~	~~DI-N-BUTYLPHTHALATE~~		~~149~~	~~26.07~~	~~1083~~	~~12778~~	~~3.20 UG/L~~	99
65)	*CHRYSENE-D12	(IS)	240	31.53	1351	104717	40.00 UG/L	100
68)	TERPHENYL-D14	(SURR)	244	28.64	1209	33675	24.12 UG/L	100
68)	~~TERPHENYL-D14~~	~~(SURR)~~	~~244~~	~~28.80~~	~~1217~~	~~70~~	~~.05 UG/L~~	100
74)	*PERYLENE-D12	(IS)	264	35.55	1548	78094	40.00 UG/L	100

* Compound is ISTD



CHANNEL: 1A - 1 TITLE: RUN 22 3:28 21 FEB 87

SAMPLE: 1036 METHOD: CEPA CALCULATION: 23 - ANALYS

DC-I12-57

PEAK NO	PEAK NAME	RESULT UG/AU	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.255		115677	BV	4.25
2		0.0000	1.575		233775	VB	4.88
3	[illegible]	[illegible]	2.436	0.056	89753	BB	6.44
4		0.0000	3.109		73016	BV	12.36
5	[illegible]	[illegible]	[illegible]	-0.137	[illegible]	VB	[illegible]
6		[illegible]	[illegible]		[illegible]	VB	[illegible]

47 043

CHANNEL: 1A - 1 TITLE: RUN# 22 3:28 24 FEB 87

DC-I12-57

SAMPLE: 1036 METHOD: CEPA CALCULATION: CS - ANALYS

PEAK NO	PEAK NAME	RESULT DB/AG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.255		115677	BV	4.25
2		0.0000	1.575		233975	VB	4.00
3	[illegible]	130.4432	2.136	0.056	89733	BB	6.41
4		0.0000	3.106		79016	BV	12.30
5	[illegible]	35.4511	3.786	-0.134	59615	VV	19.00
6		0.0000	4.156		120621	VB	14.00
7		0.0000	5.578		233505	BB	12.00
8	[illegible]	12.5812	7.371	-0.179	21772	BB	79.75
9	[illegible]	35.1813	12.682	-0.070	47030	VV	34.30
10	[illegible]	59.7257	14.133	0.003	78765	VB	37.30
11		0.0000	19.225		22282	BB	60.00
12	DBC	553.5312	26.716	0.106	1377675	BB	81.31

TOTALS: 1226.973 0.054 2471706

DETECTED PKS: 25 REJECTED PKS: 13

DIVISOR: 0.15000 MULTIPLIER: 2000.00000

NOISE: 11.4 OFFSET: 5

RACK: 2 VIAL: 7 INJ: 1

NOTES:
NOTEBOOK: 237-115,116 ANALYST: RICHARD SANSON
SECURE PACK: 0 [illegible]
INJ: [illegible]
COLUMN: [illegible]
LIQUID PHASE: 3% OV-1
CARRIER GAS: H2 @ 60 ML/MIN
DET: 300 C INJ: 220 C
200 C ISOTHERMAL 4 UL INJECTION

POST RUN:
SAVE FILE: [illegible] DC1131

SAMPLE NUMBER DC-I12-58

DC-I-12-58

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.
Case No: 4-4906, 4928, 4971, 4989.
Lab Sample ID No: 1037
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: Wojtowicz
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/ml 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 V-4906, 4928, 4971, 4989

Sample Number DC-I12-58

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

Laboratory Name Ecology & Environment Inc.

Case No U-4906, 4928, 4971, 4989

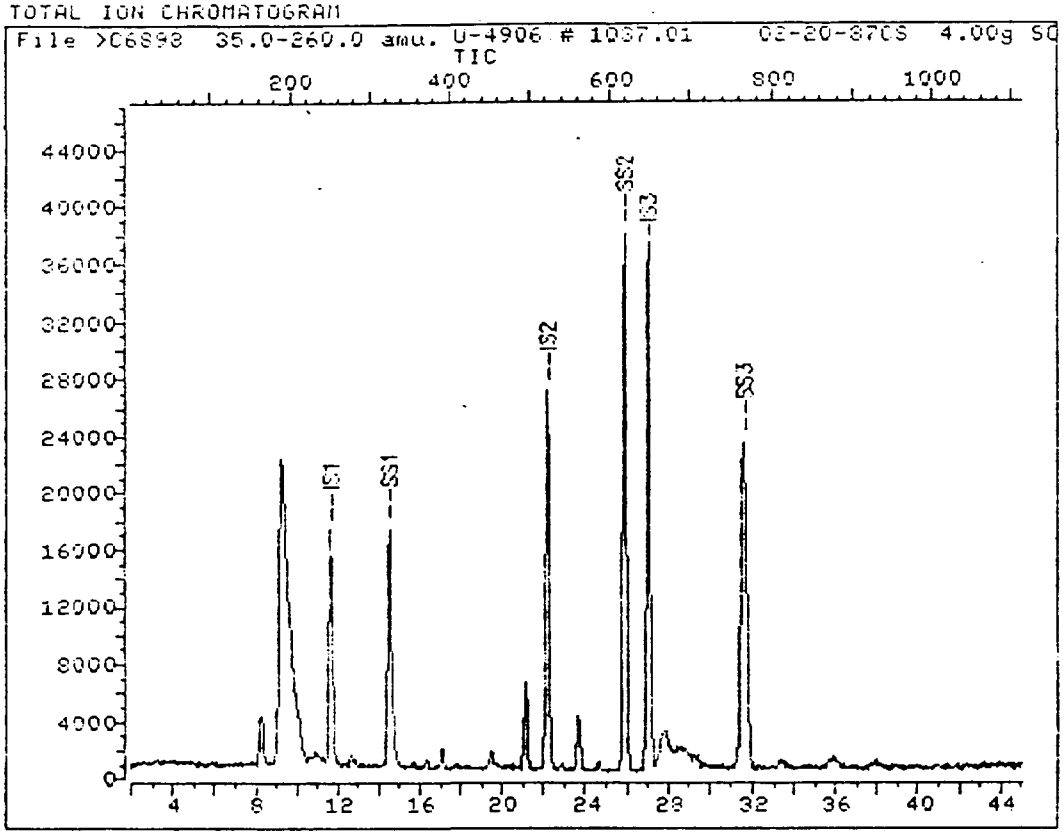
Sample Number DC-I12-58

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	(RT) or Scan Number	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

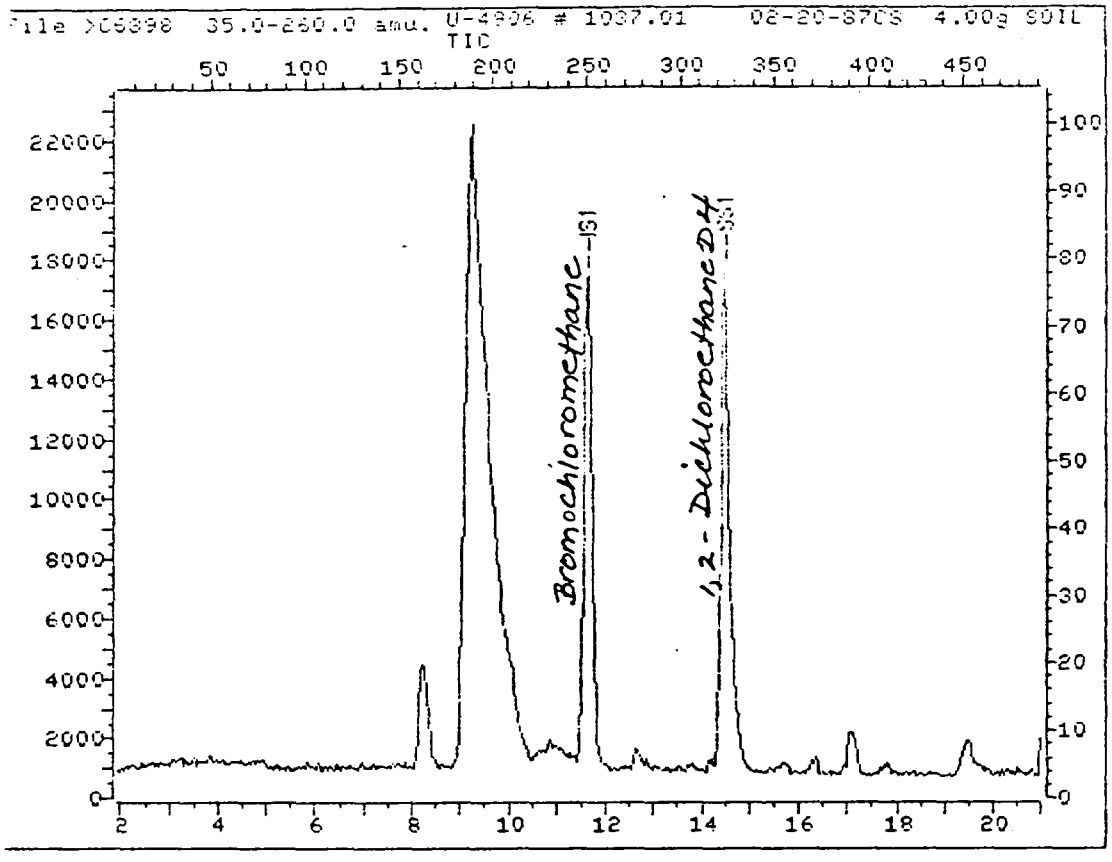


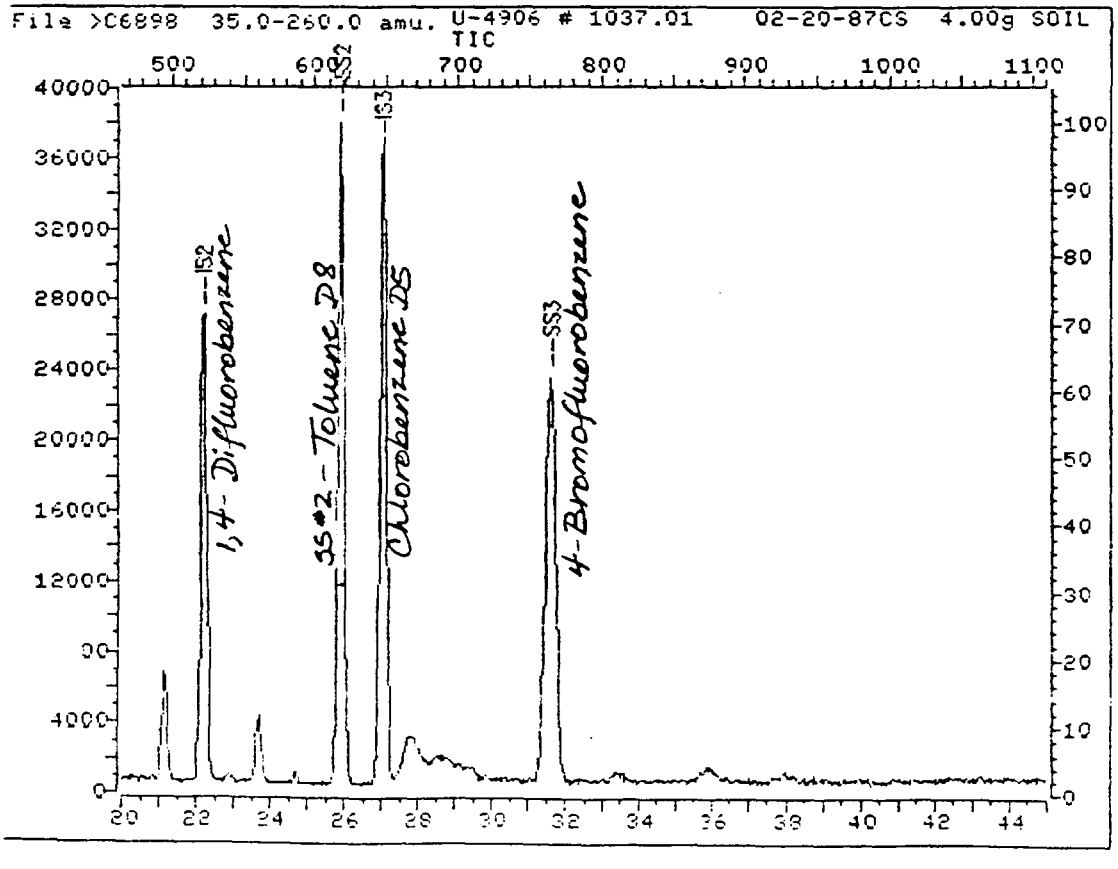
Data File: >C6898::D3
Name: U-4906 # 1037.01 DC-I12-58
Misc: 02-20-87CS 4.00g SOIL IN 5ML DI + 10UL IS/SS

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

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
131
1,2-Dichloroethane D4
331


File >C6898 35.0-260.0 amu. U-4906 # 1037.01 02-20-87CS 4.00g SOIL
TIC
152
1,4-Difluorobenzene
SS#2-Toluene D8
Chlorobenzene D5
153
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

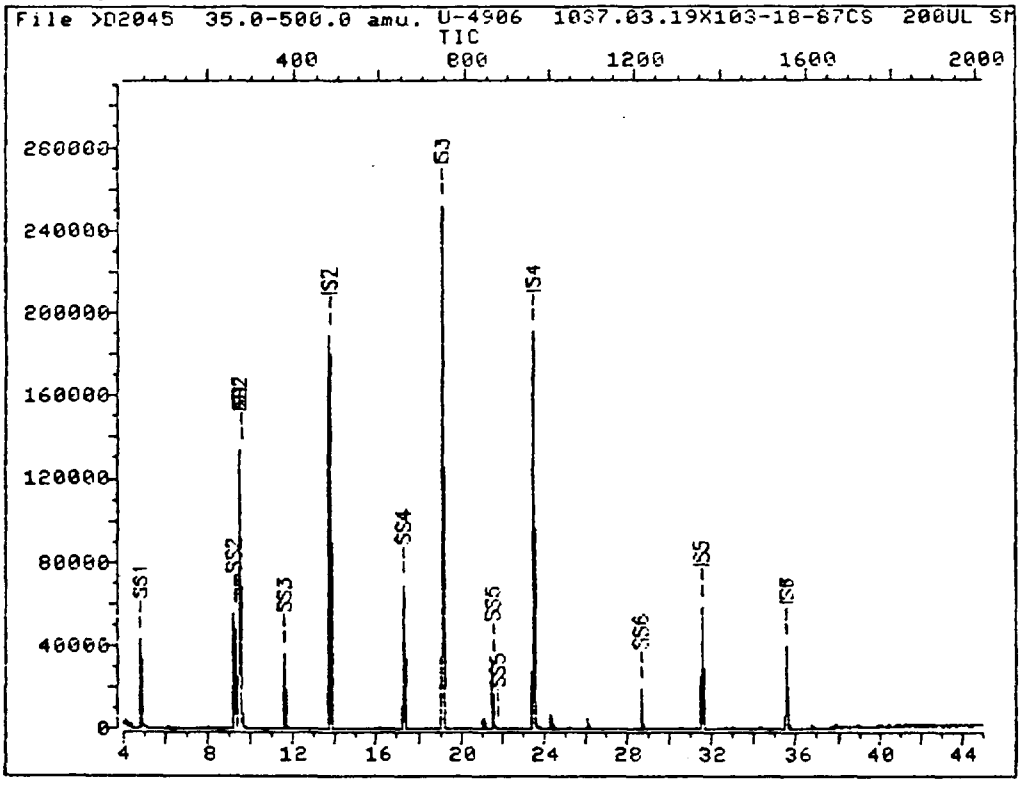
ID File: VOACRS::02
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870220 12:09

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.61	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	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.48	324	67811	218.58	NGS 87	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~~	67
~~33)~~	~~2-HEXANONE~~		~~43~~	~~23.67~~	~~561~~	~~7738~~	~~17.79~~	~~NGS~~	100
36)	TOLUENE-D8	(SURR)	98	25.89	618	138903	217.83	NGS 87	91 ✓
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.60	765	81041	223.21	NGS 89	100 ✓

4no CW

* Compound is ISTD

TOTAL ION CHROMATOGRAM

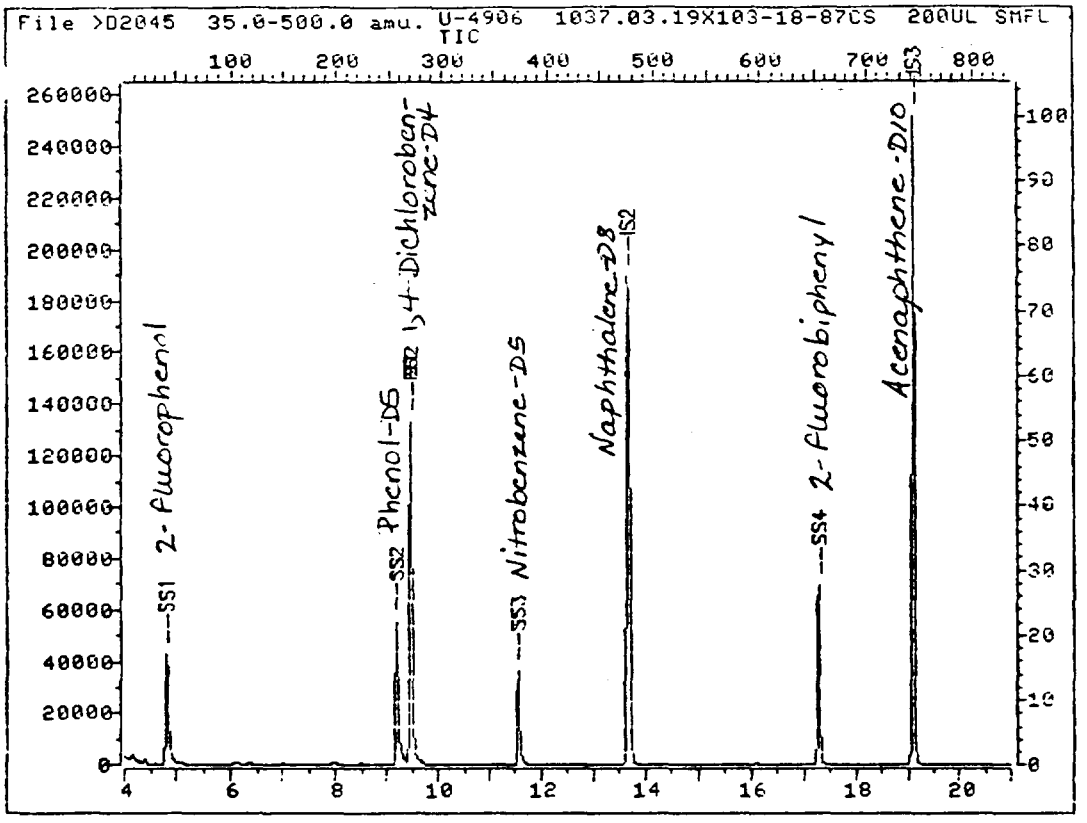


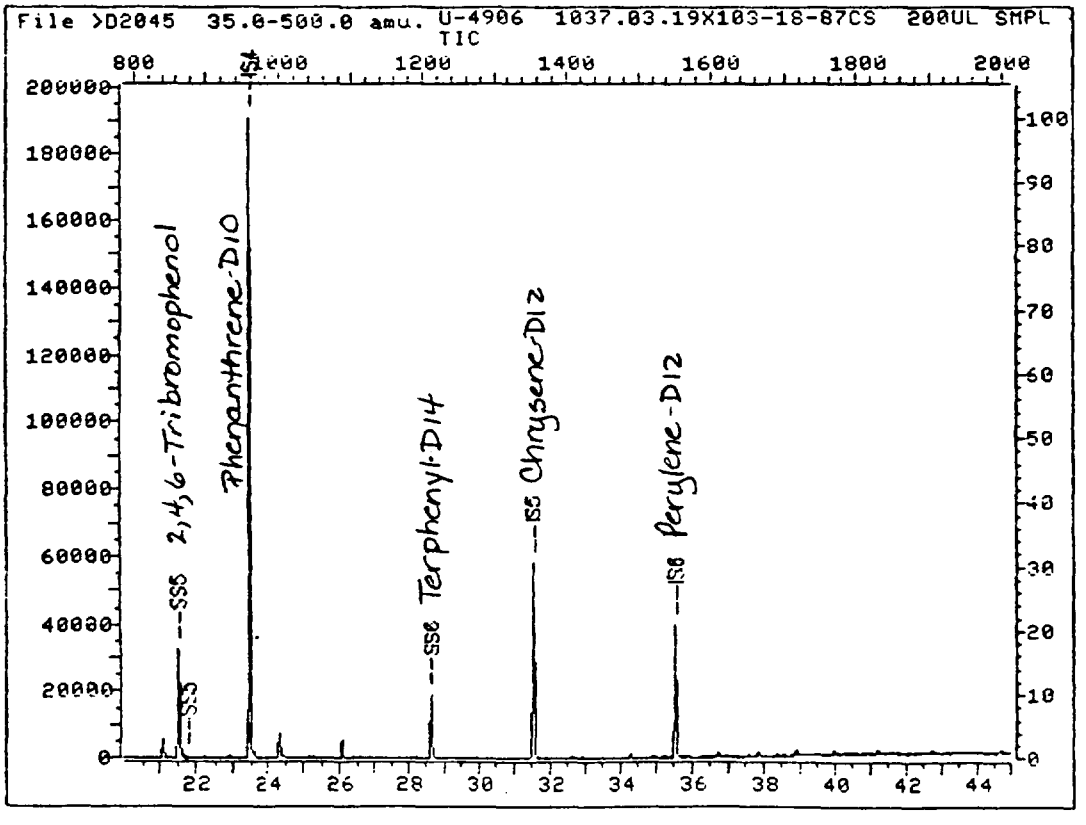
Data File: >D2045::D1
Name: U-4906 1037.03.19X1 DC-I12-58
Misc: 03-18-87CS 200UL SMPL + 200UL A/P + 4UL IS (2X) BTL# 4

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
--SS1
Phenol-D5
--SS2
1,4-Dichlorobenzene-D4
--IS1
Nitrobenzene-D5
--SS3
Naphthalene-D8
--IS2
2-Fluorobiphenyl
--SS4
Acenaphthene-D10
--IS3


File >D2045 35.0-500.0 amu. U-4906 1037.03.19X103-18-87CS 200UL SMPL
TIC
2,4,6-Tribromophenol
--SS5
--SS5
Phenanthrene-D10
--IS4
Terphenyl-D14
--SS6
Chrysene-D12
--IS5
Perylene-D12
--IS6

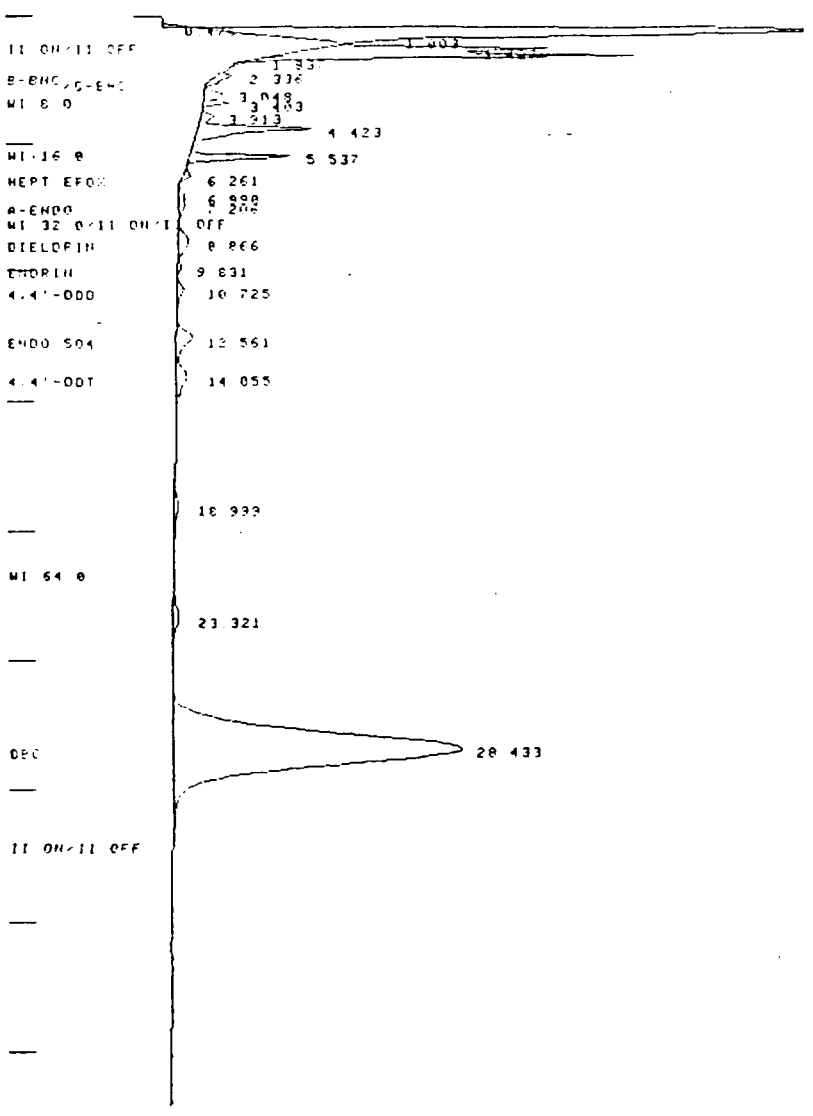
QUANT REPORT

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 jpo	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: ES - 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		101400	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		148645	VB	11.75
9	~~DIELDRIN~~	12.6520	8.866	0.056	47209	BV	40.25
10	~~4,4'-DDD~~	7.3841	10.725	-0.175	24385	VV	30.69
11	~~ENDO SO4~~	27.0809	12.561	-0.219	72403	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 -0.350 4350127

DETECTED PKS: 29 REJECTED PKS: 13

DIVISOR: 0.15000 MULTIPLIER: 1000.00000

NOISE: 11.4 OFFSET: -17

PACK: 2 VOL: 10 INJ: 1

SAMPLE NUMBER DC-01-59

DC-01-59

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.

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

Lab Sample ID No: 1110

QC Report No:

Sample Matrix: Soil

Contract No: IL-3140

Data Release Authorized By: C Stoytowicz

Date Sample Received: 2-19-87

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 2-24-87

Conc/Dil Factor: 1 pH 7.2

Percent Moisture: (Not Decanted) 13

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	1200 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	26 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/ml 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-01-59

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low (Medium) (Circle One)

Date Extracted/Prepared 02-19-87

Date Analyzed 03-06-87

Conc/Dil Factor: 2

Percent Moisture (Decanted) 13

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	4600
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	1200 BJ
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 and environment, inc.

Case No V-4906, 4928, 4971, 4989

Sample Number DC-01-59

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) 13

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

Laboratory Name Ecology & Environment Inc.

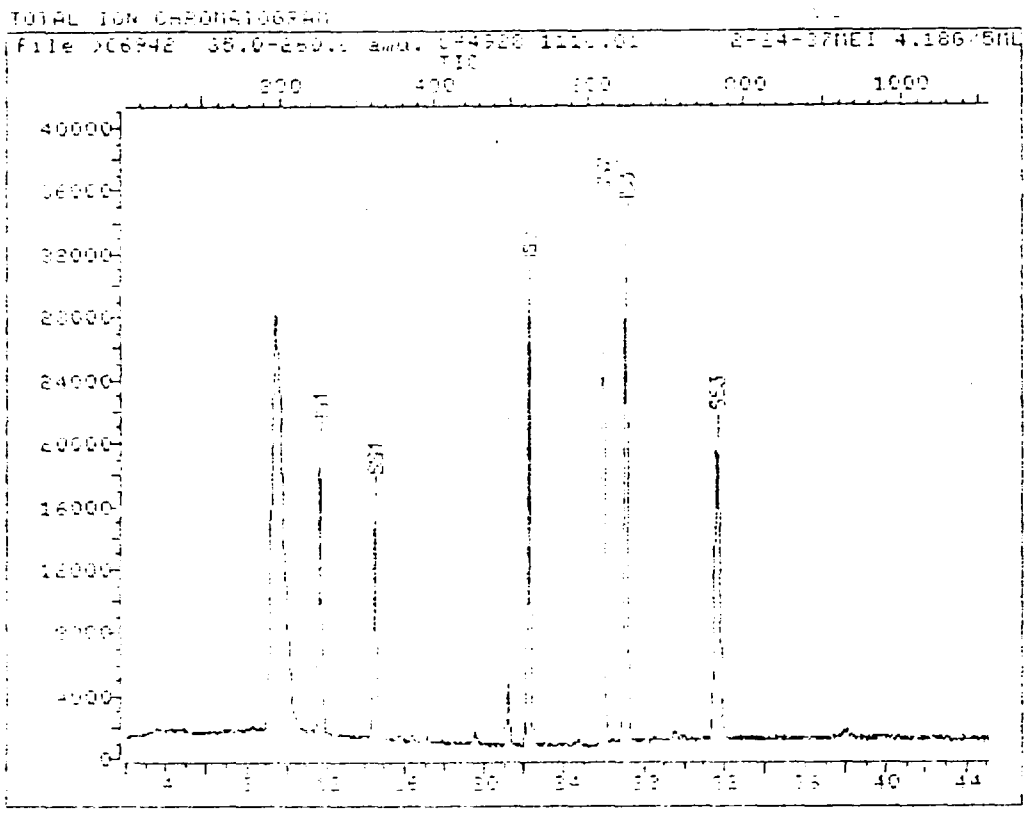
Case No U-4906, 4928, 4971, 4989

Sample Number DC-01-59

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.		Hexane isomer	VOA	21.2	9 J
2.					
3.		Unknown	BNA	11.43	1500 J
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.					
30					

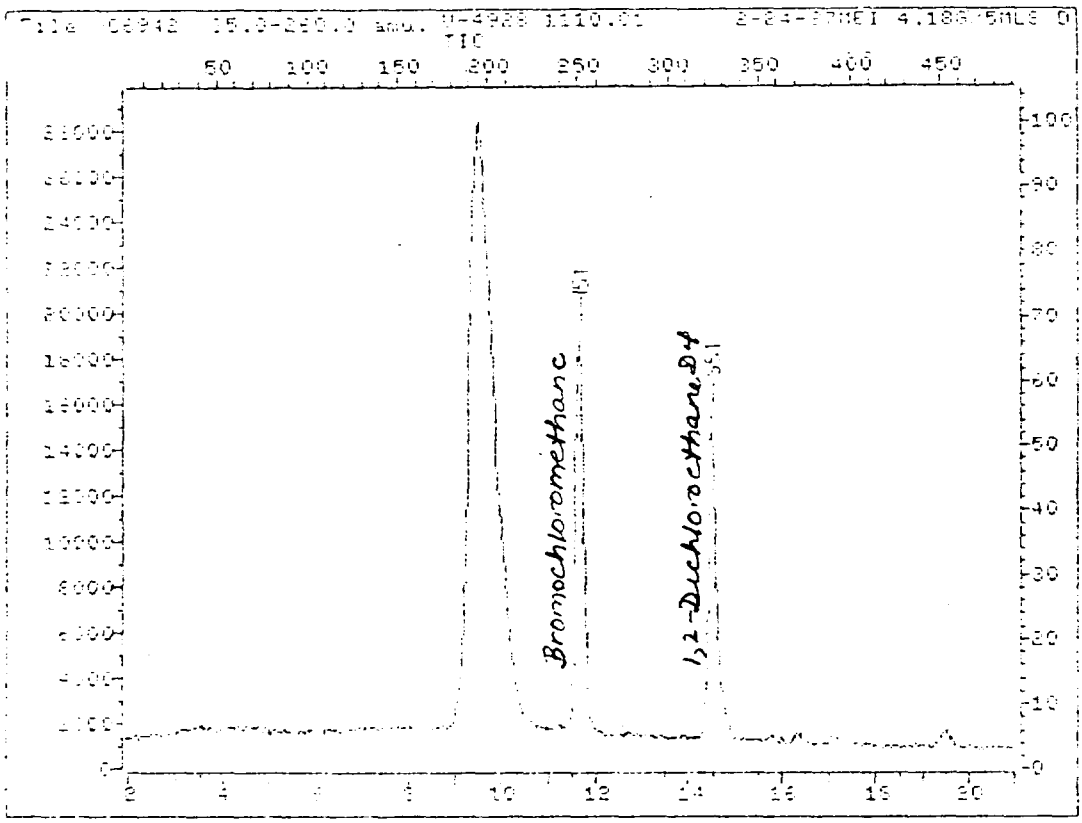


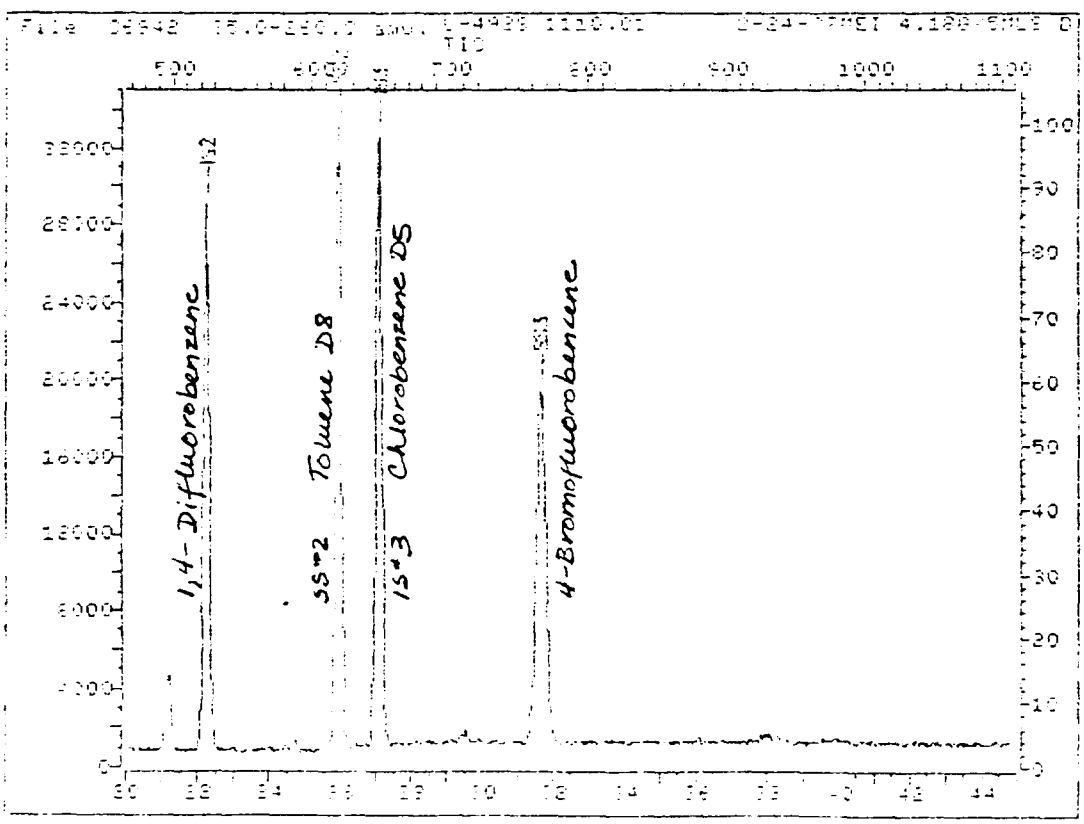
Data File: >C6942::01
Name: 2-4928 1111.01 DC-01-59
Misc: 2-24-97MEI 4.18G/5ML DI - 10UL IP/SS

Id File: VOACSS::02
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 970224 15:45

Operator ID: USER3
Quant Time: 970224 17:31
Injected at: 970224 16:45

DC-01-59


TIC
Bromochloromethane
1,2-Dichloroethane D4


TIC
1,4-Difluorobenzene
Toluene D8
Chlorobenzene D5
4-Bromofluorobenzene

QUANT REPORT

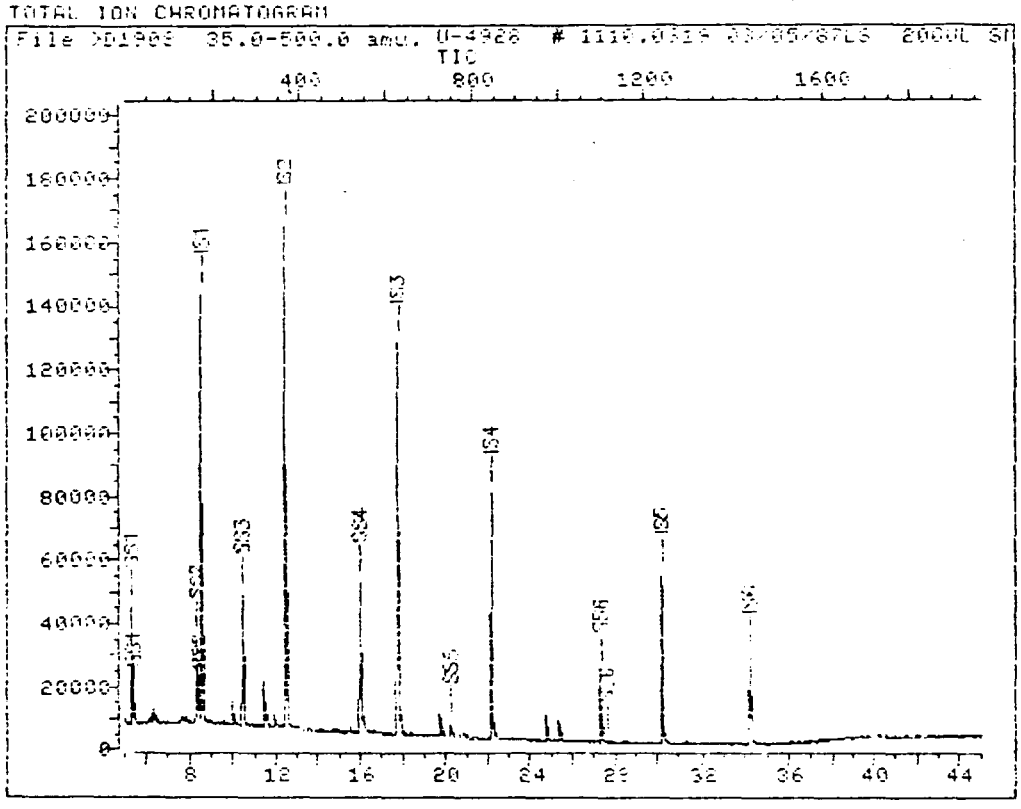
Operator ID: USER? Quant Rev: 4 Quant Time: 870224 17:31
Output File: ^C6942::D2 Injected at: 870224 16:45
Data File: ^C6942::D1 Dilution Factor: 1.00
Name: U-4928 1110.01 DC-01-59
Misc: 2-24-87MEI [illegible] - 10UL [illegible]

ID File: VOACPB::D2
Title: VOA ID FILE FOR [illegible] CAL
Last Calibration: 870224 15:48

	Compound			R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.65	251	24120	250.00	NGS	100
7)	ACETONE		43	9.48	195	694615	4910.07	NGS E yes	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.48	324	58631	232.86	NGS 93	84
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.24	524	114837	250.00	NGS	100
17)	2-BUTANONE		72	14.72	330	3466	107.50	NGS yes	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.11	649	107211	250.00	NGS	100
35)	TOLUENE-D8	(SURR)	98	25.97	619	118012	219.10	NGS 88	96
40)	4-BROMOFLUOROBENZENE	(SURR)	95	[illegible]	[illegible]	64810	216.[illegible]	NGS 87	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM

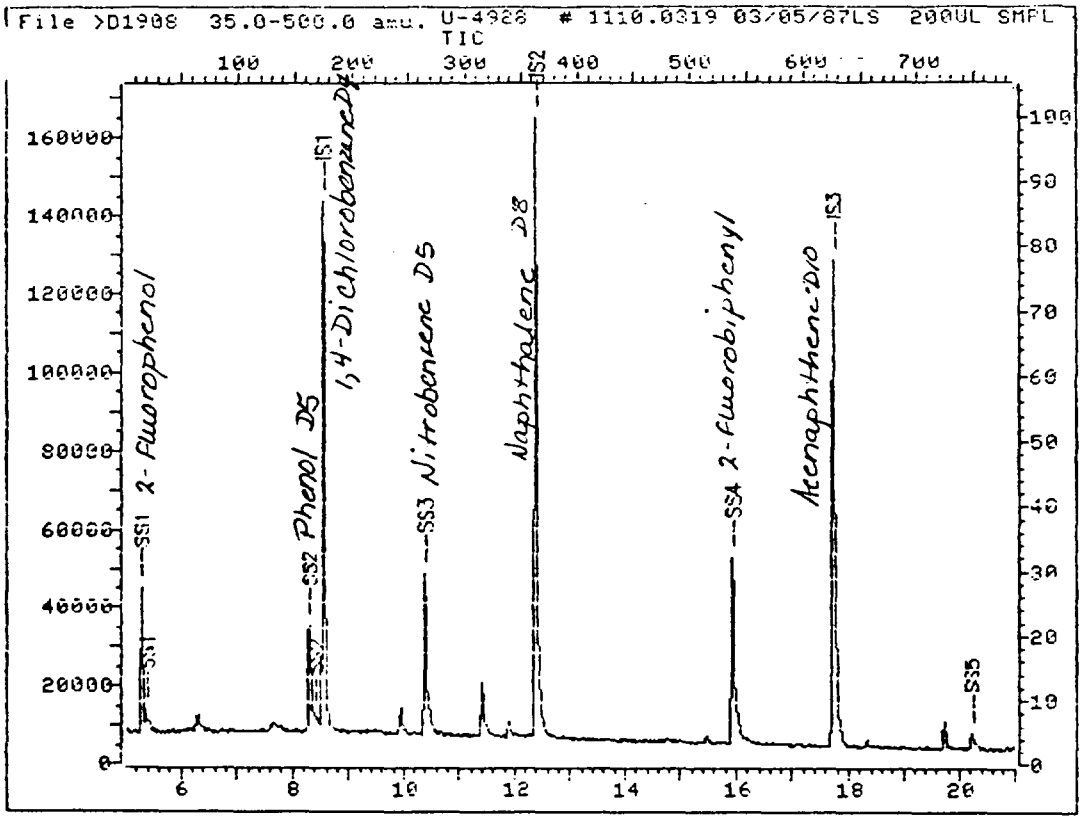


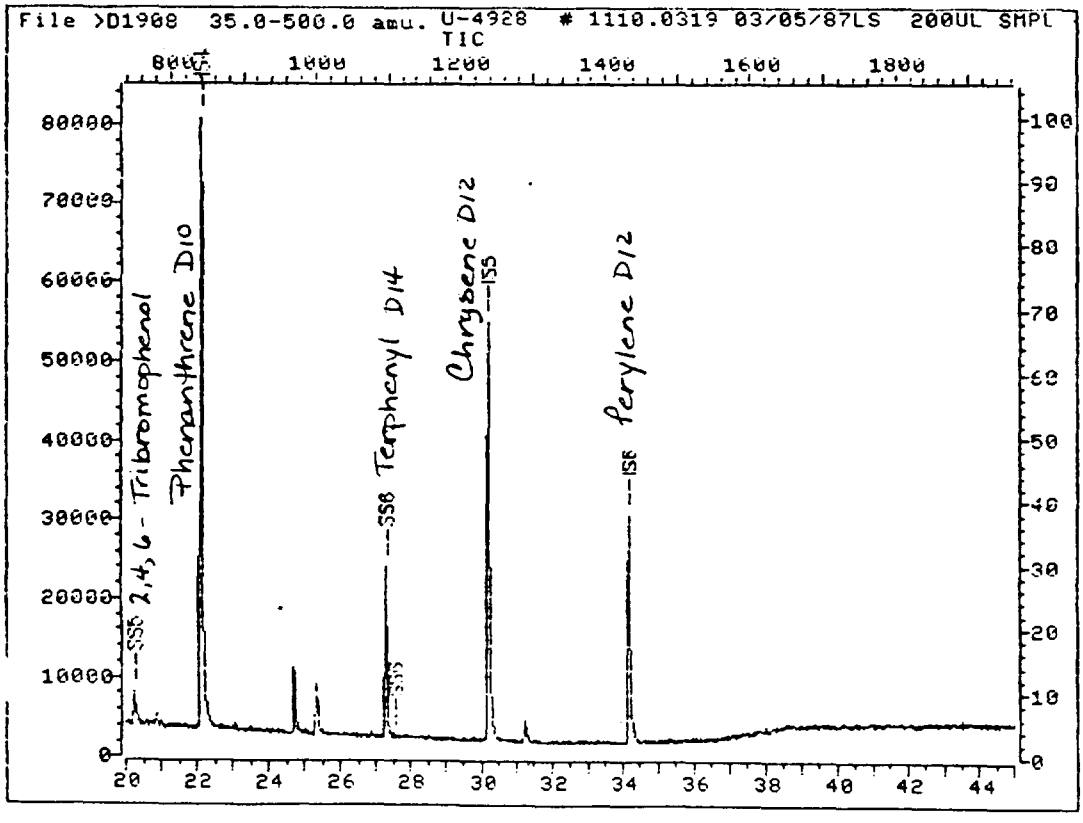
Data File: >D1908::D3
Name: U-4928 # 1110.0319 DC-01-59
Misc: 03/05/87LS 200UL SMPL + 20[illegible]UL MEOL2 + 4UL IS (2X) BIL# 5

Id File: BNA0R::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870305 17:22

Operator ID: USER6
Quant Time: 870306 10:52
Injected at: 870306 10:05

DC-01.-59


File >D1908 35.0-500.0 amu. U-4928 # 1110.0319 03/05/87LS 200UL SMPL
TIC
2-Fluorophenol
Phenol D5
1,4-Dichlorobenzene D4
Nitrobenzene D5
Naphthalene D8
2-Fluorobiphenyl
Acenaphthene D10


File >D1908 35.0-500.0 amu. U-4928 # 1110.0319 03/05/87LS 200UL SMPL
TIC
2,4,6-Tribromophenol
Phenanthrene D10
Terphenyl D14
Chrysene D12
Perylene D12

QUANT REPORT

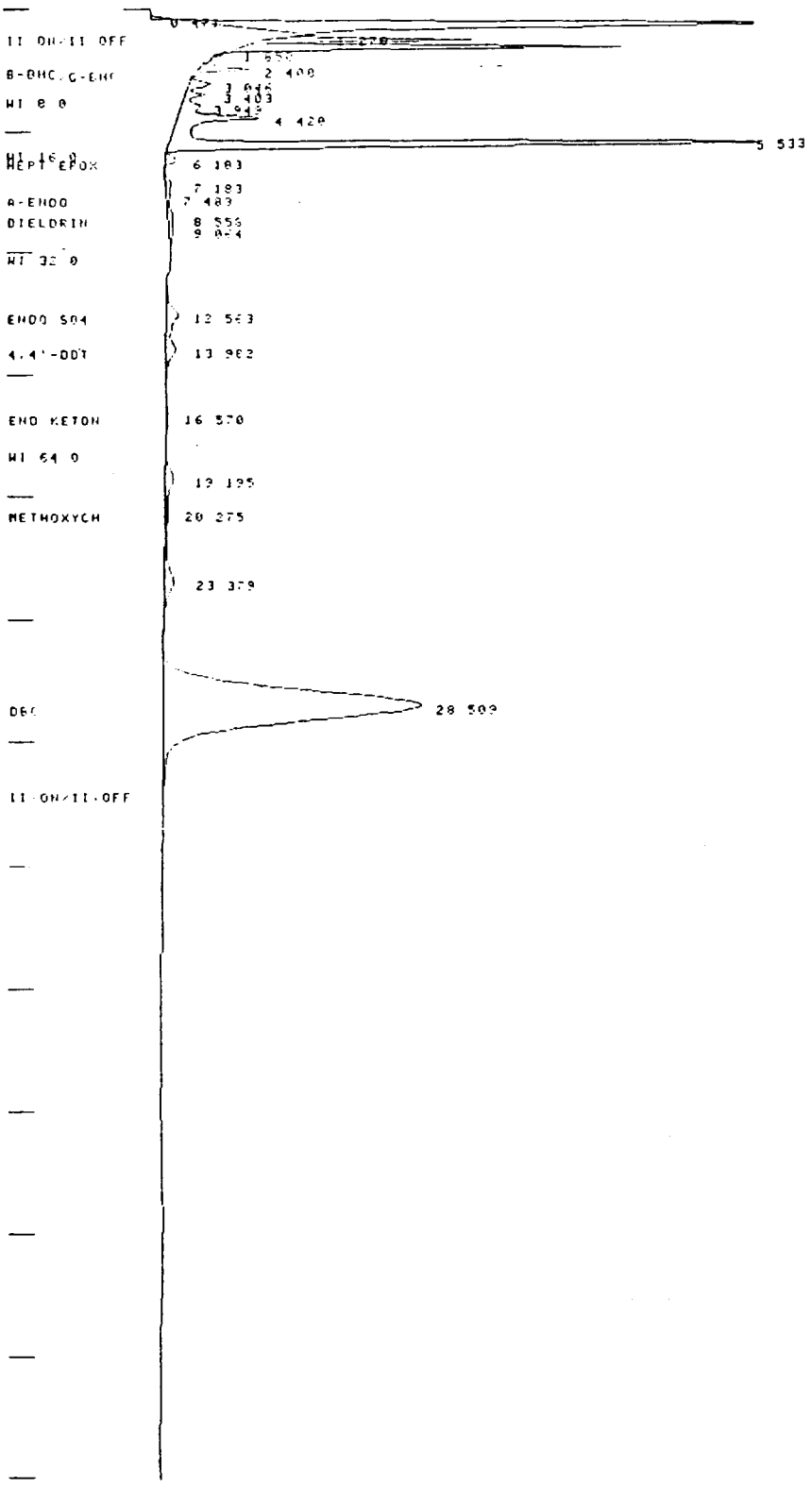
Operator ID: USER6 Quant Rev: 4 Quant Time: 870306 10:52
Output File: ^D1908::02 Injected at: 870306 10:05
Data File: >D1908::03 Dilution Factor: 2.00
Name: U-4928 # 1119.0319 DC-01-59
Misc: 03/05/87US 200UL SMPL + 200UL MECL2 + 40UL IS (2X) BTL# 5

ID File: BNAUR::02
Title: PNA 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	8.55	175	64520	40.00 UG/L	89
2)	PHENOL-D5	(SURR)	99	8.30	163	32515	26.49 UG/L	97
2)	PHENOL-D5	(SURR)	99	8.40	168	3932	3.20 UG/L	87
5)	2-FLUOROPHENOL	(SURR)	112	5.29	15	22651	40.97 UG/L	73
5)	2-FLUOROPHENOL	(SURR)	112	5.32	19	2634	4.76 UG/L	96
12)	~~N-NITROSO-DI-N-BUTYLAMINE~~		~~78~~	~~10.50~~	~~266~~	~~6741~~	~~6.85 UG/L~~	81
19)	*NAPHTHALENE-D8	(IS)	136	12.40	364	296769	40.00 UG/L	100
21)	NITROBENZENE-D5	(SURR)	82	10.40	266	43944	36.38 UG/L	95
34)	*ACENAPHTHENE-D10	(IS)	167	17.23	626	87509	40.00 UG/L	96
38)	2-FLUOROBIPHENYL	(SURR)	172	15.94	599	63600	35.99 UG/L	97
41)	~~DIMETHYL PHTHALATE~~		~~163~~	~~17.23~~	~~626~~	~~16814~~	~~12.51 UG/L~~	100
49)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.22	248	3505	17.19 UG/L	94
52)	~~2,6-DINITROTOLUENE~~		~~165~~	~~17.23~~	~~626~~	~~11394~~	~~44.31 UG/L~~	100
55)	*PHENANTHRENE-D10	(IS)	188	22.11	841	119126	40.00 UG/L	93
63)	DI-N-BUTYLPHTHALATE		149	24.22	969	19197	13.70 UG/L	99
65)	*CHRYSENE-D12	(IS)	240	30.16	1256	90248	40.00 UG/L	100
68)	TERPHENYL-D14	(SURR)	244	27.29	1099	36335	41.03 UG/L	100
~~69~~	~~TERPHENYL-D14~~	(SURR)	~~244~~	~~27.57~~	~~1109~~	~~112~~	~~.13 UG/L~~	100
72)	BIS(2-ETHYLHEXYL)PHTHALATE		149	31.24	1289	2991	3.57 UG/L	90
74)	*PERYLENE-D12	(IS)	264	34.17	1433	53812	40.00 UG/L	100

* Compound is ISTD

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



CHANNEL: 1A - 1 TITLE: RUN: 15 2C-01-59 23:30 24 FEB 87

SAMPLE: 1110 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	1.278		144935	BV	4.25
2		0.0000	1.555		462146	VB	5.05
3	[illegible]	42.1434	[illegible]	0.018	57391	BV	? 8.38
4		[illegible]	[illegible]		[illegible]	[illegible]	? [illegible]

CHANNEL: 1A - 1 TITLE: RUN# 15 DC-01-59 23:30 24 FEB 87

SAMPLE: 1110 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/[illegible]	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	WI/2 (SEC)
1		0.0000	1.278		144935	BV	4.25
2		0.0000	1.566		462146	VB	5.06
3	[illegible]	42.4494	2.408	0.018	57991	BV ?	8.38
4		0.0000	3.046		36498	BV ?	9.19
5		0.0000	3.403		26425	VV	8.06
6	[illegible]	13.9529	3.949	-0.181	49130	VV ?	11.81
7		0.0000	4.420		226638	VV	14.44
8		0.0000	5.533		1094512	VB	12.19
9	[illegible]	7.0467	6.183	0.043	25107	BV	21.13
10	[illegible]	6.1262	8.558	-0.182	20980	VV ?	30.00
11	[illegible]	30.8718	12.563	-0.287	76164	BV	40.25
12	[illegible]	22.2202	13.982	-0.268	53672	VB	41.56
13		0.0000	19.195		55985	BV	59.19
14	[illegible]	24.4475	20.275	-0.625	31750	VV	?100.00
15		0.0000	23.379		82913	VV	55.00
16	DBC 148	969.9122	28.509	0.029	2759978	VB	81.75

TOTALS: 1137.028 -1.453 5204816

DETECTED PKS: 26 REJECTED PKS: 10

DIVISOR: 0.15000 MULTIPLIER: 1000.00000

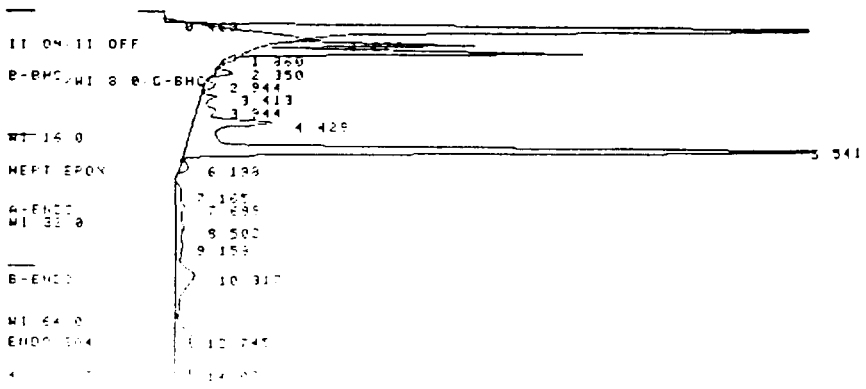
NOISE: 11.4 OFFSET: -16

RACK: 1 VIAL: 15 INJ: 1

NOTES:
NOTEBOOK:259-117,119 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 TURK213

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



SAMPLE NUMBER DC-02-60

DC-02-60

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.
Case No: U-4906, 4928, 4971, 4989.
Lab Sample ID No: 1111
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: CBojtowicz
Date Sample Received: 2-19-87

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared:
Date Analyzed: 2-24-87
Conc/Dil Factor: 2 pH 7.4
Percent Moisture: (Not Decanted) 22

Concentrations reported "as received"

CAS Number		ug/l or (ug/Kg) (Circle One)
74-87-3	Chloromethane	20u
74-83-9	Bromomethane	20u
75-01-4	Vinyl Chloride	20u
75-00-3	Chloroethane	20u
75-09-2	Methylene Chloride	27
67-64-1	Acetone	7100 BE
75-15-0	Carbon Disulfide	10u
75-35-4	1, 1-Dichloroethene	10u
75-34-3	1, 1-Dichloroethane	85
156-60-5	Trans-1, 2-Dichloroethene	150
67-66-3	Chloroform	10u
107-06-2	1, 2-Dichloroethane	18
78-93-3	2-Butanone	20,000BE
71-55-6	1, 1, 1-Trichloroethane	10u
56-23-5	Carbon Tetrachloride	10u
108-05-4	Vinyl Acetate	20u
75-27-4	Bromodichloromethane	10u

CAS Number		ug/l or (ug/Kg) (Circle One)
78-87-5	1, 2-Dichloropropane	10u
10061-02-6	Trans-1, 3-Dichloropropene	10u
79-01-6	Trichloroethene	54
124-48-1	Dibromochloromethane	10u
79-00-5	1, 1, 2-Trichloroethane	10u
71-43-2	Benzene	520
10061-01-5	cis-1, 3-Dichloropropene	10u
110-75-8	2-Chloroethylvinylether	20u
75-25-2	Bromoform	10u
108-10-1	4-Methyl-2-Pentanone	970 B
591-78-6	2-Hexanone	49
127-18-4	Tetrachloroethene	10u
79-34-5	1, 1, 2, 2-Tetrachloroethane	22
108-88-3	Toluene	10u
108-90-7	Chlorobenzene	1300
100-41-4	Ethylbenzene	36
100-42-5	Styrene	10u
	Total Xylenes	110

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/ml 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 V-4906, 4928, 4971, 4989

Sample Number
DC-02-60

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low (Medium) (Circle One)

Date Extracted/Prepared 2-19-87

Date Analyzed 3-6-87

Conc./Dil Factor: 2

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	3300u
111-44-4	bis-2-ChloroethylEther	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
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 and environment, inc.

Case No V-4906, 4928, 4971, 4989

Sample Number
DC-02-60

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 2-19-87

Date Analyzed 2-25-87

Conc/Dil Factor 1

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	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

Laboratory Name Ecology & Environment Inc.

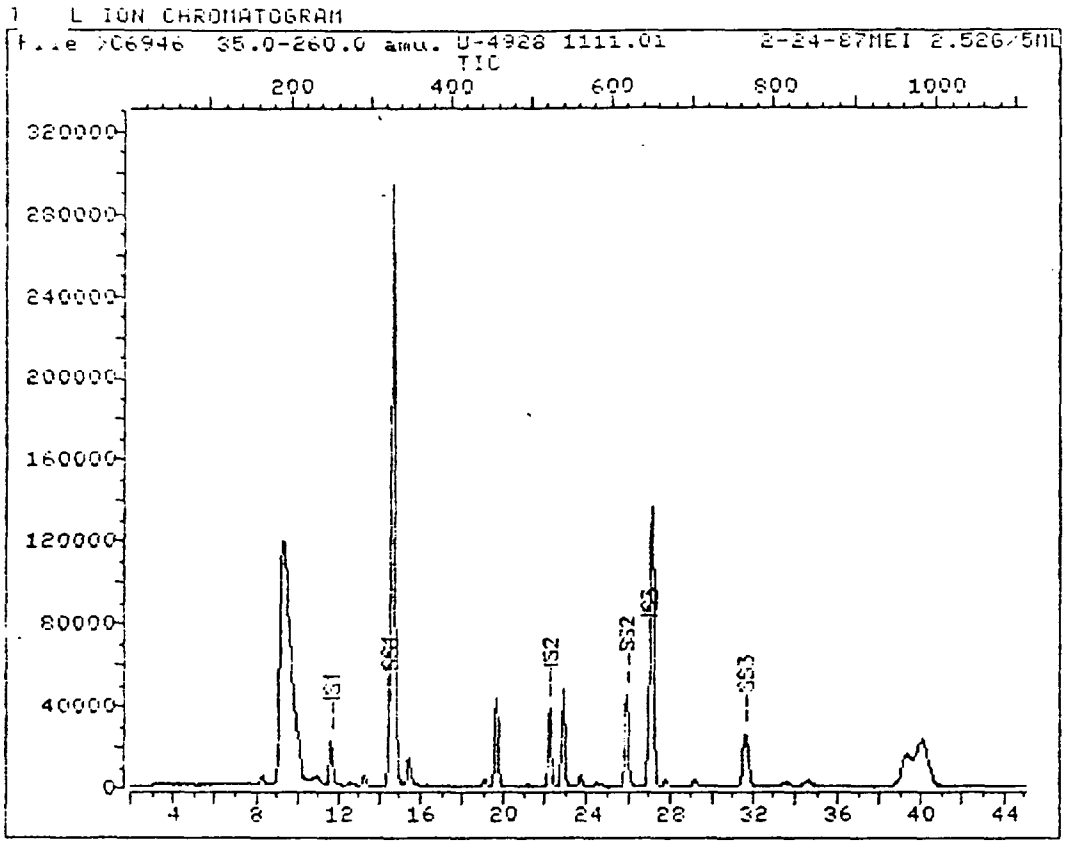
Case No U-4906, 4928, 4971, 4989

Sample Number
DC-02-60

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	(RT) or Scan Number MCAC	Estimated Concentration (ug/l or ug/kg)
1.	78922	Butanol	VOA	15.5	70 J
2.		Unknown hydrocarbon	VOA	23.7	14 J
3.		Dichlorobenzene isomer	VOA	39.4	120 J
4.		Dichlorobenzene isomer	VOA	40.1	180 J
5.					
6.		NO TIC's in BNA fraction			
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

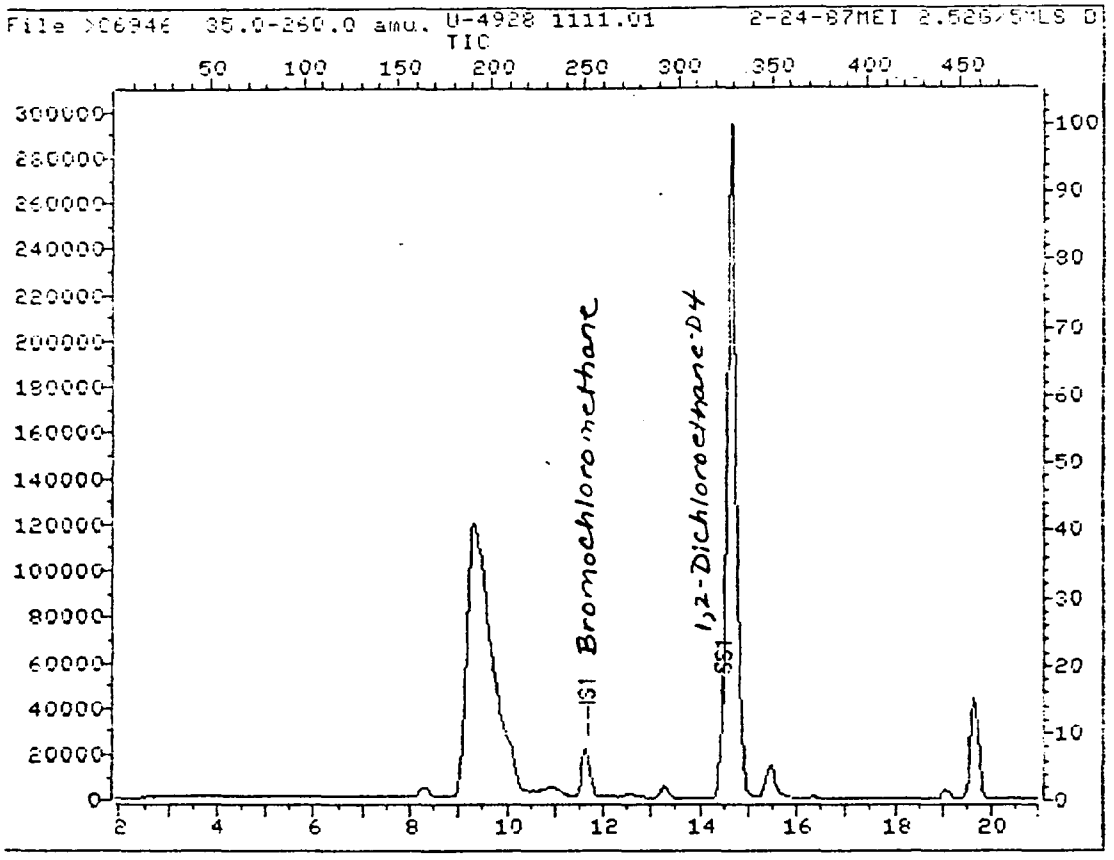


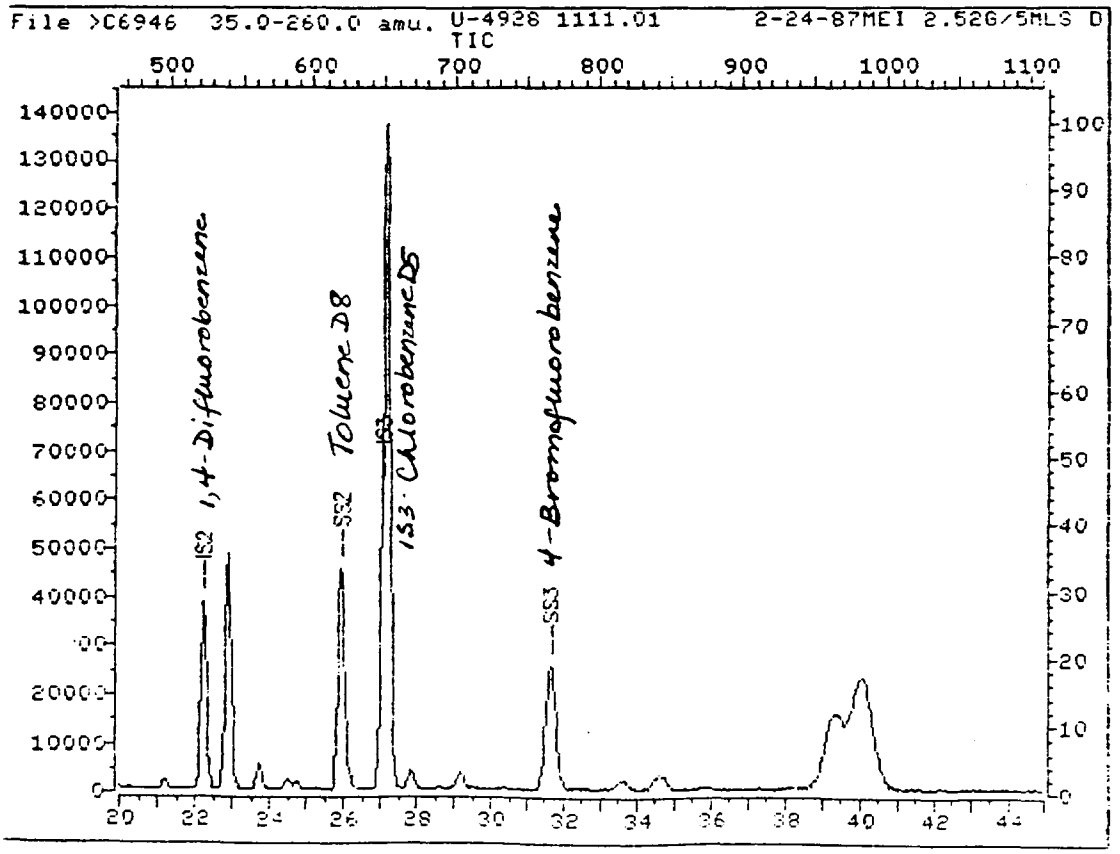
Data File: >C6946::D3
Name: U-4928 1111.01 JC-02-60
Misc: 2-24-87MEI 2.52G/5MLS DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870224 15:45

Operator ID: USER8
Quant Time: 870224 21:11
Injected at: 870224 20:25

DC-02-60


File >C6946 35.0-260.0 amu. U-4928 1111.01 2-24-87MEI 2.52G/5MLS D
TIC
Bromochloromethane
1,2-Dichloroethane-D4
IS1
SS1


File >C6946 35.0-260.0 amu. U-4928 1111.01 2-24-87MEI 2.52G/5MLS D
TIC
1,4-Difluorobenzene
Toluene D8
Chlorobenzene D5
4-Bromofluorobenzene
IS2
SS2
IS3
SS3

QUANT REPORT

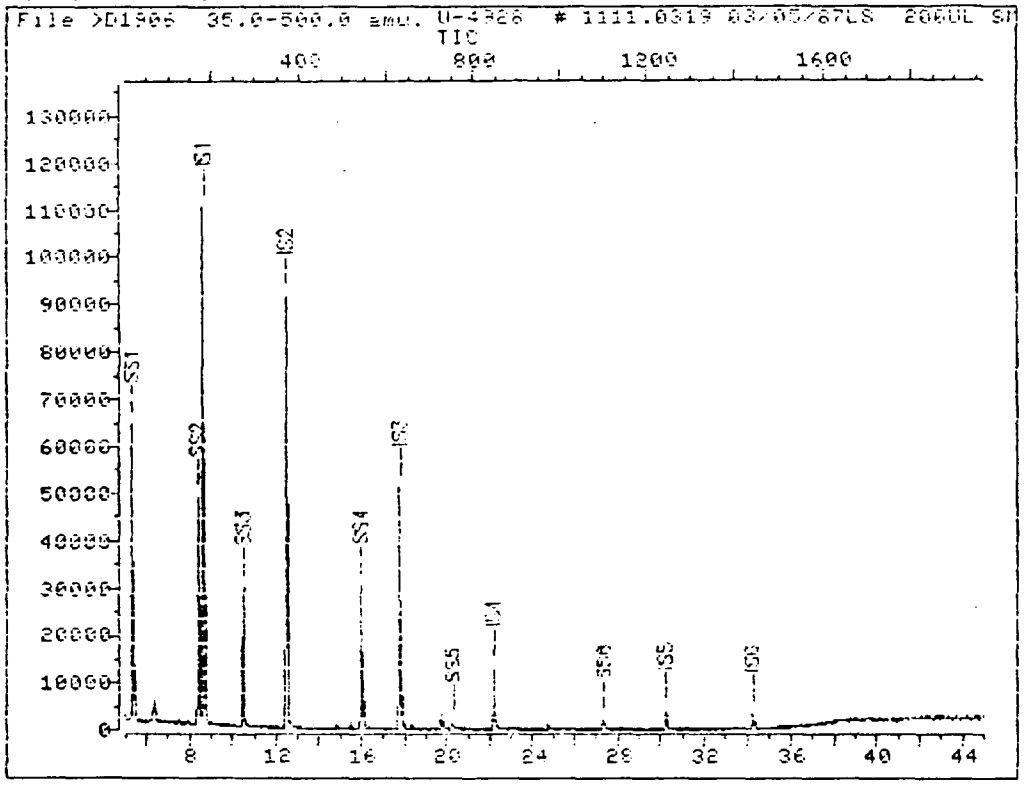
Operator ID: USER8 Quant Rev: 4 Quant Time: 870224 21:11
Output File: ^C6946::Q2 Injected at: 870224 20:25
Data File: >C6946::D3 Dilution Factor: 1.00
Name: U-4928 1111.01 DC-02-60
Misc: 2-24-87MEI 2.5G/5MLS DI + 10UL IS/SS

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	11.65	251	28641	250.00	NGS	100	
6)	METHYLENE CHLORIDE		84	8.31	165	11900	68.96	NGS yes	100	
7)	ACETONE		43	9.36	192	2955918	17853.49	NGS yes	100	E
11)	1,1-DICHLOROETHANE		63	12.54	274	7850	19.47	NGS yes	94	
12)	TRANS-1,2-DICHLOROETHENE		96	13.28	293	12121	72.97	NGS yes	77	
14)	1,2-DICHLOROETHANE		62	14.60	327	3327	8.84	NGS yes	89	✓
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.48	324	79649	266.40	NGS	81	✓
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.24	524	160186	250.00	NGS	100	
17)	2-BUTANONE		72	14.63	328	442984	9849.66	NGS yes	100	E
17)	~~2-BUTANONE~~		~~72~~	~~15.45~~	~~349~~	~~3509~~	~~78.02~~	NGS NO CAL	100	
24)	TRICHLOROETHENE		130	19.06	442	6723	26.63	NGS yes	84	
27)	BENZENE		78	19.64	457	186892	253.15	NGS yes	100	
28)	~~CIS-1,3-DICHLOROPROPENE~~		~~75~~	~~19.64~~	~~457~~	~~3531~~	~~14.08~~	NGS NO CAL	100	
31)	*CHLOROBENZENE-D5	(IS)	117	27.05	648	135239	250.00	NGS	100	
32)	4-METHYL-2-PENTANONE		43	22.90	541	211310	474.65	NGS yes	91	
32)	~~4-METHYL-2-PENTANONE~~		~~43~~	~~23.71~~	~~562~~	~~9522~~	~~21.39~~	NGS	61	CW
33)	~~2-HEXANONE~~		~~43~~	~~23.71~~	~~562~~	~~9522~~	~~23.71~~	NGS	100	CW
33)	2-HEXANONE		43	24.49	582	8209	23.89	NGS yes	100	
35)	1,1,2,2-TETRACHLOROETHANE		83	24.53	583	4030	10.61	NGS yes	100	✓
36)	TOLUENE-D8	(SURR)	98	25.93	619	171275	252.09	NGS	99	✓
38)	CHLOROBENZENE		112	27.17	651	377742	629.74	NGS yes	98	
39)	ETHYLBENZENE		91	29.16	702	18967	17.79	NGS yes	90	
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.64	766	89443	237.06	NGS	100	✓
42)	TOTAL XYLENES		91	33.62	817	18274	20.45	NGS yes	100	
42)	TOTAL XYLENES		91	34.59	842	28161	31.51	NGS yes	100	
43)	1,3-DICHLOROBENZENE yes		146	39.32	964	118742	118742.0	NO CALIB	100	
43)	1,3-DICHLOROBENZENE		146	40.06	983	147266	147266.0	NO CALIB	100	
44)	1,2-DICHLOROBENZENE			39.32	964	118742	118742.0	NO CALIB	100	
44)	1,2-DICHLOROBENZENE			40.06	983	136323	136323.0	NO CALIB	100	
45)	1,4-DICHLOROBENZENE		146	39.32	964	121498	121498.0	NO CALIB	100	
45)	1,4-DICHLOROBENZENE		146	40.06	983	184198	184198.0	NO CALIB	100	

* Compound is ISTD

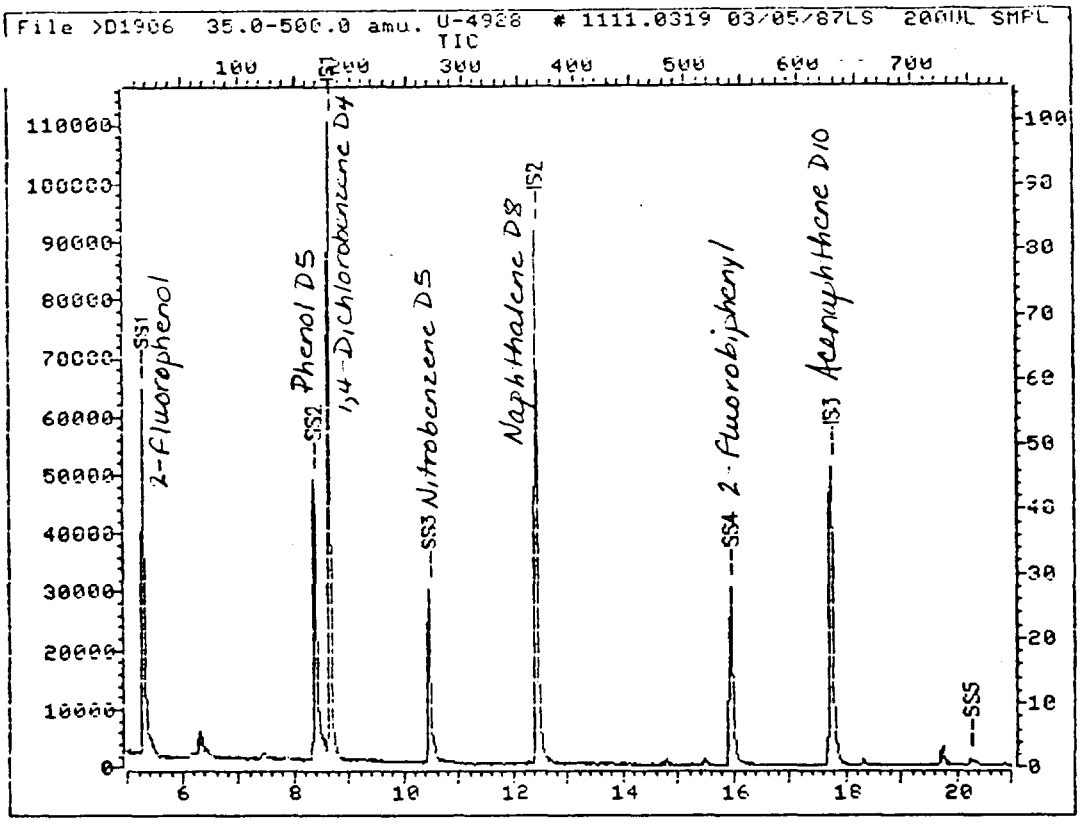
TOTAL ION CHROMATOGRAM



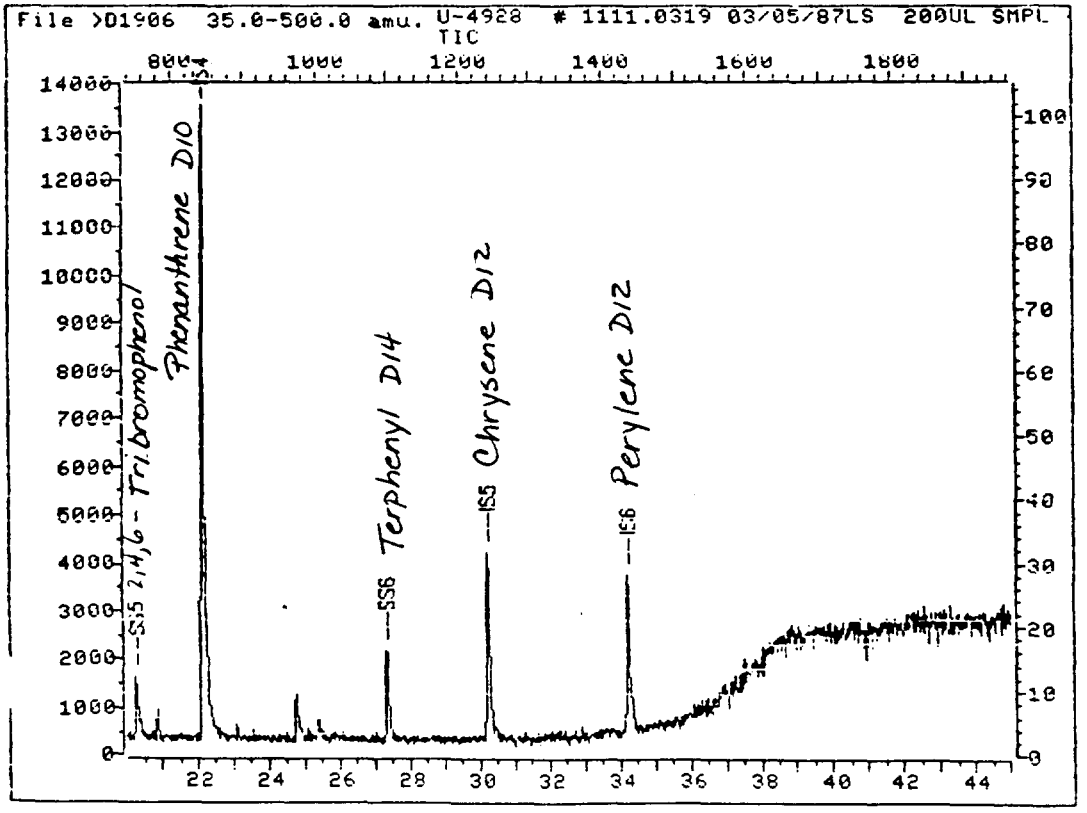
Data File: >D1906::D3
Name: U-4928 # 1111.0319 DC-02-60
Misc: 03/05/87LS 200UL SMPL + 200UL MEOL2 + 40UL IS (2X) BTL# 3

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870305 17:22

Operator ID: USER6
Quant Time: 870306 00:51
Injected at: 870306 00:03


File >D1906 35.0-500.0 amu. U-4928 # 1111.0319 03/05/87LS 200UL SMPL
TIC
2-Fluorophenol
Phenol D5
1,4-Dichlorobenzene D4
Nitrobenzene D5
Naphthalene D8
2-Fluorobiphenyl
Acenaphthene D10

DC-02-60


File >D1906 35.0-500.0 amu. U-4928 # 1111.0319 03/05/87LS 200UL SMPL
TIC
2,4,6-Tribromophenol
Phenanthrene D10
Terphenyl D14
Chrysene D12
Perylene D12

QUANT REPORT

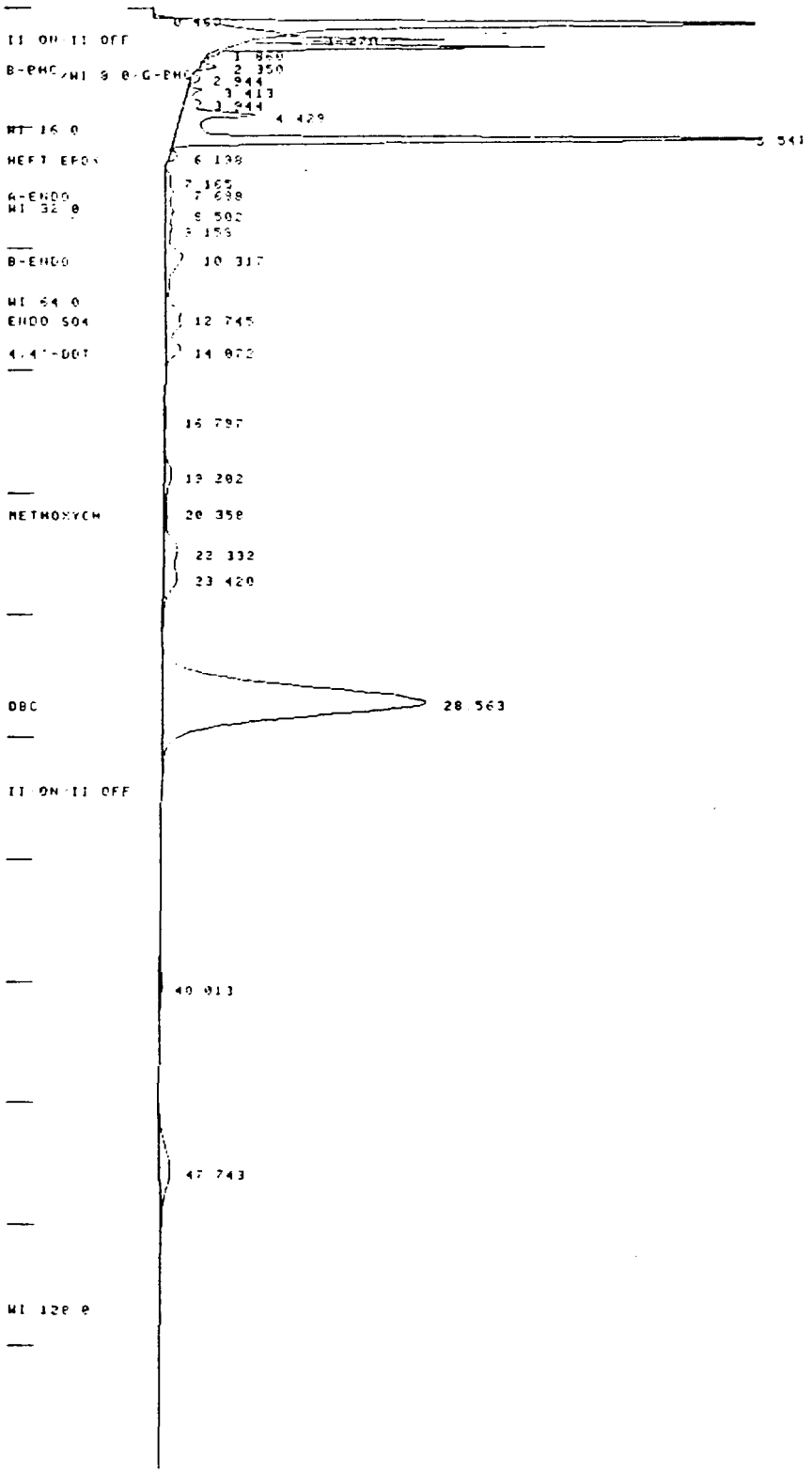
Operator ID: USER6 Quant Rev: 4 Quant Time: 870306 00:51
Output File: ^D1906::Q2 Injected at: 870306 00:03
Data File: >D1906::D3 Dilution Factor: 2.00
Name: U-4928 # 1111.0319 DC-02-60
Misc: 03/05/87LS 200UL SMPL + 200UL MECL2 + 4UL IS (2X) BTL# 3

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	8.64	180	45765	40.00	UG/L	84
2)	PHENOL-D5	(SURR) 99	8.36	166	58440	67.12	UG/L 67 ✓	97
5)	2-FLUOROPHENOL	(SURR) 112	5.28	15	43166	110.07	UG/L 110 ✓	43
~~[illegible]~~	~~N-NITROSO-DI-N-PROPYLAMINE~~	~~70~~	~~10.46~~	~~269~~	~~5502~~	~~7.88~~	~~UG/L~~	~~91~~ CW
19)	*NAPHTHALENE-D8	(IS) 136	12.43	366	144838	40.00	UG/L	100
20)	NITROBENZENE-D5	(SURR) 82	10.46	269	33961	44.02	UG/L 88 ✓	91
34)	*ACENAPHTHENE-D10	(IS) 162	17.75	627	41721	40.00	UG/L	93
38)	2-FLUOROBIPHENYL	(SURR) 172	15.45	539	43091	51.15	UG/L 102 ✓	92
~~41)~~	~~DIMETHYL PHTHALATE~~	~~[illegible]~~	~~17.75~~	~~627~~	~~7952~~	~~13.03~~	~~UG/L~~	~~100~~ CW
48)	2,4,6-TRIBROMOPHENOL	(SURR) 330	20.25	750	1555	16.00	UG/L 16 LOBD	
~~52)~~	~~2,6-DINITROTOLUENE~~	~~[illegible]~~	~~17.75~~	~~627~~	~~5450~~	~~44.45~~	~~UG/L~~	~~100~~ CW
55)	*PHENANTHRENE-D10	(IS) 188	22.13	842	30904	40.00	UG/L	90
65)	*CHRYSENE-D12	(IS) 240	30.21	1239	12449	40.00	UG/L	100
68)	TERPHENYL-D14	(SURR) 244	27.32	1097	7415	60.69	UG/L 121	100 ✓
74)	*PERYLENE-D12	(IS) 264	34.22	1436	8996	40.00	UG/L	100

* Compound is ISTD

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



DC-02-60

CHANNEL: 1A - 1 TITLE: RUN# 16 0:35 25 FEB 87

SAMPLE: 1111 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	WI/2 (SEC)
1		0.0000	1.079		134793	BV	4.25
2		0.0000	1.565		376477	VB	5.00

DC-C2-60

CHANNEL: 1A - 1 TITLE: RUN# 16 0:35 25 FEB 87

SAMPLE: 1111 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	1.278		134783	BV		4.25
2		0.0000	1.566		376477	VB		5.00
3	[illegible]	15.9883	2.350	-0.040	21842	VB		7.81
4		0.0000	3.413		24792	VV		9.00
5	[illegible]	14.2629	3.944	-0.186	50221	VV	?	14.31
6		0.0000	4.426		199820	VV		15.25
7		0.0000	5.541		1748447	VV		12.19
8		0.0000	7.165		20330	BV	?	34.88
9	[illegible]	8.0388	7.688	0.088	27281	VV	?	41.75
10	[illegible]	9.9712	8.502	-0.238	34148	VV	?	39.25
11	[illegible]	9.2205	9.158	0.318	33247	VV	?	59.75
12	[illegible]	39.8878	10.317	0.267	133553	VV		51.38
13	[illegible]	26.5327	12.745	-0.105	65459	VV	?	51.06
14		0.0000	12.996		61123	VV	?	30.75
15	[illegible]	30.6016	14.072	-0.178	73917	VB		40.88
16		0.0000	19.202		62501	VV		58.50
17		0.0000	22.332		102086	VV	?	58.94
18		0.0000	23.420		116581	VV	?	73.81
19	DBC 153	1019.796	28.563	0.083	2843298	VB		80.69
20		0.0000	40.013		26360	BB		80.00
21		0.0000	47.743		174482	BB		124.25

TOTALS: 1174.300 0.009 6330848

DETECTED PKS: 33 REJECTED PKS: 12

DIVISOR: 0.15000 MULTIPLIER: 1000.00000

NOISE: 11.4 OFFSET: -11

RACK: 2 VIAL: 1 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 TURK214

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

SAMPLE NUMBER DC-03-61

DC-03-61

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.
Case No: U-4906, 4928, 4971, 4989.
Lab Sample ID No: 1112
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: C Slojkowicz
Date Sample Received: 2-19-87

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared:
Date Analyzed: 2-24-87
Conc/Dil Factor: 2 pH 7.8
Percent Moisture: (Not Decanted) 16

Concentrations reported "as received"

CAS Number		ug/l or (ug/Kg) (Circle One)
74-87-3	Chloromethane	20U
74-83-9	Bromomethane	20U
75-01-4	Vinyl Chloride	20U
75-00-3	Chloroethane	20U
75-09-2	Methylene Chloride	8 J
67-64-1	Acetone	3700 BE
75-15-0	Carbon Disulfide	10U
75-35-4	1, 1-Dichloroethene	10U
75-34-3	1, 1-Dichloroethane	10U
156-60-5	Trans-1, 2-Dichloroethene	5 J
67-66-3	Chloroform	10U
107-06-2	1, 2-Dichloroethane	10U
78-93-3	2-Butanone	30 B
71-55-6	1, 1, 1-Trichloroethane	10U
56-23-5	Carbon Tetrachloride	10U
108-05-4	Vinyl Acetate	20U
75-27-4	Bromodichloromethane	10U

CAS Number		ug/l or (ug/Kg) (Circle One)
78-87-5	1, 2-Dichloropropane	10U
10061-02-6	Trans-1, 3-Dichloropropene	10U
79-01-6	Trichloroethene	10U
124-48-1	Dibromochloromethane	10U
79-00-5	1, 1, 2-Trichloroethane	10U
71-43-2	Benzene	20
10061-01-5	cis-1, 3-Dichloropropene	10U
110-75-8	2-Chloroethylvinylether	20U
75-25-2	Bromoform	10U
108-10-1	4-Methyl-2-Pentanone	20U
591-78-6	2-Hexanone	20U
127-18-4	Tetrachloroethene	10U
79-34-5	1, 1, 2, 2-Tetrachloroethane	10U
108-88-3	Toluene	10U
108-90-7	Chlorobenzene	52
100-41-4	Ethylbenzene	140
100-42-5	Styrene	10U
	Total Xylenes	820

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 factor. (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. 10 J). 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/ml 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-03-61

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low (Medium) (Circle One)

Date Extracted/Prepared 2-19-87

Date Analyzed 3-5-87

Conc/Dil Factor: 2

Percent Moisture (Decanted) 16

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	19000
85-01-8	Phenanthrene	3300u
120-12-7	Anthracene	3300u
84-74-2	Di-n-Butylphthalate	4500
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	1600 BJ
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 and environment, inc.

Case No U-4906, 4928, 4971, 4989

Sample Number DC-03-61

Organics Analysis Data Sheet
(Page 3)

Pesticide 'PCBs

Concentration (Low) Medium (Circle One)

Date Extracted 'Prepared 2-19-87

Date Analyzed 2-25-87

Conc 'Dil Factor 2

Percent Moisture (decanted) 16

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 1000 V_i 4

Laboratory Name Ecology & Environment Inc.

Case No U-4906, 4928, 4971, 4989

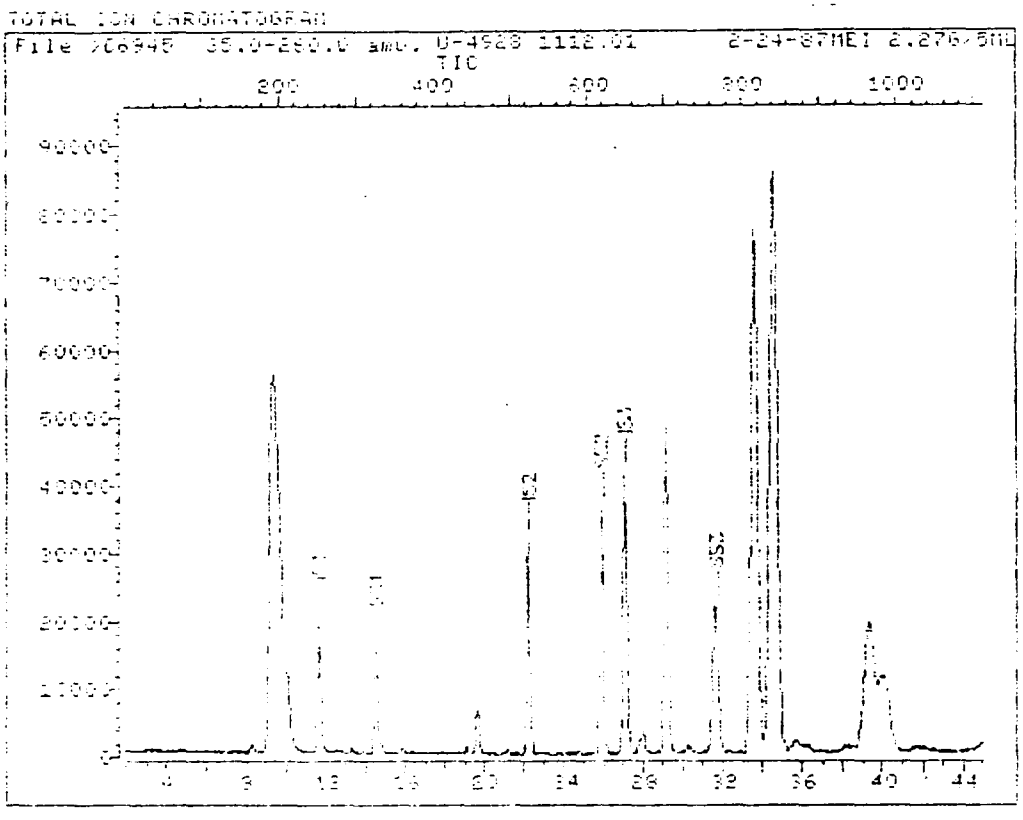
Sample Number DC-03-61

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	(RT) or Scan Number MCC-IC	Estimated Concentration (ug/l or ug/kg)
1.		Hexane isomer	VOA	21.2	3 J
2.		Dichlorobenzene isomer	VOA	39.3	230 J
3.		Dichlorobenzene isomer	VOA	40.1	130 J
4.					
5.		Unknown	BNA	11.43	3000 J
6.	10544500	Molecular Sulfur	BNA	25.35	2400 J
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

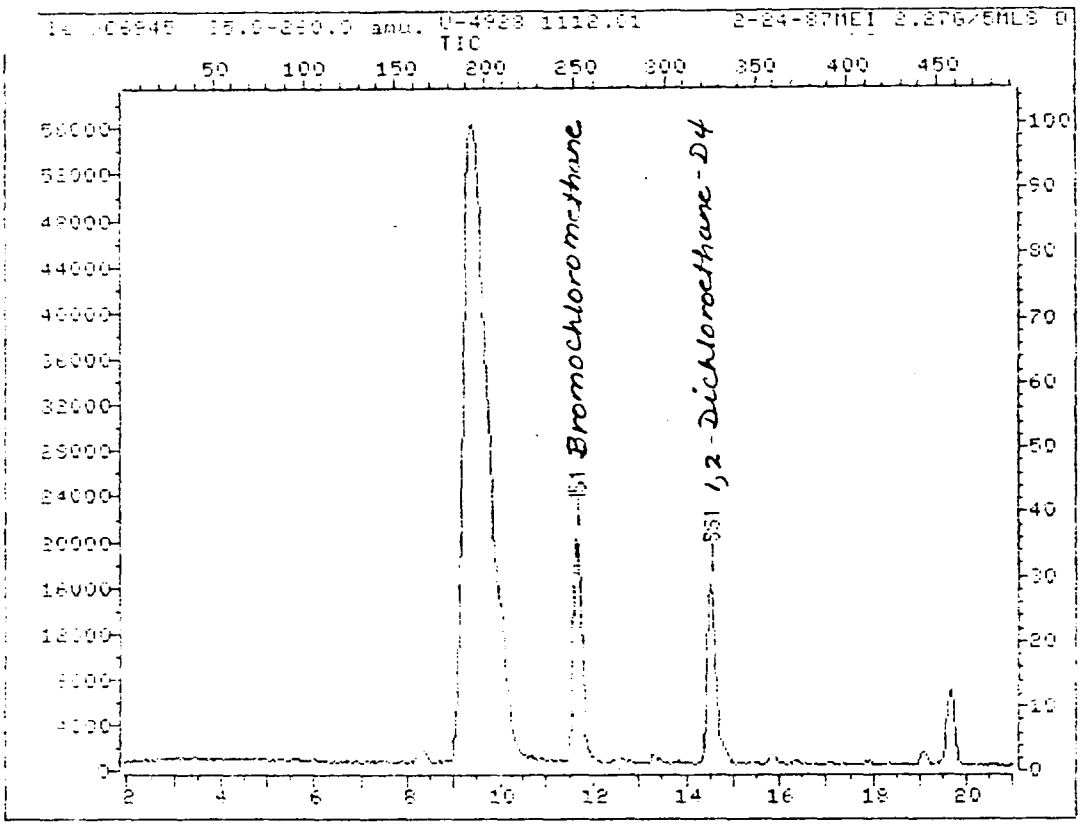


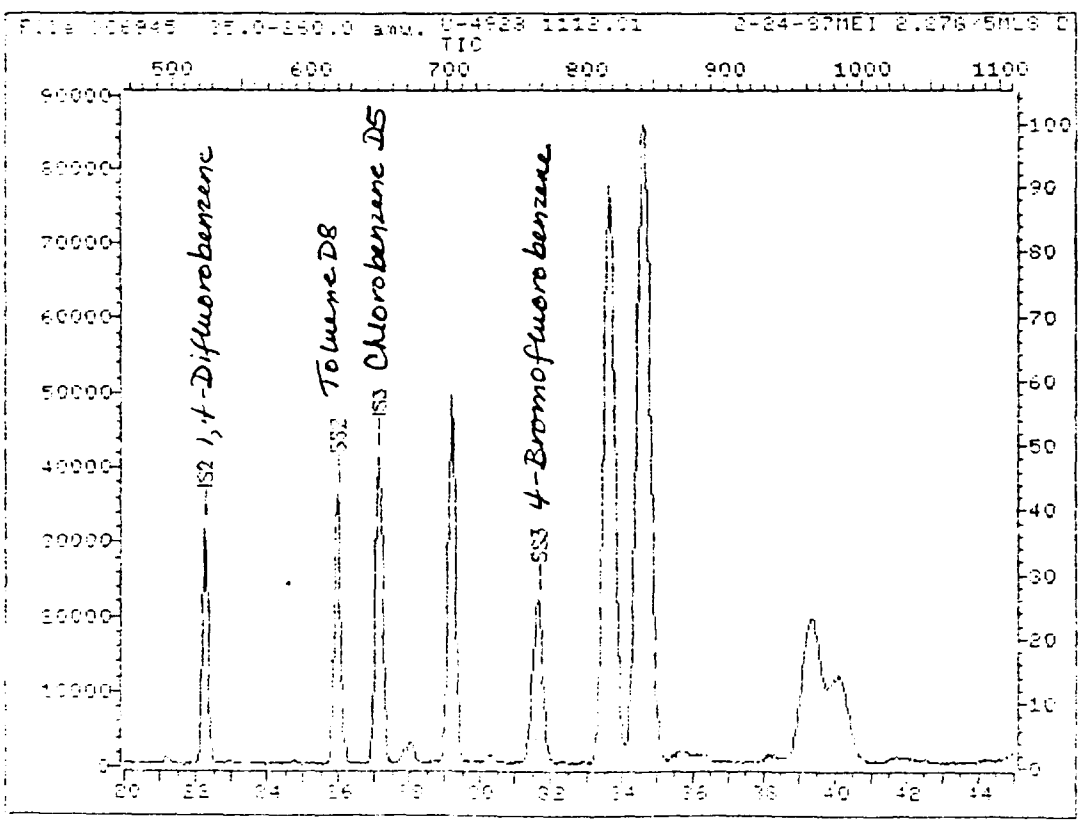
Data File: C6945::D3
Name: U-4928 1112.01 DC-03-61
Misc: 2-24-87MEI 2.276/5ML5 DI + 10UL IS/SS

Id File: WD-CF6::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870224 15:45

Operator ID: JBERS
Quant Time: 870224 20:19
Injected at: 870224 19:33

DC-03-61


TIC
S1 Bromochloromethane
S1 1,2-Dichloroethane-D4


TIC
S2 1,4-Difluorobenzene
S2 Toluene D8
S3 Chlorobenzene D5
S3 4-Bromofluorobenzene

QUANT REPORT --

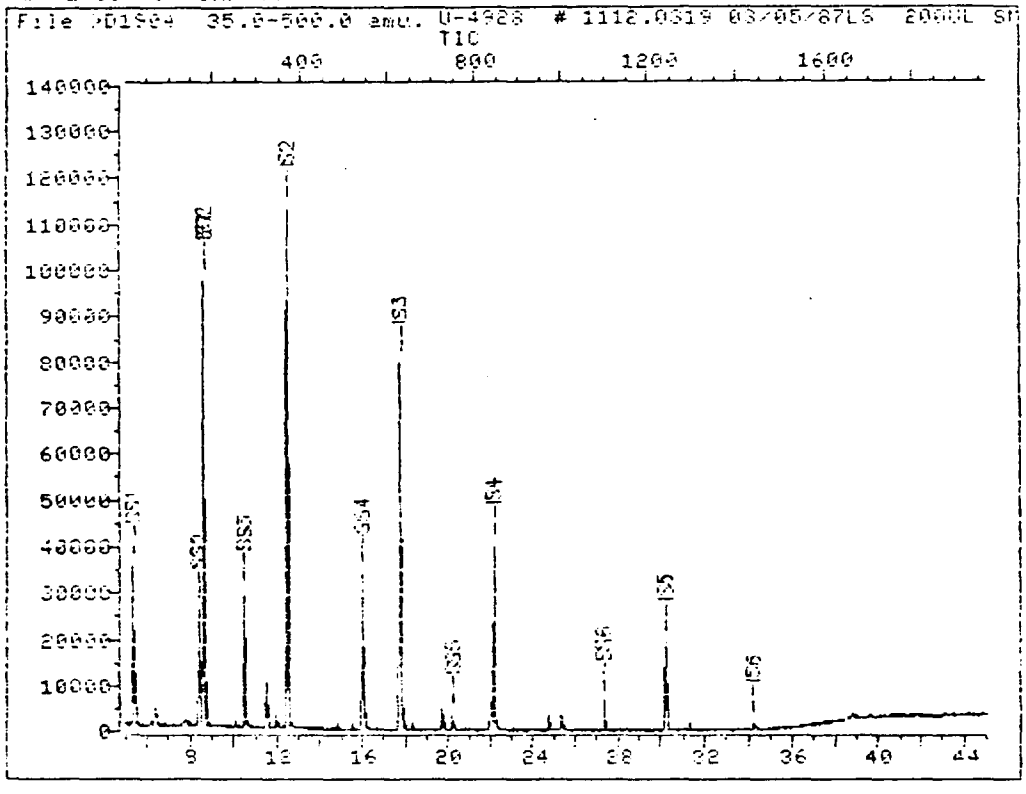
Operator ID: USER8 Quant Rev: 4 Quant Time: 870224 20:19
Output File: ^C6945::02 Injected at: 870224 19:33
Data File: >C6945::03 Dilution Factor: 1.00
Name: U-4928 1112.01 DC-03-61
Misc: 2-24-87MEI 2 [illegible] 10UL [illegible]

ID File: VOACRS::02
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	11.65	251	29721	250.00	NGS	100
6)	METHYLENE CHLORIDE	84	8.31	165	3445	19.24	NGS yes	100
7)	ACETONE	43	9.40	193	1435868	8357.38	NGS yes	100 E
10)	TRANS-1,2-DICHLOROETHENE	96	13.31	294	2060	11.95	NGS yes	88
15)	1,2-DICHLOROETHANE-D4(SURR)	65	14.52	325	71529	230.55	NGS	81 ✓
16)	*1,4-DIFLUOROBENZENE (IS)	114	22.24	524	132985	250.00	NGS	100
17)	2-BUTANONE	72	14.71	330	2556	68.46	NGS yes	100
27)	BENZENE	78	19.64	457	28187	45.99	NGS yes	100
31)	*CHLOROBENZENE-D5 (IS)	117	27.09	649	110844	250.00	NGS	100
36)	TOLUENE-D8 (SURR)	98	25.93	619	137283	246.53	NGS	98 ✓
38)	CHLOROBENZENE	112	27.21	652	57517	116.99	NGS yes	96
39)	ETHYLBENZENE	91	29.19	703	271683	310.94	NGS yes	96
40)	4-BROMOFLUOROBENZENE(SURR)	95	31.68	767	75014	242.57	NGS	100 ✓
41)	~~STYRENE~~	~~[illegible]~~	~~[illegible]~~	~~817~~	~~11833~~	~~[illegible]~~	~~NGS~~ NO	100
41)	~~STYRENE~~	~~[illegible]~~	~~[illegible]~~	~~841~~	~~17209~~	~~[illegible]~~	~~NGS~~ NO	100
42)	TOTAL XYLENES	91	33.62	817	587960	802.64	NGS yes	100
42)	TOTAL XYLENES	91	34.63	843	768502	1049.10	NGS yes	100 E
43)	1,3-DICHLOROBENZENE yes	146	38.27	937	3583	3583.00	NO CALIB	100
43)	1,3-DICHLOROBENZENE	146	39.28	963	79135	79135.00	NO CALIB	100
44)	1,2-DICHLOROBENZENE		38.27	937	3583	3583.00	NO CALIB	100
44)	1,2-DICHLOROBENZENE		39.28	963	79135	79135.00	NO CALIB	100
45)	1,4-DICHLOROBENZENE	146	38.27	937	3583	3583.00	NO CALIB	100
45)	1,4-DICHLOROBENZENE	146	39.28	963	79135	79135.00	NO CALIB	100

* Compound is ISTD

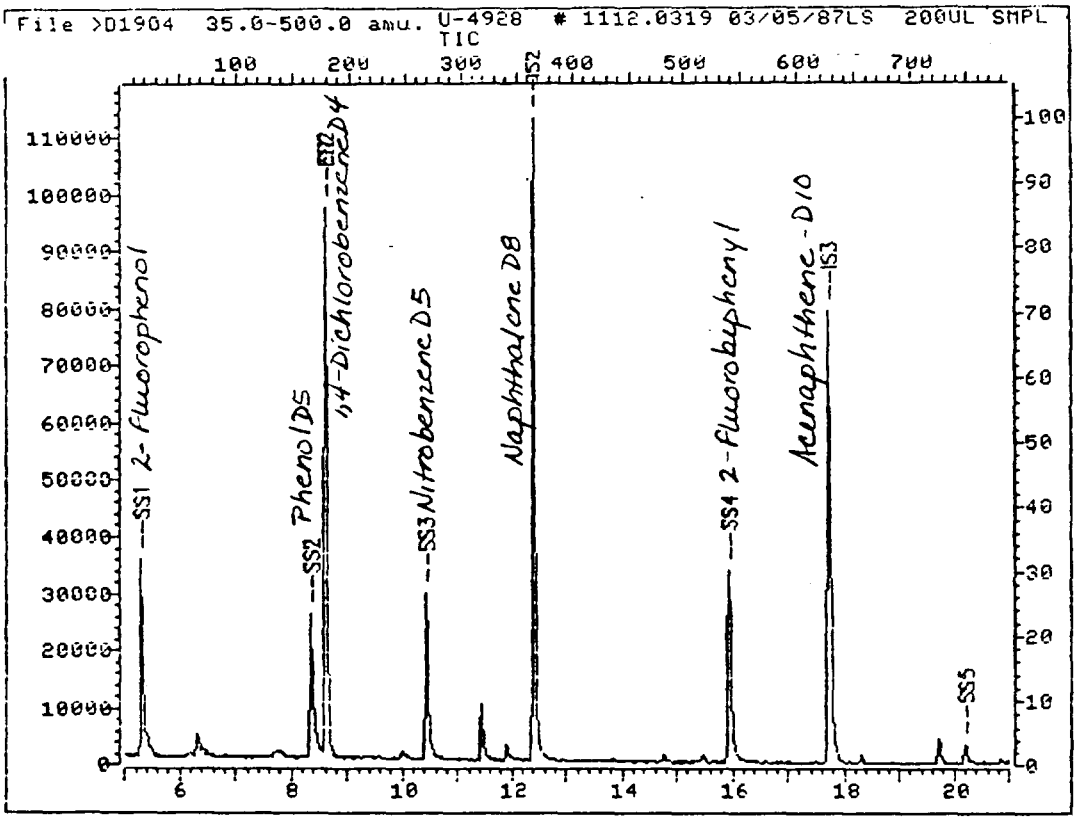
TOTAL ION CHROMATOGRAM



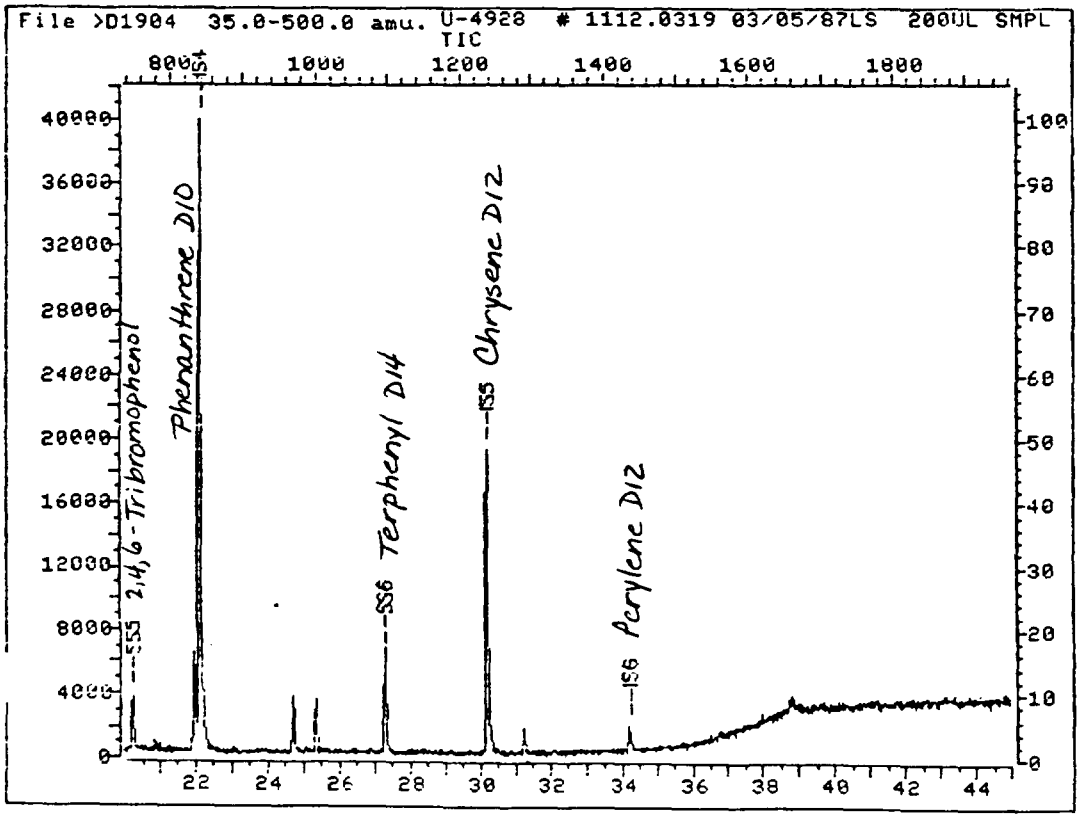
Data File: >01904::03
Name: U-4928 # 1112.0319 DC-03-61
Misc: 03/05/87LS 200UL SMPL + 200UL MECL2 + 4UL IS (2X) B'L# 1

Id File: BNA0R::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870305 17:22

Operator ID: USER6
Quant Time: 870305 23:05
Injected at: 870305 22:17


File >D1904 35.0-500.0 amu. U-4928 # 1112.0319 03/05/87LS 200UL SMPL
TIC
--SS1 2-Fluorophenol
--SS2 Phenol D5
1,4-Dichlorobenzene-D4
--SS3 Nitrobenzene D5
Naphthalene D8
--SS4 2-Fluorobiphenyl
Acenaphthene-D10
--IS3
--SS5

DC-03-61


File >D1904 35.0-500.0 amu. U-4928 # 1112.0319 03/05/87LS 200UL SMPL
TIC
--SS5 2,4,6-Tribromophenol
Phenanthrene D10
--SS6 Terphenyl D14
--SS Chrysene D12
--IS6 Perylene D12

QUANT REPORT -

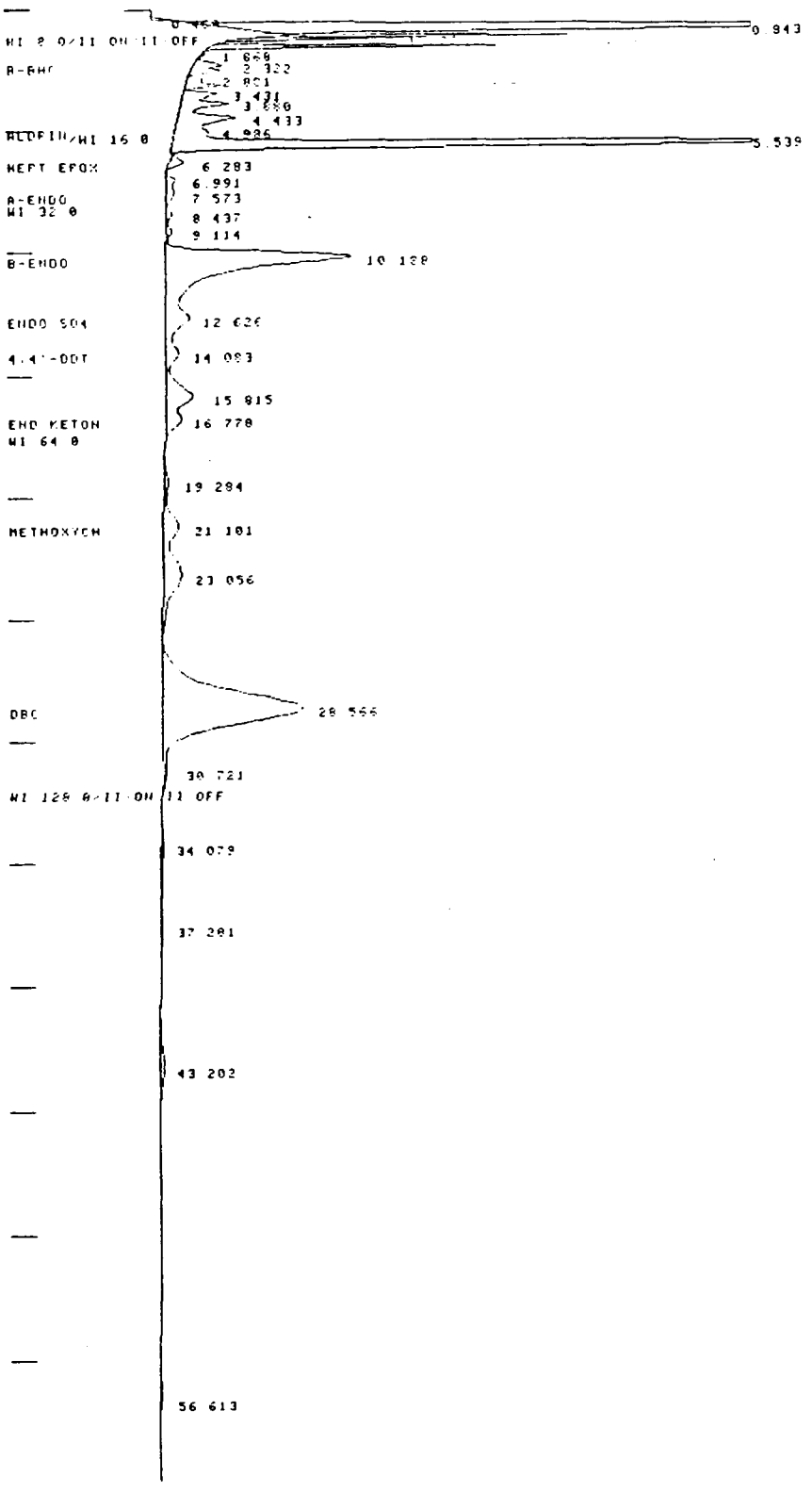
Operator ID: USER6 Quant Rev: 4 Quant Time: 870305 23:05
Output File: ^D1904::Q2 Injected at: 870305 22:17
Data File: >D1904::D3 Dilution Factor: 2.00
Name: U-4928 # 1112.0319 DC-03-61
Misc: 03/05/87,LS 200UL SMPL + 200UL MEHL2 + 40UL IS (2X) BTL# 1

ID File: BNA0P::DC
Title: BNA ID FILE -OR THE HP 5970 (B)
Last Calibration: 870305 17:22

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	8.62	179	50161	40.00 UG/L	84
2)	PHENOL-D5	(SURR)	99	8.56	166	29951	31.39 UG/L 33 ✓	99
2)	PHENOL-D5	(SURR)	99	8.62	179	1581	1.66 UG/L	96
5)	2-FLUOROPHENOL	(SURR)	112	5.40	16	22480	52.30 UG/L 52 ✓	92
[illegible]	N-NITROSO-DI-N-PROPYLAMINE		70	10.44	261	5407	7.05 UG/L	[illegible]
19)	*NAPHTHALENE-D8	(IS)	136	12.41	565	167933	40.00 UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	10.44	268	31301	35.00 UG/L 70 ✓	90
34)	*ACENAPHTHENE-D10	(IS)	162	17.43	626	56996	40.00 UG/L	94
38)	2-FLUOROBIPHENYL	(SURR)	172	15.94	539	43581	37.87 UG/L 76 ✓	96
[illegible]	DIMETHYL PHTHALATE		163	17.43	626	11113	13.33 UG/L	[illegible]
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.21	249	3693	27.82 UG/L 28 ✓	95
[illegible]	2,4-DINITROTOLUENE		165	17.43	626	7548	44.59 UG/L	100
55)	*PHENANTHRENE-D10	(IS)	188	22.11	841	58227	40.00 UG/L	91
60)	PENTACHLOROPHENOL		266	21.47	834	6576	57.49 UG/L 48	100
63)	DI-N-BUTYLPHTHALATE		149	24.72	969	9522	13.90 UG/L 42	99
65)	*CHRYSENE-D12	(IS)	240	30.17	1237	36168	40.00 UG/L	100
68)	TERPHENYL-D14	(SURR)	244	27.28	1095	14522	40.91 UG/L 82 ✓	100
72)	BIS(2-ETHYLHEXYL)PHTHALATE		149	31.25	1290	1651	4.92 UG/L	97
74)	*PERYLENE-D12	(IS)	264	34.21	1435	4340	40.00 UG/L 40	100

* Compound is ISTD

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



DC-03-61

CHANNEL: 1A - 1 TITLE: RUN: 17 1:39 25 FEB 87

SAMPLE: 1112 METHOD: CEPA CALCULATION: ES - ANALYS

220

PEAK NO	PEAK NAME	RESULT UG/Kg	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.277		80167	BB	3.81
2		0.0000	1.567		186475	BB	5.00
3		65.0133	2.222	-2.268	44433	VV	11.94
4		0.0000	2.490		27829	VV	7.69

56 613

DC-03-61

CHANNEL: 1A - 1 TITLE: RUN# 17 1:39 25 FEB 87

SAMPLE: 1112 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/Kg	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		WI/2 (SEC)
1		0.0000	1.277		80167	BB		3.81
2		0.0000	1.567		188475	BB		5.00
3	[redacted]	65.0499	2.322	-0.068	44433	VV		11.94
4		0.0000	2.490		37829	VV		7.69
5		0.0000	2.881		21177	VV	?	10.38
6		0.0000	3.116		43208	VV		8.63
7		0.0000	3.431		42258	VV	?	8.69
8		0.0000	3.609		31071	VV	?	13.88
9		0.0000	3.880		96808	VV		11.94
10		0.0000	4.433		175632	VV		22.38
11	[redacted]	37.9179	4.986	-0.094	71996	VV	?	17.44
12		0.0000	5.539		1910925	VV		12.25
13	[redacted]	21.0791	6.283	0.143	37550	T		18.25
14		0.0000	6.991		23019	T	?	18.06
15	[redacted]	18.0371	7.573	-0.027	30606	T	?	42.81
16	[redacted]	655.9532	10.188	0.138	1114877	VV		38.38
17	[redacted]	124.7121	12.626	-0.224	153839	VV	?	54.88
18	[redacted]	56.4349	14.083	-0.157	68158	VV		43.50
19		0.0000	15.815		177958	VV		51.19
20	[redacted]	39.2700	16.778	0.368	72011	VB	?	48.19
21		0.0000	19.284		29355	BV	?	48.88
22	[redacted]	189.1690	21.101	0.201	122837	VV		62.75
23		0.0000	23.056		227097	VB		89.19
24	DBC 171	1195.832	28.566	0.086	1667052	BV		84.44
25		0.0000	34.079		22517	BV		80.00
26		0.0000	37.281		21870	VV		72.00
27		0.0000	43.202		51367	VB		94.13

TOTALS: 2413.454 0.356 6564092

DETECTED PKS: 37 REJECTED PKS: 10

DIVISOR: 0.15000 MULTIPLIER: 2000.00000

NOISE: 11.4 OFFSET: -20

RACK: 2 VIAL: 2 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 TURKZIS

SAMPLE NUMBER DC-04-62

DC-04-62

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.
Case No: 4-4906, 4928, 4971, 4989.
Lab Sample ID No: 1113
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: C Slotowicz
Date Sample Received: 2-19-87

Volatile Compounds

Concentration: Low (Medium) (Circle One)
Date Extracted/Prepared:
Date Analyzed: 2-23-87
Conc/Dil Factor: 2 pH 10.5
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	650 BJ
67-64-1	Acetone	6000 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	5600 B
71-55-6	1, 1, 1-Trichloroethane	1100
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	24000
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	6000
591-78-6	2-Hexanone	2000u
127-18-4	Tetrachloroethene	1000u
79-34-5	1, 1, 2, 2-Tetrachloroethane	1000u
108-88-3	Toluene	23000
108-90-7	Chlorobenzene	30000
100-41-4	Ethylbenzene	130,000 E
100-42-5	Styrene	1000u
	Total Xylenes	480,000 E

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/ml 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-04-62

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low (Medium) (Circle One)

Date Extracted/Prepared 2-19-87

Date Analyzed: 3-5-87

Conc/Dil Factor: 50

Percent Moisture (Decanted) 22

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	83000u
111-44-4	bis(-2-Chloroethyl)Ether	83000u
95-57-8	2-Chlorophenol	83000u
541-73-1	1 3-Dichlorobenzene	83000u
106-46-7	1 4-Dichlorobenzene	83000u
100-51-6	Benzyl Alcohol	83000u
95-50-1	1 2-Dichlorobenzene	19000 J
95-48-7	2-Methylphenol	83000u
39638-32-9	bis(2-chloroisopropyl)Ether	83000u
106-44-5	4-Methylphenol	83000u
621-64-7	N-Nitroso-Di-n-Propylamine	83000u
67-72-1	Hexachloroethane	83000u
98-95-3	Nitrobenzene	83000u
78-59-1	Isophorone	83000u
88-75-5	2-Nitrophenol	83000u
105-67-9	2 4-Dimethylphenol	83000u
65-85-0	Benzoic Acid	410,000u
111-91-1	bis(-2-Chloroethoxy)Methane	83000u
120-83-2	2 4-Dichlorophenol	83000u
120-82-1	1 2 4-Trichlorobenzene	21000 J
91-20-3	Naphthalene	27000 J
106-47-8	4-Chloroaniline	83000u
87-68-3	Hexachlorobutadiene	83000u
59-50-7	4-Chloro-3-Methylphenol	83000u
91-57-6	2-Methylnaphthalene	125,000
77-47-4	Hexachlorocyclopentadiene	83000u
88-06-2	2 4 6-Trichlorophenol	83000u
95-95-4	2 4 5-Trichlorophenol	410,000u
91-58-7	2-Chloronaphthalene	83,000u
88-74-4	2-Nitroaniline	410,000u
131-11-3	Dimethyl Phthalate	83,000u
208-96-8	Acenaphthylene	83,000u
99-09-2	3-Nitroaniline	410,000u

CAS Number		ug/l or (ug/Kg) (Circle One)
83-32-9	Acenaphthene	83,000u
51-28-5	2 4-Dinitrophenol	410,000u
100-02-7	4-Nitrophenol	410,000u
132-64-9	Dibenzofuran	83,000u
121-14-2	2 4-Dinitrotoluene	83,000u
606-20-2	2 6-Dinitrotoluene	83000u
84-66-2	Diethylphthalate	83000u
7005-72-3	4-Chlorophenyl-phenylether	83000u
86-73-7	Fluorene	83000u
100-01-6	4-Nitroaniline	410000u
534-52-1	4 6-Dinitro-2-Methylphenol	410000u
86-30-6	N-Nitrosodiphenylamine (1)	39000 J
101-55-3	4-Bromophenyl-phenylether	83000u
118-74-1	Hexachlorobenzene	83000u
87-86-5	Pentachlorophenol	370,000 J
85-01-8	Phenanthrene	170,000
120-12-7	Anthracene	83000u
84-74-2	Di-n-Butylphthalate	83000u
206-44-0	Fluoranthene	34000 J
129-00-0	Pyrene	220,000
85-68-7	Butylbenzylphthalate	83000u
91-94-1	3 3-Dichlorobenzidine	170000u
56-55-3	Benzo(a)Anthracene	95000
117-81-7	bis(2-Ethylhexyl)Phthalate	83000u
218-01-9	Chrysene	220000
117-84-0	Di-n-Octyl Phthalate	83000u
205-99-2	Benzo(b)Fluoranthene	62000 J
207-08-9	Benzo(k)Fluoranthene	83000u
50-32-8	Benzo(a)Pyrene	52000 J
193-39-5	Indeno(1,2,3-cd)Pyrene	83000u
53-70-3	Dibenz(a,h)Anthracene	83000u
191-24-2	Benzo(g,h,i)Perylene	41000 J

(1) Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No V-4906, 4928, 4971, 4989

Sample Number
DC-04-62

Organics Analysis Data Sheet
(Page 3)

Pesticide / PCBs

Concentration (Low) Medium (Circle One)

Date Extracted / Prepared 2-19-87

Date Analyzed 2-25-87

Conc / Dil Factor 500

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	40,000 U
319-85-7	Beta BHC	40,000 U
319-86-8	Delta BHC	40,000 U
58-89-9	Gamma BHC (Lindane)	40,000 U
76-44-8	Heptachlor	40,000 U
309-00-2	Aldrin	40,000 U
1024-57-3	Heptachlor Epoxide	40,000 U
959-98-8	Endosulfan I	40,000 U
60-57-1	Dieldrin	80,000 U
72-55-9	4,4'-DDE	80,000 U
72-20-8	Endrin	80,000 U
33213-65-9	Endosulfan II	80,000 U
72-54-8	4,4'-DDD	80,000 U
1031-07-8	Endosulfan Sulfate	80,000 U
50-29-3	4,4'-DDT	80,000 U
72-43-5	Methoxychlor	400,000 U
53494-70-5	Endrin Ketone	80,000 U
57-74-9	Chlordane	400,000 U
8001-35-2	Toxaphene	800,000 U
12674-11-2	Aroclor-1016	400,000 U
11104-28-2	Aroclor-1221	400,000 U
11141-16-5	Aroclor-1232	400,000 U
53469-21-9	Aroclor-1242	1,460,000
12672-29-6	Aroclor-1248	400,000 U C
11097-69-1	Aroclor-1254	400,000 U
11096-82-5	Aroclor-1260	800,000 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 II-4906, 4928, 4971, 4989

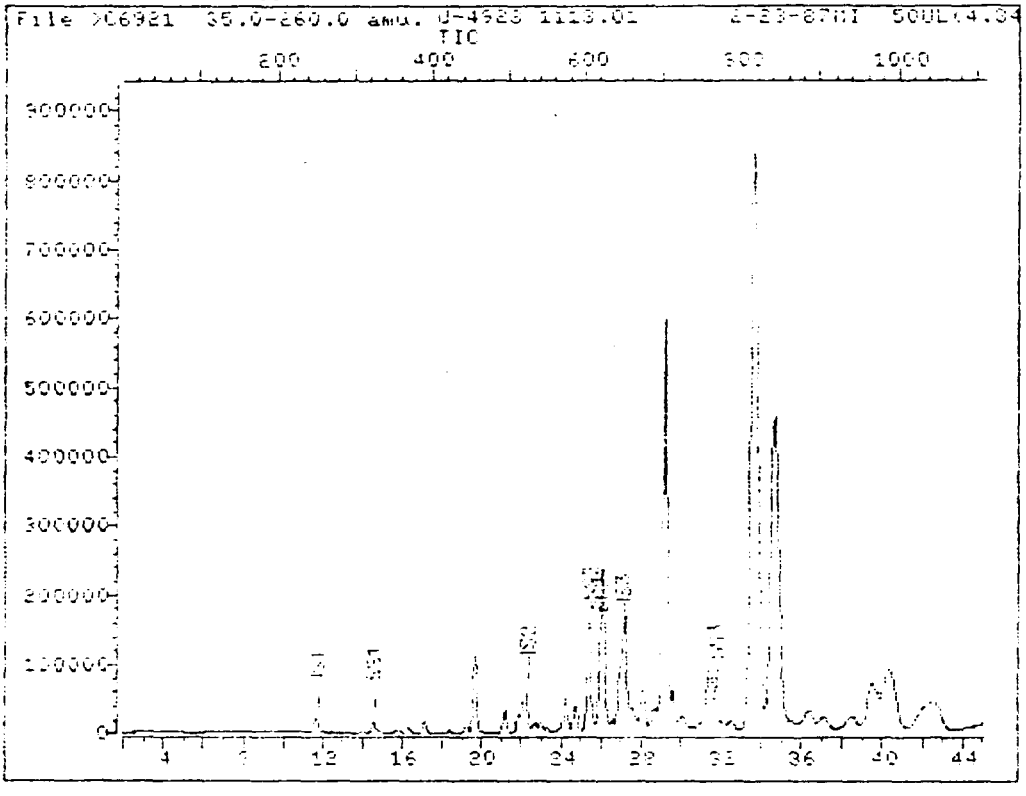
Sample Number DC-04-62

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.	110827	Cyclohexane	VOA	16.3	4300 J
2.		Hexene isomer	VOA	17.2	1600 BJ
3.		Unknown	VOA	19.2	1100 J
4.		Hexane isomer	VOA	21.2	8600 BJ
5.		Dichlorobenzene isomer	VOA	39.5	18000 J
6.		Dichlorobenzene isomer	VOA	40.4	27000 J
7.					
8.					
9.	1120214	Undecane	BNA	10.94	91,000 J
10.	112403	Dodecane		13.00	190,000 J
11.	100005	Benzene, 1-chloro-4-nitro-		13.64	74,000 J
12.	629505	Tridecane		14.86	310,000 J
13.	629594	Tetradecane		16.59	370,000 J
14.		Dimethyl naphthalene isomer		16.78	140,000 J
15.		Unknown hydrocarbon		17.63	260,000 J
16.	629629	Pentadecane		18.22	540,000 J
17.	544763	Hexadecane		19.75	430,000 J
18.		Unknown hydrocarbon		21.22	400,000 J
19.	2719633	Benzene (1-butyloctyl)-		21.69	99000 J
20.	629789	Heptadecane		22.61	320,000 J
21.	4534490	Benzene, (1-pentyloctyl)		22.98	120,000 J
22.	832644	Phenanthrene, 4-methyl-		23.71	140,000 J
23.		Methyl phenanthrene or methyl anthracene		23.79	150,000 J
24		Unknown hydrocarbon		23.92	240,000 J
25.	10544500	Molecular Sulfur		25.32	110,000 J
26.					
27.	**	PCB Confirmation **			
28.	2050682	1,1'-Biphenyl, 4,4'-dichloro-		21.12	see GC Results
29.	25323686	1,1'-Biphenyl, trichloro-		22.28	
30		Trichloro 1,1'-biphenyl isomer	↓	23.51	

TOTAL ION CHROMATOGRAM

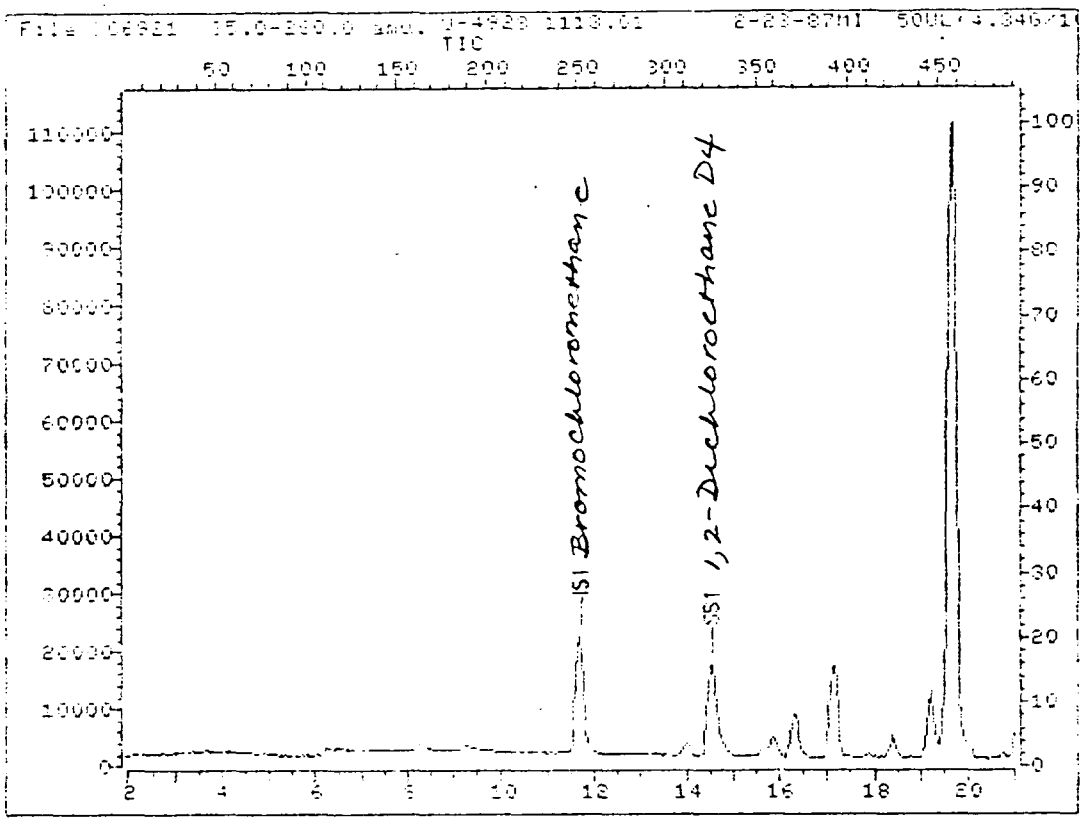


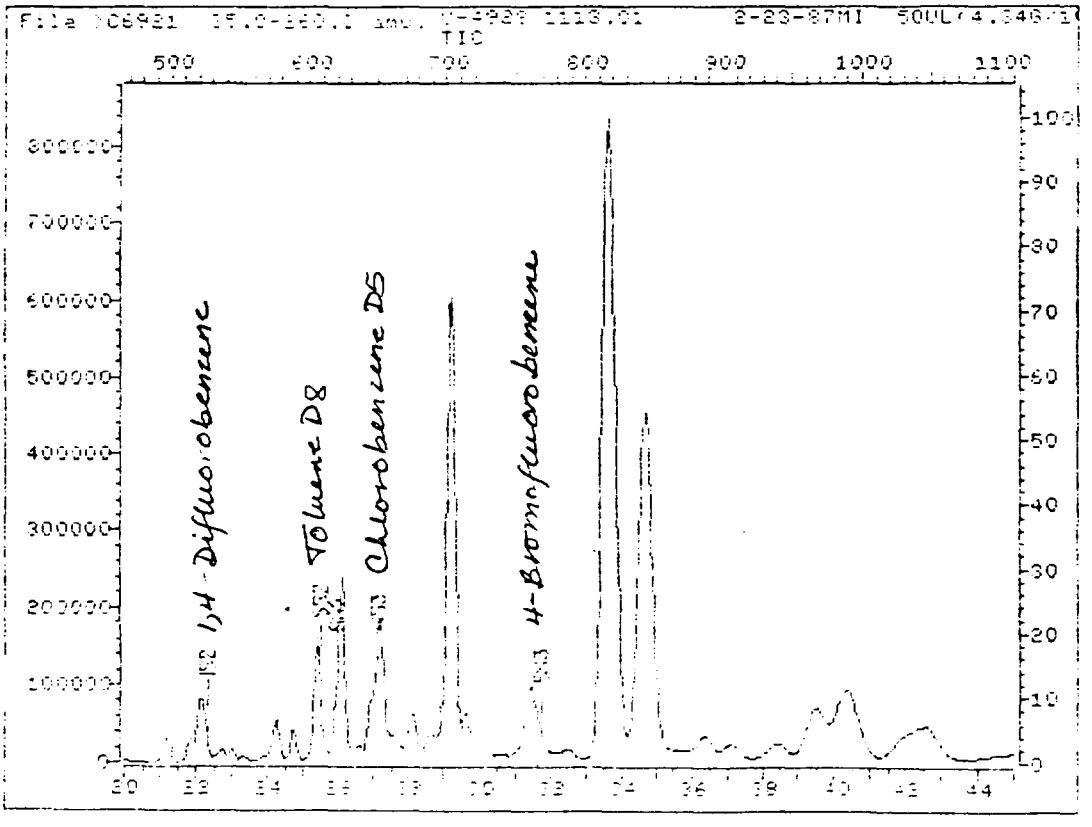
Data File: C6921::01
Name: U-4928 1117.01 DC-04-62
Misc: 2-27-87MI 50UL/4.34G/10ML - 10UL IS/SS

Ic File: UOACP::02
Title: UOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 970223 13:31

Operator ID: USER8
Quant Time: 970227 23:47
Injected at: 970223 23:01

DC-04-62


TIC
IS Bromochloromethane
SS 1,2-Dichloroethane D4


TIC
1,4-Difluorobenzene
Toluene D8
Chlorobenzene D5
4-Bromofluorobenzene

QUANT REPORT

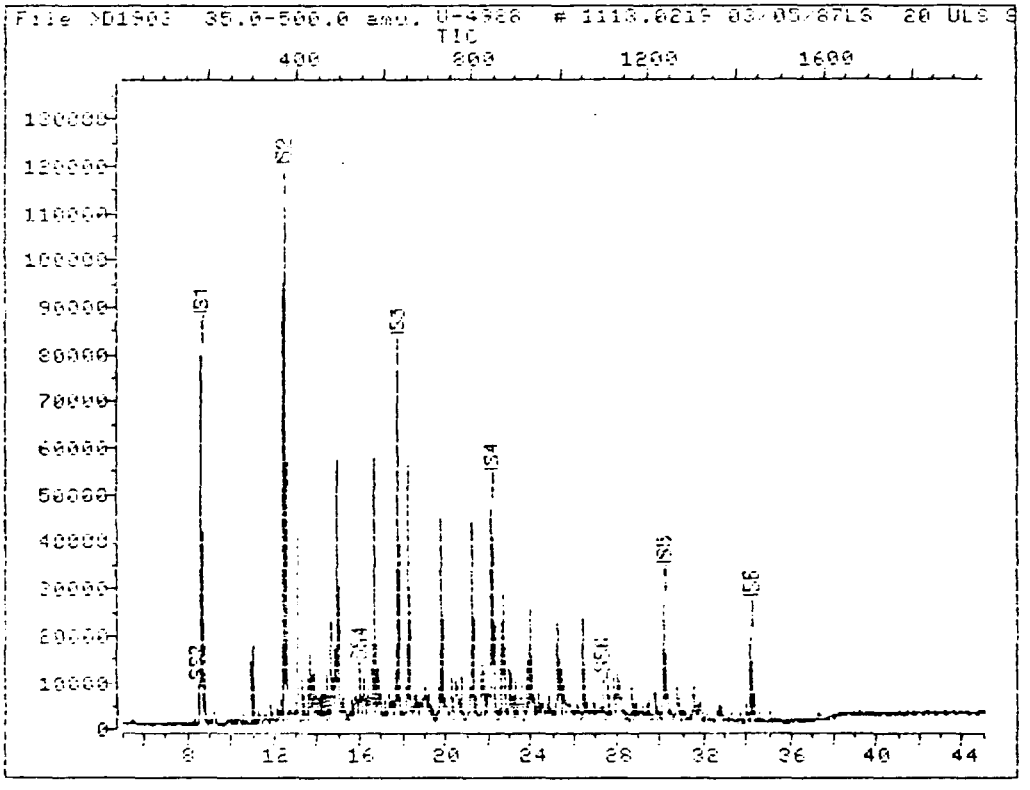
Operator ID: WEEG Quant Rev: 4 Quant Time: 870223 23:47
Output File: ^C6^C1::DC Injected at: 870223 23:01
Data File: ^C6^C1::D1 Dilution Factor: 1.00
Name: U-4928 1113.11 DC-0462
Misc: 0-22-87^^ FILE ^,5=2'10"LE ^ - 10LL IS/SS

ID File: ^D4^S^::D1
Title: ^CW_ID FILE FOR VOLATILES (CONT. CAL.)
Last Calibration: 870223 13:31

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE (IS)	128	11.69	252	29844	50.00	UG/L	100
6)	METHYLENE CHLORIDE	84	8.35	166	3384	2.82	UG/L	100
7)	ACETONE	43	9.29	190	14256	25.85	UG/L	100
15)	1,2-DICHLOROETHANE-D4(SURR)	65	14.52	325	72340	42.84	UG/L	85
16)	*1,4-DIFLUOROBENZENE (IS)	114	22.23	525	171542	50.00	UG/L	100
17)	2-BUTANONE	72	14.71	330	3494	24.54	UG/L	100
18)	1,1,1-TRICHLOROETHANE	97	15.86	360	9994	4.64	UG/L	97
27)	BENZENE	78	19.63	453	453919	103.64	UG/L	100
29)	2-CHLOROETHYLVINYLETHER	63	19.93	459	9764	5.44	UG/L	100
31)	*CHLOROBENZENE-D5 (IS)	117	27.09	649	143717	50.00	UG/L	100
32)	4-METHYL-2-PENTANONE	43	22.96	543	32526	26.25	UG/L	53
33)	2-HEXANONE	43	24.26	574	116489	126.07	UG/L	100
34)	BROMOFORM	173	24.79	589	112909	122.19	UG/L	100
35)	STYRENE	104	25.03	605	232043	251.99	UG/L	100
36)	1,1,2,2-TETRACHLOROETHANE	83	26.12	623	19075	6.26	UG/L	100
37)	1,2,3-TRICHLOROPROPANE	75	26.25	626	3536	2.16	UG/L	100
38)	1,1,2,2-TETRACHLOROETHANE	83	26.32	605	16725	10.70	UG/L	100
39)	TOLUENE-D8 (SURR)	98	26.93	607	6908	1.48	UG/L	62
40)	TOLUENE-D8 (SURR)	98	26.97	620	178696	44.77	UG/L	99
41)	TOLUENE	92	26.12	624	286896	97.71	UG/L	97
42)	TOLUENE	92	27.02	647	2639	.90	UG/L	72
43)	CHLOROBENZENE	112	27.21	652	479114	132.21	UG/L	97
44)	CHLOROBENZENE	112	28.11	675	13442	3.71	UG/L	69
45)	ETHYLBENZENE	91	29.24	704	3545826	557.45	UG/L	95
46)	4-BROMOFLUOROBENZENE(SURR)	95	31.72	768	100218	47.32	UG/L	100
47)	STYRENE	104	33.87	817	141092	36.19	UG/L	100
48)	STYRENE	104	34.68	844	96111	24.65	UG/L	100
49)	TOTAL XYLENES	91	31.57	758	6022	1.11	UG/L	100
50)	TOTAL XYLENES	91	33.63	817	6916277	1269.86	UG/L	100
51)	TOTAL XYLENES	91	34.69	844	4322139	793.56	UG/L	100
52)	TOTAL XYLENES	91	36.73	893	252260	46.32	UG/L	100
53)	1,3-DICHLOROBENZENE	146	38.48	942	26214	26214.00	NO CALIB	100
53)	1,3-DICHLOROBENZENE	146	39.53	969	553397	553397.0	NO CALIB	100
54)	1,2-DICHLOROBENZENE	146	38.48	942	26214	26214.00	NO CALIB	100
54)	1,2-DICHLOROBENZENE	146	39.53	969	553397	553397.0	NO CALIB	100
55)	1,4-DICHLOROBENZENE	146	38.48	942	26214	26214.00	NO CALIB	100
55)	1,4-DICHLOROBENZENE	146	39.53	969	553397	553397.0	NO CALIB	100

* Compound is ISTD

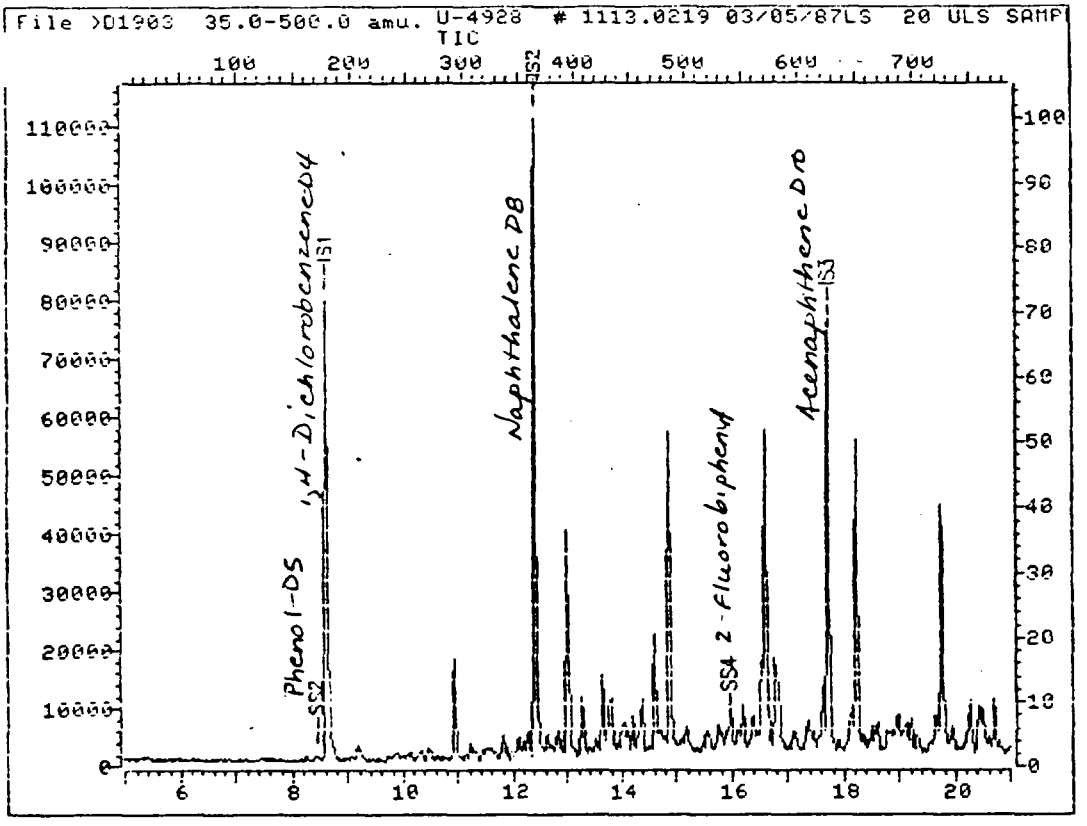
TOTAL ION CHROMATOGRAM



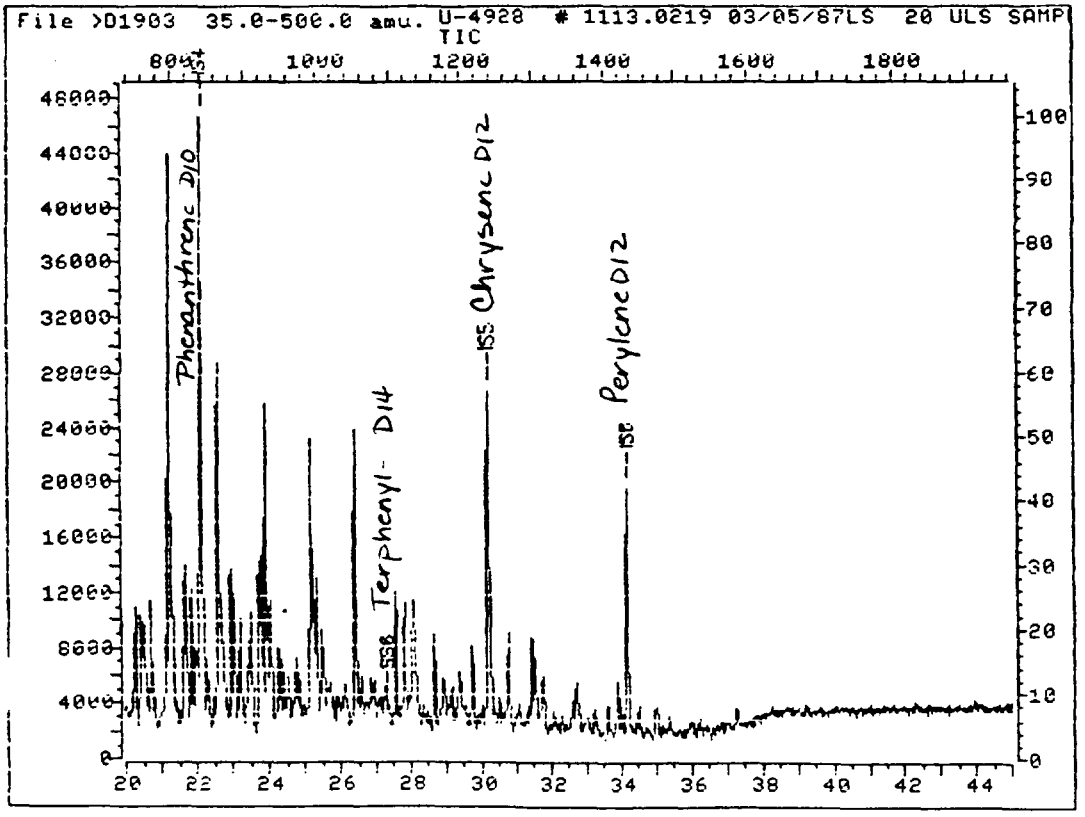
Data File: >D1903::03
Name: U-4928 # 1113.0219 DC-04-62
Misc: 03/05/87LS 20 ULS SAMPLE + 980 ULS MECL2 + 10 ULS IS BTL# 5

Id File: BNAOR::02
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870305 17:22

Operator ID: USER6
Quant Time: 870305 22:12
Injected at: 870305 21:24


File >D1903 35.0-500.0 amu. U-4928 # 1113.0219 03/05/87LS 20 ULS SAMP
TIC
Phenol-D5
1,4-Dichlorobenzene-D4
Naphthalene D8
2-Fluorobiphenyl
Acenaphthene D10

DC-04-62


File >D1903 35.0-500.0 amu. U-4928 # 1113.0219 03/05/87LS 20 ULS SAMP
TIC
Phenanthrene D10
Terphenyl- D14
Chrysene D12
Perylene D12

QUANT REPORT

Operator ID: USER6 Quant Rev: 4 Quant Time: 870305 22:12
Output File: ^D1903::02 Injected at: 870305 21:24
Data File: >D1903::03 Dilution Factor: 50.00
Name: U-4928 # 1113.0219 DC-04-62
Misc: 03/05/87/LS 20 ULS SAMPLE + 980 ULS MECL2 + 10 ULS IS BTL# 5

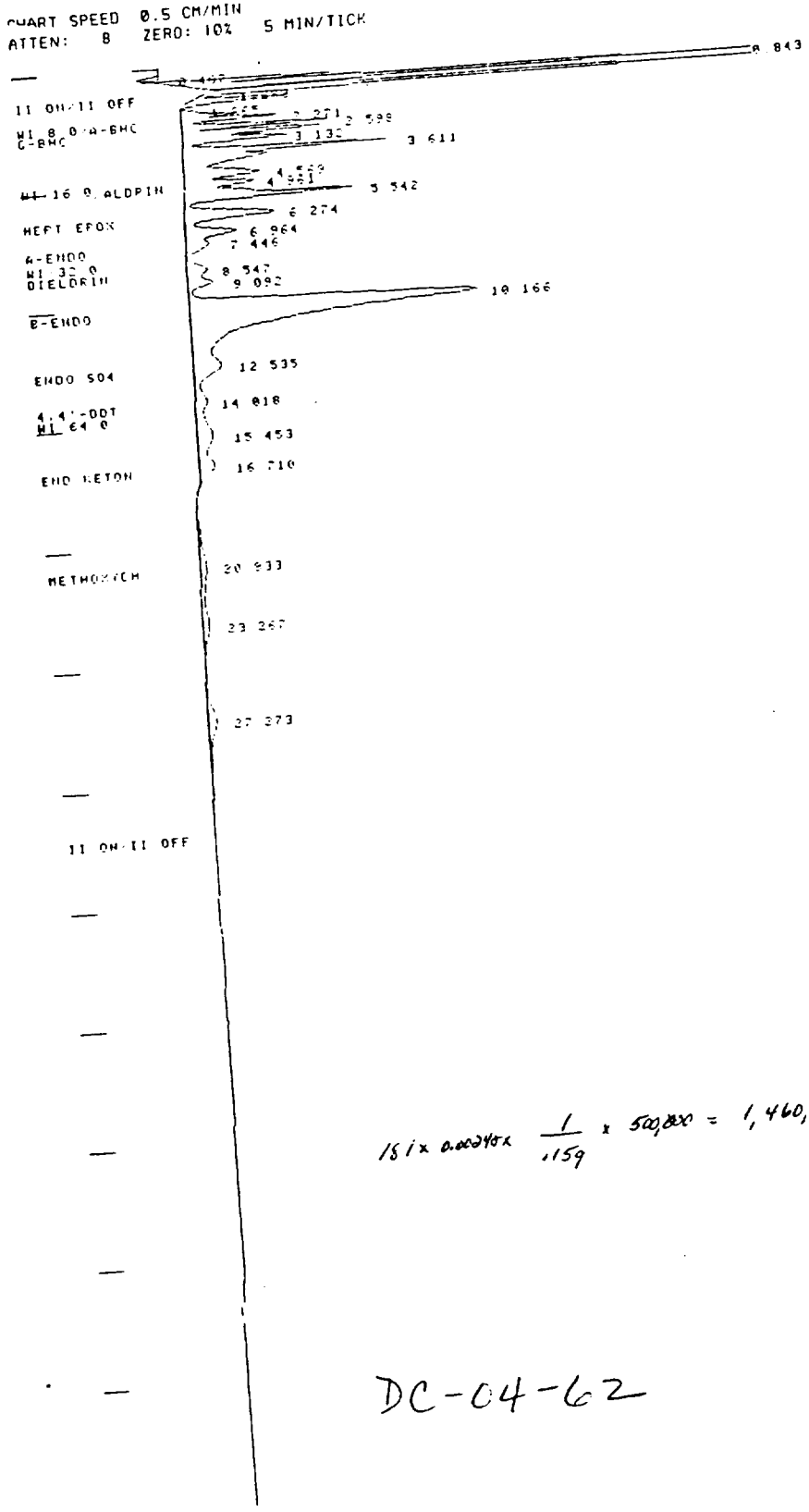
ID File: BNADR::02
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870305 17:22

	Compound		R.T.	Scan#	Area	Conc	Units	q	
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	8.60	178	42719	40.00	UG/L	89	
2)	PHENOL-D5	(SURR)	99	8.42	169	1682	51.74	UG/L	89	
12)	1,2-DICHLOROBENZENE		146	9.21	208	1921	61.52	UG/L	89	yes
19)	*NAPHTHALENE-D8	(IS)	136	12.41	365	145210	40.00	UG/L	100	
28)	1,2,4-TRICHLOROBENZENE		180	12.37	363	1689	66.33	UG/L	100	yes
29)	NAPHTHALENE		128	12.45	367	6238	86.06	UG/L	100	yes
33)	2-METHYLNAPHTHALENE		142	14.59	472	16241	394.91	UG/L	99	yes
~~34)~~	~~2-METHYLNAPHTHALENE~~		~~142~~	~~14.48~~	~~436~~	~~8143~~	~~199.51~~	~~UG/L~~	~~97~~	CW
34)	*ACENAPHTHENE-D10	(IS)	162	17.71	625	51357	40.00	UG/L	98	
38)	2-FLUOROBIPHENYL	(SURR)	172	15.94	538	1892	46.52	UG/L	91	
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~17.74~~	~~626~~	~~9244~~	~~334.68~~	~~UG/L~~	~~100~~	CW
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~17.71~~	~~625~~	~~6349~~	~~1072.57~~	~~UG/L~~	~~100~~	CW
55)	*PHENANTHRENE-D10	(IS)	188	22.10	840	49779	40.00	UG/L	93	
57)	N-NITROSODIPHENYLAMINE		169	20.98	741	1755	123.35	UG/L	48	yes
60)	PENTACHLOROPHENOL		266	21.98	834	4635	1184.85	UG/L	100	yes
61)	PHENANTHRENE		178	22.16	843	13102	553.62	UG/L	97	yes
~~62)~~	~~ANTHRACENE~~		~~178~~	~~22.16~~	~~843~~	~~13102~~	~~558.81~~	~~UG/L~~	~~97~~	CW
64)	FLUORANTHENE		202	25.27	1020	1890	109.37	UG/L	81	yes
65)	*CHRYSENE-D12	(IS)	240	30.16	1235	30165	40.00	UG/L	100	
67)	PYRENE		202	26.39	1050	13989	697.41	UG/L	92	yes
68)	TERPHENYL-D14	(SURR)	244	27.28	1094	584	49.32	UG/L	100	
71)	BENZO(A)ANTHRACENE		228	30.12	1233	4495	301.81	UG/L	96	yes
~~72)~~	~~BENZO(A)ANTHRACENE~~		~~228~~	~~30.22~~	~~1238~~	~~10263~~	~~722.67~~	~~UG/L~~	~~93~~	CW
~~73)~~	~~CHRYSENE~~		~~228~~	~~30.12~~	~~1233~~	~~4495~~	~~288.82~~	~~UG/L~~	~~97~~	CW
73)	CHRYSENE		228	30.22	1238	10763	691.55	UG/L	94	yes
74)	*PERYLENE-D12	(IS)	264	34.18	1432	27036	40.00	UG/L	100	
76)	BENZO(B)FLUORANTHENE		252	33.24	1386	3116	197.63	UG/L	100	yes
~~77)~~	~~BENZO(K)FLUORANTHENE~~		~~252~~	~~33.24~~	~~1386~~	~~3116~~	~~122.06~~	~~UG/L~~	~~100~~	CW
~~78)~~	~~BENZO(A)PYRENE~~		~~252~~	~~33.39~~	~~1418~~	~~5123~~	~~334.98~~	~~UG/L~~	~~100~~	CW
78)	BENZO(A)PYRENE		252	34.03	1425	2530	165.43	UG/L	100	yes
81)	BENZO(G,H,I)PERYLENE		276	37.27	1584	2063	129.94	UG/L	100	yes

* Compound is ISTD

CL

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



ALB 1242

$18.1 \times 0.00245 \times \frac{1}{.159} \times 500{,}000 = 1{,}460{,}000$ ug/kg

DC-04-62

233

5:57 25 FEB 87

CHANNEL: 1A - 1 TITLE: FUN: 31

181 x 0.00040 x 1/1159 x 50,000 = 7,700,000 ug/kg

DC-04-62

CHANNEL: 1A - 1 TITLE: RUN# 21 5:57 25 FEB 87

SAMPLE: 1113 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	1.427		89146	VB	5.13
2		0.0000	2.023		63566	VV	8.50
3	~~[illegible]~~	11824.08	2.271	0.021	100488	VV	7.19
4	~~6 [illegible]~~	20956.38	2.598	-0.012	152595	VV	7.38
5		0.0000	2.850		170565	VV	9.44
6		0.0000	3.132		151184	VV	11.25
7		0.0000	*3.611	PCB 1242	305465	VV	10.75
8		0.0000	3.848		193580	VV	? 21.63
9		0.0000	4.569		217337	VV	? 23.56
10	~~ALSPIN~~	17971.05	4.961	-0.119	136489	VV	16.44
11		0.0000	~~5.542~~		~~[illegible]~~	VV	14.00
12	~~[illegible]~~	37118.72	6.274	0.134	264504	VV	22.13
13		0.0000	6.964	181	131810	VV	17.94
14	~~[illegible]~~	10467.29	~~7.446~~	-0.154	~~[illegible]~~	VB	? 29.69
15	~~[illegible]~~	10060.56	8.547	-0.193	68908	BV	? 29.38
16	~~[illegible]~~	10452.27	9.092	0.252	76377	VV	? 25.44
17	~~[illegible]~~	256328.5	10.166	0.116	1716486	VV	38.25
18	~~[illegible]~~	39088.92	12.535	-0.315	192873	VV	? 61.81
19	~~[illegible]~~	13799.03	14.018	-0.232	66662	VV	? 55.25
20		0.0000	15.453		137873	VV	83.38
21	~~END [illegible]~~	11318.12	16.710	0.300	83018	VB	? 46.88
22	~~[illegible]~~	40666.39	20.833	-0.067	105627	BV	92.00
23		0.0000	23.267		71191	VB	72.81
24	~~[illegible]~~	17855.32	27.273	-1.207	99565	BB	72.31
TOTALS:		497906.7		-1.476	5053835		

DETECTED PKS: 30 REJECTED PKS: 6

DIVISOR: 0.15000 MULTIPLIER: 500000.000

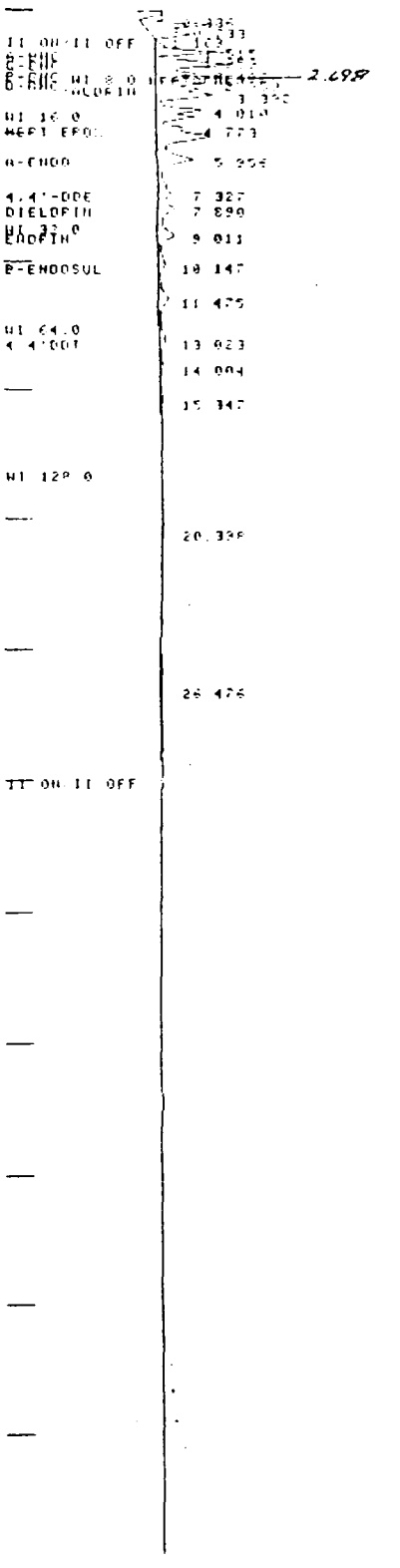
NOISE: 11.4 OFFSET: -17

RACK: 2 VIAL: 6 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 TURK219

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



DC-C4-62

CHANNEL: 1B - 1 TITLE: RUN# 10 17:46 3 MAR 87

SAMPLE: 1113.03.19A1 METHOD: PEFA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT MG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.515		33335	VV	? 4.88
2	[illegible]	0.0000	1.628	-0.132	116774	VV	4.44
3		0.0000	1.959		114002	VV	5.19
4		0.0000	2.080		121422	VV	5.88
5	[illegible]	0.0000	2.239	0.029	40544	VV	? 6.19
6	[illegible]	0.0000	1298 2.402	-0.128	91559	VV	? 11.25
7	[illegible]	0.0000	* 2.899	-0.022	284620	VV	6.94

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DC-04-62

CHANNEL: 1B - 1 TITLE: RUN# 10 17:46 3 MAR 87

SAMPLE: 1113.03.1941 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	1.515		33335	VV	?	4.88
2	[redacted]	0.0000	1.628	-0.132	116774	VV		4.44
3	[redacted]	0.0000	1.900		114002	VV		5.19
4		0.0000	2.080		121422	VV		5.80
5	[redacted]	0.0000	2.239	0.029	40544	VV	?	6.19
6	[redacted]	0.0000	2.402	-0.138	91558	VV	?	11.25
7	[redacted]O	0.0000	2.698	-0.022	284620	VV		6.94
8	[redacted]	0.0000	2.959	-0.001	107900	VV		9.00
9		0.0000	3.169		92132	VV	?	10.75
10	[redacted]	0.0000	3.392	0.092	198298	VV	?	16.13
11		0.0000	4.010		142812	VV		12.88
12		0.0000	4.300		125207	VV	?	15.31
13		0.0000	4.773		84921	VV	?	14.00
14	[redacted]X	0.0000	5.061	0.121	243865	VV		19.31
15	[redacted]	0.0000	5.956	-0.264	242091	VV		21.69
16	[redacted]	0.0000	7.327	0.137	124361	VV	?	46.13
17	[redacted]	0.0000	7.890	0.290	98146	VV	?	28.88
18	[redacted]	0.0000	9.011	-0.239	134436	VV		34.88
19	[redacted]L	0.0000	10.147	-0.253	70500	VV	?	64.94
20	[redacted]	0.0000	11.475	0.465	101188	VV		56.13
21	[redacted]	0.0000	13.023	-0.227	65674	VV	?	67.25
22		0.0000	14.004		27157	VV	?	85.38
23	[redacted]	0.0000	15.347	0.637	21587	VB	?	96.81
24		0.0000	20.398		20822	BB		42.81
25	[redacted]CH	0.0000	26.476	1.036	26924	BB	?	61.69

TOTALS: 0.0000 1.531 2730276

DETECTED PKS: 38 REJECTED PKS: 13

DIVISOR: 0.15000 MULTIPLIER: 500000.000

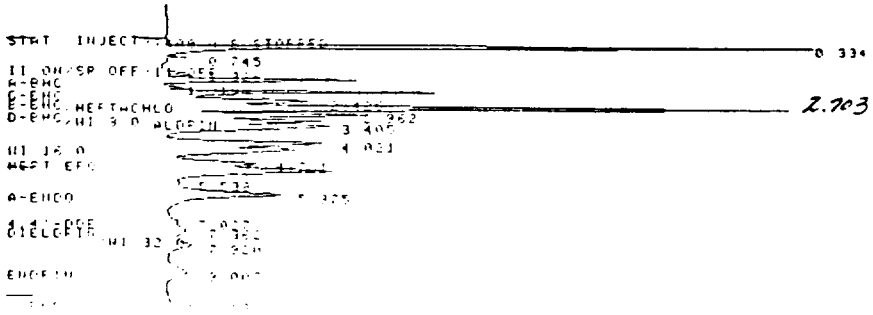
NOISE: 57.1 OFFSET: -17

RACK: 1 VIAL: 11 INJ: 1

NOTES:
NOTEBOOK: 259-130 ANALYST: F.JUPEK
SECURE AREA: D JOB#:U-4928
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 ANALYSIS

POST RUN:
SAVE FILE: RAW SAS077

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



SAMPLE NUMBER DC-05-63

DC-05-63

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.
Case No: U-4906, 4928, 4971, 4989
Lab Sample ID No: 1114
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: O'Sojourn
Date Sample Received: 2-19-87

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared:
Date Analyzed: 2-24-87
Conc/Dil Factor: 10 pH 7.8
Percent Moisture: (Not Decanted) 18

Concentrations reported "as received"

CAS Number		ug/l or (ug/Kg) (Circle One)
74-87-3	Chloromethane	100U
74-83-9	Bromomethane	100U
75-01-4	Vinyl Chloride	100U
75-00-3	Chloroethane	100U
75-09-2	Methylene Chloride	50U
67-64-1	Acetone	7100BE
75-15-0	Carbon Disulfide	50U
75-35-4	1, 1-Dichloroethene	50U
75-34-3	1, 1-Dichloroethane	50U
156-60-5	Trans-1, 2-Dichloroethene	50U
67-66-3	Chloroform	50U
107-06-2	1, 2-Dichloroethane	50U
78-93-3	2-Butanone	200 B
71-55-6	1, 1, 1-Trichloroethane	50U
56-23-5	Carbon Tetrachloride	50U
108-05-4	Vinyl Acetate	100U
75-27-4	Bromodichloromethane	50U

CAS Number		ug/l or (ug/Kg) (Circle One)
78-87-5	1, 2-Dichloropropane	50U
10061-02-6	Trans-1, 3-Dichloropropene	50U
79-01-6	Trichloroethene	50U
124-48-1	Dibromochloromethane	50U
79-00-5	1, 1, 2-Trichloroethane	50U
71-43-2	Benzene	50U
10061-01-5	cis-1, 3-Dichloropropene	50U
110-75-8	2-Chloroethylvinylether	100U
75-25-2	Bromoform	50U
108-10-1	4 Methyl-2-Pentanone	100U
591-78-6	2-Hexanone	100U
127-18-4	Tetrachloroethene	50U
79-34-5	1, 1, 2, 2-Tetrachloroethane	50U
108-88-3	Toluene	50U
108-90-7	Chlorobenzene	61
100-41-4	Ethylbenzene	30 J
100-42-5	Styrene	50U
	Total Xylenes	200

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/ml 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-05-63

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low (Medium) (Circle One)

Date Extracted/Prepared 2-19-87

Date Analyzed: 03-05-87

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	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	790 J
120-12-7	Anthracene	3300u
84-74-2	Di-n-Butylphthalate	3100 JB
206-44-0	Fluoranthene	330u
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 and environment, inc.

Case No V-4906, 4928, 4971, 4989

Sample Number
DC-05-63

Organics Analysis Data Sheet
(Page 3)

Pesticide / PCBs

Concentration (Low) Medium (Circle One)

Date Extracted / Prepared 2-19-87

Date Analyzed 2-25-87

Conc / Dil Factor 5

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	400 U	
319-85-7	Beta-BHC	400 U	
319-86-8	Delta-BHC	400 U	
58-89-9	Gamma-BHC (Lindane)	400 U	
76-44-8	Heptachlor	400 U	
309-00-2	Aldrin	400 U	
1024-57-3	Heptachlor Epoxide	400 U	
959-98-8	Endosulfan I	400 U	
60-57-1	Dieldrin	800 U	
72-55-9	4,4'-DDE	800 U	
72-20-8	Endrin	800 U	
33213-65-9	Endosulfan II	800 U	
72-54-8	4,4'-DDD	800 U	
1031-07-8	Endosulfan Sulfate	800 U	
50-29-3	4,4'-DDT	800 U	
72-43-5	Methoxychlor	4000 U	
53494-70-5	Endrin Ketone	800 U	
57-74-9	Chlordane	4000 U	
8001-35-2	Toxaphene	8000 U	
12674-11-2	Aroclor-1016	4000 U	
11104-28-2	Aroclor-1221	4000 U	
11141-16-5	Aroclor-1232	22,000	C
53469-21-9	Aroclor-1242	4000 U	
12672-29-6	Aroclor-1248	4000 U	
11097-69-1	Aroclor-1254	8000 U	
11096-82-5	Aroclor-1260	4500 J	C

V_t = 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.

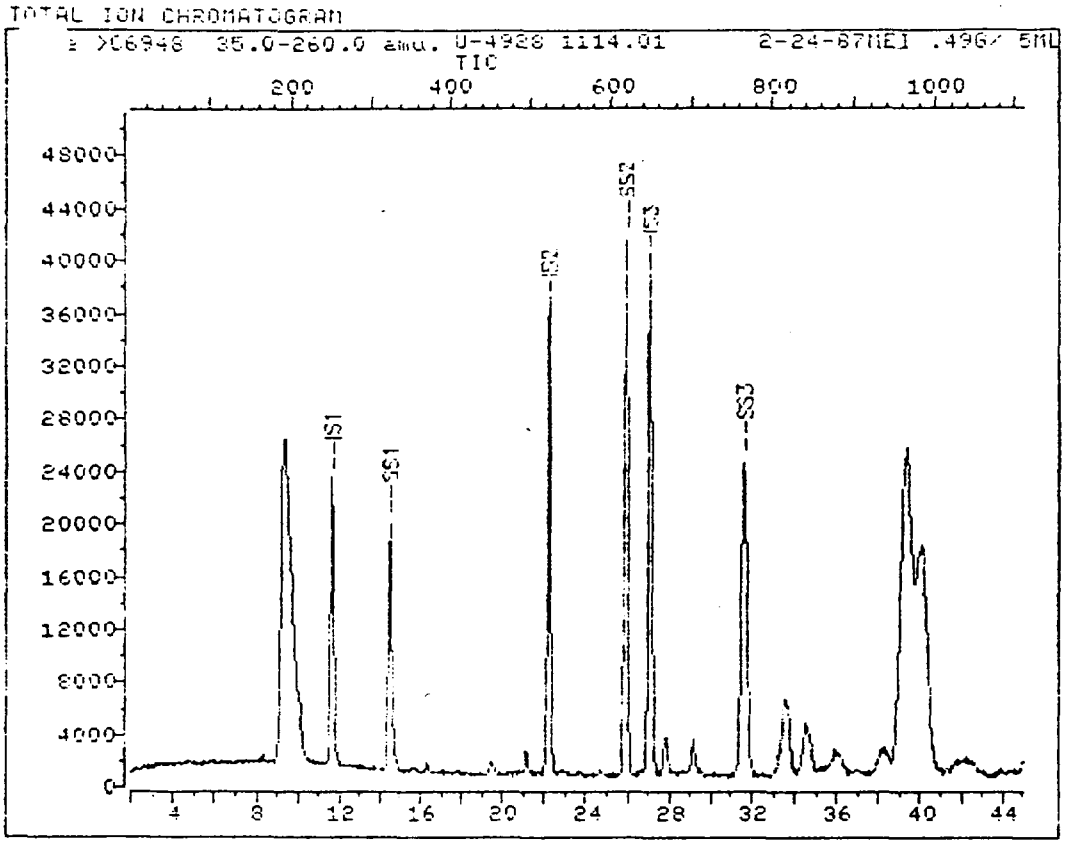
Case No II-4906, 4928, 4971, 4989

Sample Number DC-05-63

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

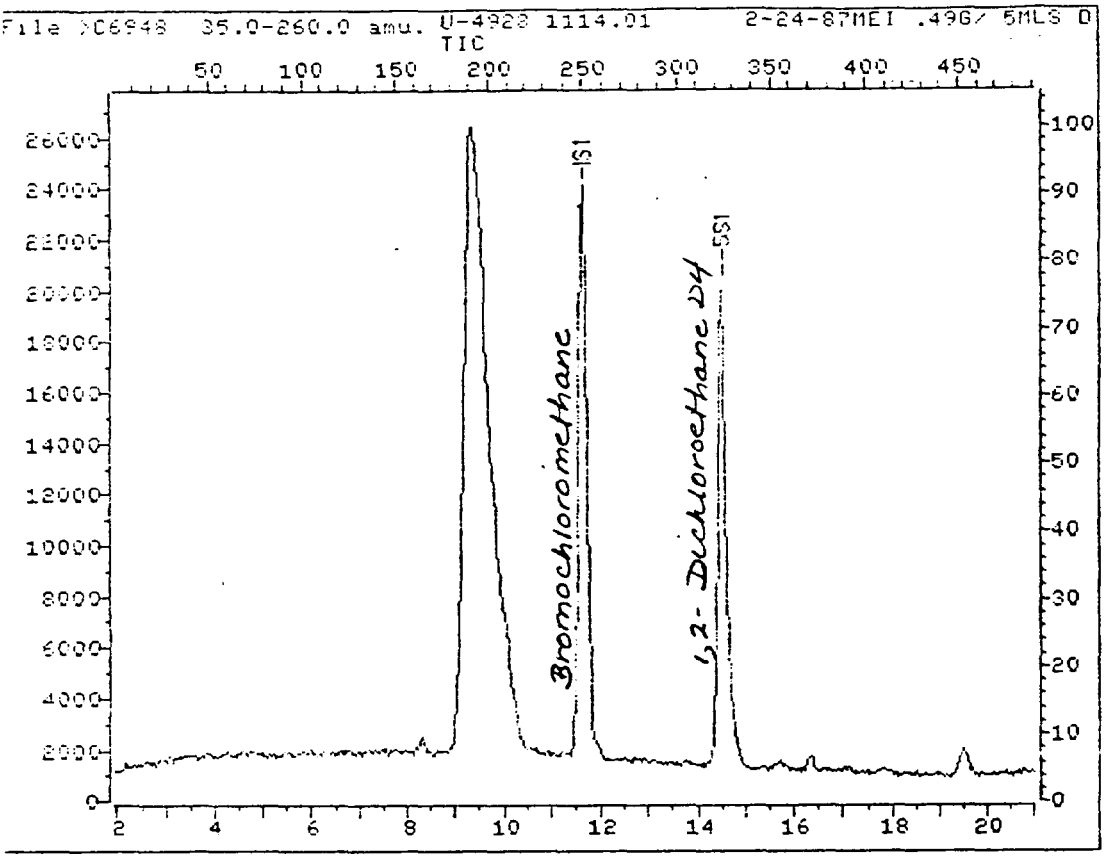
	CAS Number	Compound Name	Fraction	(RT) or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.		Dichlorobenzene isomer	VOA	39.3	980 J
2.		Dichlorobenzene isomer	VOA	40.1	680 J
3.					
4.					
5.	4536883	Benzene, (1-methyldecyl)-	BNA	21.23	9400 J
6.	2719622	Benzene, (1-pentylheptyl)-		21.62	6900 J
7.	2719633	Benzene, (1-butyloctyl)-		21.68	5400 J
8.	2719644	Benzene, (1-propylnonyl)-		21.84	5100 J
9.	2nd	Unknown hydrocarbon		22.60	3800 J
10.	2719611	Benzene, (1-methylundecyl)-		22.66	4600 J
11.	4534490	Benzene, (1-pentyloctyl)-		22.96	5200 J
12.	4534514	Benzene, (1-propyldecyl)-		23.06	3500 J
13.	4534503	Benzene, (1-butylnonyl)-		23.23	3500 J
14.		Unknown hydrocarbon		23.51	2900 J
15.	92524	1,1'-Biphenyl		16.14	3700 J
16.	2051607	1,1'-Biphenyl, 2-chloro-		18.14	3500 J
17.		Unknown hydrocarbon		18.23	4400 J
18.		Unknown hydrocarbon		19.76	9300 J
19.	4536861	Benzene, (1-propyloctyl)-		20.42	4700 J
20.	4536872	Benzene, (1-ethylnonyl)-		20.70	4100 J
21.	4537159	Benzene, (1-butylheptyl)-		20.27	14000 J
22.		Unknown hydrocarbon		23.92	2600 J
23.	4534536	Benzene, (1-methyldodecyl)		24.82	2600 J
24	10544500	Molecular Sulfur	↓	25.33	2000 J
25.					
26.					
27.					
28.					
29.					
30					



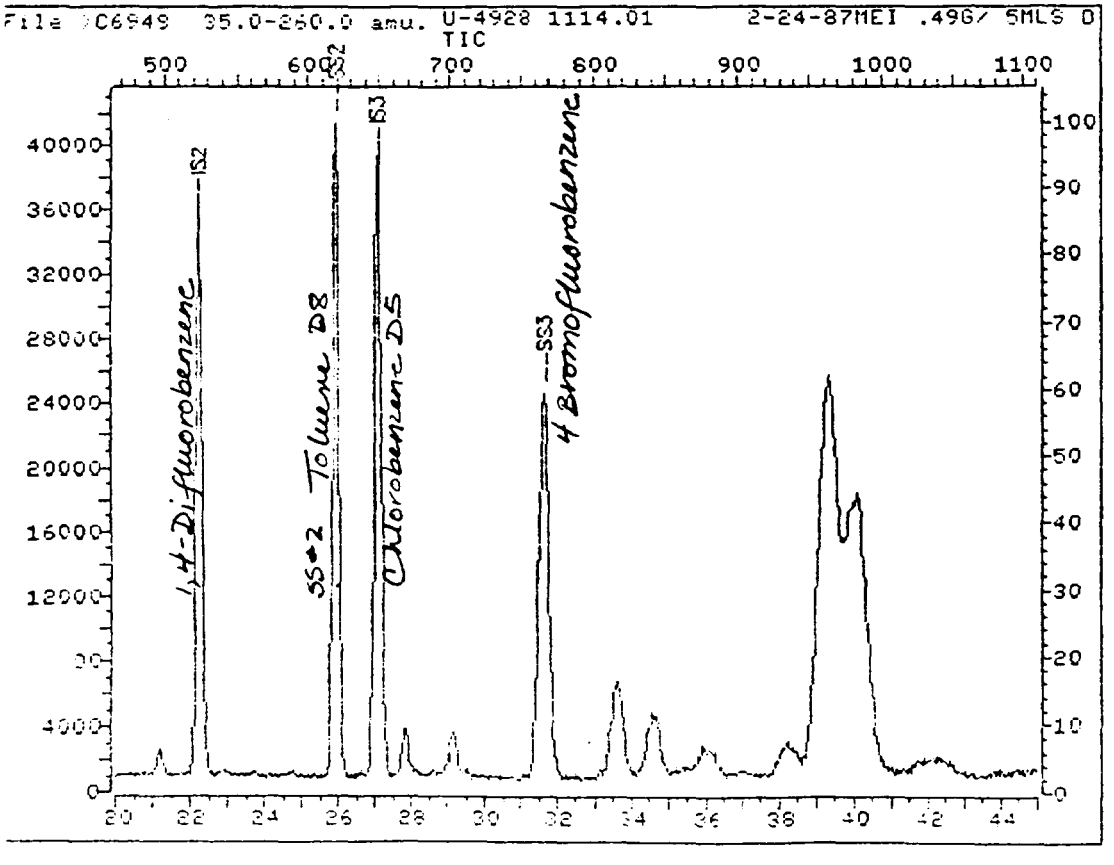
Data File: >C6948::D3
Name: U-4928 1114.01 DC-05-63
Misc: 2-24-87MEI .49G/ 5MLS DI + 10UL IS/SS

Id File: VOACP3::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870224 15:45

Operator ID: USER3
Quant Time: 870224 23:13
Injected at: 870224 22:27


File)C6948 35.0-260.0 amu. U-4928 1114.01 2-24-87MEI .49G/ 5MLS 0
TIC
Bromochloromethane
IS1
1,2-Dichloroethane D4
SS1

DC-05-63


File)C6949 35.0-260.0 amu. U-4928 1114.01 2-24-87MEI .49G/ 5MLS 0
TIC
1,4-Difluorobenzene
IS2
SS2
Toluene D8
IS3
Chlorobenzene D5
SS3
4 Bromofluorobenzene

QUANT REPORT

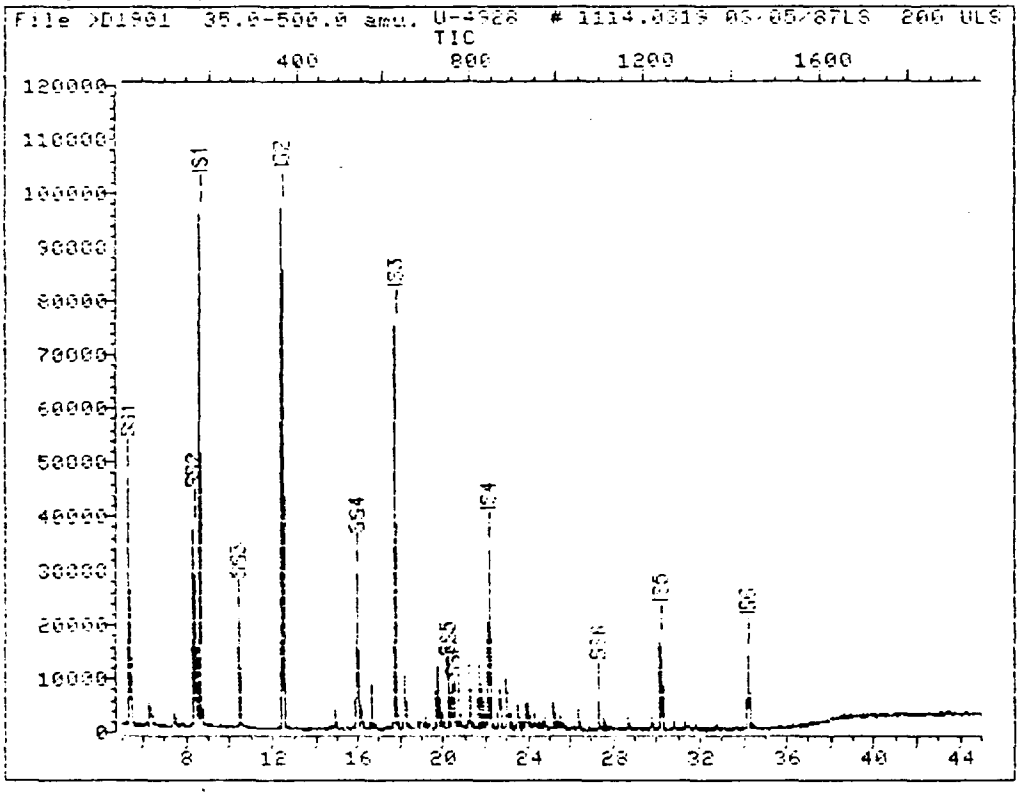
perator ID: USER8 Quant Rev: 4 Quant Time: 870224 23:13
utput File: ^C6948::Q2 Injected at: 870224 22:27
ata File: >C6949::D3 Dilution Factor: 1.00
ame: U-4928 1114.01 DC-05-63
ethod: 2-24-87MEI .49g/ 5MLS DI + 10UL IS/SS

ID File: VOACRS::D2
itle: VOA ID FILE FOR HP-5995 (CONT. CAL.)
ast Calibration: 870224 15:49

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.61	250	30749	250.00 NGS	100
7)	ACETONE		43	9.32	191	615511	3462.77 NGS	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.48	324	78111	243.34 NGS	84
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.20	523	144843	250.00 NGS	100
17)	2-BUTANONE		72	14.67	329	4072	100.13 NGS	100
1)	*CHLOROBENZENE-D5	(IS)	117	27.05	648	120147	250.00 NGS	100
6)	TOLUENE-D8	(SURR)	98	25.92	619	151338	250.72 NGS	94
8)	CHLOROBENZENE		112	27.21	652	15903	29.84 NGS	99
9)	ETHYLBENZENE		91	29.19	703	13909	14.69 NGS	95
0)	4-BROMOFLUOROBENZENE	(SURR)	95	31.64	766	82421	245.88 NGS	100
2)	TOTAL XYLENES		91	33.62	817	44727	56.33 NGS	100
2)	TOTAL XYLENES		91	34.59	842	34909	43.97 NGS	100
~~2)~~	~~TOTAL XYLENES~~		~~91~~	~~36.02~~	~~879~~	~~28746~~	~~26.13 NGS~~	100
3)	1,3-DICHLOROBENZENE		146	38.31	938	9403	9403.00 NO CALIB	100
3)	1,3-DICHLOROBENZENE		146	39.32	964	194261	194261.0 NO CALIB	100
4)	1,2-DICHLOROBENZENE			38.31	938	9403	9403.00 NO CALIB	100
4)	1,2-DICHLOROBENZENE			39.32	964	194261	194261.0 NO CALIB	100
5)	1,4-DICHLOROBENZENE		146	38.31	938	9403	9403.00 NO CALIB	100
5)	1,4-DICHLOROBENZENE		146	39.32	964	194261	194261.0 NO CALIB	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM

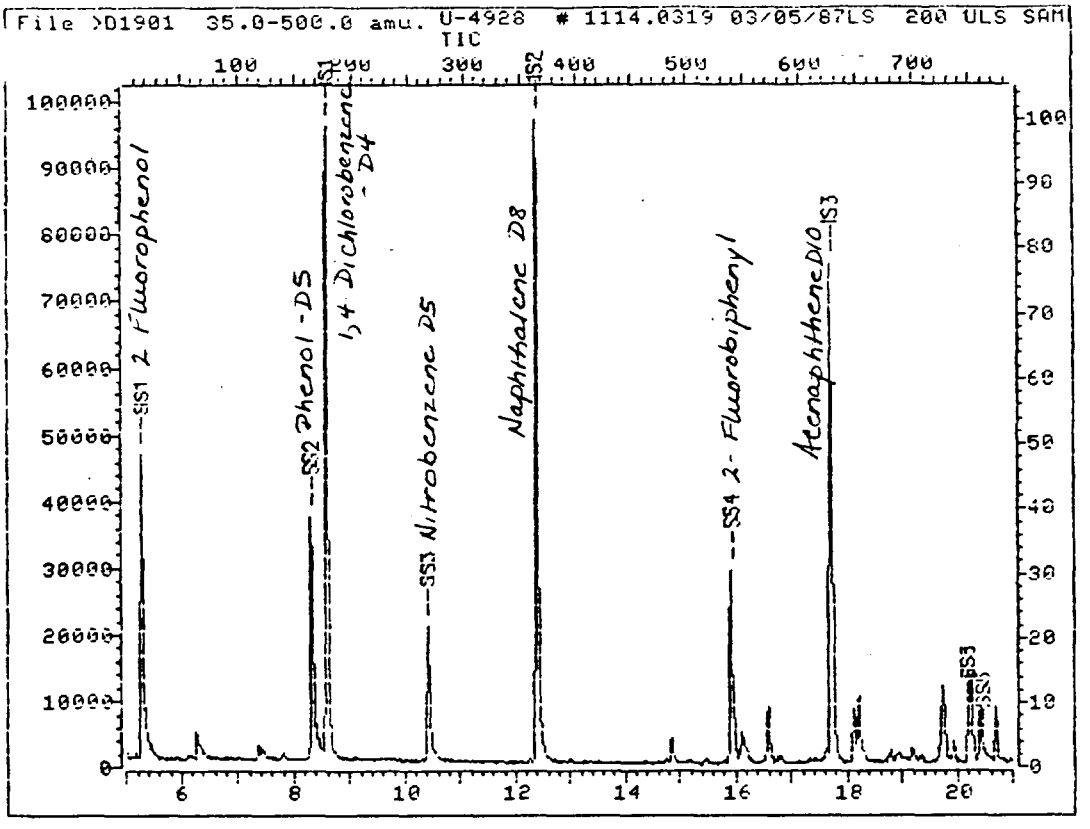


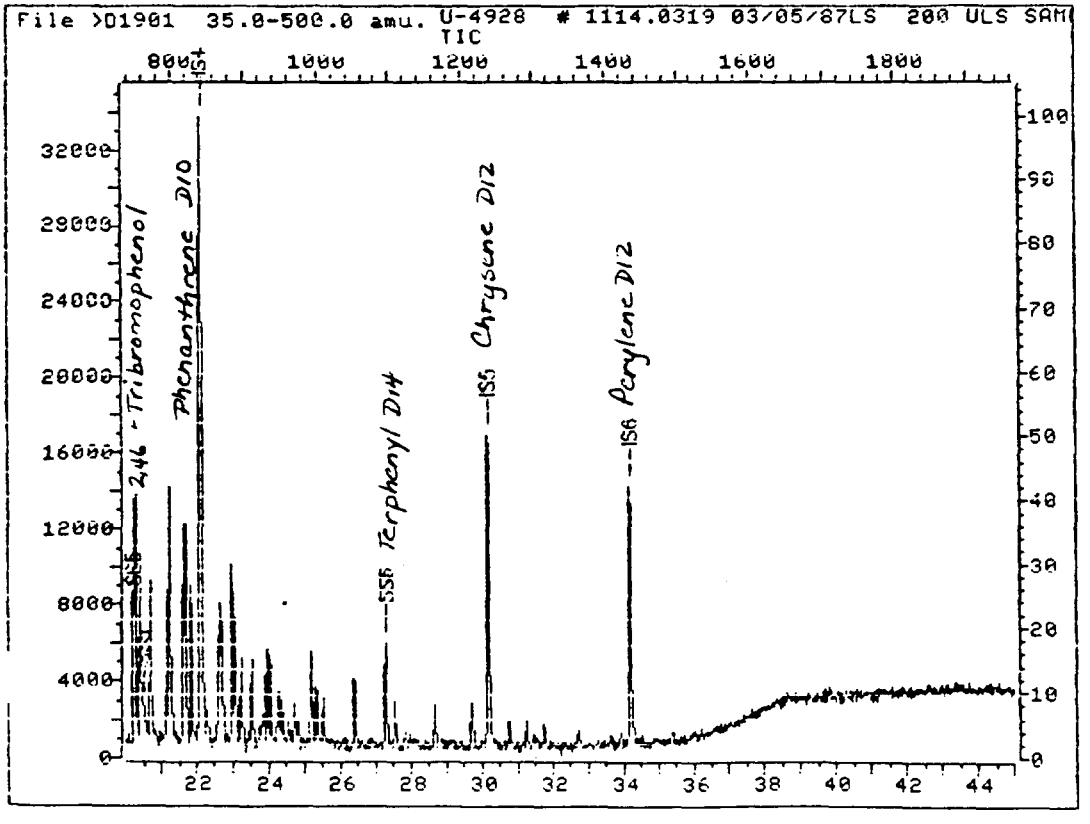
Data File: >D1901::D5
Name: U-4928 # 1114.0319 DC-05-63
Misc: 03/05/87LS 200 ULS SAMPLE + 200 ULS MECL2 + 4 ULS IS BTL# 3

Id File: BNAOR::D2
Title: BNA ID FILE FOR THE HP 5970 (E)
Last Calibration: 870305 17:22

Operator ID: USER6
Quant Time: 870305 20:26
Injected at: 870305 19:38

DC-05-63


File >D1901 35.0-500.0 amu. U-4928 # 1114.0319 03/05/87LS 200 ULS SAM
TIC
--SS1 2 Fluorophenol
--SS2 Phenol-D5
1,4 Dichlorobenzene - D4
--SS3 Nitrobenzene D5
Naphthalene D8
--SS4 2-Fluorobiphenyl
Acenaphthene D10
--IS3


File >D1901 35.0-500.0 amu. U-4928 # 1114.0319 03/05/87LS 200 ULS SAM
TIC
2,4,6-Tribromophenol
Phenanthrene D10
--SS5 Terphenyl D14
--IS5 Chrysene D12
--IS6 Perylene D12

QUANT REPORT

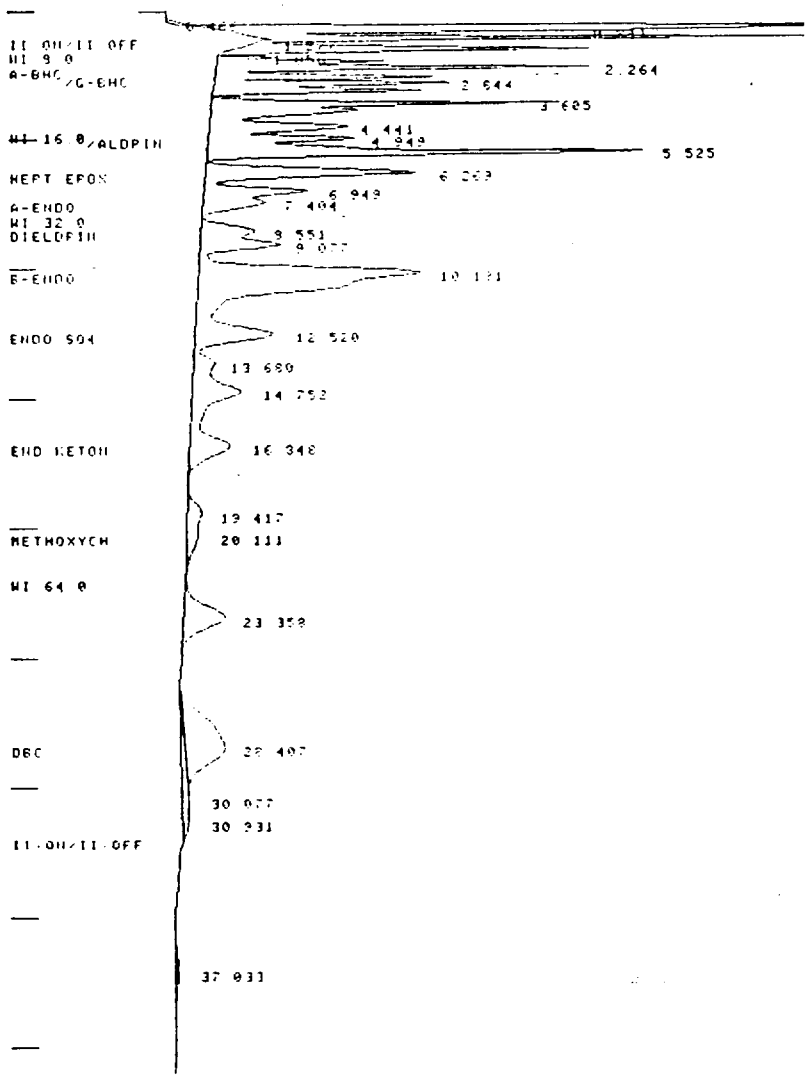
Operator ID: USER6 Quant Rev: 4 Quant Time: 870305 20:26
Output File: ^D1901::02 Injected at: 870305 19:38
Data File: >D1901::D3 Dilution Factor: 2.00
Name: U-4928 # 1114.0319 JC-05-63
Misc: 03/05/87LS 200 ULS SAMPLE + 200 ULS MEOL2 + 4 ULS IS BTL# 3

ID File: BNADR::02
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	8.60	178	46474	40.00 UG/L	83
2)	PHENOL-D5	(SURR)	99	8.31	164	40563	45.88 UG/L 49 ✓	99
5)	2-FLUOROPHENOL	(SURR)	112	5.28	15	35156	88.27 UG/L 88 ✓	70
17)	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~10.43~~	~~268~~	~~2344~~	~~6.15 UG/L~~	~~84~~ CW
19)	*NAPHTHALENE-D8	(IS)	136	12.39	364	145879	40.00 UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	10.41	267	24735	31.83 UG/L 64 ✓	94
34)	*ACENAPHTHENE-D10	(IS)	162	17.72	626	49001	40.00 UG/L	99
39)	2-FLUOROBIPHENYL	(SURR)	172	15.93	538	34345	34.71 UG/L 69 ✓	91
41)	~~DIMETHYL PHTHALATE~~		~~163~~	~~17.72~~	~~626~~	~~9347~~	~~15.04 UG/L~~	~~100~~ CW
44)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.19	747	4041	35.40 UG/L 35 ✓	95
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.46	760	50	.44 UG/L	74
52)	~~2,6-DINITROTOLUENE~~		~~165~~	~~17.72~~	~~626~~	~~8829~~	~~45.99 UG/L~~	~~100~~ CW
55)	*PHENANTHRENE-D10	(IS)	188	22.11	841	45228	40.00 UG/L	90
61)	PHENANTHRENE		178	22.17	844	1268	2.36 UG/L yes	86
62)	~~ANTHRACENE~~		~~178~~	~~22.17~~	~~844~~	~~1268~~	~~2.38 UG/L~~	~~86~~ CW
63)	DI-N-BUTYLPHTHALATE		149	24.72	969	5016	9.43 UG/L yes	95
65)	*CHRYSENE-D12	(IS)	240	30.15	1236	27183	40.00 UG/L	100
69)	TERPHENYL-D14	(SURR)	244	27.28	1095	10067	37.74 UG/L 75 ✓	100
71)	~~BENZO(A)ANTHRACENE~~		~~228~~	~~30.22~~	~~1239~~	~~1710~~	~~5.10 UG/L~~	~~93~~ CW
73)	CHRYSENE		228	30.22	1239	1710	4.88 UG/L yes	95
74)	*PERYLENE-D12	(IS)	264	34.17	1433	24175	40.00 UG/L yes	100

* Compound is ISTD

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



22

$\cancel{300}^{259} \times 0.00053 \times \frac{1}{115} \times 5000 = 22{,}000$ ug/kg 1232

$\cancel{153}^{146} \times 0.00093 \times \frac{1}{115} \times 5000^{J} = 4{,}500$ ug/kg 1260

DC-05-63

RECALCULATE ON FILE: TURK220

CHANNEL: 1A - 1 TITLE: RUN# 22 7:01 25 FEB 87

SAMPLE: 1114 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	1.389		105227	VV	?	5.13
2		0.0000	1.534		319952	VB		6.63
3		0.0000	1.858		39043	BV		5.88
					[illegible]	[illegible]	?	7.13

$\frac{146}{153} \times 0.00093 \times \frac{1}{115} \times 5000 = 7{,}500$ ug/g

RECALCULATE ON FILE: TURK220 DC-05-63

CHANNEL: 1A - 1 TITLE: RUN: 33 7:01 25 FEB 87

SAMPLE: 1114 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/g	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		WI/2 (SEC)
1		0.0000	1.389		105227	VV	?	5.13
2		0.0000	1.534		319962	VB		6.63
3		0.0000	1.856		39043	BV		5.88
4		0.0000	2.027		175067	VV	?	7.13
5	[illegible]	379.1808	2.264	0.014	321250	VV		7.13
6	[illegible]C	351.4662	2.590	-0.020	256922	VV		8.00
7		0.0000	2.844		276535	VV		9.06
8		0.0000	3.113		233799	VV		9.56
9		0.0000	3.605		462019	VV		10.44
10		0.0000	3.845		250919	VV	?	18.63
11		0.0000	4.441		360495	VV		22.06
12	[illegible]	358.4467	4.949	-0.131	272238	VV		15.19
13		0.0000	5.525		864537	VV		13.50
14	[illegible]	777.8115	6.269	0.129	554260	VV		22.31
15		0.0000	6.949		243224	VV		19.69
16	[illegible]	265.6096	7.484	-0.186	189278	VB	?	31.94
17	[illegible]	254.0191	8.551	-0.189	180835	BV	?	29.75
18	[illegible]	323.8172	9.077	0.237	230622	VV	?	26.50
19	[illegible]	2114.001	10.181	0.131	1415626	VV		55.56
20	[illegible]	766.3191	12.520	-0.330	378118	VV		36.38
21		0.0000	13.680		94017	VV	?	30.81
22	[illegible]	702.4566	14.752	0.502	339351	VV		39.81
23	[illegible]	351.8368	16.848	0.438	259071	VB		41.19
24		0.0000	19.417		100354	BV	?	49.94
25	[illegible]	245.5915	22.111	-0.789	167790	VB	?	88.00
26		0.0000	23.358		295152	BB		54.75
27	OBC 166	1106.264	28.407	-0.073	616676	BV	?	126.69
28		0.0000	30.077		36082	VV	?	
29		0.0000	30.931		26939	VB	?	
30		0.0000	37.033		33203	BB		92.00
31		0.0000	43.231		78835	BB		94.75
32		0.0000	48.736		24569	BB		98.00

TOTALS: 8006.820 -0.277 9128115

DETECTED PKS: 41 REJECTED PKS: 9

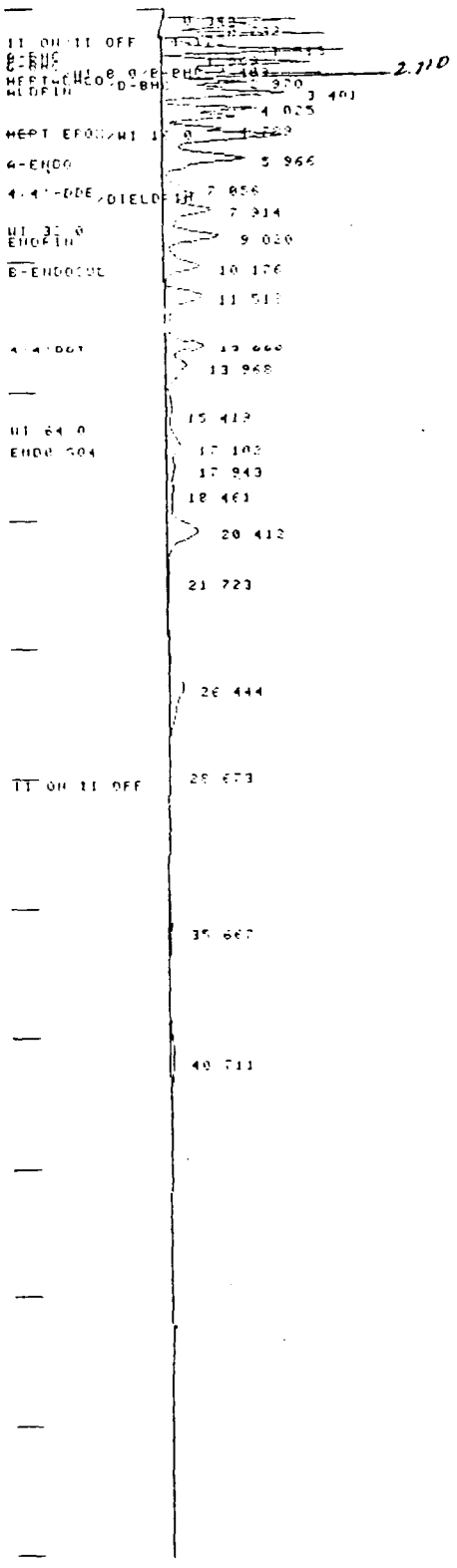
DIVISOR: 0.15000 MULTIPLIER: 5000.00000

NOISE: 11.4 OFFSET: 4

RACK: 2 VIAL: 7 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

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



DC-05-63

CHANNEL: 1B - 1 TITLE: RUN# 8 15:37 3 MAR 87

SAMPLE: 1114.03.1301 METHOD: PCPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT MG/MG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		WI/2 (SEC)
1		0.0000	1.326		38430	BV		4.19
2		0.0000	1.454		91989	VV	?	4.55
3		0.0000	1.518		87142	VV	?	8.62
4		0.0000	1.676	-0.104	359878	VB		4.61
					181624	BV	?	5.02

CHANNEL: 1B - 1 TITLE: RUN# 8 DC-0563 15:37 3 MAR 87

SAMPLE: 1114.03.19A1 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	1.326		38430	BV		4.19
2		0.0000	1.454		91989	VV	?	4.56
3		0.0000	1.518		87142	VV	?	8.63
4	[illegible]	0.0000	1.636	-0.124	359878	VB		4.81
5		0.0000	1.969		181684	BV	?	5.00
6		0.0000	2.090		216035	VV	?	6.44
7	[illegible]	0.0000	2.248	0.038	68752	VV	?	6.38
8	[illegible]	0.0000	2.409	-0.131	155286	VV	?	13.00
9	[illegible]	0.0000	2.710	-0.010	487630	VV		6.94
10	[illegible]	0.0000	2.970	0.010	176611	VV		8.69
11		0.0000	3.173		115170	VV	?	9.38
12	[illegible]	0.0000	3.401	0.101	398885	VV		14.00
13		0.0000	4.025		263497	VV		11.38
14		0.0000	4.308		221698	VV	?	13.50
15		0.0000	4.789		154387	VV	?	12.44
16	[illegible]	0.0000	5.075	0.135	545722	VV		18.75
17	[illegible]	0.0000	5.966	-0.254	525996	VV		22.19
18	[illegible]	0.0000	7.056	-0.134	75549	VV	?	23.63
19		0.0000	7.346		176372	VV	?	30.31
20	[illegible]	0.0000	7.914	0.314	317830	VV		24.00
21	[illegible]	0.0000	9.020	-0.230	347811	VV		25.44
22	[illegible]	0.0000	10.176	-0.224	267050	VV		27.56
23	[illegible]	0.0000	11.518	0.508	306160	VV		29.44
24	[illegible]	0.0000	13.026	-0.224	333188	VV		34.75
25		0.0000	13.968		235726	VV	?	57.69
26	[illegible]	0.0000	15.419	0.709	87843	VV	?	151.19
27		0.0000	17.102		175429	VV	?	65.88
28	[illegible]	0.0000	17.943	0.253	75870	VV	?	60.31
29		0.0000	18.461		84247	VV	?	
30		0.0000	20.412		370504	VV		48.69
31		0.0000	21.723		21129	VV	?	
32	[illegible]	0.0000	26.444	1.004	317651	VV		107.25
33		0.0000	35.667		43272	BB	?	80.75
34		0.0000	40.711		87526	BB		92.75

TOTALS: 0.0000 1.741 7411939

DETECTED PKS: 45 REJECTED PKS: 11

DIVISOR: 0.15000 MULTIPLIER: 5000.00000

NOISE: 57.1 OFFSET: 1

RACK: 1 VIAL: 9 INJ: 1

NOTES:
NOTEBOOK: 259-130 ANALYST: K.JUREK
SECURE AREA: D JOB#:U-4928
INST: VARIAN 6000#2 B ECD 10X1 ATT:16
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOFORT
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 ANALYSIS

POST RUN:
SAVE FILE: RAW SAS075

TOTALS: 0.0000 -0.685 9230643

DETECTED PKS: 34 REJECTED PKS: 5

DIVISOR: 1.00000 MULTIPLIER: 1.00000

NOISE: 57.1 OFFSET: 8

RACK: 1 VIAL: 17 INJ: 1

SAMPLE NUMBER DC-05-64

DC-05-64

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.
Case No: U-4906, 4928, 4971, 4989

Lab Sample ID No: 1115
QC Report No:

Sample Matrix: Soil
Contract No: IL-3140

Data Release Authorized By: [signature]
Date Sample Received: 2-19-87

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared:
Date Analyzed: 2-25-87
Conc/Dil Factor: 10 pH 7.7
Percent Moisture: (Not Decanted) 18

Concentrations reported "as received"

CAS Number		ug/l or (ug/Kg) (Circle One)
74-87-3	Chloromethane	100 u
74-83-9	Bromomethane	100 u
75-01-4	Vinyl Chloride	100 u
75-00-3	Chloroethane	100 u
75-09-2	Methylene Chloride	15 J
67-64-1	Acetone	9400 BE
75-15-0	Carbon Disulfide	50 u
75-35-4	1, 1-Dichloroethene	50 u
75-34-3	1, 1-Dichloroethane	50 u
156-60-5	Trans-1, 2-Dichloroethene	50 u
67-66-3	Chloroform	50 u
107-06-2	1, 2-Dichloroethane	50 u
78-93-3	2-Butanone	140 B
71-55-6	1, 1, 1-Trichloroethane	50 u
56-23-5	Carbon Tetrachloride	50 u
108-05-4	Vinyl Acetate	100 u
75-27-4	Bromodichloromethane	50 u

CAS Number		ug/l or (ug/Kg) (Circle One)
78-87-5	1, 2-Dichloropropane	50 u
10061-02-6	Trans-1, 3-Dichloropropene	50 u
79-01-6	Trichloroethene	50 u
124-48-1	Dibromochloromethane	50 u
79-00-5	1, 1, 2-Trichloroethane	50 u
71-43-2	Benzene	15 J
10061-01-5	cis-1, 3-Dichloropropene	50 u
110-75-8	2-Chloroethylvinylether	100 u
75-25-2	Bromoform	50 u
108-10-1	4-Methyl-2-Pentanone	100 u
591-78-6	2-Hexanone	100 u
127-18-4	Tetrachloroethene	50 u
79-34-5	1, 1, 2, 2-Tetrachloroethane	50 u
108-88-3	Toluene	50 u
108-90-7	Chlorobenzene	130
100-41-4	Ethylbenzene	47 J
100-42-5	Styrene	50 u
	Total Xylenes	210

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/ml 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-05-64

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low (Medium) (Circle One)

Date Extracted/Prepared 2-19-87

Date Analyzed 03-05-87

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

CAS Number		ug/l or (ug/Kg) (Circle One)
83-32-9	Acenaphthene	3300 u
51-28-5	2 4-Dinitrophenol	16000 u
100-02-7	4-Nitrophenol	16000 u
132-64-9	Dibenzofuran	3300 u
121-14-2	2 4-Dinitrotoluene	3300 u
606-20-2	2 6-Dinitrotoluene	3300 u
84-66-2	Diethylphthalate	3300 u
7005-72-3	4-Chlorophenyl-phenylether	3300 u
86-73-7	Fluorene	3300 u
100-01-6	4-Nitroaniline	16000 u
534-52-1	4 6-Dinitro-2-Methylphenol	16000 u
86-30-6	N-Nitrosodiphenylamine (1)	3300 u
101-55-3	4-Bromophenyl-phenylether	3300 u
118-74-1	Hexachlorobenzene	3300 u
87-86-5	Pentachlorophenol	16000 u
85-01-8	Phenanthrene	3300 u
120-12-7	Anthracene	3300 u
84-74-2	Di-n-Butylphthalate	3300 u
206-44-0	Fluoranthene	3300 u
129-00-0	Pyrene	3300 u
85-68-7	Butylbenzylphthalate	3300 u
91-94-1	3 3-Dichlorobenzidine	6600 u
56-55-3	Benzo(a)Anthracene	3300 u
117-81-7	bis(2-Ethylhexyl)Phthalate	2000 JB
218-01-9	Chrysene	1600 J
117-84-0	Di-n-Octyl Phthalate	3300 u
205-99-2	Benzo(b)Fluoranthene	3300 u
207-08-9	Benzo(k)Fluoranthene	3300 u
50-32-8	Benzo(a)Pyrene	3300 u
193-39-5	Indeno(1,2,3-cd)Pyrene	3300 u
53-70-3	Dibenz(a,h)Anthracene	3300 u
191-24-2	Benzo(g,h,i)Perylene	3300 u

(1) Cannot be separated from diphenylamine

254

Laboratory Name ecology and environment, inc.

Case No V-4906, 4928, 4971, 4989

Sample Number
DC-05-64

Organics Analysis Data Sheet
(Page 3)

Pesticide / PCBs

Concentration (Low) Medium (Circle One)

Date Extracted / Prepared 2-19-87

Date Analyzed 2-25-87

Conc / Dil Factor 5

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	400 U
319-85-7	Beta-BHC	400 U
319-86-8	Delta-BHC	400 U
58-89-9	Gamma-BHC (Lindane)	400 U
76-44-8	Heptachlor	400 U
309-00-2	Aldrin	400 U
1024-57-3	Heptachlor Epoxide	400 U
959-98-8	Endosulfan I	400 U
60-57-1	Dieldrin	800 U
72-55-9	4,4'-DDE	800 U
72-20-8	Endrin	800 U
33213-65-9	Endosulfan II	800 U
72-54-8	4,4'-DDD	800 U
1031-07-8	Endosulfan Sulfate	800 U
50-29-3	4,4'-DDT	800 U
72-43-5	Methoxychlor	4000 U
53494-70-5	Endrin Ketone	800 U
57-74-9	Chlordane	4000 U
8001-35-2	Toxaphene	8000 U
12674-11-2	Aroclor-1016	4000 U
11104-28-2	Aroclor-1221	4000 U
11141-16-5	Aroclor-1232	24,900
53469-21-9	Aroclor-1242	4000 U
12672-29-6	Aroclor-1248	4000 U
11097-69-1	Aroclor-1254	8000 U
11096-82-5	Aroclor-1260	3200 J

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 II-4906, 4928, 4971, 4989

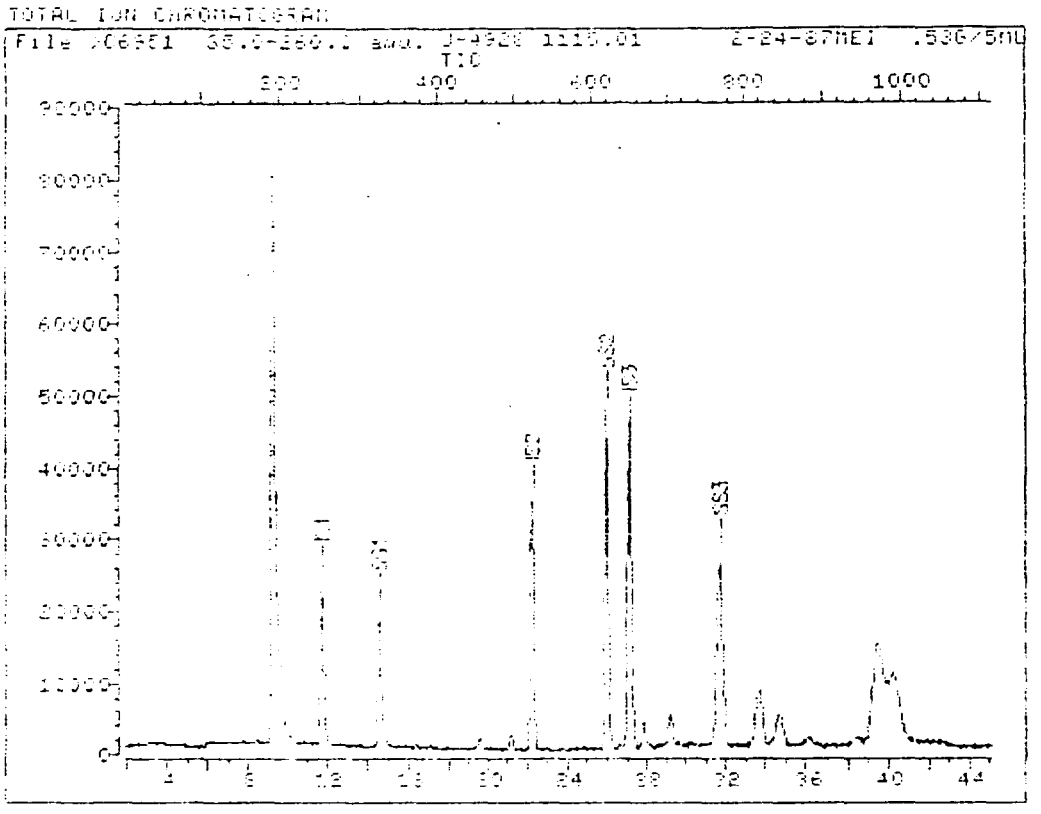
Sample Number DC-05-64

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number MCAC	Estimated Concentration (ug/l or ug/kg)
1.		Unknown hydrocarbon	VOA	27.8	66 J
2.		Dichlorobenzene isomer	VOA	39.5	690 J
3.		Dichlorobenzene isomer	VOA	40.2	420 J
4.					
5.					
6.	629505	Tridecane	BNA	19.77	4400 J
7.	4537159	Benzene, (1-butylheptyl)		20.28	15000 J
8.	4536861	Benzene, (1-propyloctyl)		20.42	7100 J
9.	4536872	Benzene, (1-ethylnonyl)		20.70	4500 J
10.	4536883	Benzene, (1-methyldecyl)		21.23	8500 J
11.	2719622	Benzene, (1-pentylheptyl)		21.62	6400 J
12.	2719633	Benzene, (1-butyloctyl)		21.68	5200 J
13.	2719644	Benzene, (1-propylnonyl)		21.84	4500 J
14.		~~Unknown~~ CW		~~22.11~~ CW	
15.		Unknown hydrocarbon		22.62	3300 J
16.	2719611	Benzene, (1-methylundecyl)		22.66	5000 J
17.	2400013	Benzene (1-hexylheptyl)		22.97	5800 J
18.	4534503	Benzene, (1-butylnonyl)		23.07	3700 J
19.		Unknown		23.23	2700 J
20.		Unknown		23.52	2800 J
21.		Unknown hydrocarbon		23.92	2600 J
22.		Unknown hydrocarbon		25.19	2800 J
23.	10544500	Molecular Sulfur	↓	25.35	2700 J
24					
25.					
26.					
27.					
28.					
29.					
30					

TOTAL ION CHROMATOGRAM

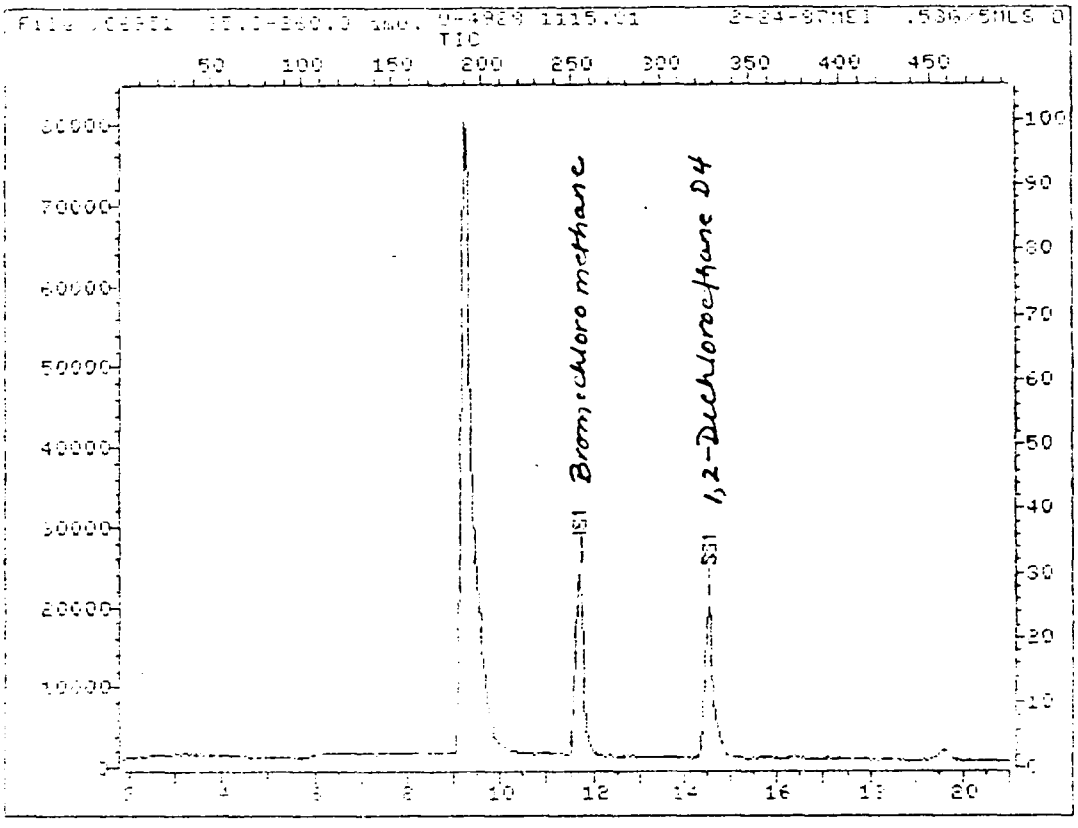


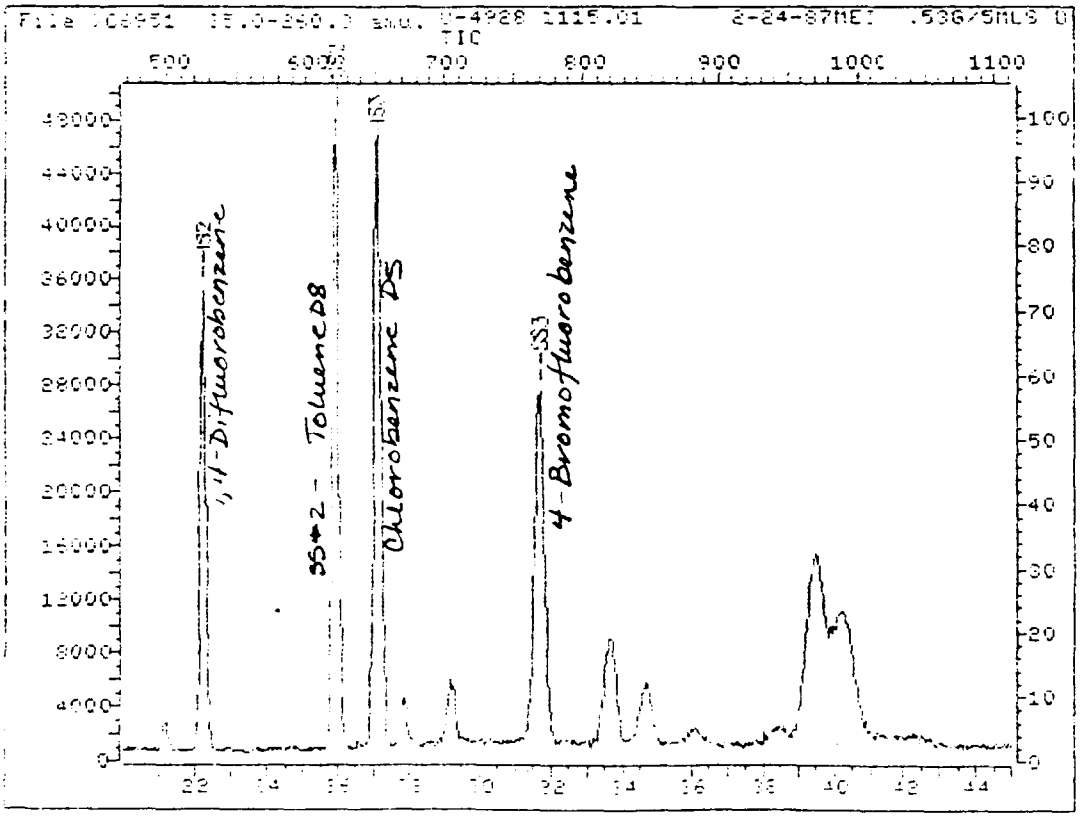
Data File: >C6951::D7
Name: U-4928 1115.01 DC-05-64
Misc: 2-24-87MEI .53G/5MLS DI - 10UL IS/SS

Id File: VOACRS::D1
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870224 15:45

Operator ID: USER8
Quant Time: 870225 01:48
Injected at: 870225 01:02

DC-05-64


TIC
Bromochloromethane
IS1
1,2-Dichloroethane D4
IS1


TIC
1,4-Difluorobenzene
IS2
Toluene D8
Chlorobenzene D5
IS3
4-Bromofluorobenzene

QUANT REPORT

Operator ID: USER6 Quant Rev: 4 Quant Time: 870305 21:19
Output File: ^D1902::02 Injected at: 870305 20:31
Data File: >D1902::03 Dilution Factor: 2.00
Name: U-4928 # 1115.0319 DC-05-64
Misc: 03/05/87LS 200 ULS SAMPLE + 200 ULS MEOL2 + 4 ULS IS BIL# 4

ID File: BNADR::02
Title: BNA ID FILE FOR THE HP 5970 (8)
Last Calibration: 870305 17:22

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	8.60	178	40201	40.00 UG/L	87
2)	PHENOL-D5	(SURR)	99	8.34	165	53271	58.09 UG/L 58 ✓	99
5)	2-FLUOROPHENOL	(SURR)	112	5.30	16	36430	88.20 UG/L 88 ✓	77
~~17)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~10.54~~	~~268~~	~~4719~~	~~6.42 UG/L~~	~~92~~ CW
19)	*NAPHTHALENE-D8	(IS)	136	12.39	364	149581	40.00 UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	10.42	267	28981	36.38 UG/L 73 ✓	95
34)	*ACENAPHTHENE-D10	(IS)	162	17.73	626	46184	40.00 UG/L	95
38)	2-FLUOROBIPHENYL	(SURR)	172	15.94	558	41892	44.92 UG/L 89 ✓	91
~~51)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~17.73~~	~~626~~	~~5710~~	~~12.69 UG/L~~	~~100~~ CW
49)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.21	748	5429	50.46 UG/L 50 ✓	99
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~17.73~~	~~626~~	~~6184~~	~~44.97 UG/L~~	~~100~~ CW
55)	*PHENANTHRENE-D10	(IS)	188	22.11	841	43972	40.00 UG/L	94
65)	*CHRYSENE-D12	(IS)	240	30.18	1237	29514	40.00 UG/L	100
69)	TERPHENYL-D14	(SURR)	244	27.28	1095	13351	46.09 UG/L 92 ✓	100
~~68)~~	~~TERPHENYL-D14~~	(SURR)	~~244~~	~~27.42~~	~~1104~~	~~125~~	~~.43 UG/L~~	~~100~~
68)	TERPHENYL-D14	(SURR)	244	27.51	1106	132	.46 UG/L	100
~~71)~~	~~BENZO(A)ANTHRACENE~~		~~228~~	~~30.24~~	~~1240~~	~~1876~~	~~5.15 UG/L~~	~~90~~ CW
72)	BIS(2-ETHYLHEXYL)PHTHALATE		149	31.24	1289	1676	6.12 UG/L yes	99
73)	CHRYSENE		228	30.24	1240	1876	4.93 UG/L yes	89
74)	*PERYLENE-D12	(IS)	264	34.17	1433	26070	40.00 UG/L	100

* Compound is ISTD

QUANT REPORT

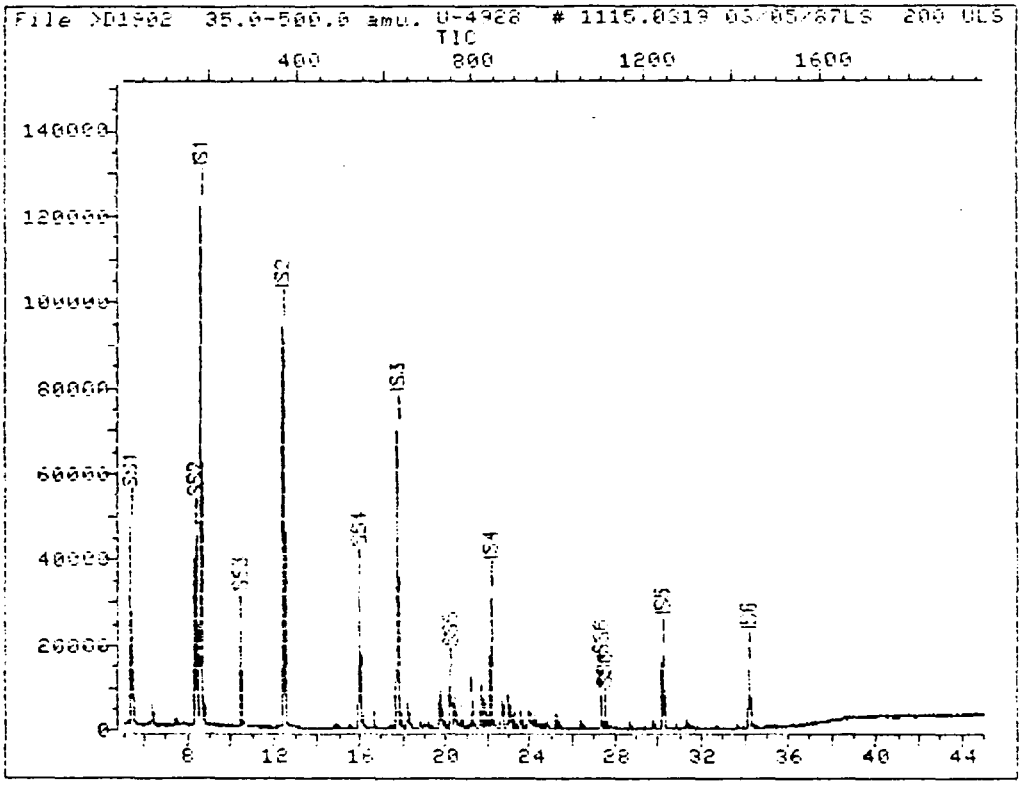
Operator ID: USER8 Quant Rev: 4 Quant Time: 870225 01:48
Output File: ^C6951::02 Injected at: 870225 01:02
Data File: >C6951::03 Dilution Factor: 1.00
Name: U-4928 1115.01 DC-05-64
Misc: 2-24-87MEI .57G/5ML DI + 10UL IS/SS

ID File: VOACPS::02
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	11.70	254	32036	250.00	NGS	100
6)	METHYLENE CHLORIDE	84	8.36	168	1550	8.03	NGS yes	100
7)	ACETONE	43	9.21	190	921296	4974.85	NGS yes	100
15)	1,2-DICHLOROETHANE-D4(SURR)	65	14.57	327	82625	247.06	NGS	86
16)	*1,4-DIFLUOROBENZENE (IS)	114	22.21	525	146336	250.00	NGS	100
17)	2-BUTANONE	72	14.72	332	3059	74.45	NGS yes	100
27)	BENZENE	78	19.65	459	5510	8.17	NGS yes	100
31)	*CHLOROBENZENE-D5 (IS)	117	27.06	650	141448	250.00	NGS	100
36)	TOLUENE-D8 (SURR)	98	25.94	621	182434	256.73	NGS	97
38)	CHLOROBENZENE	112	27.19	653	42698	68.06	NGS yes	99
39)	ETHYLBENZENE	91	29.20	705	27846	24.97	NGS yes	96
40)	4-BROMOFLUOROBENZENE(SURR)	95	31.69	769	97558	247.21	NGS	100
42)	TOTAL XYLENES	91	33.71	821	64274	68.76	NGS yes	100
42)	TOTAL XYLENES	91	34.68	846	42239	45.19	NGS yes	100
43)	1,3-DICHLOROBENZENE yes	146	39.53	971	113294	113294.0	NO CALIB	100
44)	1,2-DICHLOROBENZENE		39.53	971	113294	113294.0	NO CALIB	100
45)	1,4-DICHLOROBENZENE	146	39.53	971	113294	113294.0	NO CALIB	100

* Compound is ISTD

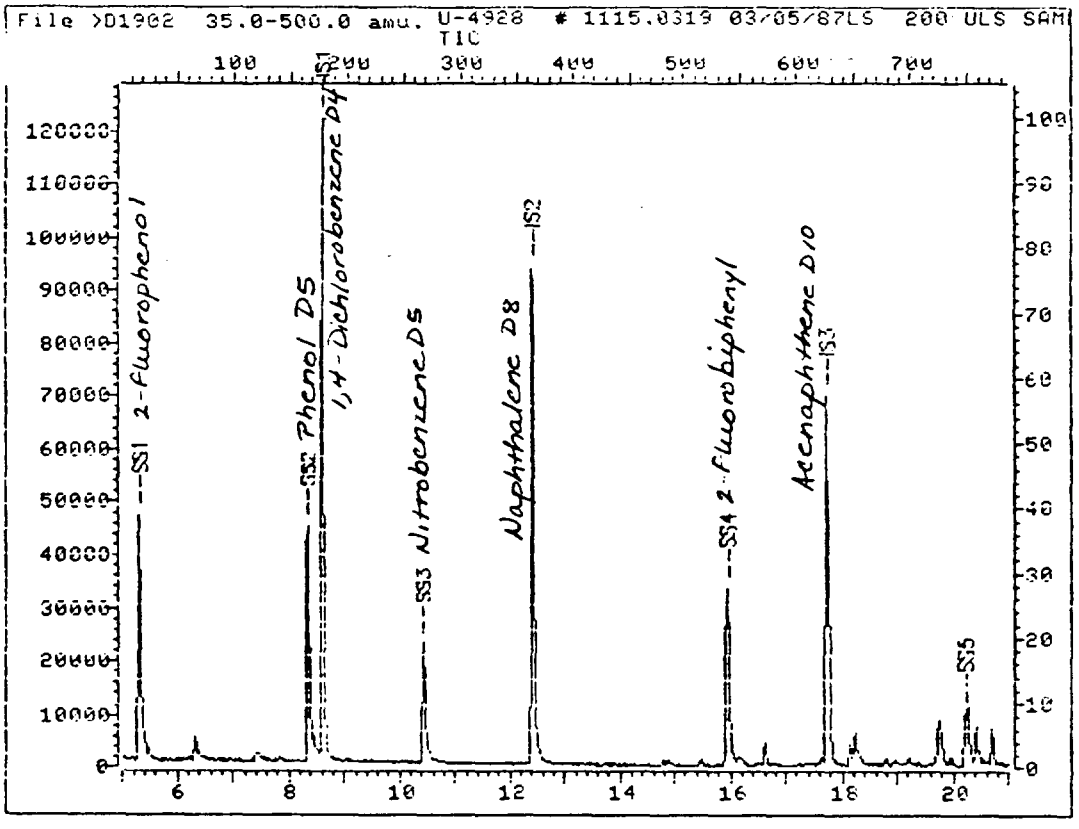
TOTAL ION CHROMATOGRAM



Data File: >D1902::D5
Name: U-4928 # 1115.0319 DC-05-64
Misc: 03/05/87LS 200 ULS SAMPLE + 200 ULS MEOL2 + 4 ULS IS BTL# 4

Id File: BNAUR::U2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870305 17:22

Operator ID: USER6
Quant Time: 870305 21:19
Injected at: 870305 20:31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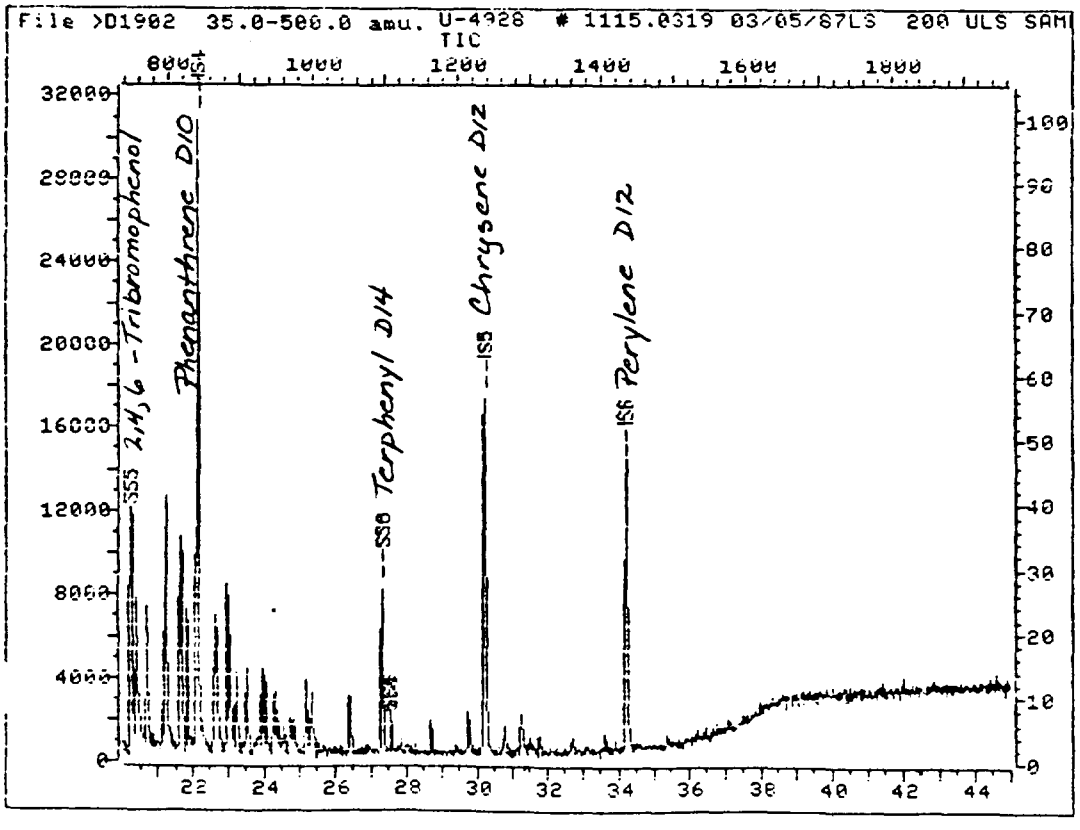
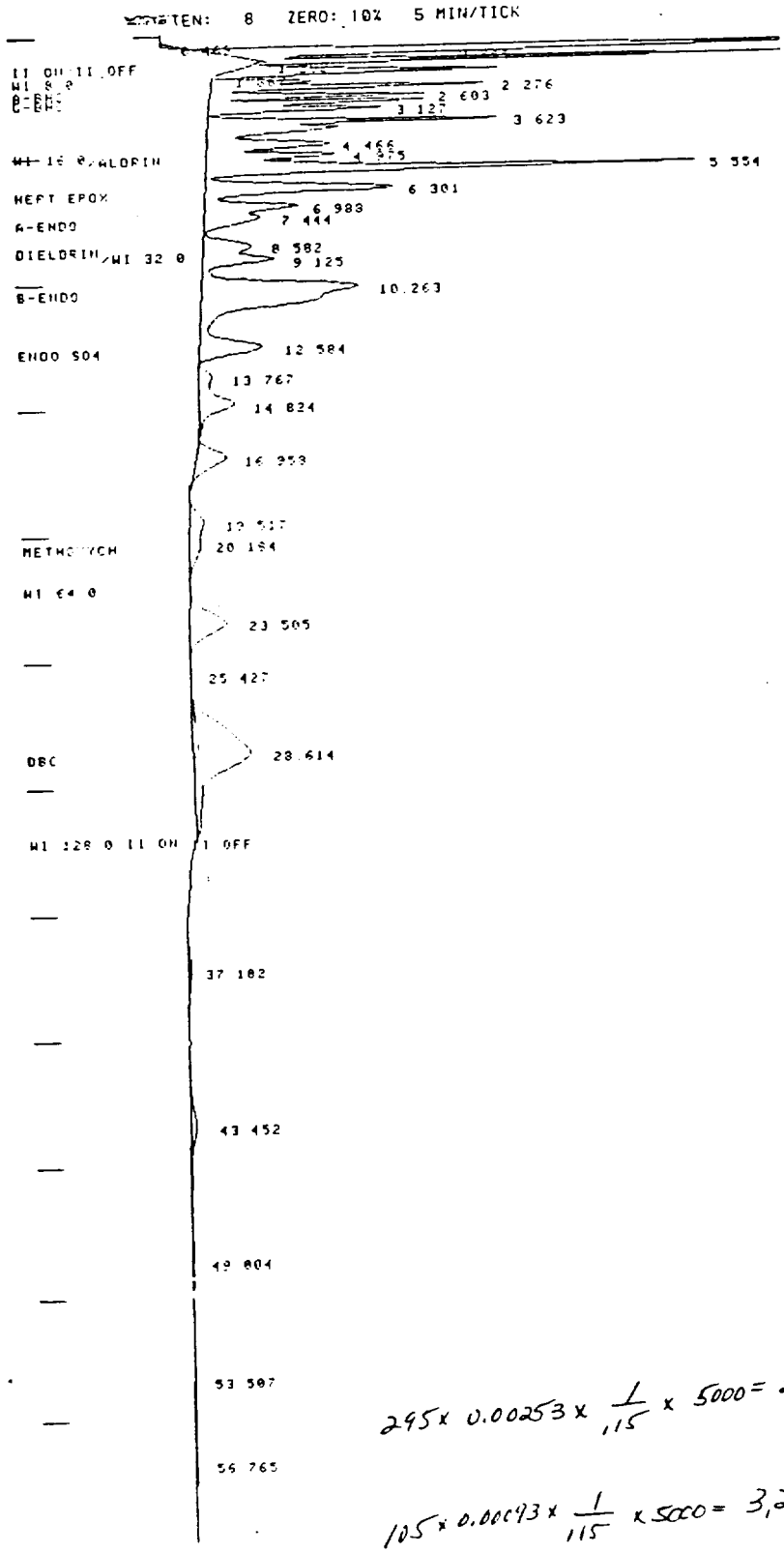
TIC
2-Fluorophenol
Phenol D5
1,4-Dichlorobenzene D4
Nitrobenzene D5
Naphthalene D8
2-Fluorobiphenyl
Acenaphthene D10

DC-05-64


File >D1902 35.0-500.0 amu. U-4928 # 1115.0319 03/05/87LS 200 ULS SAM
TIC
2,4,6-Tribromophenol
Phenanthrene D10
Terphenyl D14
Chrysene D12
Perylene D12



$295 \times 0.00253 \times \frac{1}{115} \times 5000 = 24{,}900$ ug/kg 1232

$105 \times 0.00093 \times \frac{1}{115} \times 5000 = 3{,}200$ ug/kg 1260

DC-05-64

$295 \times 0.00253 \times \frac{1}{115} \times 5000 =$ [illegible]

$105 \times 0.00093 \times \frac{1}{115} \times 5000 = 3{,}200$ ug/kg 1260

DC-05-64

CHANNEL: 1A - 1 TITLE: RUN# 23 8:06 25 FEB 87

SAMPLE: 1115 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	1.282		24768	BV	3.94
2		0.0000	1.394		76112	VV	? 4.81
3		0.0000	1.542		274256	VB	6.44
4		0.0000	1.867		32646	BV	5.94
5		0.0000	2.043		120850	VV	? 7.75
6	[illegible]	319.8251	2.276	0.026	271806	VV	7.13
7	[illegible]	321.0298	2.503	-0.007	233745	VV	7.81
8		0.0000	2.558		242502	VV	9.00
9		0.0000	3.127		219657	VV	9.56
10		0.0000	3.623		408054	VV	10.44
11		0.0000	3.864		263612	VV	? 18.63
12		0.0000	4.456		333559	VV	22.38
13	[illegible]	317.9315	4.975	-0.105	241467	VV	15.69
14		0.0000	~~5.554~~		~~852779~~	VV	13.31
15	[illegible]	741.1691	6.301	0.161	528149	VV	22.38
16		0.0000	6.998		236600	VV	19.94
17	[illegible]	262.0500	7.444	-0.156	177862	VV	? 32.19
18	[illegible]	245.6113	8.562	-0.158	168229	VV	? 29.06
19	[illegible]	298.7227	9.125	0.285	215425	VV	? 27.38
20	[illegible]	1606.133	10.263	0.213	1075536	VV	56.25
21	[illegible]	584.2241	12.594	-0.266	208308	VV	33.00
22	[illegible]	112.5356	13.767	-0.483	54365	VV	? 31.94
23		0.0000	14.924		203545	VB	39.75
24	[illegible]	236.6996	16.958	0.548	173765	BB	41.56
25		0.0000	19.517		92614	BV	? 47.63
26	[illegible]	250.1075	~~20.184~~	-0.716	~~64963~~	VB	? 95.06
27		0.0000	23.505		292054	BV	56.06
28	DBC 125	~~[illegible]~~ 834	28.614	0.134	~~812255~~ 10mm		111.25
29		0.0000	37.182		28410	BB	82.00
30		0.0000	43.452		70602	BV	91.75
31		0.0000	49.004		24151	VB	92.00
TOTALS:		6752.947		-0.524	8158646		

1232

295

1260

105

DETECTED PKS: 39 REJECTED PKS: 8

DIVISOR: 0.15000 MULTIPLIER: 5000.00000

NOISE: 11.4 OFFSET: -12

RACK: 2 VIAL: 8 INJ: 1

NOTES:
NOTEBOOK:259-117,118 ANALYST:RICHARD SAMSON
SECURE AREA: D JOB#:U-4928
INST: VARIAN 5000# 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 TURK221

CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 12% 5 MIN/TICK

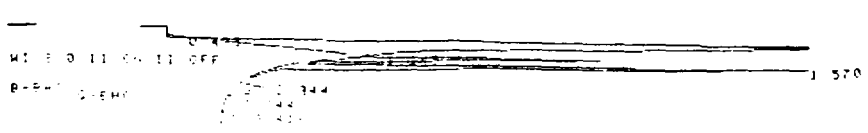
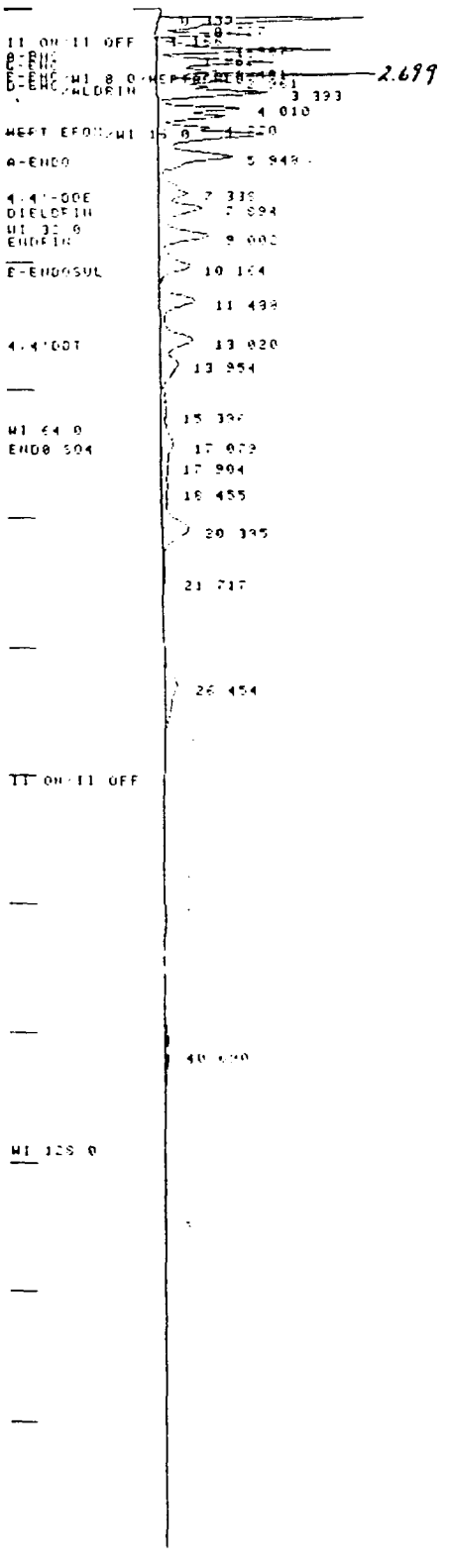


CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10% 5 MIN/TICK



DC-05-64

CHANNEL: 1E - 1 TITLE: RUN# 9 16:41 3 MAR 87

SAMPLE: 1115.03.19A1 METHOD: PEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT MG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	WIDTH (SEC)
		0.0000	1.771		31020	BV	4.13

DC-05-64

CHANNEL: 1B - 1 TITLE: RUN# 9 16:41 3 MAR 87

SAMPLE: 1115.03.19A1 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	1.321		31020	BV		4.13
2		0.0000	1.446		85522	VV	?	4.13
3		0.0000	1.507		34813	VV	?	9.94
4	[illegible]	0.0000	1.629	-0.131	303444	VV		4.56
5		0.0000	1.962		158760	VV		5.38
6		0.0000	2.083		182554	VV		5.88
7	[illegible]	0.0000	2.240	0.030	60032	VV	?	6.38
8	[illegible]	0.0000 1232	2.401	-0.139	133545	VV	?	11.25
9	[illegible]0	0.0000	#2.699	-0.021	427924	VV		6.81
10	[illegible]C	0.0000	2.961	0.001	156598	VV		8.75
11		0.0000	3.165		101965	VV	?	9.44
12	[illegible]	0.0000	3.393	0.093	359787	VV		14.06
13		0.0000	4.010		241855	VV		11.50
14		0.0000	4.296		201689	VV	?	13.38
15		0.0000	4.770		140519	VV	?	12.31
16	[illegible](	0.0000	5.059	0.119	495369	VV		19.00
17	[illegible]	0.0000	5.948	-0.272	483313	VV		22.00
18	[illegible]	0.0000	7.338	0.148	238769	VV	?	41.81
19	[illegible]	0.0000	7.894	0.294	291743	VV		24.25
20	[illegible]	0.0000	9.002	-0.248	320787	VV		25.94
21	[illegible]	0.0000	10.164	-0.236	250105	VV		28.75
22	[illegible]	0.0000	11.488	0.478	282145	VV		30.00
23	[illegible]	0.0000	13.070	-0.230	304038	VV		36.25
24		0.0000	13.954		222467	VV	?	60.63
25	[illegible]	0.0000	15.396	0.686	84616	VV	?	153.63
26		0.0000	17.079		168868	VV	?	79.00
27	[illegible]	0.0000	17.904	0.214	72558	VV	?	91.06
28		0.0000 1210	18.455		74634	VV	?	
29		0.0000	#20.385		338509	VV		54.00
30		0.0000	21.717		20098	VB	?	
31	[illegible]	0.0000	26.454	1.014	246160	BB		87.13
32		0.0000	40.690		95826	BB		99.81

TOTALS: 0.0000 1.600 6610232

DETECTED PKS: 42 REJECTED PKS: 10

DIVISOR: 0.15000 MULTIPLIER: 5000.00000

NOISE: 57.1 OFFSET: -10

RACK: 1 VIAL: 10 INJ: 1

NOTES:
NOTEBOOK: 259-130 ANALYST: K.JUREK
SECURE AREA: D JOB#:U-4928
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 ANALYSIS

POST RUN:
SAVE FILE: RAW SAS076

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

SAMPLE NUMBER DC-OB-65

DC-OB-65

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.

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

Lab Sample ID No: 1116

QC Report No:

Sample Matrix: Soil

Contract No: IL-3140

Data Release Authorized By: C Sojtowicz

Date Sample Received: 2-19-87

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 2-24-87

Conc/Dil Factor: 1 pH 7.4

Percent Moisture: (Not Decanted) 21

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	110 B
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	10u
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-0B-65

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low (Medium) (Circle One)

Date Extracted/Prepared 2-19-87

Date Analyzed 3-5-87

Conc/Dil Factor: 2

Percent Moisture (Decanted) 21

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	2200 J
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 and environment, inc.

Case No V-4906, 4928, 4971, 4989

Sample Number
DC-08-65

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 2-19-87

Date Analyzed 2-25-87

Conc/Dil Factor 1

Percent Moisture (decanted) 21

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

Laboratory Name Ecology & Environment Inc.

Case No IL-4906, 4928, 4971, 4989

Sample Number
DC-0B-65

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	(RT) or Scan Number MLC-IC	Estimated Concentration (ug/l or ug/kg)
1.		No TIC's in VOA fraction			
2.					
3.		No TIC's in BNA fraction			
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
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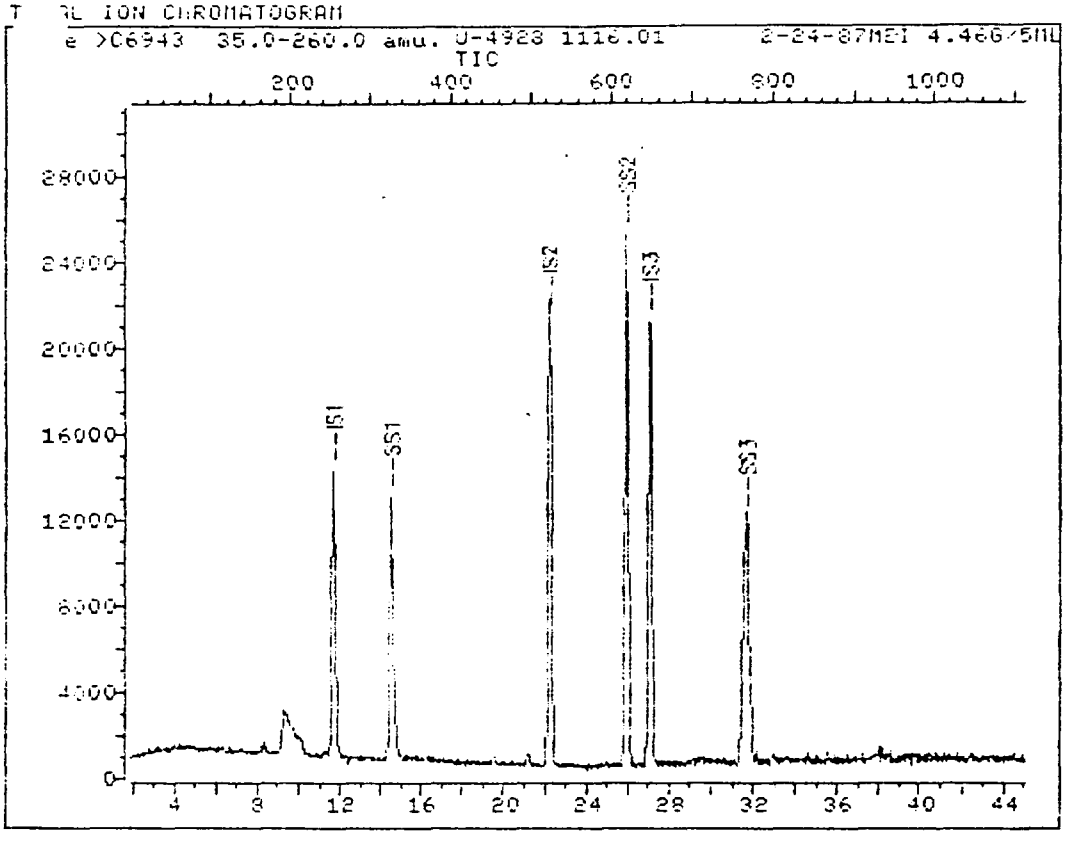
26.					
27.					
28					
29.					
30					

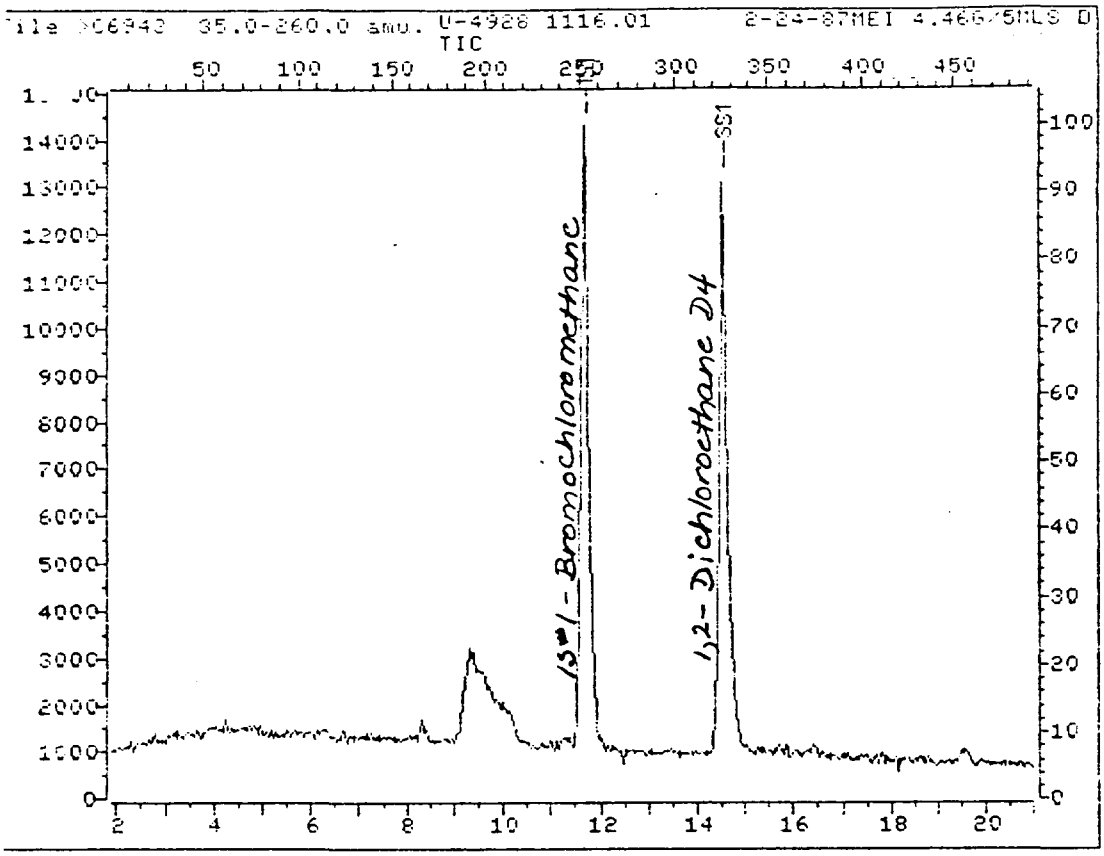


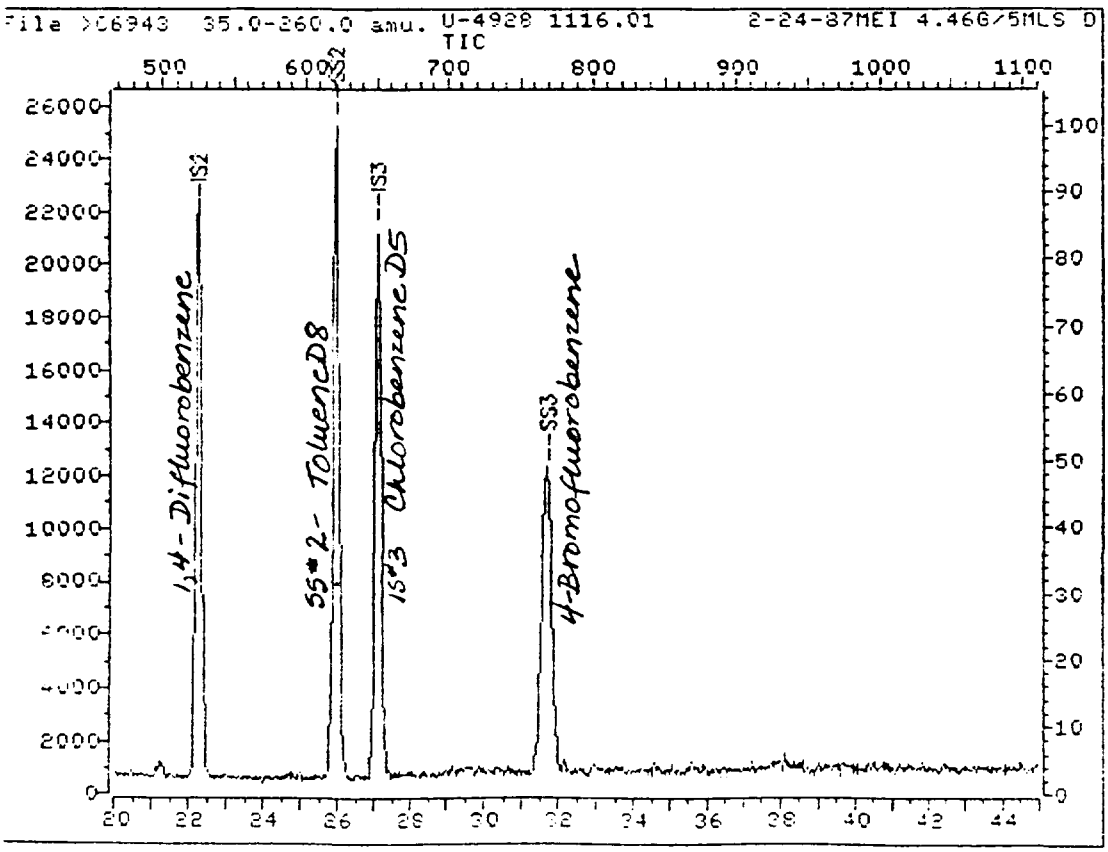
Data File: >C6943::D1
Name: U-4928 1116.01 DC-0B-65
Misc: 2-24-87MEI 4.46G/5MLS DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870224 15:45

Operator ID: USER8
Quant Time: 870224 18:25
Injected at: 870224 17:39

DC-0B-65


File >06943 35.0-260.0 amu. U-4928 1116.01 2-24-87MEI 4.466/5MLS D
TIC
SS1
1,2-Dichloroethane D4
SS*1-Bromochloromethane


File >06943 35.0-260.0 amu. U-4928 1116.01 2-24-87MEI 4.466/5MLS D
TIC
IS2
IS3
SS2
SS3
1,4-Difluorobenzene
SS*2-TolueneD8
IS*3 ChlorobenzeneD5
4-Bromofluorobenzene

QUANT REPORT

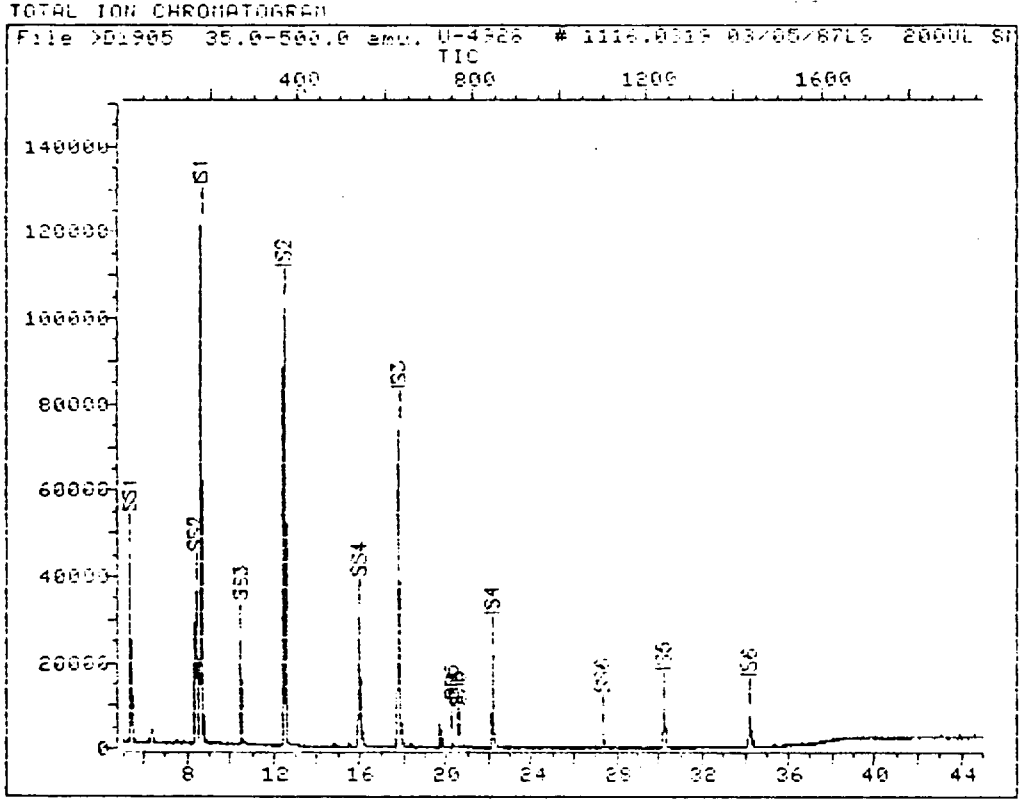
perator ID: USER8 Quant Rev: 4 Quant Time: 870224 18:25
utput File: ^C6943::02 Injected at: 870224 17:39
ata File: >C6943::01 Dilution Factor: 1.00
ame: U-4928 1116.01 DC-08-65
ise: 2-24-87MEI 4.4GG/5MLS DI + 10UL IS/SS

D File: VOACRS::D2
itle: VOA ID FILE FOR HP-5995 (CONT. CAL.)
ast Calibration: 870224 15:45

	Compound		R.T.	Scan#	Area	Conc	Units	q	
1)	*BROMOCHLOROMETHANE	(IS)	128	11.68	253	19807	250.00	NGS	100	
7)	ACETONE		43	9.39	194	55399	483.84	NGS 93	100	✓
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.52	326	53056	256.60	NGS 102	85	✓
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.24	525	91839	250.00	NGS	100	
31)	*CHLOROBENZENE-D5	(IS)	117	27.09	650	69338	250.00	NGS	100	✓
6)	TOLUENE-D8	(SURR)	98	25.96	621	93616	268.74	NGS 107	94	✓
80)	4-BROMOFLUOROBENZENE	(SURR)	95	31.71	769	42082	217.54	NGS 87	100	✓

* Compound is ISTD

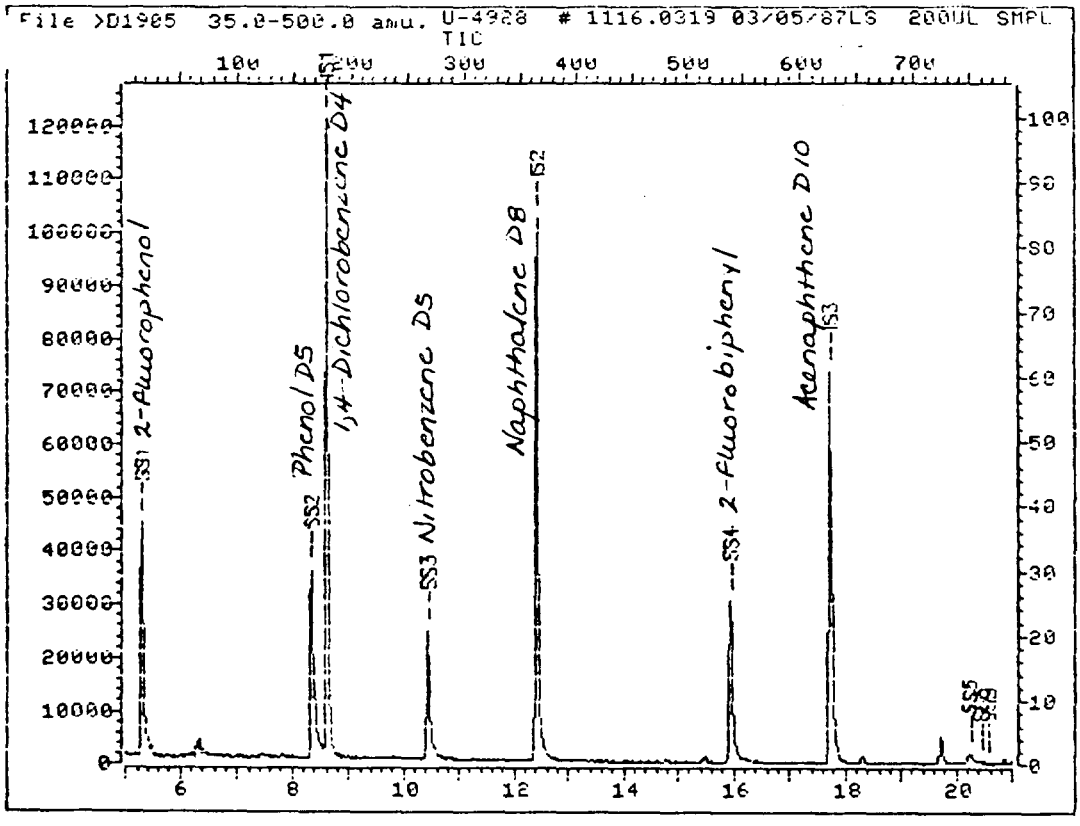
TOTAL ION CHROMATOGRAM



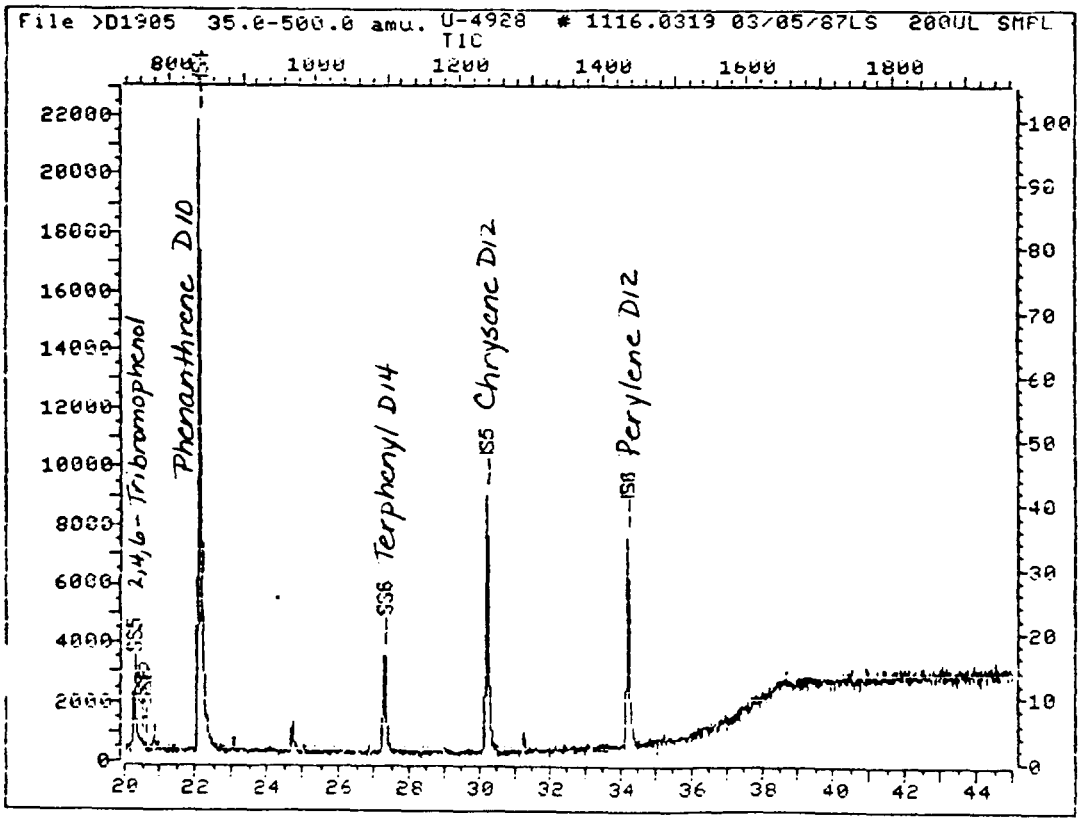
Data File: >D1905::03
Name: U-4928 # 1116.0319 DC-08-65
Misc: 03/05/87LS 20UL SMPL + 20UL MELL2 + 4UL IS (2X) BTL# 2

Id File: BNA0R::02
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870305 17:22

Operator ID: USER6
Quant Time: 870305 23:57
Injected at: 870305 23:10


File >D1905 35.0-500.0 amu. U-4928 # 1116.0319 03/05/87LS 200UL SMPL
TIC
2-Fluorophenol
Phenol D5
1,4-Dichlorobenzene D4
Nitrobenzene D5
Naphthalene D8
2-Fluorobiphenyl
Acenaphthene D10

DC-08-65


File >D1905 35.0-500.0 amu. U-4928 # 1116.0319 03/05/87LS 200UL SMPL
TIC
2,4,6-Tribromophenol
Phenanthrene D10
Terphenyl D14
Chrysene D12
Perylene D12

QUANT REPORT

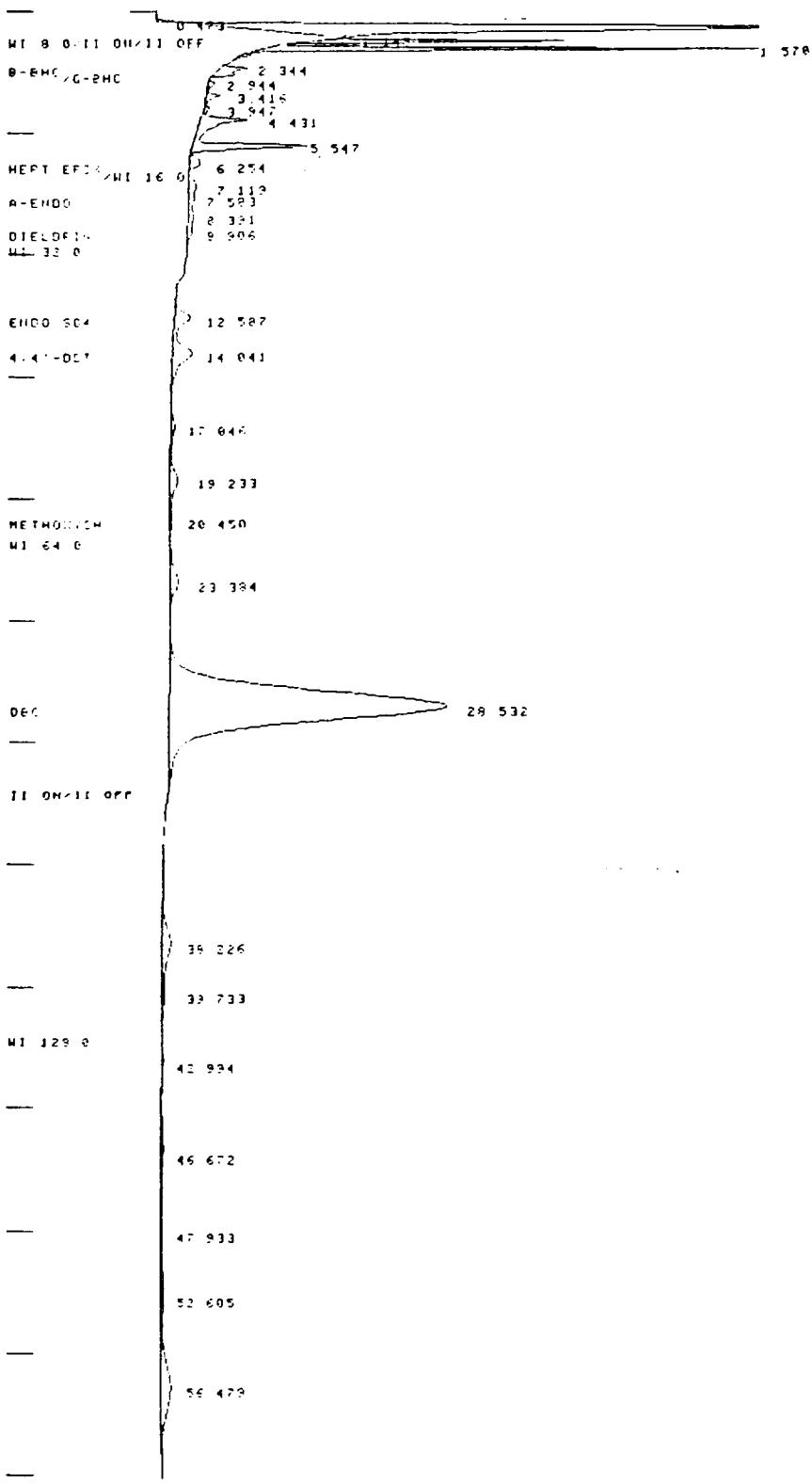
Operator ID: USER6 Quant Rev: 4 Quant Time: 870305 23:57
Output File: ^D1905::02 Injected at: 870305 23:10
Data File: >D1905::03 Dilution Factor: 2.00
Name: U-4928 # 1116.0319 DC-08-65
Misc: 03/05/87LS 200UL SMPL + 200UL MECL2 + 4UL IS (2X) BTL# 2

ID File: BNA0R::02
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	8.60	178	49494	40.00	UG/L	87
2)	PHENOL-D5	(SURR)	99	8.54	165	52144	55.38	UG/L	98
5)	2-FLUOROPHENOL	(SURR)	112	5.28	15	39313	92.69	UG/L	69
~~17)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~73~~	~~10.44~~	~~268~~	~~4422~~	~~6.12~~	~~UG/L~~	~~98~~
19)	*NAPHTHALENE-D8	(IS)	136	12.41	365	163522	40.00	UG/L	100
20)	NITROBENZ-NE-D5	(SURR)	82	10.44	268	30000	34.45	UG/L	89
34)	*ACENAPHTHENE-D10	(IS)	164	17.23	626	54844	40.00	UG/L	94
48)	2-FLUOROBIPHENYL	(SURR)	172	15.94	538	42874	38.72	UG/L	94
~~51)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~17.53~~	~~626~~	~~10446~~	~~13.02~~	~~UG/L~~	~~100~~
49)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.24	749	3246	25.41	UG/L	96
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.44	759	518	4.05	UG/L	99
49)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.56	765	336	2.63	UG/L	92
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~17.73~~	~~626~~	~~7388~~	~~45.83~~	~~UG/L~~	~~103~~
55)	*PHENANTHRENE-D10	(IS)	188	22.11	941	47276	40.00	UG/L	94
63)	DI-N-BUTYLPHTHALATE		149	24.74	970	3656	6.58	UG/L	96
65)	*CHRYSENE-D12	(IS)	240	30.17	1237	21133	40.00	UG/L	100
68)	TERPHENYL-D14	(SURR)	244	27.30	1046	10430	50.29	UG/L	100
74)	*PERYLENE-D12	(IS)	264	34.19	1454	17161	40.00	UG/L	100

* Compound is ISTD

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



CHANNEL: 1A - 1 TITLE: RUN# 34 DC-OB-65 9:11 25 FEB 87

SAMPLE: 1116 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK No	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	WI/2 (SEC)
1							

278

DC-OB-65

CHANNEL: 1A - 1 TITLE: RUN# 24 9:11 25 FEB 87

SAMPLE: 1116 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	WI/2 (SEC)
1		0.0000	1.280		161048	BV	4.25
2		0.0000	1.570		392549	VB	5.00
3	[redacted]	21.2858	2.344	-0.046	29079	BV	7.50
4	[redacted]	5.9103	2.566	-0.044	21518	VV	? 6.38
5		0.0000	3.416		20096	VB	8.13
6		0.0000	4.431		88224	VV	13.63
7		0.0000	4.675		44195	VV	? 11.81
8		0.0000	5.547		184776	VV	11.63
9	[redacted]	11.0487	6.254	0.114	39366	VB	? 23.94
10		0.0000	7.119		37099	BV	? 30.38
11	[redacted]	9.6646	8.391	-0.349	33098	VV	? 69.69
12	[redacted]	28.2104	12.587	-0.263	69598	BV	30.75
13	[redacted]	49.4010	14.041	-0.209	119326	VB	36.94
14	[redacted]	8.3101	17.046	0.636	30477	BV	60.63
15		0.0000	19.233		50571	VV	51.06
16		0.0000	23.384		57278	BB	56.56
17	DBC 164%	1090.514	28.532	0.052	3040467	BB	81.19
18		0.0000	38.226		101336	BV	93.38
19		0.0000	39.733		21098	VB	?130.00
20		0.0000	46.672		23030	VV	?106.69
21		0.0000	47.933		27892	VV	?
22		0.0000	52.605		34821	VV	?168.25
23		0.0000	56.479		159719	VV	136.31
TOTALS:		1224.345		-0.109	4786662		

DETECTED PKS: 36 REJECTED PKS: 13

DIVISOR: 0.15000 MULTIPLIER: 1000.00000

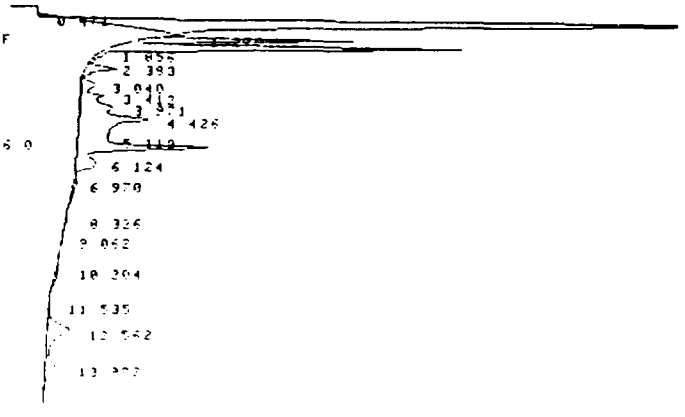
NOISE: 11.4 OFFSET: -14

RACK: 2 VIAL: 9 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 TURK222

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



SAMPLE NUMBER DC-06-66

DC-06-66

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.
Case No: U-4906, 4928, 4971, 4989.
Lab Sample ID No: 1117
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: C Softowicz
Date Sample Received: 2-19-87

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared:
Date Analyzed: 2-24-87
Conc/Dil Factor: 1 pH 7.7
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	3 J
67-64-1	Acetone	370 B
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	16 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. 10 J). 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/ml 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 V-4906, 4928, 4971, 4989

Sample Number
DC-06-66

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low (Medium) (Circle One)
Date Extracted/Prepared: 2-19-87
Date Analyzed: 3-6-87
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-Chloroethylether	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-Chloroethoxyl 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
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	Dibenzo(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-06-66

Organics Analysis Data Sheet
(Page 3)

Pesticide / PCBs

Concentration (Low) Medium (Circle One)

Date Extracted / Prepared 2-19-87

Date Analyzed 2-25-87

Conc / Dil Factor 1

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	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

Laboratory Name Ecology & Environment Inc.

Case No U-4906, 4928, 4971, 4989

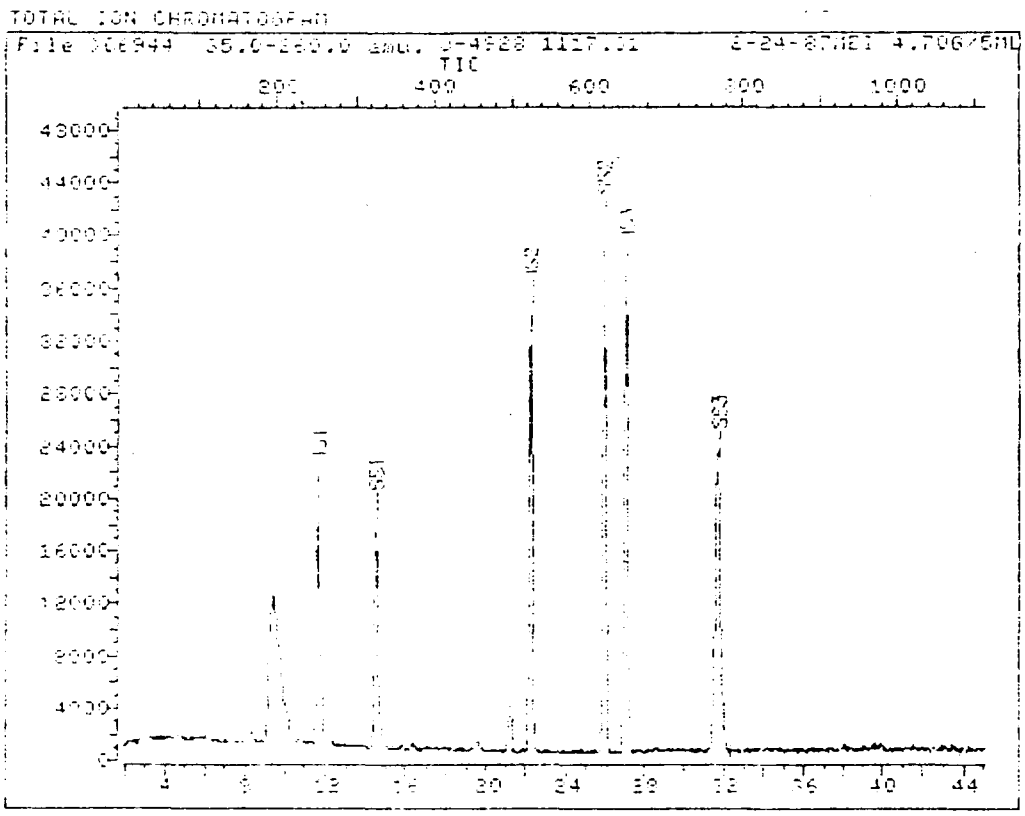
Sample Number
DC-06-66

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.		Hexane isomer	VOA	21.2	6 J
2.					
3.		No TIC's in BNA fraction			
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.					
30					

TOTAL ION CHROMATOGRAM

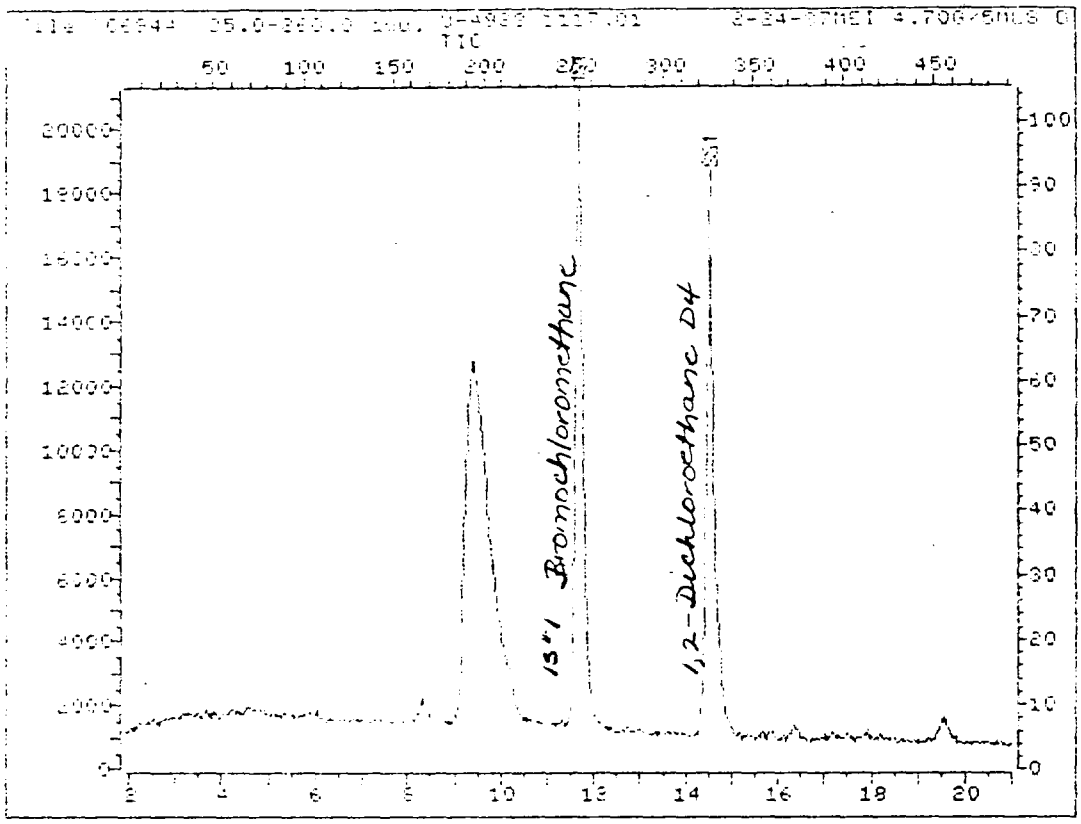


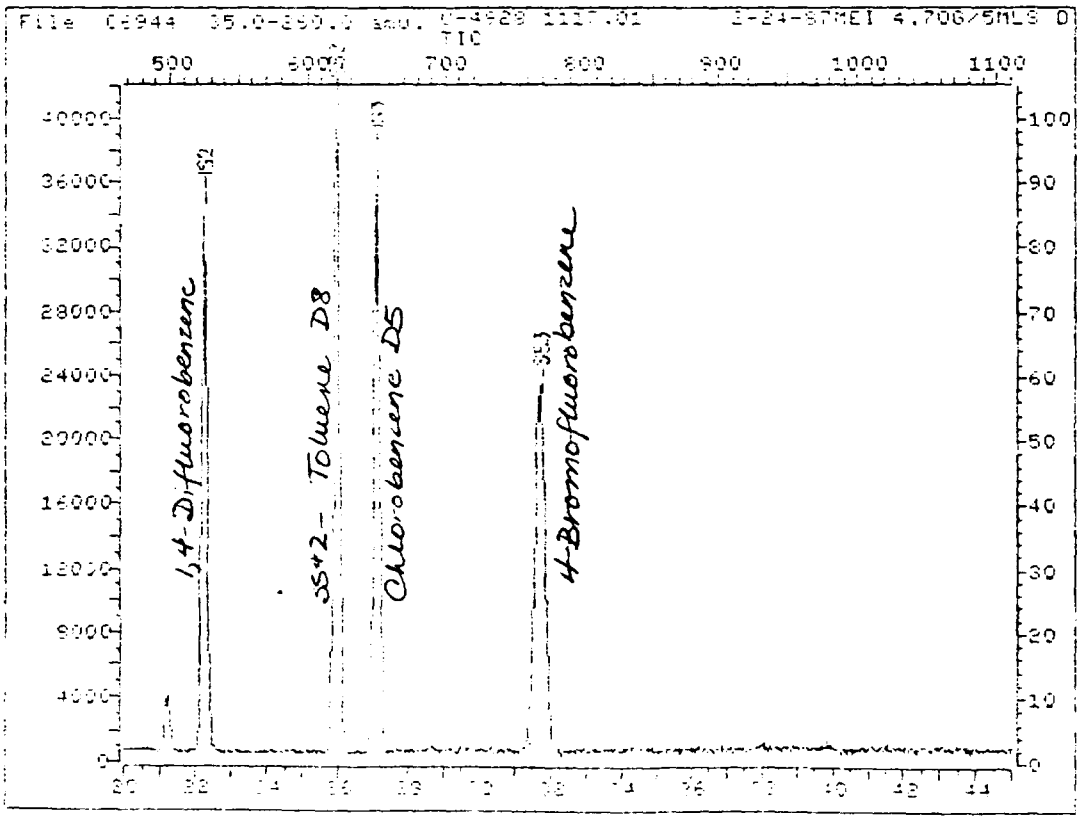
Data File: 006944::01
Name: U-4928 1117.0. DC-06-66
Misc: 2-24-87MEI 4.70G/5MLS DI + 10UL IS/SS

Id File: VOACPS::02
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870224 15:45

Operator ID: USER8
Quant Time: 870224 19:17
Injected at: 870224 18:31

DC-06-66


TIC
Bromochloromethane
1,2-Dichloroethane D4


TIC
1,4-Difluorobenzene
Toluene D8
Chlorobenzene D5
4-Bromofluorobenzene

QUANT REPORT

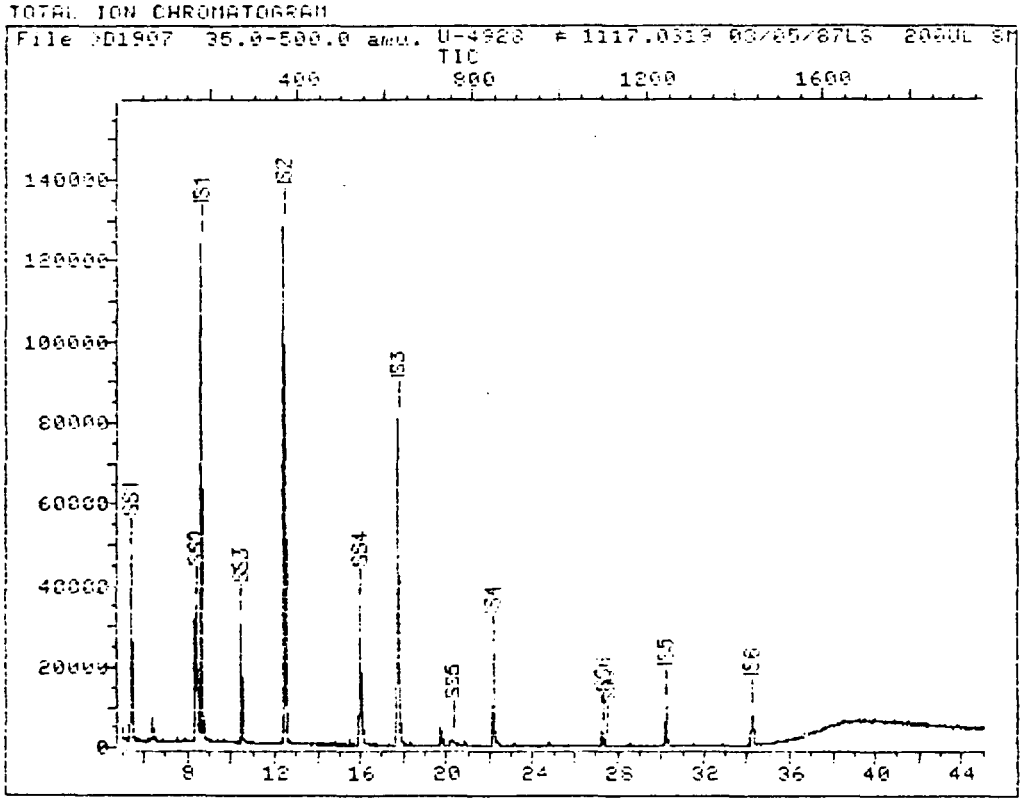
Operator ID: USER3 Quant Rev: 4 Quant Time: 870224 19:17
Output File: ^C6944::Q2 Injected at: 870224 18:31
Data File: ^C6944::D1 Dilution Factor: 1.00
Name: U-4929 1117.01 DC-06-66
Misc: 2-24-87MEI [illegible] DI - 10U. IS/SS

ID File: VOACPB::DC
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	11.66	252	28992	250.00	NGS	100
6)	METHYLENE CHLORIDE	84	8.32	166	2113	12.10	NGS	100
7)	ACETONE	43	9.41	194	290113	1731.04	NGS E	100
15)	1,2-DICHLOROETHANE-D4(SURF)	65	14.57	326	74637	246.61	NGS	83 ✓
16)	*1,4-DIFLUOROBENZENE (IS)	114	22.25	525	135168	250.00	NGS	100
17)	2-BUTANONE	72	14.76	332	2863	75.44	NGS	100
31)	*CHLOROBENZENE-D5 (IS)	117	27.10	650	118418	250.00	NGS	100 ✓
36)	TOLUENE-D8 SURF	98	25.94	620	148291	249.26	NGS	95 ✓
40)	4-BROMOFLUOROBENZENE(SURF)	95	31.77	769	79703	241.25	NGS	100 ✓

* Compound is ISTD

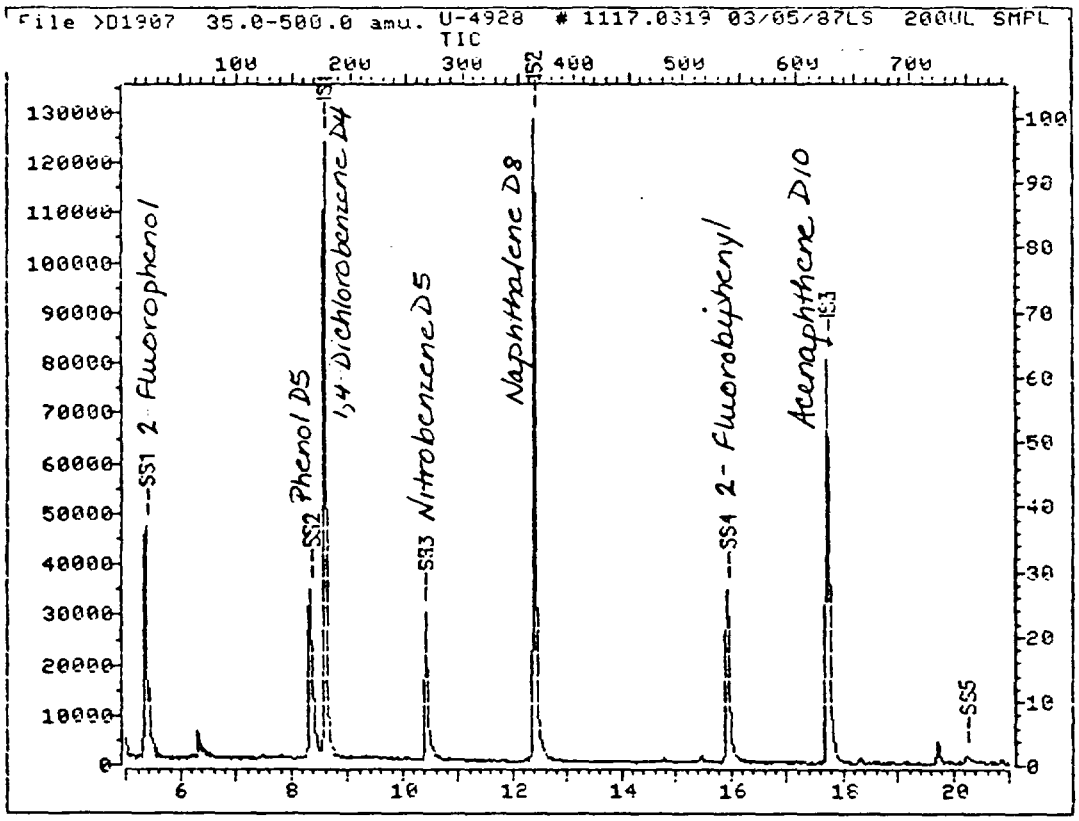
TOTAL ION CHROMATOGRAM



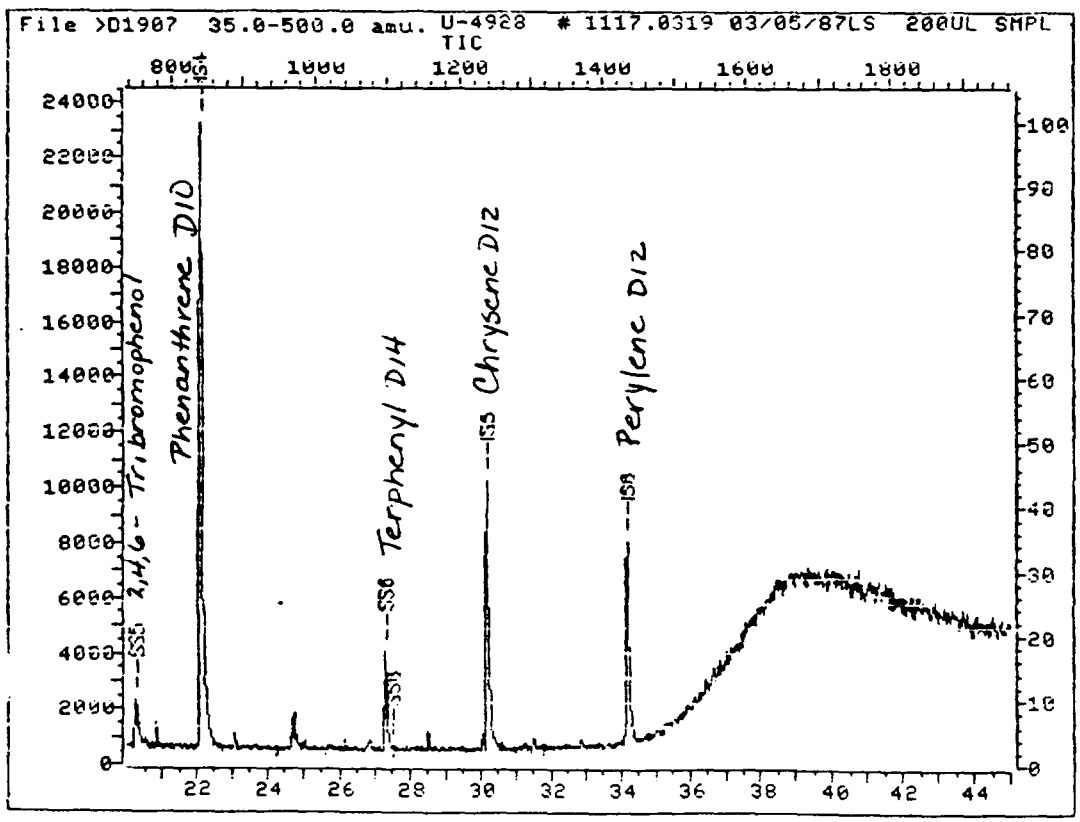
Data File: >D1907::03
Name: U-4928 # 1117.0319 DC-06-66
Misc: 03/05/87LS 200UL SMPL + 200UL MECL2 + 40UL IS (2X) BNL# 4

Id File: BNA0R::02
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870305 17:22

Operator ID: USER6
Quant Time: 870306 10:00
Injected at: 870306 09:13


File >D1907 35.0-500.0 amu. U-4928 # 1117.0319 03/05/87LS 200UL SMPL
TIC
--SS1 2 Fluorophenol
--SS2 Phenol D5
1,4 Dichlorobenzene D4
--SS3 Nitrobenzene D5
Naphthalene D8
--SS4 2-Fluorobiphenyl
Acenaphthene D10
--SS5

DC-06-66


File >D1907 35.0-500.0 amu. U-4928 # 1117.0319 03/05/87LS 200UL SMPL
TIC
--SS5 2,4,6-Tribromophenol
Phenanthrene D10
--SS6 Terphenyl D14
Chrysene D12
Perylene D12

QUANT REPORT

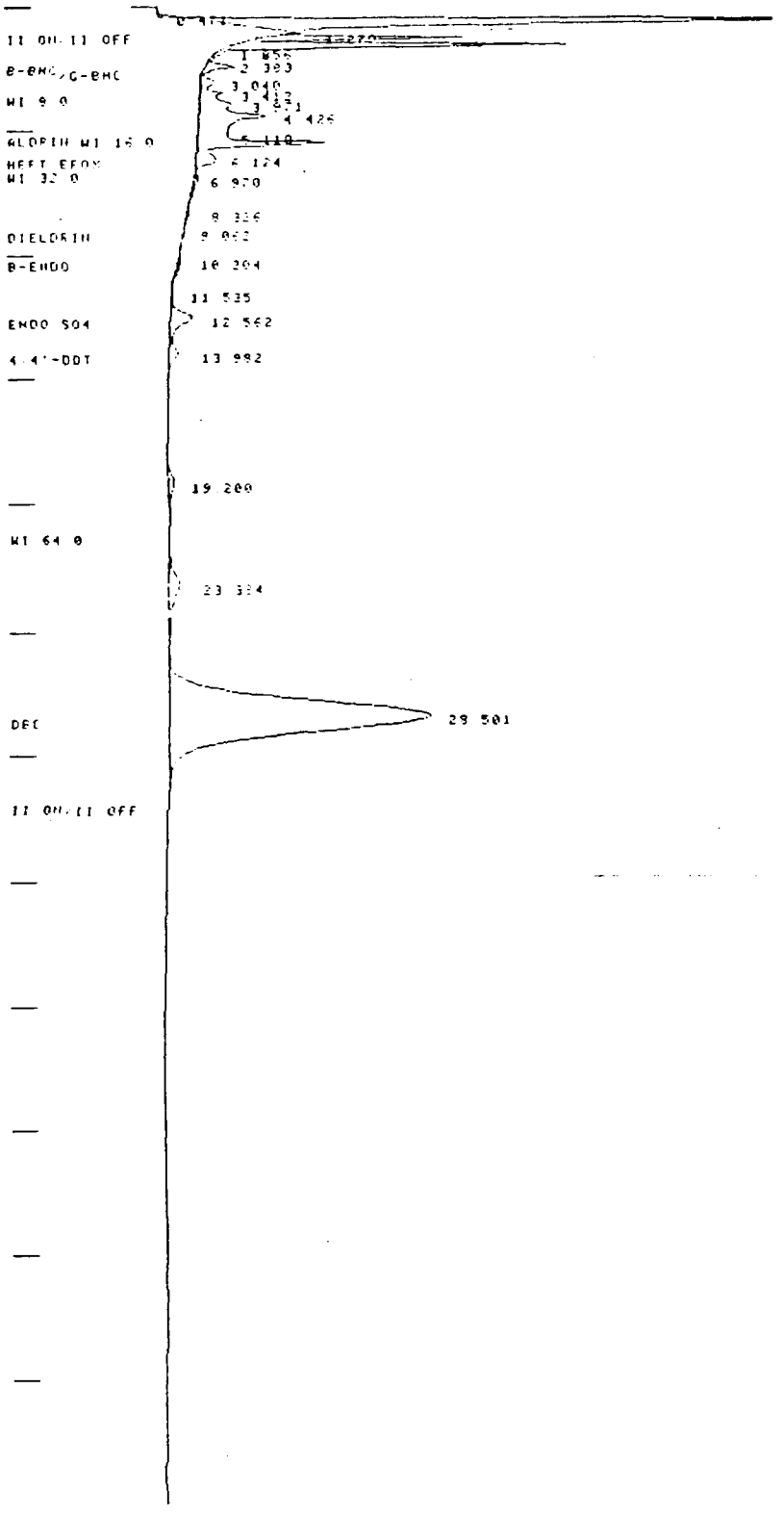
Operator ID: USER6 Quant Rev: 4 Quant Time: 870306 10:00
Output File: ^D1907::02 Injected at: 870306 09:13
Data File: >D1907::03 Dilution Factor: 2.00
Name: U-4928 # 1117.0319 DC-06-66
Misc: 03/05/87LS 20UL SMPL + 20UL MEOH2 + 40UL IS (2X) BTL# 4

ID File: BNADR::02
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870309 17:22

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	8.60	178	63713	40.00 UG/L	88
2)	PHENOL-D5	(SURR)	99	8.36	166	53734	44.33 UG/L	90
5)	2-FLUOROPHENOL	(SURR)	112	5.36	19	29064	53.23 UG/L	90
9)	N-NITROSO-DI-N-PROPYLAMINE		70	10.41	267	5329	5.48 UG/L	99
19)	*NAPHTHALENE-D8	(IS)	136	12.39	364	197937	40.00 UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	10.41	267	33666	31.93 UG/L	94
34)	*ACENAPHTHENE-D10	(IS)	162	17.23	626	63055	40.00 UG/L	95
38)	2-FLUOROBIPHENYL	(SURR)	172	15.93	548	49580	38.94 UG/L	97
41)	DIMETHYL PHTHALATE		163	17.23	626	12191	1.22 UG/L	100
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.25	750	3961	26.97 UG/L	93
49)	2,6-DINITROTOLUENE		182	17.23	626	8310	44.89 UG/L	100
55)	*PHENANTHRENE-D10	(IS)	188	22.11	841	51326	40.00 UG/L	93
65)	*CHRYSENE-D12	(IS)	240	30.17	1237	25513	40.00 UG/L	100
67)	TERPHENYL-D14	(SURR)	244	27.30	1096	11087	44.28 UG/L	100
68)	TERPHENYL-D14	(SURR)	244	27.52	1107	218	.87 UG/L	100
74)	*PERYLENE-D12	(IS)	264	34.18	1434	19585	40.00 UG/L	100

* Compound is ISTD

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



DC-06-66

CHANNEL: 1A - 1 TITLE: RUN# 35 10:16 25 FEB 87

SAMPLE: 1117 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/L	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	WI/2 (SEC)
1		0.0000	1.273		138645	BV	4.31
2		0.0000	1.597		381574	VB	5.26

DC-06-66

CHANNEL: 1A - 1 TITLE: RUN# 25 10:16 25 FEB 87

SAMPLE: 1117 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		138646	BV		4.31
2		0.0000	1.567		381674	VB		5.06
3	[redacted]	26.2729	2.383	-0.007	35892	VV	?	9.56
4		0.0000	3.040		28355	BV	?	14.31
5		0.0000	3.412		29370	VV	?	9.00
6	[redacted]	29.7726	3.971	-0.159	104833	VV	?	18.13
7		0.0000	4.426		261945	VV		26.88
8	[redacted]	7.8584	5.110	0.030	29842	VV	?	
9		0.0000	5.539		244006	VV		13.31
10	[redacted]	19.5089	6.124	-0.016	69509	VB		27.81
11	[redacted]	38.7203	12.562	-0.288	95527	VV		29.94
12	[redacted]	17.1818	13.982	-0.268	41502	VB		28.06
13		0.0000	19.200		36432	BB		57.44
14		0.0000	23.384		88981	BV		64.00
15	DBC [illegible]	980.3447	28.501	0.021	2733303	VB		81.56
TOTALS:		1119.653		-0.687	4319817			

DETECTED PKS: 27 REJECTED PKS: 12

DIVISOR: 0.15000 MULTIPLIER: 1000.00000

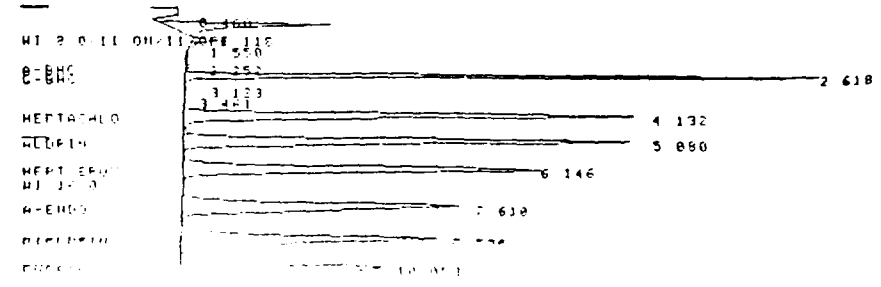
NOISE: 11.4 OFFSET: 9

RACK: 2 VIAL: 10 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
OET: 300 C INJ: 220 C
200 C ISOTHERMAL 4 UL INJECTION

POST RUN:
SAVE FILE: RAW TURK223

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



SAMPLE NUMBER DC-66-67

481095

DC-G6-67

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.

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

Lab Sample ID No: 1274

QC Report No:

Sample Matrix: Soil

Contract No. IL-3140

Data Release Authorized By: C Stojtowicz

Date Sample Received: 2-26-87

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 2-26-84

Conc/Dil Factor: 2 pH 6.5

Percent Moisture: (Not Decanted) 15

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	920 BJ
67-64-1	Acetone	3500 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	370 J
78-93-3	2-Butanone	7600 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	970 J
124-48-1	Dibromochloromethane	1000u
79-00-5	1, 1, 2-Trichloroethane	1000u
71-43-2	Benzene	8400
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	1000 J
591-78-6	2-Hexanone	2000u
127-18-4	Tetrachloroethene	10000
79-34-5	1, 1, 2, 2-Tetrachloroethane	1000u
108-88-3	Toluene	100,000
108-90-7	Chlorobenzene	23000 B
100-41-4	Ethylbenzene	840 J
100-42-5	Styrene	1000u
	Total Xylenes	1900

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-G6-67

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low (Medium) (Circle One)
Date Extracted/Prepared: 02-26-87
Date Analyzed: 03-18-87
Conc/Dil Factor: 20
Percent Moisture (Decanted): 15

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	33000 U
111-44-4	bis-2-Chloroethylether	33000 U
95-57-8	2-Chlorophenol	33000 U
541-73-1	1,3-Dichlorobenzene	33000 U
106-46-7	1,4-Dichlorobenzene	33000 U
100-51-6	Benzyl Alcohol	33000 U
95-50-1	1,2-Dichlorobenzene	33000 U
95-48-7	2-Methylphenol	33000 U
39638-32-9	bis(2-chloroisopropyl)Ether	33000 U
106-44-5	4-Methylphenol	33000 U
621-64-7	N-Nitroso-Di-n-Propylamine	33000 U
67-72-1	Hexachloroethane	33000 U
98-95-3	Nitrobenzene	33000 U
78-59-1	Isophorone	33000 U
88-75-5	2-Nitrophenol	33000 U
105-67-9	2,4-Dimethylphenol	33000 U
65-85-0	Benzoic Acid	160000 U
111-91-1	bis(2-Chloroethoxy)Methane	33000 U
120-83-2	2,4-Dichlorophenol	12000 J
120-82-1	1,2,4-Trichlorobenzene	88000
91-20-3	Naphthalene	290000
106-47-8	4-Chloroaniline	33000 U
87-68-3	Hexachlorobutadiene	33000 U
59-50-7	4-Chloro-3-Methylphenol	33000 U
91-57-6	2-Methylnaphthalene	7400 J
77-47-4	Hexachlorocyclopentadiene	33000 U
88-06-2	2,4,6-Trichlorophenol	33000 U
95-95-4	2,4,5-Trichlorophenol	160000 U
91-58-7	2-Chloronaphthalene	33000 U
88-74-4	2-Nitroaniline	160000 U
131-11-3	Dimethyl Phthalate	33000 U
208-96-8	Acenaphthylene	33000 U
99-09-2	3-Nitroaniline	160000 U

CAS Number		ug/l or (ug/Kg) (Circle One)
83-32-9	Acenaphthene	33000 U
51-28-5	2,4-Dinitrophenol	160000 U
100-02-7	4-Nitrophenol	160000 U
132-64-9	Dibenzofuran	33000 U
121-14-2	2,4-Dinitrotoluene	33000 U
606-20-2	2,6-Dinitrotoluene	33000 U
84-66-2	Diethylphthalate	33000 U
7005-72-3	4-Chlorophenyl-phenylether	33000 U
86-73-7	Fluorene	33000 U
100-01-6	4-Nitroaniline	160000 U
534-52-1	4,6-Dinitro-2-Methylphenol	160000 U
86-30-6	N-Nitrosodiphenylamine (1)	33000 U
101-55-3	4-Bromophenyl-phenylether	33000 U
118-74-1	Hexachlorobenzene	33000 U
87-86-5	Pentachlorophenol	20000 J
85-01-8	Phenanthrene	11000 J
120-12-7	Anthracene	33000 U
84-74-2	Di-n-Butylphthalate	15000 J
206-44-0	Fluoranthene	5600 J
129-00-0	Pyrene	33000 U
85-68-7	Butylbenzylphthalate	33000 U
91-94-1	3,3'-Dichlorobenzidine	66000 U
56-55-3	Benzo(a)Anthracene	33000 U
117-81-7	bis(2-Ethylhexyl)Phthalate	33000 U
218-01-9	Chrysene	33000 U
117-84-0	Di-n-Octyl Phthalate	33000 U
205-99-2	Benzo(b)Fluoranthene	33000 U
207-08-9	Benzo(k)Fluoranthene	33000 U
50-32-8	Benzo(a)Pyrene	33000 U
193-39-5	Indeno(1,2,3-cd)Pyrene	33000 U
53-70-3	Dibenz(a,h)Anthracene	33000 U
191-24-2	Benzo(g,h,i)Perylene	33000 U

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No _____

Sample Number
DG-G6-67

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 200

Percent Moisture (decanted) 15

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	45,000
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	160,000u
12672-29-6	Aroclor-1248	160,000u
11097-69-1	Aroclor-1254	320,000u
11096-82-5	Aroclor-1260	650,000

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

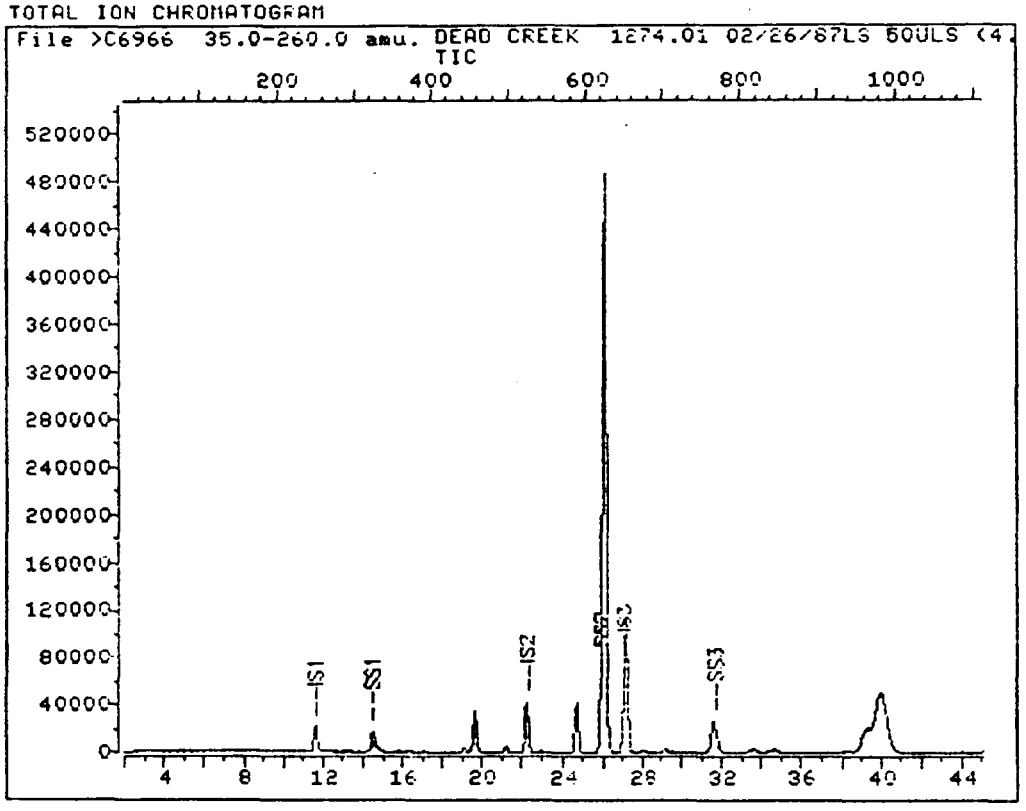
Sample Number DC-G6-67

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number MLC/C	Estimated Concentration (ug/l or ug/kg)
1.		Dichlorobenzene isomer	VOA	39.3	8200 J
2.		Dichlorobenzene isomer	VOA	40.0	28000 J
3.					
4.					
5.	95943	Benzene, 1,2,4,5-tetrachloro-	BNA	16.58	77,000 J
6.	95829	Benzenamine, 2,5-dichloro-		16.68	390,000 J
7.	608311	Benzenamine, 2,6-dichloro-		17.00	200,000 J
8.	634662	Benzene, 1,2,3,4-tetrachloro		17.43	120,000 J
9.		Unknown chlorinated Compound		18.00	62,000 J
10.	608935	Pentachlorobenzene		19.76	37,000 J
11.		Unknown hydrocarbon		20.59	61,000 J
12.	55191258	Benzene, (1,1-dimethylnonyl)-		20.84	51,000 J
13.		Butenedioic acid ester		20.88	63,000 J
14.		Isomeric Dodecylbenzene		21.06	58,000 J
15.		Unknown substituted benzene		21.12	62,000 J
16.		Unknown substituted benzene		21.63	160,000 J
17.		Unknown substituted benzene		21.69	330,000 J
18.		Unknown substituted benzene		21.84	160,000 J
19.	27854406	Benzene, (1,1-dimethyldecyl)-		21.92	220,000 J
20.		Unknown substituted benzene		22.00	230,000 J
21.		~~Unknown substituted benzene~~ CW		~~22.00~~	~~230,000 J~~
22.		Unknown substituted benzene		22.57	300,000 J
23.		Unknown substituted benzene		22.65	130,000 J
24.		Unknown substituted benzene		22.80	82,000 J
25.					
26.					
27.					
28.					
29.					
30.					

TOTAL ION CHROMATOGRAM



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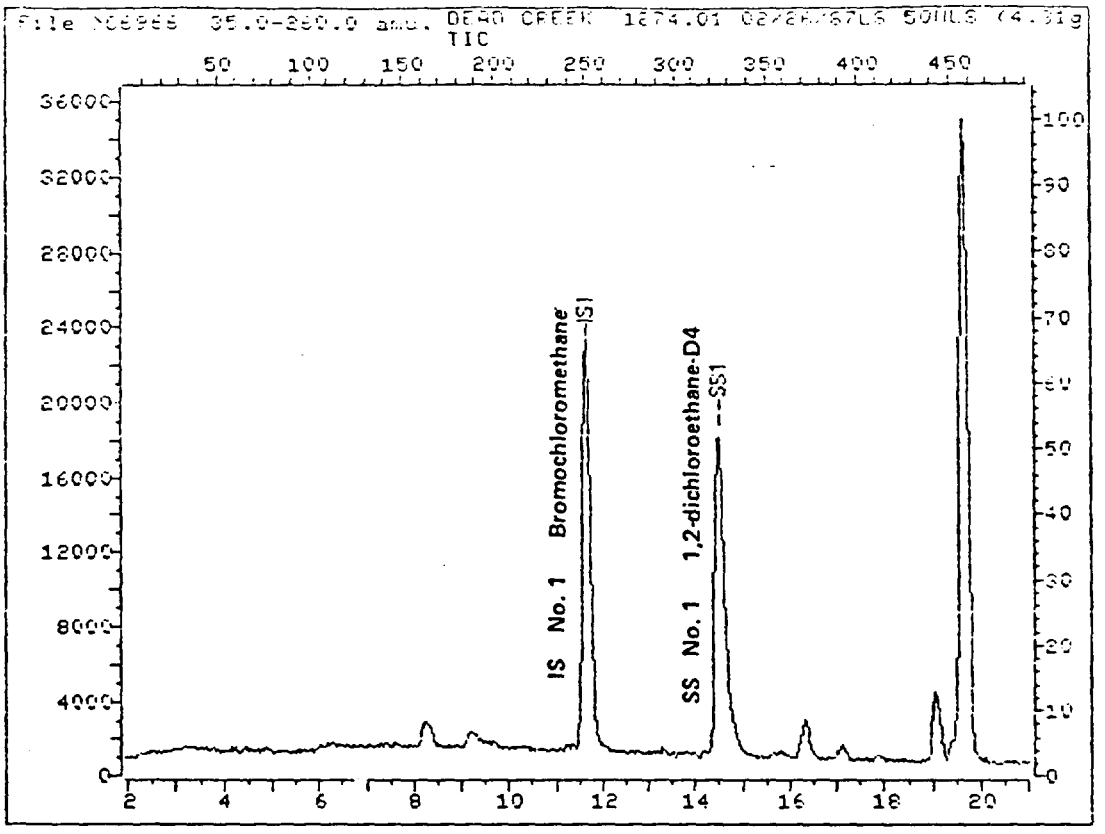
Misc: 02/26/87LS 50ULS (4.31g SOIL IN 10ML MEOH) + 10 ULS IS

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

Operator ID: USER8
Quant Time: 870226 17:39
Injected at: 870226 16:53

DC-G6-67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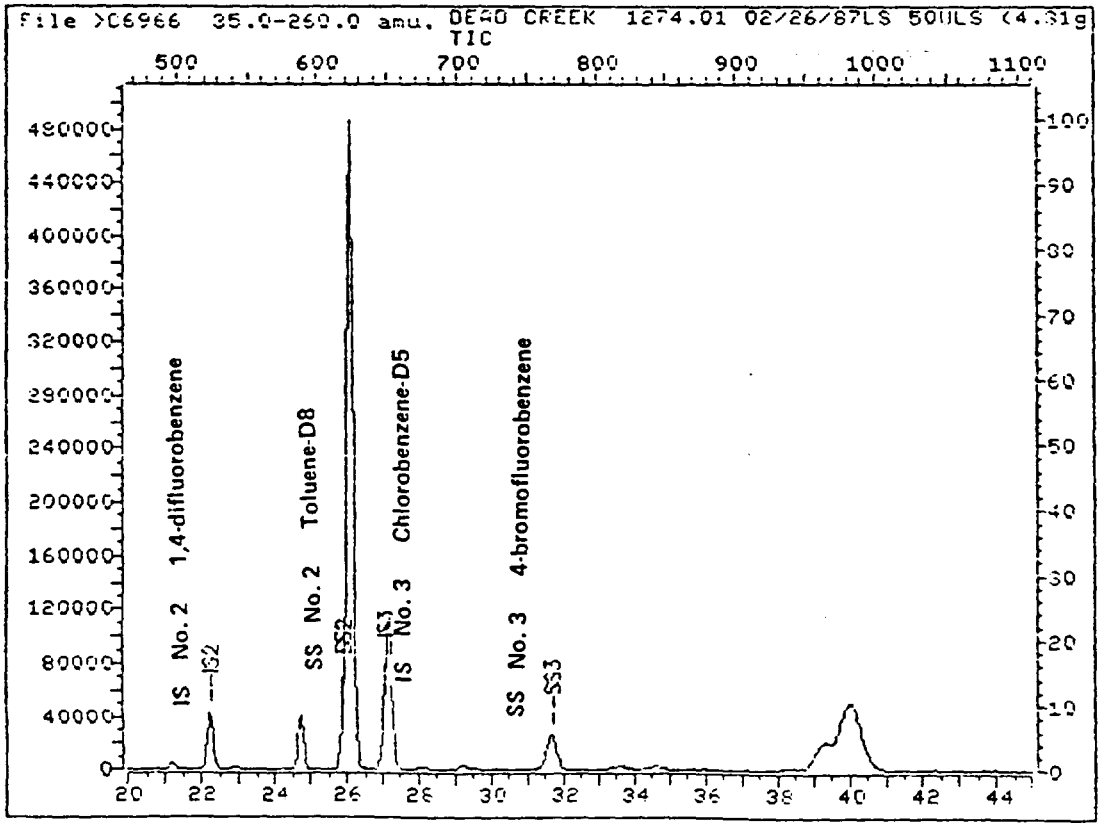
SS No. 1 1,2-dichloroethane-D4


TIC
IS No. 2 1,4-difluorobenzene
SS No. 2 Toluene-D8
IS No. 3 Chlorobenzene-D5
SS No. 3 4-bromofluorobenzene

QUANT REPORT

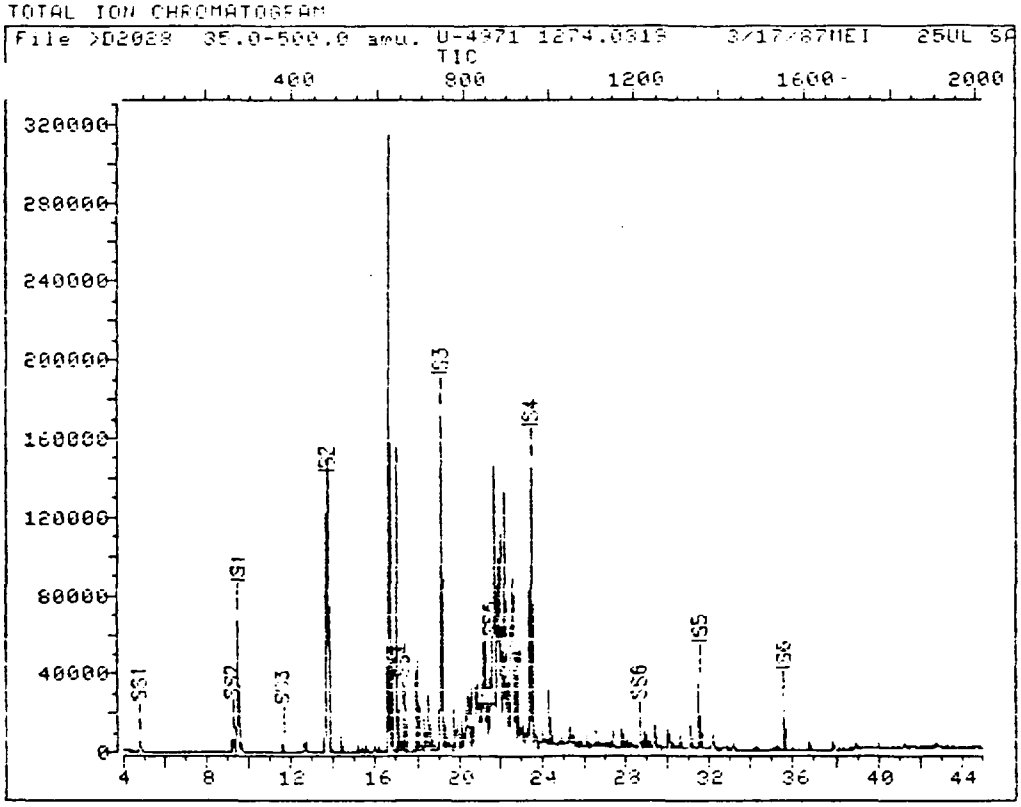
Operator ID: USER8 Quant Rev: 4 Quant Time: 870226 17:39
Output File: ^C6966::Q2 Injected at: 870226 16:53
Data File: >C6966::D3 Dilution Factor: 1.00
Name: DEAD CREEK 1274.01 DC - G6-67
Misc: 02/26/87LS 50ULS (4.31g SOIL IN 10ML MEOH) + 10 ULS IS

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	32780	50.00 UG/L	100
6)	METHYLENE CHLORIDE		84	8.28	164	4488	3.96 UG/L	100
7)	ACETONE		43	9.21	188	8767	15.02 UG/L	100
12)	~~TRANS-1,2-DICHLOROETHENE~~		~~96~~	~~13.29~~	~~293~~	~~563~~	~~.53 UG/L~~ DW	87
14)	1,2-DICHLOROETHANE		62	14.61	327	3190	1.59 UG/L	65
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.49	324	78549	49.07 UG/L 98	83
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.25	524	172291	50.00 UG/L	100
17)	2-BUTANONE		72	14.68	329	5042	32.68 UG/L	100
24)	TRICHLOROETHENE		130	19.07	442	5795	4.19 UG/L	85
27)	BENZENE		78	19.65	457	150296	36.22 UG/L	100
28)	~~CIS-1,3-DICHLOROPROPENE~~		~~75~~	~~19.65~~	~~457~~	~~3088~~	~~2.10 UG/L~~ DW	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.06	648	143550	50.00 UG/L	100
32)	4-METHYL-2-PENTANONE		43	22.91	541	4353	4.29 UG/L	81
34)	TETRACHLOROETHENE		164	24.73	588	53971	43.14 UG/L	93
36)	TOLUENE-D8	(SURR)	98	25.90	618	181560	48.74 UG/L 98	94
37)	TOLUENE		92	26.09	623	1192653	454.50 UG/L	98
38)	CHLOROBENZENE		112	27.18	651	303611	99.75 UG/L	98
39)	ETHYLBENZENE		91	29.20	703	20372	3.60 UG/L	97
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.69	767	93628	48.06 UG/L 96	100
42)	TOTAL XYLENES		91	33.63	817	23114	4.98 UG/L	100
42)	TOTAL XYLENES		91	34.56	841	14433	3.11 UG/L	100
43)	1,3-DICHLOROBENZENE		146	38.21	935	2984	2984.00 NO CALIB	100
43)	1,3-DICHLOROBENZENE		146	39.33	964	122001	122001.0 NO CALIB	100
43)	1,3-DICHLOROBENZENE		146	39.99	981	416034	416034.0 NO CALIB	100
44)	1,2-DICLHLOROBENZENE		146	38.21	935	2984	2984.00 NO CALIB	100
44)	1,2-DICLHLOROBENZENE		146	39.33	964	122001	122001.0 NO CALIB	100
44)	1,2-DICLHLOROBENZENE		146	39.99	981	416034	416034.0 NO CALIB	100
45)	1,4-DICHLOROBENZENE		146	38.21	935	2984	2984.00 NO CALIB	100
45)	1,4-DICHLOROBENZENE		146	39.33	964	122001	122001.0 NO CALIB	100
45)	1,4-DICHLOROBENZENE		146	39.99	981	416034	416034.0 NO CALIB	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



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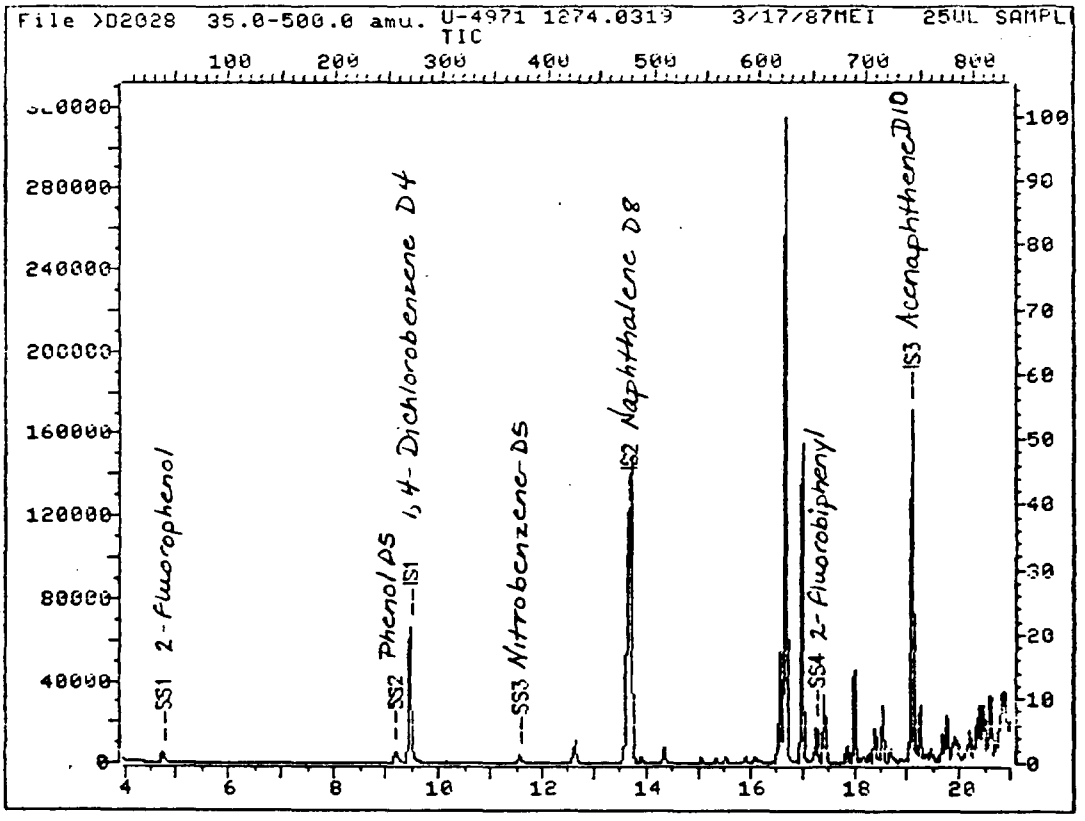
Last Calibration: 870317 16:30

Operator ID: USER8
Quant Time: 870318 01:49
Injected at: 870318 01:02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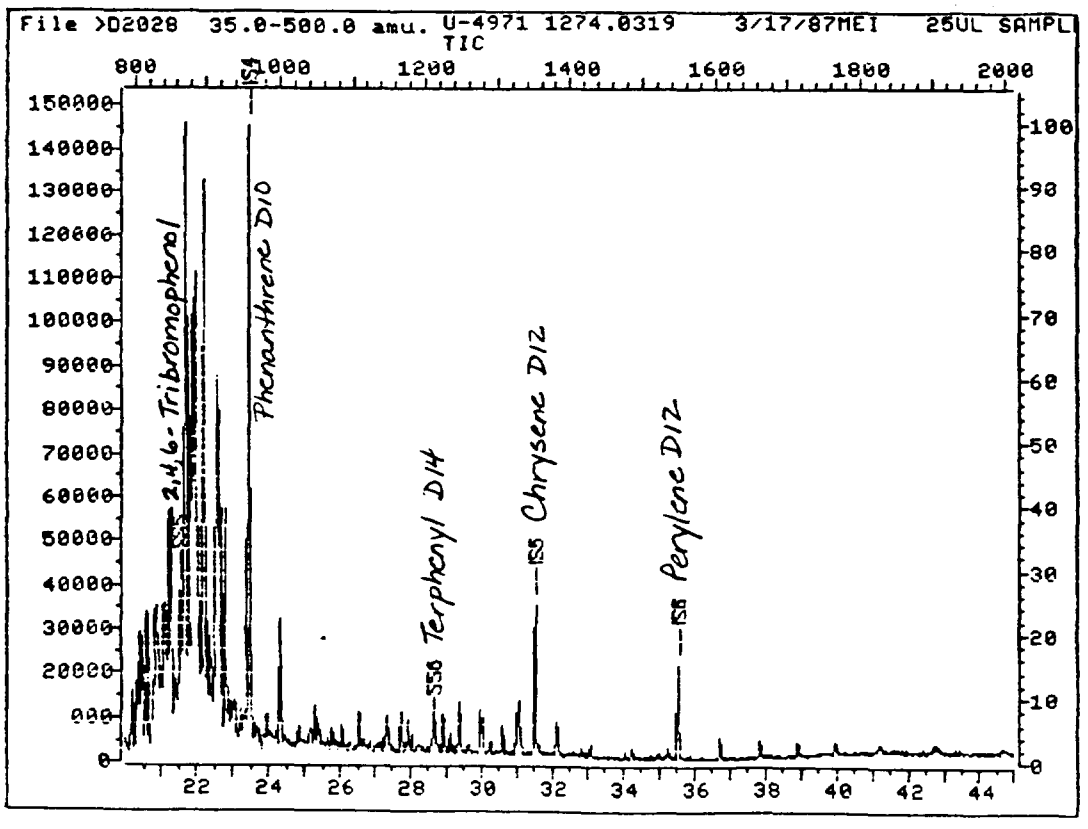
TIC
2-Fluorophenol
Phenol D5
1,4-Dichlorobenzene D4
Nitrobenzene-D5
Naphthalene D8
2-Fluorobiphenyl
Acenaphthene D10

DC-G6-67


File >D2028 35.0-500.0 amu. U-4971 1274.0319 3/17/87MEI 25UL SAMPL
TIC
2,4,6-Tribromophenol
Phenanthrene D10
Terphenyl D14
Chrysene D12
Perylene D12

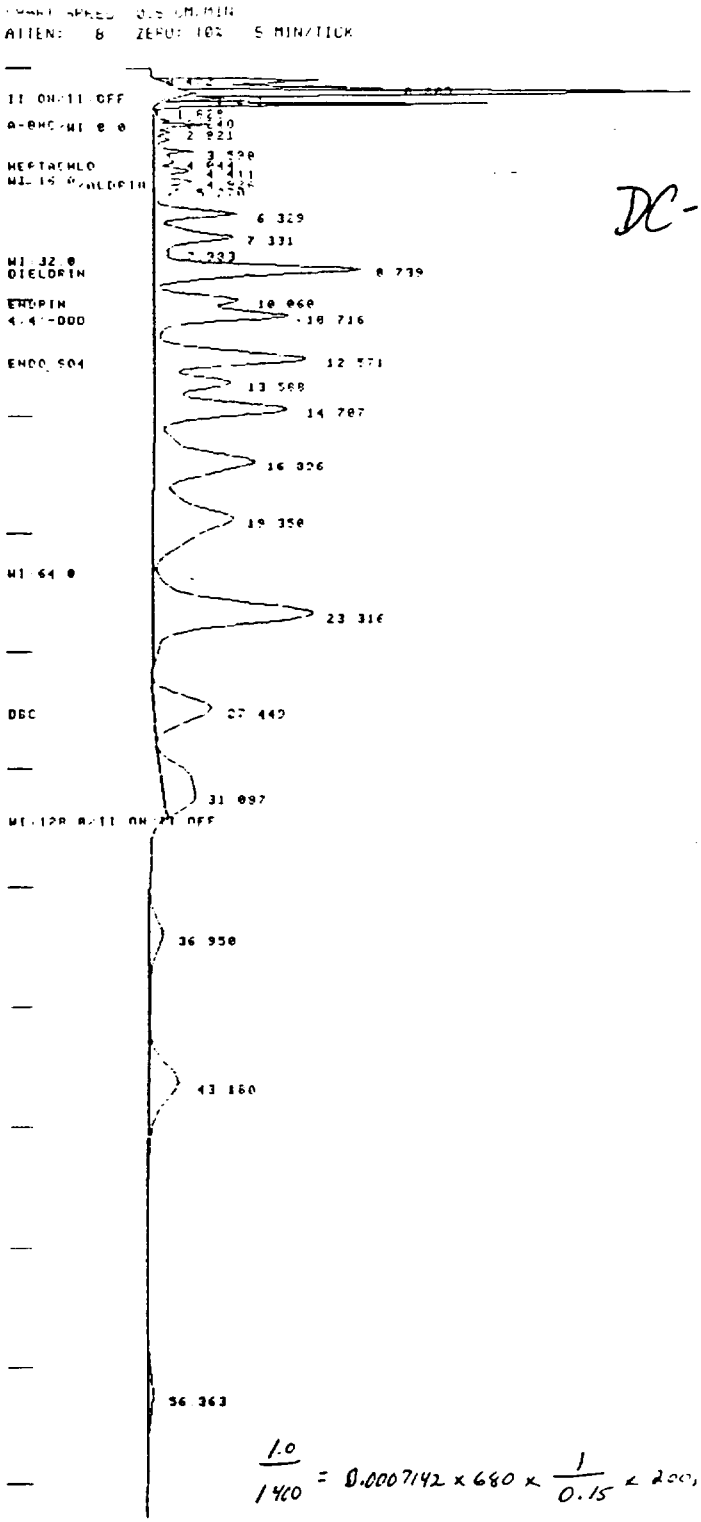
QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 870318 01:49
Output File: ^D2028::Q2 Injected at: 870318 01:02
Data File: >D2028::D3 Dilution Factor: 20.00
Name: U-4971 1274.0319 DC-G6-67
Misc: 3/17/87MEI 25UL SAMPLE/475UL MECL2 + 5UL IS (20X) BTL# 9

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	36207	40.00 UG/L	84
2)	PHENOL-D5	(SURR)	99	9.18	256	7623	111.90 UG/L	98
5)	2-FLUOROPHENOL	(SURR)	112	4.74	38	5102	117.94 UG/L	73
19)	*NAPHTHALENE-D8	(IS)	136	13.66	476	136906	40.00 UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	11.56	373	4142	61.37 UG/L	85
27)	2,4-DICHLOROPHENOL		162	13.56	471	1839	35.21 UG/L yes	89
28)	1,2,4-TRICHLOROBENZENE		180	13.62	474	16600	269.08 UG/L yes	100
29)	NAPHTHALENE		128	13.72	479	147988	873.14 UG/L yes	100
~~32)~~	~~4-CHLORO-3-METHYLPHENOL~~		~~197~~	~~16.58~~	~~619~~	~~2178~~	~~37.51 UG/L~~	~~24~~
33)	2-METHYLNAPHTHALENE		142	15.92	587	2574	22.52 UG/L yes	96
34)	*ACENAPHTHENE-D10	(IS)	162	19.08	742	92801	40.00 UG/L	94
38)	2-FLUOROBIPHENYL	(SURR)	172	17.27	653	11033	79.39 UG/L	95
~~39)~~	~~2-CHLORONAPHTHALENE~~		~~162~~	~~17.00~~	~~640~~	~~7392~~	~~60.82 UG/L~~	~~81~~
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.39~~	~~708~~	~~7562~~	~~49.71 UG/L~~	~~100~~
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.88~~	~~742~~	~~17328~~	~~113.90 UG/L~~	~~100~~
~~43)~~	~~DIBENZOFURAN~~		~~168~~	~~19.25~~	~~750~~	~~3701~~	~~20.09 UG/L~~	~~100~~
~~43)~~	~~DIBENZOFURAN~~		~~168~~	~~19.39~~	~~757~~	~~1665~~	~~9.04 UG/L~~	~~100~~
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.53	862	2522	91.14 UG/L	96
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.08~~	~~742~~	~~12531~~	~~341.08 UG/L~~	~~100~~
55)	*PHENANTHRENE-D10	(IS)	188	23.47	957	122889	40.00 UG/L	92
60)	PENTACHLOROPHENOL		266	23.29	948	1705	60.50 UG/L yes	100
61)	PHENANTHRENE		178	23.53	960	4902	32.38 UG/L yes	96
~~62)~~	~~ANTHRACENE~~		~~178~~	~~23.53~~	~~960~~	~~4902~~	~~35.27 UG/L~~	~~96~~
63)	DI-N-BUTYLPHTHALATE		149	26.08	1085	7522	46.98 UG/L yes	98
64)	FLUORANTHENE		202	27.14	1137	1887	17.00 UG/L yes	91
65)	*CHRYSENE-D12	(IS)	240	31.52	1352	30804	40.00 UG/L	100
~~66)~~	~~BENZIDINE~~		~~184~~	~~27.36~~	~~1148~~	~~693~~	~~693.00 NO CAL IB~~	~~100~~
~~66)~~	~~BENZIDINE~~		~~184~~	~~27.94~~	~~1176~~	~~625~~	~~625.00 NO CAL IB~~	~~100~~
68)	TERPHENYL-D14	(SURR)	244	28.63	1210	3497	73.78 UG/L	100
74)	*PERYLENE-D12	(IS)	264	35.54	1549	19912	40.00 UG/L	100

* Compound is ISTD



DC-G6-67

$$\frac{1.0}{140} = 0.0007142 \times 680 \times \frac{1}{0.15} \times 200{,}000$$

650,000 ug/kg 1260

CHANNEL: 1A - 1 TITLE: RUN# 15 22:37 11 MAR 87

SAMPLE: 1274 DC-G6-67 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/Kg	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	WI/2 (SEC)
1		0.0000	1.271		43203	BB	4.63
2		0.0000	1.528		272607	BV	5.13
3	[illegible]	942.5145	2.240	0.000	21207	VV	7.06
4	[illegible]	9372.257	2.468	0.088	66215	VV	7.63
5		0.0000	2.821		21359	VV	9.25
6		0.0000	3.114		23133	VV	10.06
7		0.0000	3.598		62816	VV	10.56
8	[illegible]	2162.712	4.044	-0.076	39710	VV	? 19.56
9		0.0000	4.411		88290	VV	19.13
10	[illegible]	3853.295	4.926	-0.134	80869	VV	16.25
11		0.0000	5.270		53979	VV	? 19.00
12		0.0000	5.504		27561	VV	? 12.81
13	[illegible]	13318.71	6.329	0.199	267313	VV	23.44
14	[illegible]	18897.69	7.331	-0.259	357683	VV	31.19
15		0.0000	7.983		28743	VV	? 46.13
16	4,4'-DDE	45340.53	8.739	0.019	822256	VV	27.44
17	[illegible]	17766.66	10.060	0.020	327165	VV	? 30.63
18	[illegible]	35460.90	10.716	-0.214	590507	VV	34.75
19	[illegible]	66472.74	12.571	-0.249	801069	VV	38.31
20		0.0000	13.588		372232	VV	38.88
21	[illegible]	64052.55	14.707	0.477	762937	VV	42.13
22	[illegible]	46869.30	16.896	0.506	908351	VV	63.13
23		0.0000	19.350		967788	VV	83.75
24		0.0000	23.316		1444526	VB	62.25
25	[illegible]	36613.43	27.449	-0.931	553541	BV	75.75
26		0.0000	31.087		471478	VB	?138.94
27		0.0000	36.950		181759	BV	90.75
28		0.0000	43.180		470695	VB	107.44
29		0.0000	56.363		100907	BB	139.19

TOTALS: 361123.3 -0.554 10229899

DETECTED PKS: 37 REJECTED PKS: 8

DIVISOR: 0.15000 MULTIPLIER: 200000.000

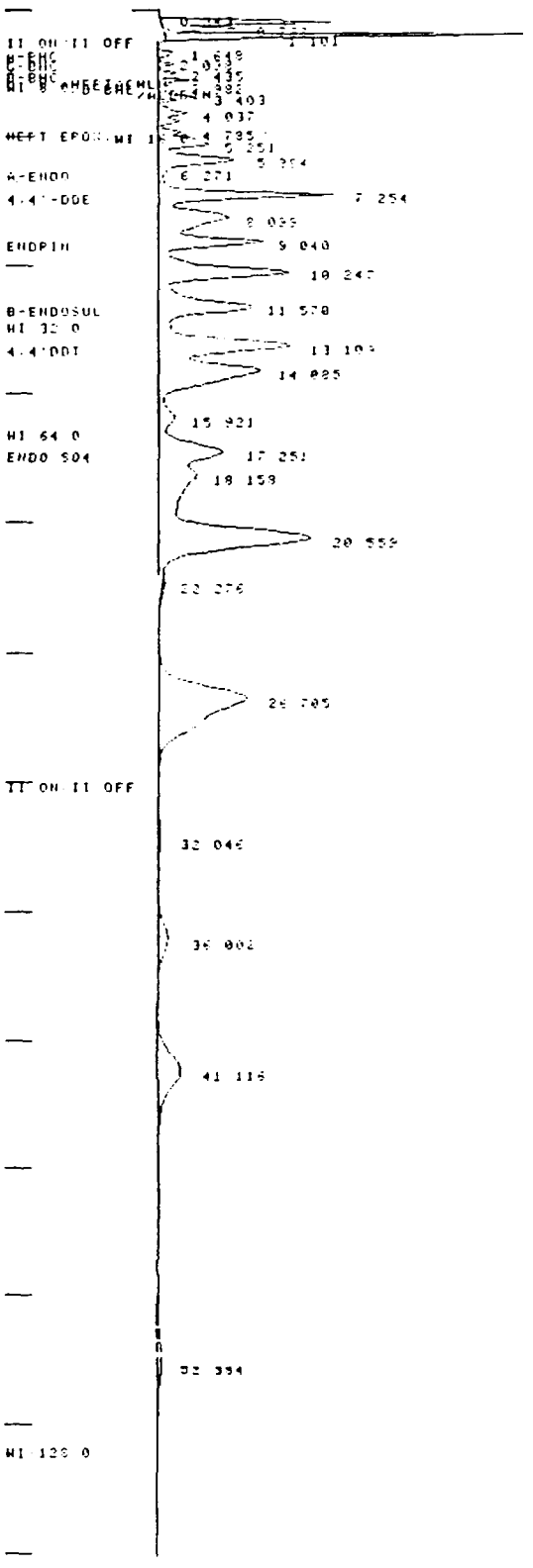
NOISE: 11.4 OFFSET: 12

RACK: 1 VIAL: 15 INJ: 1

NOTES:
NOTEBOOK: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.CROP387

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



DC-G6-67

CHANNEL: 16 - 1 TITLE: RUN# 10 6:41 17 MAR 87

SAMPLE: 1074 METHOD: PEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	WI/2 (SEC)

CHANNEL: 1B - 1 TITLE: RUN: 10 DC-66-67 6:41 17 MAR 87

SAMPLE: 1274 METHOD: PEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT MG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	WI/2 (SEC)
1	[illegible]	1067.820	1.648	-0.132	61415	VV	3.81
2	[illegible]	986.0275	2.098	-0.152	25294	VV	5.19
3	[illegible]	4015.729	2.435	-0.125	42136	VV	7.94
4	[illegible]0	2861.354	2.716	-0.054	69300	VV	6.50
5	[illegible]	973.9990	2.982	0.002	22297	VV	8.06
6	[illegible]	4273.919	3.403	0.053	110989	VV	11.81
7		0.0000	4.037		99691	VV	11.94
8		0.0000	4.329		63406	VV	12.81
9	[illegible]	2953.227	4.785	-0.225	68774	VV	? 12.69
10		0.0000	5.251		268890	VV	23.44
11		0.0000	5.884		389037	VV	19.75
12	[illegible]	1258.286	6.271	-0.029	27631	VV	?
13	4,4'-DDE	36921.55	7.254	-0.026	839534	VV	17.75
14	[illegible]	27220.58	8.099	0.399	648035	VV	42.63
15	[illegible]	29910.51	9.040	-0.310	602917	VV	22.69
16		0.0000	10.247		926596	VV	25.50
17	[illegible]	38858.70	11.570	0.250	821836	VV	31.69
18	[illegible]	75187.10	13.109	-0.331	1121184	VV	32.63
19		0.0000	14.085		1140903	VV	48.69
20		0.0000	15.921		180591	VV	48.00
21		0.0000	17.251		712136	VV	48.25
22	[illegible]	54941.16	19.158	0.299	642721	VV	?155.13
23	PCB 1260 *		20.559		1977912	VV	48.56
24		0.0000	22.276		21570	T	? 63.31
25	[illegible]	260073.6	26.705	0.875	1823783	VB	84.63
26		0.0000	32.046		37745	BB	76.63
27		0.0000	36.002		200987	BB	80.00
28		0.0000	41.116		560568	BB	93.81
29		0.0000	52.384		106782	BB	112.75

TOTALS: 542283.6 0.493 13614660

DETECTED PKS: 43 REJECTED PKS: 14

DIVISOR: 0.15000 MULTIPLIER: 200000.000

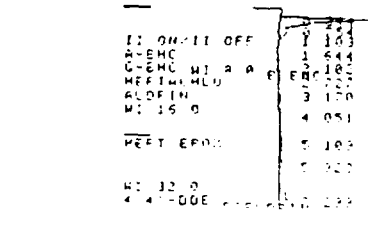
NOISE: 365.7 OFFSET: -21

RACK: 1 VIAL: 10 INJ: 1

NOTES:
NOTEBOOK:259-154 ANALYST:RICHARD SAMSON
SECURE AREA D JOB #U-4971, U-4989
INST: VARIAN 6000#2 B ECD 10X! 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.103

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



SAMPLE NUMBER DC-GB-68

DC-GB-68

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.
Case No: U-4906, 4928, 4971, 4989.
Lab Sample ID No: 1275
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: C Wojtowicz
Date Sample Received: 2-26-87

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared:
Date Analyzed: 3-04-87
Conc/Dil Factor: 1 pH 7.2
Percent Moisture: (Not Decanted) 21

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	38 B
67-64-1	Acetone	14 B
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	21 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	1 J
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/ml 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 V-4906, 4928, 4971, 4989

Sample Number DC-GB-68

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low (Medium) (Circle One)

Date Extracted/Prepared 02-26-87

Date Analyzed 03-06-87

Conc/Dil Factor: 2

Percent Moisture (Decanted) 21

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	3300 u
111-44-4	bis(2-Chloroethyl)Ether	3300 u
95-57-8	2-Chlorophenol	3300 u
541-73-1	1,3-Dichlorobenzene	3300 u
106-46-7	1,4-Dichlorobenzene	3300 u
100-51-6	Benzyl Alcohol	3300 u
95-50-1	1,2-Dichlorobenzene	3300 u
95-48-7	2-Methylphenol	3300 u
39638-32-9	bis(2-chloroisopropyl)Ether	3300 u
106-44-5	4-Methylphenol	3300 u
621-64-7	N-Nitroso-Di-n-Propylamine	3300 u
67-72-1	Hexachloroethane	3300 u
98-95-3	Nitrobenzene	3300 u
78-59-1	Isophorone	3300 u
88-75-5	2-Nitrophenol	3300 u
105-67-9	2,4-Dimethylphenol	3300 u
65-85-0	Benzoic Acid	16000 u
111-91-1	bis(2-Chloroethoxyl)Methane	3300 u
120-83-2	2,4-Dichlorophenol	3300 u
120-82-1	1,2,4-Trichlorobenzene	3300 u
91-20-3	Naphthalene	3300 u
106-47-8	4-Chloroaniline	3300 u
87-68-3	Hexachlorobutadiene	3300 u
59-50-7	4-Chloro-3-Methylphenol	3300 u
91-57-6	2-Methylnaphthalene	3300 u
77-47-4	Hexachlorocyclopentadiene	B300 u
88-06-2	2,4,6-Trichlorophenol	3300 u
95-95-4	2,4,5-Trichlorophenol	16000 u
91-58-7	2-Chloronaphthalene	3300 u
88-74-4	2-Nitroaniline	16000 u
131-11-3	Dimethyl Phthalate	3300 u
208-96-8	Acenaphthylene	3300 u
99-09-2	3-Nitroaniline	16000 u

CAS Number		ug/l or (ug/Kg) (Circle One)
83-32-9	Acenaphthene	3300 u
51-28-5	2,4-Dinitrophenol	16000 u
100-02-7	4-Nitrophenol	16000 u
132-64-9	Dibenzofuran	3300 u
121-14-2	2,4-Dinitrotoluene	3300 u
606-20-2	2,6-Dinitrotoluene	3300 u
84-66-2	Diethylphthalate	3300 u
7005-72-3	4-Chlorophenyl-phenylether	3300 u
86-73-7	Fluorene	3300 u
100-01-6	4-Nitroaniline	16000 u
534-52-1	4,6-Dinitro-2-Methylphenol	16000 u
86-30-6	N-Nitrosodiphenylamine (1)	3300 u
101-55-3	4-Bromophenyl-phenylether	3300 u
118-74-1	Hexachlorobenzene	3300 u
87-86-5	Pentachlorophenol	16000 u
85-01-8	Phenanthrene	3300 u
120-12-7	Anthracene	3300 u
84-74-2	Di-n-Butylphthalate	7900 B
206-44-0	Fluoranthene	3300 u
129-00-0	Pyrene	3300 u
85-68-7	Butylbenzylphthalate	3300 u
91-94-1	3,3'-Dichlorobenzidine	6600 u
56-55-3	Benzo(a)Anthracene	3300 u
117-81-7	bis(2-Ethylhexyl)Phthalate	3300 u
218-01-9	Chrysene	3300 u
117-84-0	Di-n-Octyl Phthalate	3300 u
205-99-2	Benzo(b)Fluoranthene	3300 u
207-08-9	Benzo(k)Fluoranthene	3300 u
50-32-8	Benzo(a)Pyrene	3300 u
193-39-5	Indeno(1,2,3-cd)Pyrene	3300 u
53-70-3	Dibenz(a,h)Anthracene	3300 u
191-24-2	Benzo(g,h,i)Perylene	3300 u

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No V-4906, 4928, 4971, 4989

Sample Number DC-GB-68

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 2

Percent Moisture (decanted) 21

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	160u
319-85-7	Beta-BHC	160u
319-86-8	Delta-BHC	160u
58-89-9	Gamma-BHC (Lindane)	160u
76-44-8	Heptachlor	160u
309-00-2	Aldrin	160u
1024-57-3	Heptachlor Epoxide	160u
959-98-8	Endosulfan I	160u
60-57-1	Dieldrin	320u
72-55-9	4,4'-DDE	320u
72-20-8	Endrin	320u
33213-65-9	Endosulfan II	320u
72-54-8	4,4'-DDD	320u
1031-07-8	Endosulfan Sulfate	320u
50-29-3	4,4'-DDT	320u
72-43-5	Methoxychlor	1,600u
53494-70-5	Endrin Ketone	320u
57-74-9	Chlordane	1,600u
8001-35-2	Toxaphene	3,200u
12674-11-2	Aroclor-1016	1,600u
11104-28-2	Aroclor-1221	1,600u
11141-16-5	Aroclor-1232	1,600u
53469-21-9	Aroclor-1242	1,600u
12672-29-6	Aroclor-1248	1,600u
11097-69-1	Aroclor-1254	3,200u
11096-82-5	Aroclor-1260	3,200u

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-GB-68

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	(RT) or Scan Number HLC-IC	Estimated Concentration (ug/l or ug/kg)
1.		No TIC's in VOA fraction			
2.					
3.		No TIC's in BNA fraction			
4.					
5.					
6.					
7.					
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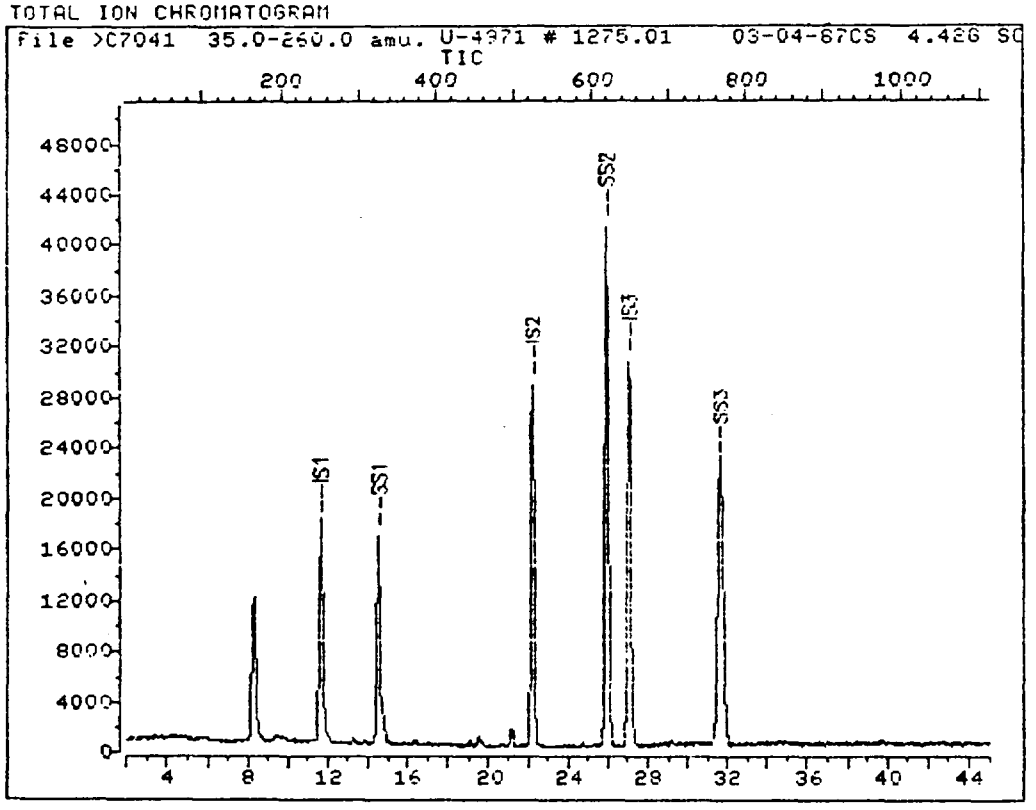
TOTAL ION CHROMATOGRAM

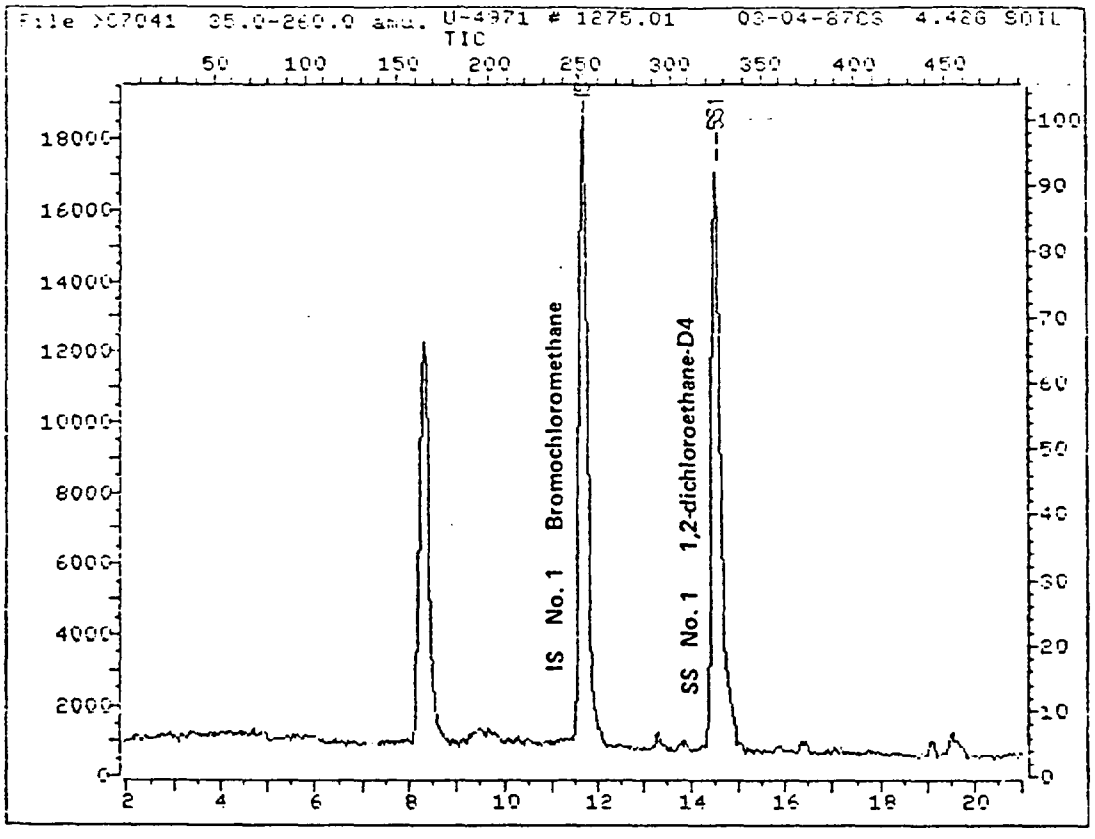


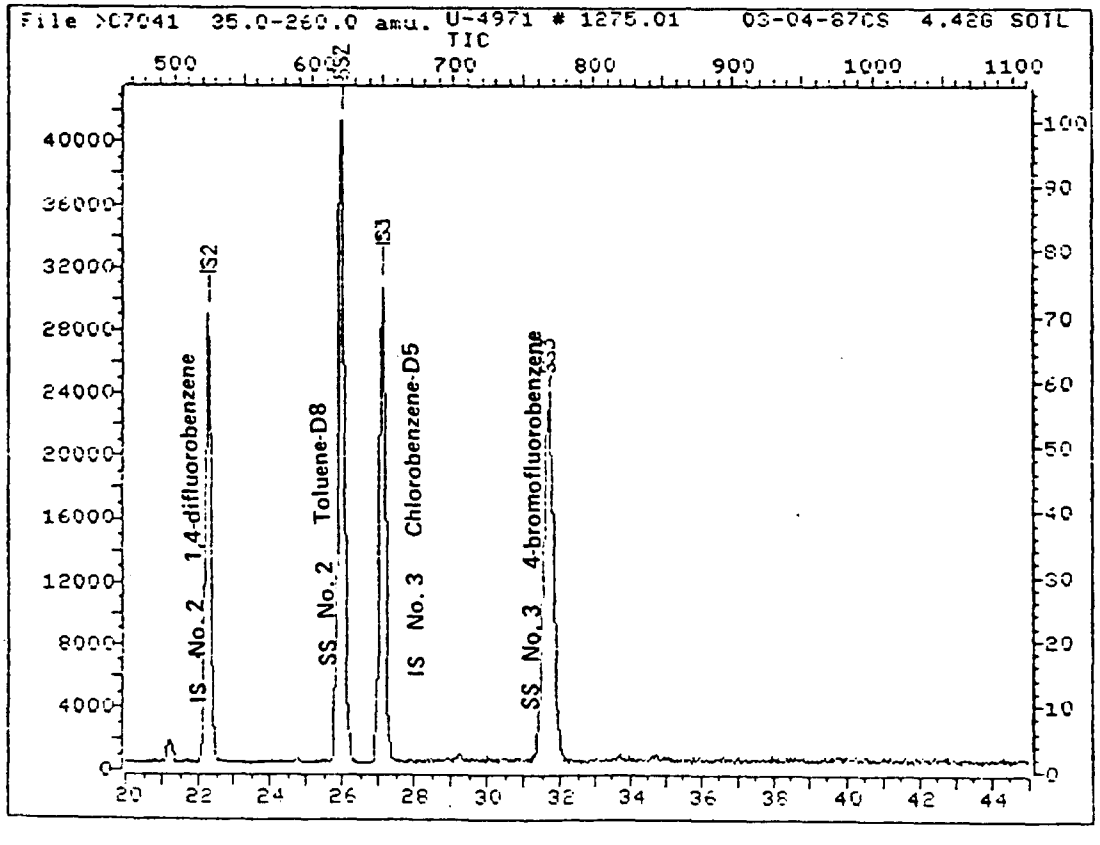
Data File: >C7041::D1
Name: U-4971 # 1275.01 DC-GB-68
Misc: 03-04-87CS 4.42G SOIL IN 5ML DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870304 11:54

Operator ID: USER8
Quant Time: 870304 13:18
Injected at: 870304 12:33

DC-GB-68


File >C7041 35.0-260.0 amu. U-4971 # 1275.01 03-04-87CS 4.426 SOIL
TIC
IS No. 1 Bromochloromethane
SS No. 1 1,2-dichloroethane-D4
IS1
SS1


File >C7041 35.0-260.0 amu. U-4971 # 1275.01 03-04-87CS 4.426 SOIL
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

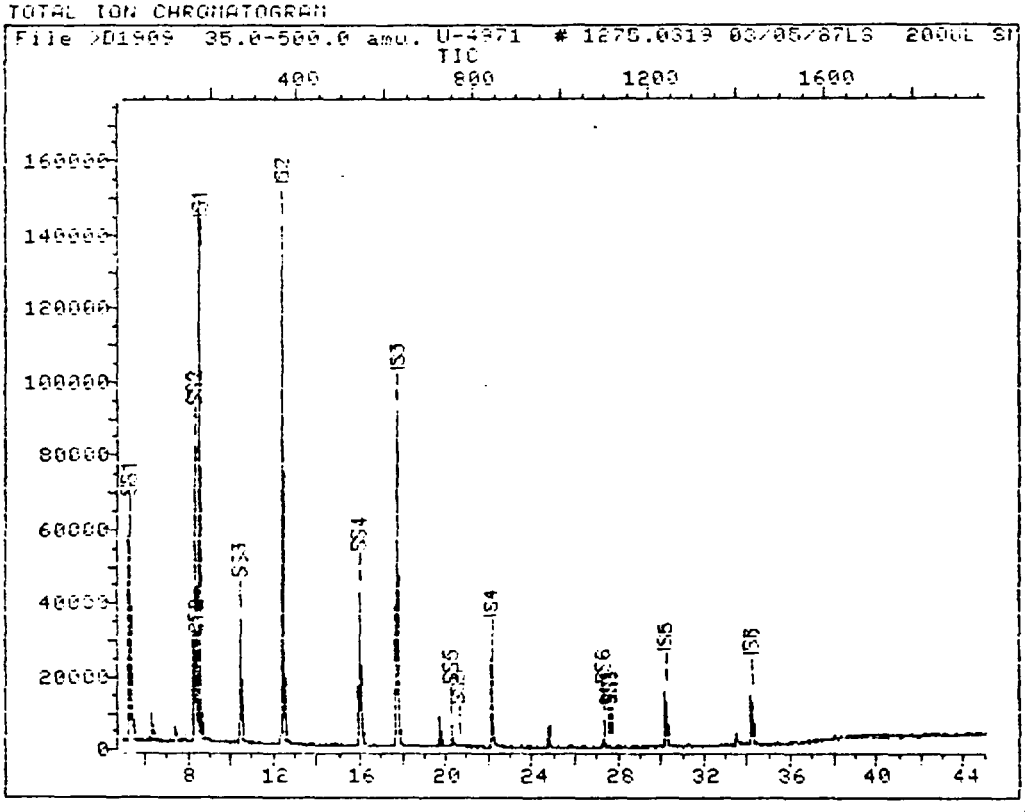
Operator ID: USER8 Quant Rev: 4 Quant Time: 870304 13:18
Output File: ^C7041::Q2 Injected at: 870304 12:33
Data File: >C7041::D1 Dilution Factor: 1.00
Name: U-4971 # 1275.01 DC-GB-68
Misc: 03-04-87CS 4.42G SOIL IN 5ML DI + 10UL IS/SS

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	28891	250.00	NGS	100
6)	METHYLENE CHLORIDE		84	8.31	165	34443	167.59	NGS	100
7)	ACETONE		43	9.43	194	8883	62.67	NGS	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.52	325	74160	267.63	NGS	87
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.24	524	127415	250.00	NGS	100
17)	2-BUTANONE		72	14.75	331	3282	91.72	NGS	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.09	649	105244	250.00	NGS	100
36)	TOLUENE-D8	(SURR)	98	25.92	619	167233	291.10	NGS	95
38)	CHLOROBENZENE		112	27.17	651	2839	5.86	NGS	99
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.64	766	82237	263.71	NGS	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM

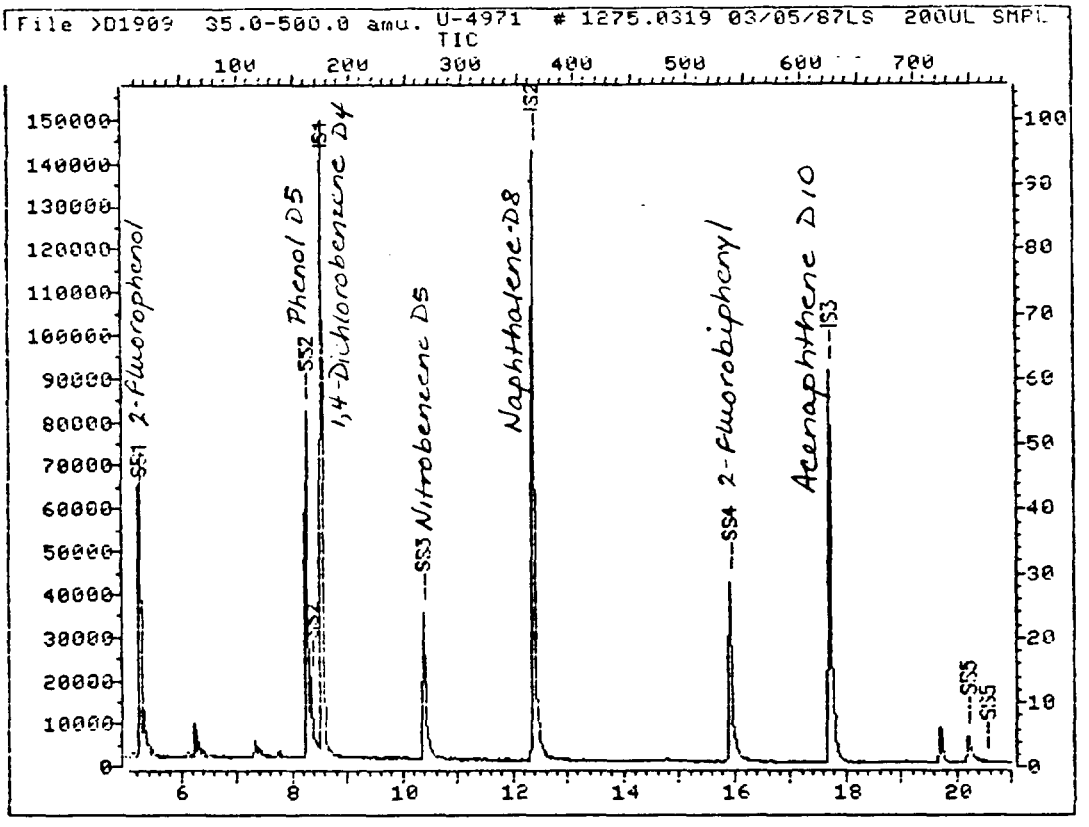


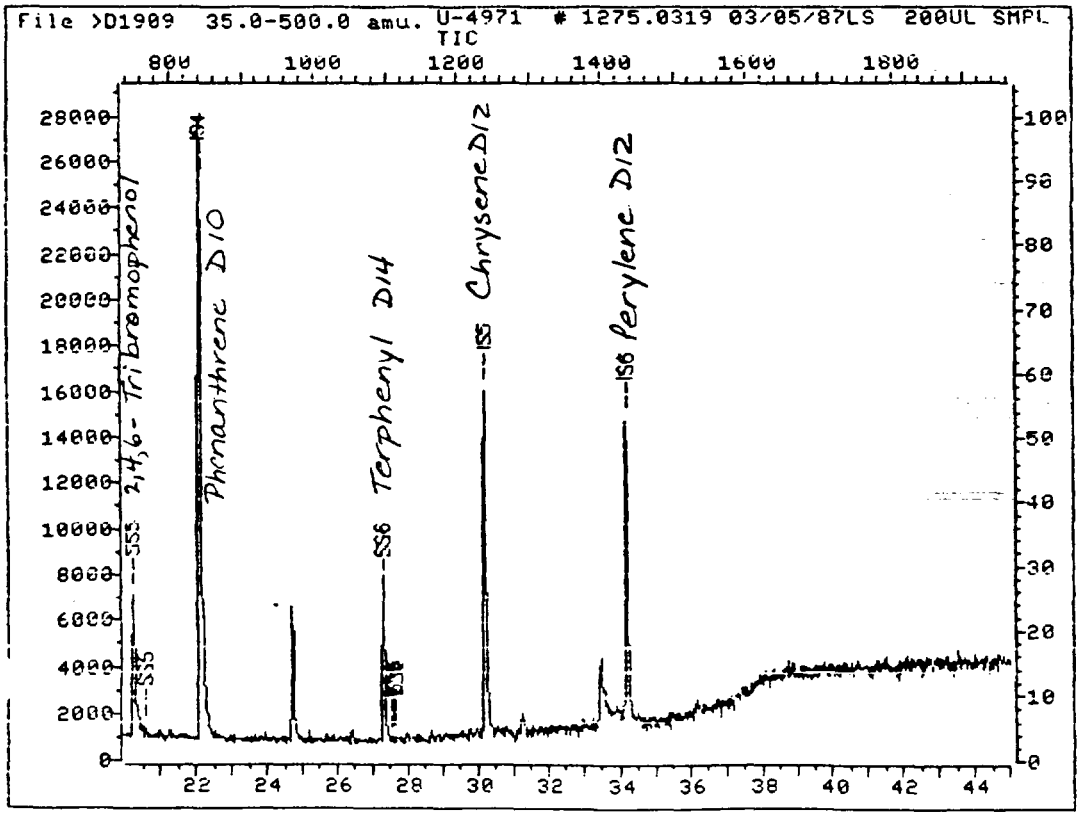
Data File: >D1909::D3
Name: U-4971 # 1275.0319 DC-GB-68
Misc: 03/05/87LS 200UL SMPL + 200UL MECL2 + 40UL IS (2X) BIL# 6

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870305 17:22

Operator ID: USER6
Quant Time: 870306 11:45
Injected at: 870306 10:57

DC-GB-68


File >D1909 35.0-500.0 amu. U-4971 # 1275.0319 03/05/87LS 200UL SMPL
TIC
2-Fluorophenol
Phenol D5
1,4-Dichlorobenzene D4
Nitrobenzene D5
Naphthalene-D8
2-Fluorobiphenyl
Acenaphthene D10


File >D1909 35.0-500.0 amu. U-4971 # 1275.0319 03/05/87LS 200UL SMPL
TIC
2,4,6-Tribromophenol
Phenanthrene D10
Terphenyl D14
Chrysene D12
Perylene D12

QUANT REPORT

Operator ID: USER6 Quant Rev: 4 Quant Time: 870306 11:45
Output File: ^D1909::U2 Injected at: 870306 10:57
Data File: >D1909::D3 Dilution Factor: 2.00
Name: U-4471 # 1275.0319 DC-GB-68
Misc: 03/05/87LS 20^UL SMPL + 200UL MEOL2 + 4UL IS (2X) B L# 6

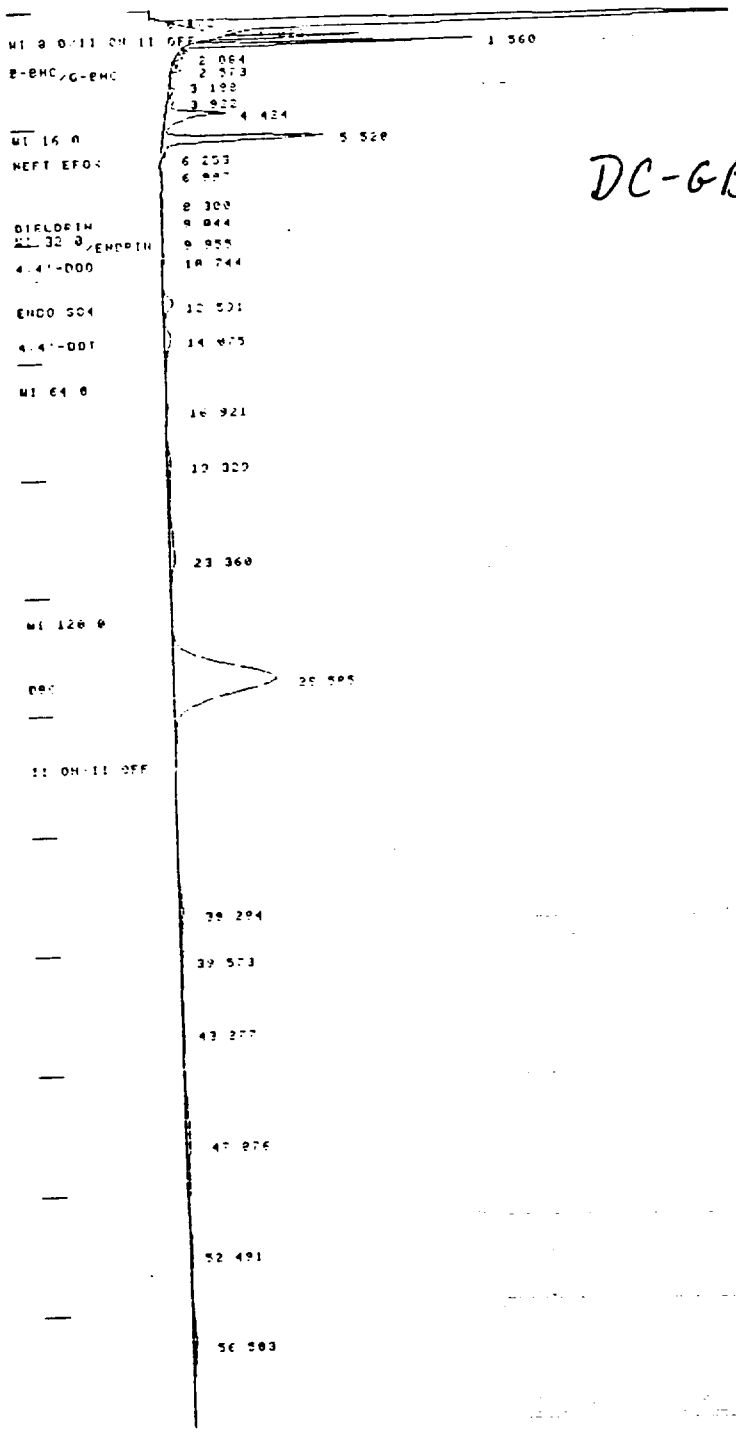
ID File: BNA0R::02
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870305 17:22

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	8.53	174	67004	40.00	UG/L	86
2)	PHENOL-D5	(SURR)	99	8.27	~~161~~	58247	45.69	UG/L	96
2)	PHENOL-D5	(SURR)	99	8.35	165	19482	15.28	UG/L	91
5)	2-FLUOROPHENOL	(SURR)	112	5.73	12	57371	99.92	UG/L	64
17)	~~N-NITROSO-DI-N-DIPROPYLAMINE~~		~~70~~	~~10.39~~	~~265~~	~~6965~~	~~5.81~~	~~UG/L~~	78
19)	*NAPHTHALENE-D8	(IS)	136	12.48	363	205985	40.00	UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	10.39	265	41933	38.22	UG/L	99
34)	*ACENAPHTHENE-D10	(IS)	162	17.72	625	65849	40.00	UG/L	94
38)	2-FLUOROBIPHENYL	(SURR)	172	15.93	537	59845	45.01	UG/L	94
41)	~~DIMETHYL PHTHALATE~~		~~163~~	~~17.72~~	~~625~~	~~12832~~	~~12.49~~	~~UG/L~~	100
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.21	747	6939	45.24	UG/L	95
49)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.55	764	241	1.57	UG/L	82
52)	~~2,6-DINITROTOLUENE~~		~~165~~	~~17.72~~	~~625~~	~~8725~~	~~49.09~~	~~UG/L~~	100
55)	*PHENANTHRENE-D10	(IS)	188	22.10	840	55799	40.00	UG/L	95
63)	DI-N-BUTYLPHTHALATE		149	24.71	968	16303	24.84	UG/L	99
65)	*CHRYSENE-D12	(IS)	240	30.17	1236	30006	40.00	UG/L	100
68)	TERPHENYL-D14	(SURR)	244	27.27	1094	14682	44.86	UG/L	100
69)	~~TERPHENYL-D14~~	~~(SURR)~~	~~244~~	~~27.48~~	~~1105~~	~~144~~	~~.49~~	~~UG/L~~	100
69)	TERPHENYL-D14	(SURR)	244	27.54	1112	113	.38	UG/L	100
69)	~~TERPHENYL-D14~~	~~(SURR)~~	~~244~~	~~27.68~~	~~1109~~	~~202~~	~~.69~~	~~UG/L~~	100
69)	~~TERPHENYL-D14~~	~~(SURR)~~	~~244~~	~~27.64~~	~~1112~~	~~68~~	~~.23~~	~~UG/L~~	100
74)	*PERYLENE-D12	(IS)	264	34.16	1432	25590	40.00	UG/L	100

* Compound is ISTD

3.16g

CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 100 5 MIN/TICK



DC-GB-68

CHANNEL: 1A - 1 TITLE: RUN# 16 23:43 11 MAR 87

SAMPLE: 1275 DC-GB-68 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/G	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.271		97935	BV	4.44
2		0.0000	1.558		204598	VB	5.25
3		0.0000	4.424		158960	VV	14.56
4		0.0000	5.528		305463	VV	12.94
5	~~ENDO SUL~~	40.8727	12.591	-0.229	49256	BV	35.25
6	~~4,4' DDT~~	47.3348	14.075	-0.155	56381	VB	50.63
7		0.0000	19.329		45731	BV	122.63
8		0.0000	23.360		83807	VB	?126.69
9	DBC	748.2589	28.585	0.205	1131257	BB	79.88
10		0.0000	38.284		44757	BV	?100.44
11		0.0000	47.876		85598	VV	?248.00
12		0.0000	52.491		24034	VV	?202.75
13		0.0000	56.503		66265	VV	168.00
TOTALS:		836.4664		-0.179	2354042		

DETECTED PKS: 34 REJECTED PKS: 21

DIVISOR: 0.15000 MULTIPLIER: 2000.00000

NOISE: 11.4 OFFSET: 2

RACK: 2 VIAL: 1 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.CROP388

SAMPLE NUMBER DC-G7-69

DC-G7-69

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.
Case No: U-4906, 4928, 4971, 4989

Lab Sample ID No: 1276
QC Report No:

Sample Matrix: Soil
Contract No: IL-3140

Data Release Authorized By: C Hofbauer
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 pH 6.9

Percent Moisture: (Not Decanted) 35

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	420 BJ
67-64-1	Acetone	10000 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	6300 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	2500
124-48-1	Dibromochloromethane	1000U
79-00-5	1, 1, 2-Trichloroethane	1000U
71-43-2	Benzene	14000
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	2700
591-78-6	2-Hexanone	2000U
127-18-4	Tetrachloroethene	29000
79-34-5	1, 1, 2, 2-Tetrachloroethane	1000U
108-88-3	Toluene	25000
108-90-7	Chlorobenzene	350,000 E
100-41-4	Ethylbenzene	11000
100-42-5	Styrene	1000U
	Total Xylenes	27000

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., 10 J - 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/ml 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 V-4906, 4928, 4971, 4989

Sample Number
DC-G7-69

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low (Medium) (Circle One)

Date Extracted/Prepared 02-26-87

Date Analyzed 03-18-87

Conc/Dil Factor: 100

Percent Moisture (Decanted) 35

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	160000 u
111-44-4	bis(2-Chloroethyl)Ether	160,000 u
95-57-8	2-Chlorophenol	160,000 u
541-73-1	1,3-Dichlorobenzene	160,000 u
106-46-7	1,4-Dichlorobenzene	160,000 u
100-51-6	Benzyl Alcohol	160,000 u
95-50-1	1,2-Dichlorobenzene	160,000 u
95-48-7	2-Methylphenol	160,000 u
39638-32-9	bis(2-chloroisopropyl)Ether	160,000 u
106-44-5	4-Methylphenol	160,000 u
621-64-7	N-Nitroso-Di-n-Propylamine	160,000 u
67-72-1	Hexachloroethane	160,000 u
98-95-3	Nitrobenzene	160,000 u
78-59-1	Isophorone	160,000 u
88-75-5	2-Nitrophenol	160,000 u
105-67-9	2,4-Dimethylphenol	160,000 u
65-85-0	Benzoic Acid	830,000 u
111-91-1	bis(2-Chloroethoxy)Methane	160,000 u
120-83-2	2,4-Dichlorophenol	160,000 u
120-82-1	1,2,4-Trichlorobenzene	78000 J
91-20-3	Naphthalene	71000 J
106-47-8	4-Chloroaniline	150000 J
87-68-3	Hexachlorobutadiene	160000 u
59-50-7	4-Chloro-3-Methylphenol	160000 u
91-57-6	2-Methylnaphthalene	160000 u
77-47-4	Hexachlorocyclopentadiene	160000 u
88-06-2	2,4,6-Trichlorophenol	160000 u
95-95-4	2,4,5-Trichlorophenol	830000 u
91-58-7	2-Chloronaphthalene	160000 u
88-74-4	2-Nitroaniline	830000 u
131-11-3	Dimethyl Phthalate	160000 u
208-96-8	Acenaphthylene	160000 u
99-09-2	3-Nitroaniline	830000 u

CAS Number		ug/l or (ug/Kg) (Circle One)
83-32-9	Acenaphthene	160000 u
51-28-5	2,4-Dinitrophenol	830000 u
100-02-7	4-Nitrophenol	830000 u
132-64-9	Dibenzofuran	22000 J
121-14-2	2,4-Dinitrotoluene	160000 u
606-20-2	2,6-Dinitrotoluene	160000 u
84-66-2	Diethylphthalate	160000 u
7005-72-3	4-Chlorophenyl-phenylether	160000 u
86-73-7	Fluorene	160000 u
100-01-6	4-Nitroaniline	830000 u
534-52-1	4,6-Dinitro-2-Methylphenol	830000 u
86-30-6	N-Nitrosodiphenylamine (1)	160000 u
101-55-3	4-Bromophenyl-phenylether	160000 u
118-74-1	Hexachlorobenzene	160000 u
87-86-5	Pentachlorophenol	3100000
85-01-8	Phenanthrene	160000 u
120-12-7	Anthracene	160000 u
84-74-2	Di-n-Butylphthalate	160000 u
206-44-0	Fluoranthene	160000 u
129-00-0	Pyrene	160000 u
85-68-7	Butylbenzylphthalate	160000 u
91-94-1	3,3'-Dichlorobenzidine	320000 u
56-55-3	Benzo(a)Anthracene	160000 u
117-81-7	bis(2-Ethylhexyl)Phthalate	160000 u
218-01-9	Chrysene	160000 u
117-84-0	Di-n-Octyl Phthalate	160000 u
205-99-2	Benzo(b)Fluoranthene	160000 u
207-08-9	Benzo(k)Fluoranthene	160000 u
50-32-8	Benzo(a)Pyrene	160000 u
193-39-5	Indeno(1,2,3-cd)Pyrene	160000 u
53-70-3	Dibenz(a,h)Anthracene	160000 u
191-24-2	Benzo(g,h,i)Perylene	160000 u

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No V-4906, 4928, 4971, 4989

Sample Number
DC-G7-69

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 2-26-87

Date Analyzed 3-12-87

Conc/Dil Factor 1000

Percent Moisture (decanted) 35

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	80,000 u
319-85-7	Beta-BHC	80,000 u
319-86-8	Delta-BHC	80,000 u
58-89-9	Gamma-BHC (Lindane)	80,000 u
76-44-8	Heptachlor	80,000 u
309-00-2	Aldrin	80,000 u
1024-57-3	Heptachlor Epoxide	80,000 u
959-98-8	Endosulfan I	80,000 u
60-57-1	Dieldrin	160,000 u
72-55-9	4,4'-DDE	88,000 J
72-20-8	Endrin	160,000 u
33213-65-9	Endosulfan II	160,000 u
72-54-8	4,4'-DDD	160,000 u
1031-07-8	Endosulfan Sulfate	160,000 u
50-29-3	4,4'-DDT	160,000 u
72-43-5	Methoxychlor	800,000 u
53494-70-5	Endrin Ketone	160,000 u
57-74-9	Chlordane	800,000 u
8001-35-2	Toxaphene	1,600,000 u
12674-11-2	Aroclor-1016	800,000 u
11104-28-2	Aroclor-1221	800,000 u
11141-16-5	Aroclor-1232	800,000 u
53469-21-9	Aroclor-1242	800,000 u
12672-29-6	Aroclor-1248	800,000 u
11097-69-1	Aroclor-1254	1,600,000 u
11096-82-5	Aroclor-1260	430,000 J

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

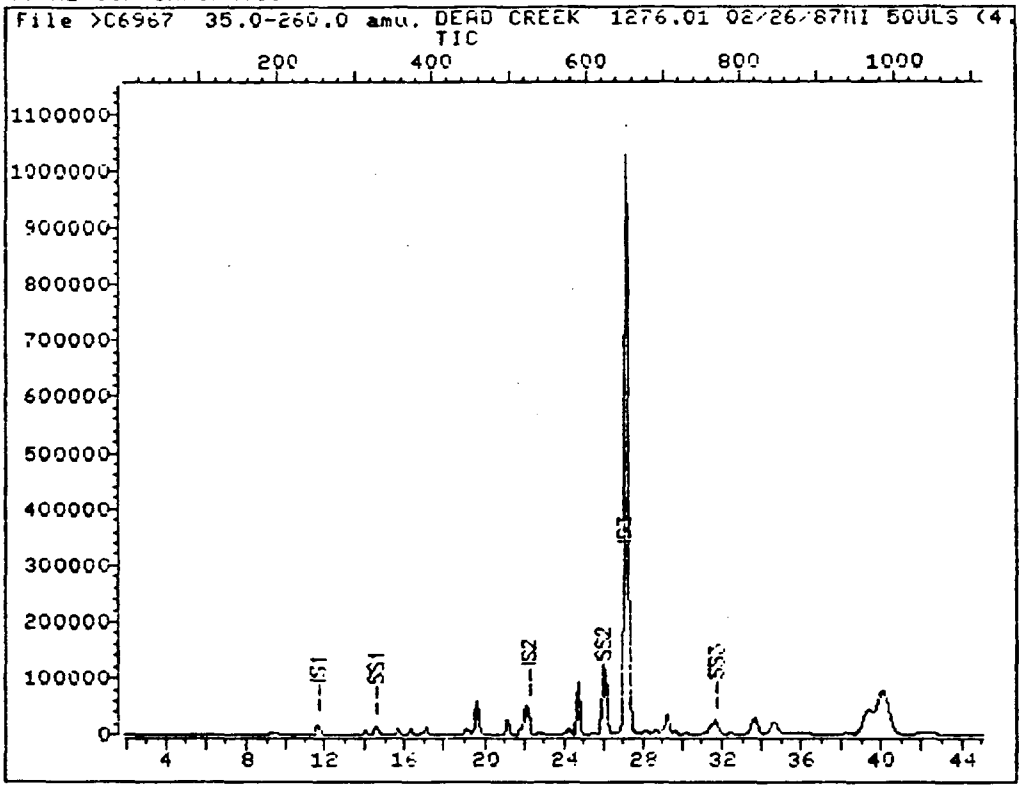
Sample Number: DC-G7-69

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number MCC-IC	Estimated Concentration (ug/l or ug/kg)
1.	109660	Pentane	VOA	15.7	5000 J
2.	110827	Cyclohexane	VOA	16.3	5100 J
3.		Hexene isomer	VOA	17.1	2000 J
4.		Hexane isomer	VOA	21.2	4000 J
5.		Dichlorobenzene isomer	VOA	39.4	20,000 J
6.		Dichlorobenzene isomer	VOA	40.1	34,000 J
7.					
8.					
9.		Chloromethylpyridine isomer	BNA	12.62	175,000 J
10.		Unknown		16.10	220,000 J
11.	1985575	Benzene, (1,1-dimethylbutyl)-		20.83	70,000 J
12.		Unknown		21.14	140,000 J
13.		Unknown		21.26	230,000 J
14.	26356116	Benzene, (1,1,2-trimethylpropyl)-		21.54	140,000 J
15.		Isomeric dodecylbenzene		21.71	670,000 J
16.		Unknown		21.85	280,000 J
17.	27854406	Benzene, (1,1-dimethyldecyl)-		21.91	470,000 J
18.		Unknown substituted benzene		21.99	420,000 J
19.		Unknown substituted benzene		22.22	670,000 J
20.	1985575	Benzene, (1,1-dimethylbutyl)-		22.58	570,000 J
21.	55134071	Benzene, (1,1,4,6,6-pentamethylheptyl)-		22.65	270,000 J
22.		Unknown substituted benzene		22.81	210,000 J
23.	544638	Tetradecanoic acid		24.34	130,000 J
24.	10224916	Ethane, 1,1-bis(p-ethylphenyl)-		25.34	290,000 J
25.	10544500	Molecular Sulfur		26.70	110,000 J
26.		Unknown		27.01	1,000,000 J
27.		Unknown		29.37	740,000 J
28.					
29.					
30.					

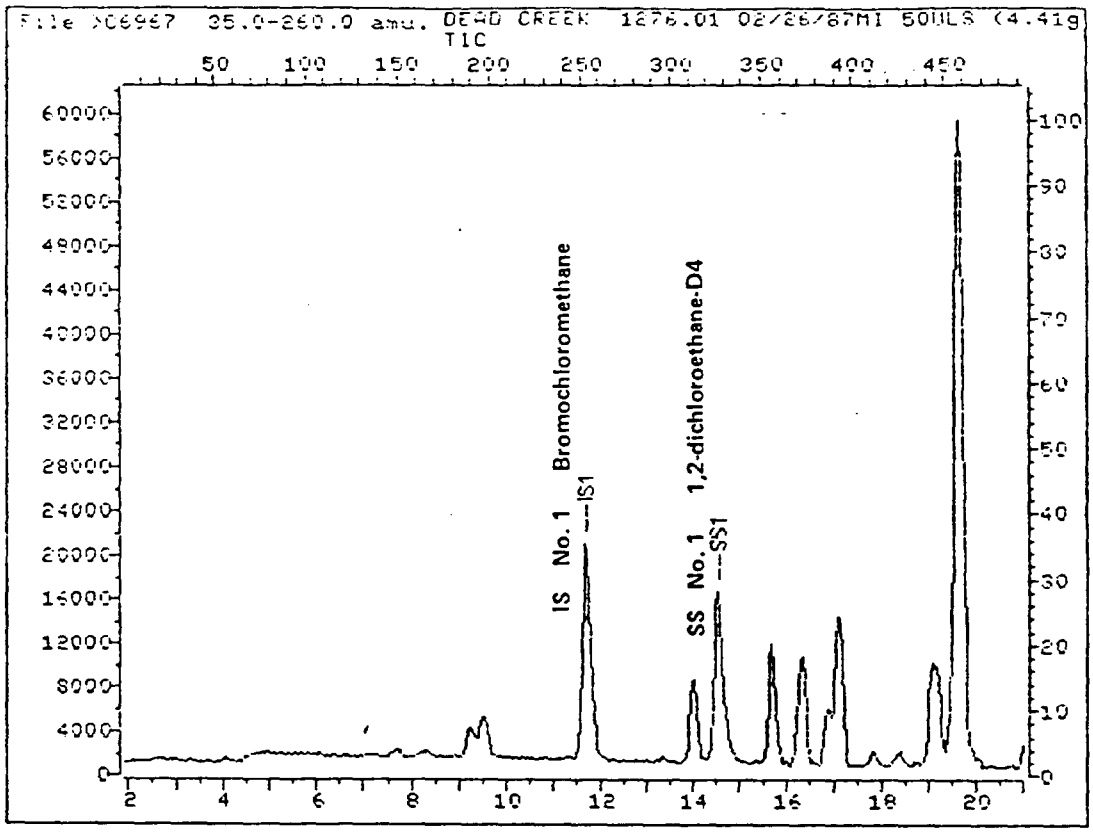
TOTAL ION CHROMATOGRAM



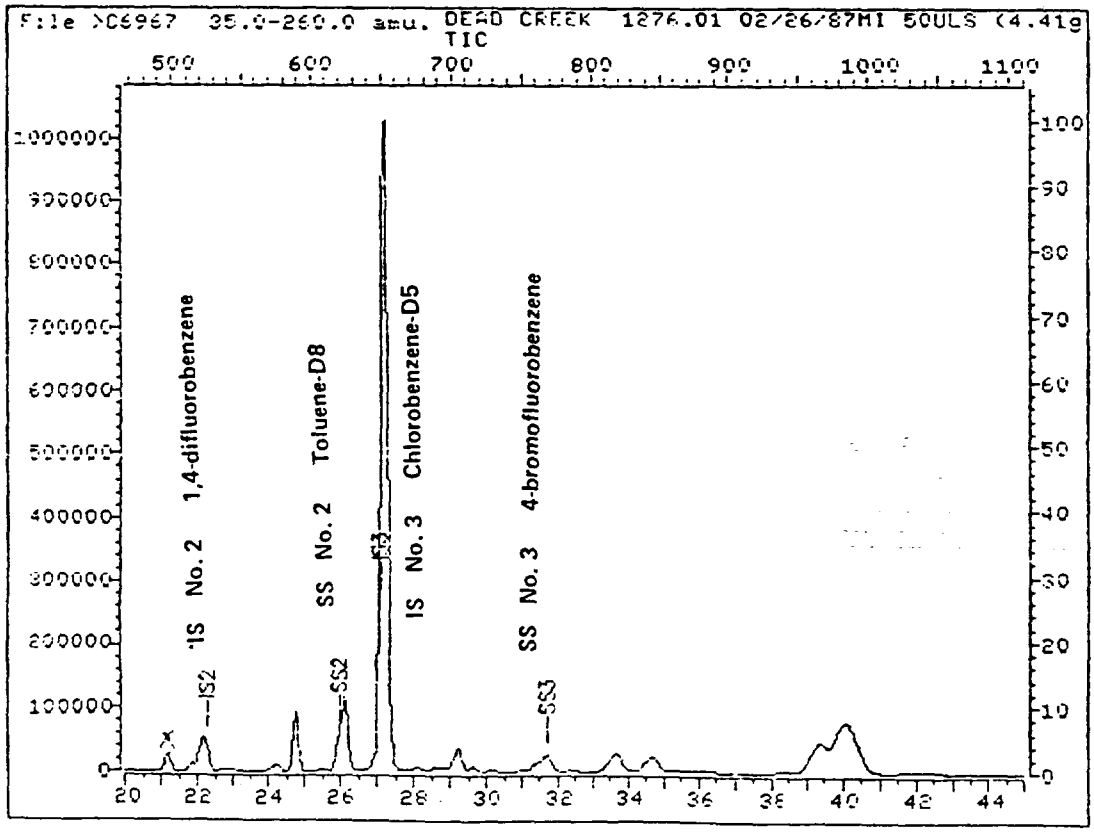
Data File: >C6967::D3
Name: DEAD CREEK 1276.01 DC-G7-69
Misc: 02/26/87MI 50ULS (4.41g SOIL IN 10ML MEOH) + 10 ULS IS

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

Operator ID: USER8
Quant Time: 870226 18:31
Injected at: 870226 17:45


File >C6967 35.0-260.0 amu. DEAD CREEK 1276.01 02/26/87MI 50ULS (4.41g
TIC
IS No. 1 Bromochloromethane
IS1
SS No. 1 1,2-dichloroethane-D4
SS1

DC-G7-69


File >C6967 35.0-260.0 amu. DEAD CREEK 1276.01 02/26/87MI 50ULS (4.41g
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

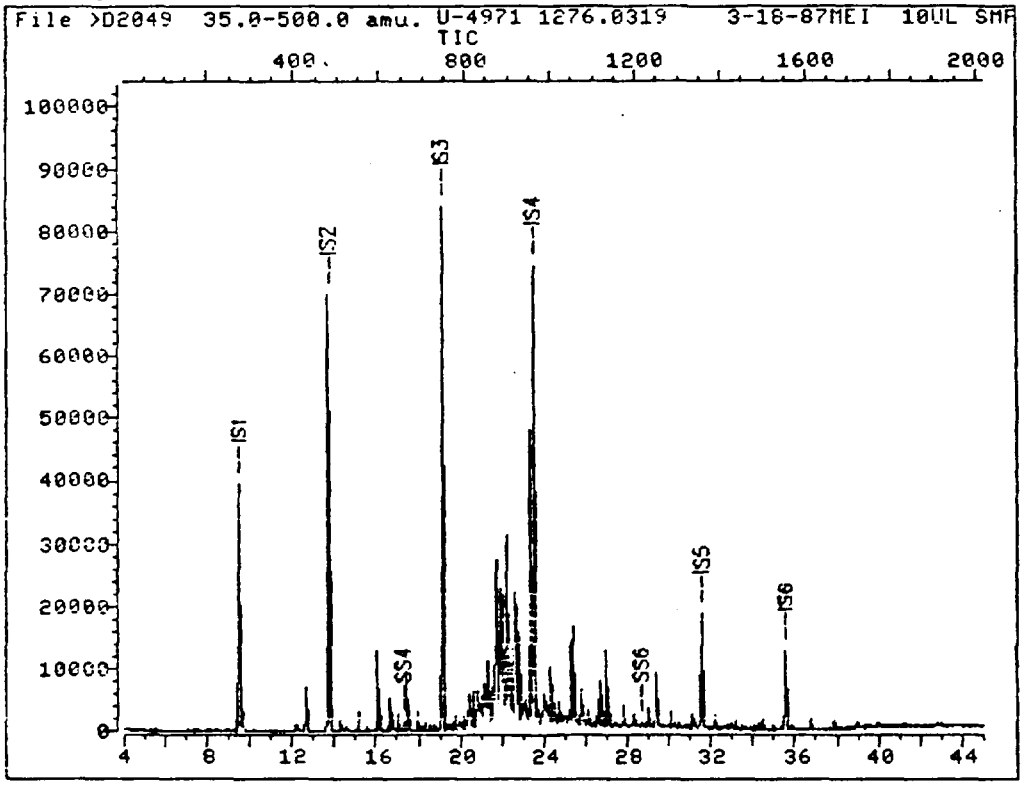
Operator ID: USER8 Quant Rev: 4 Quant Time: 870226 18:31
Output File: ^C6967::Q2 Injected at: 870226 17:45
Data File: >C6967::D3 Dilution Factor: 1.00
Name: DEAD CREEK 1276.01 DC-G7-69
Misc: 02/26/87MI 50ULS (4.41g SOIL IN 10ML MEOH) + 10 ULS IS

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	11.68	253	30039	50.00	UG/L	100
6)	METHYLENE CHLORIDE	84	8.35	167	1906	1.84	UG/L	100
7)	ACETONE	43	9.28	191	23861	44.61	UG/L	100
7)	~~ACETONE~~	~~43~~	~~9.51~~	~~197~~	~~23788~~	~~44.47~~	~~UG/L~~	100
12)	~~TRANS-1,2-DICHLOROETHENE~~	~~96~~	~~13.35~~	~~296~~	~~523~~	~~.54~~	~~UG/L~~	47
15)	1,2-DICHLOROETHANE-D4	(SURR) 65	14.55	327	70434	48.02	UG/L	82
16)	*1,4-DIFLUOROBENZENE	(IS) 114	22.24	525	151676	50.00	UG/L	100
17)	2-BUTANONE	72	14.75	332	3774	27.78	UG/L	100
17)	~~2-BUTANONE~~	~~72~~	~~15.68~~	~~356~~	~~3338~~	~~24.57~~	~~UG/L~~	100
20)	~~VINYL ACETATE~~	~~43~~	~~15.68~~	~~356~~	~~36918~~	~~21.42~~	~~UG/L~~	100
24)	TRICHLOROETHENE	130	19.06	443	13447	11.05	UG/L	81
27)	BENZENE	78	19.64	458	233994	64.05	UG/L	100
28)	~~CIS-1,3-DICHLOROPROPENE~~	~~75~~	~~19.64~~	~~458~~	~~4769~~	~~3.69~~	~~UG/L~~	100
31)	*CHLOROBENZENE-D5	(IS) 117	27.05	649	104971	50.00	UG/L	100
32)	4-METHYL-2-PENTANONE	43	22.98	544	8916	12.02	UG/L	63
33)	~~2-HEXANONE~~	~~43~~	~~24.26~~	~~577~~	~~23595~~	~~36.65~~	~~UG/L~~	100
33)	~~2-HEXANONE~~	~~43~~	~~24.76~~	~~590~~	~~20714~~	~~32.21~~	~~UG/L~~	100
34)	TETRACHLOROETHENE	164	24.76	590	117300	128.22	UG/L	91
35)	~~1,1,2,2-TETRACHLOROETHANE~~	~~83~~	~~24.14~~	~~574~~	~~3812~~	~~3.69~~	~~UG/L~~	100
35)	~~1,1,2,2-TETRACHLOROETHANE~~	~~83~~	~~24.76~~	~~590~~	~~3294~~	~~3.18~~	~~UG/L~~	100
36)	TOLUENE-D8	(SURR) 98	25.96	621	150596	55.29	UG/L	98
37)	TOLUENE	92	26.12	625	214874	111.98	UG/L	98
38)	CHLOROBENZENE	112	27.21	653	3476169	1561.82	UG/L	98
38)	~~CHLOROBENZENE~~	~~112~~	~~28.07~~	~~675~~	~~3783~~	~~1.70~~	~~UG/L~~	98
39)	ETHYLBENZENE	91	29.23	705	191980	46.36	UG/L	96
40)	4-BROMOFLUOROBENZENE	(SURR) 95	31.68	768	80522	56.52	UG/L	100
41)	~~STYRENE~~	~~104~~	~~33.70~~	~~820~~	~~3849~~	~~1.60~~	~~UG/L~~	100
41)	~~STYRENE~~	~~104~~	~~34.59~~	~~843~~	~~2399~~	~~1.00~~	~~UG/L~~	100
42)	TOTAL XYLENES	91	33.70	820	198341	58.49	UG/L	100
42)	TOTAL XYLENES	91	34.63	844	209385	61.75	UG/L	100
42)	~~TOTAL XYLENES~~	~~91~~	~~36.30~~	~~887~~	~~6116~~	~~1.80~~	~~UG/L~~	100
43)	1,3-DICHLOROBENZENE	146	38.32	939	7999	7999.00	NO CALIB	100
43)	1,3-DICHLOROBENZENE	146	39.40	967	360552	360552.0	NO CALIB	100
43)	1,3-DICHLOROBENZENE	146	40.06	984	571532	571532.0	NO CALIB	100
44)	1,2-DICLHLOROBENZENE	146	38.32	939	7999	7999.00	NO CALIB	100
44)	1,2-DICLHLOROBENZENE	146	39.40	967	360552	360552.0	NO CALIB	100
44)	1,2-DICLHLOROBENZENE	146	40.06	984	571532	571532.0	NO CALIB	100
45)	1,4-DICHLOROBENZENE	146	38.32	939	7999	7999.00	NO CALIB	100
45)	1,4-DICHLOROBENZENE	146	39.40	967	360552	360552.0	NO CALIB	100
45)	1,4-DICHLOROBENZENE	146	40.06	984	571532	571532.0	NO CALIB	100

* Compound is ISTD

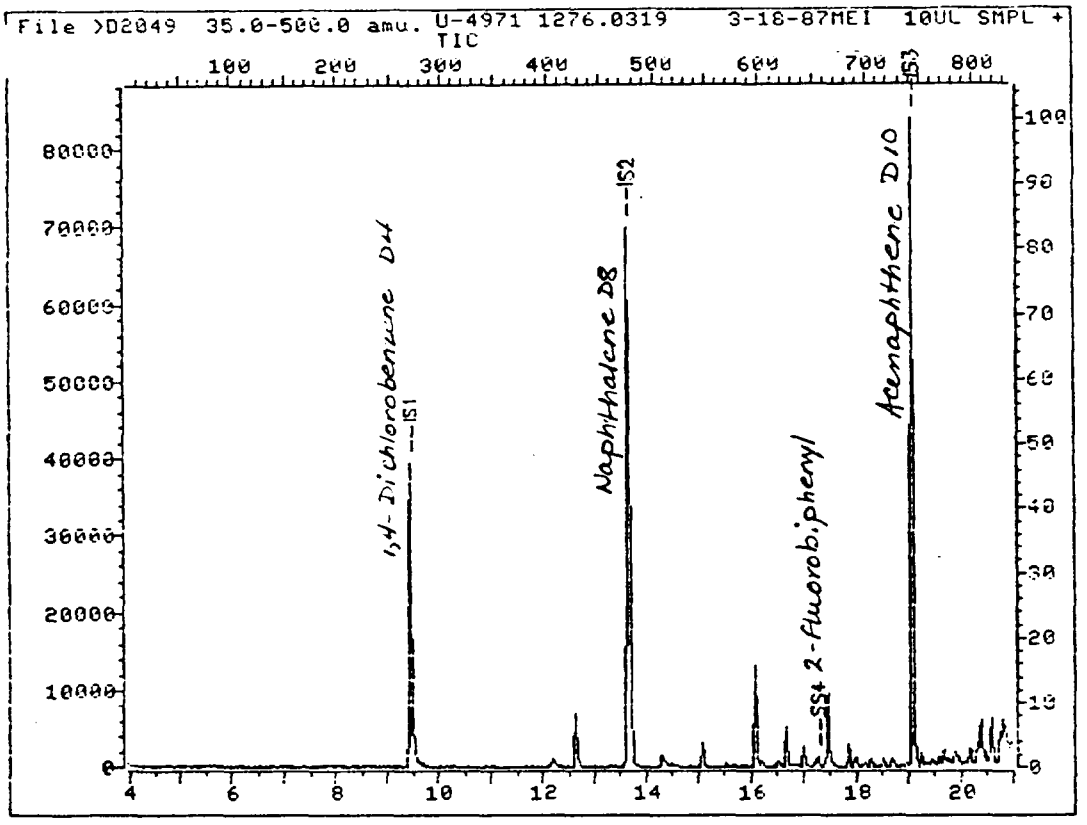
TOTAL ION CHROMATOGRAM



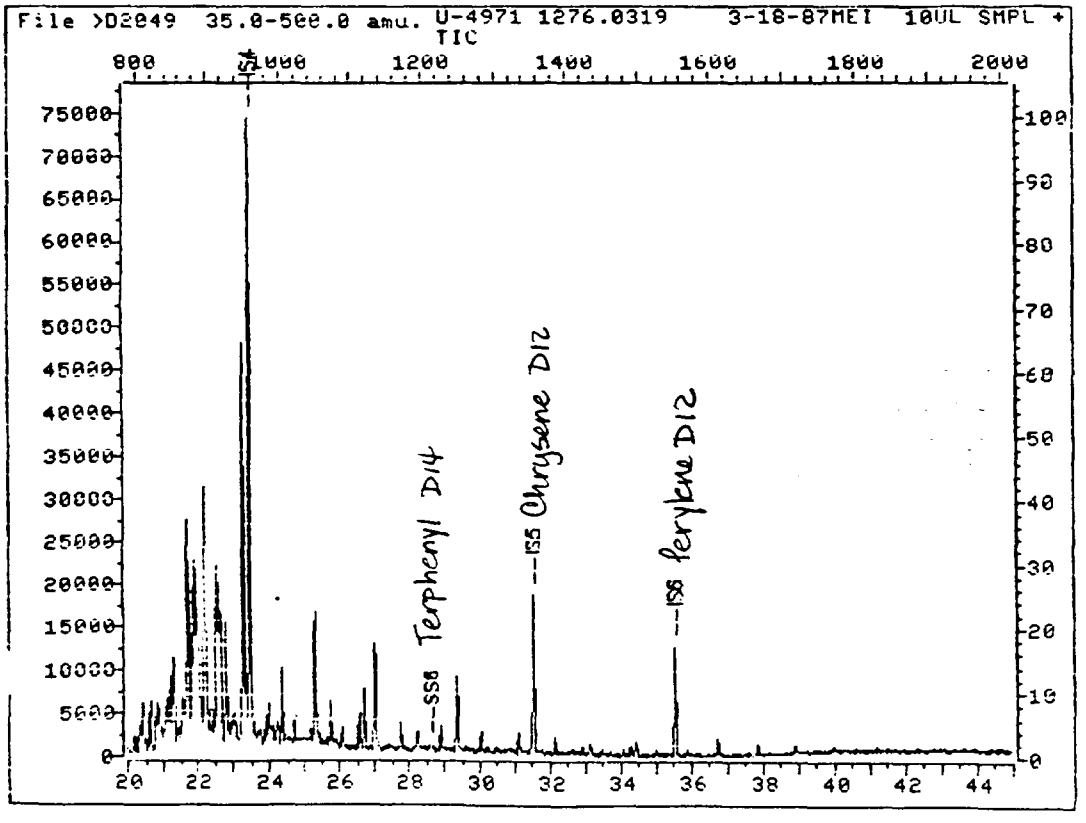
Data File: >D2049::D1
Name: U-4971 1276.0319 DC-G7-69
Misc: 3-18-87MEI 10UL SMPL + 990UL MECL2 +10UL IS (100X) BTL# 1

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

Operator ID: USER8
Quant Time: 870318 22:30
Injected at: 870318 21:42


File >D2049 35.0-500.0 amu. U-4971 1276.0319 3-18-87MEI 10UL SMPL +
TIC
1,4-Dichlorobenzene D4
--IS1
Naphthalene D8
--IS2
--SS4 2-Fluorobiphenyl
Acenaphthene D10
--IS3

DC-G7-69


File >D2049 35.0-500.0 amu. U-4971 1276.0319 3-18-87MEI 10UL SMPL +
TIC
--SS6 Terphenyl D14
--IS5 Chrysene D12
--IS6 Perylene D12

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 870318 22:30
Output File: ^D2049::Q2 Injected at: 870318 21:42
Data File: >D2049::D1 Dilution Factor: 100.00
Name: U-4971 1276.0319 DC-G7-69
Misc: 3-18-87MEI 10UL SMPL + 990UL MECL2 +10UL IS (100X) BTL# 1

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	9.46	270	22404	40.00 UG/L	88
19)	*NAPHTHALENE-D8	(IS)	136	13.66	476	80463	40.00 UG/L	100
28)	1,2,4-TRICHLOROBENZENE		180	13.62	474	1716	241.86 UG/L yes	100
29)	NAPHTHALENE		128	13.72	479	4389	221.27 UG/L yes	100
30)	4-CHLOROANILINE		127	14.29	507	2383	473.17 UG/L yes	97
34)	*ACENAPHTHENE-D10	(IS)	162	19.10	743	47145	40.00 UG/L	94
38)	2-FLUOROBIPHENYL	(SURR)	172	17.29	654	865	60.23 UG/L	94
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.10~~	~~743~~	~~8894~~	~~579.93 UG/L~~	~~100~~
43)	DIBENZOFURAN		168	19.26	751	1238	68.76 UG/L yes	100
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.08~~	~~742~~	~~6266~~	~~1719.68 UG/L~~	~~100~~
55)	*PHENANTHRENE-D10	(IS)	188	23.48	958	59790	40.00 UG/L	84
60)	PENTACHLOROPHENOL		266	23.28	948	21892	9798.98 UG/L yes	100
65)	*CHRYSENE-D12	(IS)	240	31.53	1353	18497	40.00 UG/L	100
68)	TERPHENYL-D14	(SURR)	244	28.64	1211	223	45.21 UG/L	100
74)	*PERYLENE-D12	(IS)	264	35.54	1550	12940	40.00 UG/L	100

* Compound is ISTD

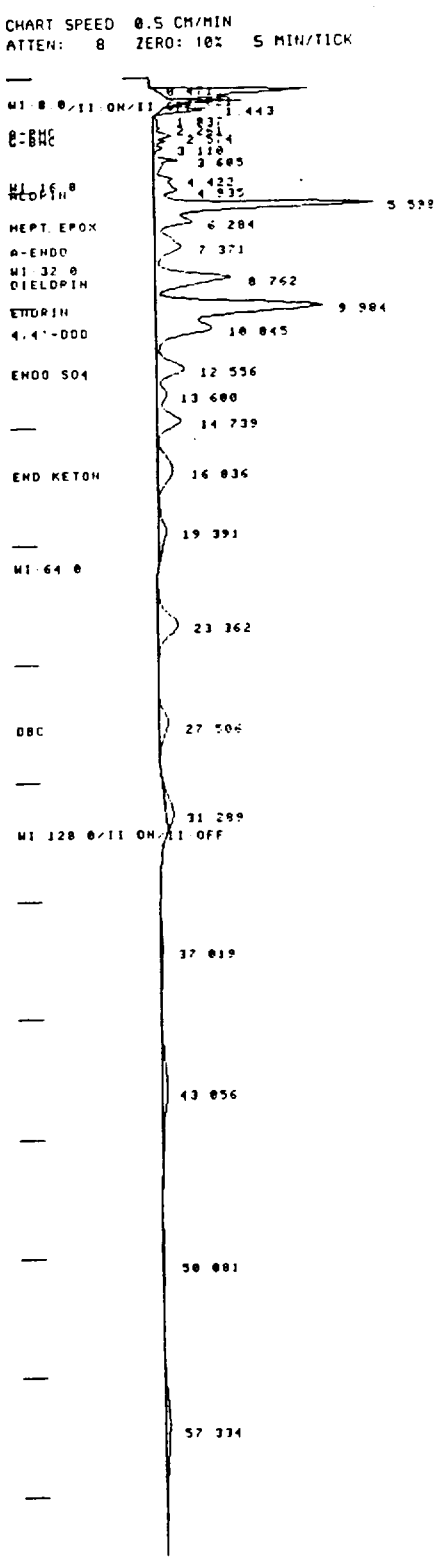


CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 10% 5 MIN/TICK
MI 8 0/II ON/II
B-BHC
HEPT. EPOX
a-ENDO
MI 32 0
DIELDRIN
ENDRIN
4,4'-DDD
ENDO SO4
END KETON
MI 64 0
DBC
MI 128 0/II ON/II OFF
1 443
5 599
6 284
7 371
8 762
9 984
10 845
12 556
13 600
14 739
16 836
19 391
23 362
27 506
31 289
37 819
43 856
50 881
57 334

DC-G7-69

RECALCULATE ON FILE: S.CROP392

CHANNEL: 1A - 1 TITLE: RUN# 20 4:01 12 MAR 87

SAMPLE: 1276 DC-GT-69 METHOD: CASE1 CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/Kg	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		W1/2 (SEC)
1		0.0000	1.443		27991	VV	?	4.38
2		0.0000	1.527		32417	VV	?	5.38
3	~~ENDO~~	6472.720	2.574	-0.036	26671	VV		12.06
4		0.0000	3.605		36478	VV		10.31
5		0.0000	3.842		21999	VV	?	29.00
6		0.0000	4.422		35416	VV	?	14.06
7	~~ALDRIN~~	17721.47	4.935	-0.125	74384	VV	?	33.75
8		0.0000	5.598		548033	VV		17.06
9	~~HEPT EPOX~~	31418.03	6.284	0.154	126115	VV	?	31.75
10	~~A-ENDO~~	40587.33	7.371	-0.219	153642	VV	?	42.81
11	4,4'-DDE	87770.57	8.762	0.042	318346	VV		30.00
12	~~B-ENDO~~ -	187615.3	9.984	-0.056	690970	VV		30.13
13	~~4,4'-DDD~~ - 1260	77580.68	10.845	-0.085	258380	VV	?	42.00
14	~~ENDO SO4~~	58945.70	12.556	-0.264	142072	VV		37.81
15		0.0000	13.600		50796	VV		42.38
16	~~4,4'-DDT~~	54925.60	14.739	0.509	130845	VV		41.19
17	~~END KETON~~	36915.95	16.836	0.446	145090	VV	?	75.88
18		0.0000	19.391	PCB	77971	VB		67.00
19		0.0000	23.362	1260	178952	BB		60.00
20	~~ODO~~	29114.94	27.506	-0.874	88035	BV		75.88
21		0.0000	31.289		66741	VB	?	106.19
22		0.0000	37.019		29328	BV		96.00
23		0.0000	43.056		131813	VB		140.00
24		0.0000	57.334		122752	BB		202.00

TOTALS: 629068.3 -0.508 3513237

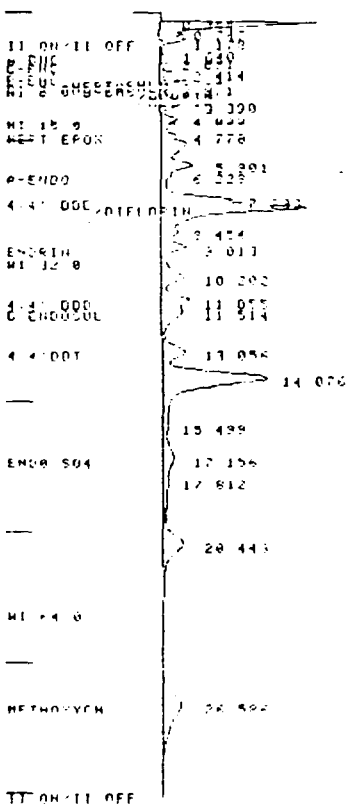
DETECTED PKS: 36 REJECTED PKS: 12

DIVISOR: 0.15000 MULTIPLIER: 1000000.00

NOISE: 11.4 OFFSET: -4

RACK: 2 VIAL: 5 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



DC-G7-69

CHANNEL: 16 - 1 TITLE: RUN#17 14:22 17 MAR 87

SAMPLE: 1276 METHOD: FEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT MG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		WI/2 (SEC)
1	[illegible]	15546.70	2.414	-0.136	31517	VV		6.69
2	[illegible]	8537.920	2.707	-0.063	40136	VV		6.25
3	[illegible]	12256.87	3.390	0.050	64714	VV		13.13
4		0.0000	4.022		60290	VV		13.19
5		0.0000	4.318		50224	VV	?	17.88
6		0.0000	4.778		45735	VV	?	17.13
7	[illegible]	38681.44	5.081	0.081	178791	VV		38.75
8		0.0000	5.901		167330	VV		23.56
9	[illegible]	9158.840	6.228	-0.062	39999	VV	?	
10	4,4'-DDE	66065.32	7.233	-0.027	290453	VV	?	19.81
11	[illegible]	171157.0	7.561	-0.129	811459	VV		20.94
12		0.0000	8.454		84221	VV	?	32.75
13	[illegible]	38540.75	9.013	-0.317	152164	VV		27.25
14		0.0000	10.202		163300	VV		28.69
15	[illegible]	49224.19	11.055	-0.045	174676	VV	?	28.31
16	[illegible]	39405.10	11.514	0.224	165361	VV	?	49.56
17	[illegible]	62071.34	13.056	-0.354	179647	VV		35.44
18	[illegible]	293832.9	[illegible]	-0.694	[illegible]	VV		34.38
19		0.0000	15.499		57099	VV	?	
20		0.0000	17.156		160191	VV	?	73.31
21	[illegible]	44443.01	17.812	0.302	99696	VV	?	
22		0.0000	20.448	PCB 1260	237642	VB		53.63
23	[illegible]	257055.4	26.586	0.636	352260	BB		71.44

TOTALS: 1105889. -0.834 4552455

DETECTED PKS: 41 REJECTED PKS: 18

DIVISOR: 0.15000 MULTIPLIER: 1000000.00

NOISE: 34.3 OFFSET: -1

PROF: 2 VIAL: 2 INJ: 1

NOTES:

SAMPLE NUMBER DC-G8-70

DC-G8-70

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.
Case No: U-4906, 4928, 4971, 4989.
Lab Sample ID No: 1277
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: C Slotowicz
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	610 BJ
67-64-1	Acetone	9000 B
75-15-0	Carbon Disulfide	2000U
75-35-4	1, 1-Dichloroethene	2000U
75-34-3	1, 1-Dichloroethane	2000U
156-60-5	Trans-1, 2-Dichloroethene	490 J
67-66-3	Chloroform	2000U
107-06-2	1, 2-Dichloroethane	2000U
78-93-3	2-Butanone	8600
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	1400J
124-48-1	Dibromochloromethane	2000U
79-00-5	1, 1, 2-Trichloroethane	2000U
71-43-2	Benzene	3600
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	4200
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	8500
108-90-7	Chlorobenzene	70,000 B
100-41-4	Ethylbenzene	10,000
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 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/ml 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

Laboratory Name Ecology & Environment
Case No V-4906, 4928, 4971, 4989

Sample Number
DC-G8-70

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low (Medium) (Circle One)
Date Extracted/Prepared 02-26-87
Date Analyzed 03-18-87
Conc/Dil Factor: 100
Percent Moisture (Decanted) 30

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	160,000u
111-44-4	bis(2-Chloroethyl)Ether	160,000u
95-57-8	2-Chlorophenol	160,000u
541-73-1	1,3-Dichlorobenzene	160,000u
106-46-7	1,4-Dichlorobenzene	160,000u
100-51-6	Benzyl Alcohol	160,000u
95-50-1	1,2-Dichlorobenzene	160,000u
95-48-7	2-Methylphenol	160,000u
39638-32-9	bis(2-chloroisopropyl)Ether	160,000u
106-44-5	4-Methylphenol	160,000u
621-64-7	N-Nitroso-Di-n-Propylamine	160,000u
67-72-1	Hexachloroethane	160,000u
98-95-3	Nitrobenzene	160,000u
78-59-1	Isophorone	160,000u
88-75-5	2-Nitrophenol	160,000u
105-67-9	2,4-Dimethylphenol	160,000u
65-85-0	Benzoic Acid	830,000u
111-91-1	bis(2-Chloroethoxy)Methane	160,000u
120-83-2	2,4-Dichlorophenol	99000 J
120-82-1	1,2,4-Trichlorobenzene	160,000u
91-20-3	Naphthalene	3,800,000
106-47-8	4-Chloroaniline	160,000u
87-68-3	Hexachlorobutadiene	160,000u
59-50-7	4-Chloro-3-Methylphenol	160,000u
91-57-6	2-Methylnaphthalene	26000 J
77-47-4	Hexachlorocyclopentadiene	160,000u
88-06-2	2,4,6-Trichlorophenol	160,000u
95-95-4	2,4,5-Trichlorophenol	830,000u
91-58-7	2-Chloronaphthalene	160,000u
88-74-4	2-Nitroaniline	830,000u
131-11-3	Dimethyl Phthalate	160,000u
208-96-8	Acenaphthylene	160,000u
99-09-2	3-Nitroaniline	830,000u

CAS Number		ug/l or (ug/Kg) (Circle One)
83-32-9	Acenaphthene	160,000u
51-28-5	2,4-Dinitrophenol	830,000u
100-02-7	4-Nitrophenol	830,000u
132-64-9	Dibenzofuran	160,000u
121-14-2	2,4-Dinitrotoluene	160,000u
606-20-2	2,6-Dinitrotoluene	160,000u
84-66-2	Diethylphthalate	16000 J
7005-72-3	4-Chlorophenyl-phenylether	160,000u
86-73-7	Fluorene	160,000u
100-01-6	4-Nitroaniline	830,000u
534-52-1	4,6-Dinitro-2-Methylphenol	830,000u
86-30-6	N-Nitrosodiphenylamine (1)	160,000u
101-55-3	4-Bromophenyl-phenylether	160,000u
118-74-1	Hexachlorobenzene	160,000u
87-86-5	Pentachlorophenol	130000 J
85-01-8	Phenanthrene	36000 J
120-12-7	Anthracene	160,000u
84-74-2	Di-n-Butylphthalate	160,000u
206-44-0	Fluoranthene	160,000u
129-00-0	Pyrene	160,000u
85-68-7	Butylbenzylphthalate	160,000u
91-94-1	3,3'-Dichlorobenzidine	320,000u
56-55-3	Benzo(a)Anthracene	160,000u
117-81-7	bis(2-Ethylhexyl)Phthalate	160,000u
218-01-9	Chrysene	160,000u
117-84-0	Di-n-Octyl Phthalate	160,000u
205-99-2	Benzo(b)Fluoranthene	160,000u
207-08-9	Benzo(k)Fluoranthene	160,000u
50-32-8	Benzo(a)Pyrene	160,000u
193-39-5	Indeno(1,2,3-cd)Pyrene	160,000u
53-70-3	Dibenz(a,h)Anthracene	160,000u
191-24-2	Benzo(g,h,i)Perylene	160,000u

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No U-4906, 4928, 4971, 4989

Sample Number DC-68-70

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 2-26-87

Date Analyzed 3-12-87

Conc/Dil Factor 1000

Percent Moisture (decanted) 30

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	80,000u
319-85-7	Beta-BHC	80,000u
319-86-8	Delta-BHC	80,000u
58-89-9	Gamma-BHC (Lindane)	80,000u
76-44-8	Heptachlor	80,000u
309-00-2	Aldrin	80,000u
1024-57-3	Heptachlor Epoxide	80,000u
959-98-8	Endosulfan I	80,000u
60-57-1	Dieldrin	160,000u
72-55-9	4,4'-DDE	160,000u
72-20-8	Endrin	160,000u
33213-65-9	Endosulfan II	160,000u
72-54-8	4,4'-DDD	160,000u
1031-07-8	Endosulfan Sulfate	160,000u
50-29-3	4,4'-DDT	160,000u
72-43-5	Methoxychlor	800,000u
53494-70-5	Endrin Ketone	160,000u
57-74-9	Chlordane	800,000u
8001-35-2	Toxaphene	1,600,000u
12674-11-2	Aroclor-1016	800,000u
11104-28-2	Aroclor-1221	800,000u
11141-16-5	Aroclor-1232	800,000u
53469-21-9	Aroclor-1242	800,000u
12672-29-6	Aroclor-1248	800,000u
11097-69-1	Aroclor-1254	1,600,000u
11096-82-5	Aroclor-1260	3,100,000 1268 as 1260

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-G8-70

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number MLC-IC	Estimated Concentration (ug/l or ug/kg)
1.		Dichlorobenzene isomer	VOA	39.4	6400 J
2.		Dichlorobenzene isomer	VOA	40.0	5200 J
3.					
4.		Chlorobenzenamine isomer	BNA	12.65	120,000 J
5.	95829	Benzenamine, 2,5-dichloro-	BNA	16.66	91,000 J
6.		Isomeric dodecylbenzene	BNA	21.69	180,000 J
7.		Unknown Substituted benzene	BNA	22.20	170,000 J
8.		Unknown	BNA	24.34	270,000 J
9.		Unknown	BNA	31.14	690,000 J
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
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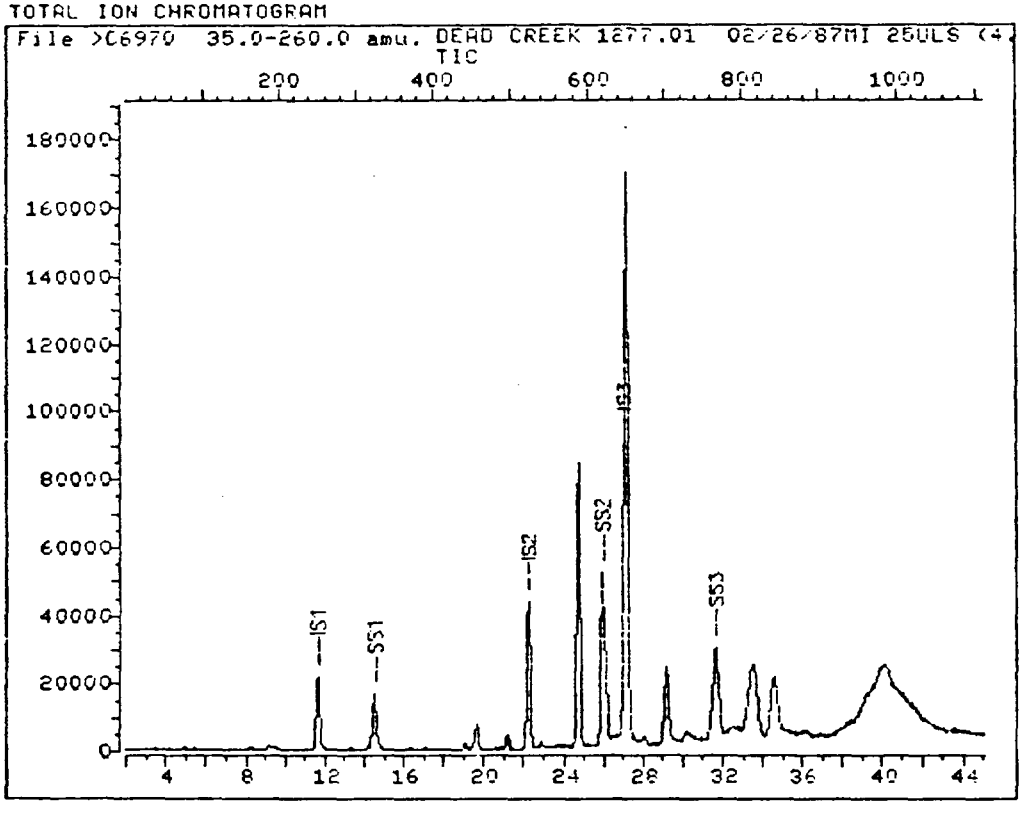
25.					
26.					
27.					
28.					
29.					
30.					

TOTAL ION CHROMATOGRAM

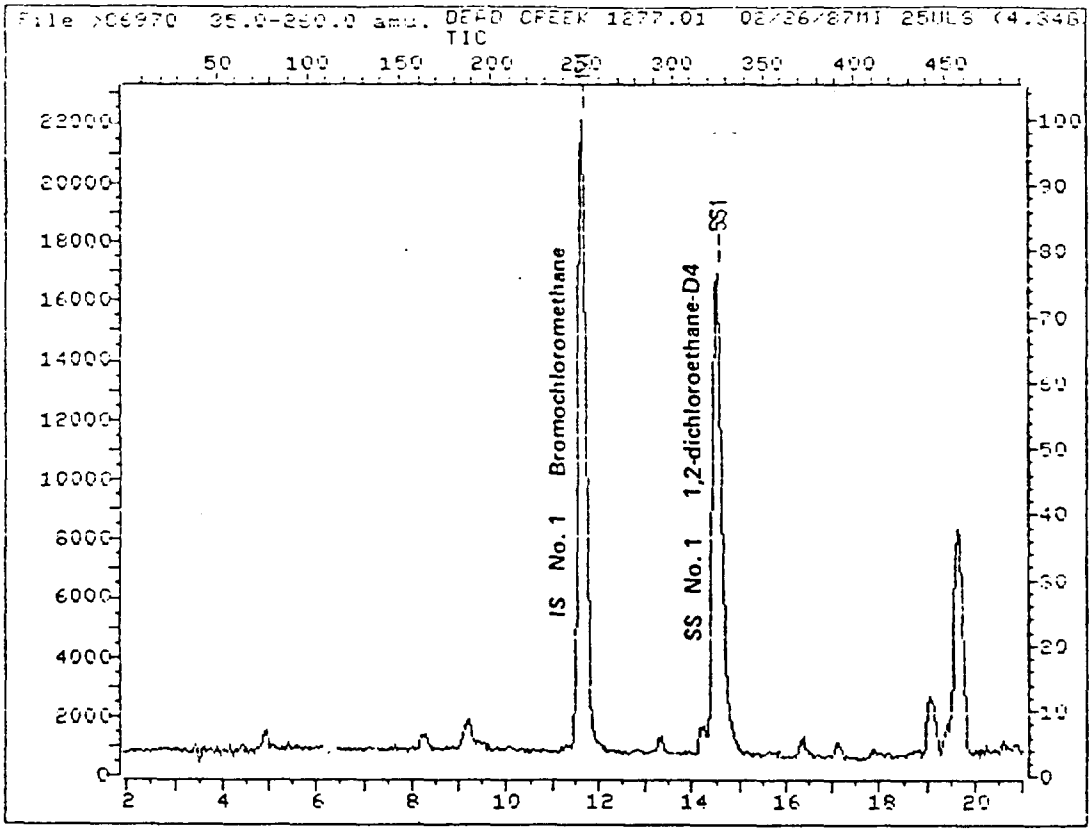


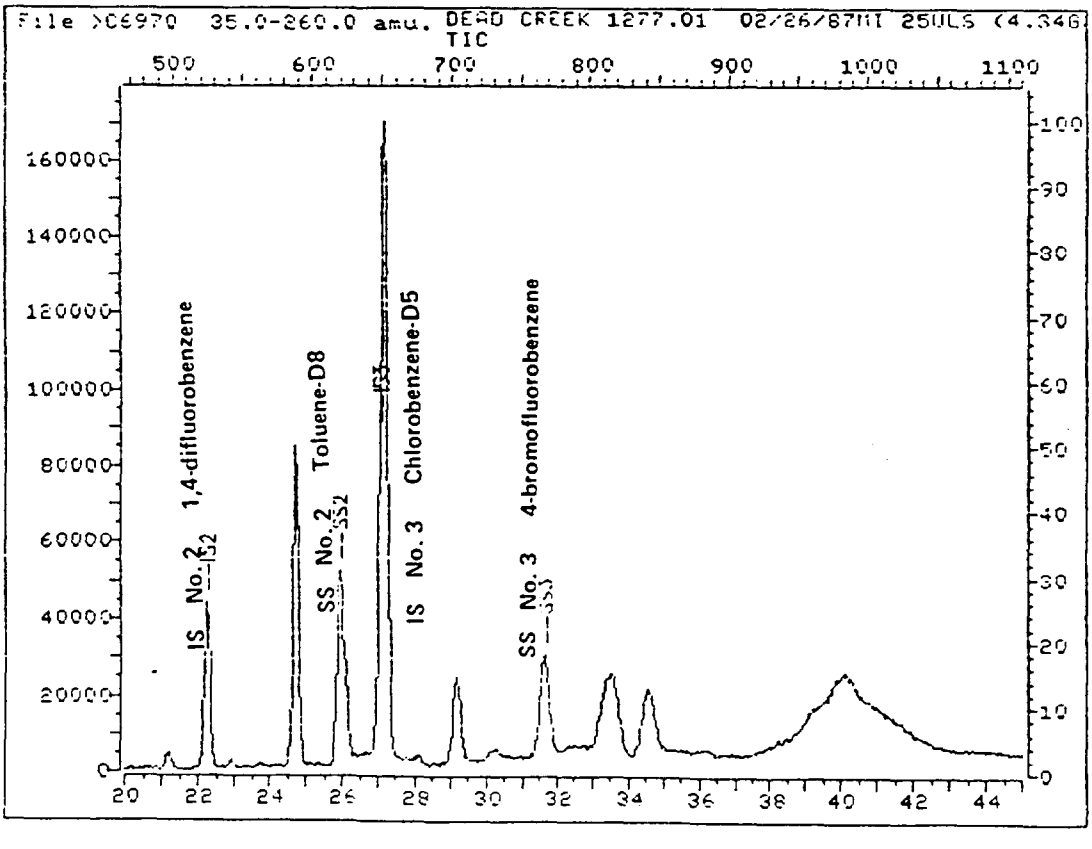
Data File: >C6970::D3
Name: DEAD CREEK 1277.01 DC-G8-70
Misc: 02/26/87MI 25ULS (4.34G/10MLS MEOH) + 10UL IS/SS

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

Operator ID: USER8
Quant Time: 870226 21:25
Injected at: 870226 20:39

DC-G8-70


File >C6970 35.0-260.0 amu. DEAD CREEK 1277.01 02/26/87MI 25ULS (4.346
TIC
IS No. 1 Bromochloromethane
SS No. 1 1,2-dichloroethane-D4
SS1


File >C6970 35.0-260.0 amu. DEAD CREEK 1277.01 02/26/87MI 25ULS (4.346
TIC
IS No. 2 1,4-difluorobenzene
SS No. 2 Toluene-D8
IS No. 3 Chlorobenzene-D5
SS No. 3 4-bromofluorobenzene

QUANT REPORT

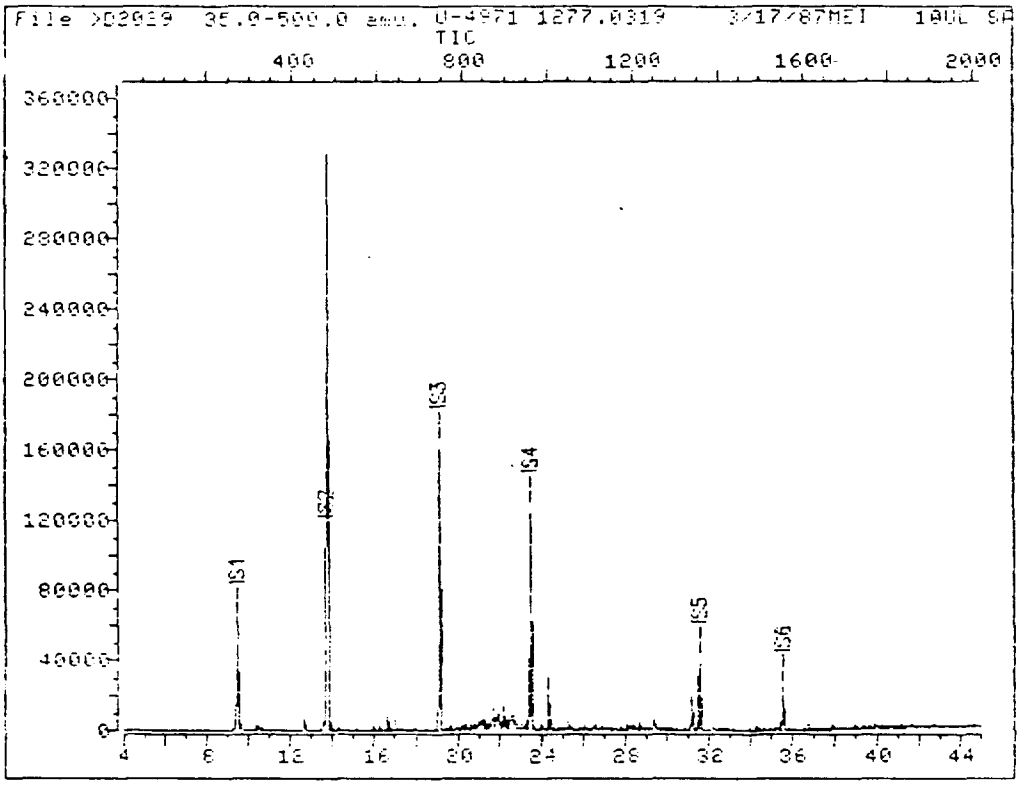
Operator ID: USER8 Quant Rev: 4 Quant Time: 870226 21:25
Output File: ^C6970::Q2 Injected at: 870226 20:39
Data File: >C6970::D3 Dilution Factor: 1.00
Name: DEAD CREEK 1277.01 DC-G8-70
Misc: 02/26/87MI 25ULS (4.34G/10MLS MEOH) + 10UL IS/SS

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	11.65	251	31413	50.00 UG/L	100
6)	METHYLENE CHLORIDE		84	8.24	163	1443	1.33 UG/L	100
7)	ACETONE		43	9.17	187	10955	19.58 UG/L	100
12)	TRANS-1,2-DICHLOROETHENE		96	13.32	294	1068	1.06 UG/L	87
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.52	325	73194	47.72 UG/L	85
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.25	524	180003	50.00 UG/L	100
17)	2-BUTANONE		72	14.68	329	3008	18.66 UG/L	100
24)	TRICHLOROETHENE		130	19.06	442	4276	2.96 UG/L	86
27)	BENZENE		78	19.65	457	34336	7.92 UG/L	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.06	648	147890	50.00 UG/L	100
32)	4-METHYL-2-PENTANONE		43	22.91	541	9552	9.14 UG/L	85
~~33)~~	~~2-HEXANONE~~		~~43~~	~~24.73~~	~~588~~	~~8532~~	~~2.79 UG/L~~	100
34)	TETRACHLOROETHENE		164	24.73	588	115040	89.26 UG/L	92
~~35)~~	~~1,1,2,2-TETRACHLOROETHANE~~		~~83~~	~~24.73~~	~~588~~	~~3989~~	~~2.68 UG/L~~	100
36)	TOLUENE-D8	(SURR)	98	25.93	619	185754	48.40 UG/L	92
37)	TOLUENE		92	26.13	624	50135	18.54 UG/L	97
38)	CHLOROBENZENE		112	27.18	651	475360	151.59 UG/L	98
39)	ETHYLBENZENE		91	29.16	702	132383	22.69 UG/L	97
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.65	766	96991	48.33 UG/L	100
~~41)~~	~~STYRENE~~		~~104~~	~~34.56~~	~~841~~	~~3375~~	~~1.00 UG/L~~	100
42)	TOTAL XYLENES		91	33.59	816	102421	21.44 UG/L	100
42)	TOTAL XYLENES		91	34.56	841	152353	31.89 UG/L	100
43)	1,3-DICHLOROBENZENE		146	39.38	965	20653	20653.00 NO CALIB	100
43)	1,3-DICHLOROBENZENE		146	40.00	981	16987	16987.00 NO CALIB	100
44)	1,2-DICLHLOROBENZENE		146	39.38	965	20653	20653.00 NO CALIB	100
44)	1,2-DICLHLOROBENZENE		146	40.00	981	16987	16987.00 NO CALIB	100
45)	1,4-DICHLOROBENZENE		146	39.38	965	20653	20653.00 NO CALIB	100
45)	1,4-DICHLOROBENZENE		146	40.00	981	16987	16987.00 NO CALIB	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM

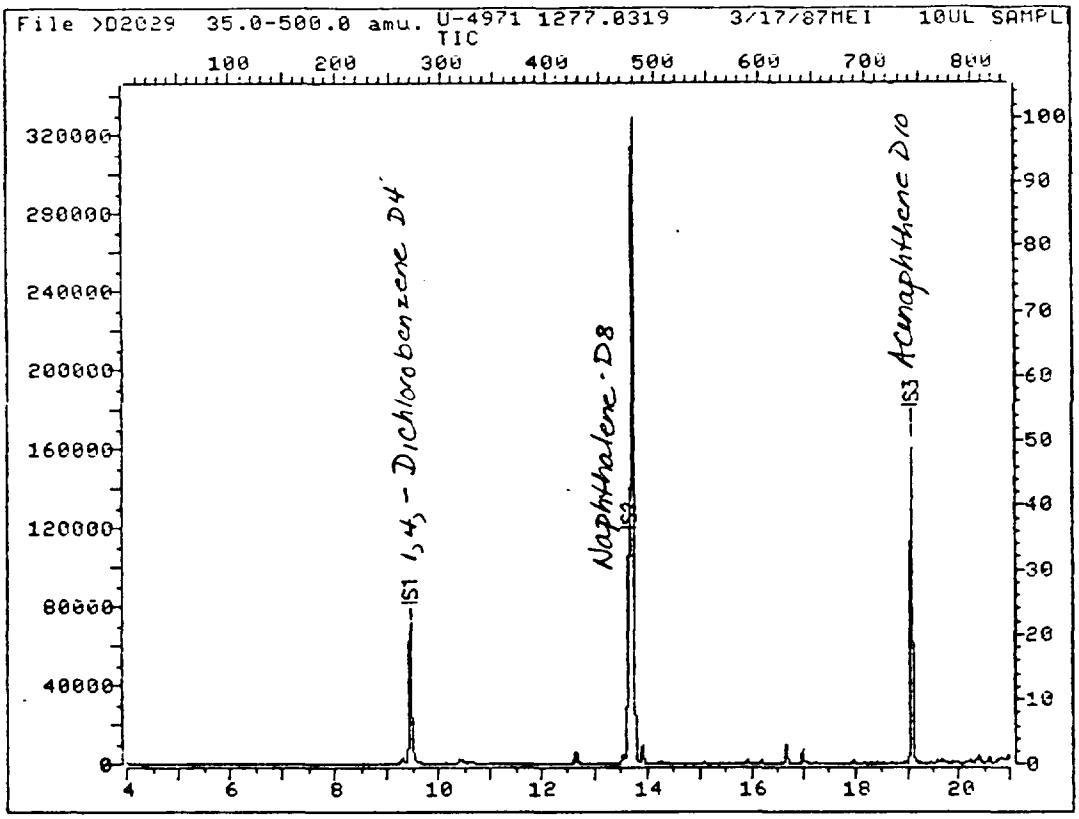


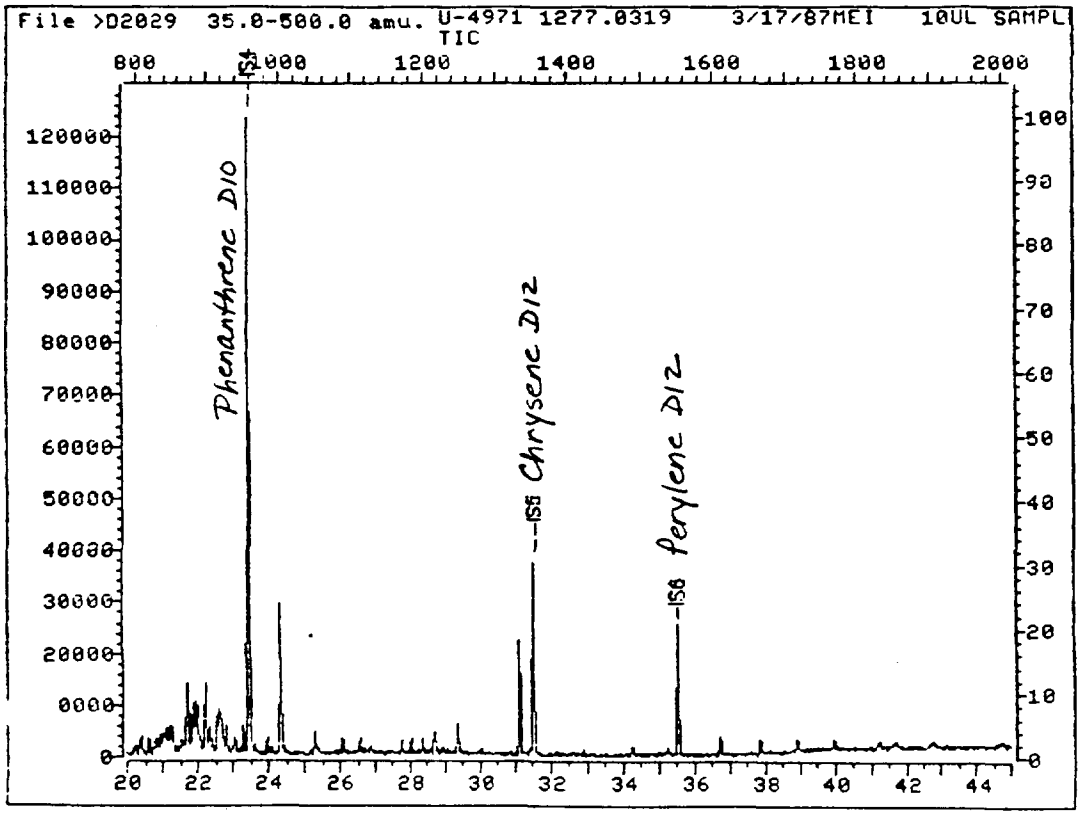
Data File: >D2029::D1
Name: U-4971 1277.0319 DC-G8-70
Misc: 3/17/87MEI 10UL SAMPLE/990UL MECL2 +10UL IS (100%)_ BTL#10

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (E)
Last Calibration: 870317 16:30

Operator ID: USER8
Quant Time: 870318 02:47
Injected at: 870318 02:00

DC-G8-70


File >D2029 35.0-500.0 amu. U-4971 1277.0319 3/17/87MEI 10UL SAMPL
TIC
IS1 1,4-Dichlorobenzene D4
Naphthalene-D8
IS3
IS3 Acenaphthene D10


File >D2029 35.0-500.0 amu. U-4971 1277.0319 3/17/87MEI 10UL SAMPL
TIC
IS4
Phenanthrene D10
IS5 Chrysene D12
IS6 Perylene D12

QUANT REPORT

erator ID: USER8 Quant Rev: 4 Quant Time: 870318 02:47
Output File: ^D2029::Q2 Injected at: 870318 02:00
Data File: >D2029::01 Dilution Factor: 100.00
Name: U-4971 1277.0319 DC-G8-70
Misc: 3/17/87MEI 10UL SAMPLE/990UL MECL2 +10UL IS (100X)_ BTL#10

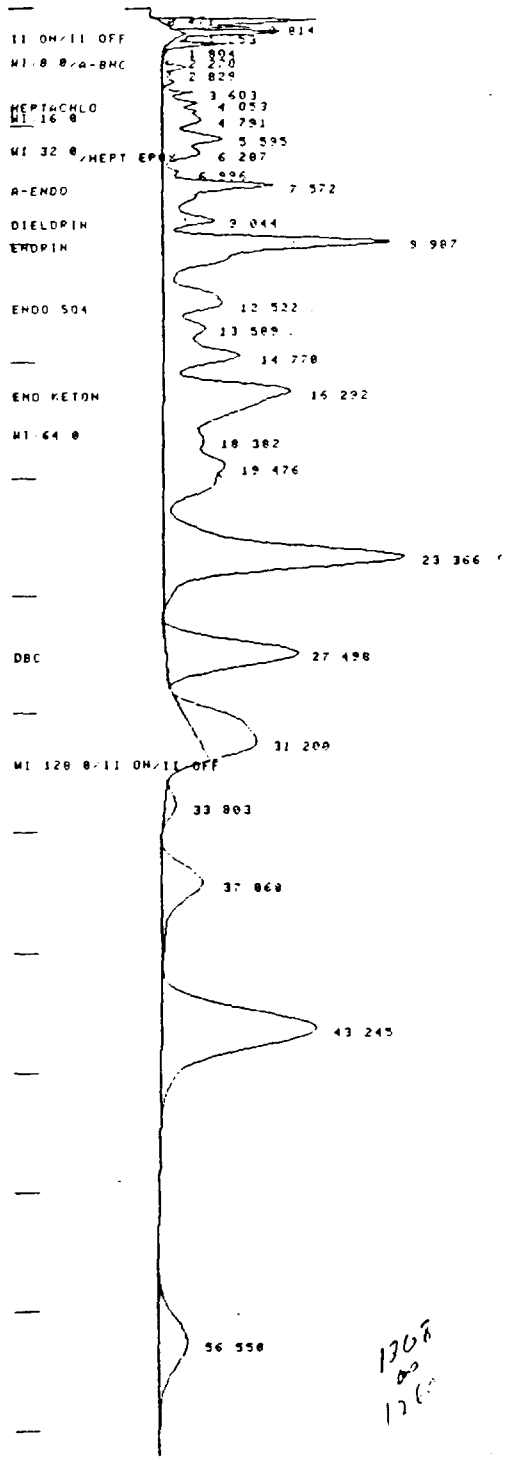
ID File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870317 16:30

	Compound		R.T.	Scan#	Area	Conc	Units	q	
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.45	269	36934	40.00	UG/L	87
19)	*NAPHTHALENE-D8	(IS)	136	13.66	476	138092	40.00	UG/L	100
27)	2,4-DICHLOROPHENOL		162	13.54	470	3299	313.09	UG/L yes	90
29)	NAPHTHALENE		128	13.75	480	404910	11842.36	UG/L yes	100
~~29)~~	~~NAPHTHALENE~~		~~128~~	~~13.79~~	~~482~~	~~1479~~	~~43.26~~	~~UG/L~~	~~100~~
33)	2-METHYLNAPHTHALENE		142	15.93	587	1910	82.82	UG/L yes	88
34)	*ACENAPHTHENE-D10	(IS)	162	19.08	742	87360	40.00	UG/L	94
41)	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.09~~	~~742~~	~~16699~~	~~582.99~~	~~UG/L~~	100
52)	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.08~~	~~742~~	~~11698~~	~~1691.18~~	~~UG/L~~	100
53)	DIETHYLPHTHALATE		149	21.04	838	1456	49.18	UG/L yes	96
55)	*PHENANTHRENE-D10	(IS)	188	23.46	957	131926	40.00	UG/L	93
60)	PENTACHLOROPHENOL		266	23.28	948	2453	405.40	UG/L yes	100
61)	PHENANTHRENE		178	23.52	960	3694	113.64	UG/L yes	98
~~62)~~	~~ANTHRACENE~~		~~178~~	~~23.52~~	~~960~~	~~3694~~	~~123.00~~	~~UG/L~~	~~98~~
65)	*CHRYSENE-D12	(IS)	240	31.53	1353	38891	40.00	UG/L	100
74)	*PERYLENE-D12	(IS)	264	35.52	1549	24929	40.00	UG/L	100

* Compound is ISTD

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

DC-G8-70



RECALCULATE ON FILE: S.CROP393

CHANNEL: 1A - 1 TITLE: RUN# 21 5:08 12 MAR 87

SAMPLE: 1277DC-G8-70 METHOD: CASE1 CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/kg	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.514		64071	VV	7.00
2	~~G-BHC~~	9714.298	2.506	-0.104	40028	VV	12.56
3		0.0000	3.603		46723	VV	10.38
4	~~HEPTACHLR~~	20558.84	4.053	-0.067	75497	VV	? 17.31
5		0.0000	4.371		61754	VV	? 17.63
6		0.0000	4.791		155406	VV	? 50.00
7		0.0000	5.595		230196	VV	? 35.13
8	~~HEPT EPOX~~	41688.83	6.207	0.077	167343	VV	? 44.56
9		0.0000	6.996		35385	VV	? 20.13
10	~~A-ENDO~~	124024.0	7.572	-0.018	469489	VV	24.13
11	~~DIELDRIN~~	51906.50	9.044	0.204	207154	VV	27.81
12	~~B-ENDO~~	340817.9	9.987	-0.053	1255201	VV	32.94
13	~~ENDO-SO4~~	186400.1	12.522	-0.298	449265	VV	? 60.06
14		0.0000	13.589		241103	VV	? 47.94
15	~~4,4 DDT~~	213639.1	14.770	0.540	508936	VV	49.81
16	~~END KETON~~ 1260	347935.6	16.292	-0.098	1348634	VV	85.25
17		0.0000	18.382		245775	VV	? 54.94
18		0.0000	19.476		812833	VV	?117.63
19		0.0000	*23.366 PCB 1260		2304151	VB	64.88
20	~~DDD~~	412892.1	27.498	-0.1260	1248464	BV	74.31
21		0.0000	31.200		806138	VB	?147.13
22		0.0000	33.803		82556	BV	54.69
23		0.0000	37.068		558771	VV	96.44
24		0.0000	43.245		2360172	VB	110.44
25		0.0000	56.550		563260	BB	144.75
TOTALS:		1749577.		-0.699	14338305		

DETECTED PKS: 38 REJECTED PKS: 13

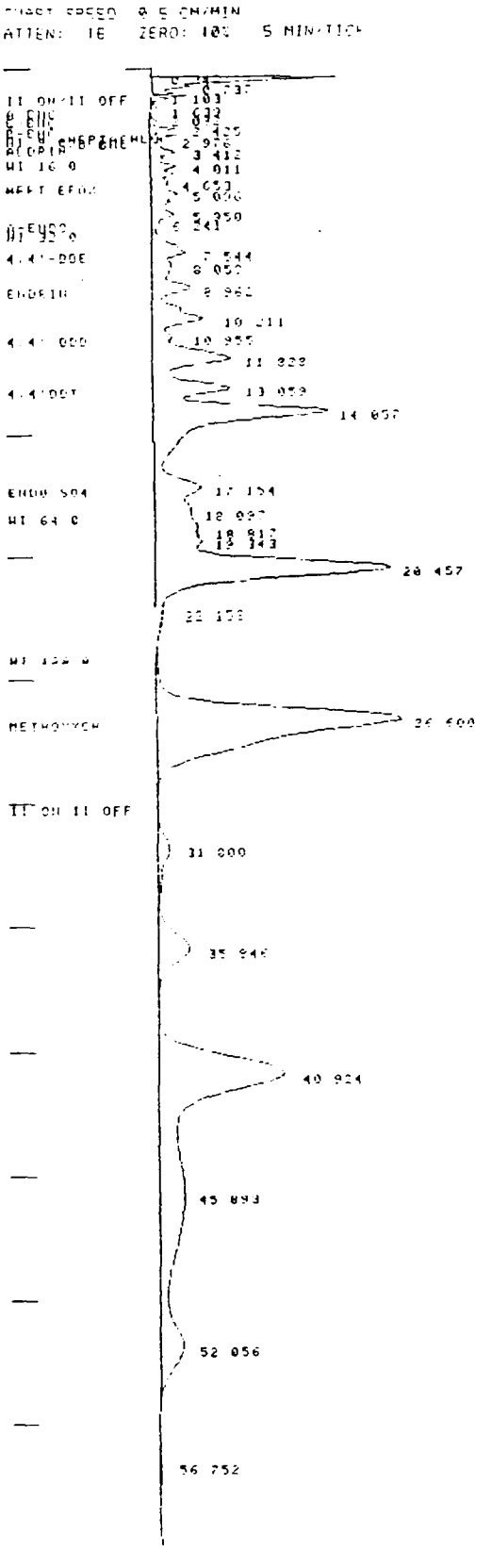
DIVISOR: 0.15000 MULTIPLIER: 1000000.00

NOISE: 11.4 OFFSET: -5

RACK: 2 VIAL: 6 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

CHART SPEED 0.5 CM/MIN
ATTEN: 1E ZERO: 10% 5 MIN/TICK



CHANNEL: 1B - 1 TITLE: RUN# 18 DC-G8-7Q 14:58 17 MAR 87

SAMPLE: 1277 METHOD: PEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT MG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1	———	25643.[illegible]	2.425	[illegible]	51380	VV	6.63
2	———	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]

DC-GS-70

CHANNEL: 1B - 1 TITLE: RUN# 18 14:58 17 MAR 87

SAMPLE: 1277 METHOD: PEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT MG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		WI/2 (SEC)
1	[illegible]	25643.38	2.425	-0.125	51980	VV		6.63
2	[illegible]	13515.04	2.706	-0.064	63533	VV		7.81
3	[illegible]	7030.633	2.976	-0.004	30780	VV	?	10.69
4	[illegible]	16785.07	3.412	0.072	99187	VV		16.38
5		0.0000	3.695		31214	VV	?	14.68
6		0.0000	4.011		92375	VV	?	14.75
7		0.0000	4.312		76627	VV	?	17.94
8		0.0000	4.653		49429	VV	?	17.44
9		0.0000	4.704		42577	VV	?	
10	[illegible]	29845.51	5.096	0.096	138236	VV	?	22.63
11		0.0000	5.427		74661	VV	?	24.38
12		0.0000	5.950		137856	VV	?	29.06
13	[illegible]	8705.695	6.241	-0.049	38020	VV	?	
14	[illegible]	68017.01	7.544	-0.146	322470	VV		38.63
15		0.0000	8.058		190680	VV	?	75.06
16	[illegible]N	75120.32	8.962 ✓	-0.368	295585	VV		31.19
17		0.0000	10.211 ✓		503715	VV		45.94
18	[illegible]	32364.77	10.955	-0.145	114849	VV	?	27.63
19	[illegible]	196190.5	11.628	0.538	823301	VV		41.25
20	[illegible]	245690.1	13.059 ✓	-0.351	711077	VV		37.25
21	[illegible]	697389.4	[illegible]	-0.713	[illegible]	VV		38.63
22		0.0000	17.154 ✓		592504	VV	?	51.25
23	[illegible]	127851.3	18.097	0.287	286353	VV	?	48.69
24		0.0000	18.617		414379	VV	?	63.06
25		0.0000	19.343		419230	VV	?	36.25
26		0.0000	* 20.457 ✓ PCB 1248		3303664	VV		48.63
27	[illegible]	3820322.	26.547	0.40 ppm 1260	5235238	VE		76.63
28		0.0000	31.760		287709	BV		76.88
29		0.0000	35.816		674585	VE		81.56
30		0.0000	40.886		3368248	BV		85.13
31		0.0000	45.954		1848523	VV		153.19
32		0.0000	52.056		782820	VE		129.56
33		0.0000	56.752		22112	EE		83.00

TOTALS: 5366273. -0.175 23394442

DETECTED PKS: 53 REJECTED PKS: 20

DIVISOR: 0.15000 MULTIPLIER: 1000000.00

NOISE: 297.1 OFFSET: -16

RACK: 2 VIAL: 5 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.CRH.111

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

[illegible]

SAMPLE NUMBER DC-G9-71

DC-G9-71

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.
Case No: IL-4906, 4928, 4971, 4989
Lab Sample ID No: 1278
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: CStojowicz
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 pH 7.5
Percent Moisture: (Not Decanted) 14

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	400 BJ
67-64-1	Acetone	5200 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	10000
107-06-2	1, 2-Dichloroethane	1000U
78-93-3	2-Butanone	8200 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	39000
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	11000
79-34-5	1, 1, 2, 2-Tetrachloroethane	500 J
108-88-3	Toluene	81000
108-90-7	Chlorobenzene	170000 E
100-41-4	Ethylbenzene	6200
100-42-5	Styrene	1000U
	Total Xylenes	14000 E

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/ml 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 V-4906, 4928, 4971, 4989

Sample Number
DC-G9-71

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low (Medium) (Circle One)

Date Extracted/Prepared: 02-26-87

Date Analyzed: 03-18-87

Conc/Dil Factor: 10

Percent Moisture (Decanted): 14

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	16000 U
111-44-4	bis(2-Chloroethyl)Ether	16000 U
95-57-8	2-Chlorophenol	16000 U
541-73-1	1 3-Dichlorobenzene	16000 U
106-46-7	1 4-Dichlorobenzene	16000 U
100-51-6	Benzyl Alcohol	16000 U
95-50-1	1 2-Dichlorobenzene	16000 U
95-48-7	2-Methylphenol	16000 U
39638-32-9	bis(2-chloroisopropyl)Ether	16000 U
106-44-5	4-Methylphenol	16000 U
621-64-7	N-Nitroso-Di-n-Propylamine	16000 U
67-72-1	Hexachloroethane	16000 U
98-95-3	Nitrobenzene	16000 U
78-59-1	Isophorone	16000 U
88-75-5	2-Nitrophenol	16000 U
105-67-9	2 4-Dimethylphenol	16000 U
65-85-0	Benzoic Acid	83000 U
111-91-1	bis(2-Chloroethoxy)Methane	16000 U
120-83-2	2 4-Dichlorophenol	16000 U
120-82-1	1 2 4-Trichlorobenzene	13000 J
91-20-3	Naphthalene	94000
106-47-8	4-Chloroaniline	6900 J
87-68-3	Hexachlorobutadiene	16000 U
59-50-7	4-Chloro-3-Methylphenol	16000 U
91-57-6	2-Methylnaphthalene	12000 J
77-47-4	Hexachlorocyclopentadiene	16000 U
88-06-2	2 4 6-Trichlorophenol	16000 U
95-95-4	2 4 5-Trichlorophenol	83000 U
91-58-7	2-Chloronaphthalene	16000 U
88-74-4	2-Nitroaniline	83000 U
131-11-3	Dimethyl Phthalate	16000 U
208-96-8	Acenaphthylene	16000 U
99-09-2	3-Nitroaniline	83000 U

CAS Number		ug/l or (ug/Kg) (Circle One)
83-32-9	Acenaphthene	2300 J
51-28-5	2 4-Dinitrophenol	12000 J
100-02-7	4-Nitrophenol	83000 U
132-64-9	Dibenzofuran	3700 J
121-14-2	2 4-Dinitrotoluene	16000 U
606-20-2	2 6-Dinitrotoluene	16000 U
84-66-2	Diethylphthalate	16000 U
7005-72-3	4-Chlorophenyl-phenylether	16000 U
86-73-7	Fluorene	9700 J
100-01-6	4-Nitroaniline	83000 U
534-52-1	4 6-Dinitro-2-Methylphenol	83000 U
86-30-6	N-Nitrosodiphenylamine (1)	16000 U
101-55-3	4-Bromophenyl-phenylether	16000 U
118-74-1	Hexachlorobenzene	16000 U
87-86-5	Pentachlorophenol	83000 U
85-01-8	Phenanthrene	22000
120-12-7	Anthracene	7300 J
84-74-2	Di-n-Butylphthalate	15000 BJ
206-44-0	Fluoranthene	16000 U
129-00-0	Pyrene	6500 J
85-68-7	Butylbenzylphthalate	20000
91-94-1	3 3-Dichlorobenzidine	32000 U
56-55-3	Benzo(a)Anthracene	16000 U
117-81-7	bis(2-Ethylhexyl)Phthalate	16000 U
218-01-9	Chrysene	16000 U
117-84-0	Di-n-Octyl Phthalate	16000 U
205-99-2	Benzo(b)Fluoranthene	16000 U
207-08-9	Benzo(k)Fluoranthene	16000 U
50-32-8	Benzo(a)Pyrene	16000 U
193-39-5	Indeno(1 2 3-cd)Pyrene	16000 U
53-70-3	Dibenz(a h)Anthracene	16000 U
191-24-2	Benzo(g h i)Perylene	16000 U

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No V-4906, 4928, 4971, 4989

Sample Number DC-G9-71

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 2-26-87

Date Analyzed 3-12-87

Conc/Dil Factor 100

Percent Moisture (decanted) 14

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	8,000u	
319-85-7	Beta-BHC	8,000u	
319-86-8	Delta-BHC	8,000u	
58-89-9	Gamma-BHC (Lindane)	8,000u	
76-44-8	Heptachlor	8,000u	
309-00-2	Aldrin	8,000u	
1024-57-3	Heptachlor Epoxide	8,000u	
959-98-8	Endosulfan I	8,000u	
60-57-1	Dieldrin	16,000u	
72-55-9	4,4'-DDE	16,000u	
72-20-8	Endrin	16,000u	
33213-65-9	Endosulfan II	16,000u	
72-54-8	4,4'-DDD	16,000u	
1031-07-8	Endosulfan Sulfate	16,000u	
50-29-3	4,4'-DDT	16,000u	
72-43-5	Methoxychlor	80,000u	
53494-70-5	Endrin Ketone	16,000u	
57-74-9	Chlordane	80,000u	
8001-35-2	Toxaphene	160,000u	
12674-11-2	Aroclor-1016	80,000u	
11104-28-2	Aroclor-1221	80,000u	
11141-16-5	Aroclor-1232	80,000u	
53469-21-9	Aroclor-1242	80,000u	
12672-29-6	Aroclor-1248	150,000	C
11097-69-1	Aroclor-1254	160,000u	
11096-82-5	Aroclor-1260	230,000	C

V_t = 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_t 4

Laboratory Name Ecology & Environment Inc.

Case No U-4906, 4928, 4971, 4989

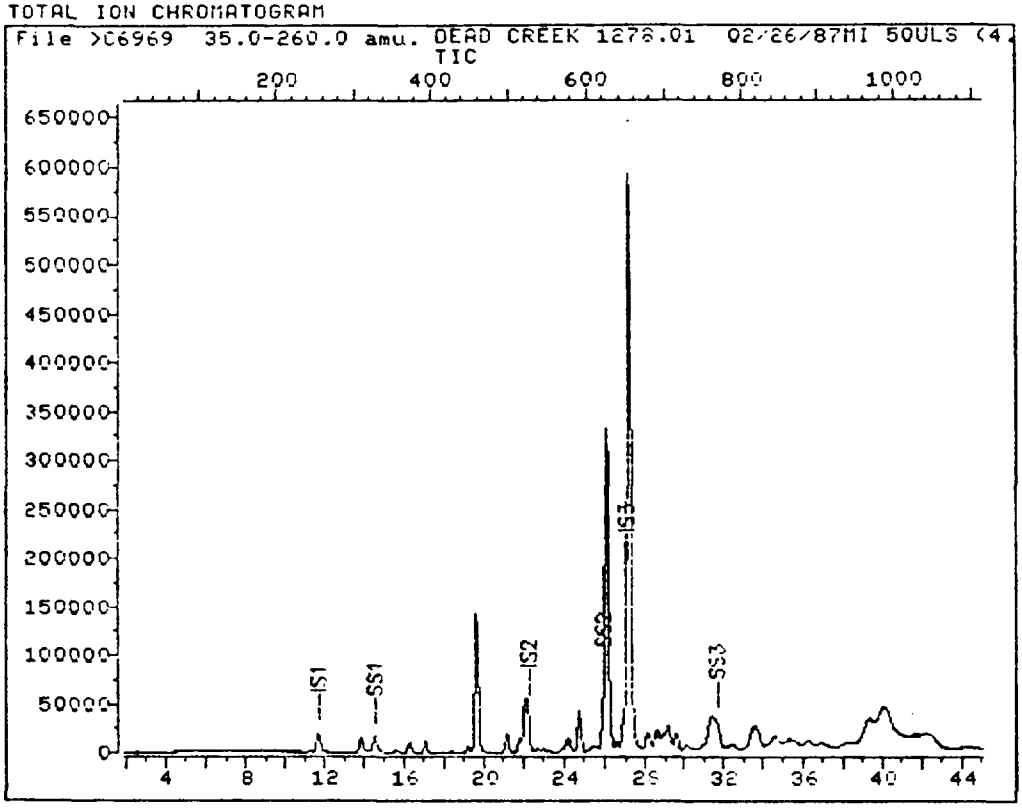
Sample Number DC-69-71

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.	110827	Cyclohexane	VOA	16.3	5000 J
2.		Hexene isomer	VOA	17.1	1300 J
3.		Hexane isomer	VOA	21.2	2200 J
4.		Unknown	VOA	24.2	2700 J
5.		Unknown hydrocarbon	VOA	28.2	2400 J
6.		Unknown hydrocarbon	VOA	28.6	3700 J
7		Dichlorobenzene isomer	VOA	39.4	11000 J
8.		Dichlorobenzene isomer	VOA	40.1	26000 J
9.					
10.					
11.	100005	Benzene, 1-chloro-4-nitro-	BNA	14.92	36000 J
12.	92524	1,1'-Biphenyl		17.47	61000 J
13.	643583	1,1'-Biphenyl, 2-methyl-		17.86	130,000 J
14.	1560969	Tridecane, 2-methyl		17.96	50000 J
15.	644086	1,1'-Biphenyl, 4-methyl-		19.25	78000 J
16.	643939	1,1'-Biphenyl, 3-methyl-		19.39	56000 J
17.	629629	Pentadecane		19.60	71000 J
18.	544763	Hexadecane		21.13	81000 J
19.		Isomeric Dodecylbenzene		21.70	72000 J
20.		Unknown hydrocarbon		21.85	52000 J
21.	2785440	Benzene, (1,1-dimethyldecyl)-		21.91	54000 J
22.		Unknown (dodecyl benzene isomer?)		21.99	39000 J
23.		Unknown (dodecylbenzene isomer?)		22.21	57000 J
24	629787	Heptadecane		22.58	100,000 J
25.		Unknown hydrocarbon		22.66	54,000 J
26.		Unknown hydrocarbon		23.97	59,000 J
27.		Unknown hydrocarbon		25.30	320,000 J
28		Unknown hydrocarbon		26.56	300,000 J
29.	5097124	Benzene, 1,1'-Sulfonylbis[2-methyl-		28.04	230,000 J
30	1241947	Phosphoric acid, 2-ethylhexyl diphenyl ester	↓	31.40	240,000 J

TOTAL ION CHROMATOGRAM



Data File: >C6969::D3
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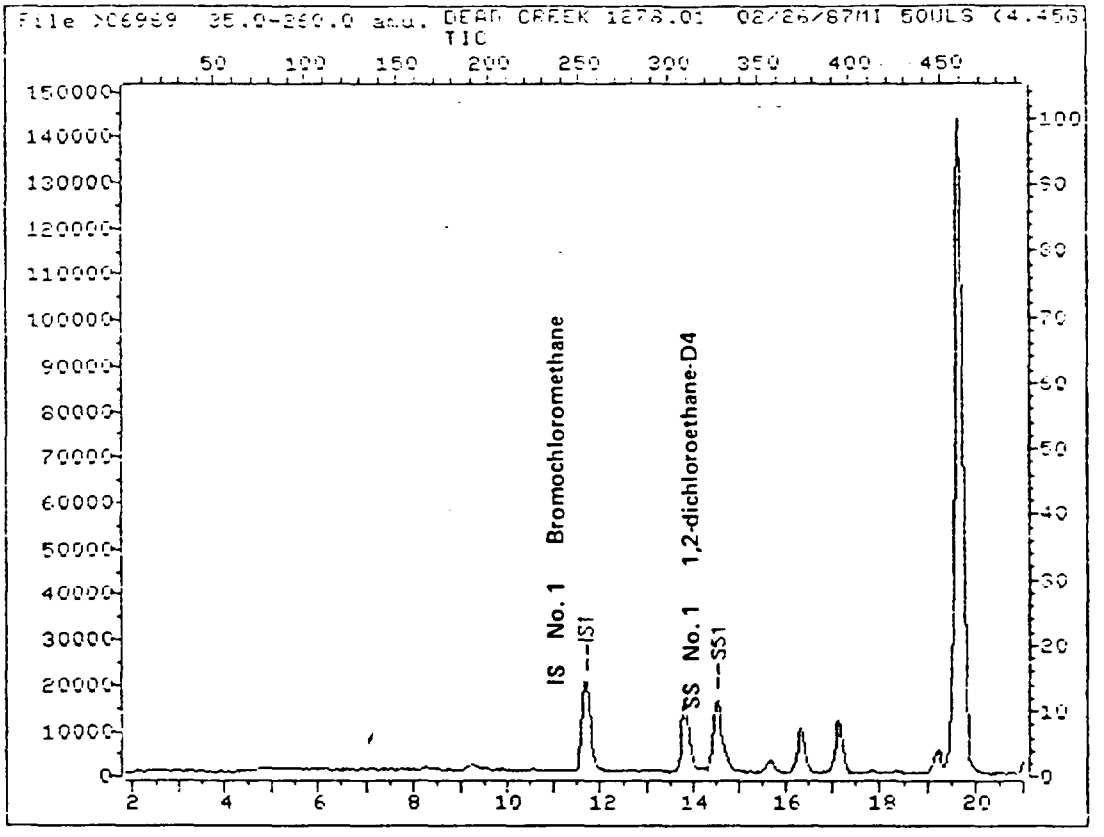
Misc: 02/26/87MI 50ULS (4.45G/10MLS MEOH) + 10UL IS/SS

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

Operator ID: USER8
Quant Time: 870226 20:19
Injected at: 870226 19:33

DC-G9-71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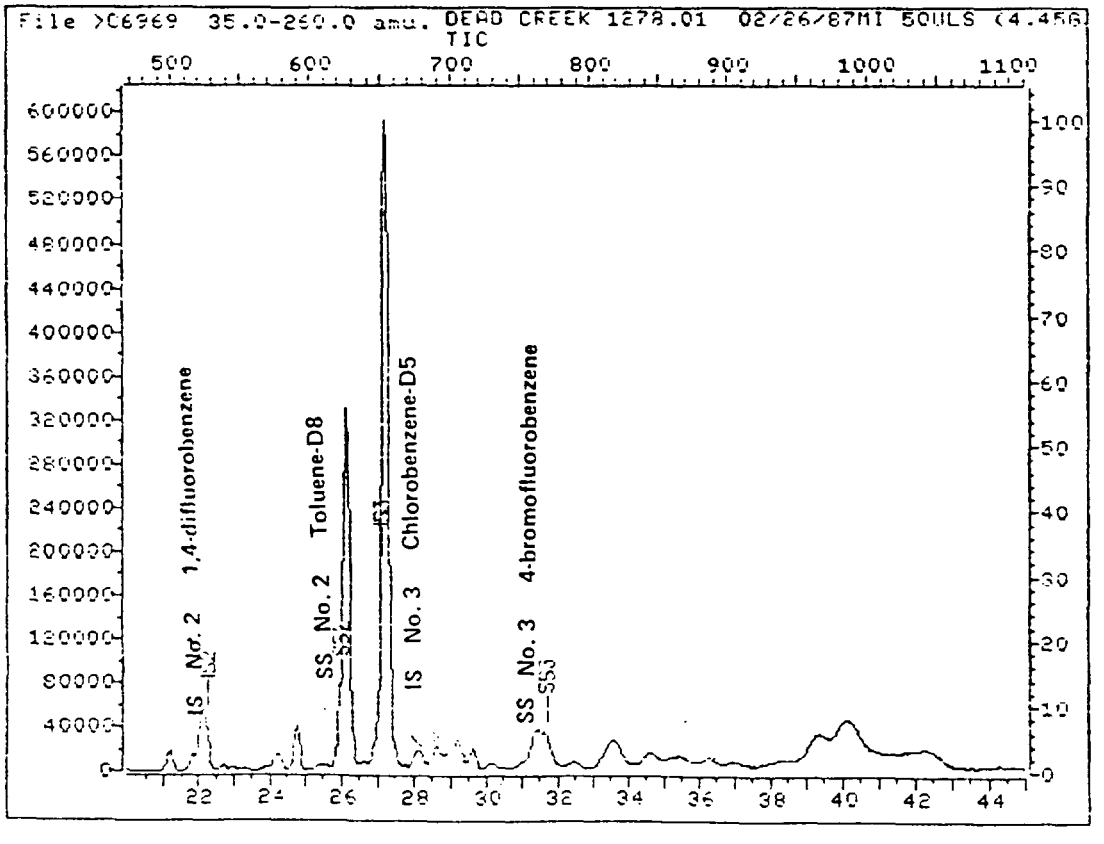
IS No. 1 Bromochloromethane
IS1
SS No. 1 1,2-dichloroethane-D4
SS1


File >C6969 35.0-260.0 amu. DEAD CREEK 1278.01 02/26/87MI 50ULS (4.456)
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

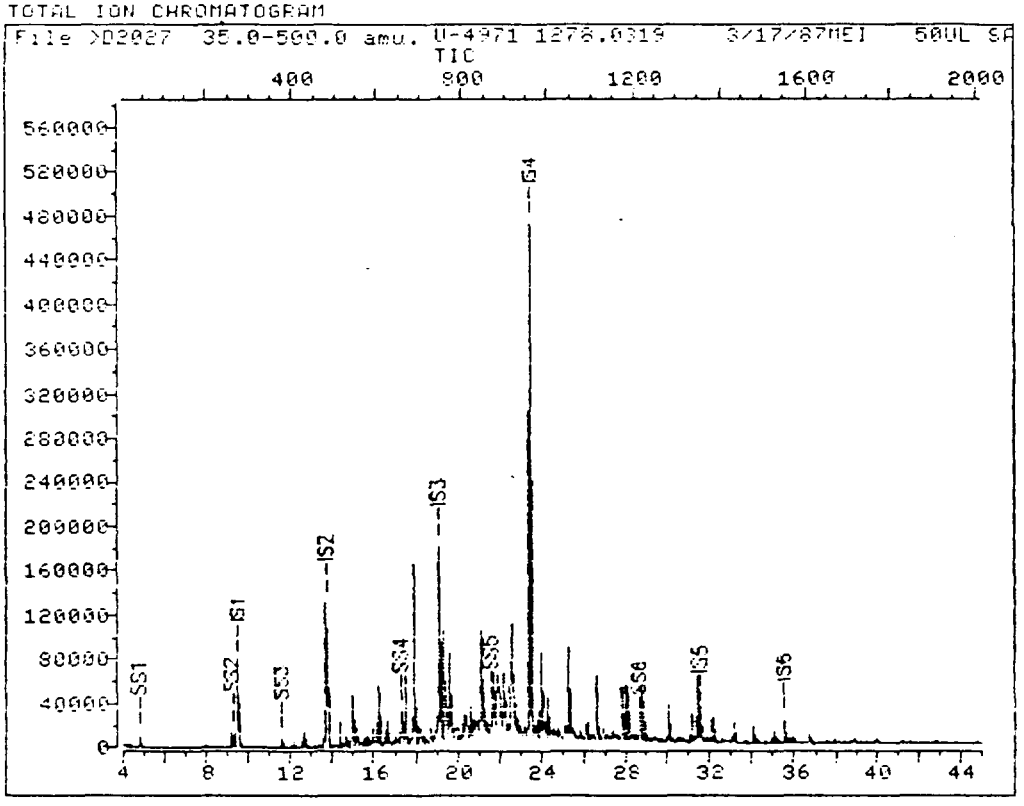
Operator ID: USER8 Quant Rev: 4 Quant Time: 870226 20:19
Output File: ^C6969::Q2 Injected at: 870226 19:33
Data File: >C6969::D3 Dilution Factor: 1.00
Name: DEAD CREEK 1278.01 DC-G9-71
Misc: 02/26/87MI 50ULS (4.45G/10MLS MEOH) + 10UL IS/SS

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	11.67	253	29441	50.00 UG/L	100	
6)	METHYLENE CHLORIDE		84	8.25	165	1776	1.75 UG/L	100	
7)	ACETONE		43	9.26	191	12028	22.94 UG/L	100	
13)	CHLOROFORM		83	13.84	309	61720	44.59 UG/L	100	
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.54	327	68765	47.83 UG/L 96	82	✓
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.26	526	147142	50.00 UG/L	100	
17)	2-BUTANONE		72	14.69	331	4801	36.43 UG/L	100	
27)	BENZENE		78	19.66	459	610385	172.24 UG/L	100	
~~28)~~	~~CIS-1,3-DICHLOROPROPENE~~		~~75~~	~~19.66~~	~~459~~	~~12210~~	~~9.73 UG/L~~ CW	100	
~~29)~~	~~2-CHLOROETHYLVINYLETHER~~		~~63~~	~~21.87~~	~~516~~	~~260~~	~~.57 UG/L~~	100	
31)	*CHLOROBENZENE-D5	(IS)	117	27.07	650	111725	50.00 UG/L	100	
~~33)~~	~~2-HEXANONE~~		~~43~~	~~24.28~~	~~578~~	~~30915~~	~~45.17 UG/L~~ NO CW	100	
33)	2-HEXANONE		43	24.74	590	25290	36.95 UG/L NO CW	100	
~~33)~~	~~2-HEXANONE~~		~~43~~	~~25.40~~	~~607~~	~~5915~~	~~8.64 UG/L~~	100	
34)	TETRACHLOROETHENE		164	24.74	590	46174	47.42 UG/L	93	
~~35)~~	~~1,1,2,2-TETRACHLOROETHANE~~		~~83~~	~~24.16~~	~~575~~	~~8083~~	~~7.34 UG/L~~ CW	100	
35)	1,1,2,2-TETRACHLOROETHANE		83	24.59	586	2387	2.17 UG/L yes	100	
~~35)~~	~~1,1,2,2-TETRACHLOROETHANE~~		~~83~~	~~25.40~~	~~607~~	~~3018~~	~~2.74 UG/L~~ CW	100	
36)	TOLUENE-D8	(SURR)	98	25.95	621	144733	49.92 UG/L 100	94	✓
37)	TOLUENE		92	26.14	626	740324	362.49 UG/L	96	
38)	CHLOROBENZENE		112	27.19	653	1818330	767.57 UG/L	98	
39)	ETHYLBENZENE		91	29.22	705	120888	27.43 UG/L	96	
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.66	768	80349	52.99 UG/L 106	100	✓
42)	TOTAL XYLENES		91	33.64	819	121087	33.55 UG/L	100	
42)	TOTAL XYLENES		91	34.66	845	99070	27.45 UG/L	100	
~~42)~~	~~TOTAL XYLENES~~		~~91~~	~~36.33~~	~~888~~	~~37017~~	~~10.26 UG/L~~ CW	100	
43)	1,3-DICHLOROBENZENE		146	39.36	966	168958	168958.0 NO CALIB	100	
44)	1,2-DICLHLOROBENZENE		146	39.36	966	168958	168958.0 NO CALIB	100	
45)	1,4-DICHLOROBENZENE		146	39.36	966	168958	168958.0 NO CALIB	100	

* Compound is ISTD

TOTAL ION CHROMATOGRAM



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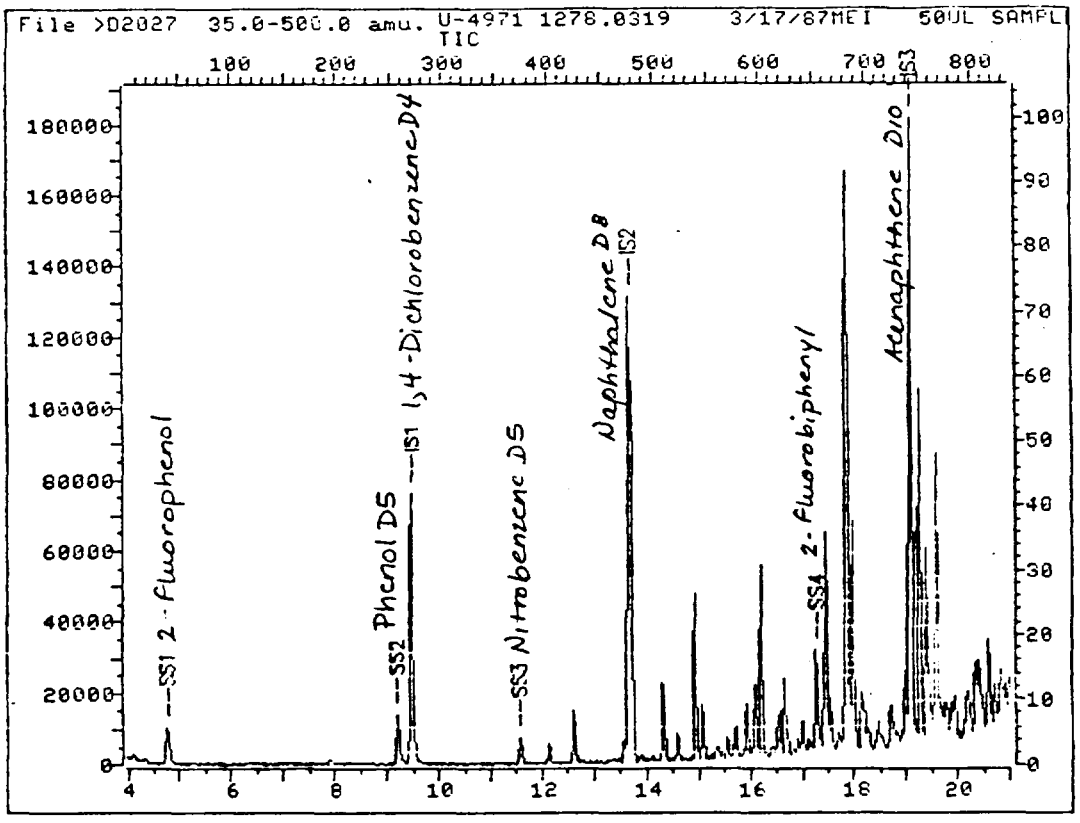
Name: U-4971 1278.0319 DC-G9-71
Misc: 3/17/87MEI 50UL SAMPLE/450UL MECL2 + 5UL IS (10X) BTL# 8

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870317 16:30

Operator ID: USER8
Quant Time: 870318 00:51
Injected at: 870318 00:03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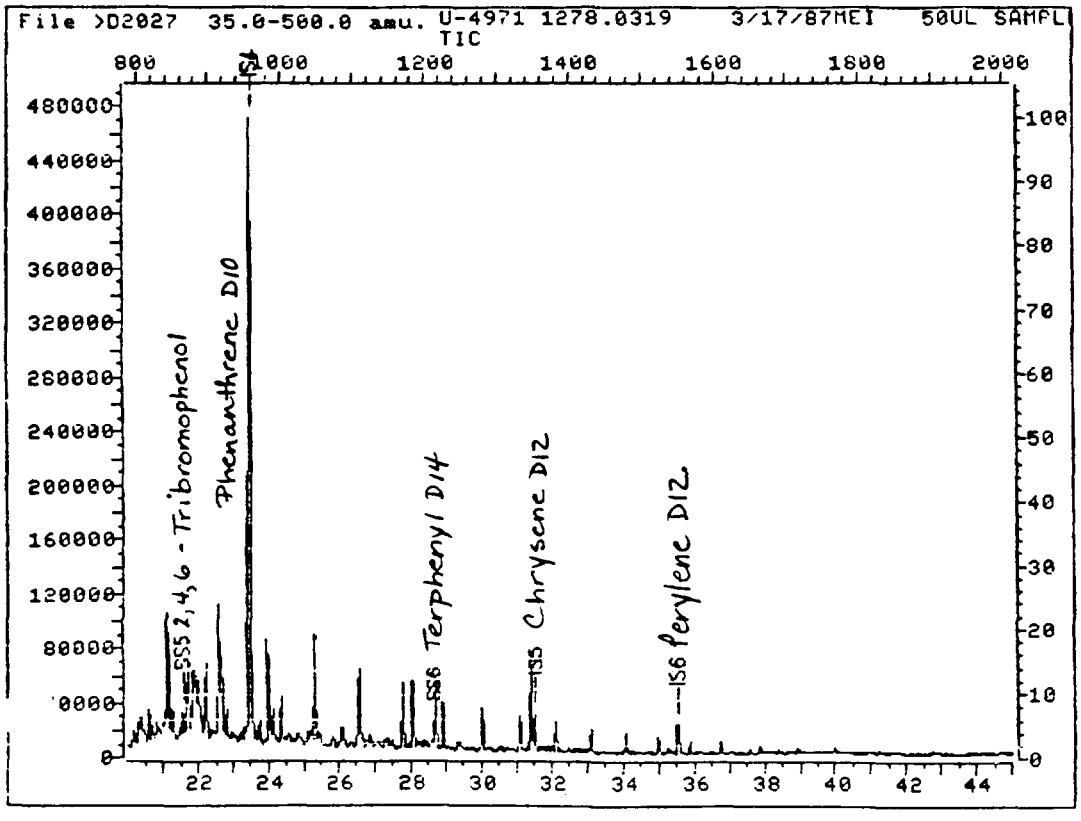
TIC
SS1 2-Fluorophenol
SS2 Phenol D5
IS1 1,4-Dichlorobenzene D4
SS3 Nitrobenzene D5
Naphthalene D8
IS2
SS4 2-Fluorobiphenyl
Acenaphthene D10
IS3

DC-G9-71


File >D2027 35.0-500.0 amu. U-4971 1278.0319 3/17/87MEI 50UL SAMPL
TIC
SS5 2,4,6-Tribromophenol
Phenanthrene D10
SS6 Terphenyl D14
IS5 Chrysene D12
IS6 Perylene D12

QUANT REPORT

erator ID: USER8 Quant Rev: 4 .. Quant Time: 870318 00:51
Output File: ^D2027::02 Injected at: 870318 00:03
Data File: >D2027::03 Dilution Factor: 10.00
Name: U-4971 1278.0319 DC-69-71
Misc: 3/17/87MEI 50UL SAMPLE/450UL MECL2 + 5UL IS (10X) BTL# 8

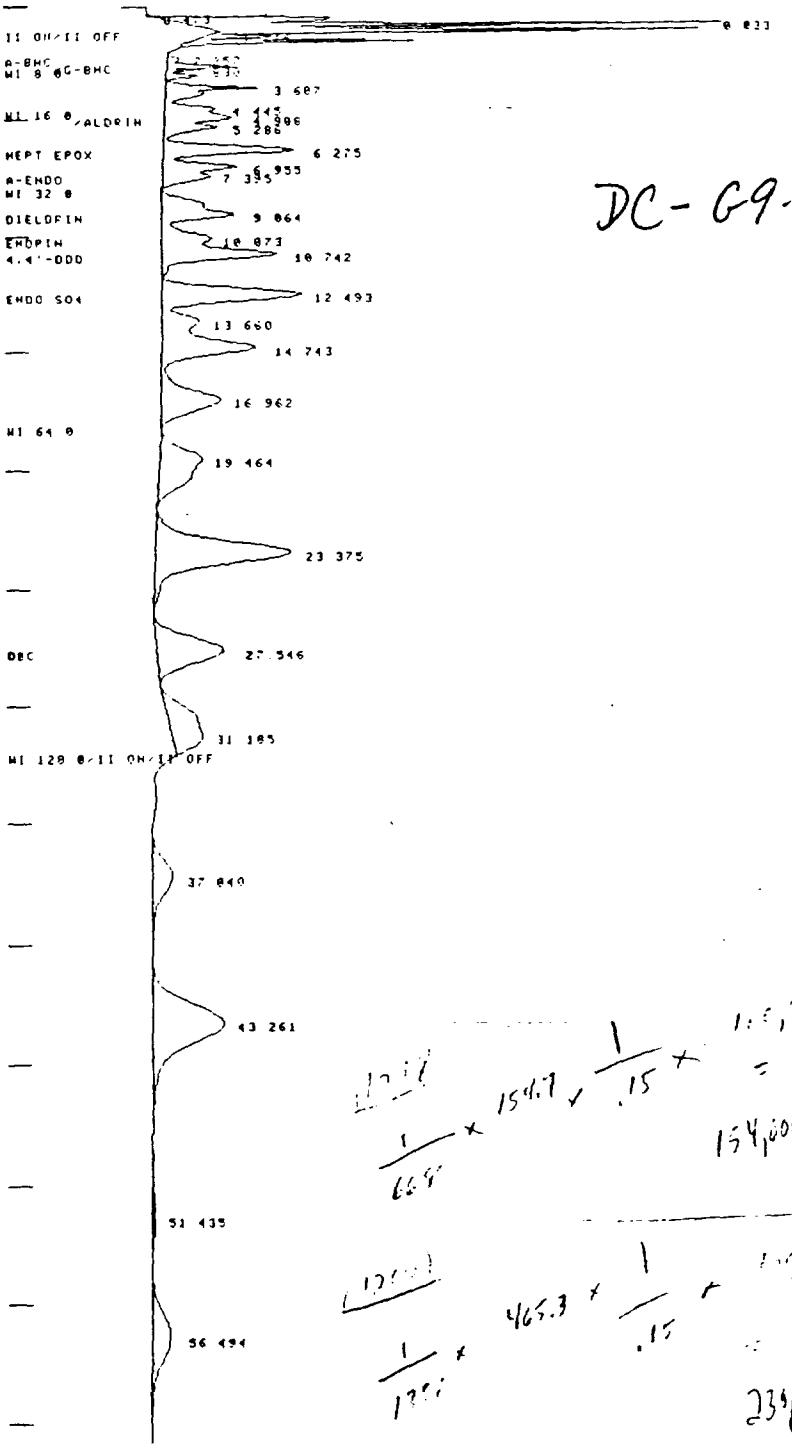
ID File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870317 16:30

	Compound		R.T.	Scan#	Area	Conc	Units		q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.46	270	39413	40.00	UG/L	87
2)	PHENOL-D5	(SURR)	99	9.18	256	15785	106.43	UG/L	98
5)	2-FLUOROPHENOL	(SURR)	112	4.74	38	10198	108.29	UG/L	79
~~17)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.58~~	~~373~~	~~1349~~	~~10.38~~	~~UG/L~~	~~81~~
19)	*NAPHTHALENE-D8	(IS)	136	13.66	476	153494	40.00	UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	11.54	372	8537	56.41	UG/L	96
~~27)~~	~~2,4-DICHLOROPHENOL~~		~~162~~	~~13.54~~	~~470~~	~~3765~~	~~32.15~~	~~UG/L~~	~~93~~
28)	1,2,4-TRICHLOROBENZENE		180	13.62	474	5453	39.42	UG/L yes	100
29)	NAPHTHALENE		128	13.72	479	110665	291.18	UG/L yes	100
30)	4-CHLOROANILINE		127	14.29	507	2120	21.24	UG/L yes	87
33)	2-METHYLNAPHTHALENE		142	15.92	587	9713	37.89	UG/L yes	90
~~33)~~	~~2-METHYLNAPHTHALENE~~		~~142~~	~~15.21~~	~~601~~	~~5491~~	~~21.42~~	~~UG/L~~	~~90~~
34)	*ACENAPHTHENE-D10	(IS)	162	19.09	742	90056	40.00	UG/L	96
38)	2-FLUOROBIPHENYL	(SURR)	172	17.27	653	19234	71.31	UG/L	95
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.09~~	~~742~~	~~17341~~	~~58.73~~	~~UG/L~~	~~100~~
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.29~~	~~750~~	~~1490~~	~~5.05~~	~~UG/L~~	~~100~~
~~43)~~	~~DIBENZOFURAN~~		~~168~~	~~19.25~~	~~750~~	~~50730~~	~~169.89~~	~~UG/L~~	~~100~~
~~43)~~	~~DIBENZOFURAN~~		~~168~~	~~19.39~~	~~757~~	~~31035~~	~~86.82~~	~~UG/L~~	~~100~~
43)	DIBENZOFURAN		168	19.68	771	4062	11.36	UG/L yes	100
~~44)~~	~~ACENAPHTHYLENE~~		~~152~~	~~18.13~~	~~699~~	~~1288~~	~~3.33~~	~~UG/L~~	~~1~~
45)	FLUORENE		166	20.72	822	8129	29.83	UG/L yes	98
47)	ACENAPHTHENE		153	19.17	746	1737	7.01	UG/L yes	94
~~47)~~	~~ACENAPHTHENE~~		~~153~~	~~19.25~~	~~750~~	~~10501~~	~~42.35~~	~~UG/L~~	~~1~~
~~47)~~	~~ACENAPHTHENE~~		~~153~~	~~19.39~~	~~757~~	~~6312~~	~~25.46~~	~~UG/L~~	~~2~~
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.54	862	3408	63.46	UG/L	98
49)	2,4-DINITROPHENOL		184	21.01	836	1524	37.87	UG/L yes	100
~~50)~~	~~4-NITROPHENOL~~		~~139~~	~~19.80~~	~~781~~	~~199~~	~~4.68~~	~~UG/L~~	~~100~~
~~50)~~	~~4-NITROPHENOL~~		~~139~~	~~19.94~~	~~784~~	~~237~~	~~5.58~~	~~UG/L~~	~~100~~
~~50)~~	~~4-NITROPHENOL~~		~~139~~	~~20.44~~	~~808~~	~~152~~	~~3.50~~	~~UG/L~~	~~100~~
~~50)~~	~~4-NITROPHENOL~~		~~139~~	~~20.72~~	~~822~~	~~823~~	~~19.37~~	~~UG/L~~	~~100~~
~~51)~~	~~2,4-DINITROTOLUENE~~		~~165~~	~~19.64~~	~~769~~	~~1237~~	~~16.92~~	~~UG/L~~	~~100~~
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.89~~	~~742~~	~~12075~~	~~169.34~~	~~UG/L~~	~~100~~
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.25~~	~~750~~	~~16060~~	~~225.23~~	~~UG/L~~	~~100~~
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.39~~	~~757~~	~~11536~~	~~161.78~~	~~UG/L~~	~~100~~
55)	*PHENANTHRENE-D10	(IS)	188	23.48	957	86225	40.00	UG/L	82
61)	PHENANTHRENE		178	23.54	960	14174	66.72	UG/L yes	96
~~61)~~	~~PHENANTHRENE~~		~~178~~	~~23.66~~	~~966~~	~~4395~~	~~20.69~~	~~UG/L~~	~~92~~
~~62)~~	~~ANTHRACENE~~		~~178~~	~~23.54~~	~~960~~	~~14174~~	~~72.68~~	~~UG/L~~	~~96~~
62)	ANTHRACENE.		178	23.66	966	4395	22.54	UG/L yes	92
63)	DI-N-BUTYLPHTHALATE		149	26.07	1084	10541	46.91	UG/L yes	99
75)	*CHRYSENE-D12	(IS)	240	31.52	1351	25925	40.00	UG/L	100
~~3)~~	~~BENZIDINE~~		~~184~~	~~27.36~~	~~1147~~	~~218~~	~~218.00~~	~~NO CALIB~~	~~100~~
~~66)~~	~~BENZIDINE~~		~~184~~	~~28.06~~	~~1181~~	~~325~~	~~325.00~~	~~NO CALIB~~	~~100~~
67)	PYRENE		202	27.73	1165	3016	19.87	UG/L yes	98
68)	TERPHENYL-D14	(SURR)	244	28.65	1210	4356	54.60	UG/L	100
69)	BUTYLBENZYLPHTHALATE		149	30.53	1302	2694	60.60	UG/L yes	89

	Compound		R.T.	Scan#	Area	Conc	Units	q
~~73)~~	~~3,3'-DICHLOROBENZIDINE~~		~~252~~	~~31.48~~	~~1545~~	~~4499~~	~~3679.62 UG/L~~	~~100~~
74)	*PERYLENE-D12	(IS)	264	35.52	1547	19824	40.00 UG/L	100

* Compound is ISTD

CHART SPEED 2.5 CM/MIN
ATTEN: 8 ZERO: 10% 5 MIN/TICK



DC-09-71

RECALCULATE ON FILE: S.CROP394

RECALCULATE ON FILE: S.CROP394

CHANNEL: 1A - 1 TITLE: RUN# 22 6:12 12 MAR 87

SAMPLE: 1278 DC-G-9-71 METHOD: CASE1 CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/Kg	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.274		58303	BV	4.81
2		0.0000	1.529		195155	VB	5.06
3	~~G BHC~~	2297.499	2.586	-0.024	94669	VV ?	8.44
4		0.0000	2.830		46385	VV	8.06
5		0.0000	3.115		38426	VV	8.31
6		0.0000	3.607		147808	VV	10.63
7		0.0000	3.846		88050	VV ?	19.19
8		0.0000	4.445		111447	VV ?	15.94
9	~~ALDRIN~~	5316.607	4.908	-0.152	223159	VV ?	34.38
10		0.0000	5.286		136251	VV ?	18.00
11	~~HEPT EPOX~~	10105.71	*6.275	PCB1248	406653	VV	23.31
12		0.0000	6.955		194567	VV	20.69
13	~~A ENDO~~	4114.658	7.395	-0.195	156759	VB ?	30.25
14	~~DIELDRIN~~	9885.574	9.064	0.224	394524	BV	46.88
15	~~B ENDO~~	5481.945	10.073	0.033	201895	VV ?	34.75
16	~~4,4' DDE~~	14325.88	10.742	-0.188	477119	VV	30.44
17	~~ENDO SO4~~	27880.33	12.493	-0.327	671977	VV	36.75
18		0.0000	13.660		186972	VV ?	37.06
19	~~4,4' DDT~~	23310.63	14.743	0.513	555311	VV	42.94
20	~~END KETON~~	11947.80	16.962	0.572	463109	VB	56.63
21		0.0000	19.464		511471	BV	96.38
22		0.0000	*23.375	PCB1260	119101	VV	61.50
23	~~DDD~~	21439.62	27.546	-0.834	648271	VV	76.38
24		0.0000	31.185		421703	VB	?146.88
25		0.0000	37.040		262011	BV	94.94
26		0.0000	43.261		1116475	VB	111.75
27		0.0000	51.435		50432	BV	156.00
28		0.0000	56.494		337070	VB	137.69
TOTALS:		136106.2		-0.233	9384983		

DETECTED PKS: 35 REJECTED PKS: 7

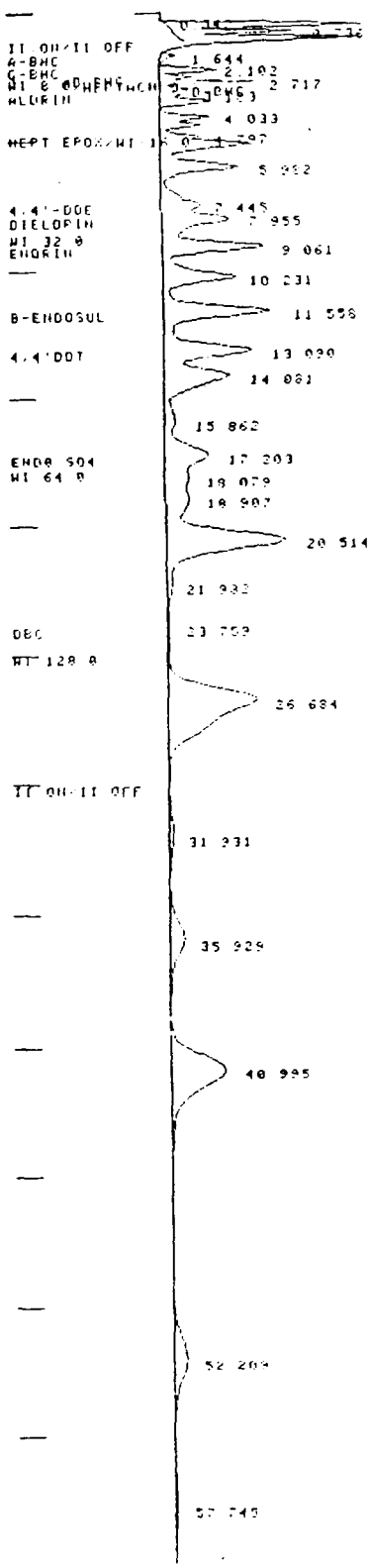
DIVISOR: 0.15000 MULTIPLIER: 100000.000

NOISE: 11.4 OFFSET: 11

RACK: 2 VIAL: 7 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

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



DC-G9-71

CHANNEL: 18 - 1 TITLE: RUN 13 9:55 17 MAR 87

SAMPLE: 1278 METHOD: PERA CALCULATION: ES - ANAL.S

PEAK	PEAK	RESULT	TIME	TIME	AREA	SEP	WI/2

DC-69-71

CHANNEL: 18 - 1 TITLE: RUN#13 9:55 17 MAR 87

SAMPLE: 1278 METHOD: PEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT MG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1	[illegible]	632.3035	1.644	-0.136	41581	BV	3.69
2		0.0000	2.102		44852	VV ?	5.25
3	[illegible]	1572.038	2.190	-0.060	82323	VV ?	6.38
4	[illegible]	3334.686	2.423	-0.157	83980	VV ?	8.56
5	[illegible]	3534.845	2.717	-0.053	171223	VV	6.38
6	[illegible]	1390.013	2.977	-0.003	63641	VV	8.13
7		0.0000	3.183		44373	VV ?	9.44
8	[illegible]	3049.725	3.414	0.064	158396	VV	12.69
9		0.0000	4.033		145439	VV	11.63
10		0.0000	4.321		121957	VV	13.31
11		0.0000	[illegible]		108060	VV ?	12.56
12	[illegible]	8742.754 *	5.033	0.089	427196	VV	19.31
13	[illegible]	10383.60	[illegible]	-0.316	[illegible]	VV	21.13
14	[illegible]	6804.314	7.445	0.165	313985	VV ?	35.25
15	[illegible]	10831.82	7.955	0.255	515704	VV	30.44
16	[illegible]	15552.75	9.661	-0.289	843131	VV	25.00
17		0.0000	10.234		565918	VV	27.56
18	[illegible]	19425.73	11.556	0.236	821663	VV	29.19
19	[illegible]	24681.58	13.080	-0.350	738338	VV	33.19
20		0.0000	14.084		728588	VV	47.36
21		0.0000	15.662		133554	VV ?	71.56
22		0.0000	17.283		553047	VV ?	96.25
23	[illegible]	9477.234	18.079	0.219	221736	VV ?	93.50
24		0.0000	18.587		305631	VV ?	93.25
25		0.0000 *	[illegible]		1521296	VV	48.31
26		0.0000	21.962		61247	VV	?123.81
27	[illegible]	973.1716	23.759	-0.031	33711	VV	?122.38
28	[illegible]	133578.0	26.684	0.854	1873449	VB	89.75
29		0.0000	31.831		82662	BV	83.81
30		0.0000	35.929		313415	VV	83.75
31		0.0000	52.208		377689	BV	115.13
32		0.0000	57.745		43120	VB	136.00

PCB 1248

PCB 1260

TOTALS:	2544803.8		8.507	11787656

DETECTED PKS: 44 REJECTED PKS: 12

DIVISOR: 0.15000 MULTIPLIER: 100000.000

NOISE: 45.7 OFFSET: -1

RACK: 1 VIAL: 13 INJ: 1

NOTES:
NOTEBOOK:259-154 ANALYST:RICHARD SAMSON
SECURE AREA D JOB #U-4571, U-4585
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.CRA.106

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

SAMPLE NUMBER DC-09-72

DC-09-72

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.
Case No: U-4906, 4928, 4971, 4989.
Lab Sample ID No: 1427
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: C Stoflowicz
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 7.0
Percent Moisture: (Not Decanted) 18

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	720 BJ
67-64-1	Acetone	2000U
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	1000U
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	240 J
108-90-7	Chlorobenzene	690 J
100-41-4	Ethylbenzene	2000
100-42-5	Styrene	1000U
	Total Xylenes	18000

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/ml 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 V-4906, 4928, 4971, 4989

Sample Number DC-09-72

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: 10

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)
108-95-2	Phenol	16000U
111-44-4	bis(2-Chloroethyl)Ether	16000U
95-57-8	2-Chlorophenol	16000U
541-73-1	1,3-Dichlorobenzene	16000U
106-46-7	1,4-Dichlorobenzene	3800 J
100-51-6	Benzyl Alcohol	16000U
95-50-1	1,2-Dichlorobenzene	27000
95-48-7	2-Methylphenol	16000U
39638-32-9	bis(2-chloroisopropyl)Ether	16000U
106-44-5	4-Methylphenol	16000U
621-64-7	N-Nitroso-Di-n-Propylamine	16000U
67-72-1	Hexachloroethane	16000U
98-95-3	Nitrobenzene	16000U
78-59-1	Isophorone	16000U
88-75-5	2-Nitrophenol	16000U
105-67-9	2,4-Dimethylphenol	16000U
65-85-0	Benzoic Acid	83000U
111-91-1	bis(2-Chloroethoxy)Methane	16000U
120-83-2	2,4-Dichlorophenol	16000U
120-82-1	1,2,4-Trichlorobenzene	21000
91-20-3	Naphthalene	5500 J
106-47-8	4-Chloroaniline	16000U
87-68-3	Hexachlorobutadiene	16000U
59-50-7	4-Chloro-3-Methylphenol	16000U
91-57-6	2-Methylnaphthalene	26000
77-47-4	Hexachlorocyclopentadiene	16000U
88-06-2	2,4,6-Trichlorophenol	16000U
95-95-4	2,4,5-Trichlorophenol	83000U
91-58-7	2-Chloronaphthalene	16000U
88-74-4	2-Nitroaniline	83000U
131-11-3	Dimethyl Phthalate	16000U
208-96-8	Acenaphthylene	16000U
99-09-2	3-Nitroaniline	83000U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	2100 J
51-28-5	2,4-Dinitrophenol	83000U
100-02-7	4-Nitrophenol	83000U
132-64-9	Dibenzofuran	1200 J
121-14-2	2,4-Dinitrotoluene	16000U
606-20-2	2,6-Dinitrotoluene	16000U
84-66-2	Diethylphthalate	16000U
7005-72-3	4-Chlorophenyl-phenylether	16000U
86-73-7	Fluorene	2500 J
100-01-6	4-Nitroaniline	83000U
534-52-1	4,6-Dinitro-2-Methylphenol	83000U
86-30-6	N-Nitrosodiphenylamine (1)	8400 J
101-55-3	4-Bromophenyl-phenylether	16000U
118-74-1	Hexachlorobenzene	16000U
87-86-5	Pentachlorophenol	270,000
85-01-8	Phenanthrene	18000
120-12-7	Anthracene	3400 J
84-74-2	Di-n-Butylphthalate	5900 J
206-44-0	Fluoranthene	6000 J
129-00-0	Pyrene	51000
85-68-7	Butylbenzylphthalate	16000U
91-94-1	3,3'-Dichlorobenzidine	33000U
56-55-3	Benzo(a)Anthracene	21000
117-81-7	bis(2-Ethylhexyl)Phthalate	16000U
218-01-9	Chrysene	51000
117-84-0	Di-n-Octyl Phthalate	16000U
205-99-2	Benzo(b)Fluoranthene	14000 J
207-08-9	Benzo(k)Fluoranthene	16000U
50-32-8	Benzo(a)Pyrene	16000
193-39-5	Indeno(1,2,3-cd)Pyrene	16000U
53-70-3	Dibenz(a,h)Anthracene	16000U
191-24-2	Benzo(g,h,i)Perylene	14000 J

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No V-4906, 4928, 4911, 4989

Sample Number
DC-09-72

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) 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	16,000 u
319-85-7	Beta-BHC	16,000 u
319-86-8	Delta-BHC	16,000 u
58-89-9	Gamma-BHC (Lindane)	16,000 u
76-44-8	Heptachlor	16,000 u
309-00-2	Aldrin	16,000 u
1024-57-3	Heptachlor Epoxide	16,000 u
959-98-8	Endosulfan I	16,000 u
60-57-1	Dieldrin	32,000 u
72-55-9	4,4'-DDE	32,000 u
72-20-8	Endrin	32,000 u
33213-65-9	Endosulfan II	32,000 u
72-54-8	4,4'-DDD	32,000 u
1031-07-8	Endosulfan Sulfate	32,000 u
50-29-3	4,4'-DDT	32,000 u
72-43-5	Methoxychlor	160,000 u
53494-70-5	Endrin Ketone	32,000 u
57-74-9	Chlordane	160,000 u
8001-35-2	Toxaphene	320,000 u
12674-11-2	Aroclor-1016	160,000 u
11104-28-2	Aroclor-1221	160,000 u
11141-16-5	Aroclor-1232	160,000 u
53469-21-9	Aroclor-1242	520,000 Y
12672-29-6	Aroclor-1248	160,000 u
11097-69-1	Aroclor-1254	320,000 u
11096-82-5	Aroclor-1260	320,000 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

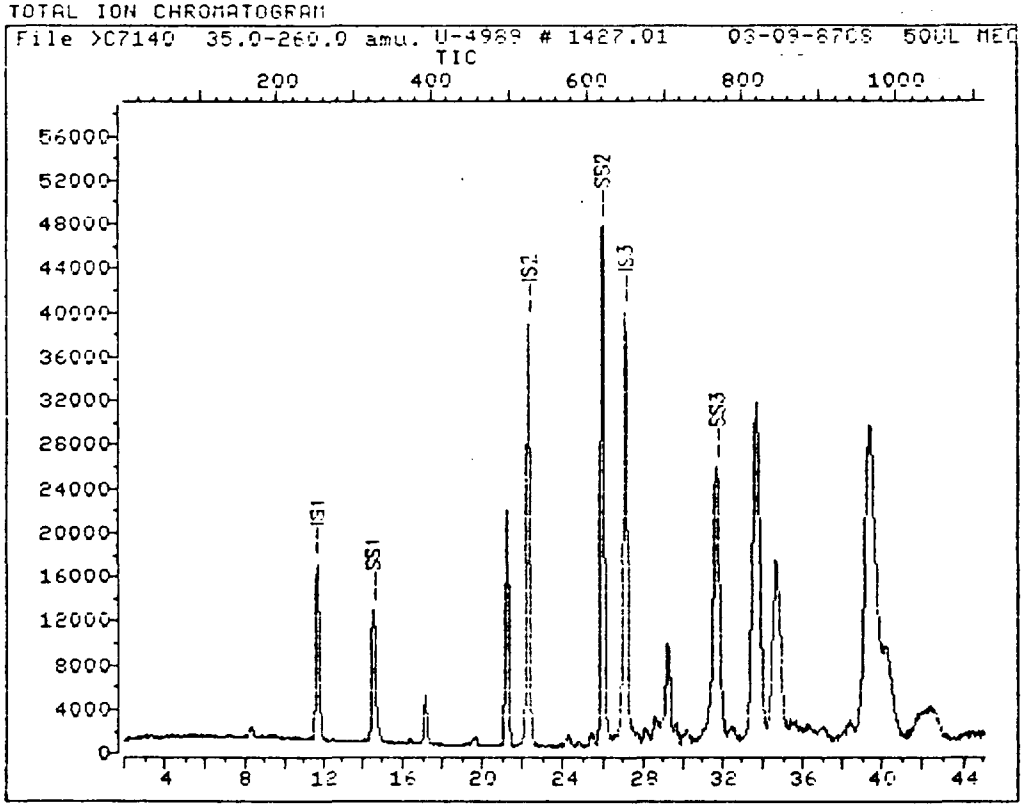
Sample Number DC-09-72

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	1300 BJ
2.		Hexane isomer	VOA	21.2	6200 BJ
3.		Dichlorobenzene isomers	VOA	39.4	27000 J
4.		Methyl ethyl benzene isomer	VOA	41.9	390 J
5.					
6.					
7.	629505	Tridecane	BNA	16.21	120,000 J
8.	629594	Tetradecane		17.97	130,000 J
9.	629629	Pentadecane		19.60	95,000 J
10.	544763	Hexadecane		21.14	100,000 J
11.	4537159	Benzene, (1-butylheptyl)-		21.65	120,000 J
12.	4536861	Benzene, (1-propyloctyl)-		21.79	67,000 J
13.	4536872	Benzene, (1-ethylnonyl)-		22.08	55,000 J
14.	4536883	Benzene, (1-methyldecyl)-		22.61	120,000 J
15.	2719622	Benzene, (1-pentylheptyl)-		23.00	95,000 J
16.	2719633	Benzene, (1-butyloctyl)-		23.08	79,000 J
17.	2719644	Benzene, (1-propylnonyl)-		23.22	73,000 J
18.	629787	Heptadecane		23.98	50,000 J
19.	4534490	Benzene, (1-pentyloctyl)-		24.35	110,000 J
20.	4534503	Benzene, (1-butylnonyl)-		24.43	58,000 J
21.	4534514	Benzene, (1-propyldecyl)-		24.59	51,000 J
22.	4534525	Benzene, (1-ethylundecyl)-		24.90	56,000 J
23.	4534536	Benzene, (1-methyldodecyl)-		25.41	50,000 J
24					
25.		PCB Confirmation			
26.	2051607	1,1'-Biphenyl, 2-chloro-		19.48	See GC Results
27.	13029088	1,1'-Biphenyl, 2,2'-dichloro-		21.32	
28.	33146451	1,1'-Biphenyl, 2,6-dichloro-		22.34	
29.	2050682	1,1'-Biphenyl, 4,4'-dichloro-		22.46	
30					

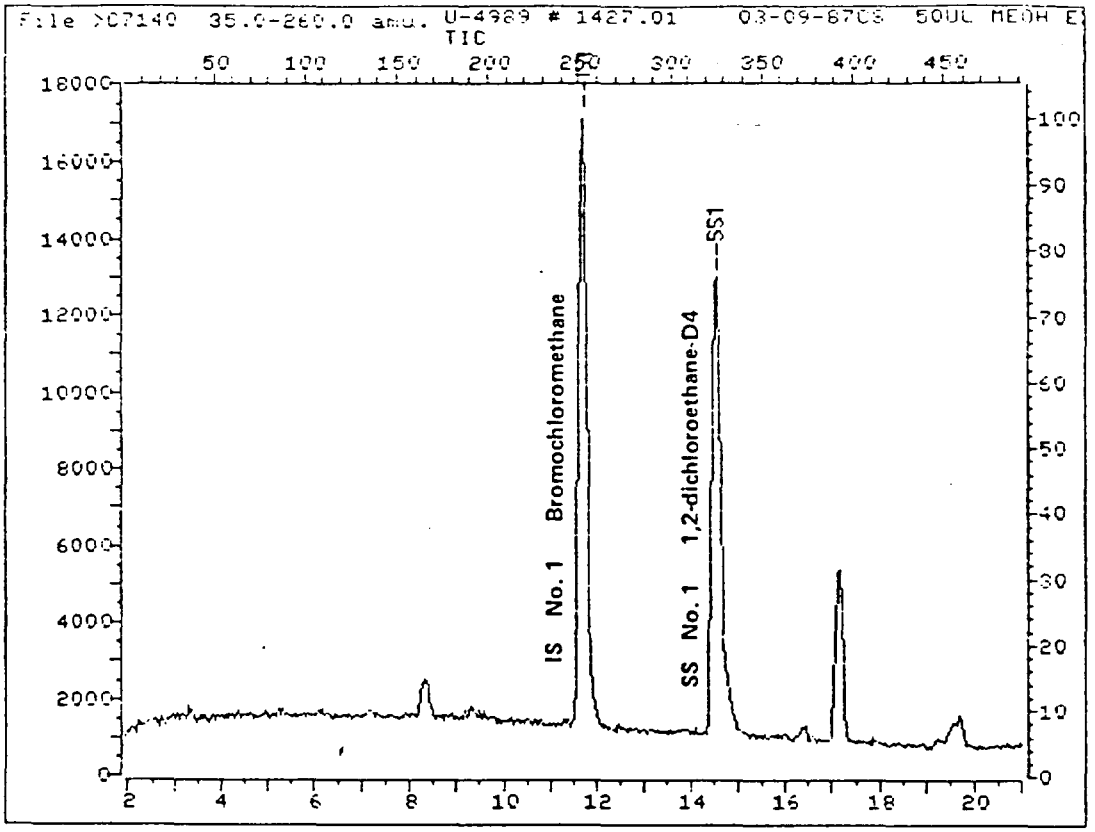
TOTAL ION CHROMATOGRAM



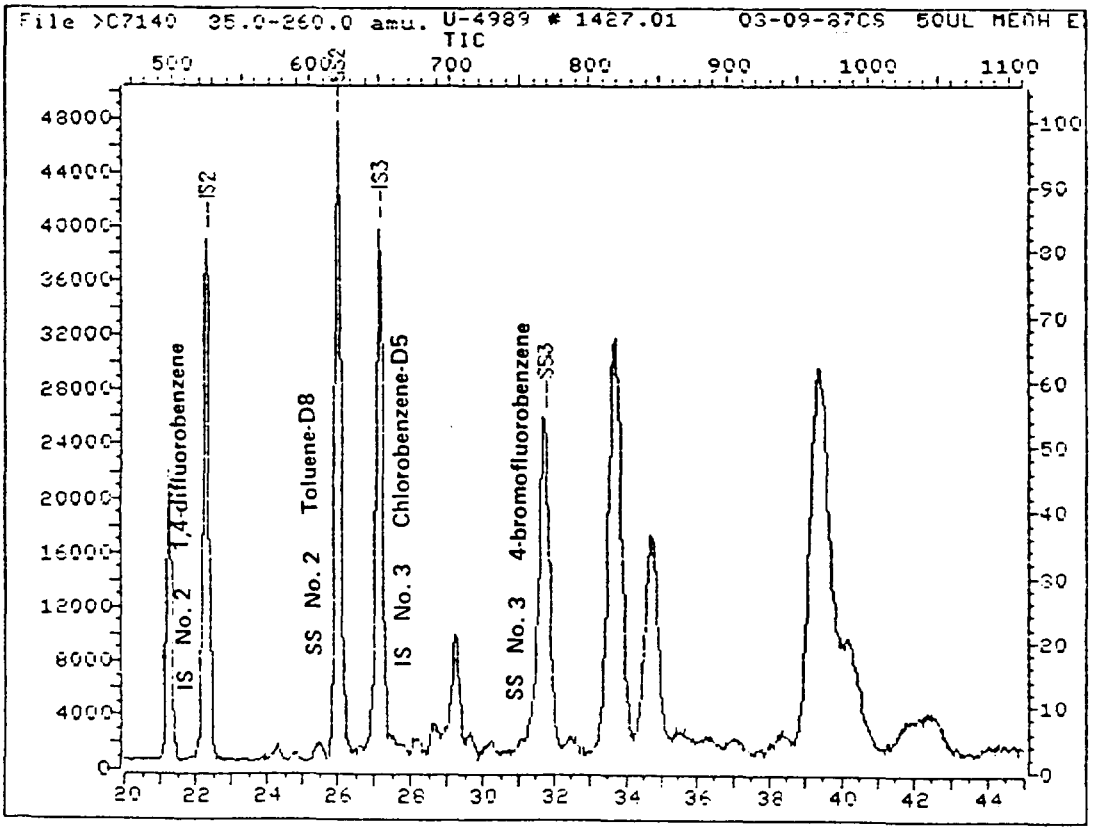
Data File: >C7140::D3
Name: U-4989 # 1427.01 DC-09-72
Misc: 03-09-87CS 50UL MEOH EXT (4.27g/10ML) + 5ML DI + 10UL

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

Operator ID: USER8
Quant Time: 870309 15:32
Injected at: 870309 14:46


File >C7140 35.0-260.0 amu. U-4989 # 1427.01 03-09-87CS 50UL MEOH E
TIC
IS No. 1 Bromochloromethane
SS No. 1 1,2-dichloroethane-D4
SS1

DC-09-72


File >C7140 35.0-260.0 amu. U-4989 # 1427.01 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 15:32
Output File: ^C7140::Q1 Injected at: 870309 14:46
Data File: >C7140::D3 Dilution Factor: 1.00
Name: U-4989 # 1427.01 DC-09-72
Misc: 03-09-87CS 50UL MEOH EXT (4.27g/10ML) + 5ML DI + 10UL

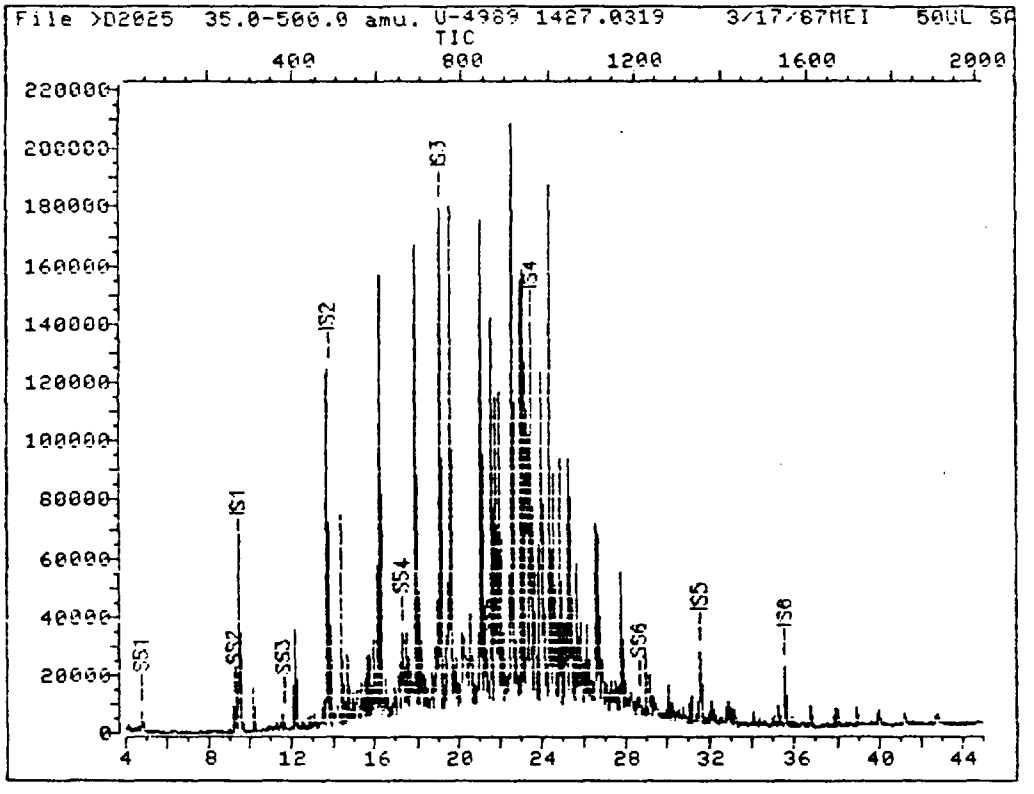
ID File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870309 12:26

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.68	252	25629	50.00 UG/L	100
6)	METHYLENE CHLORIDE		84	8.31	165	3103	3.08 UG/L	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.52	325	56078	41.92 UG/L	86
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.28	525	164718	50.00 UG/L	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.13	650	131150	50.00 UG/L	100
36)	TOLUENE-D8	(SURR)	98	25.96	620	187822	47.04 UG/L	95
37)	TOLUENE		92	26.16	625	2904	1.04 UG/L	97
38)	CHLOROBENZENE		112	27.25	653	9569	2.93 UG/L	94
39)	ETHYLBENZENE		91	29.23	704	50895	8.73 UG/L	94
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.72	768	90807	44.68 UG/L	100
42)	TOTAL XYLENES		91	33.70	819	228880	46.02 UG/L	100
42)	TOTAL XYLENES		91	34.67	844	144328	29.02 UG/L	100
~~42)~~	~~TOTAL XYLENES~~		~~91~~	~~36.10~~	~~881~~	~~4555~~	~~.92 UG/L~~	~~100~~
~~42)~~	~~TOTAL XYLENES~~		~~91~~	~~36.22~~	~~884~~	~~7169~~	~~1.44 UG/L~~	~~100~~
43)	1,3-DICHLOROBENZENE		146	38.35	939	3414	3414.00 NO CALIB	100
43)	1,3-DICHLOROBENZENE		146	39.40	966	310538	310538.0 NO CALIB	100
44)	1,2-DICLHLOROBENZENE		146	38.35	939	3414	3414.00 NO CALIB	100
44)	1,2-DICLHLOROBENZENE		146	39.40	966	310538	310538.0 NO CALIB	100
45)	1,4-DICHLOROBENZENE		146	38.35	939	3414	3414.00 NO CALIB	100
45)	1,4-DICHLOROBENZENE		146	39.40	966	310538	310538.0 NO CALIB	100

* Compound is ISTD

ok cw

TOTAL ION CHROMATOGRAM

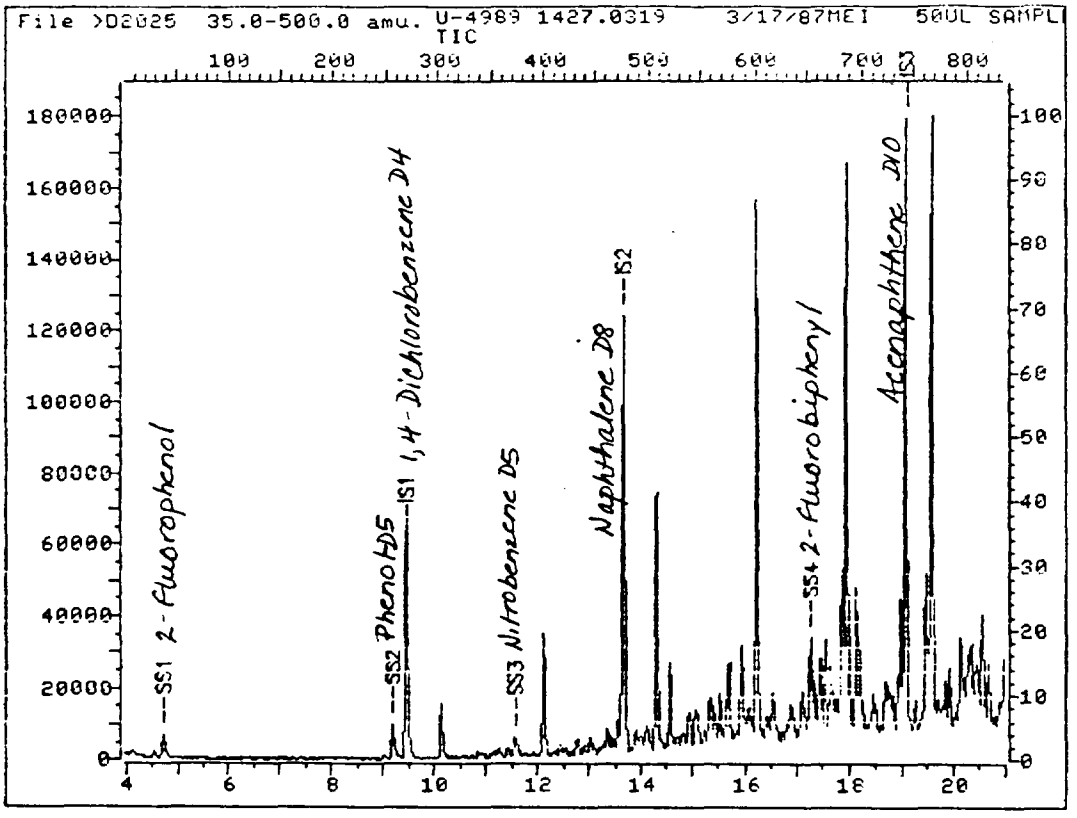


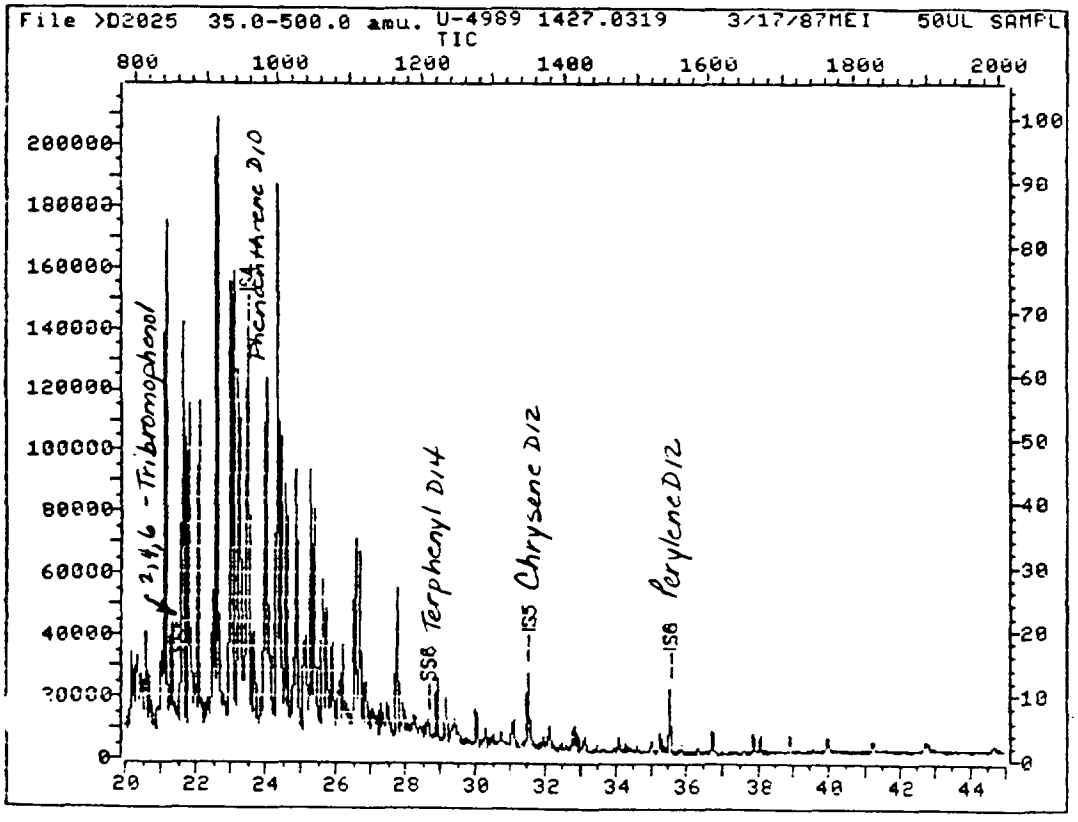
Data File: >D2025::D3
Name: U-4989 1427.0319 DC-09-72
Misc: 3/17/87MEI 50UL SAMPLE/450UL MECL2 + 5UL IS (10X) BTL# 6

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

Operator ID: USER8
Quant Time: 870414 09:58
Injected at: 870317 22:08

DC-09-72


File >D2025 35.0-500.0 amu. U-4989 1427.0319 3/17/87MEI 50UL SAMPL
TIC
SS1 2-Fluorophenol
SS2 Phenol D5
IS1 1,4-Dichlorobenzene D4
SS3 Nitrobenzene D5
Naphthalene D8
IS2
SS4 2-Fluorobiphenyl
Acenaphthene D10
IS3


File >D2025 35.0-500.0 amu. U-4989 1427.0319 3/17/87MEI 50UL SAMPL
TIC
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: 870414 09:58
put File: ^D2025::Q2 Injected at: 870317 22:08
Data File: >D2025::D3 Dilution Factor: 10.00
Name: U-4989 1427.0319 DC-09-72
Misc: 3/17/87MEI 50UL SAMPLE/450UL MECL2 + 5UL IS (10X) BTL# 6

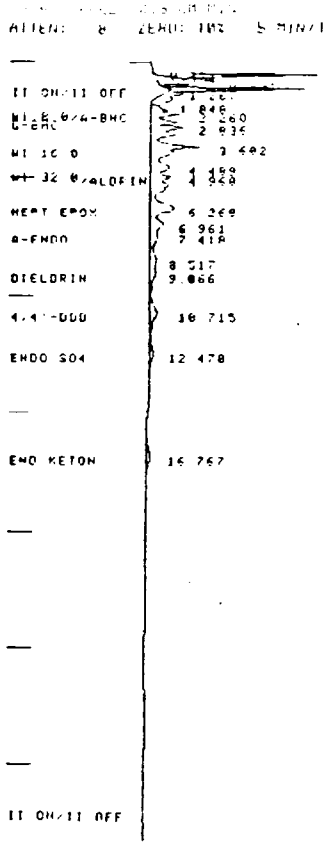
ID File: BNAOR::D2 3.1q
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870414 09:44

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.44	269	34298	40.00 UG/L	89
2)	PHENOL-D5	(SURR)	99	9.18	256	10556	81.79 UG/L	94
5)	2-FLUOROPHENOL	(SURR)	112	4.72	37	6511	79.45 UG/L	70
9)	~~1,3-DICHLOROBENZENE~~		~~146~~	~~9.51~~	~~272~~	~~1461~~	~~12.22~~ UG/L	93
10)	1,4-DICHLOROBENZENE		146	9.51	272	1461	11.75 UG/L yes	95
12)	1,2-DICHLOROBENZENE		146	10.14	303	10482	84.60 UG/L yes	99
19)	*NAPHTHALENE-D8	(IS)	136	13.66	476	135917	40.00 UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	11.56	373	6127	45.72 UG/L yes	91
28)	1,2,4-TRICHLOROBENZENE		180	13.62	474	7945	64.86 UG/L yes	100
29)	NAPHTHALENE		128	13.70	478	5774	17.16 UG/L yes	100
33)	2-METHYLNAPHTHALENE		142	15.91	586	18386	81.00 UG/L yes	95
33)	~~2-METHYLNAPHTHALENE~~		~~142~~	~~16.21~~	~~611~~	~~12879~~	~~53.22~~ UG/L	83
34)	*ACENAPHTHENE-D10	(IS)	162	19.09	742	85974	40.00 UG/L	95
38)	2-FLUOROBIPHENYL	(SURR)	172	17.27	653	15483	60.13 UG/L	93
41)	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.09~~	~~742~~	~~16563~~	~~58.76~~ UG/L	100
43)	DIBENZOFURAN		168	19.26	750	1288	3.77 UG/L yes	100
45)	FLUORENE		166	20.71	821	2055	7.90 UG/L yes	98
47)	ACENAPHTHENE		153	19.17	746	1534	6.48 UG/L	96
47)	~~ACENAPHTHENE~~		~~153~~	~~19.62~~	~~763~~	~~1489~~	~~6.29~~ UG/L	50
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.52	861	3534	68.93 UG/L	97
49)	~~2,4-DINITROPHENOL~~		~~184~~	~~21.01~~	~~836~~	~~3080~~	~~80.17~~ UG/L	100
49)	~~2,4-DINITROPHENOL~~		~~184~~	~~21.23~~	~~849~~	~~1939~~	~~50.36~~ UG/L	100
49)	~~2,4-DINITROPHENOL~~		~~184~~	~~21.44~~	~~857~~	~~2827~~	~~73.58~~ UG/L	100
50)	~~4-NITROPHENOL~~		~~139~~	~~19.91~~	~~777~~	~~276~~	~~6.80~~ UG/L	100
50)	~~4-NITROPHENOL~~		~~139~~	~~19.89~~	~~781~~	~~270~~	~~6.66~~ UG/L	100
50)	~~4-NITROPHENOL~~		~~139~~	~~19.95~~	~~784~~	~~607~~	~~14.96~~ UG/L	100
50)	~~4-NITROPHENOL~~		~~139~~	~~20.20~~	~~796~~	~~708~~	~~17.45~~ UG/L	100
50)	~~4-NITROPHENOL~~		~~139~~	~~20.46~~	~~809~~	~~328~~	~~8.09~~ UG/L	100
52)	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.09~~	~~742~~	~~11568~~	~~169.94~~ UG/L	100
55)	*PHENANTHRENE-D10	(IS)	188	23.49	957	100074	40.00 UG/L	84
57)	~~N-NITROSODIPHENYLAMINE~~		~~169~~	~~20.99~~	~~835~~	~~1791~~	~~15.81~~ UG/L	14
57)	~~N-NITROSODIPHENYLAMINE~~		~~169~~	~~21.36~~	~~853~~	~~1768~~	~~15.61~~ UG/L	39
57)	N-NITROSODIPHENYLAMINE		169	21.44	857	2942	25.97 UG/L yes	45
60)	PENTACHLOROPHENOL		266	23.28	947	38945	848.50 UG/L yes	100
61)	PHENANTHRENE		178	23.53	959	13576	55.06 UG/L yes	94
61)	~~PHENANTHRENE~~		~~178~~	~~23.67~~	~~966~~	~~2404~~	~~9.75~~ UG/L	91
62)	~~ANTHRACENE~~		~~178~~	~~23.53~~	~~959~~	~~13576~~	~~59.98~~ UG/L	94
62)	ANTHRACENE		178	23.67	966	2404	10.62 UG/L yes	91
63)	DI-N-BUTYLPHTHALATE		149	26.08	1084	4741	18.18 UG/L yes	90
64)	~~FLUORANTHENE~~		~~202~~	~~26.84~~	~~1121~~	~~1518~~	~~8.35~~ UG/L	1
64)	FLUORANTHENE		202	27.13	1135	3348	18.51 UG/L	88
65)	*CHRYSENE-D12	(IS)	240	31.52	1350	23035	40.00 UG/L 376	100
66)	~~BENZIDINE~~		~~184~~	~~27.35~~	~~1146~~	~~345~~	~~345.00~~ NO CAL!	8100
67)	PYRENE		202	27.74	1165	21458	159.08 UG/L yes	92
68)	TERPHENYL-D14	(SURR)	244	28.64	1209	3786	53.41 UG/L	100
71)	BENZO(A)ANTHRACENE		228	31.47	1348	4054	65.76 UG/L yes	97

	Compound		R.T.	Scan#	Area	Conc	Units	q
71)	~~BENZO(A)ANTHRACENE~~		~~228 31.60~~	~~1354~~	~~9339~~	~~151.50~~	~~UG/L~~	93
73)	~~CHRYSENE~~		~~228 31.47~~	~~1348~~	~~4854~~	~~69.23~~	~~UG/L~~	96
73)	CHRYSENE		228 31.60	1354	9339	159.47	UG/L	94
74)	*PERYLENE-D12	(IS)	264 35.53	1547	16451	40.00	UG/L	100
76)	BENZO(B)FLUORANTHENE		252 34.57	1500	2282	43.97	UG/L	100
77)	~~BENZO(K)FLUORANTHENE~~		~~252 34.57~~	~~1500~~	~~2282~~	~~43.57~~	~~UG/L~~	100
78)	~~BENZO(A)PYRENE~~		~~252 35.25~~	~~1533~~	~~4854~~	~~87.74~~	~~UG/L~~	100
78)	BENZO(A)PYRENE		252 35.37	1539	2274	49.21	UG/L	100
81)	BENZO(G,H,I)PERYLENE		276 38.61	1698	2060	44.54	UG/L	100

* Compound is ISTD

DC-09-72



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		40038	VV	? 13.69
6		0.0000	3.602		88540	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 EPOX~~	22625.51	6.268	0.138	90821	VV	27.44
12		0.0000	6.961		50097	VV	? 27.81
13	~~B-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	35082	VV	? 38.44
16	~~4,4'-DDD~~	17426.98	10.715	-0.215	58040	VV	46.81
17	~~END KETON~~	6574.129	16.767	0.377	25482	BB	43.00
TOTALS:		103912.2		0.045	842022		

DETECTED PKS: 27 REJECTED PKS: 10

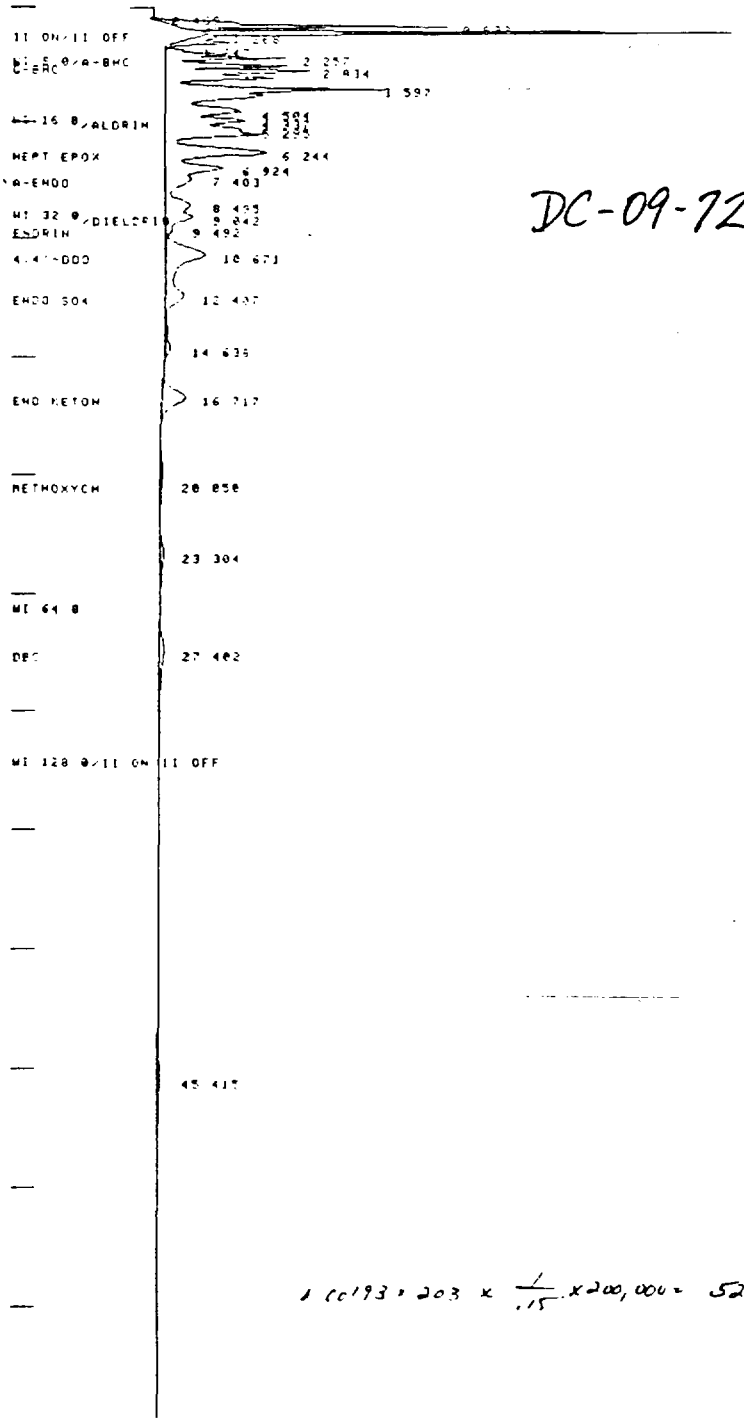
DIVISOR: 0.15000 MULTIPLIER: 1000000.00

NOISE: 11.4 OFFSET: -5

RACK: 2 VIAL: 9 INJ: 1

NOTES:
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
220 C ISOTHERMAL 4 UL INJECTION
DEAD CREEK PRIMARY ANALYSIS
AUTOSAMPLER

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



DC-09-72

1 cc/193 = 203 x $\frac{1}{.15}$ x 200,000 = 520,000 ug/kg
1342

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	~~B-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	PCB 1242 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		182534	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-DSE~~	15225.60	10.671	-0.259	253542	VV	42.19
19	~~END0 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	~~ECS~~	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

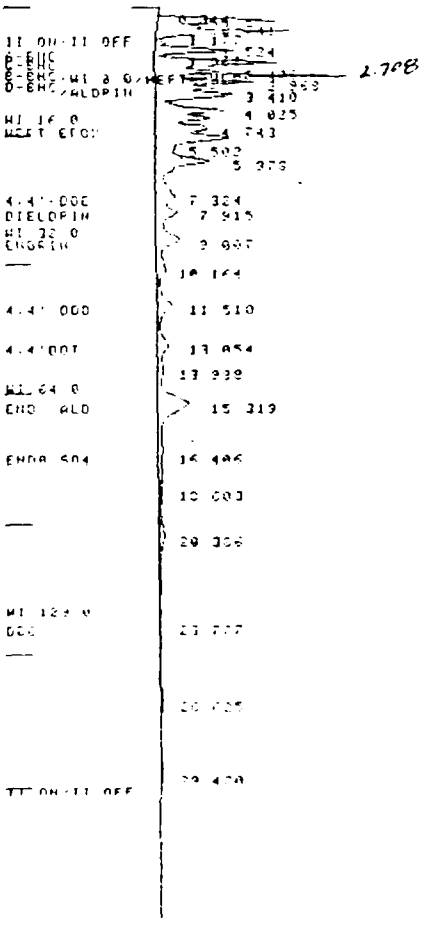
NOISE: 11.4 OFFSET: 9

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

SAMPLE: 1427 METHOD: PEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT NG/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		169387	VV		5.56
6	[illegible]	2592.470	2.246	-0.004	67880	VV	?	8.56
7	[illegible]	14361.64	3.405	-0.154	150653	VV	?	11.81
8	[illegible]	16058.60	[illegible]	-0.062	389857	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]	10988.65	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]	14378.29	5.072	0.062	334838	VV		19.63
16		0.0000	5.503		58038	VV	?	29.31
17	[illegible]	15764.44	5.976	-0.322	346175	VV		20.69
18	[illegible]	8782.978	7.324	0.044	199710	VV	?	47.75
19	[illegible]	6644.782	7.915	0.215	158151	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	0.150	157711	VV		39.56
23	[illegible]	8241.460	13.054	-0.388	122836	VV		54.25
24		0.0000	13.868		65446	VV	?	85.88
25	[illegible]	21905.66	15.319	0.503	359513	VV		46.25
26		0.0000	16.405		84818	VV	?	
27	[illegible]	6135.508	18.603	0.745	71780	VV	?	132.69
28		0.0000	20.386		117060	VV	?	106.69
29	[illegible]	1510.377	23.777	-0.013	28160	VV	?	166.81
30	[illegible]	6208.854	26.825	0.788	43547	VV	?	222.63

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

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

(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	800 u
319-85-7	Beta-BHC	800 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

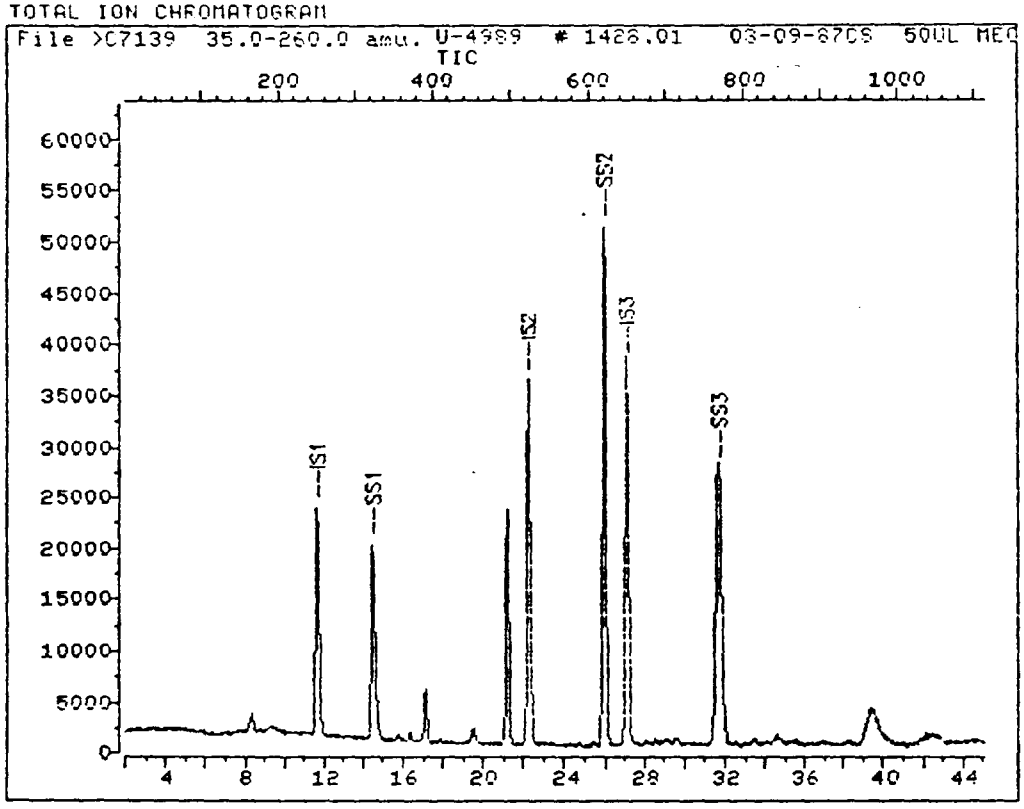
Sample Number DC-09-73

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number MCAC	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.					

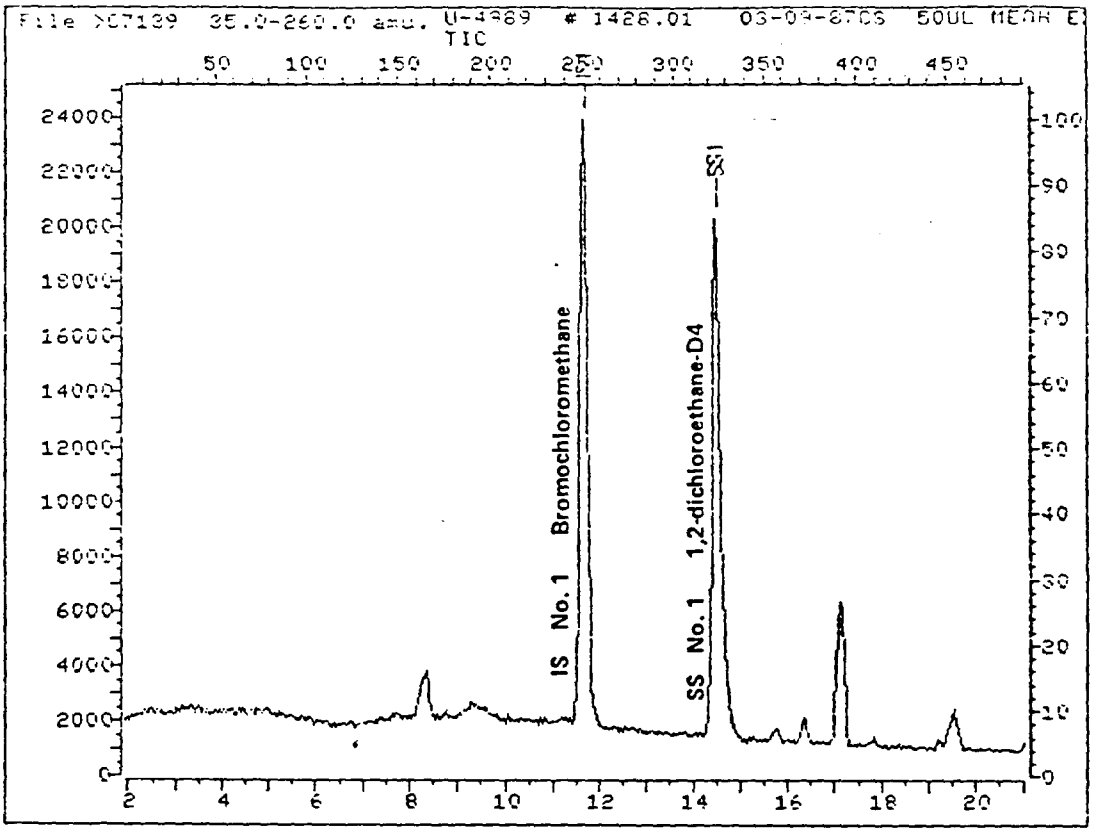
TOTAL ION CHROMATOGRAM



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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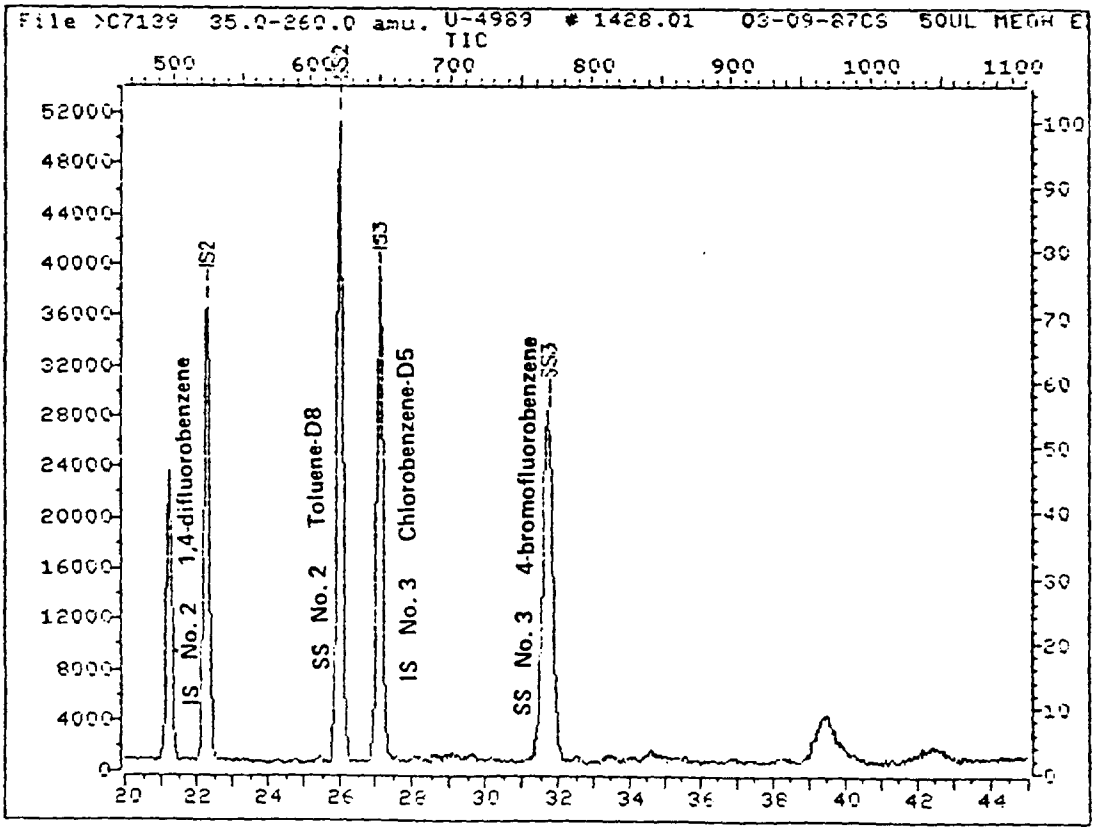
TIC
IS No. 1 Bromochloromethane
SS No. 1 1,2-dichloroethane-D4
IS1
SS1

DC-09-73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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: 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

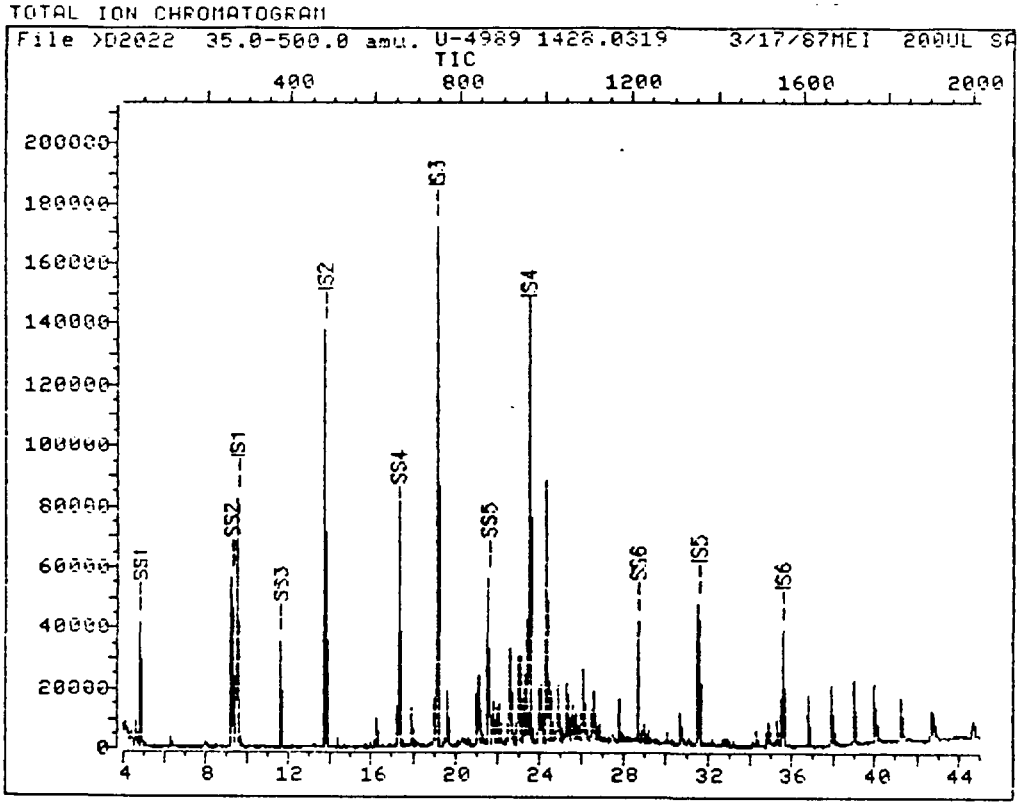
ID File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870309 12:26

	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 99 ✓	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

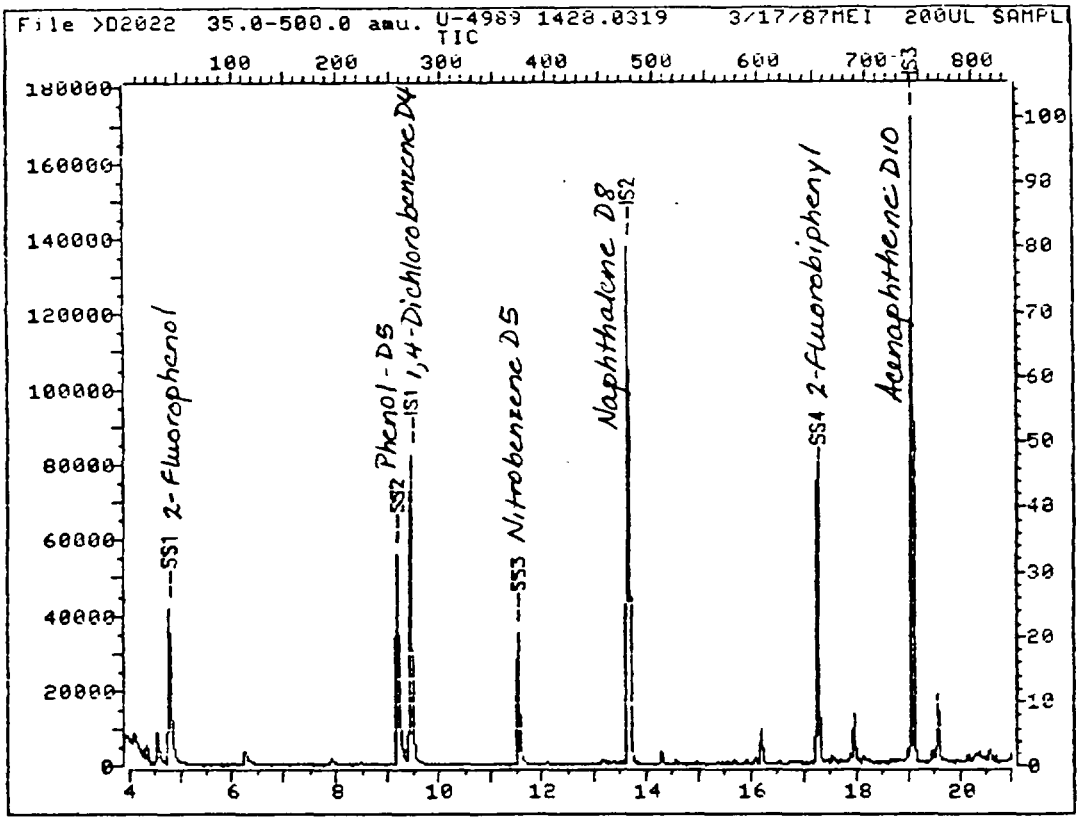


Data File: >D2022::D3
Name: U-4989 1428.0319 DC-09-73
Misc: 3/17/87MEI 200UL SAMPLE/200UL MECL2 + 4UL IS(2X) BTL# 3

Id File: BNAUR::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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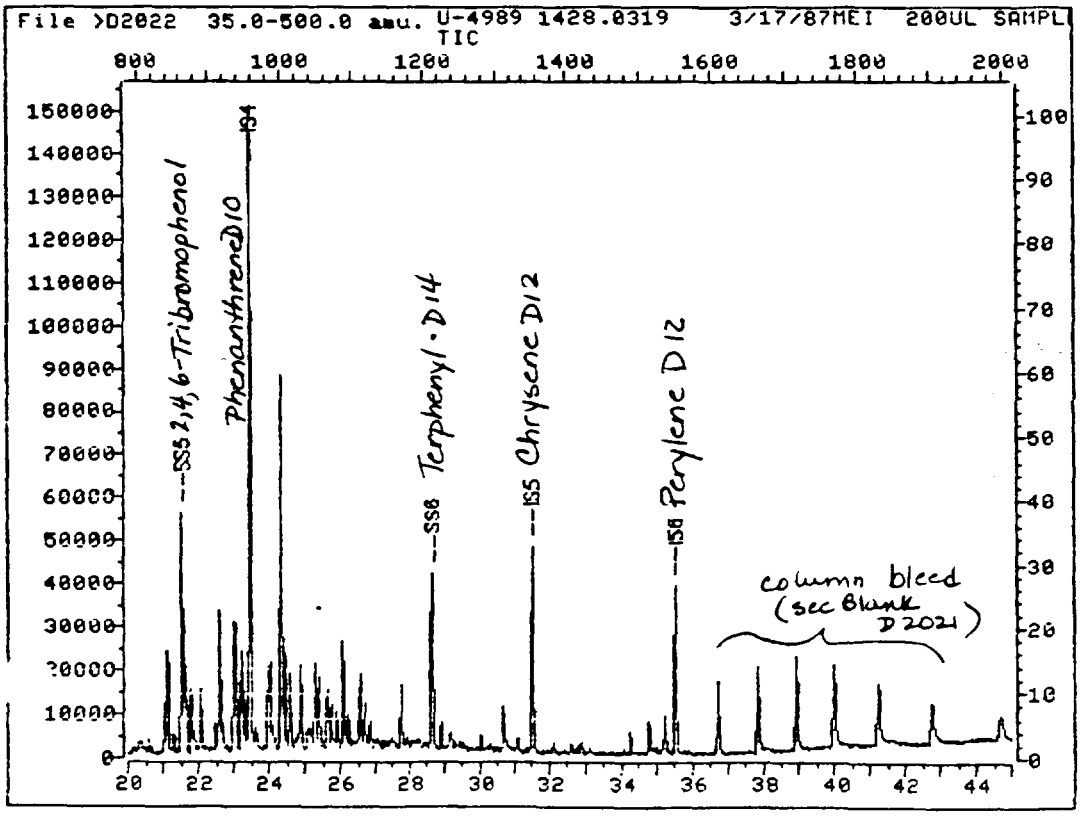
TIC
SS1 2-Fluorophenol
SS2 Phenol-D5
IS1 1,4-Dichlorobenzene D4
SS3 Nitrobenzene D5
IS2 Naphthalene D8
SS4 2-Fluorobiphenyl
IS3 Acenaphthene D10


File >D2022 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

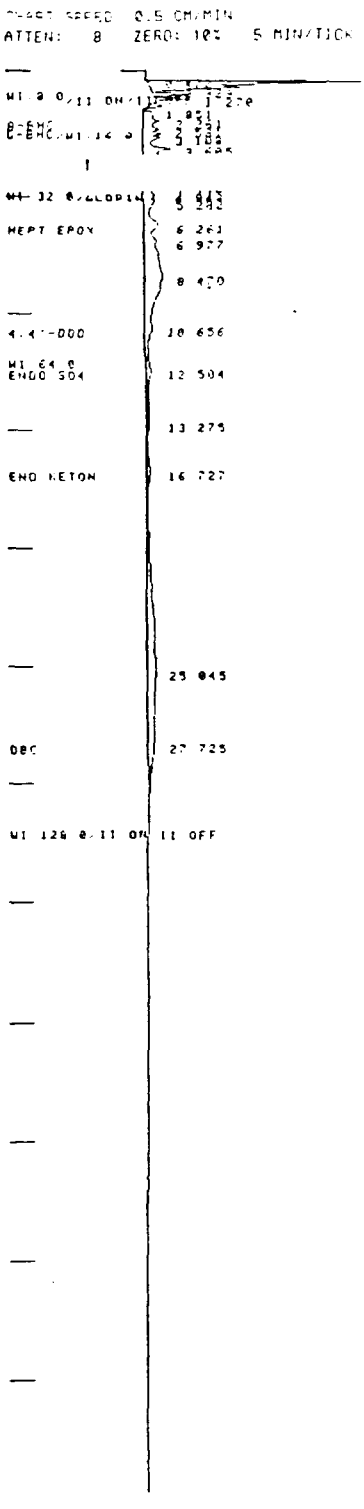


CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 10% 5 MIN/TICK
HEPT EPOX
6 261
6 977
8 470
10 656
12 504
13 275
END KETON
16 727
25 045
DBC
27 725
WI 126 0/11 ON 11 OFF

DC-09-73

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 KETEN~~	1260.338	16.727	0.337	48852	VV	? 94.31
17		0.0000	25.045		399650	VV	76.75
18	~~DSO~~	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

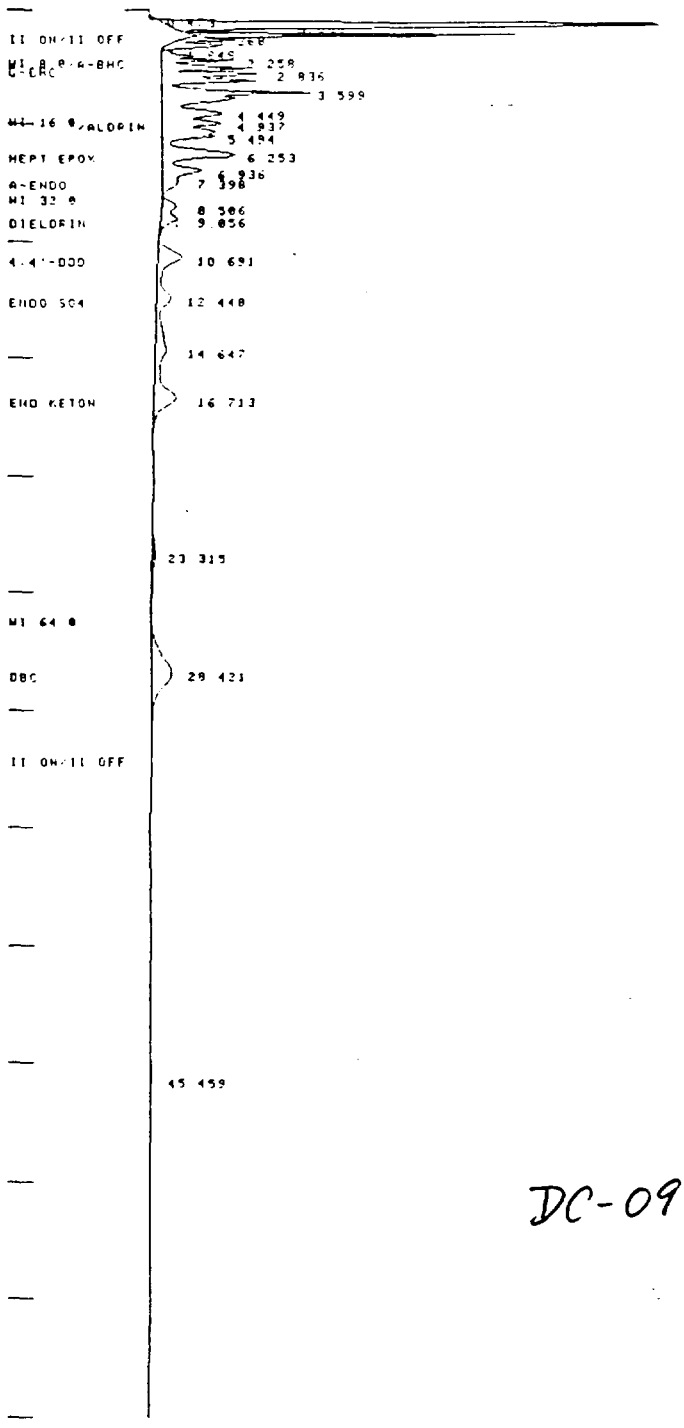
NOISE: 22.9 OFFSET: -26

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	PCB1242	243956	VV	11.63
9		0.0000	3.833		157587	VV ?	22.25
10		0.0000	4.449		182096	VV ?	27.13
11	~~HEPTA~~	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 SO4~~	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	~~DEC~~ DBC	824.6407	28.421	0.041	249347	BB	87.56
TOTALS:		4295.075		-0.030	2781338		

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: EL-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/ml 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 V-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	Dimetyl 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	Dibenz(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_l = 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_l 4

Laboratory Name Ecology & Environment Inc.

Case No U-4906, 4928, 4971, 4989

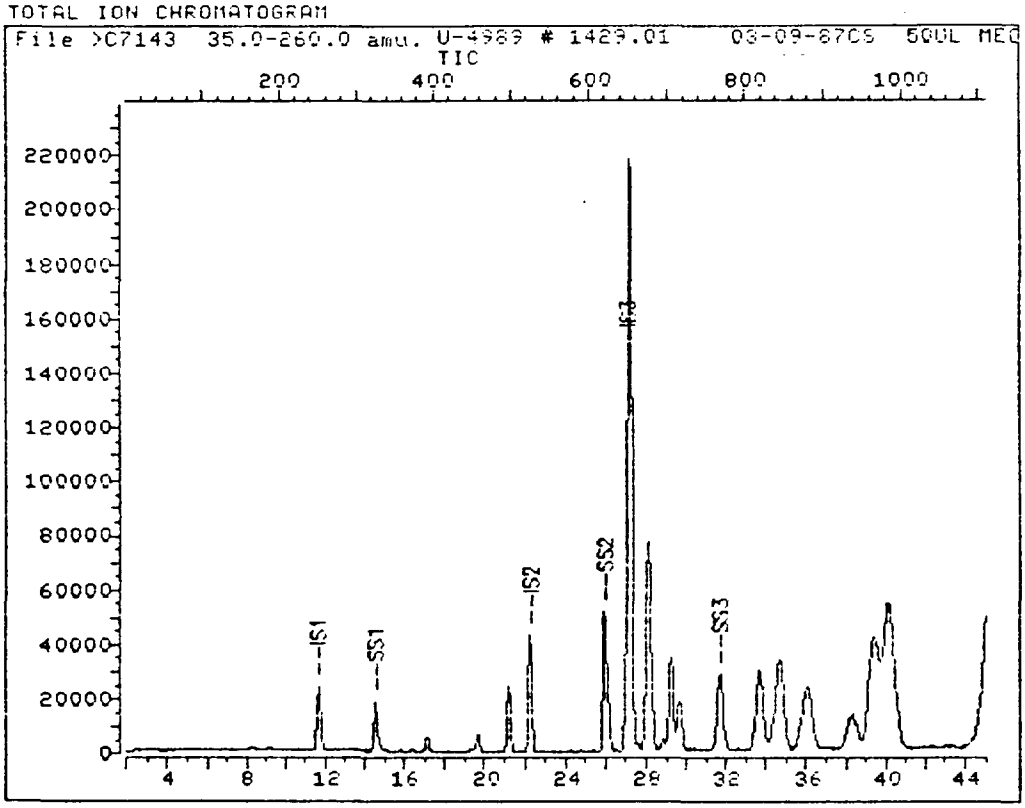
Sample Number
DC-010-74

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number MCAC	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



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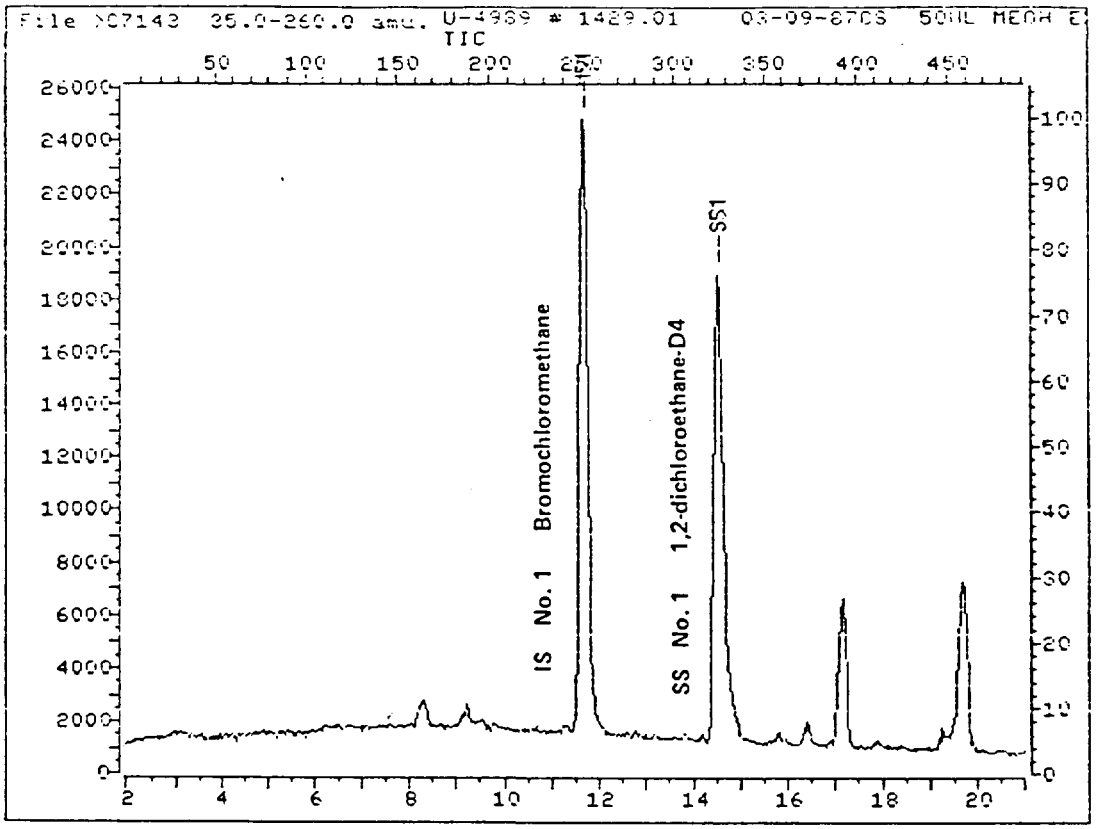
Name: U-4989 # 1429.01 DC-010-74
Misc: 03-09-87CS 50UL MEOH EXT (3.81g/10ML) + 5ML DI + 10UL

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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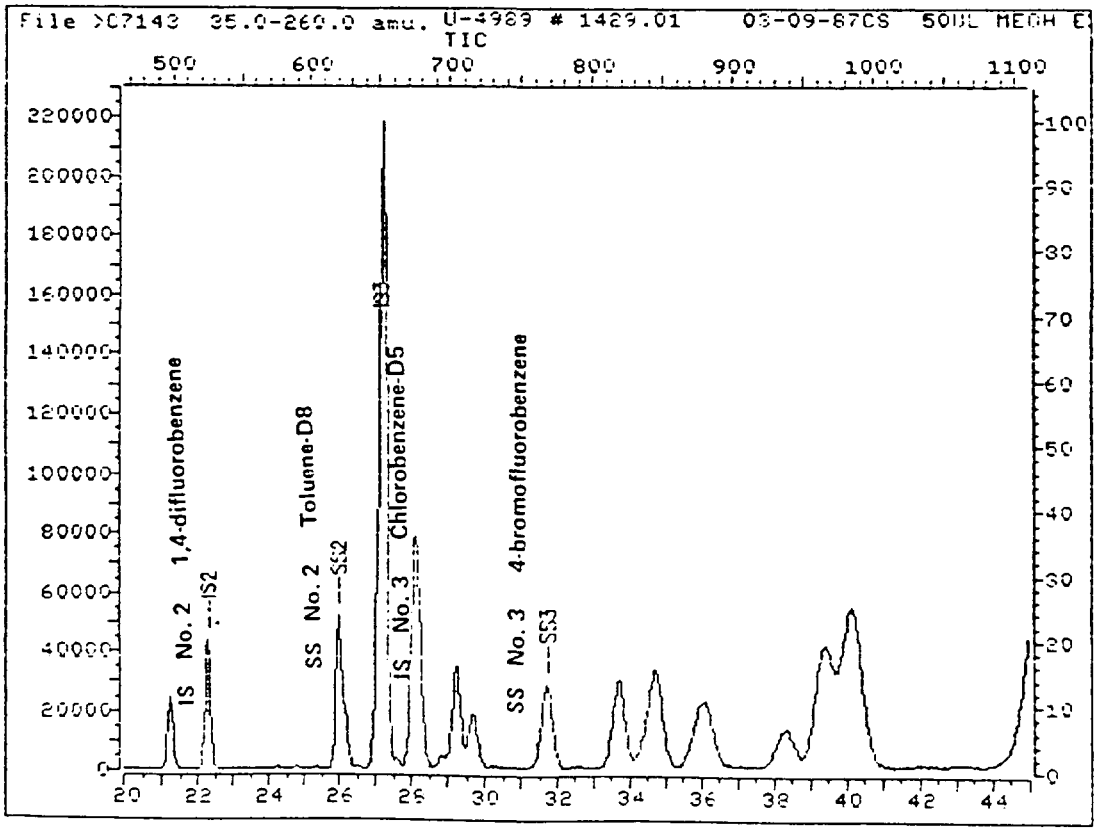
TIC
IS No. 1 Bromochloromethane
SS No. 1 1,2-dichloroethane-D4
SS1

DC-010-74


File >C7143 35.0-260.0 amu. U-4989 # 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
IS3
SS No. 3 4-bromofluorobenzene
SS3

QUANT REPORT

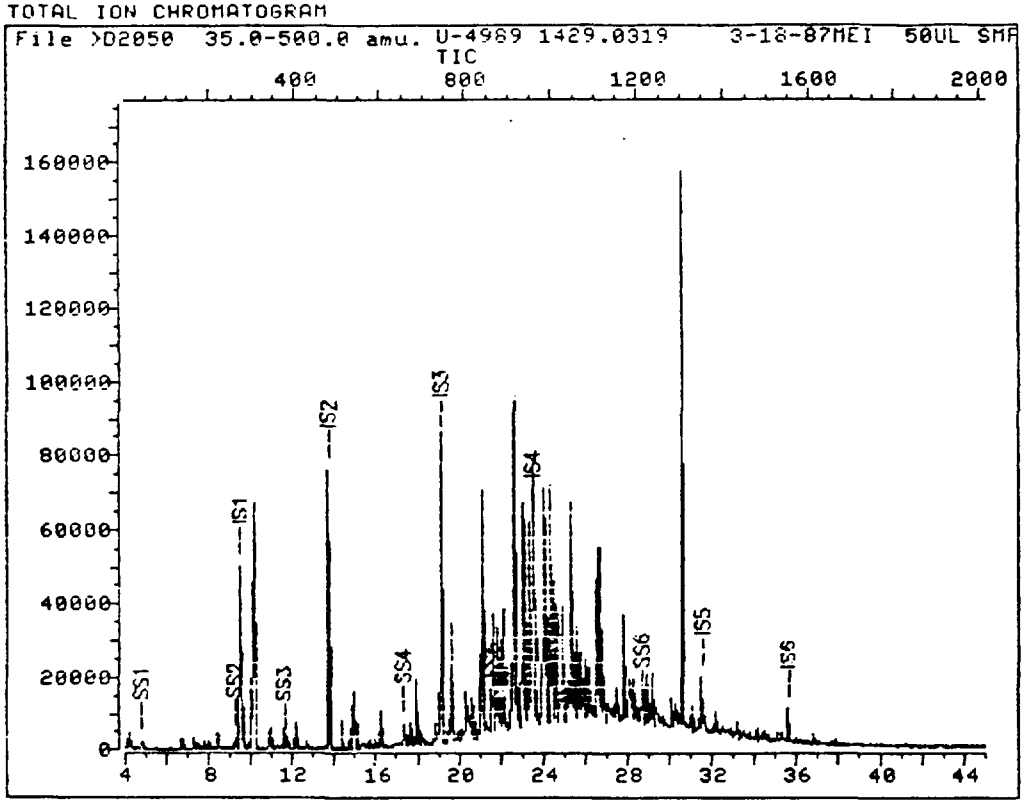
Operator ID: USER8 Quant Rev: 4. Quant Time: 870309.18:09
Output File: ^C7143::Q2 Injected at: 870309 17:23
Data File: >C7143::D3 Dilution Factor: 1.00
Name: U-4989 # 1429.01 DC-010-74
Misc: 03-09-87CS 50UL MEOH EXT (3.81g/10ML) + 5ML DI + 10UL

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	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	95
37)	TOLUENE		92	26.16	625	42359	12.87 UG/L	97
~~37)~~	~~TOLUENE~~		~~92~~	~~27.85~~	~~640~~	~~21869~~	~~6.64 UG/L~~	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	100
~~41)~~	~~STYRENE~~		~~104~~	~~33.74~~	~~820~~	~~3189~~	~~.74 UG/L~~	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~~	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

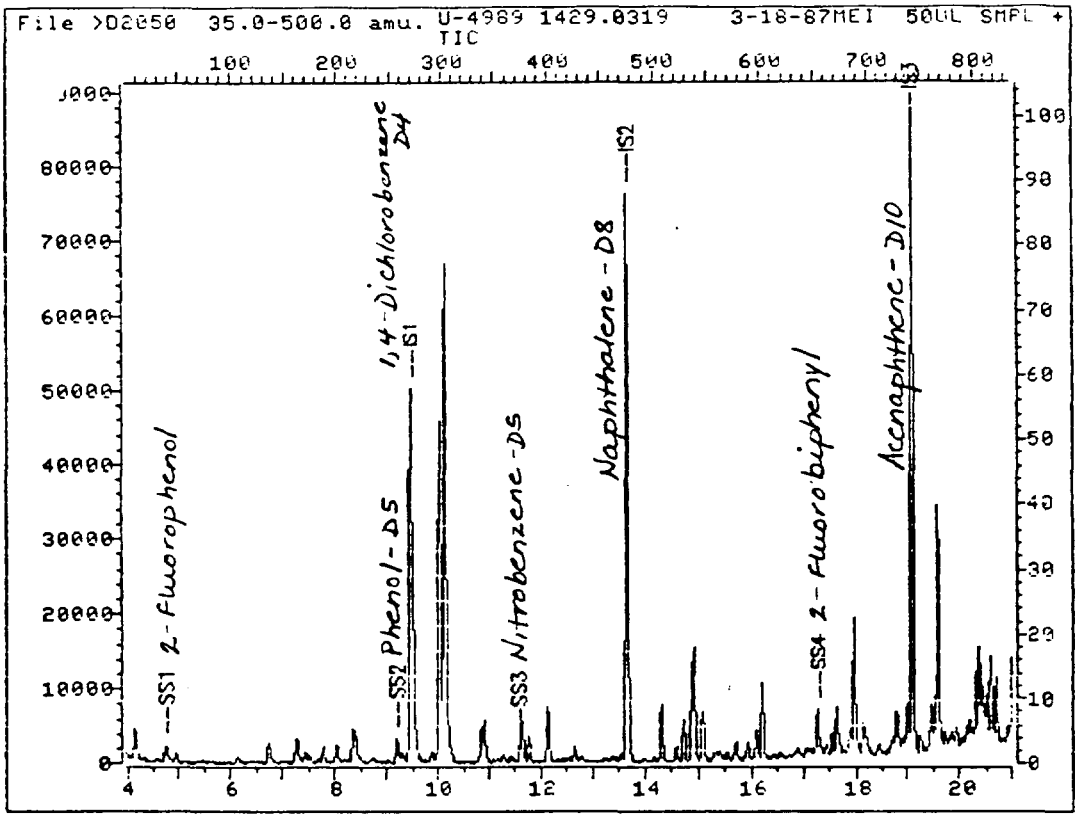


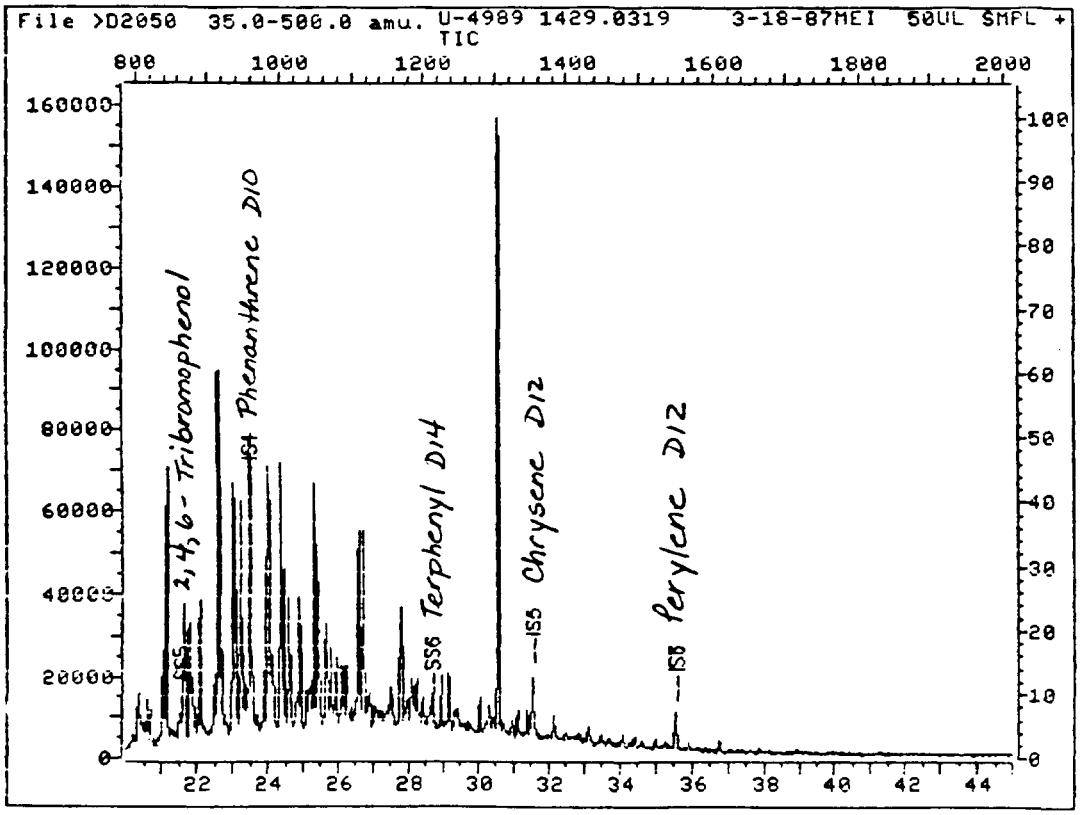
Data File: >D2050::D1
Name: U-4989 1429.0319 DC-010-74
Misc: 3-18-87MEI 50UL SMPL + 950UL MECL2 +10UL IS (20X) BTL# 2

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 >D2050 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 >D2050 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

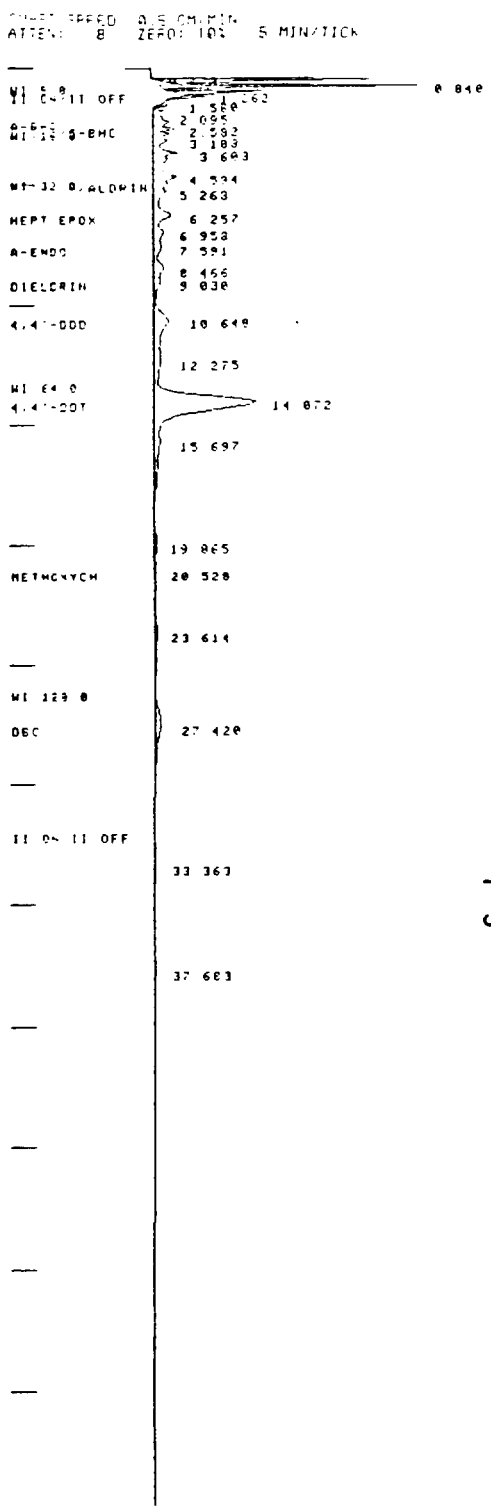
QUANT REPORT

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 +1.0UL 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 70	88 H
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.10~~	~~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~~	~~7109~~	~~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


ATTEN: 8 ZERO: 10% 5 MIN/TICK
0 840
1 560
2 095
2 592
3 183
3 603
4 594
5 263
6 257
6 958
7 591
8 466
9 030
10 649
12 275
14 072
15 697
19 865
20 528
23 614
27 420
33 363
37 683
HEPT EPOX
A-ENDO
DIELDRIN
METHOXYCH
DBC

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-SS~~	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	~~END KETON~~	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

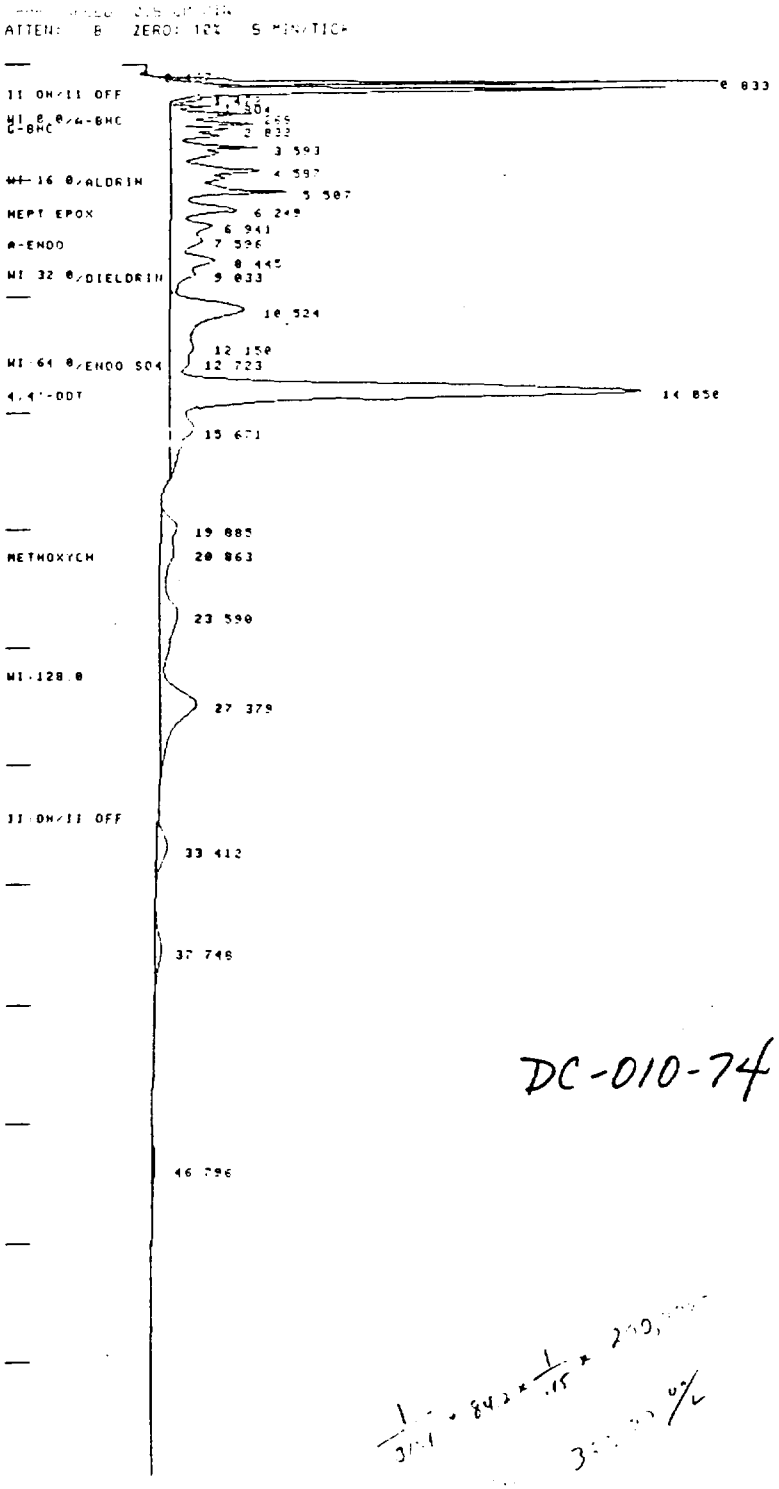
DIVISOR: 0.15000 MULTIPLIER: 1000000.00

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: 12% 5 MIN/TIC
II ON/II OFF
MI 8.0 %/A-BHC
G-BHC
MI 16 %/ALDRIN
HEPT EPOX
B-ENDO
MI 32 %/DIELDRIN
MI 64 %/ENDO SO4
4,4'-DDT
METHOXYCH
MI 128.0
II ON/II OFF
3 593
5 507
6 249
6 941
7 596
9 033
10 524
12 150
12 723
14 850
15 671
19 885
20 863
23 590
27 379
33 412
37 748
46 796

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-END~~	3043.494	2.268	0.028	68480	VV	? 12.00
4	~~a-END~~	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~~ ?		~~240632~~	VV	? 20.50
10	~~ALDRIN~~	5750.377	~~4.929~~	-0.131	~~120683~~	VV	? 25.75
11		0.0000	~~5.507~~		~~315597~~	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	~~ENDO SO4~~	6186.328	12.723	-0.097	74552	VV	?110.94
20	~~4,4' EDT~~	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

DC-010-75

.Organics Analysis Data Sheet
(Page 1)

.aboratory.Name: ecology and environment, inc.
Case No: IL-4906, 4928, 4971, 4989-

Lab Sample ID No: 1430
QC Report No:

Sample Matrix: Soil
Contract No: IL-3140

Data Release Authorized By: O'Hotowicz
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/ml 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 V-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-Chloroethylether	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

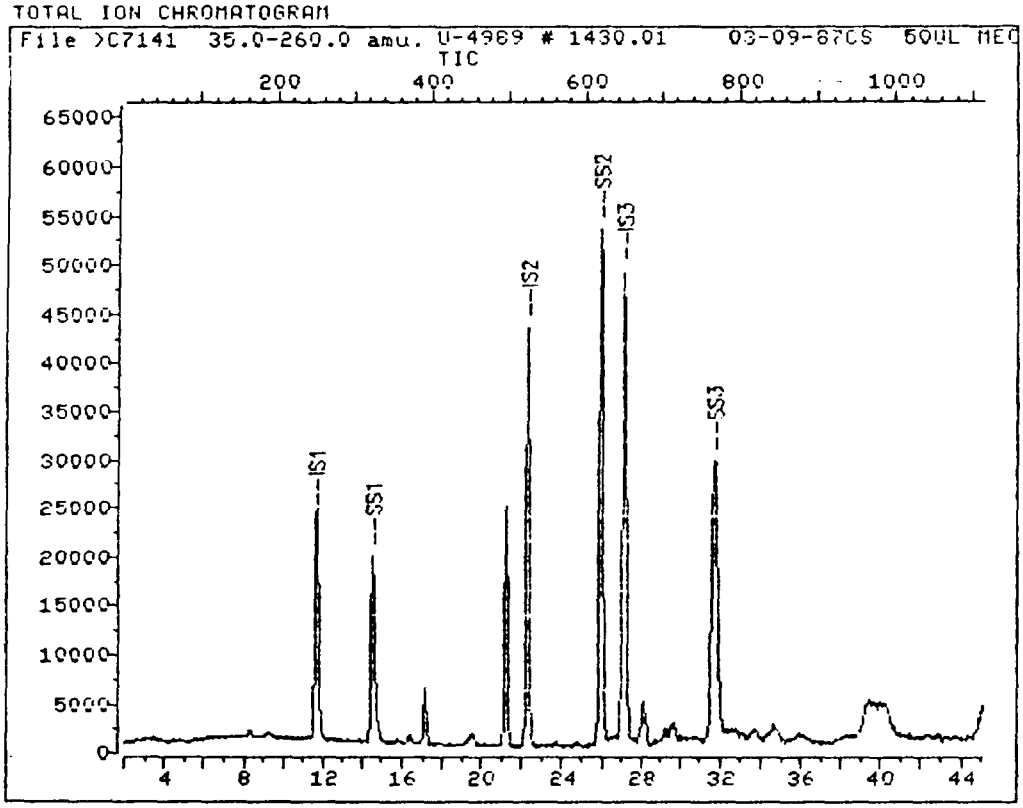
Sample Number
DC-010-75

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number MCAC	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)		2435	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

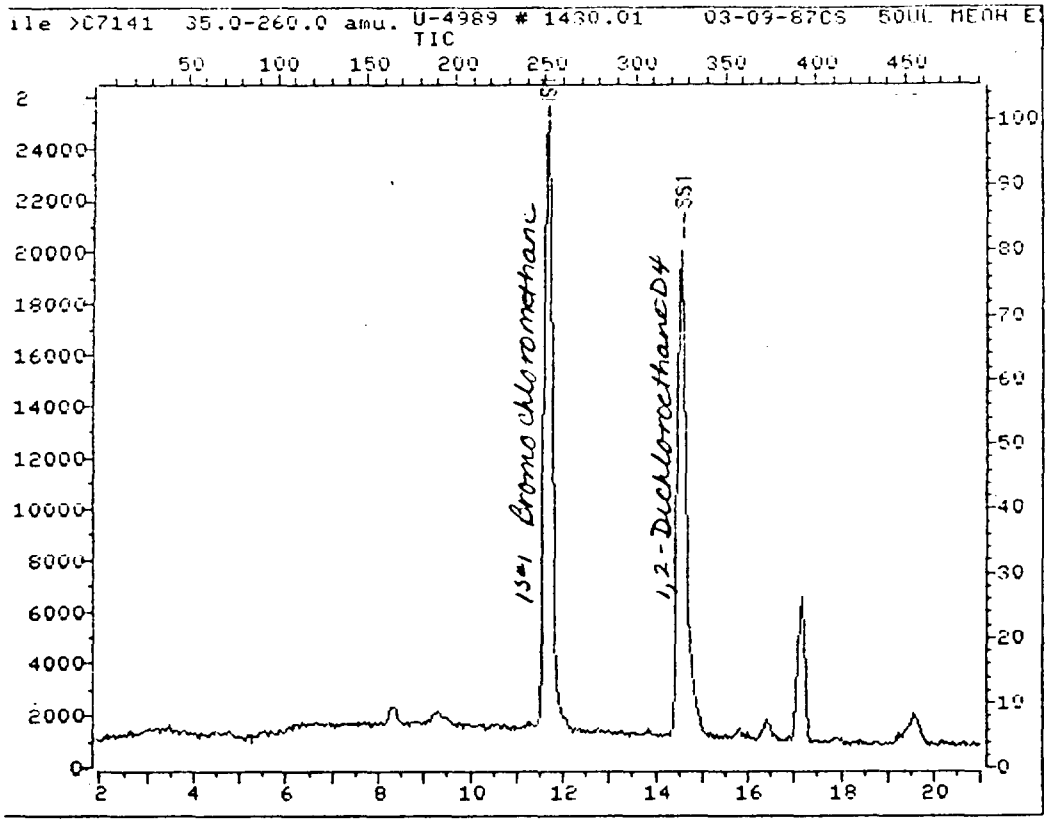


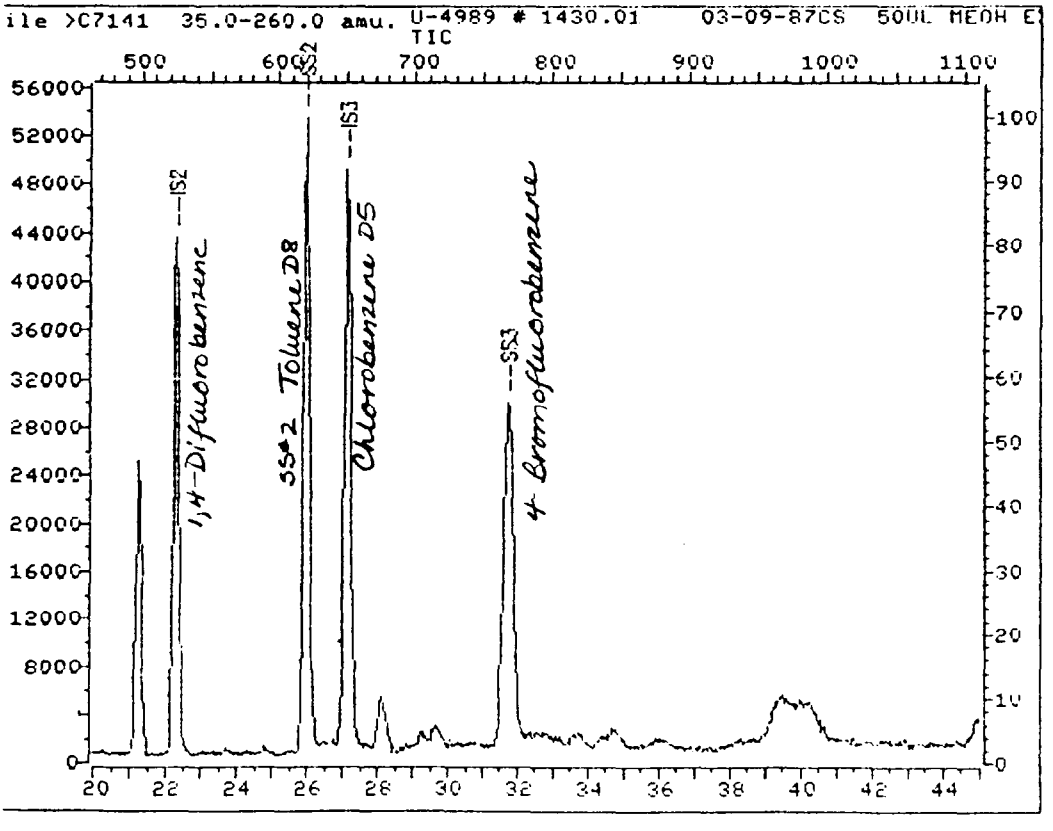
Data File: >C7141::D3
Name: U-4989 # 1430.01 DC-010-75
Misc: 03-09-87CS 50UL MEOH EXT (4.14g/10ML) + 5ML DI + 10UL

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


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


ile >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
SS2
IS3
Chlorobenzene D5
SS3
4-Bromofluorobenzene

QUANT REPORT

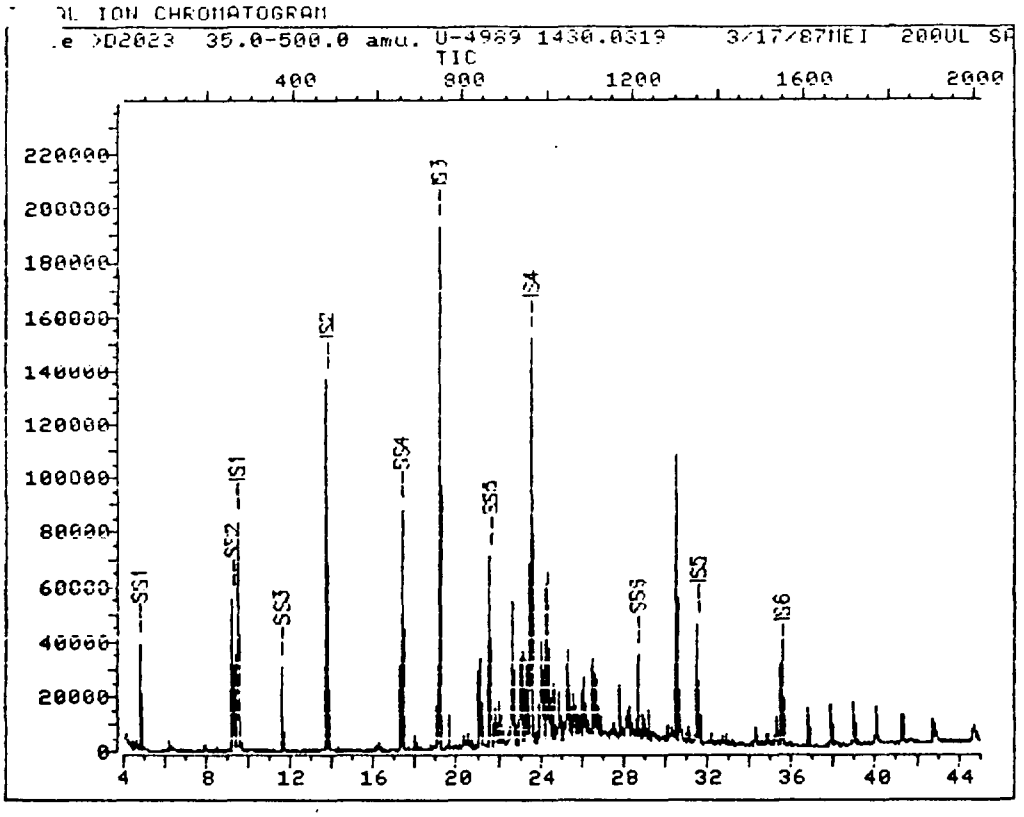
Operator ID: USER8 Quant Rev: 4 Quant Time: 870309 16:24
Input File: ^C7141::Q1 Injected at: 870309 15:38
Data File: >C7141::D3 Dilution Factor: 1.00
Name: U-4989 # 1430.01 DC-010-75
Misc: 03-09-87CS 50UL MEOH EXT (4.14g/10ML) + 5ML DI + 10UL

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 84	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 reruns required CSF

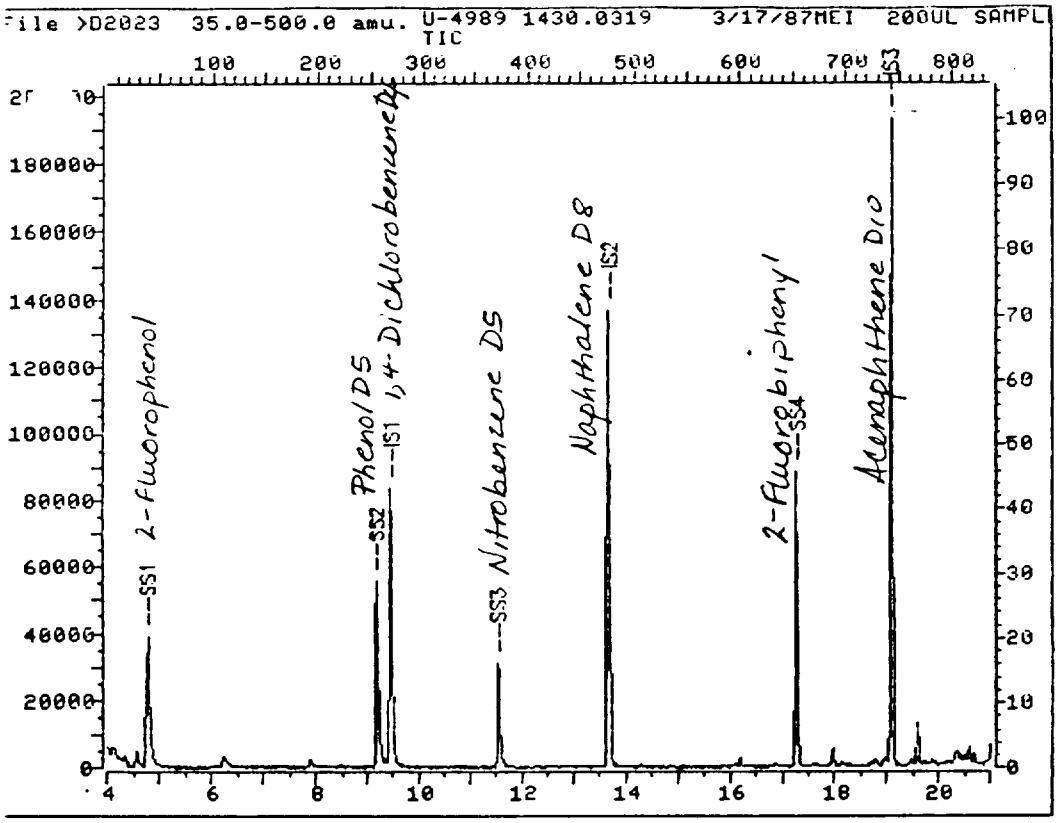


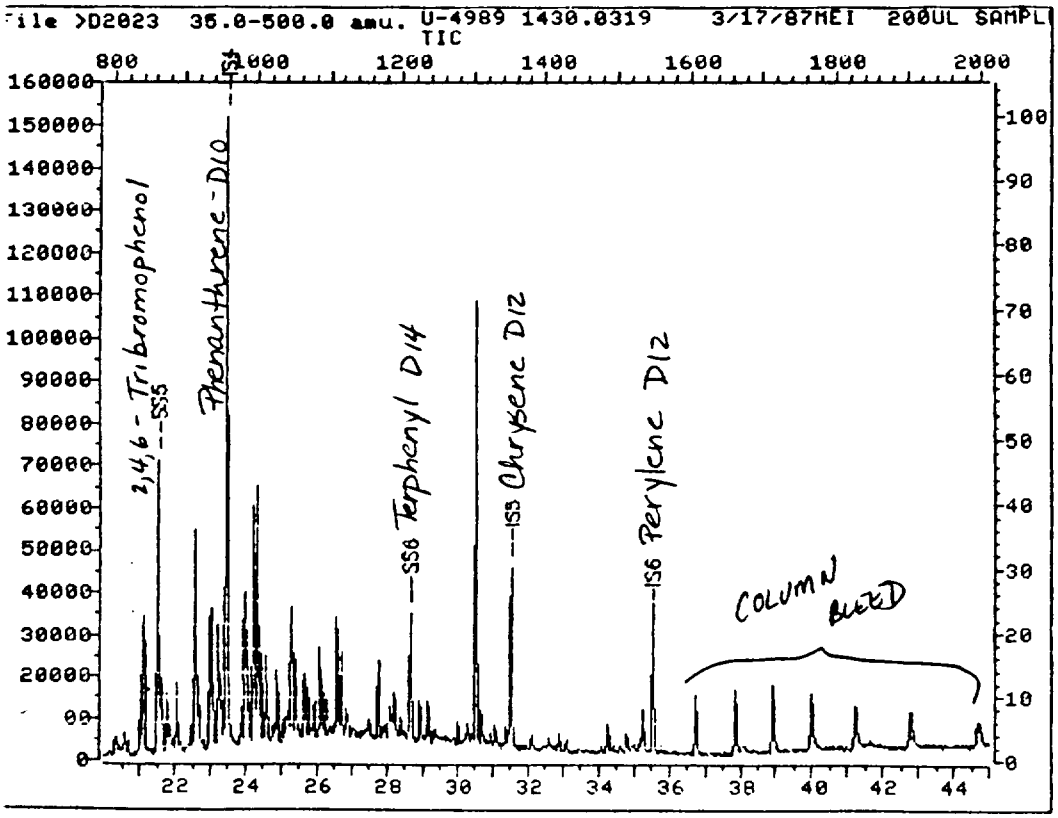
Data File: >D2023::D3
Name: U-4989 1430.0319 DC-010-75
Misc: 3/17/87MEI 200UL SAMPLE/200UL MECL2 + 4UL IS(2X) BTL# 4

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
Phenol D5
1,4-Dichlorobenzene D4
Nitrobenzene D5
Naphthalene D8
2-Fluorobiphenyl
Acenaphthene D10


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

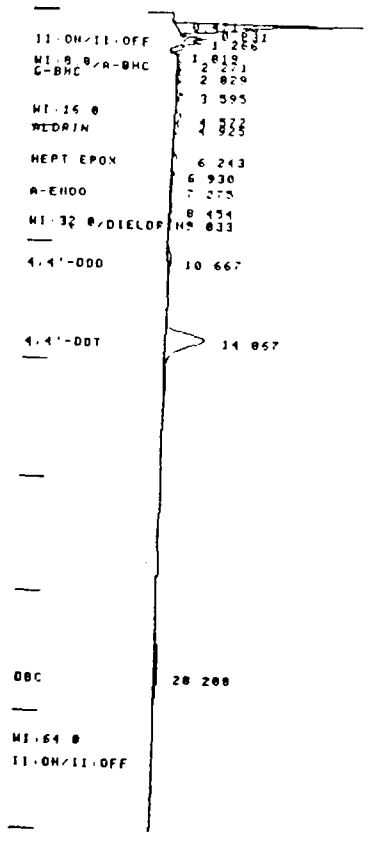
QUANT REPORT

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
0)	NITROBENZENE-D5	(SURR)	82	11.53	371	31236	38.31 UG/L 76	95
4)	*ACENAPHTHENE-D10	(IS)	162	19.09	742	102994	40.00 UG/L	95
8)	2-FLUOROBIPHENYL	(SURR)	172	17.28	653	69970	45.37 UG/L 90	93
1)	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.09~~	~~742~~	~~19888~~	~~11.77~~ UG/L	100
8)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.53	862	20914	68.10 UG/L 68	96
2)	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.09~~	~~742~~	~~13972~~	~~34.27~~ UG/L	100
5)	*PHENANTHRENE-D10	(IS)	188	23.47	957	144637	40.00 UG/L	91
0)	PENTACHLOROPHENOL		266	23.29	948	6387	19.26 UG/L yes	100
1)	PHENANTHRENE		178	23.53	960	4126	2.32 UG/L yes	97
2)	~~ANTHRACENE~~		~~178~~	~~23.53~~	~~960~~	~~4126~~	~~2.52~~ UG/L	97
3)	DI-N-BUTYLPHTHALATE		149	26.08	1085	25334	13.44 UG/L yes	99
5)	*CHRYSENE-D12	(IS)	240	31.53	1352	44115	40.00 UG/L	100
7)	PYRENE		202	27.74	1166	5088	3.94 UG/L yes	92
8)	TERPHENYL-D14	(SURR)	244	28.63	1210	28281	41.67 UG/L	100
9)	BUTYLBENZYLPHTHALATE		149	30.55	1304	67613	178.75 UG/L yes	86
1)	~~BENZO(A)ANTHRACENE~~		~~228~~	~~31.59~~	~~1355~~	~~2711~~	~~4.59~~ UG/L	98
2)	BIS(2-ETHYLHEXYL)PHTHALATE		149	32.61	1405	1822	2.91 UG/L yes	97
3)	CHRYSENE		228	31.59	1355	2711	4.83 UG/L yes	98
4)	*PERYLENE-D12	(IS)	264	35.53	1548	28291	40.00 UG/L	100

* Compound is ISTD



28

See Run 33

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

DEFAULT CALIBRATE 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	WI/2 (SEC)
1	~~4,4'-DDE~~	897.8018	10.667	-0.263	29901	BV	46.50
2	~~4,4'-DDT~~	10494.36	14.067	-0.163	249999	VV	39.00
3	~~DBC~~	1708.334	28.208	-0.172	51655	BB	7115.38
TOTALS:		13100.49		-0.598	331555		

DETECTED PKS: 27 REJECTED PKS: 24

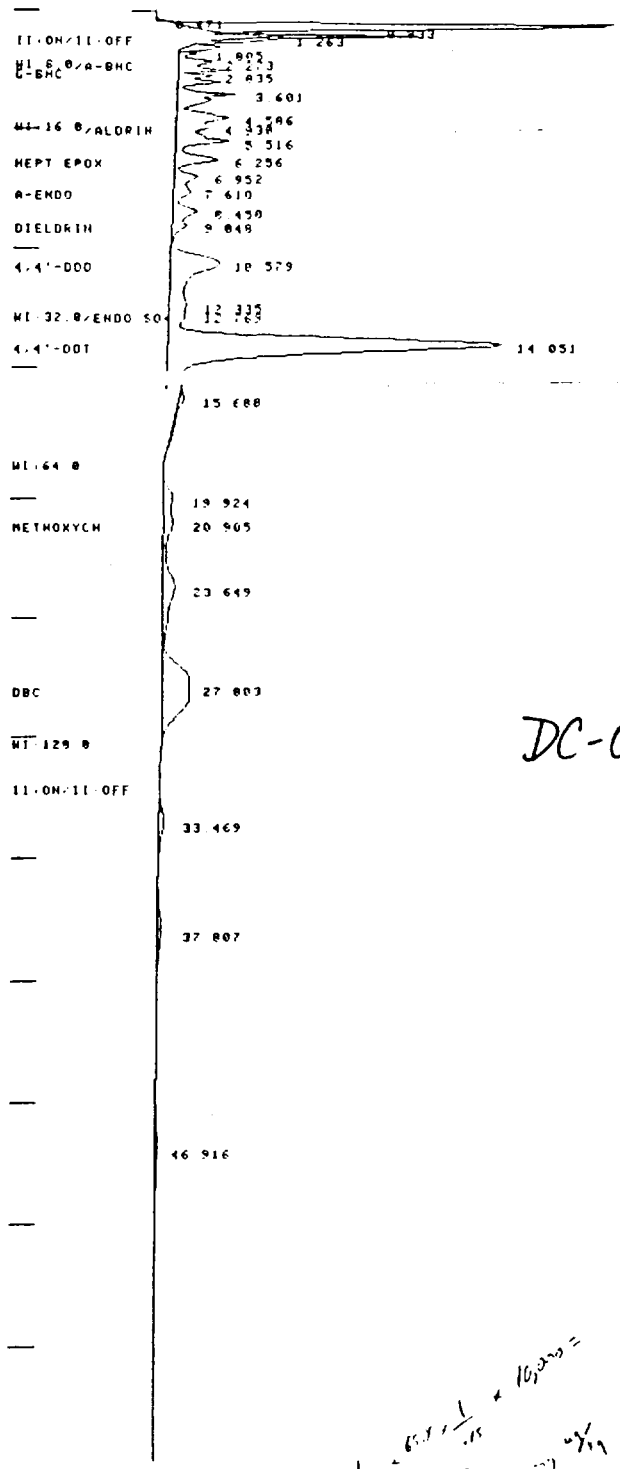
DIVISOR: 0.15000 MULTIPLIER: 100000.000

NOISE: 11.4 OFFSET: -17

RACK: 2 VIAL: 13 INJ: 1

NOTES:
NOTEBOOK:259-146,147 ANALYST: RICHARD SAMSON
SECURE AREA: D 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

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	PCB 1242	60527	VV	9.81
8		0.0000	*3.601	63.6	98487	VV	11.19
9		0.0000	3.839		75915	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	~~5.516~~		~~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	~~DDD~~ 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	5600 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)

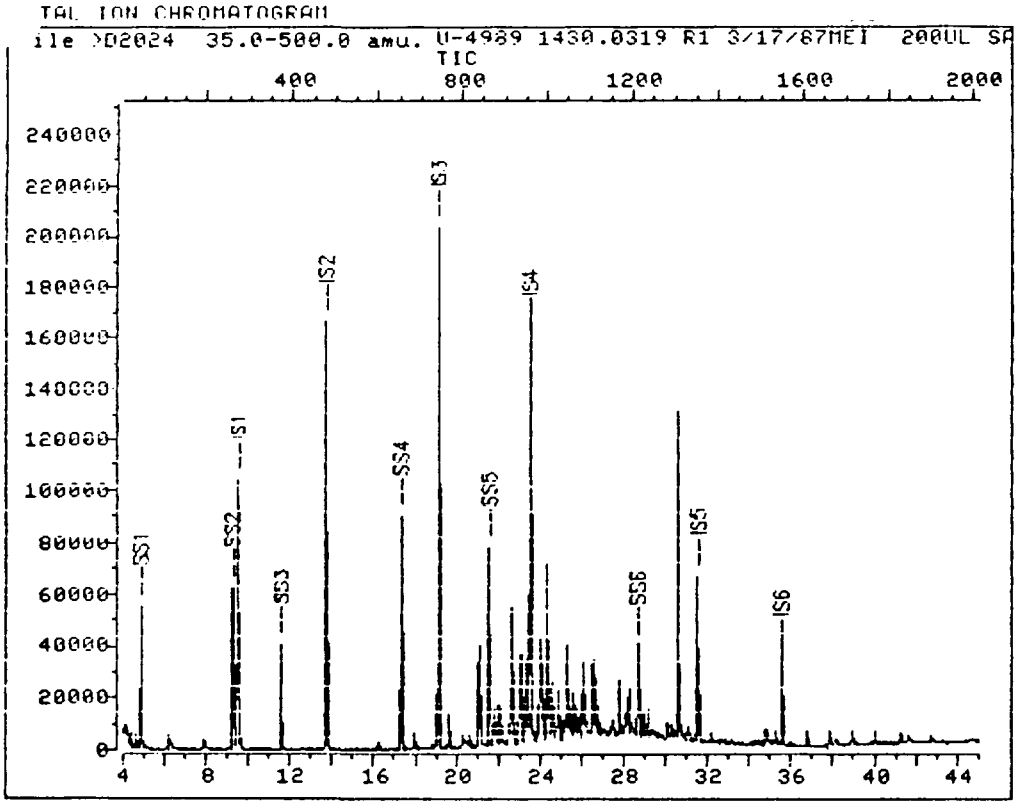
V_s = Volume of water extracted (ml)

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

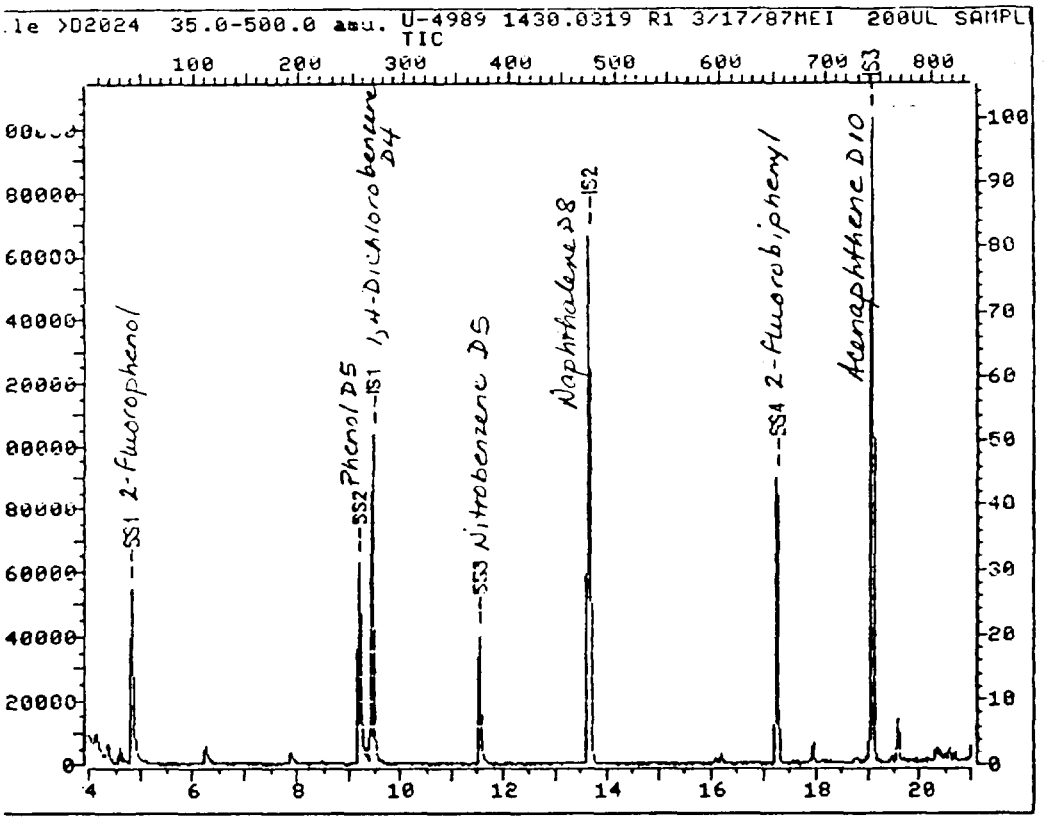


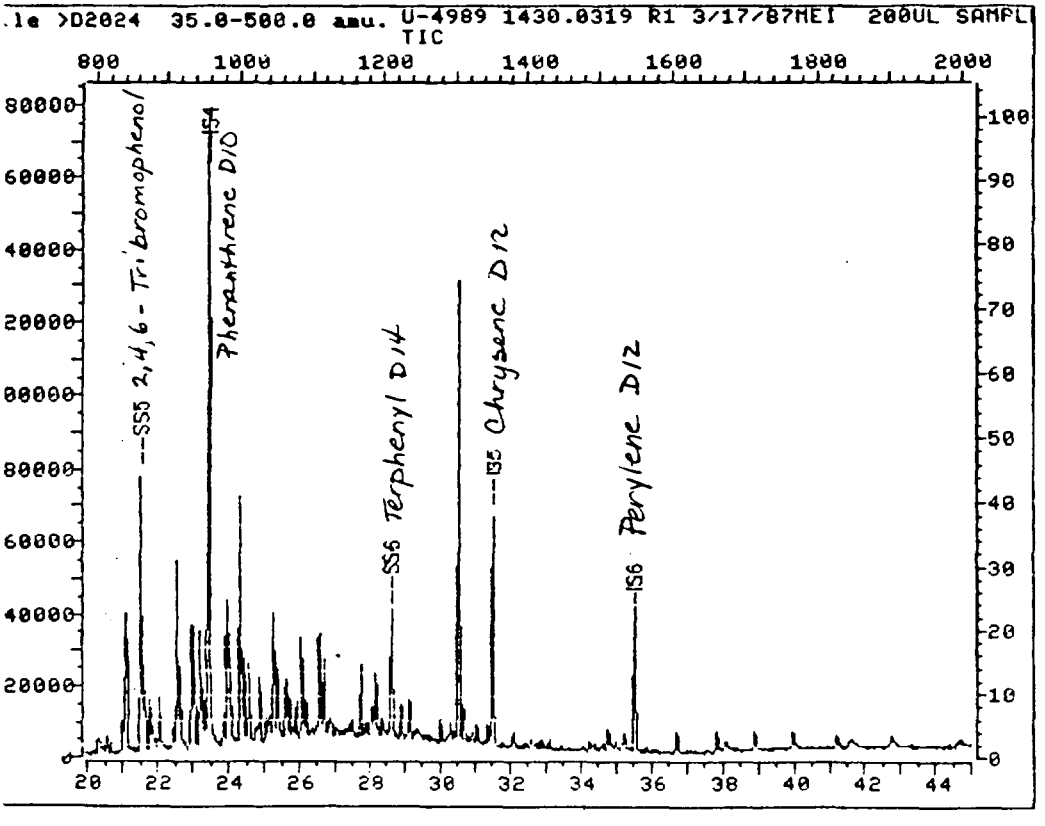
Data File: >D2024::D3
Name: U-4989 1430.0319 R1
Misc: 3/17/87MEI 200UL SAMPLE/200UL MECL2 + 4UL IS(2X) BTL# 5

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


.le >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
Naphthalene D8 --IS2
--SS4 2-Fluorobiphenyl
Acenaphthene D10 --IS3


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

QUANT REPORT

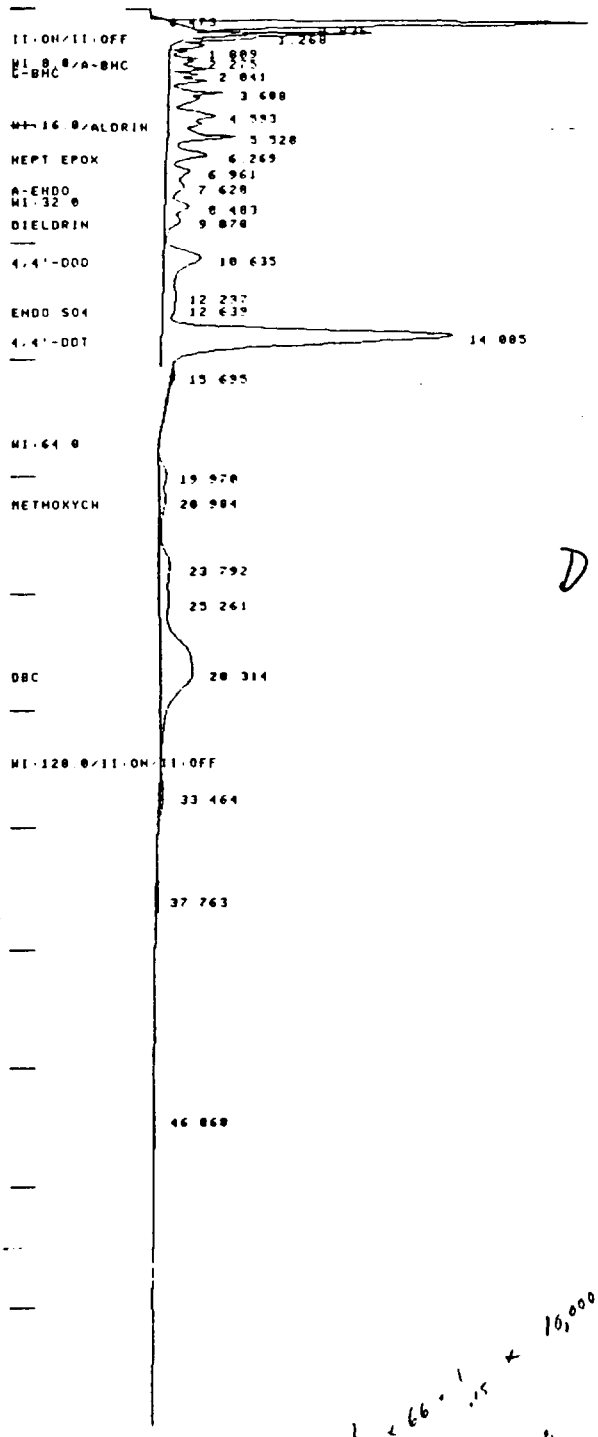
)perator ID: USER8 Quant Rev: 4 Quant Time: 870414 09:55
)utput File: ^D2024::Q2 Injected at: 870317 21:12
)ata File: >D2024::D3 Dilution Factor: 2.00
lame: U-4989 1430.0319 R1 DC-010-75R
lisc: 3/17/87MEI 200UL SAMPLE/200UL MECL2 + 4UL IS(2X) BTL# 5

D File: BNADR::D2
itle: BNA ID FILE FOR THE HP 5970 (B)
ast 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
0)	NITROBENZENE-D5	(SURR)	82	11.55	372	39217	40.50 UG/L 81	93
4)	*ACENAPHTHENE-D10	(IS)	162	19.08	742	125650	40.00 UG/L	93
8)	2-FLUOROBIPHENYL	(SURR)	172	17.27	653	80960	43.03 UG/L 86	93
1)	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.08~~	~~742~~	~~23718~~	~~11.51 UG/L~~ CW	100
8)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.53	862	24200	64.59 UG/L 65	98
2)	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.08~~	~~742~~	~~17035~~	~~34.25 UG/L~~ CW	100
3)	~~DIETHYLPHTHALATE~~		~~149~~	~~21.04~~	~~858~~	~~1571~~	~~.74 UG/L~~	92
5)	*PHENANTHRENE-D10	(IS)	188	23.47	957	183056	40.00 UG/L	96
0)	PENTACHLOROPHENOL		266	23.28	948	7098	16.91 UG/L	100
1)	PHENANTHRENE		178	23.53	960	4563	2.02 UG/L	92
2)	~~ANTHRACENE~~		~~178~~	~~23.53~~	~~960~~	~~4563~~	~~2.20 UG/L~~ CW	92
3)	DI-N-BUTYLPHTHALATE		149	26.08	1085	31098	13.04 UG/L	98
5)	*CHRYSENE-D12	(IS)	240	31.53	1352	62653	40.00 UG/L	100
7)	PYRENE		202	27.73	1166	5873	3.20 UG/L	94
8)	TERPHENYL-D14	(SURR)	244	28.63	1210	36760	38.13 UG/L 76	100
9)	BUTYLBENZYLPHTHALATE		149	30.55	1304	82532	153.63 UG/L	91
1)	~~BENZO(A)ANTHRACENE~~		~~228~~	~~31.59~~	~~1355~~	~~3153~~	~~3.76 UG/L~~ CW	94
2)	BIS(2-ETHYLHEXYL)PHTHALATE		149	32.61	1405	1253	1.41 UG/L	86
3)	CHRYSENE		228	31.59	1355	3153	3.96 UG/L	95
4)	*PERYLENE-D12	(IS)	264	35.52	1548	39462	40.00 UG/L	100
5)	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~34.40~~	~~1493~~	~~1224~~	~~1.33 UG/L~~ CW	100
5)	~~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

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	PCB 1242	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	~~END 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-G8-70MS

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.
Case No: IL-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 Slojkowicz
Date Sample Received: 2-26-87

Volatile Compounds

Concentration: Low (Medium) (Circle One)
Date Extracted/Prepared:
Date Analyzed: 2-26-87
Conc/Dil Factor: CW2 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-Dichloromethane	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

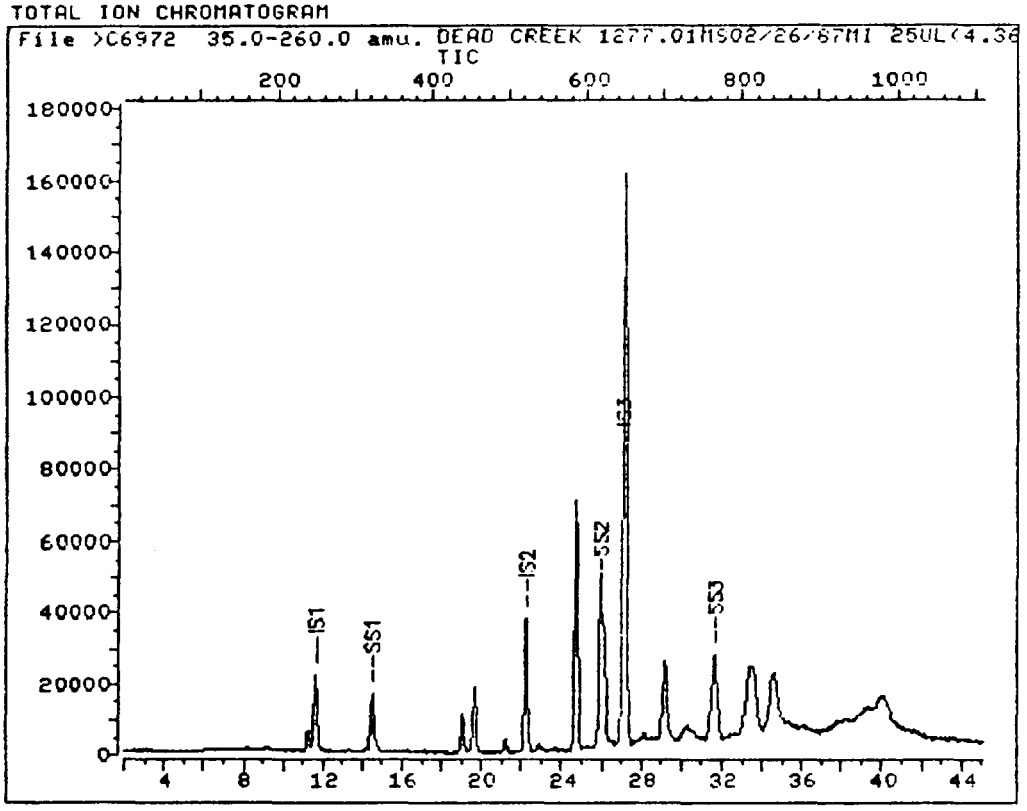
C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ml in the final extract should be confirmed by GC/MS.

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.

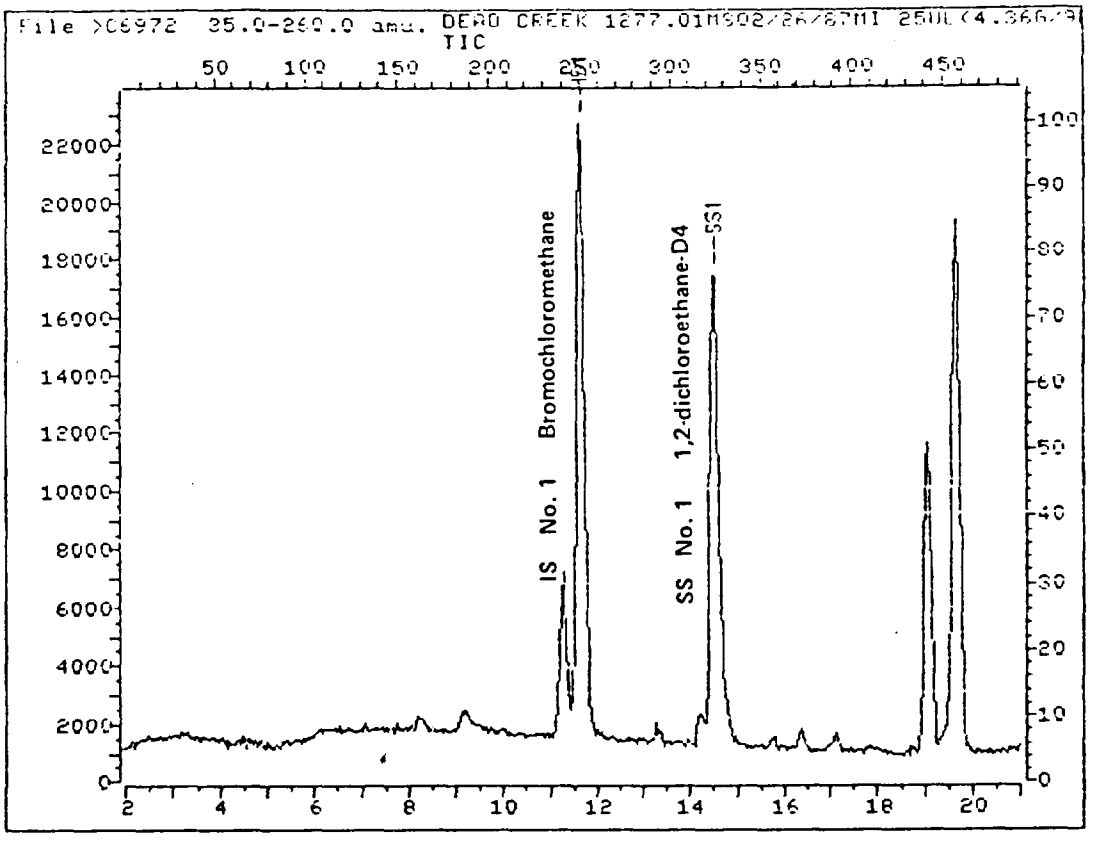
TOTAL ION CHROMATOGRAM



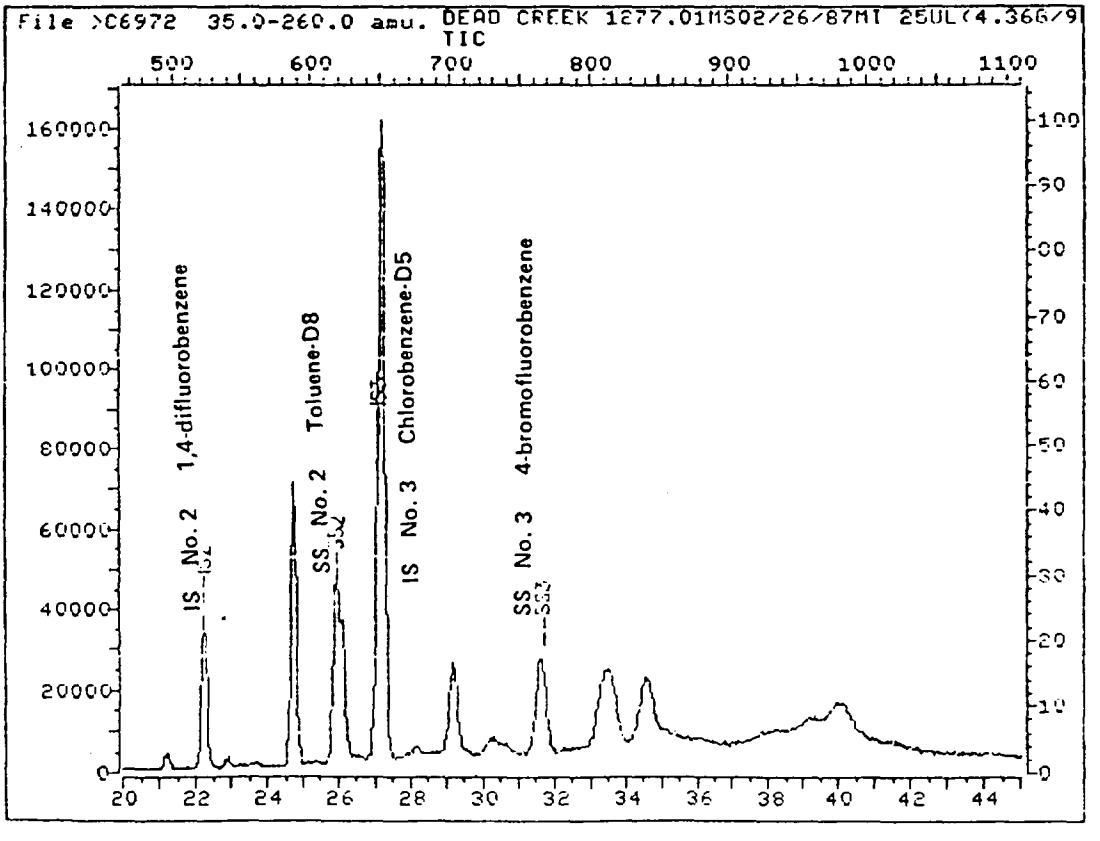
Data File: >C6972::D3
Name: DEAD CREEK 1277.01MS DC-G8-70 MS
Misc: 02/26/87MI 25UL(4.36G/9ML MEOH/1ML MS) + 10UL IS/SS

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

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


File >C6972 35.0-260.0 amu. DEAD CREEK 1277.01MSD2/26/87MI 25UL(4.366/9
TIC
IS No. 1 Bromochloromethane
SS No. 1 1,2-dichloroethane-D4
551

DC-G8-70MS


File >C6972 35.0-260.0 amu. DEAD CREEK 1277.01MSD2/26/87MI 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

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~~	~~.50~~	~~UG/L~~ 10 CW	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 CW	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: C Slotowicz
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

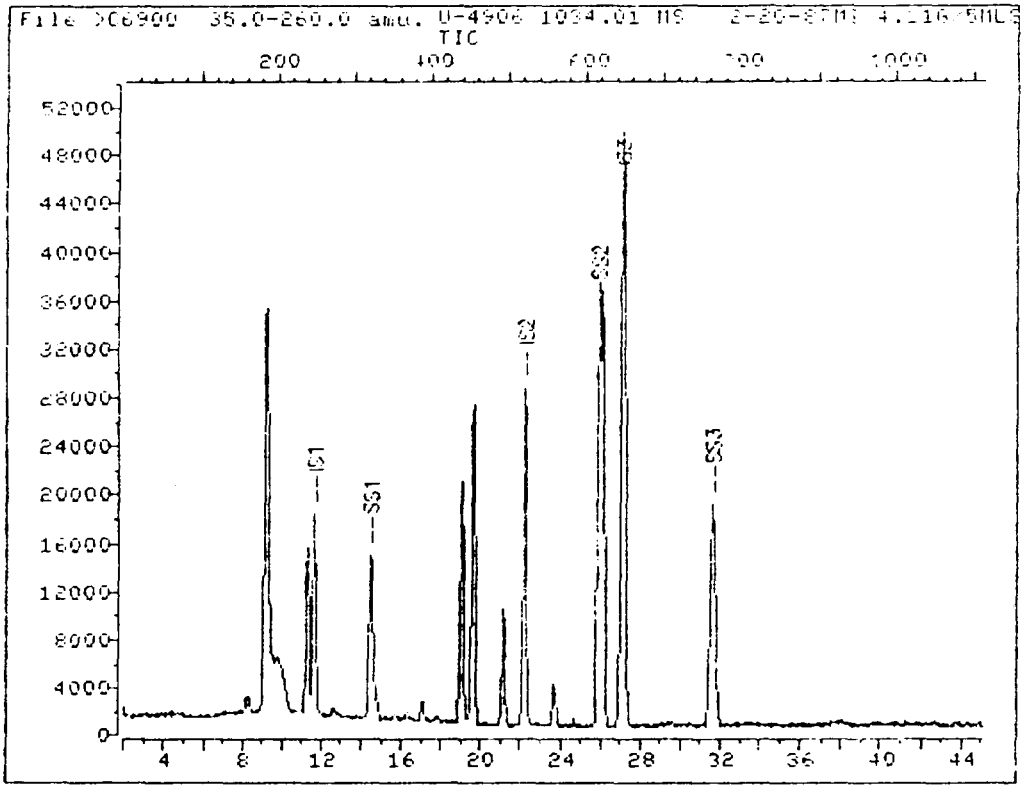
Data Reporting Qualifiers

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.
C	This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ml 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.

TOTAL ION CHROMATOGRAM

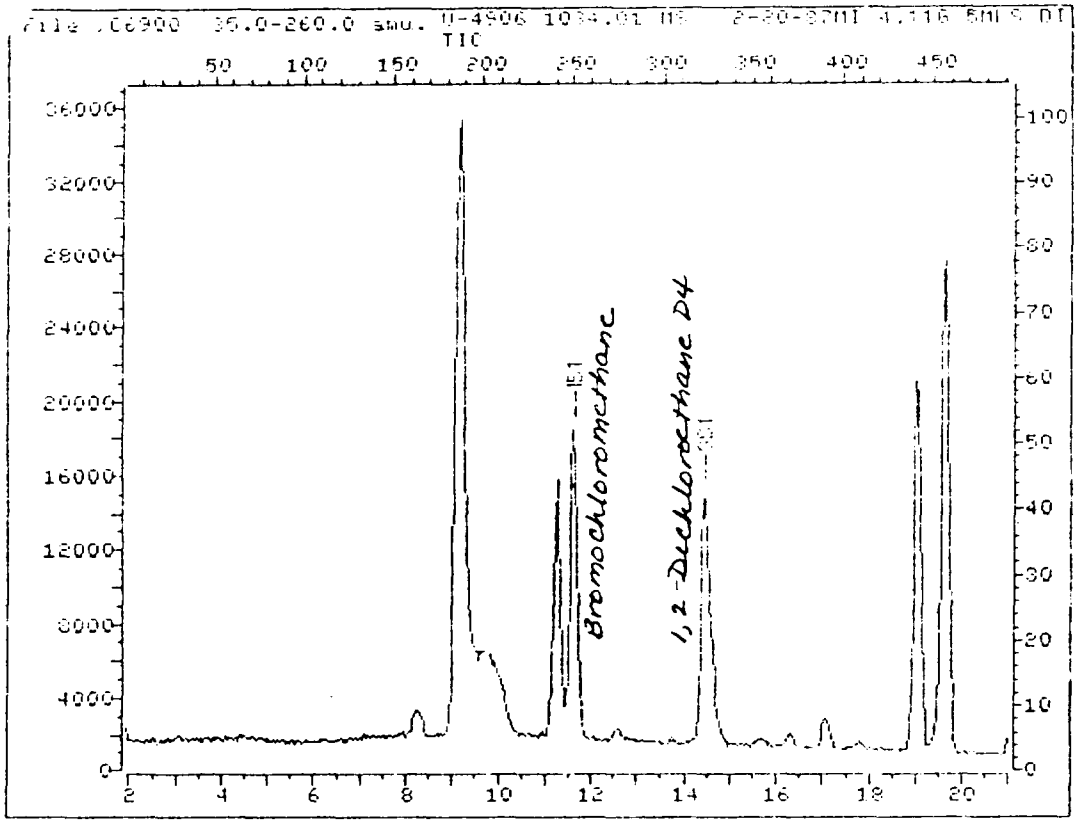


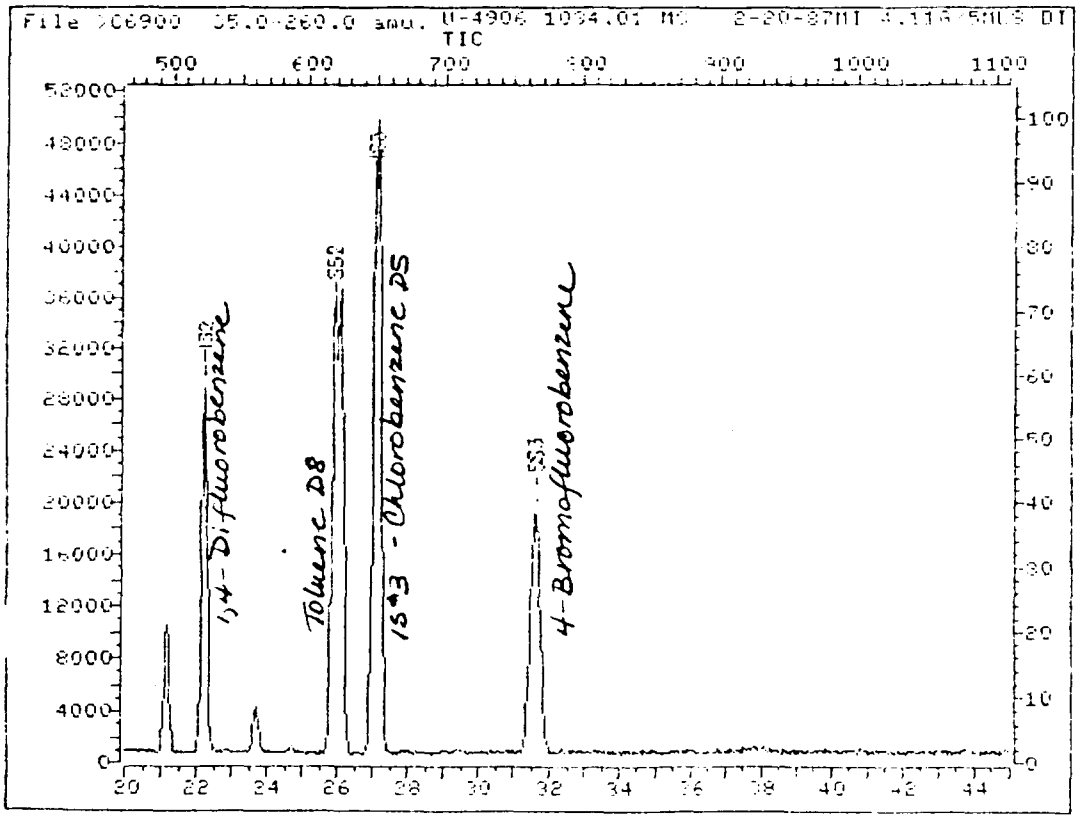
Data File: >C6900::03
Name: U-4906 1034.01 MS DC-P5-55-MS
Misc: 2-20-87MI 4.11G/5MLS DI + 10UL IS/SS/MS

Id File: VOACRS::02
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


TIC
Bromochloromethane
1,2-Dichloroethane D4


TIC
1,4-Difluorobenzene
Toluene D8
1,3-Dichlorobenzene D5
4-Bromofluorobenzene

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 870220 18:34
Output File: ^C6900::02 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	153	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	(SUPP)	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%	89
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~~	~~100~~
36)	TOLUENE-D8	(SURR)	98	25.88	618	127719	220.13 NGS 88	98 ✓
37)	TOLUENE		92	26.09	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 ✓

~~NO CW~~

* 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~~ aw 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

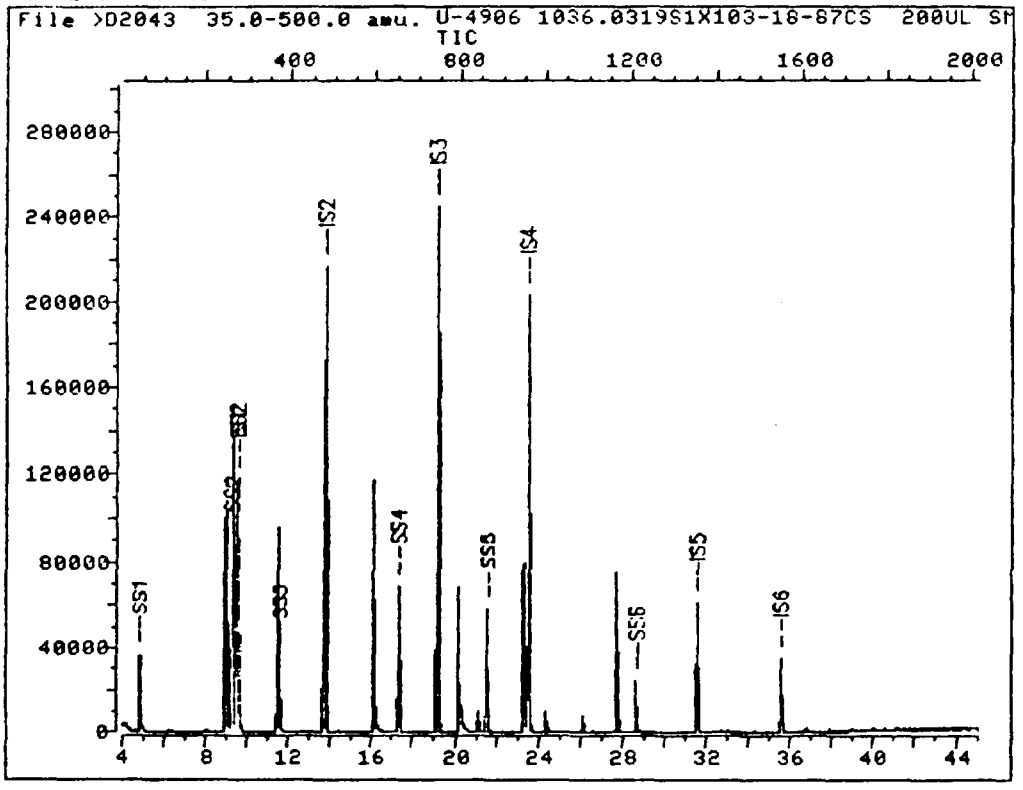
Concentrations reported "as received" basis

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
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

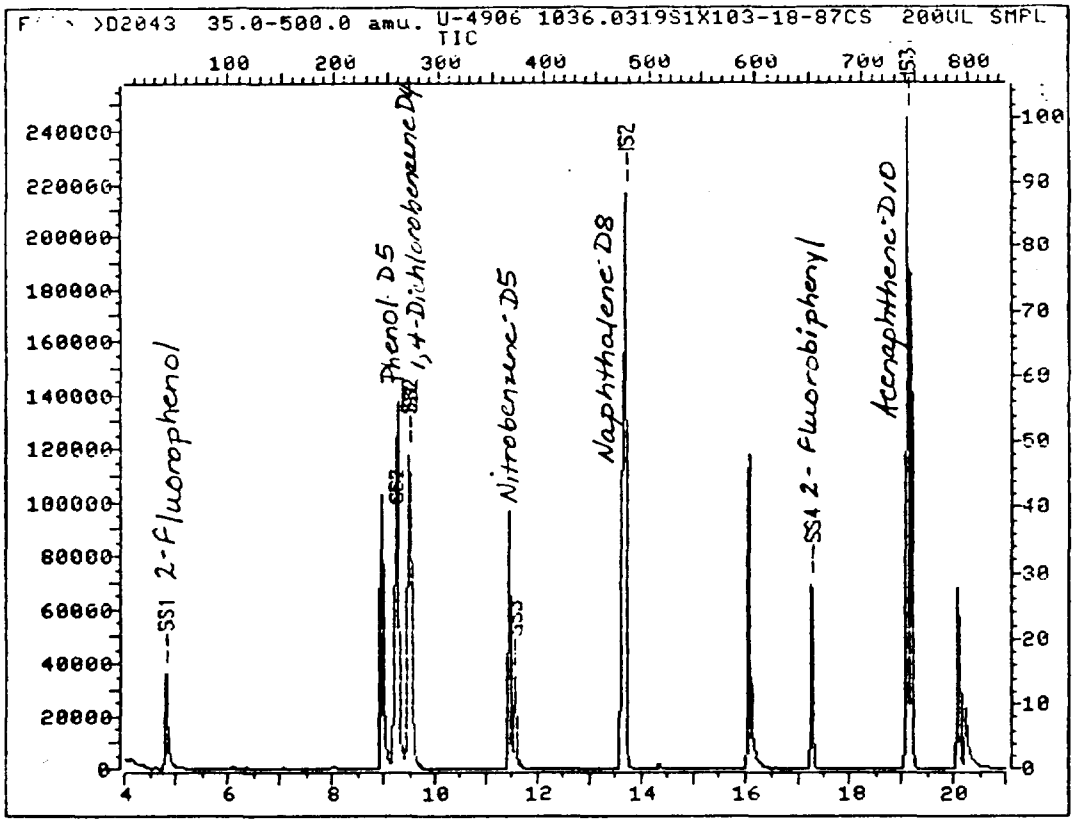
TOTAL ION CHROMATOGRAM



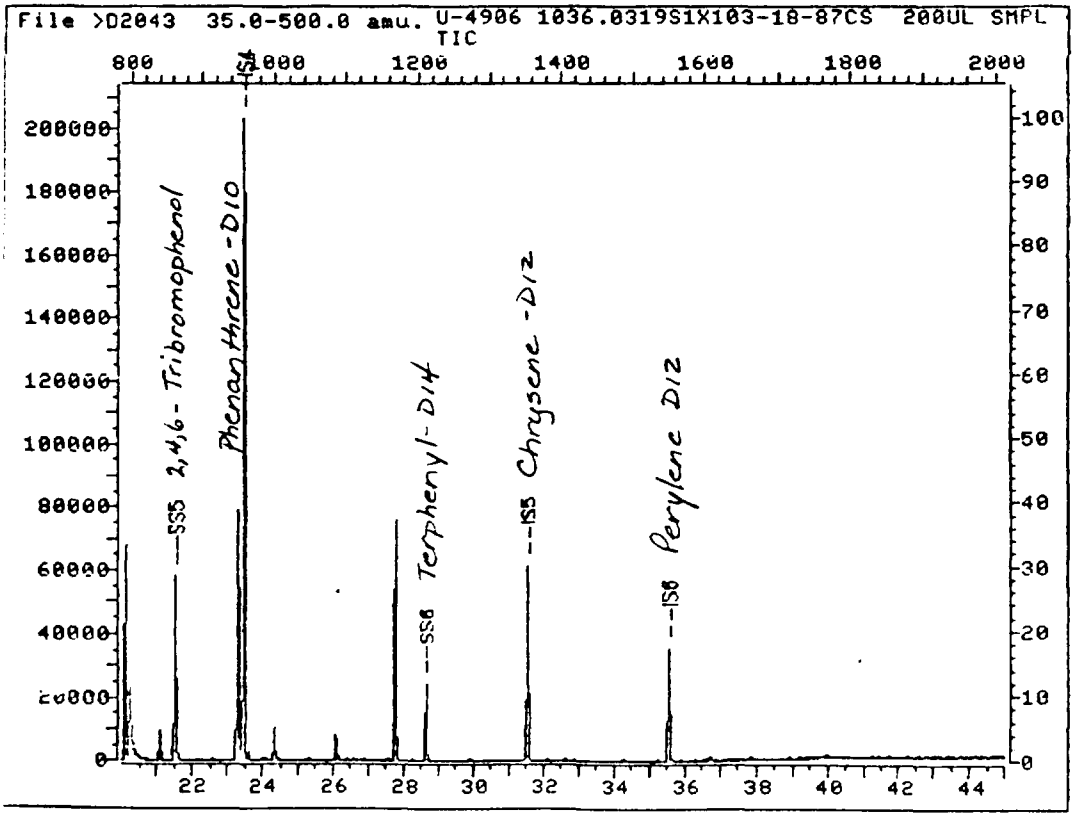
Data File: >D2043::D1
Name: U-4906 1036.0319S1X1 DC-I12-57 MS
Misc: 03-18-87CS 200UL SMPL + 200UL A/P + 4UL IS (2X) BTL# 2

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


TIC
2-Fluorophenol
Phenol-D5
1,4-Dichlorobenzene-D4
Nitrobenzene-D5
Naphthalene-D8
2-Fluorobiphenyl
Acenaphthene-D10

DC-I12-57MS


TIC
2,4,6-Tribromophenol
Phenanthrene-D10
Terphenyl-D14
Chrysene-D12
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-I12-57 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

	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 57% ✓	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 U-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	8200 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_t = Volume of extract injected (ul)

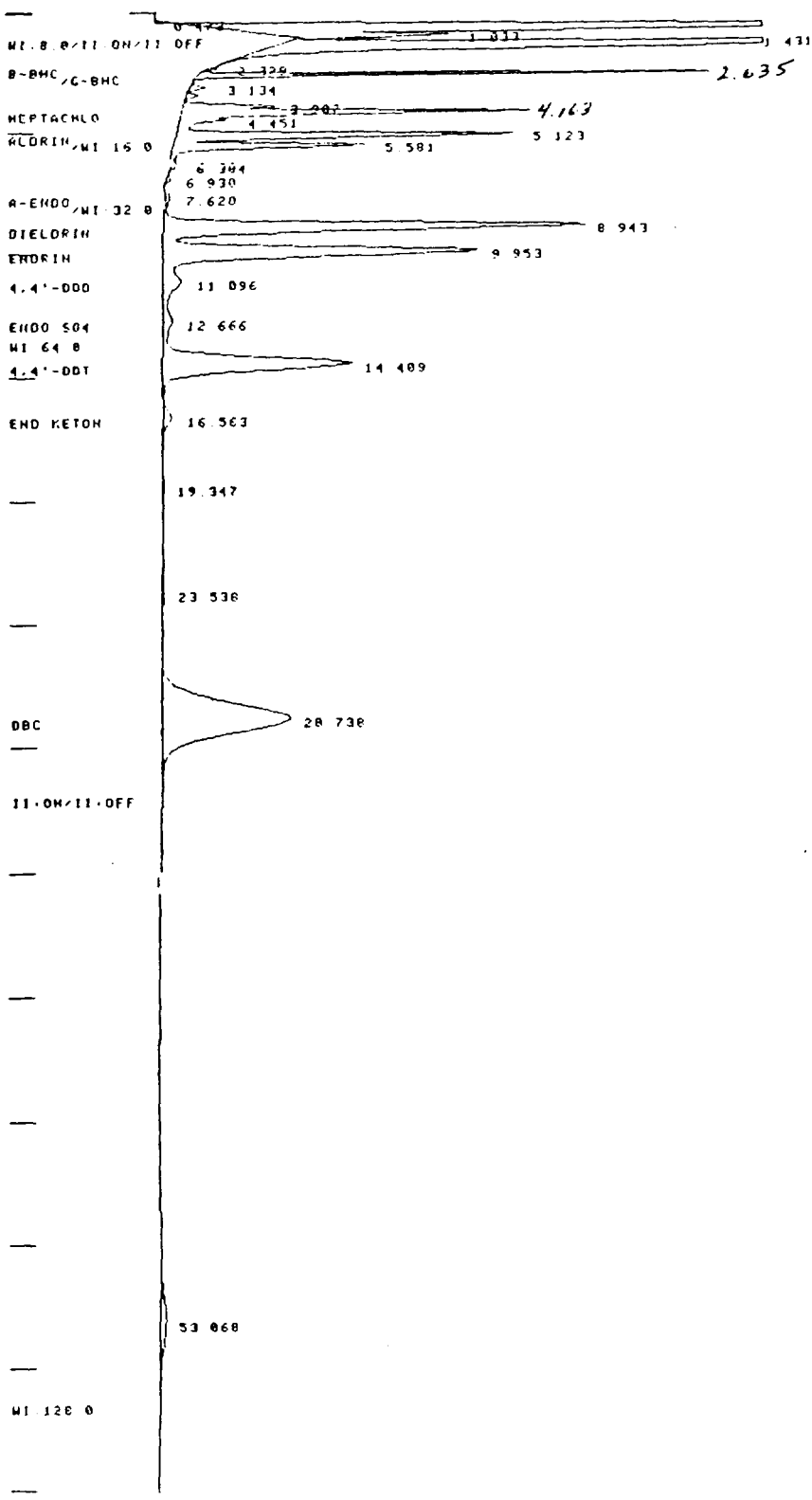
V_s = Volume of water extracted (ml)

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_t 4

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



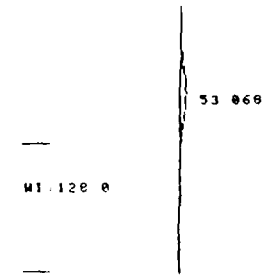
DC-I12-57MS

448

RECALCULATE ON FILE: DC1195

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

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



RECALCULATE ON FILE: DC1195

CHANNEL: 1A - 1 TITLE: RUN# 23 4:32 24 FEB 87 DC-E12-57MS

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

PEAK NO	PEAK NAME	RESULT UG/mg	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

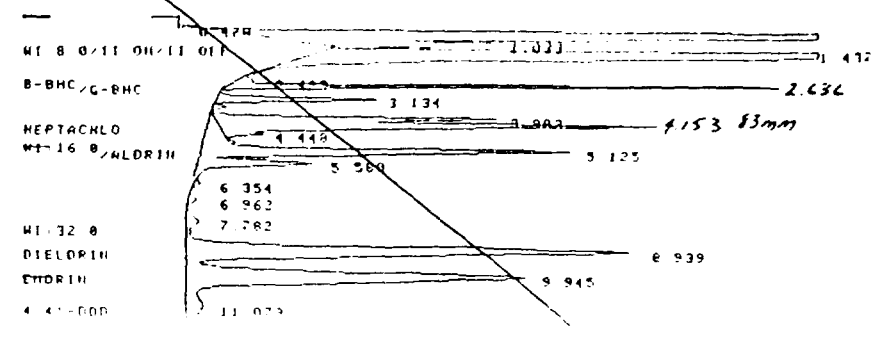
DIVISOR: 0.15000 MULTIPLIER: 2000.00000

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

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



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 Hoglowicz
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

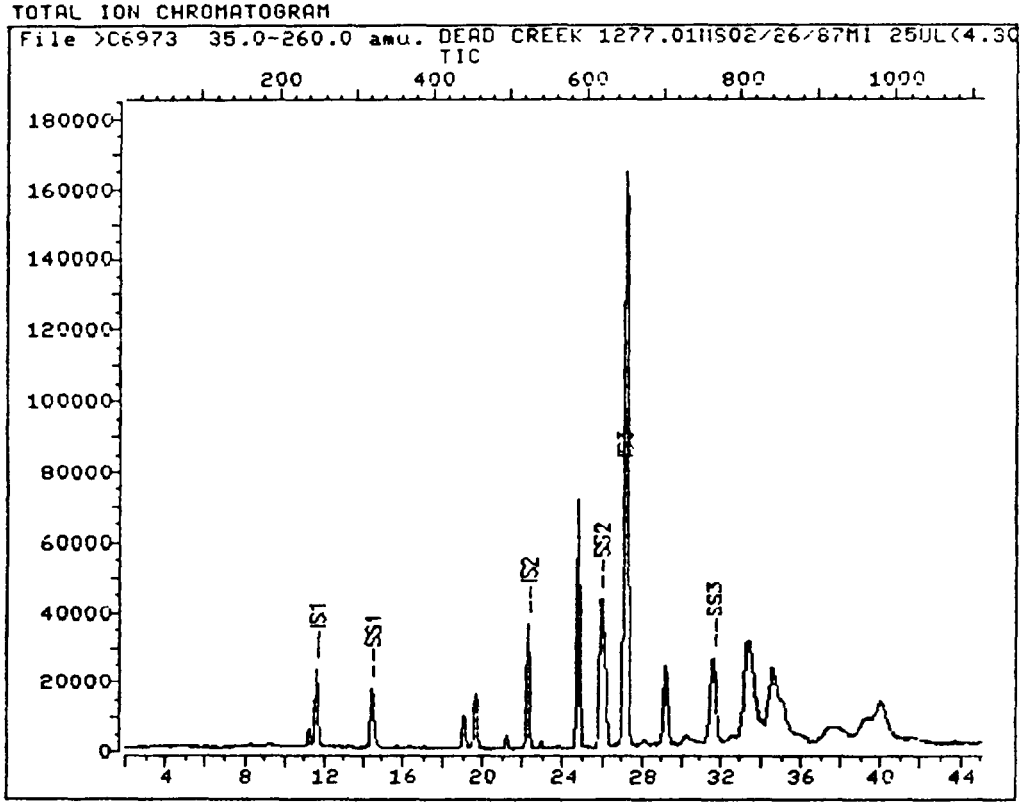
CAS Number		ug/l or (ug/Kg) (Circle One)
78-87-5	1, 2-Dichloropropane	2000u
10061-02-6	Trans-1, 3-Dichloropropene	2000u
79-01-6	Trichloroethene	SPIKE
124-48-1	Dibromochloromethane	2000u
79-00-5	1, 1, 2-Trichloroethane	2000u
71-43-2	Benzene	SPIKE
10061-01-5	cis-1, 3-Dichloropropene	2000u
110-75-8	2-Chloroethylvinylether	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
C	This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥ 10 ng/ml 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 [illegible] concentration.

TOTAL ION CHROMATOGRAM

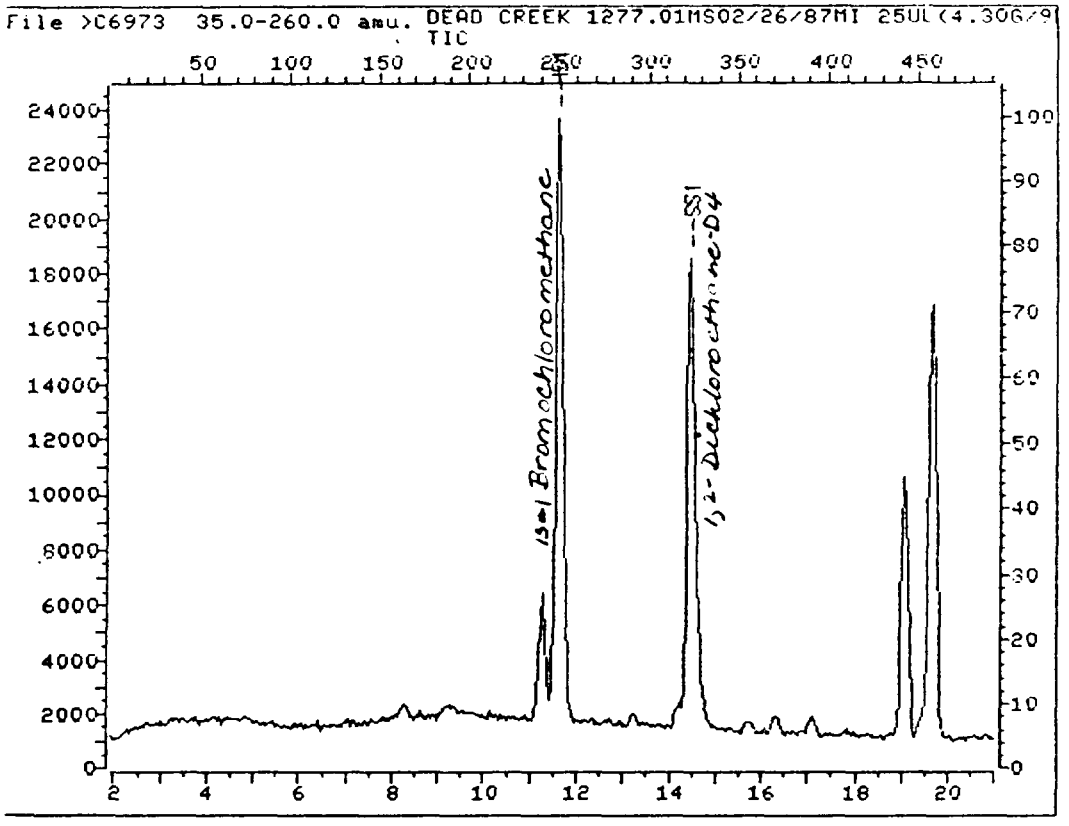


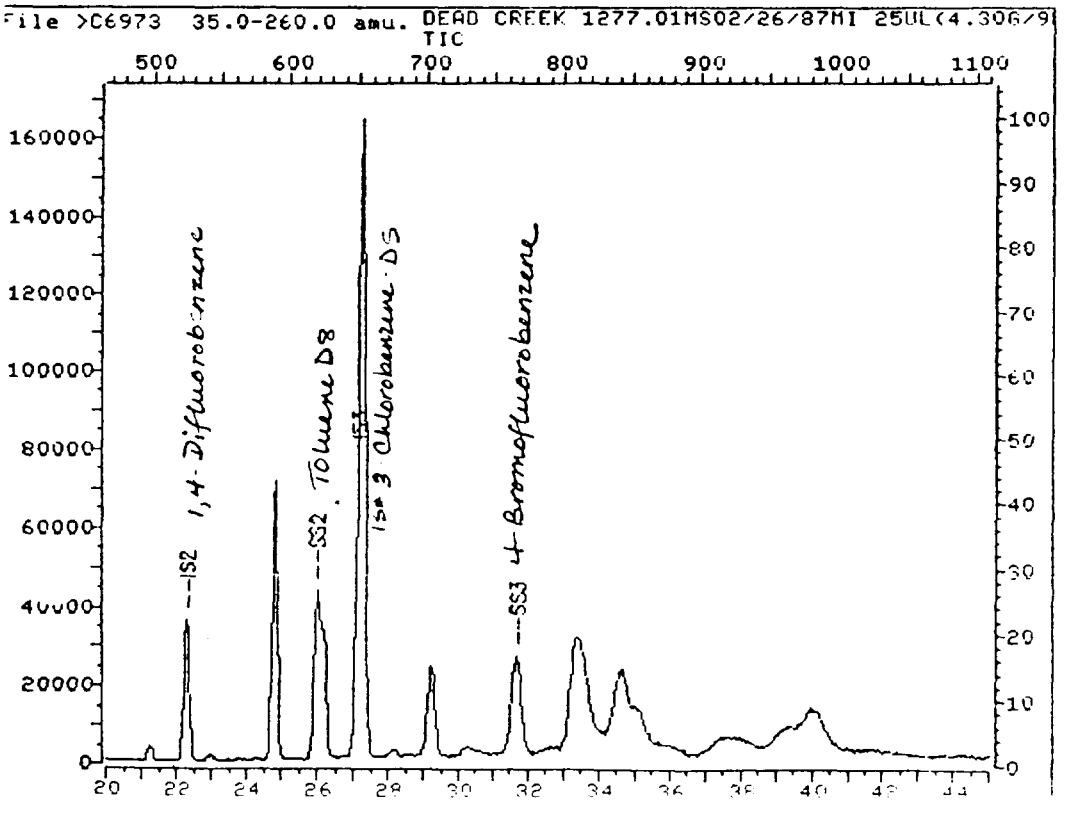
Data File: >C6973::D3
Name: DEAD CREEK 1277.01MS DC-G8-70 MSD
Misc: 02/26/87MI 25UL(4.30G/9ML MEOH/1ML MS) + 10UL IS/SS

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
50 100 150 200 250 300 350 400 450
24000 22000 20000 18000 16000 14000 12000 10000 8000 6000 4000 2000 0
100 90 80 70 60 50 40 30 20 10 0
2 4 6 8 10 12 14 16 18 20
IS=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
500 600 700 800 900 1000 1100
160000 140000 120000 100000 80000 60000 40000 20000 0
100 90 80 70 60 50 40 30 20 10 0
20 22 24 26 28 30 32 34 36 38 40 42 44
--IS2 1,4-Difluorobenzene
--SS2 Toluene D8
IS=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/50	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: IL-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

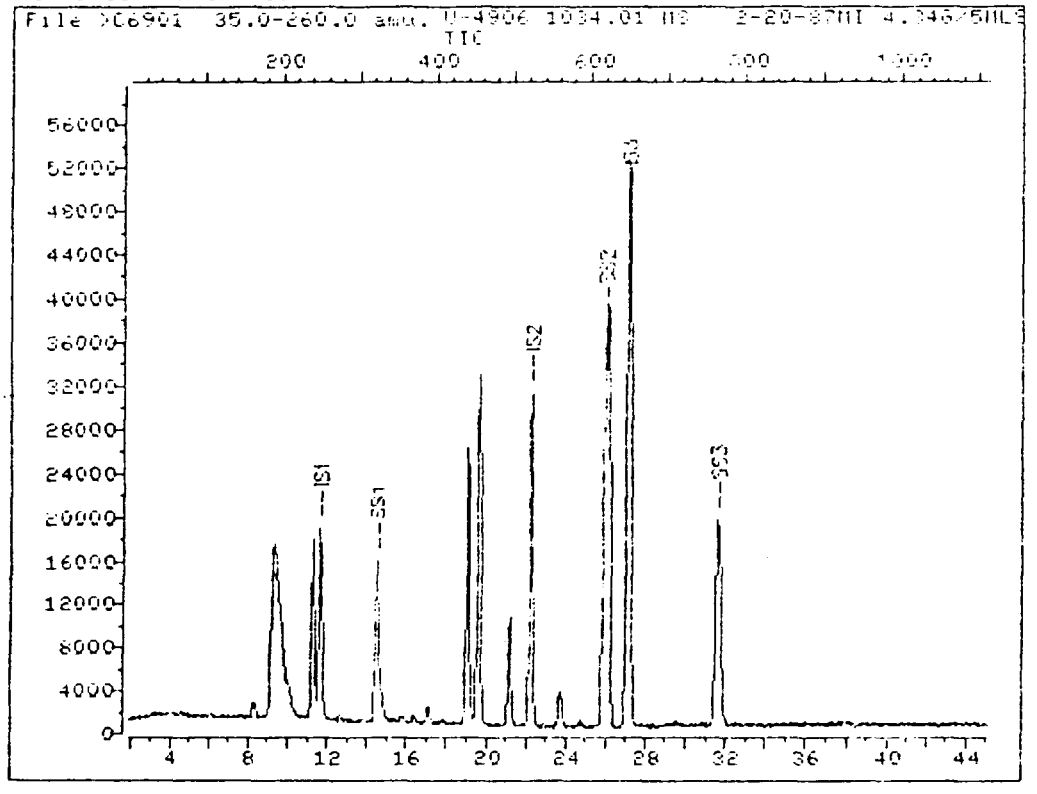
C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ml in the final extract should be confirmed by GC/MS.

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.

TOTAL ION CHROMATOGRAM

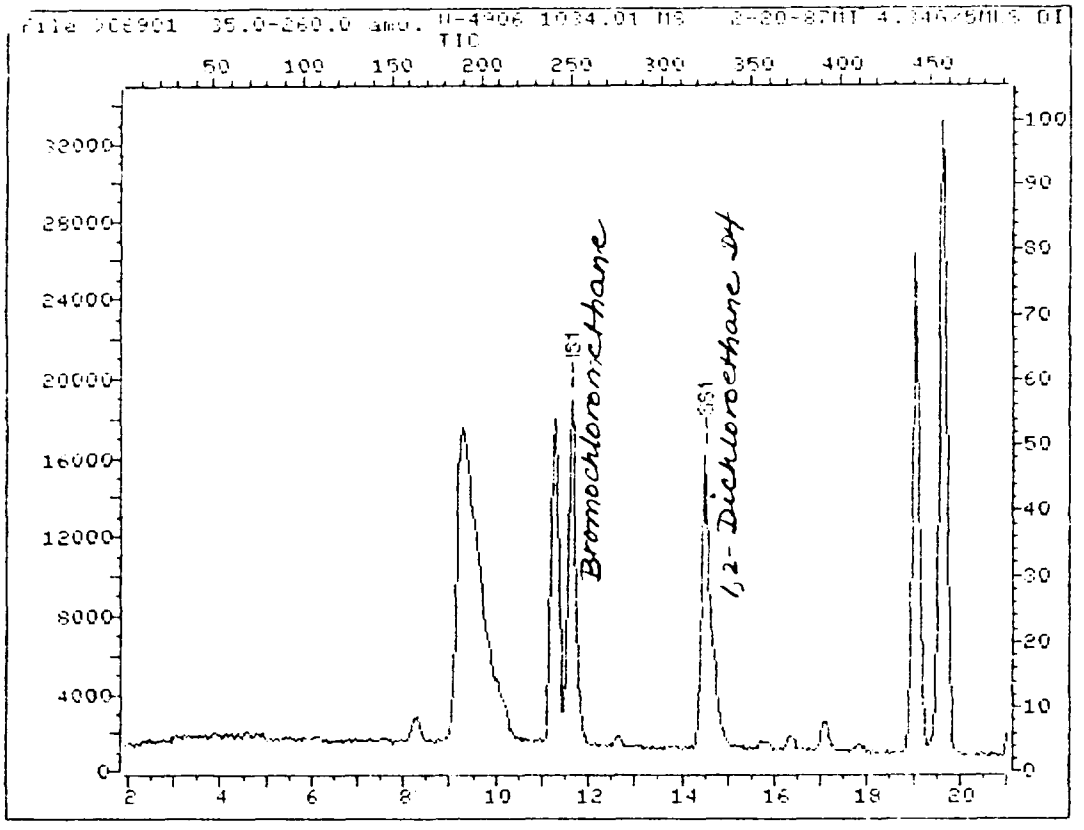


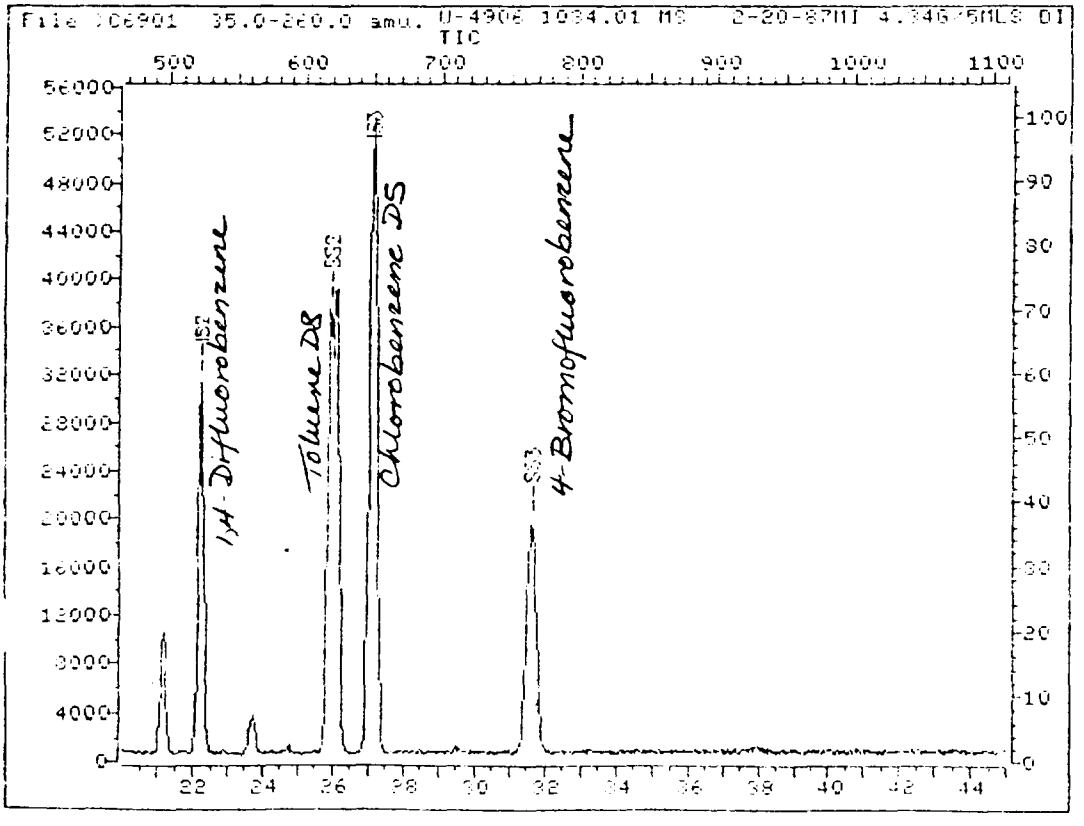
Data File: >C6901::D3
Name: U-4906 1034.01 MS DC-P5-55 MSD
Misc: 2-20-87MI 4.34G/5MLS DI + 10UL IS/SS/MS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870220 12:0?

Operator ID: USEP8
Quant Time: 870220 19:2?
Injected at: 870220 18:40

DC-P5-55 MSD


TIC
Bromochloromethane
1,2-Dichloroethane D4


TIC
1,4-Difluorobenzene
Toluene D8
Chlorobenzene D5
4-Bromofluorobenzene

QUANT REPORT

Operator ID: USER8 Quant Per: 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/5ML: DI + 10UL IS/SS/MS

ID File: UOACPS::02
Title: UOA 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 87	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	756	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

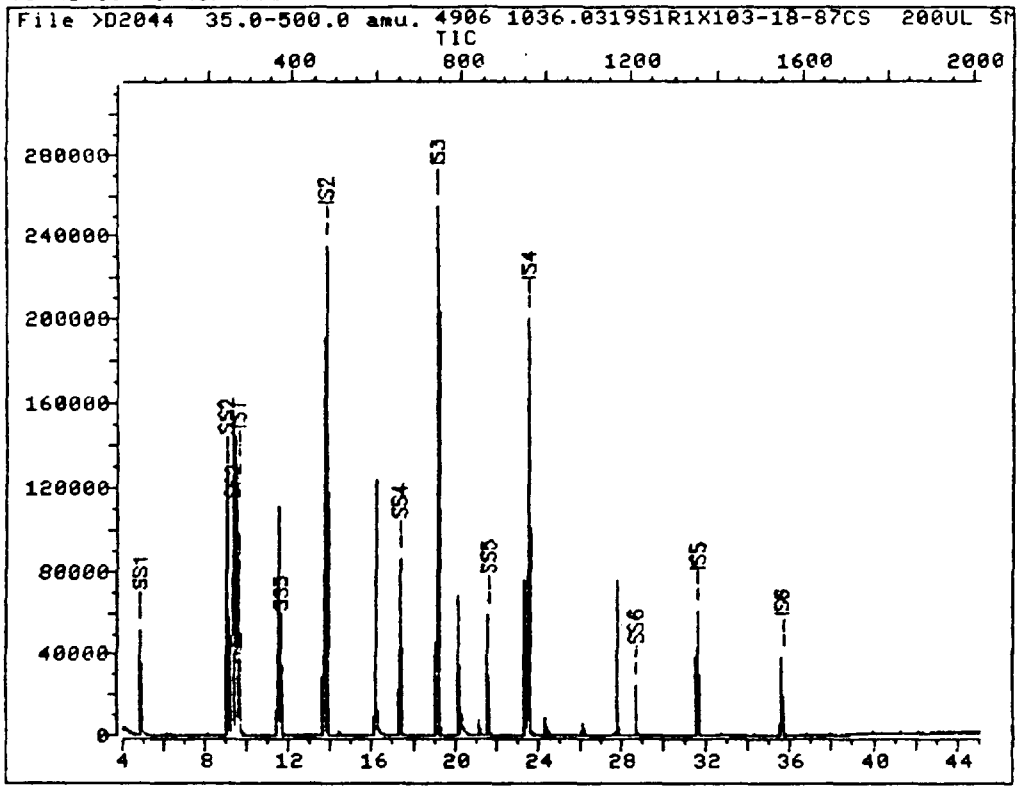
Concentrations reported "as received" basis

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
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	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

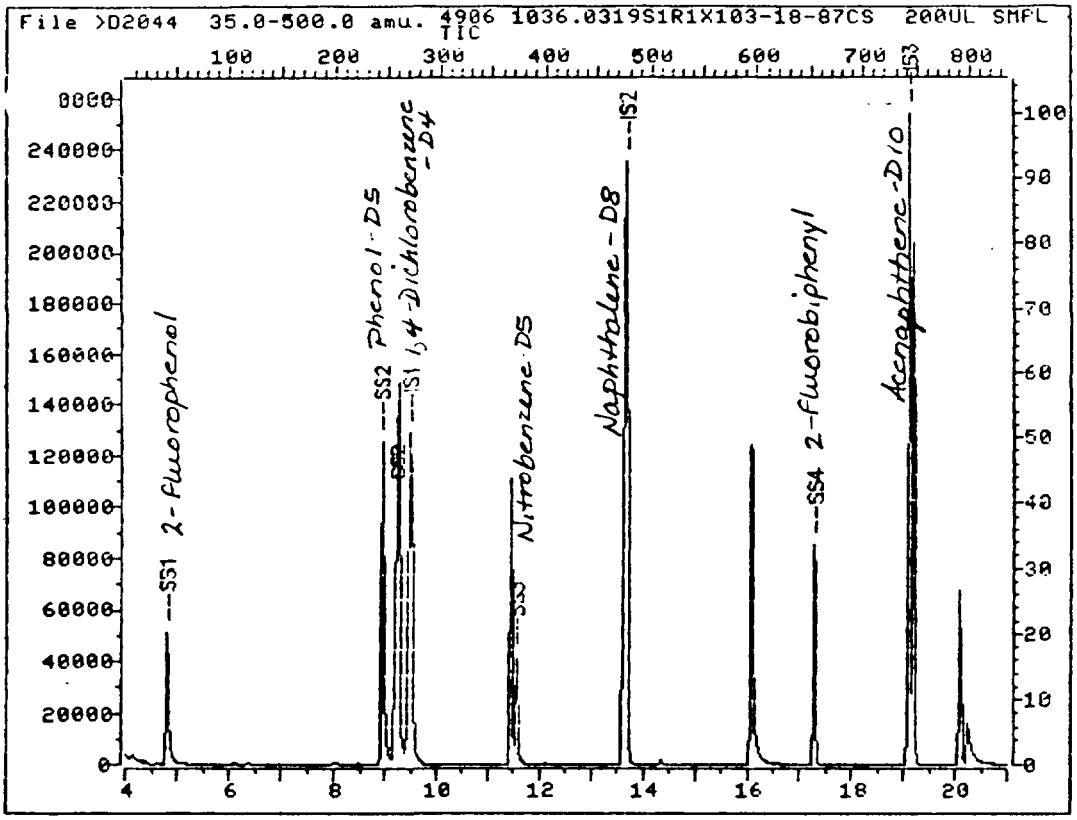
TOTAL ION CHROMATOGRAM



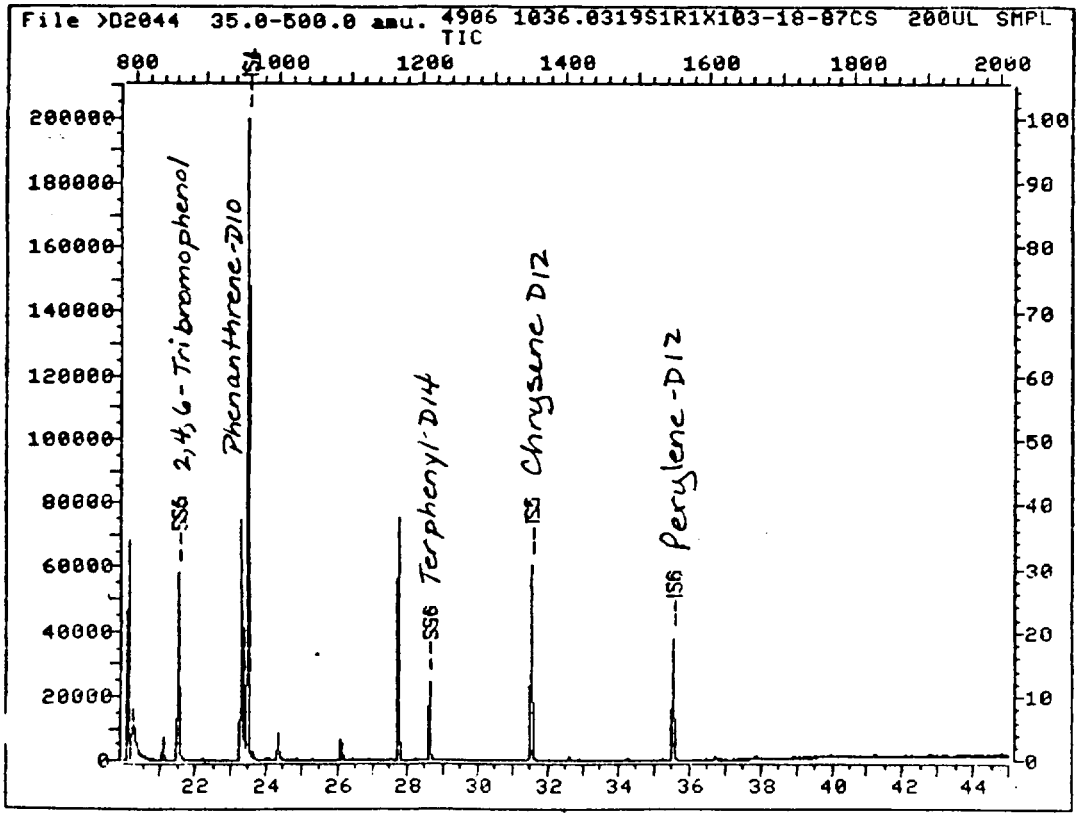
Data File: >D2044::D1
Name: 4906 1036.0319S1R1X1 DC-I12-51 MSD
Misc: 03-18-87CS 200UL SMPL + 200UL A/P + 4UL IS (2X) BTL# 3

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
--SS3 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
--IS4 Chrysene D12
--IS5 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~~	~~2.90 UG/L~~ CW	37
~~9)~~	~~1,3-DICHLOROBENZENE~~		~~146~~	~~9.53~~	~~273~~	~~55904~~	~~43.36 UG/L~~ CW	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~~	~~30.69 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~~	~~11.08 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~~	~~21884~~	~~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 V-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_t = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

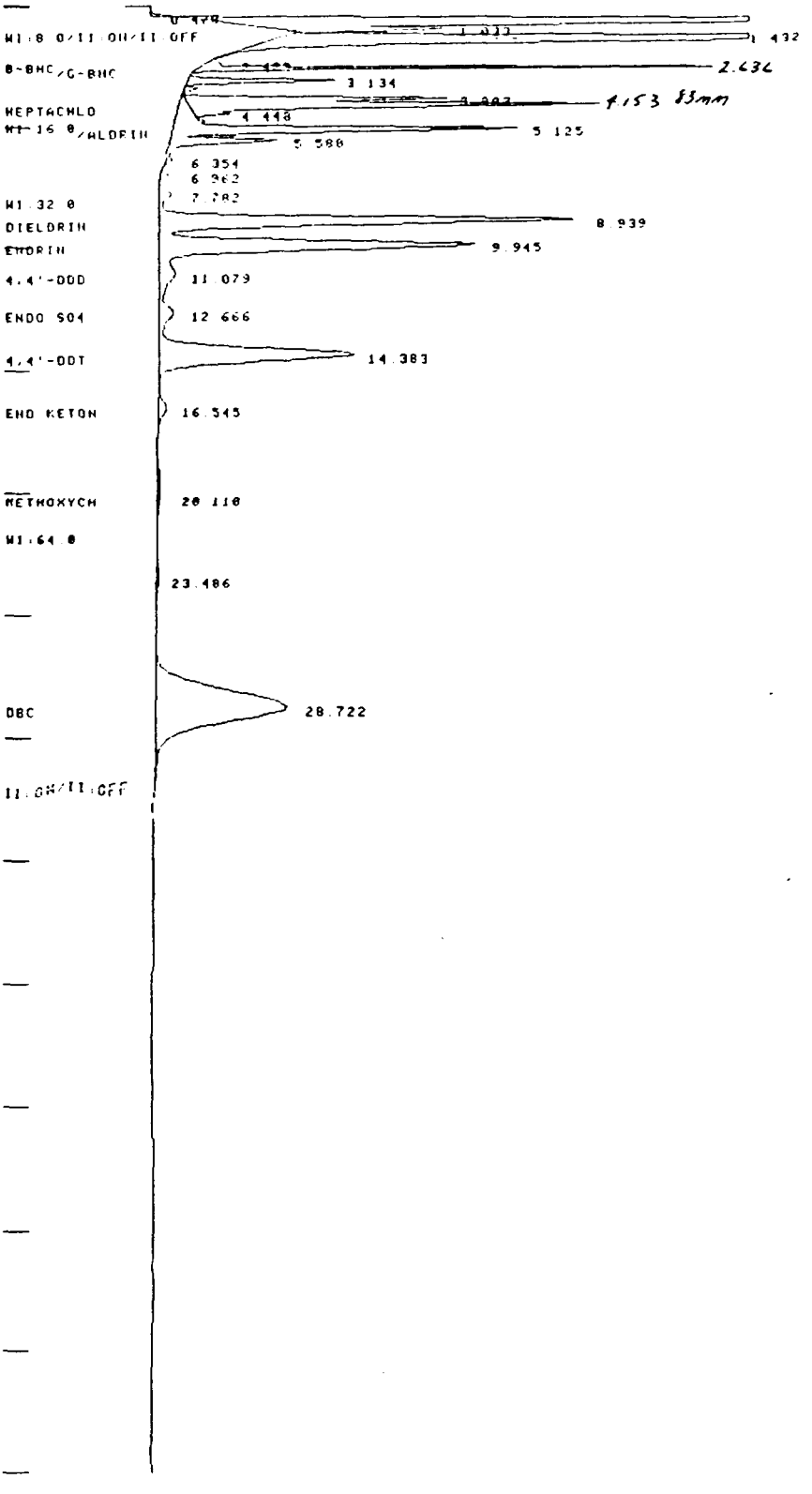
W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 3 V_t 1,000 V_i 4

< - Critical Compound

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

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)

DC-J12-57 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	85mm		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	~~P-ENDO~~	23.6072	7.782	0.212	40890	VV		28.25
12	DIELDRIN	636.3864	8.939	0.129	1187288	VV		21.94
13	~~G-ENDO~~ Endrin	~~607.1795~~ 717	9.945	-0.065	1017117	VV		24.44
14	~~ENDO-ALD~~	72.2429	11.079	0.069	109903	VV	?	64.25
15	~~ENDO-CO4~~	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	~~CHLORETHON~~	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: 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: O Bojtowicz
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 factor. (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/ml 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.

Case No II-4906, 4928, 4971, 4989

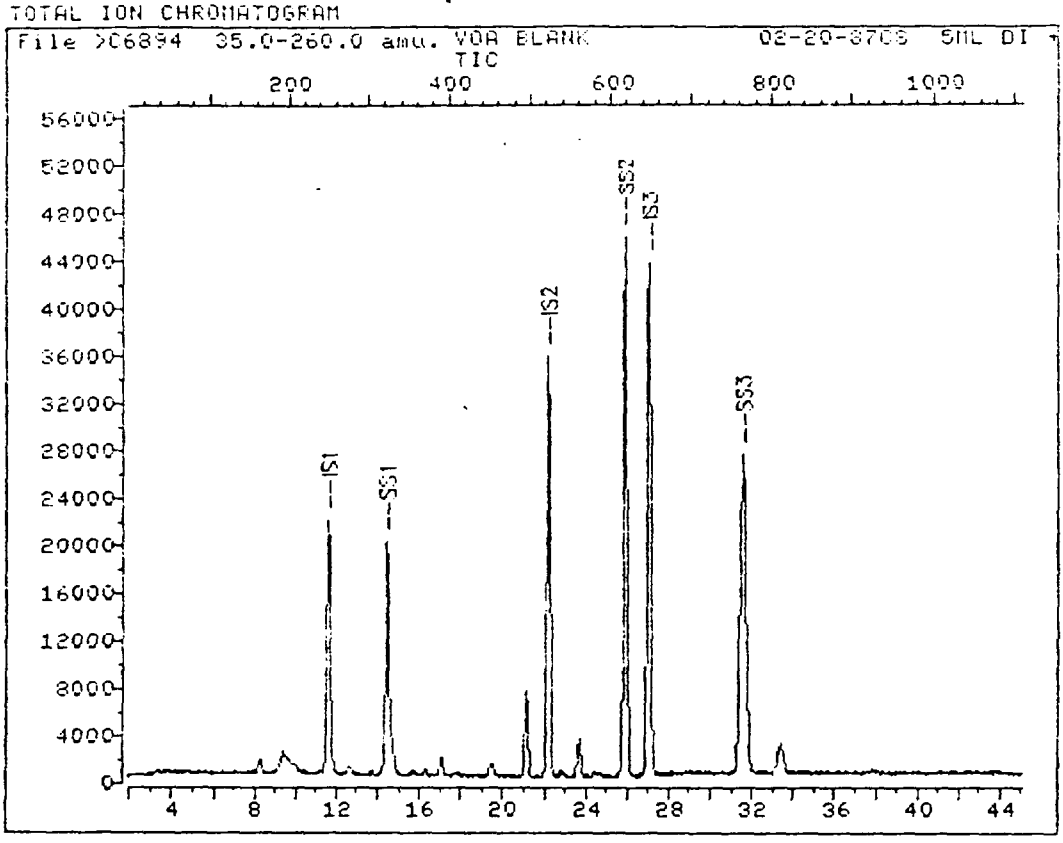
Sample Number C6894

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	(RT) or Scan Number MCAC	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

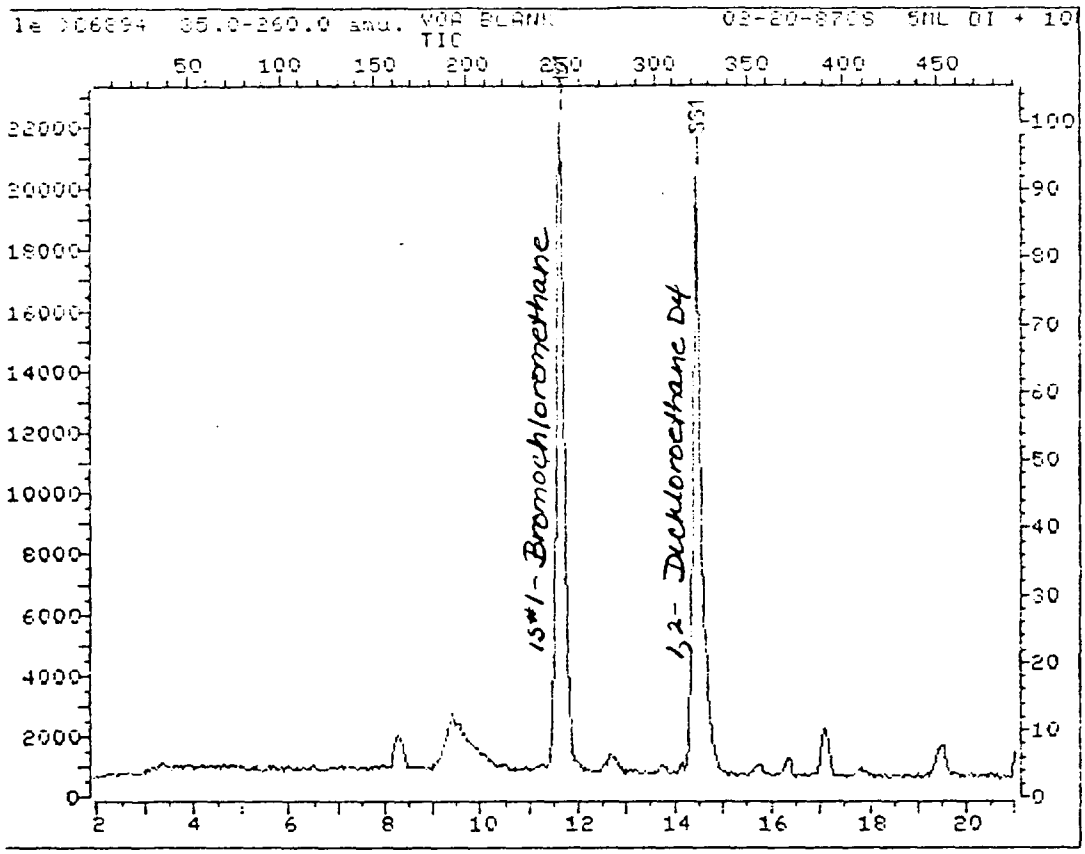


Data File: >C6894::D3
Name: VOA BLANK
Misc: 02-20-87CS 5ML DI + 10UL IS/SS

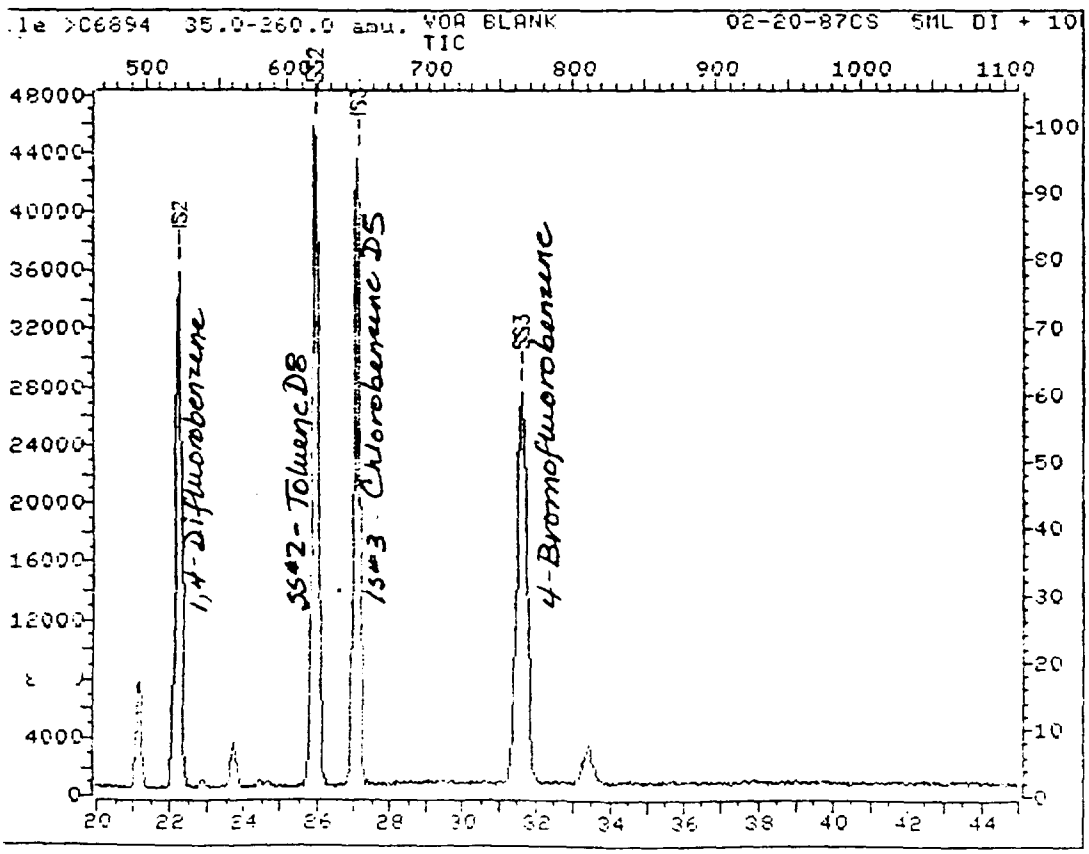
Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870220 12:09

Operator ID: USER8
Quant Time: 870220 13:02
Injected at: 870220 12:16

C6894.



1e >C6894 35.0-260.0 amu. VOA BLANK 02-20-87CS 5ML DI + 10
TIC
IS#1 - Bromochloromethane
1,2- Dichloroethane D4
SS1



1e >C6894 35.0-260.0 amu. VOA BLANK 02-20-87CS 5ML DI + 10
TIC
IS2
1,4-Difluorobenzene
SS2
SS#2 - Toluene D8
IS3
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::03 Dilution Factor: 1.00
Name: VOA BLANK
Misc: 02-20-87CS 5ML 01 - 10UL IS/SS

ID File: VOACRS::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	11.61	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	(SURR)	65	14.44	323	84196	204.62	NGS	83
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.20	523	144286	250.00	NGS	100
17)	2-BUTANONE		72	14.64	329	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~~	~~552~~	~~6590~~	~~10.37~~	~~NGS~~	~~69~~
~~33)~~	~~2-HEXANONE~~		~~43~~	~~23.75~~	~~562~~	~~6590~~	~~12.96~~	~~NGS~~	~~100~~
33)	2-HEXANONE		43	24.42	580	2975	5.85	NGS	100
36)	TOLUENE-D8	(SURR)	98	25.89	619	171844	231.68	NGS	95
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.56	764	91791	217.36	NGS	100

* Compound is ISTD

C6920

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~~ cw Water for Soil

Contract No: IL-3140

Data Release Authorized By: C Soytowicz

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

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. [illegible]

Laboratory Name Ecology & Environment Inc.

Case No W-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 MCC-IC	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.					
12.					
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15.					
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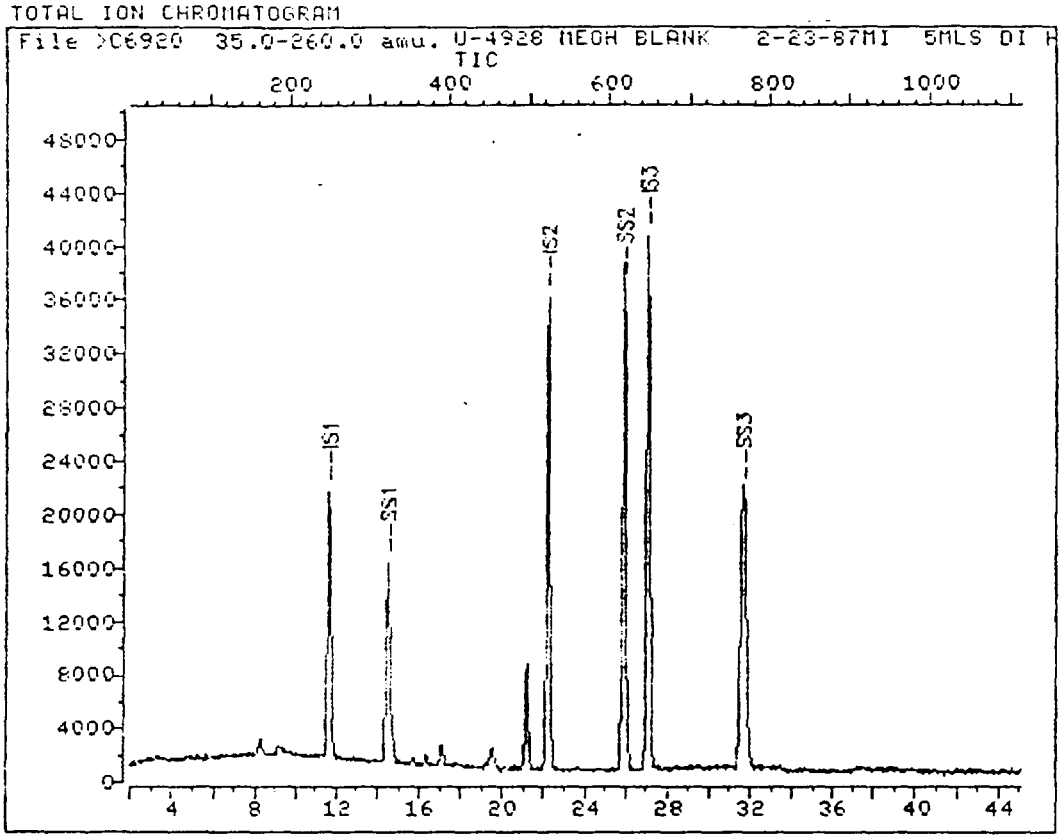
21.					
22.					
23.					
24					
25.					
26.					
27.					
28.					
29.					
30					

TOTAL ION CHROMATOGRAM

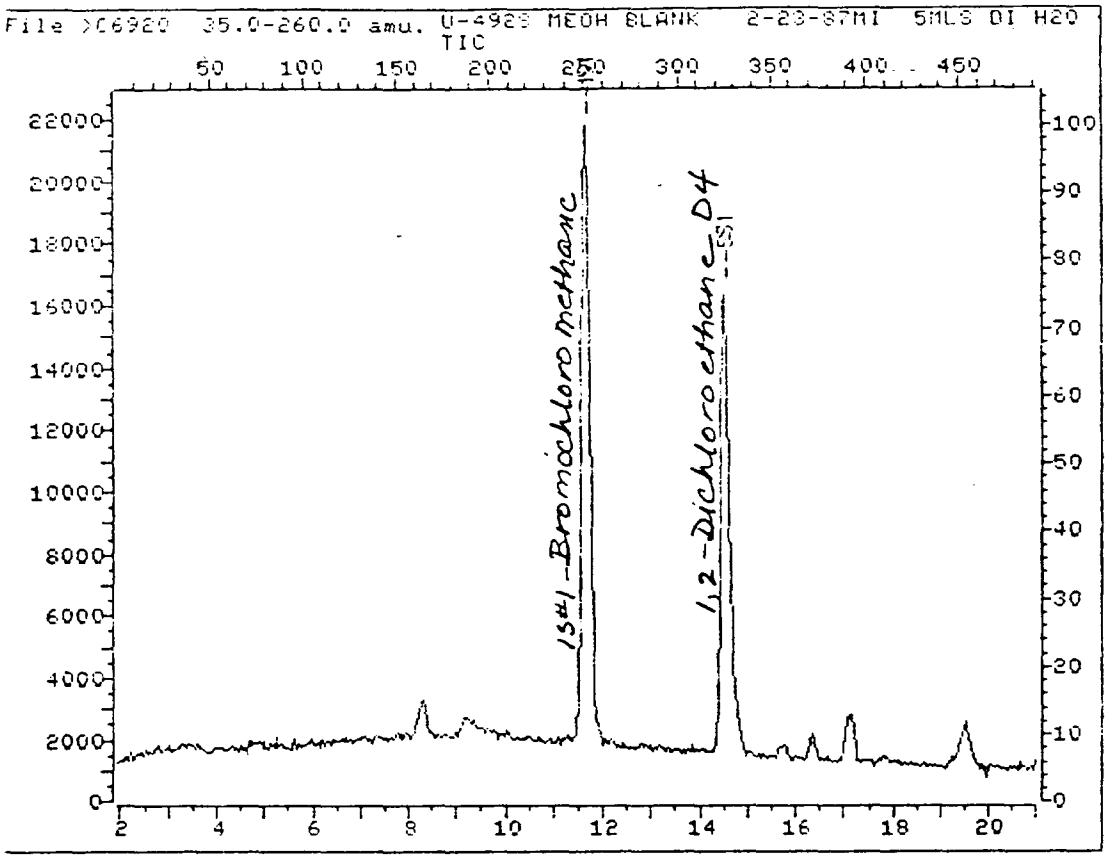


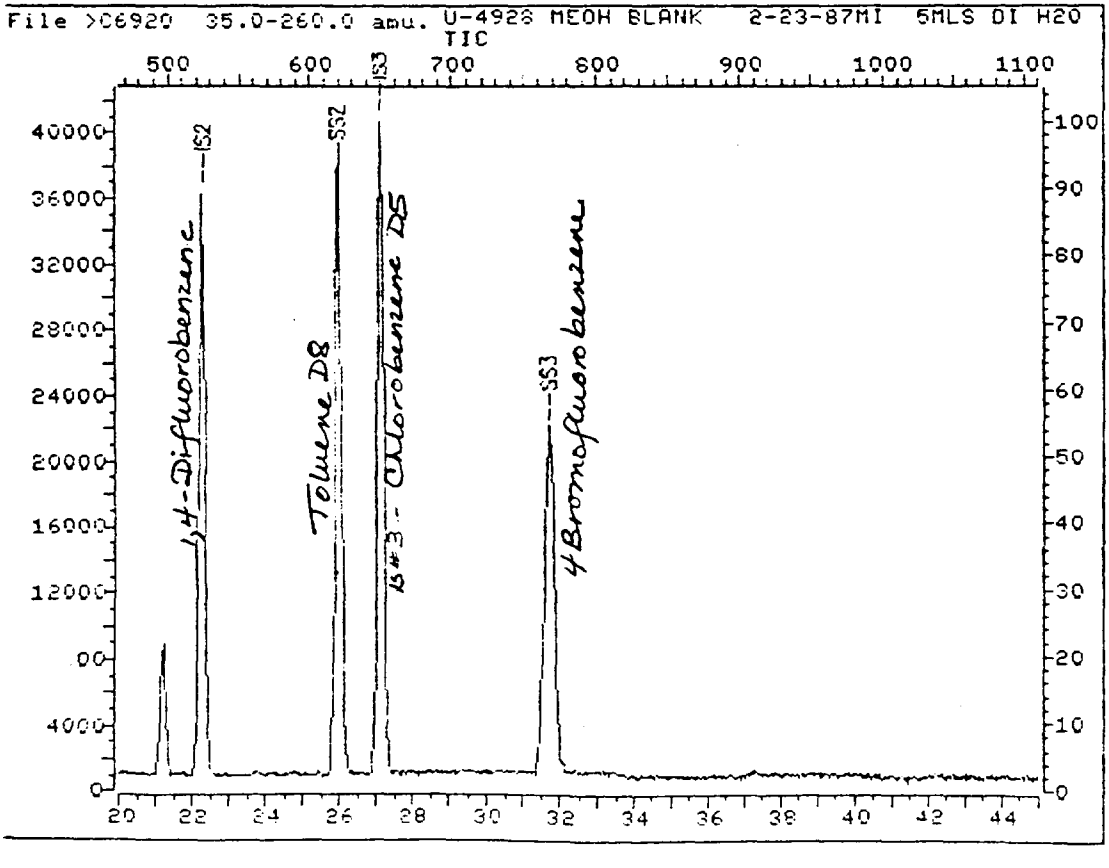
Data File: >C6920::D1
Name: U-4928 MEOH BLANK
Misc: 2-23-87MI 5MLS DI H20 + 10UL IS/SS + 50UL MEOH

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 METHOD BLANK 2-23-87MI 5MLS DI H2O
TIC
IS#1 - Bromochloromethane
1,2-Dichloroethane D4
SS1


File >C6920 35.0-260.0 amu. U-4928 METHOD BLANK 2-23-87MI 5MLS DI H2O
TIC
IS2
1,4-Difluorobenzene
SS2
Toluene D8
IS3
IS#3 - Chlorobenzene D5
SS3
4Bromofluorobenzene

QUANT REPORT

Operator ID: USER3 Quant Rev: 4 Quant Time: 870223 22:53
Output File: ^C6920::02 Injected at: 870223 22:07
Data File: >C6920::01 Dilution Factor: 1.00
Name: U-4928 MEOH BLANK
Misc: 2-23-87M1 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: CKojtowicz
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	6u
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	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.

E This flag indicates an approximate concentration.

Laboratory Name Ecology & Environment Inc.

Case No IC-4906, 4928, 4971, 4989

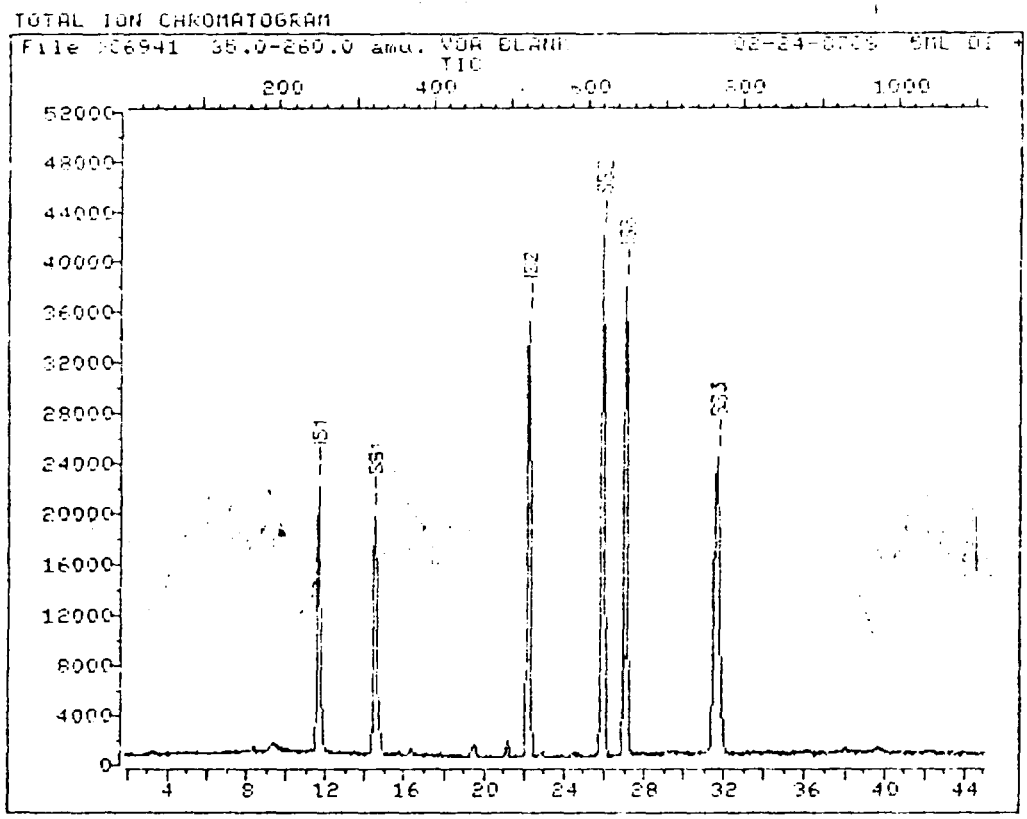
Sample Number C6941

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.					
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

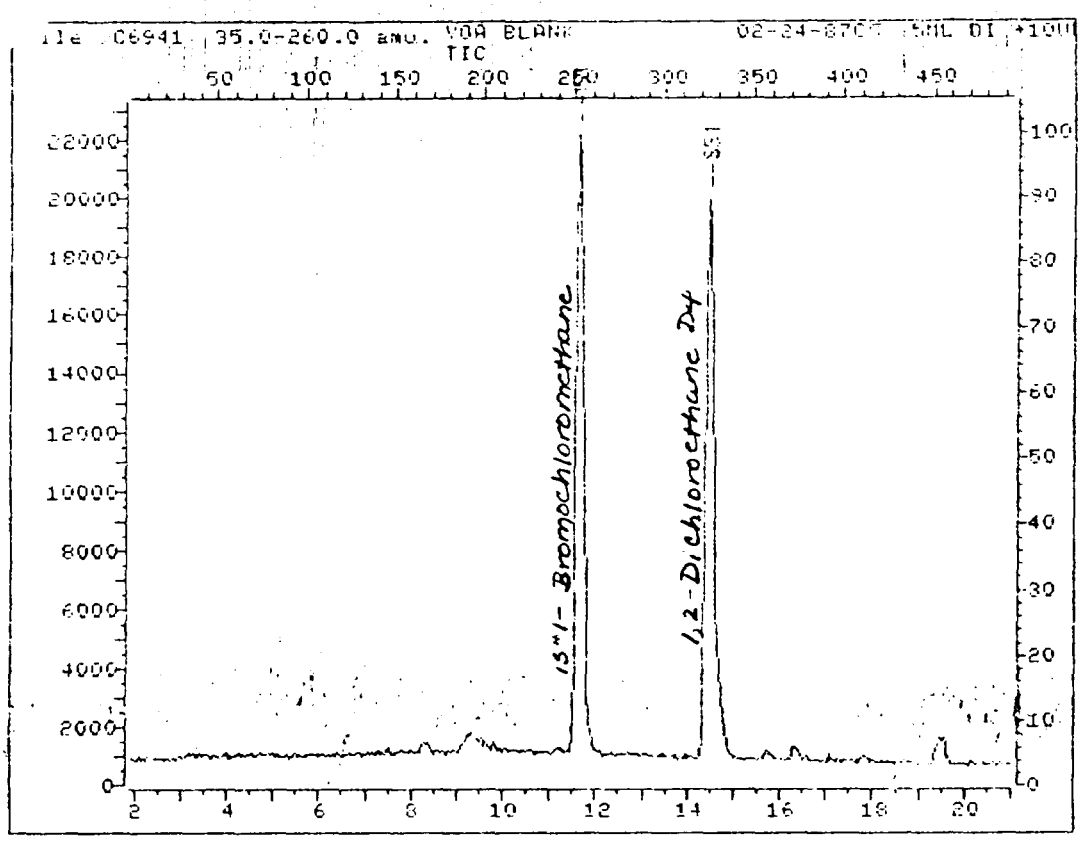


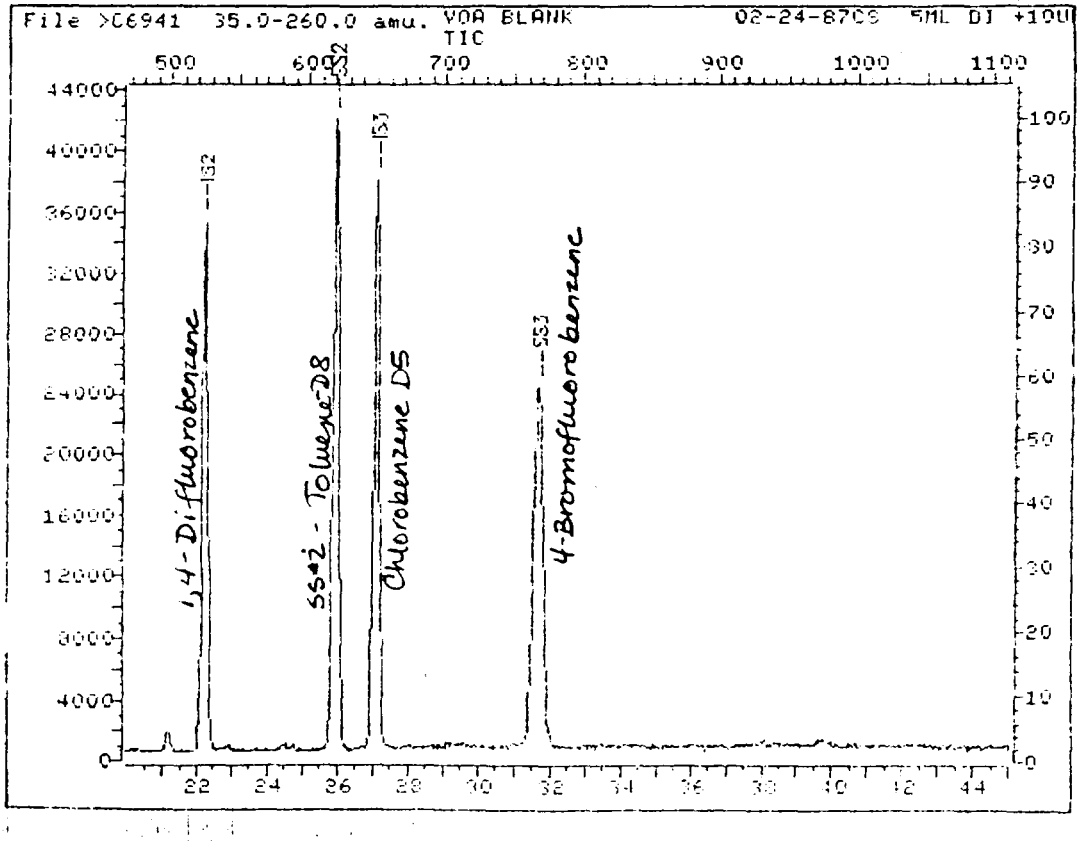
Data File: >C6941::D1
Name: VOA BLANK
Misc: 02-24-87CS 5ML DI +10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870224 15:49

Operator ID: USER8
Quant Time: 870224 16:38
Injected at: 870224 15:53

C6941


File :C6941 35.0-260.0 amu. VOA BLANK 02-24-8709 5ML DI +100
TIC
50 100 150 200 250 300 350 400 450
22000 20000 18000 16000 14000 12000 10000 8000 6000 4000 2000 0
100 90 80 70 60 50 40 30 20 10 0
2 4 6 8 10 12 14 16 18 20
IS*1 - Bromochloromethane
1,2-Dichloroethane D4
SS1


File >C6941 35.0-260.0 amu. VOA BLANK 02-24-8709 5ML DI +100
TIC
500 600 700 800 900 1000 1100
44000 40000 36000 32000 28000 24000 20000 16000 12000 8000 4000 0
100 90 80 70 60 50 40 30 20 10 0
22 24 26 28 30 32 34 36 38 40 42 44
IS2
IS3
SS3
1,4-Difluorobenzene
SS*2 - Toluene-D8
Chlorobenzene D5
4-Bromofluorobenzene

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 870224 16:38
Output File: ^C6941::02 Injected at: 870224 15:53
Data File: >C6941::01 Dilution Factor: 1.00
Name: VOA BLANK
Misc: 02-24-87CS 5ML DI +10UL IS/SS

ID File: VOACPS::02
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870224 15:45

	Compound		P.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	100	✓
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.46	325	79430	261.55	NGS	83	✓
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.22	525	140145	250.00	NGS	100	
17)	2-BUTANONE		72	14.65	330	4841	97.62	NGS	100	
~~30)~~	~~BROMOFORM~~		~~173~~	~~19.19~~	~~554~~	~~238~~	~~1.67~~	~~NGS~~	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	70	
~~33)~~	~~2-HEXANONE~~		~~43~~	~~24.43~~	~~582~~	~~3391~~	~~11.51~~	~~NGS~~	100	✓
36)	TOLUENE-D8	(SURR)	98	25.91	620	156524	268.69	NGS	98	
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.66	768	82782	255.89	NGS	100	✓

* Compound is ISTD

C6964

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 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

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ml 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 on the

Laboratory Name Ecology & Environment Inc.

ase No U-4906, 4928, 4971, 4989

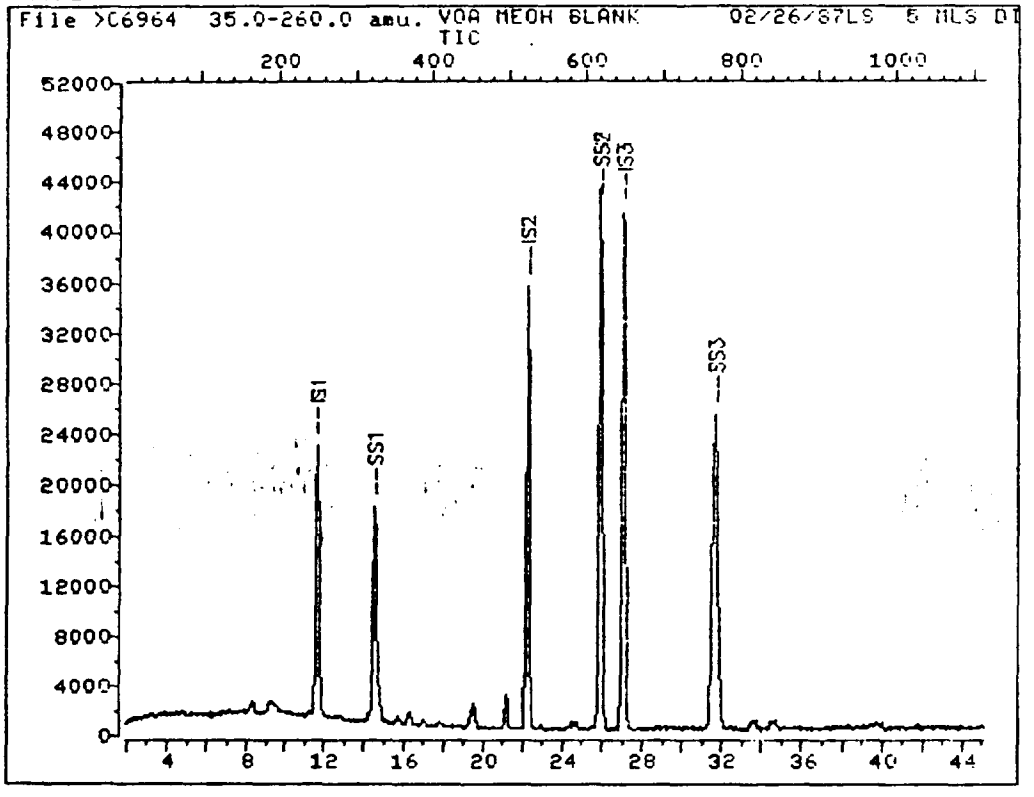
Sample Number C6964

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number MCC-3C	Estimated Concentration (ug/l or ug/kg)
1.		No TIC's in VOA fraction			
2.					
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

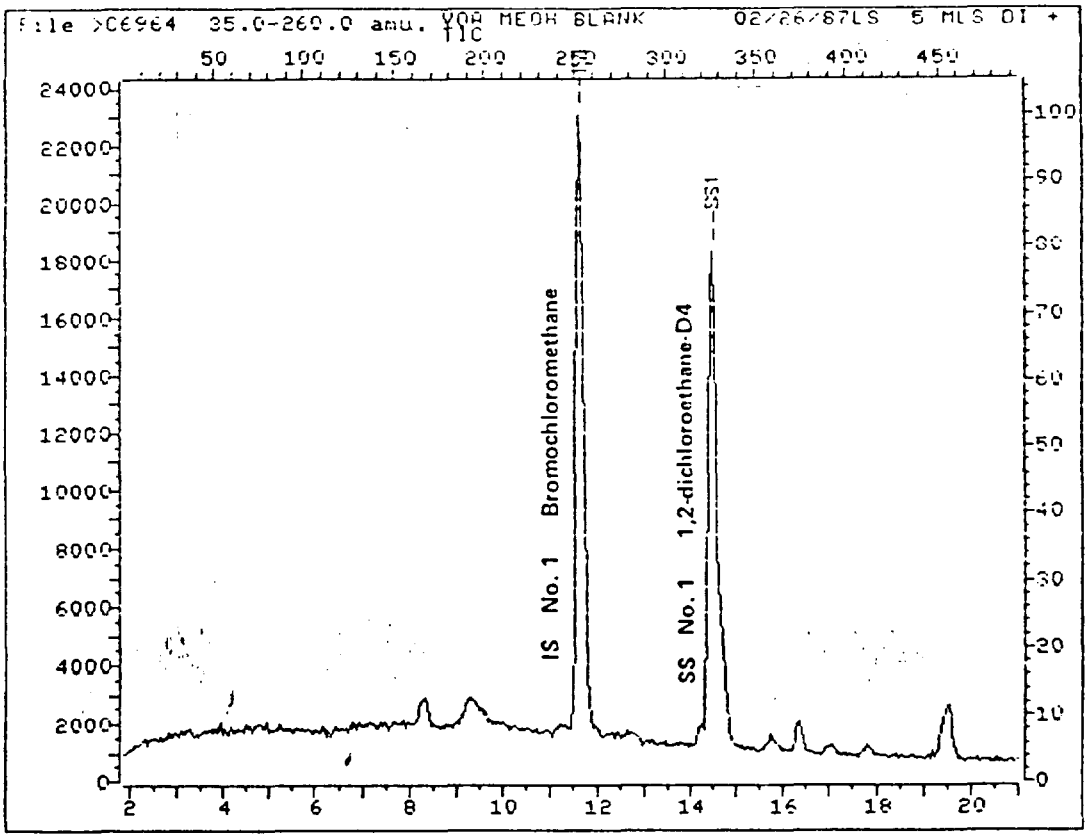


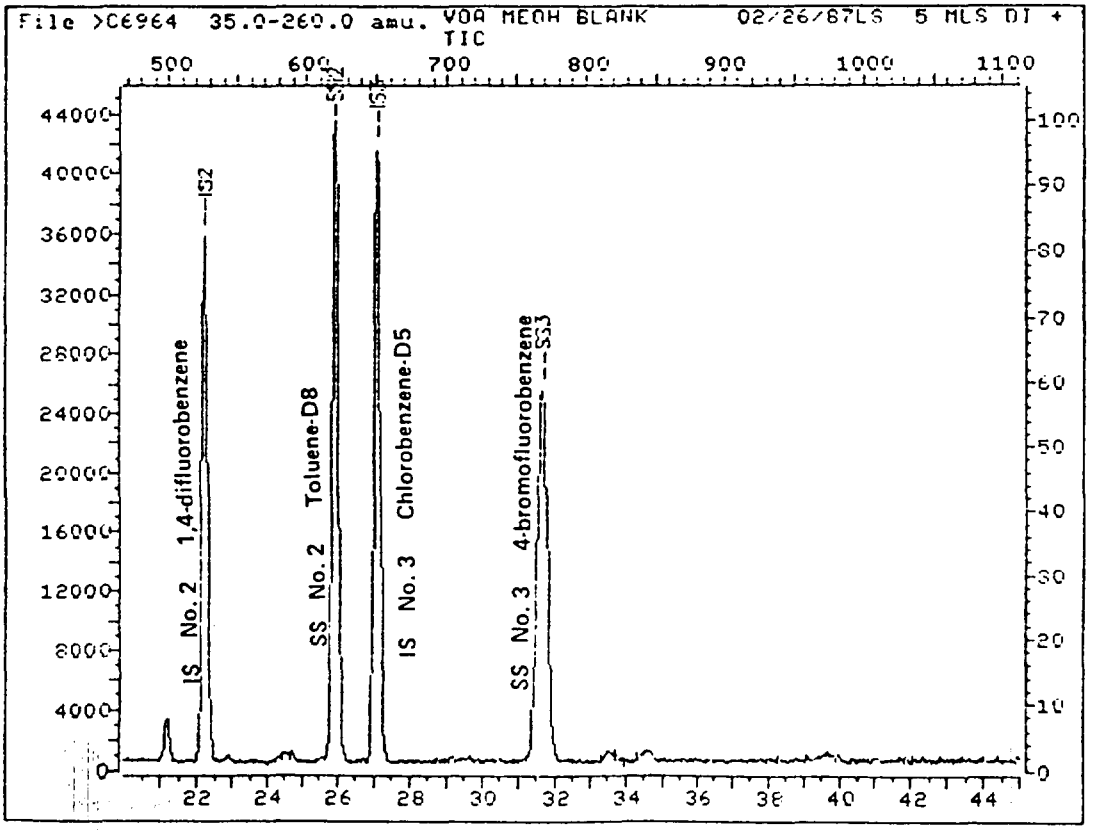
Data File: >C6964::D3
Name: VOA MEOH BLANK
Misc: 02/26/87LS 5 MLS DI + 10 ULS IS/SS + 50 ULS MEOH

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
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: 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 cw 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: 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 [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.

Laboratory Name Ecology & Environment Inc.

Case No W-4906, 4928, 4971, 4989

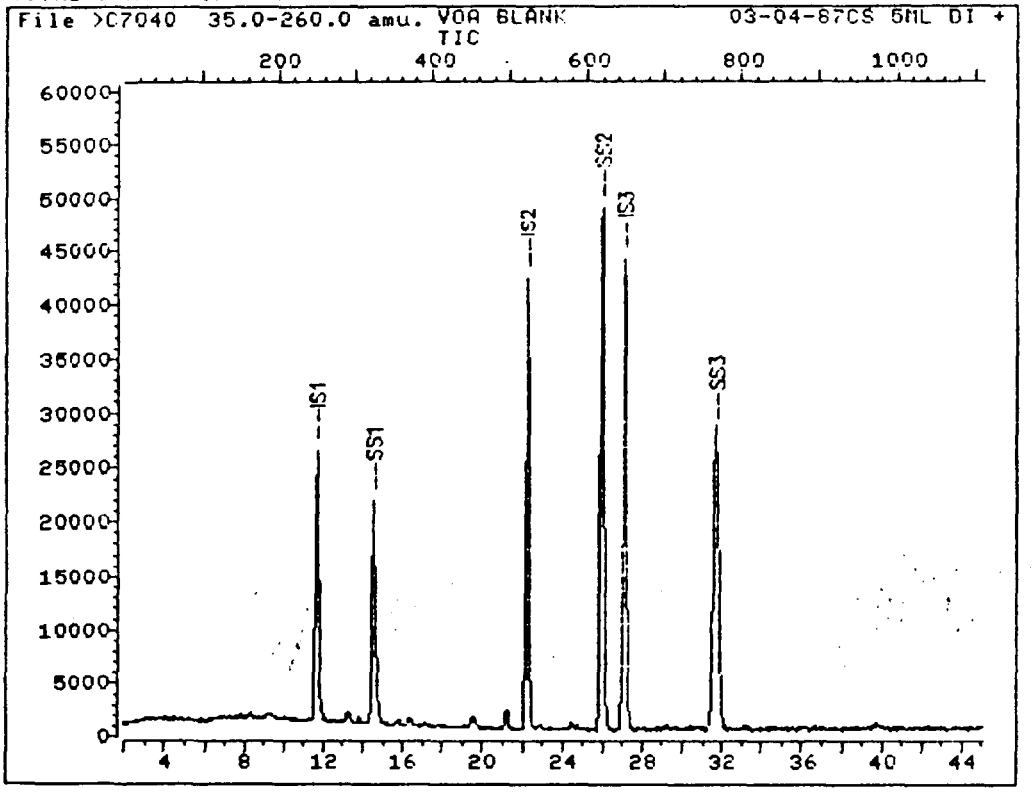
Sample Number C7040

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number MCAC	Estimated Concentration (ug/l or ug/kg)
1.		No TIC's in VOA fraction			
2.					
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

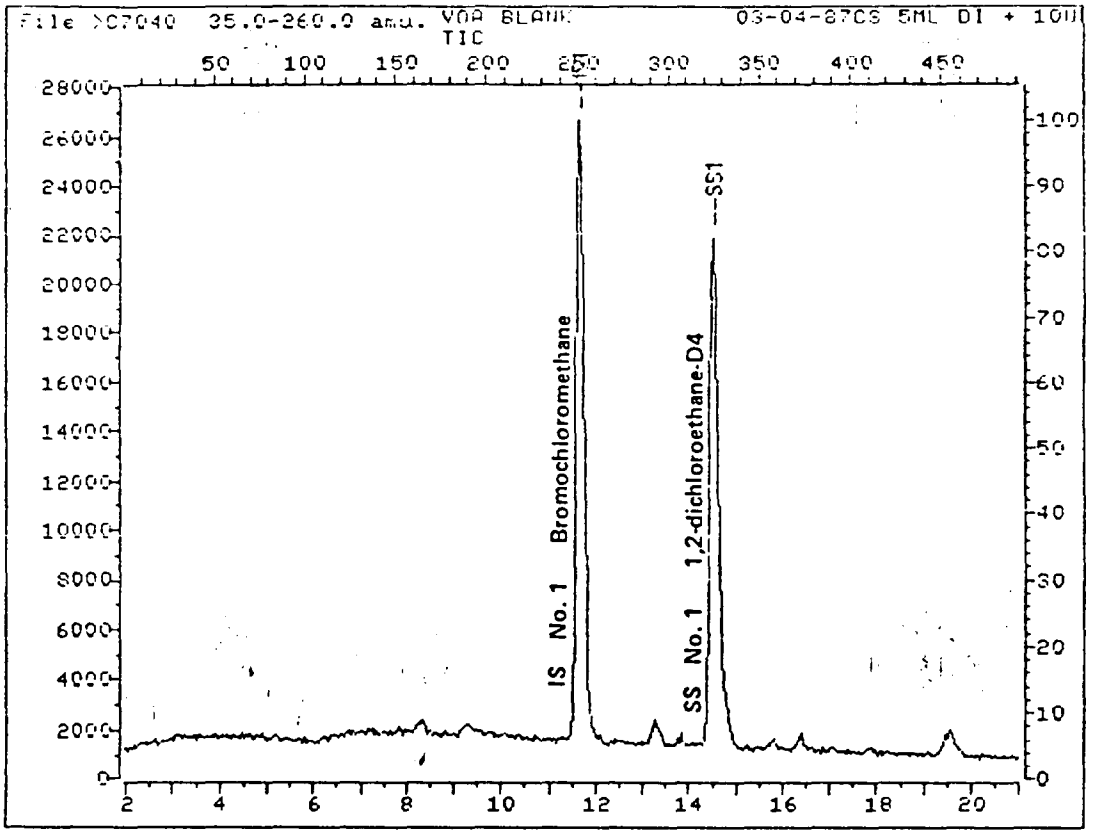


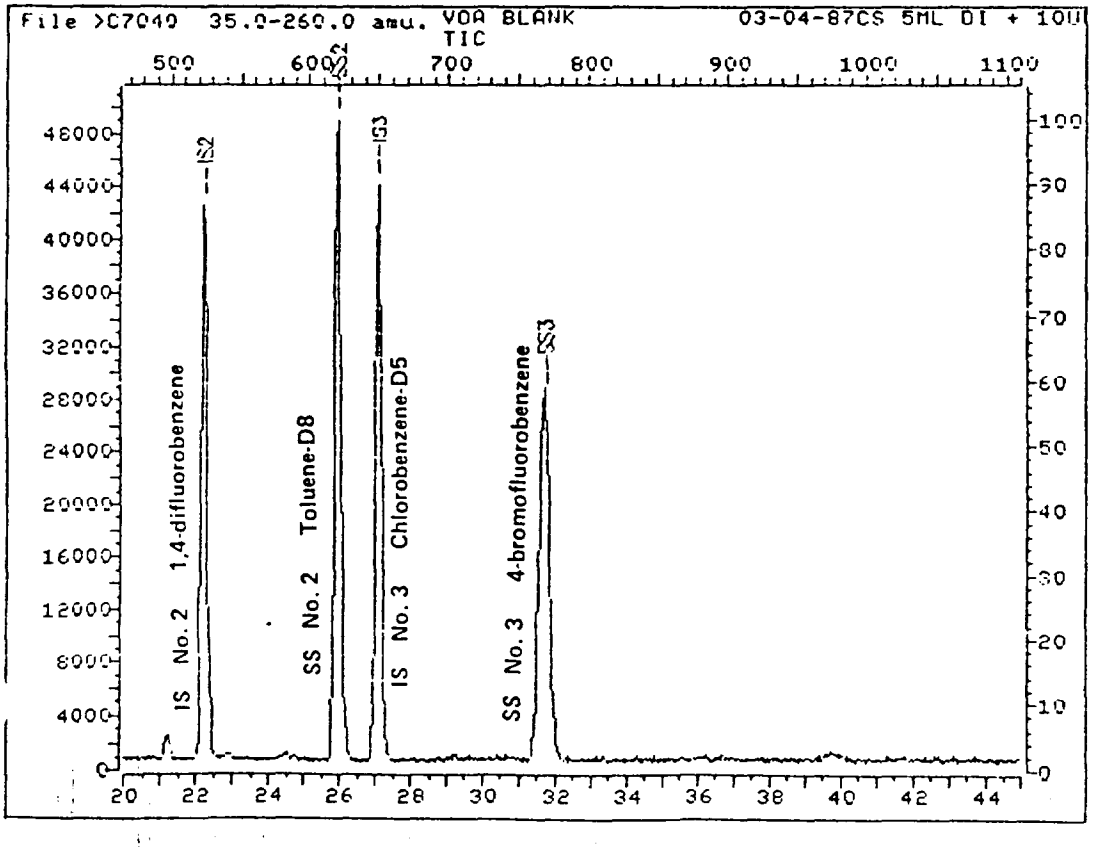
Data File: >C7040::D1
Name: VOA BLANK
Misc: 03-04-87CS 5ML DI + 10UL IS/SS

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 + 100
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 + 100
TIC
IS No. 2 1,4-difluorobenzene
SS No. 2 Toluene-D8
IS No. 3 Chlorobenzene-D5
SS No. 3 4-bromofluorobenzene
IS2
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 preceded this blank

C7138

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 cw Water for Soil
Contract No: IL-3140
Data Release Authorized By: [signature]
Date Sample Received:

Volatile Compounds

Concentration: Low (Medium) (Circle One)
Date Extracted/Prepared:
Date Analyzed: 3-09-87
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	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 sample quantitation 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/ml 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 II-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	Estimated Concentration (ug/l or ug/kg)
1.		Hexene, isomer	VOA	17.2	1700 J
2.		Hexane, isomer	VOA	21.2	7800 J
3.					
4.					
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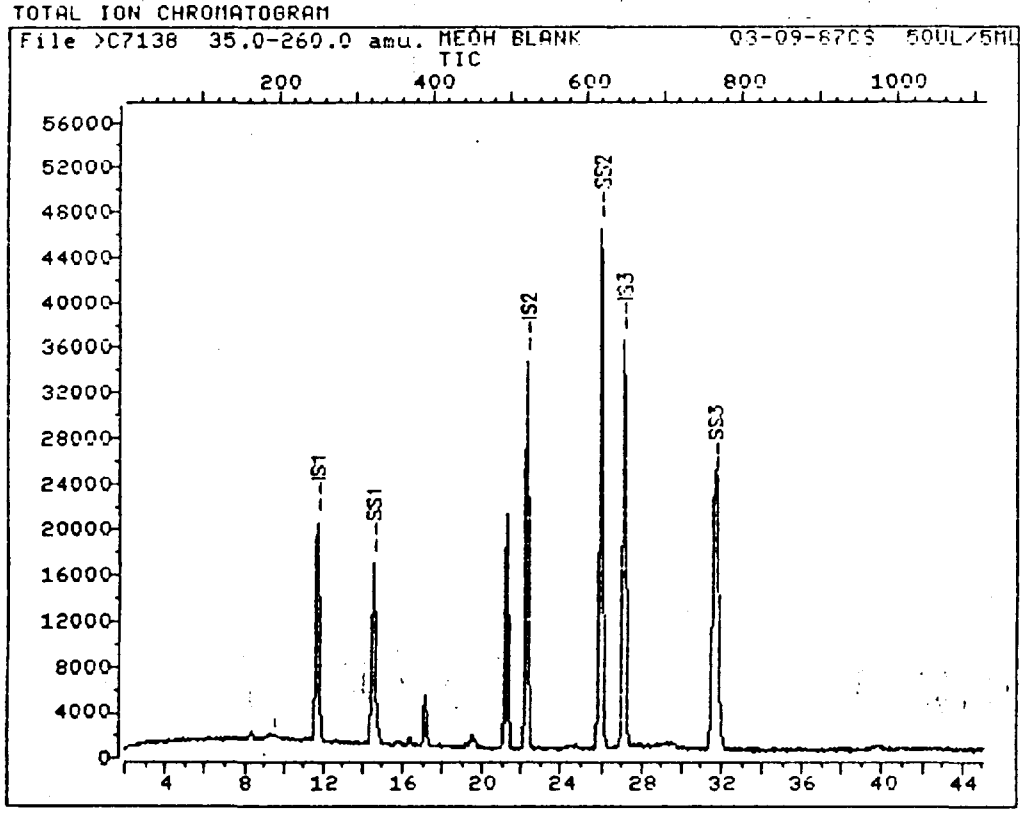
27.					
28.					
29.					
30					

TOTAL ION CHROMATOGRAM

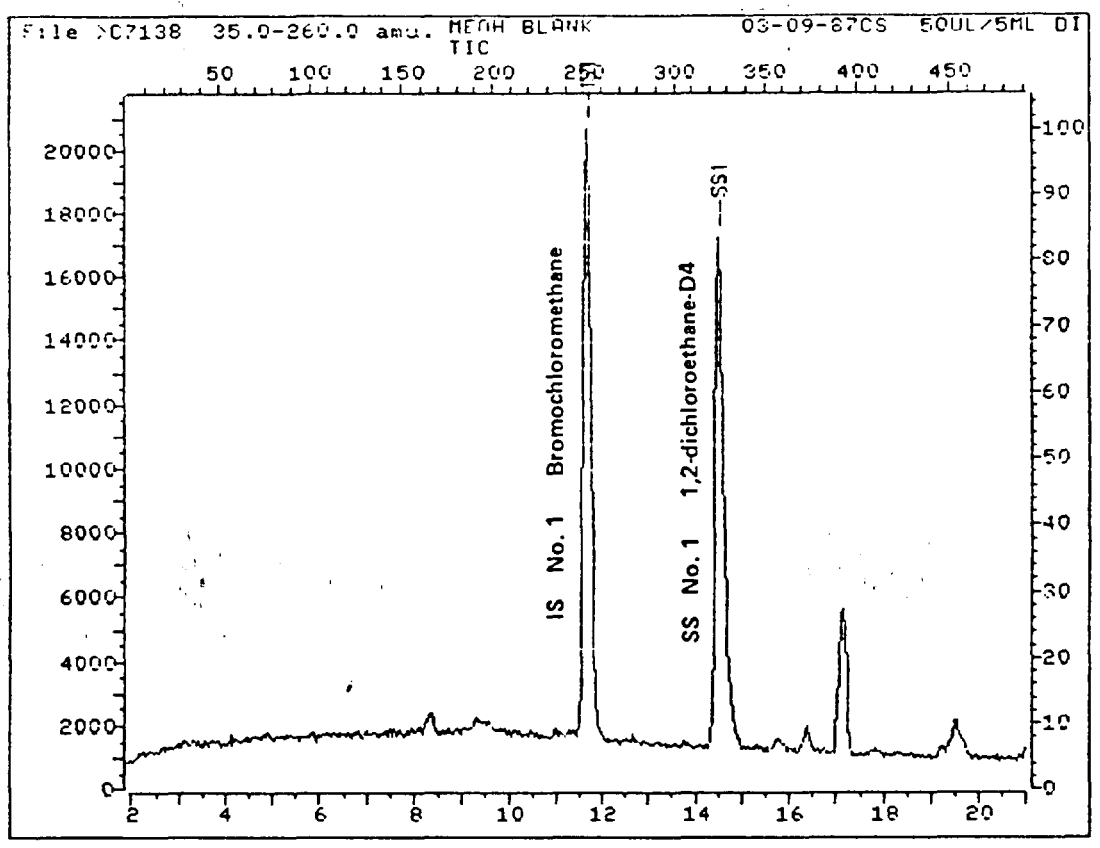


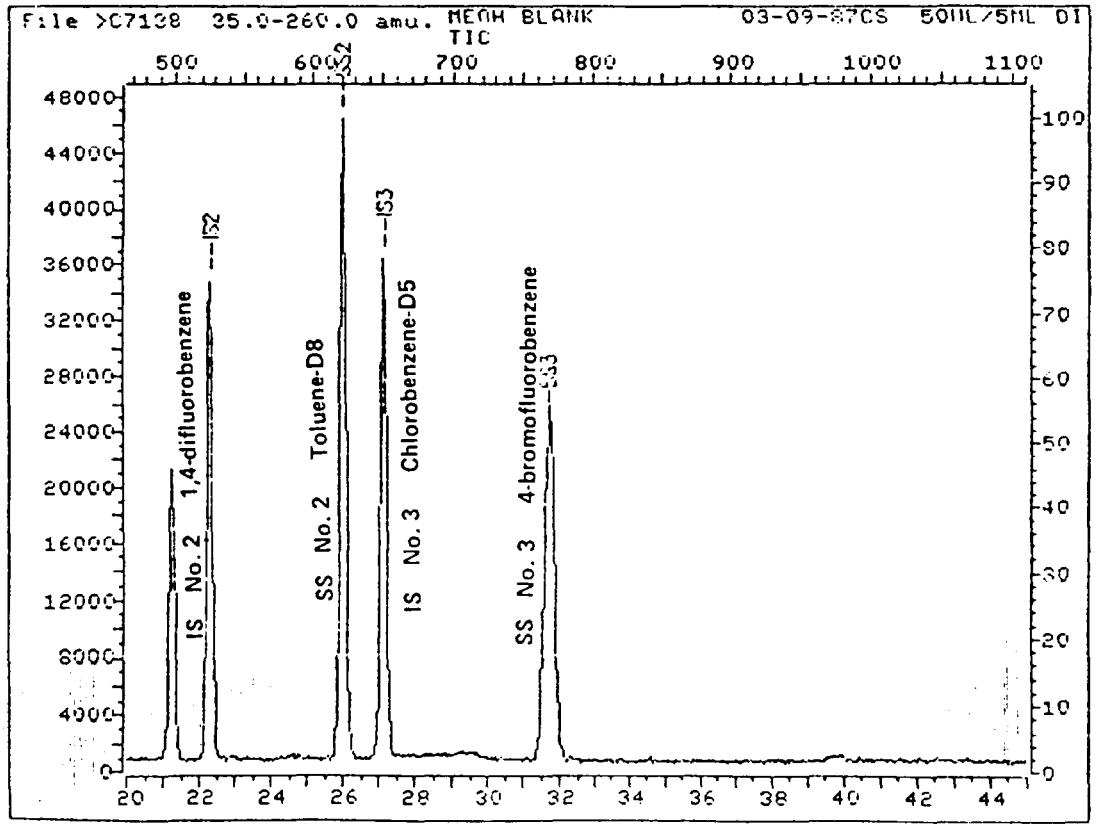
Data File: >C7138::D3
Name: MEOH BLANK
Misc: 03-09-87CS 50UL/5ML DI + 10UL IS/SS

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. METH BLANK 03-09-87CS 50UL/5ML DI
TIC
IS No. 1 Bromochloromethane
SS No. 1 1,2-dichloroethane-D4
SS1


File >C7138 35.0-260.0 amu. METH BLANK 03-09-87CS 50UL/5ML 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

: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.					
5.					
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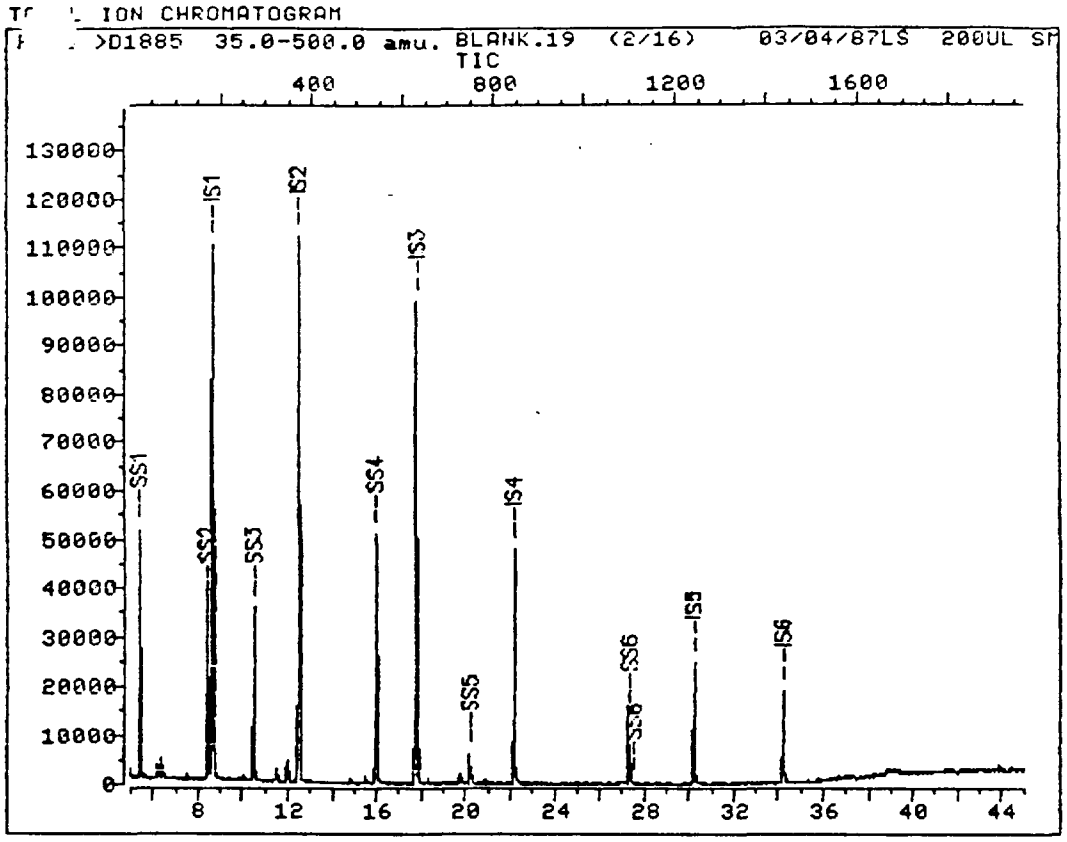
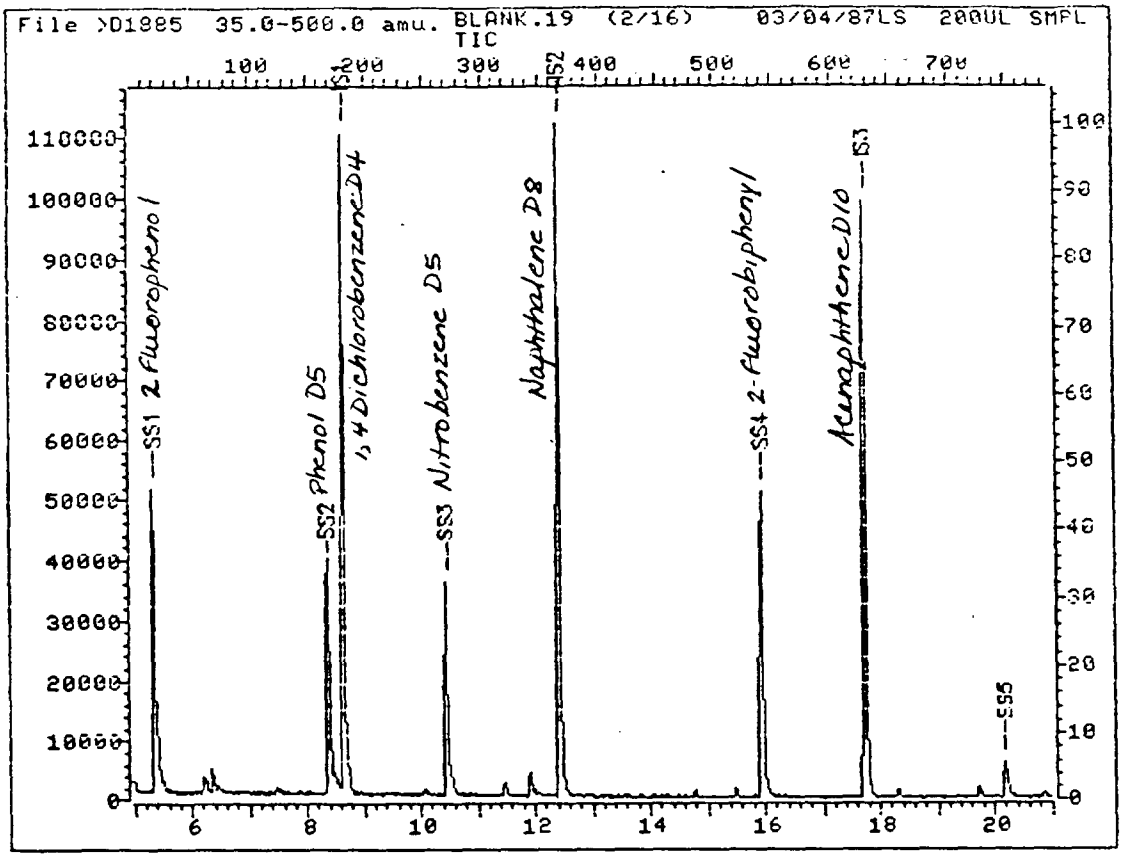
29.					
30					



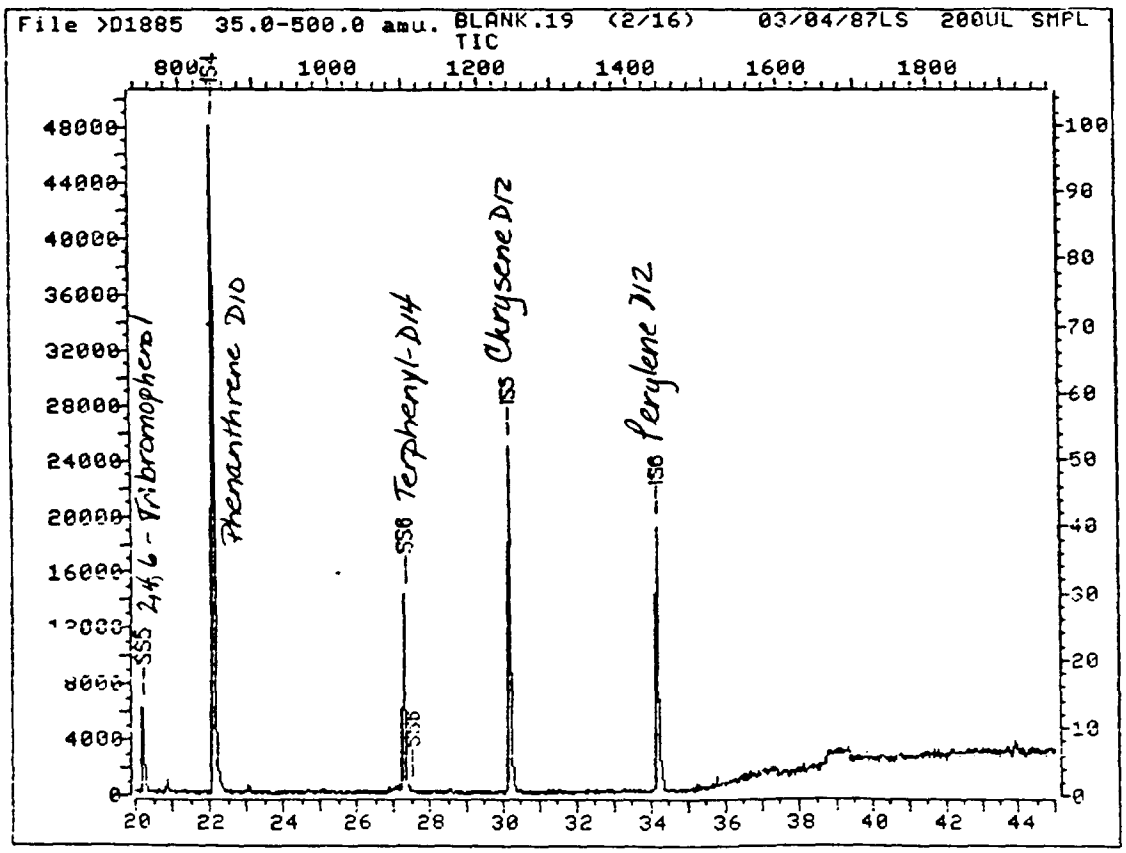
Data File: >D1885::D3
Name: BLANK.19 (2/16)
Misc: 03/04/87LS 200UL SMPL + 200UL MECL2 + 4UL IS (2X) BTL# 1

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 >D1885 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
IS3
SS5

D1885


File >D1885 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
IS5 Chrysene D12
IS6 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 V-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	1200J
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	1500J
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

ase No 11-4906,4928, 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.					
6.					
7.					
8.					
9.					
10.					
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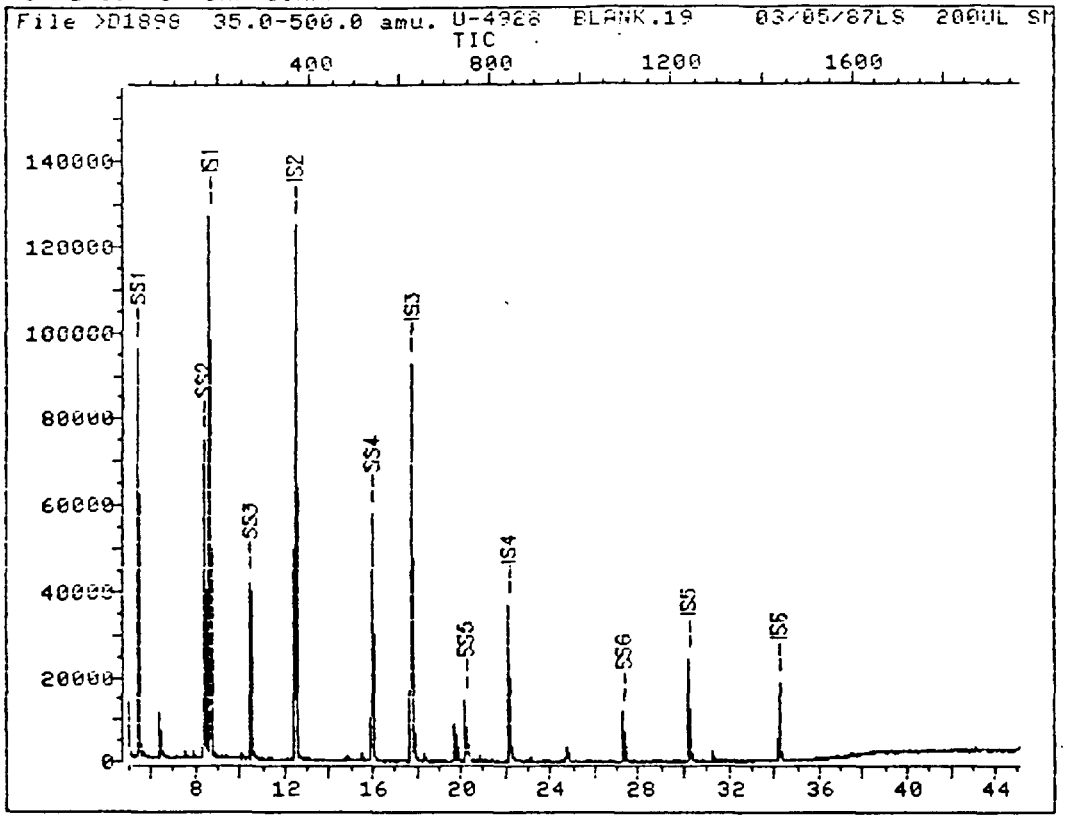
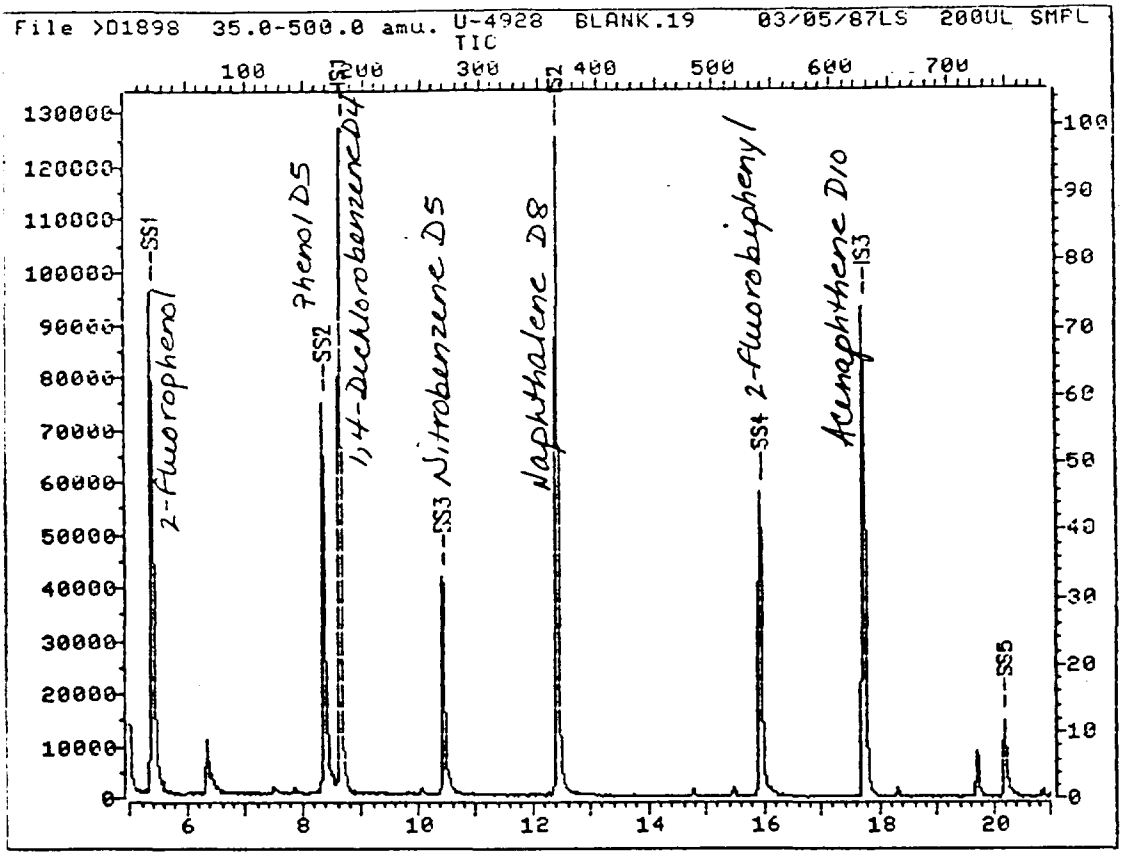
TOTAL ION CHROMATOGRAM



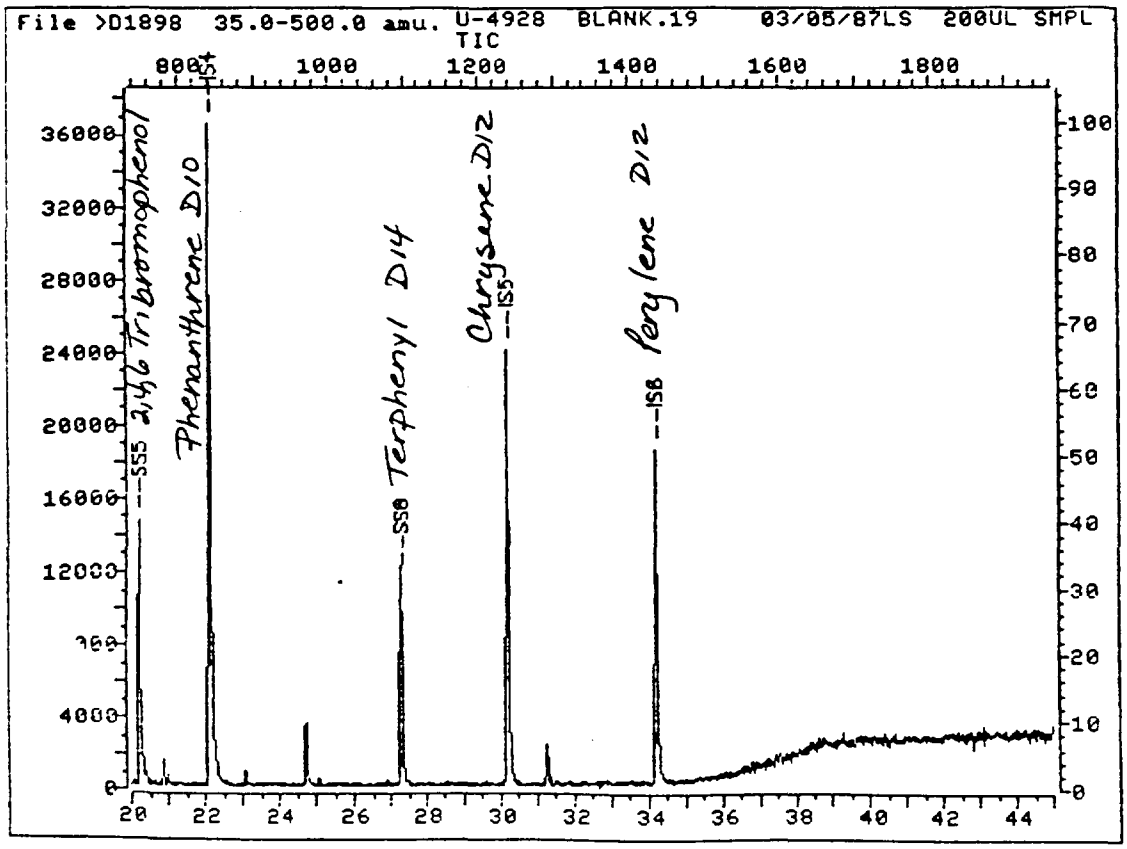
Data File: >D1898::D3
Name: U-4928 BLANK.19
Misc: 03/05/87LS 200UL SMPL + 200UL MECL2 + 4UL IS (2X) BTL# 1

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
IS2
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
IS4
IS5
IS6

QUANT REPORT

Operator ID: USER6 Quant Rev: 4 Quant Time: 870305 17:48
Output File: ^D1898::02 Injected at: 870305 17:00
Data File: >D1898::03 Dilution Factor: 2.00
Name: U-4928 BLANK.19
Misc: 03/05/87LS 200UL SMPL + 2000UL MECL2 + 40UL IS (2X) BTL# 1

ID File: BNAOR::02
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	1811	53808	40.00 UG/L	89
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~~	~~8348~~	~~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	17.23	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~~	~~17.23~~	~~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~~	~~17.23~~	~~626~~	~~8422~~	~~43.50 UG/L~~	~~100~~
53)	DIETHYLPHTHALATE		149	19.21	723	2573	3.58 UG/L YOD	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 V-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-Chloroethoxyl)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

Case 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	Estimated Concentration (ug/l or (ug/kg))
				min	
1.	544638	Tetradecanoic acid	BNA	24.34	6100 J
2.					
3.					
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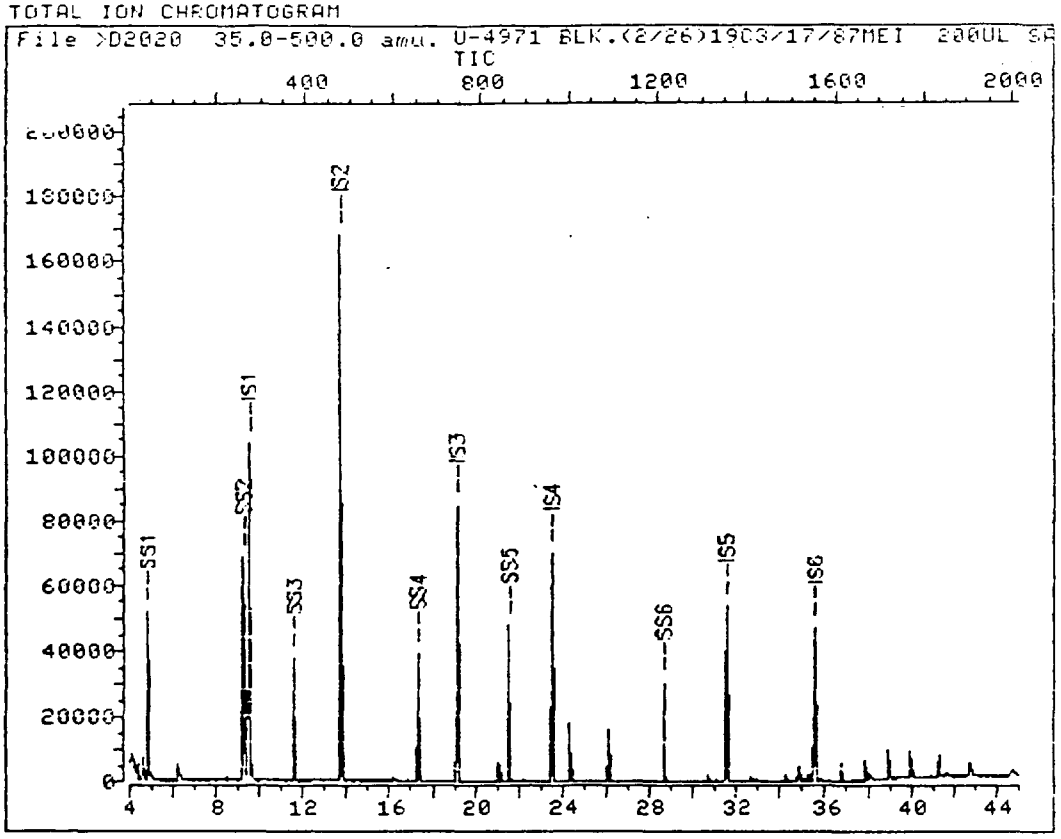
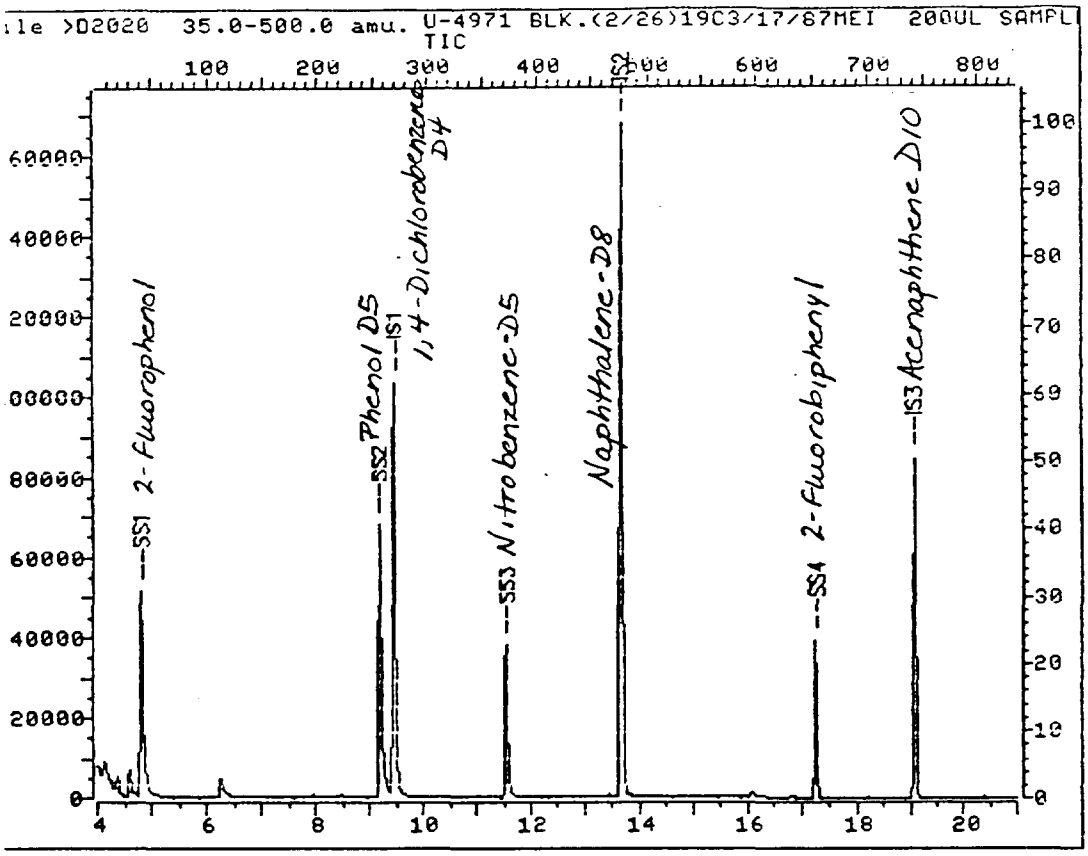
TOTAL ION CHROMATOGRAM



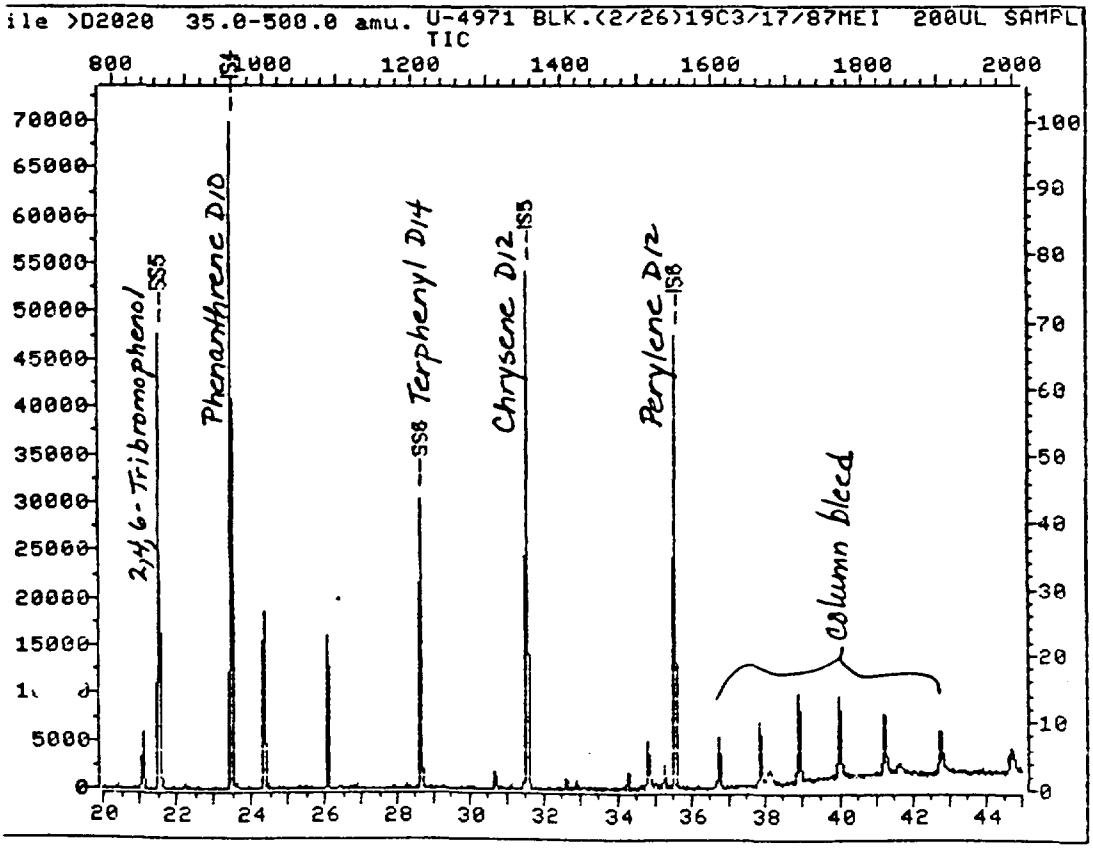
Data File: >D2020::D1
Name: U-4971 BLK.(2/26)19C
Misc: 3/17/87MEI 200UL SAMPLE/200UL MECL2 + 4UL IS(2X) BTL# 1

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


ile >D2020 35.0-500.0 amu. U-4971 BLK.(2/26)19C3/17/87MEI 200UL SAMPL
TIC
2-Fluorophenol
--SS1
Phenol D5
--SS2
--IS1
1,4-Dichlorobenzene D4
--SS3 Nitrobenzene-D5
Naphthalene-D8
--SS4 2-Fluorobiphenyl
--IS3 Acenaphthene D10

D-2020


ile >D2020 35.0-500.0 amu. U-4971 BLK.(2/26)19C3/17/87MEI 200UL SAMPL
TIC
2,4,6-Tribromophenol
--SS5
Phenanthrene D10
--SS8 Terphenyl D14
Chrysene D12
--IS5
Perylene D12
--IS6
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~~	~~11.59~~	~~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
~~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 V-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-Chloroethoxyl)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 V-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
3.					
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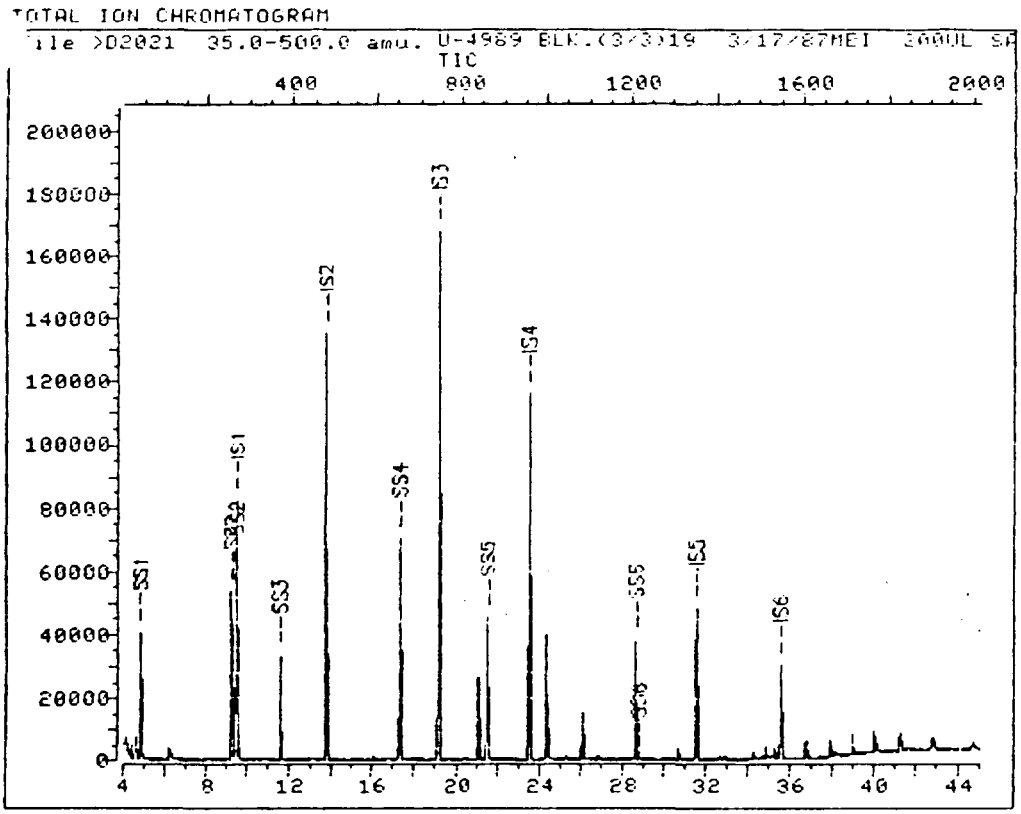
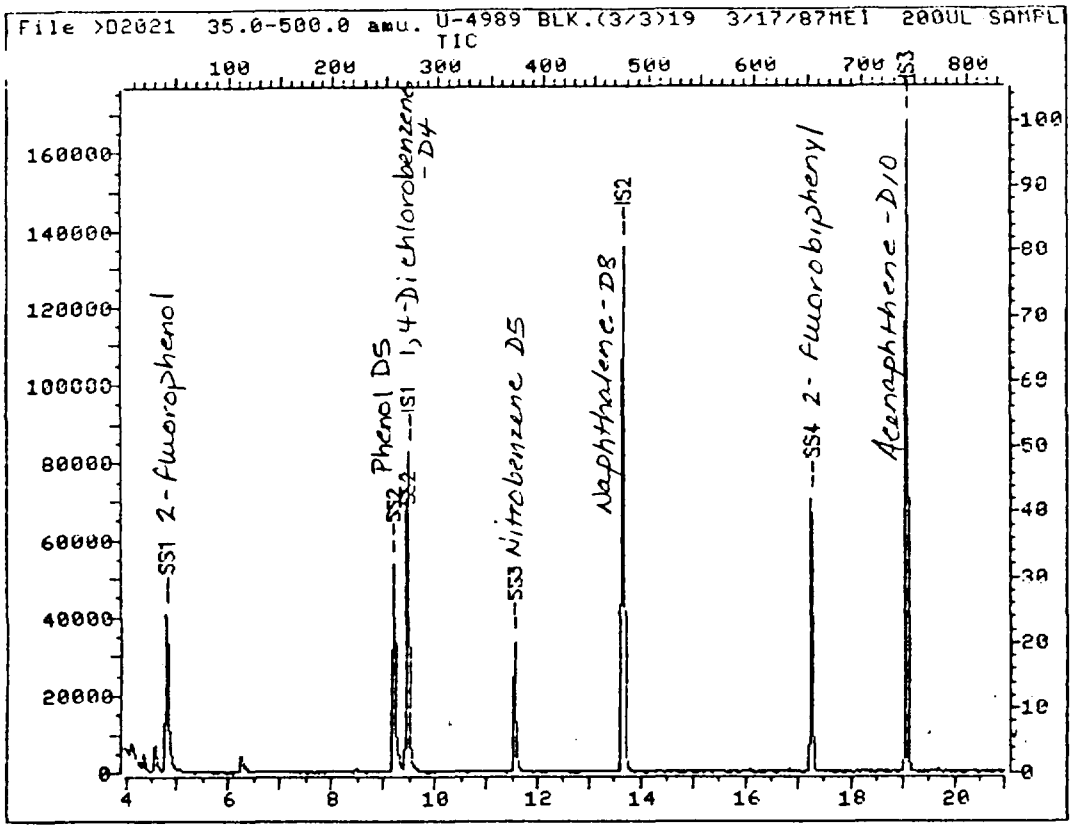
30					



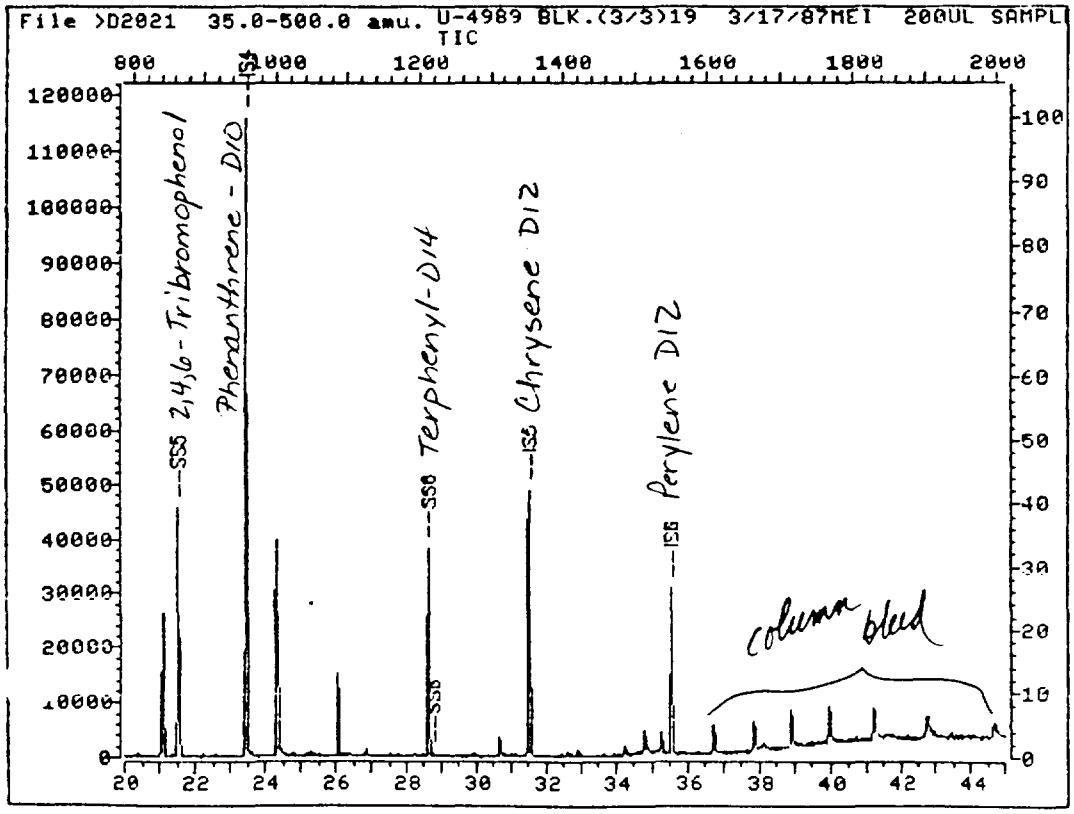
Data File: >D2021::D1
Name: U-4989 BLK.(3/3)19
Misc: 3/17/87MEI 200UL SAMPLE/200UL MECL2 + 4UL IS(2X) BTL# 2

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


File >D2021 35.0-500.0 amu. U-4989 BLK.(3/3)19 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

D2021


File >D2021 35.0-500.0 amu. U-4989 BLK.(3/3)19 3/17/87MEI 200UL SAMPL
TIC
--SS5 2,4,6-Tribromophenol
--IS4 Phenanthrene-D10
--SS6 Terphenyl-D14
--IS5
--IS5 Chrysene D12
--IS6 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~~	~~10331~~	~~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 D2041

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	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

517

Laboratory Name Ecology & Environment
Case No V-4906, 4928, 4971, 4989

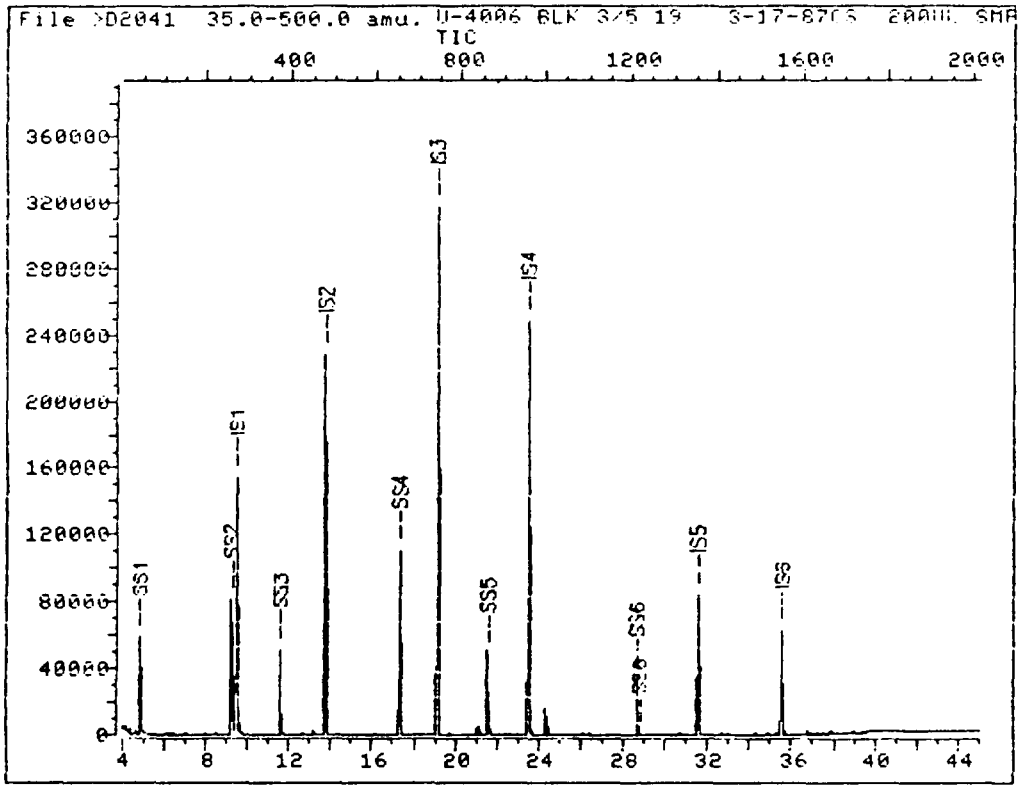
Sample Number
D2041

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.					
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.					
30					

TOTAL ION CHROMATOGRAM

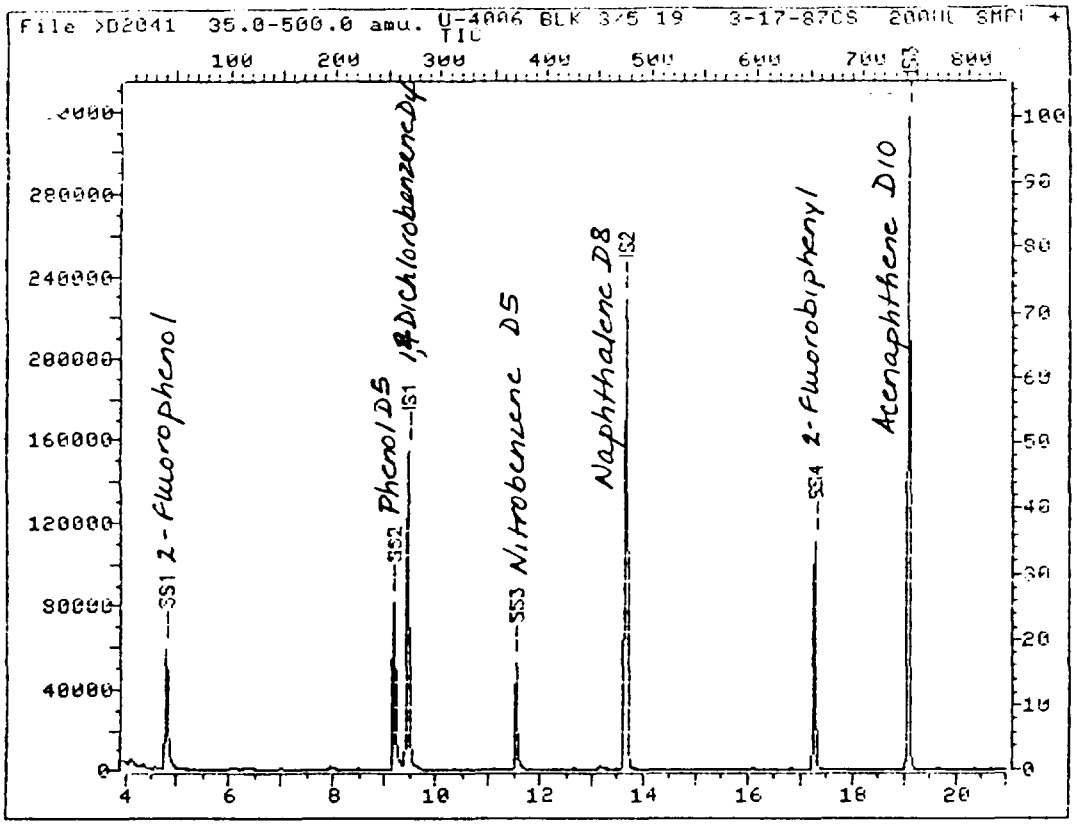


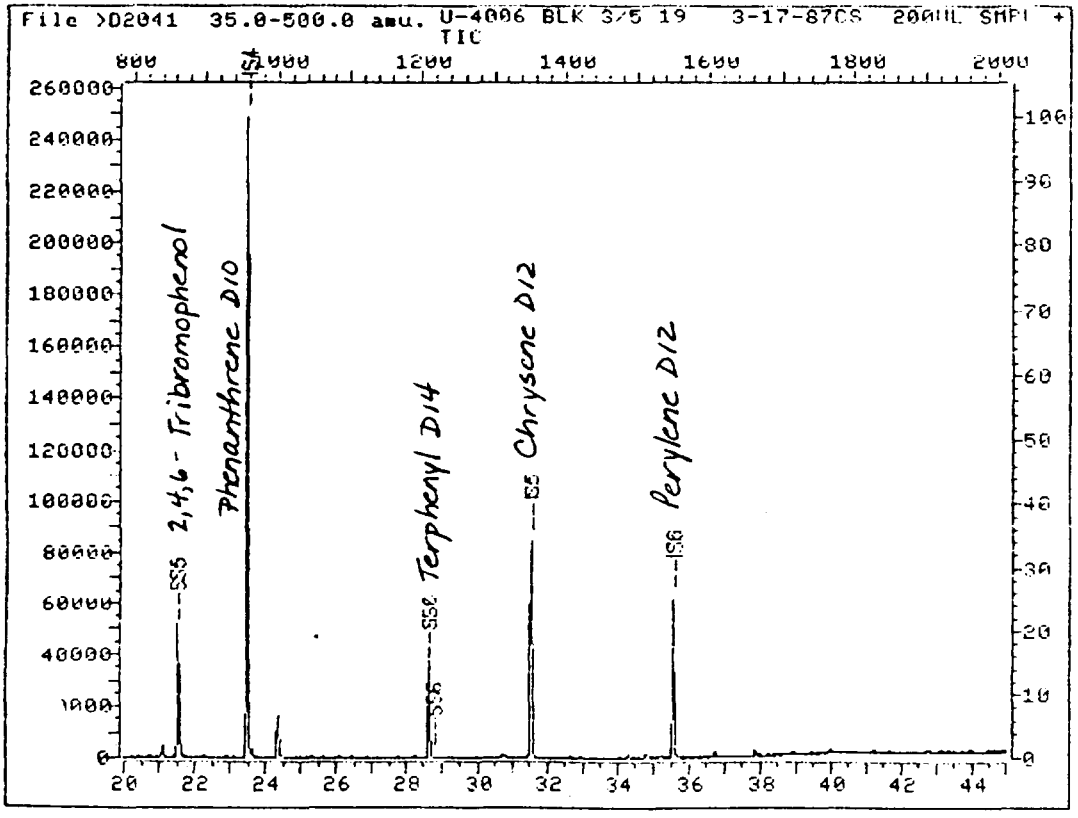
Data File: >D2041
Name: U-4006 BLK 3/5 19
Misc: 3-17-87CS 200UL SMPL + 200UL MECL2 + 40UL IS (2X) BTL# 1

Id File: BNAUR::U2
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 200uL SMPI
TIC
2-Fluorophenol
Phenol D5
1,4-Dichlorobenzene-d4
Nitrobenzene D5
Naphthalene D8
2-Fluorobiphenyl
Acenaphthene D10


File >D2041 35.0-500.0 amu. U-4006 BLK 3/5 19 3-17-87CS 200uL SMPI
TIC
2,4,6-Tribromophenol
Phenanthrene D10
Terphenyl D14
Chrysene D12
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 MEOL2 + 40UL IS (2X) BIL# 1

ID File: BNAOR::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	99
5)	2-FLUOROPHENOL	(SURR)	112	4.78	40	44669	54.83	UG/L	77
~~12)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~78~~	~~11.54~~	~~372~~	~~8182~~	~~6.87~~	~~UG/L~~	~~98~~
19)	*NAPHTHALENE-D8	(IS)	136	13.66	476	288910	40.00	UG/L	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	92
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.10~~	~~743~~	~~34160~~	~~11.65~~	~~UG/L~~	~~100~~
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.53	862	19633	48.13	UG/L	98
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.10~~	~~743~~	~~23908~~	~~34.32~~	~~UG/L~~	~~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	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

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_t = 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

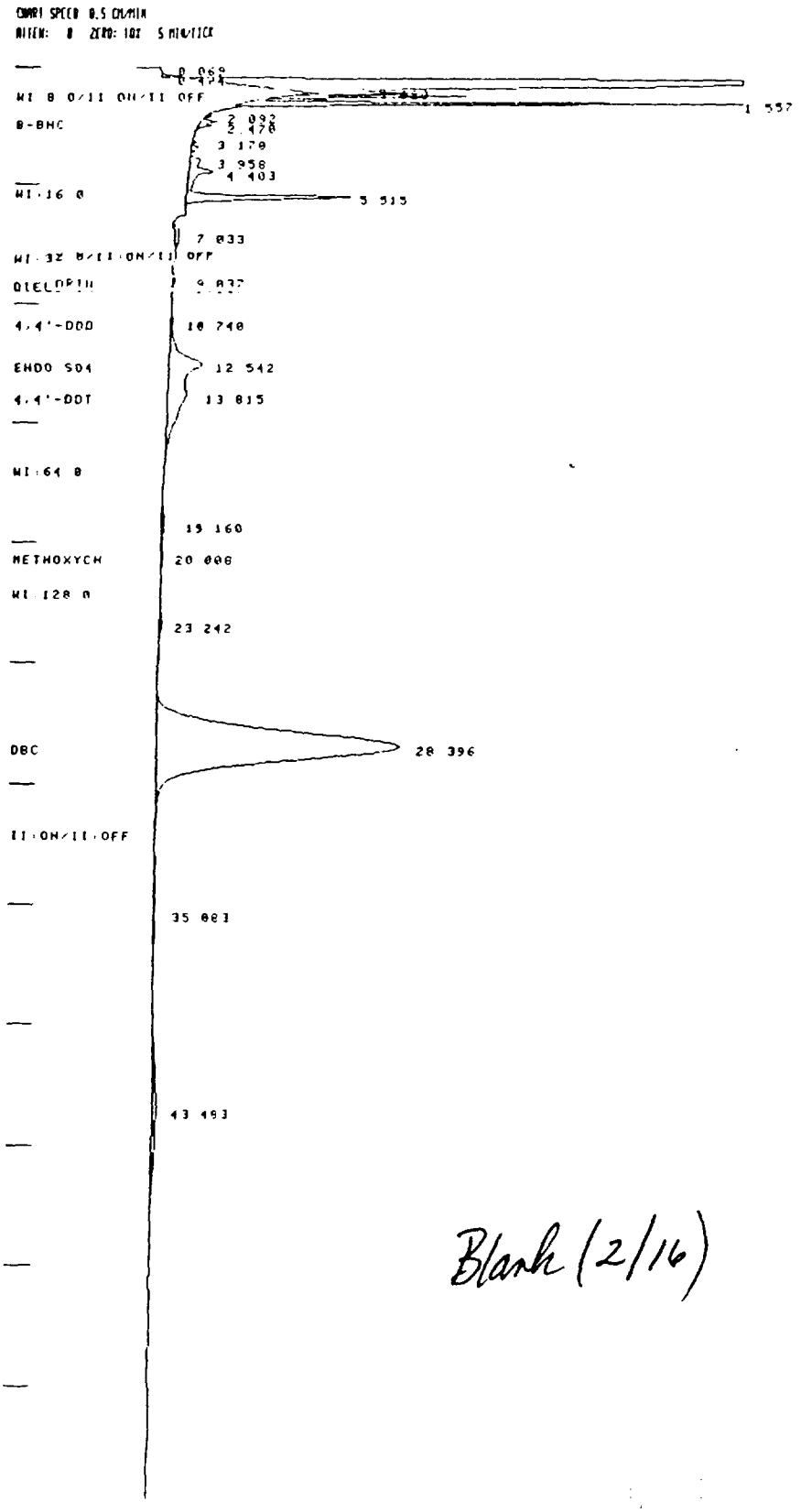


CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 10% 5 MV/DIV
0.069
0.494
1.557
WI 8 0/II ON/II OFF
B-BHC
2.092
2.478
3.170
3.958
4.403
WI:16 0
5.515
7.033
WI:32 0/II:ON/II OFF
DIELDRIN
9.832
4,4'-DDD
10.740
ENDO SO4
12.542
4,4'-DDT
13.815
WI:64 0
15.160
METHOXYCH
20.008
WI:128 0
23.242
DBC
28.396
II:ON/II:OFF
35.083
43.493

Blank (2/16)

CHANNEL: 18 - 1 TITLE: RUN 16 21:03 23 FEB 87

SAMPLE: BLANK 2-16 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	1.273		102518	BB	4.00
2		0.0000	1.557		348871	BB	5.00
3	[illegible]	7.2746	3.958	-0.162	24466	BV	? 13.44
4		0.0000	4.403		74491	VV	14.81
5		0.0000	5.515		277414	VB	12.19
6		0.0000	7.033		25200	BB	? 61.69
7	[illegible]	94.7089	12.542	-0.238	253212	VV	46.88
8	[illegible]	81.4954	13.815	-0.375	193117	VB	? 96.00
9	DBC	916.7631	28.396	0.086	2648937	BB	81.00
10		0.0000	35.083		32212	BB	172.00
11		0.0000	43.483		132740	BB	248.00

TOTALS: 1108.241 -0.689 4113170

DETECTED PKS: 27 REJECTED PKS: 16

DIVISOR: 0.15000 MULTIPLIER: 1000.00000

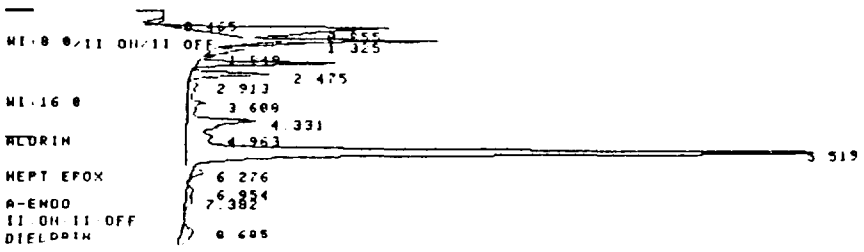
NOISE: 11.4 OFFSET: 6

RACK: 2 VIAL: 1 INJ: 1

NOTES:
NOTEBOOK:259-115,116 ANALYST: RICHARD SAMSON
SECURE AREA: 0 JOBA:U-4872,4906
INST: VARIAN 6000X 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 DC1188

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



Laboratory Name ecology and environment, inc.

Case No V-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)

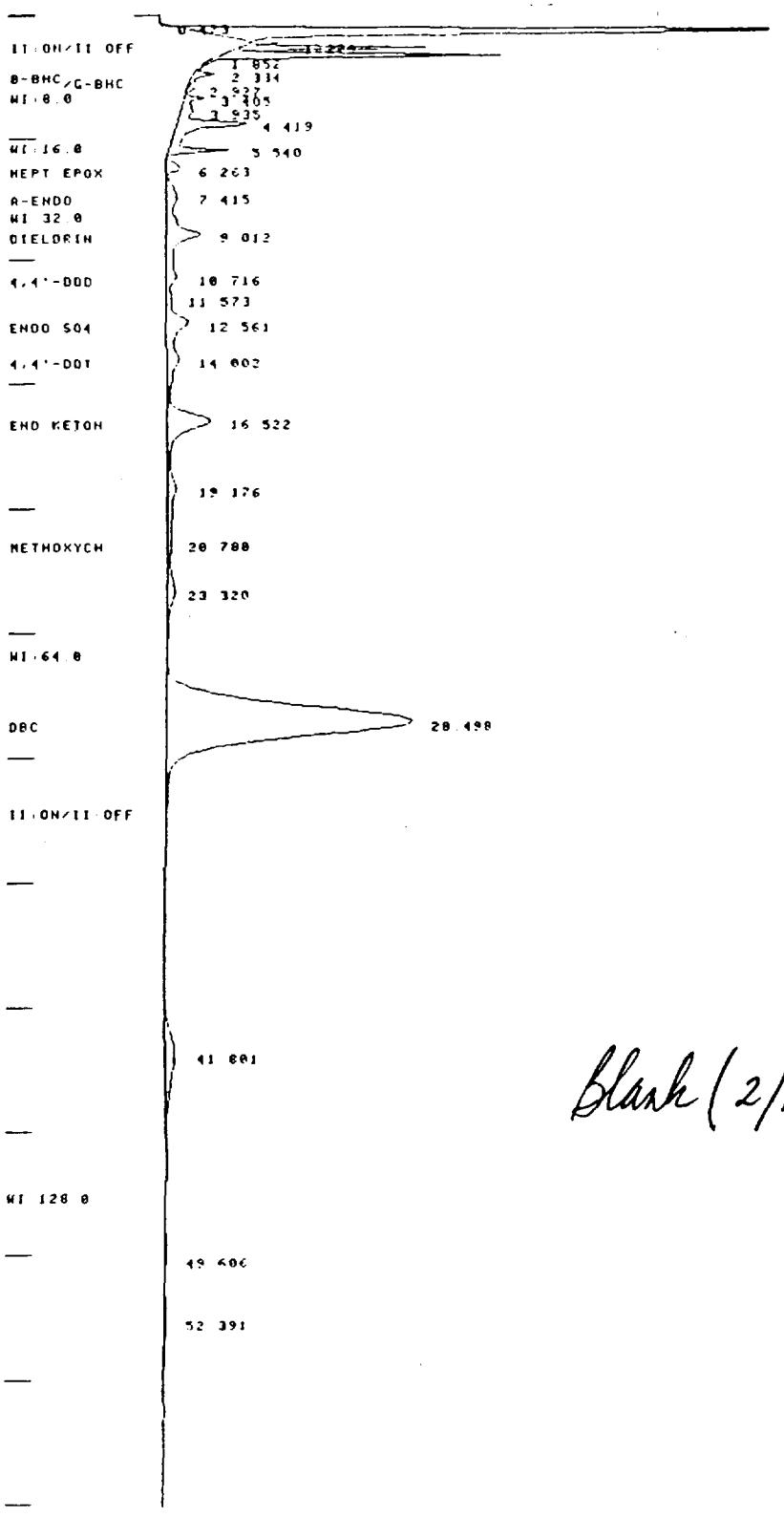
V_s = Volume of water extracted (ml)

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	WI/2 (SEC)

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	WI/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	3.936	-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	~~END KETON~~	75.3683	16.522	0.112	276412	VV	44.56
14		0.0000	19.176		104410	VV	? 70.19
15	~~METHOXYCHL~~	30.2533	20.780	-0.120	39290	VV	?
16		0.0000	23.320		81411	VB	? 87.31
17	DBC ISTD	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: 8 ZERO: 10% 5 MIN/TICK

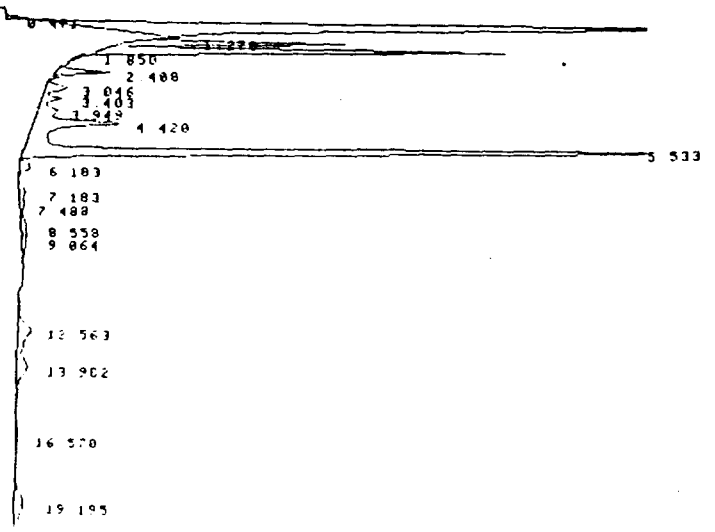
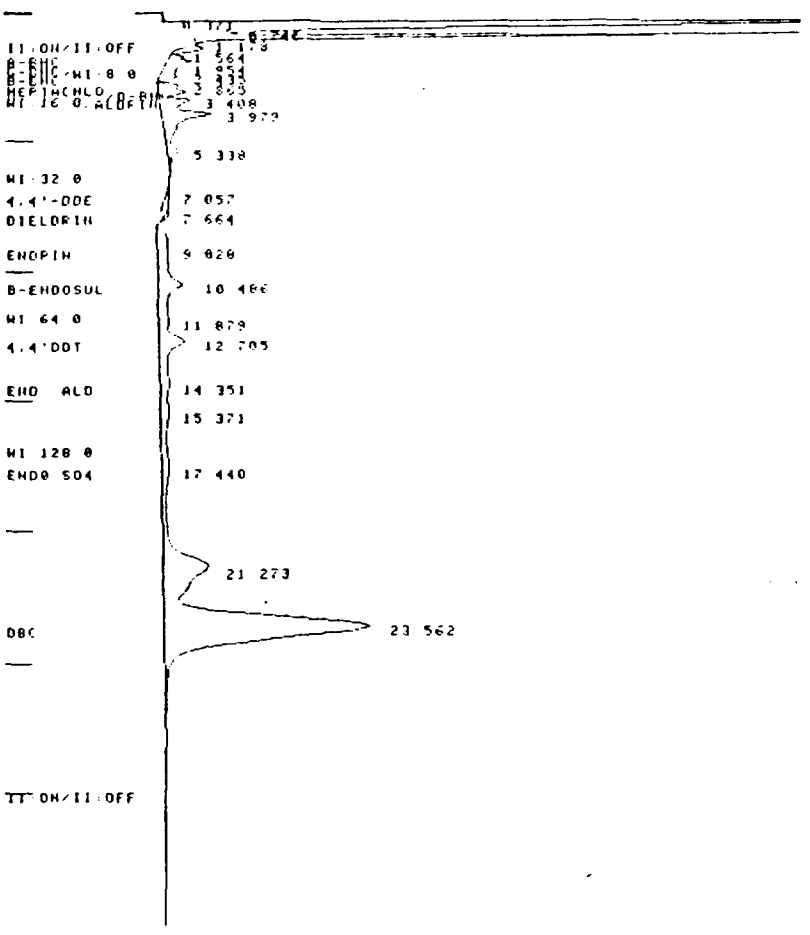


CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10% 5 MIN/TICK



CHANNEL: 18 - 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		20220	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	?	18.44
6	~~G-BHC~~	0.0000	2.237	0.027	38836	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		65220	VV	?	17.81
10	~~ALDRIN~~	0.0000	3.408	0.108	136338	VV	?	10.63
11		0.0000	3.979		322379	VV		20.56
12		0.0000	5.338		71262	VB	?	36.63
13	~~4,4'-EOS~~	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	0.286	285946	VV		49.50
16		0.0000	11.879		139957	VV	?	78.13
17	~~4,4'DDT~~	0.0000	12.705	-0.545	264797	VV		42.19
18	~~ENDO ALD~~	0.0000	14.351	-0.269	141681	VV	?	134.44
19		0.0000	15.371		154227	VV	?	108.06
20	~~ENDO SO4~~	0.0000	17.440	-0.250	162049	VV	?	152.25
21		0.0000	21.273		871534	VV		92.81
22	DBC	0.0000	23.562	0.202	2965949	VB		57.88
TOTALS:		0.0000		-1.404	6178588			

DETECTED PKS: 22 REJECTED PKS: 12

Laboratory Name ecology and environment, inc.

Case No V-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

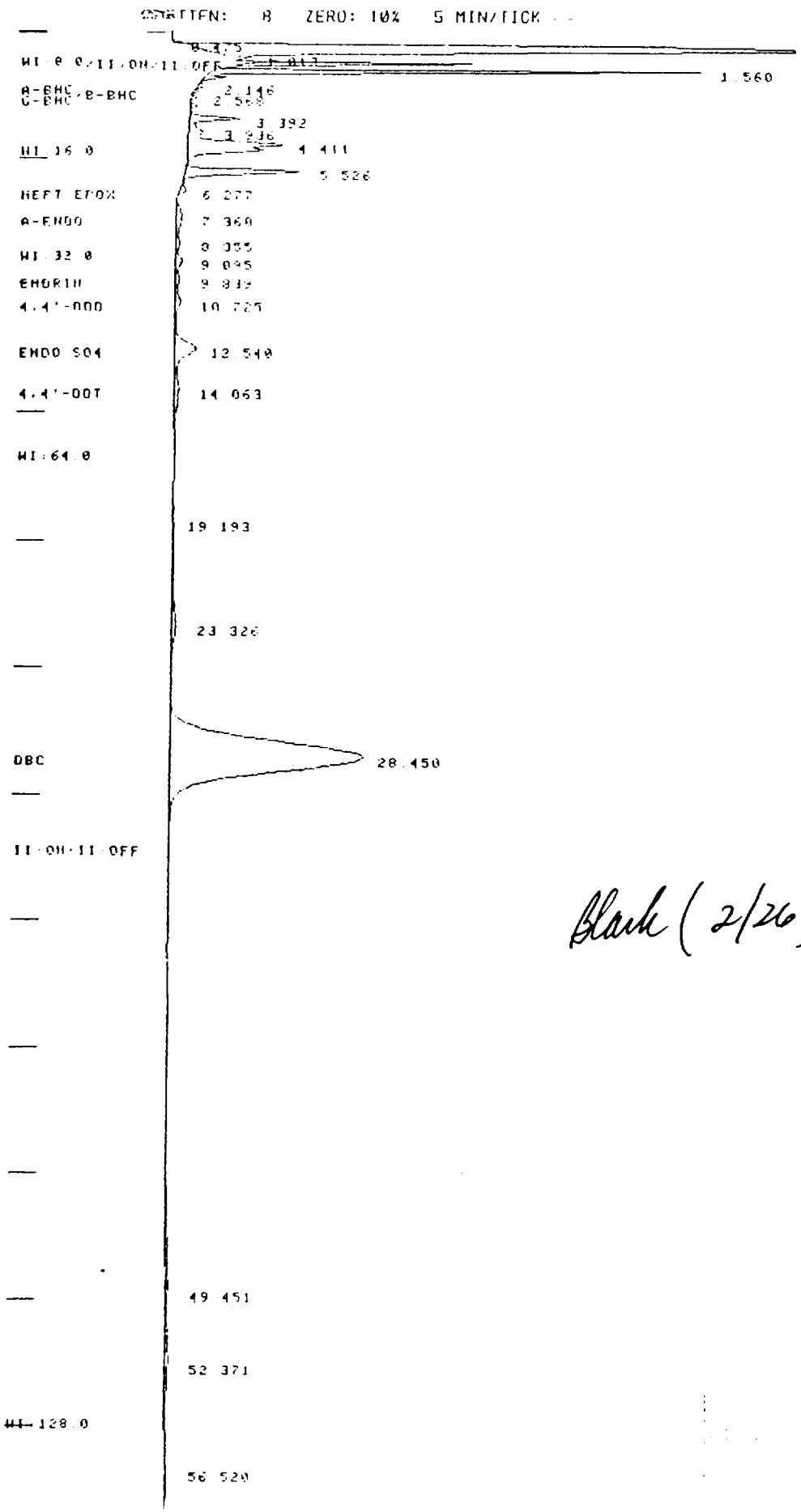
V_i = Volume of extract injected (ul)

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


WRITTEN: B ZERO: 10% 5 MIN/TICK
WI 0 0/II-ON/II-OFF
A-BHC/B-BHC
C-BHC
WI 16 0
HEPT EPOX
A-ENDO
WI 32 0
ENDRIN
4,4'-DDD
ENDO SO4
4,4'-DDT
WI 64 0
DBC
II-ON/II-OFF
WI 128 0
1.560
2.116
2.568
3.392
3.946
4.411
5.526
6.277
7.360
8.035
9.095
9.819
10.725
12.540
14.063
19.193
23.326
28.450
49.451
52.371
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-END~~	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'-DDE~~	8.1193	10.725	-0.205	27041	VV	? 45.56
12	~~END0 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

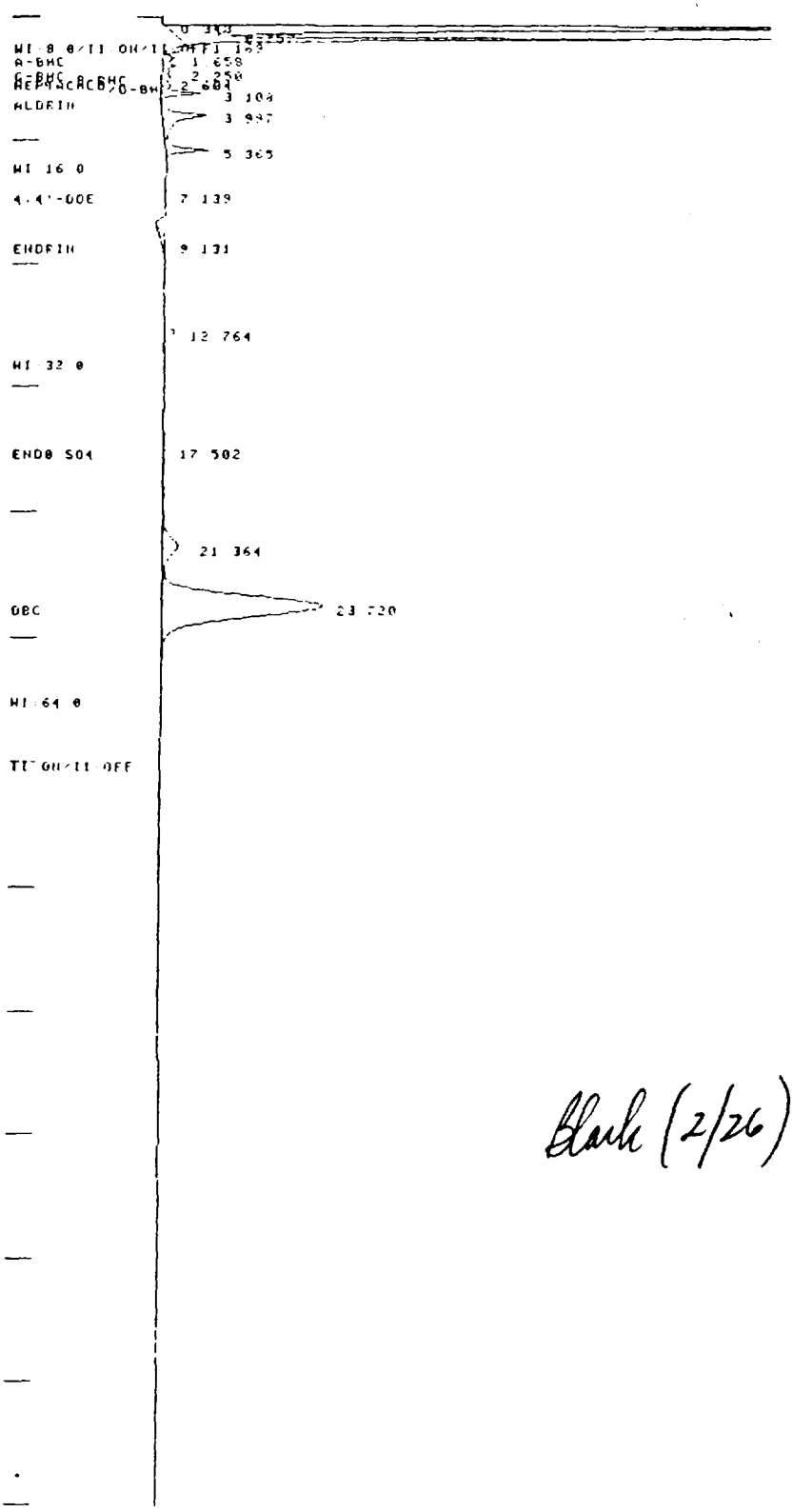
NOISE: 11.4 OFFSET: 10

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

CHANNEL: 1B - 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	WI/2 (SEC)
1		0.0000	1.282		30521	BV	3.38
2	[illegible]	4.0858	1.658	-0.122	26869	VV	? 12.00
3		0.0000	2.012		29052	VV	7.44
4	[illegible]	10.3567	2.434	-0.126	21734	VV	8.19
5	[illegible]	7.2120	2.833	0.063	34934	VV	? 18.00
6	[illegible]	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	[illegible]	15.1483	9.131	-0.219	61070	BB	? 22.88
10	[illegible]	27.0143	12.764	-0.676	80567	BB	28.00
11	[illegible]	8.5781	17.502	-0.358	20070	BB	? 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

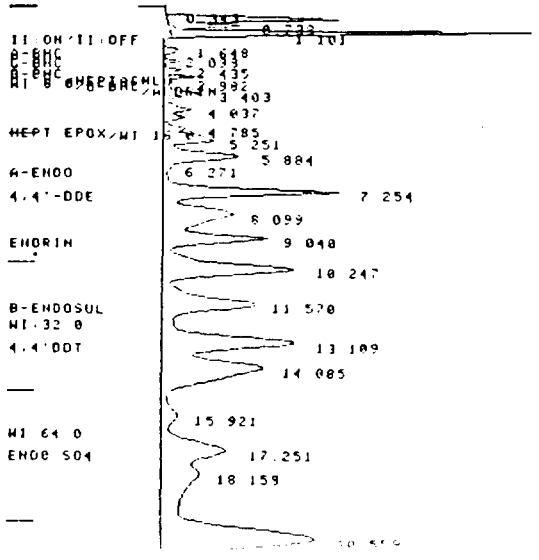
NOISE: 365.7 OFFSET: 5

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

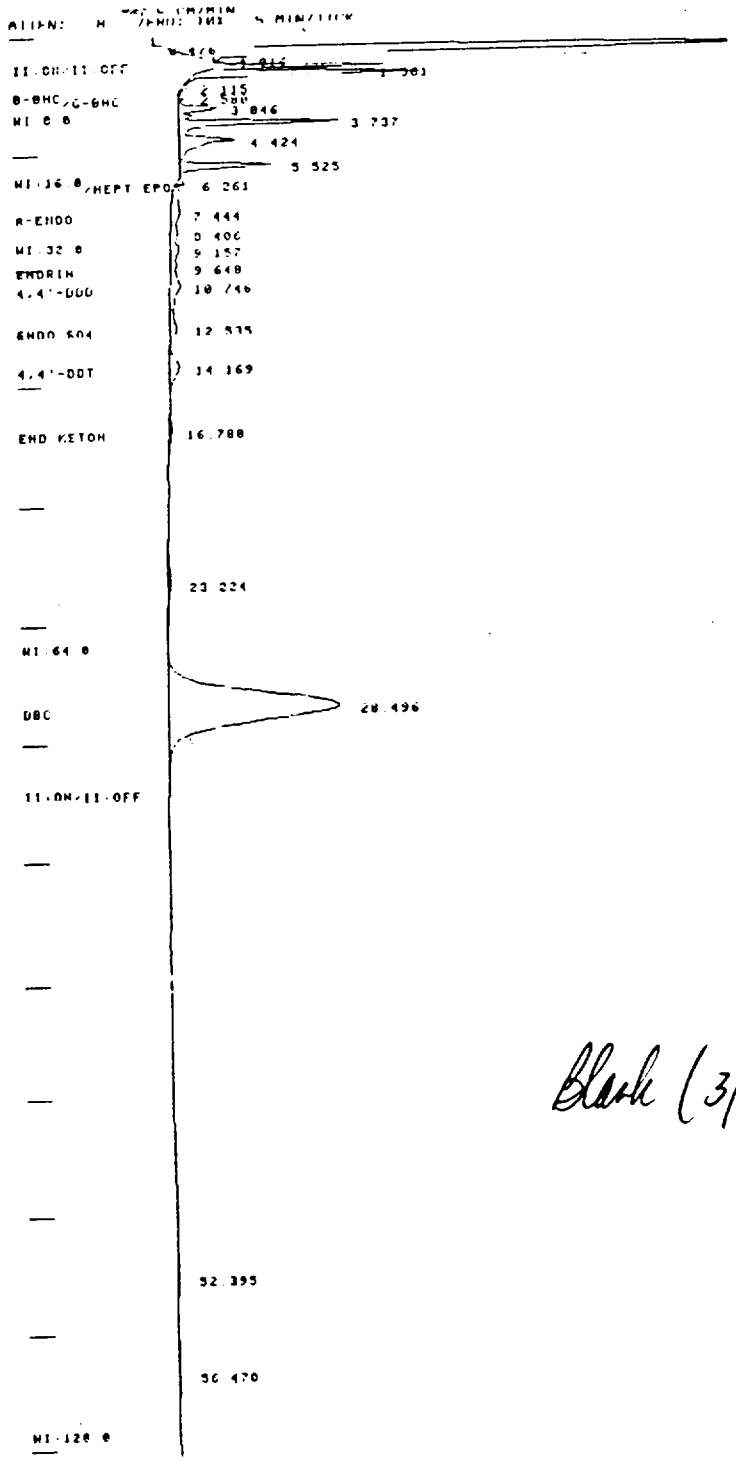
V_t = Volume of extract injected (ul)

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



II.ON/II.OFF
B-BHC/G-BHC
WI 8.0
WI 16.0 /HEPT EPO
A-ENDO
WI 32.0
ENDRIN
4,4'-DDD
ENDO SO4
4,4'-DDT
END KETON
WI 64.0
DBC
II.ON/II.OFF
WI 128.0
2.115
3.846
3.737
4.424
5.525
6.261
7.444
8.406
9.157
9.648
10.746
12.535
14.169
16.788
23.224
28.496
52.395
56.470

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	[illegible]	17.9241	7.444	-0.146	67851	VV	? 56.56
8	[illegible]	8.0347	8.406	-0.314	29142	VV	? 42.00
9	[illegible]	10.1476	9.157	0.317	40498	VV	? 49.50
10	[illegible]	23.7654	10.746	-0.184	79150	VV	42.44
11	[illegible]	16.4284	12.535	-0.285	39596	VV	30.00
12	[illegible]	27.7732	14.169	-0.061	66162	VB	45.63
13	[illegible]	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

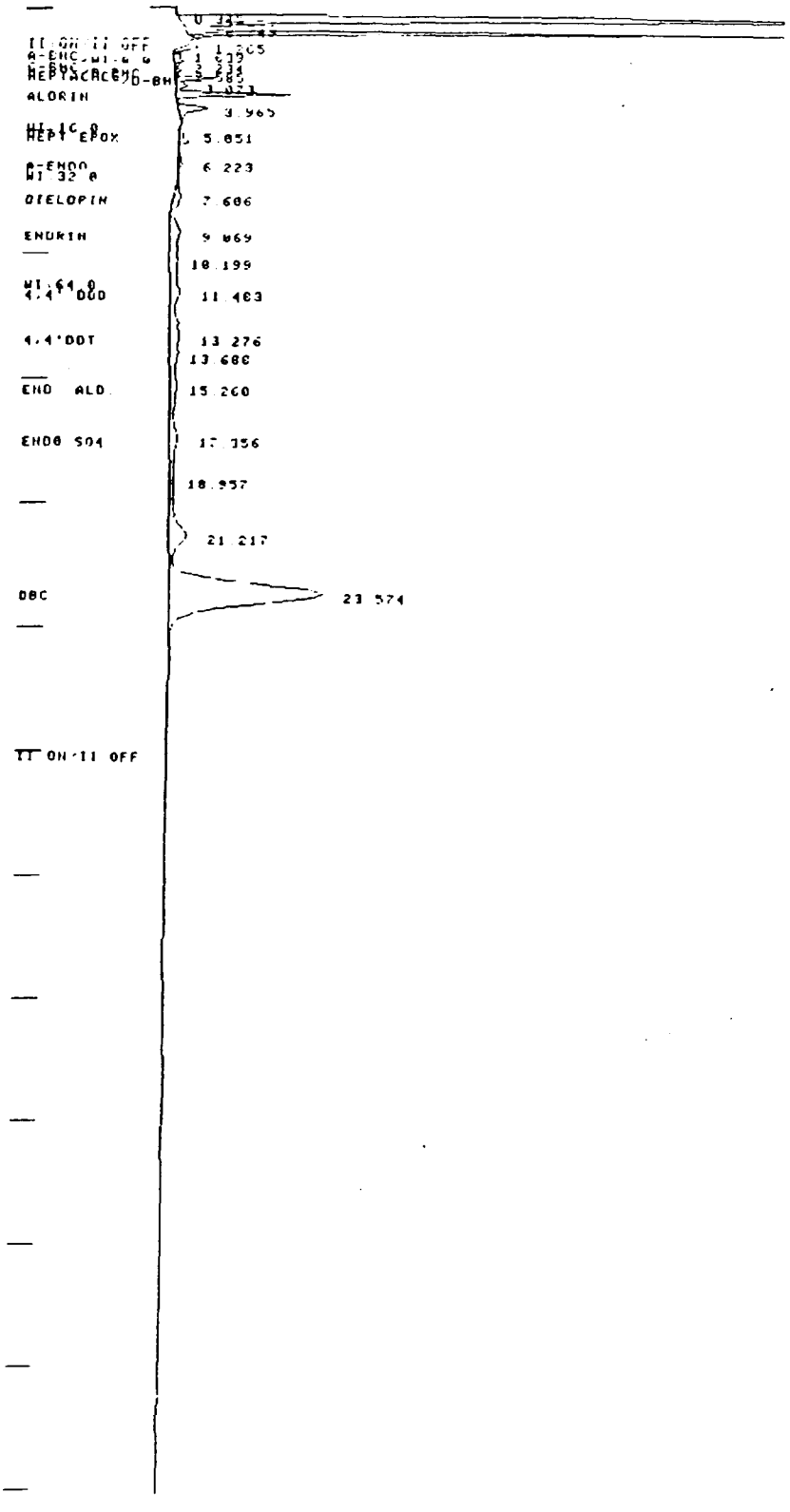
POST RUN:
SAVE FILE: RAW S.CROP395

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	0.008	83113	VV	7.13
4	~~E-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-ENDOSUL~~	30.8438	11.483	0.163	130465	VV	? 75.88
13	~~4,4'DDI~~	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:		972.8887		-0.275	4259079		

DETECTED PKS: 35 REJECTED PKS: 16

DIVISOR: 0.15000 MULTIPLIER: 1000.00000

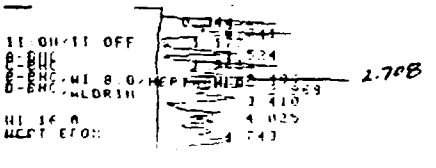
NOISE: 365.7 OFFSET: 8

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 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.108

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



ATTACHMENT A

FORMS I

CASE NUMBERS U-4906, U-4928, U-4971, AND U-4989

SUBSURFACE SOIL INORGANIC

Date 5/11/87

COVER PAGE
INORGANIC ANALYSES DATA PACKAGE

Lab Name Ecology and Environment, Inc. Case No. U-4906/U-4928/U-4971/U-4989

SOW No. 784 Q.C. Report No. _____

Sample Numbers

	Lab ID No.			Lab ID No.
DC-P1-53	1032		DC-04-62	1113
DC-P2-54	1033		DC-05-63	1114
DC-P5-55	1034		DC-05-64	1115
DC-P5-56	1035		DC-08-65	1116
DC-I12-57	1036		DC-06-66	1117
DC-I12-58	1037		DC-G6-67	1274
DC-01-59	1110		DC-G8-68	1275
DC-02-60	1111		DC-G7-69	1276
DC-03-61	1112		DC-G8-70	1277

Comments: _____

ICP Interelement and background corrections applied? Yes X No ____.

If yes, corrections applied before X or after _____ generation of raw data.

Footnotes:

NR - not required by contract at this time
Form I:
Value - If the result is a value greater than or equal to the instrument detection limit but less than the contract required detection limit, report the value in brackets (i.e., [10]). Indicate the analytical method used with P (for ICP/Flame AA) or F (for furnace).
U - Indicates element was analyzed for but not detected. Report with the detection limit value (e.g., 10U).
E - Indicates a value estimated or not reported due to the presence of interference. Explanatory note included on cover page.
s - Indicates value determined by Method of Standard Addition.
R - Indicates spike sample recovery is not within control limits.
* - Indicates duplicate analysis is not within control limits.
+ - Indicates the correlation coefficient for method of standard addition is less than 0.995

Date 5/11/87

COVER PAGE
INORGANIC ANALYSES DATA PACKAGE

Lab Name Ecology and Environment, Inc. Case No. U-4906/U-4928/U-4971/U-4989

SOW No. 784 Q.C. Report No. _____

Sample Numbers

	Lab ID No.		Lab ID No.
DC-09-71	1278		
DC-09-72	1427		
DC-09-73	1428		
DC-010-74	1429		
DC-610-75	1430		

Comments: _____

ICP Interelement and background corrections applied? Yes X No ____.

If yes, corrections applied before X or after _____ generation of raw data.

Footnotes:

NR - not required by contract at this time

Form I:

Value - If the result is a value greater than or equal to the instrument detection limit but less than the contract required detection limit, report the value in brackets (i.e., [10]). Indicate the analytical method used with P (for ICP/Flame AA) or F (for furnace).

U - Indicates element was analyzed for but not detected. Report with the detection limit value (e.g., 10U).

E - Indicates a value estimated or not reported due to the presence of interference. Explanatory note included on cover page.

; - Indicates value determined by Method of Standard Addition.

R - Indicates spike sample recovery is not within control limits.

* - Indicates duplicate analysis is not within control limits.

+ - Indicates the correlation coefficient for method of standard addition is less than 0.995

ecology and environment, inc.
ANALYTICAL SERVICES CENTER, P.O. BOX D, BUFFALO, NEW YORK 14225, TEL. 716-631-0360
International Specialists in the Environmental Sciences

May 12, 1987

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

CASE NARRATIVE

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

Interference Check Sample (ICS) information has not been reported as sequential ICP was used.

Information on furnace AA strip chart recordings and ICP printouts is identified by laboratory sample numbers. The cover page contains the necessary cross reference information.

Mercury analysis was performed on February 23 and March 6 and 11, 1987. Cyanide analysis was performed on February 18, 19, 23, 24, and March 2, 5, 9, 10, 1987.

Approximately one gram of sample was digested and brought to a final volume of 200 mL in preparation for ICP/furnace AA analysis.

Results of multiple lead analyses for sample DC-FS-56 ranged from 26 to 91 mg/kg because of the heterogeneous nature of the sample. Calculation of lead spike recovery was not possible. Other elements in the sample yielded consistent results and acceptable quality control.

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

Gary Hahn, Manager
Analytical Services Center

GH/db

3

recycled paper

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:
IC 8140	LOVE CANAL / SUMMIT SITES	MIKE MILLER

Samplers: (Signatures)	Field Team Leader:
Daniel T Sewall	DAN SEWALL

STATION NUMBER	DATE	TIME	SAMPLE TYPE: COMP	GRAB	AIR	SAMPLE INFORMATION: EXPECTED COMPOUNDS (Concentration)*	STATION LOCATION	NUMBER OF CONTAINERS	TCL ORGANICS (8 oz)	METALS & CYANIDE (8 oz)	VOLATILE ORGANICS (120 ml)		REMARKS
IC-M-53	2-11-87	0930	X			UNKNOWN / OVA SCREEN 2000 PPM	BORINGS M-1-4 0'-10'	4	1	1	2		SCREEN POSSIBLY DUE TO METHANE
IC-M-54	2-11-87	1030	X			UNKNOWN / OVA SCREEN 260 PPM	BORINGS M-1-4 25'-35'	4	1	1	2		SLIGHT ORGANIC ODOR
IC-P-55	2-12-87	1230	X			UNKNOWN / OVA SCREEN 180 PPM	BORING P-5 15'-25'	4	1	1	2		SLIGHT ORGANIC ODOR
IC-P-56	2-12-87	1230	X			UNKNOWN / OVA SCREEN 180 PPM	BORING P-5 15'-25'	4	1	1	2		DUPLICATE OF IC-P-55
IC-BG-57	2-13-87	0800	X			UNKNOWN - SUSPECTED LOW	BORING E-12 3½'-12½' FT	4	1	1	2		BACKGROUND LOCATION
IC-BG-58	2-13-87	0830	X			UNKNOWN - SUSPECTED LOW	BORING E-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)	Date/Time:	Received For Laboratory By: (Signature)	Relinquished By: (Signature)	Date/Time:	Received For Laboratory By: (Signature)	Date: 2-13-87
Fed Express	2-14-87/1000					

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

*See CONCENTRATION RANGE on back of form.

23405

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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:
IC 3140	DEAD CREEK / SAUGET SITES	MIKE MILLER
Samplers: (Signatures)		Field Team Leader:
Daniel T Sewall		DAN SEWALL

STATION NUMBER	DATE	TIME	SAMPLE TYPE: COMP	GRAB	AIR	SAMPLE INFORMATION: EXPECTED COMPOUNDS (Concentration)*	STATION LOCATION	NUMBER OF CONTAINERS	HSL ORGANICS - 8oz	METALS & CYANIDE - 8oz	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-08-65	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)	
Relinquished By: (Signature)	Date/Time:	Received For Laboratory By (Signature)	Relinquished By: (Signature)	Date/Time:	Received For Laboratory By (Signature)	BL/Airbill Number: 2285199070 — Date: 2-18-87
Fed. Express	2-19-87/0845	William H. Howard				

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

*See CONCENTRATION RANGE on back of form.

234055

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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	HCL ORGANICS - 9oz	METALS & CYANIDE - 9oz	VOLATILE ORGANICS - 120ml				REMARKS
DC-G6-67	2-23-87	1215	X			UNKNOWN / OVA SCREEN >1000 PPM	BORING G-6 20'-30'	4	1	1	2				STRONG HYDROCARBON ODOR
DC-G8-68	2-24-87	0900	X			UNKNOWN / BLANK (EXPECTED LOW)	SOIL BLANK	4	1	1	2				
DC-G7-69	2-24-87	0915	X			UNKNOWN / OVA SCREEN >1000 PPM	BORING G-7, 10'-25'	4	1	1	2				VERY STRONG ORGANIC ODOR
DC-G9-70	2-24-87	1200	X			UNKNOWN / OVA SCREEN >1000 PPM	BORING G-8, 10'-20'	4	1	1	2				VERY STRONG ORGANIC ODOR
DC-G9-71	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

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

*See CONCENTRATION RANGE on back of form.

234055

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International Specialists in the Environment

CHAIN-OF-CUSTODY RECORD

Project No.:	Project Name:	Project Manager:
1L3140	DEAD CREEK / SAUGET SITES	MIKE MILLER
Samplers: (Signatures)		Field Team Leader:
Daniel F. Sewell		DAN SEWELL

STATION NUMBER	DATE	TIME	SAMPLE TYPE: COMP	GRAB	AIR	SAMPLE INFORMATION: EXPECTED COMPOUNDS (Concentration)*	STATION LOCATION	NUMBER OF CONTAINERS	HSL ORGANICS - 8oz	METALS & CN - 8oz	VOCS - 120ml				REMARKS	EFE #
DC-09-72	2-26-87	1430	X			UNKNOWN / OVA SCREEN 220ppm	BORING 0-9, 0'-10'	4	1	1	2					1427
DC-09-73	2-26-87	1545	X			UNKNOWN / OVA SCREEN 650ppm	BORING 0-9, 10'-15'	4	1	1	2					1429
DC-010-74	2-26-87	1620	X			UNKNOWN / OVA SCREEN >1000ppm	BORING 0-10, 5'-10'	4	1	1	2				STRONG ORGANIC ODOR	1429
DC-010-75	2-26-87	1700	X			UNKNOWN / OVA SCREEN 840ppm	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:
Daniel F. Sewell	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
Relinquished By: (Signature)	Date/Time: 2-28-87	Received For Laboratory By: (Signature) Rick Marsh	Relinquished By: (Signature)	Date/Time:	Received For Laboratory By: (Signature)	Date: 2-27-87

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

*See CONCENTRATION RANGE on back of form.

234055

Form I

Sample No.
DC-P1-53

Date 5/11/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

LAB SAMPLE ID. NO. 1032 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or (mg/kg as received) (Circle One)

1.	Aluminum	4010		P	13.	Magnesium	NR		
2.	Antimony	12	R U	P	14.	Manganese	161 *		P
3.	Arsenic	0.96	R U	F	15.	Mercury	3.1		CV
4.	Barium	101		P	16.	Nickel	20 *		P
5.	Beryllium	1.0	U	F	17.	Potassium	NR		
6.	Cadmium	3.1		P	18.	Selenium	0.96 R	U	F
7.	Calcium	NR			19.	Silver	2.0	U	P
8.	Chromium	13		P	20.	Sodium	NR		
9.	Cobalt	10	U	P	21.	Thallium	1.9	U	F
10.	Copper	40		P	22.	Tin	7.7	U	F
11.	Iron	10200		P	23.	Vanadium	15		P
12.	Lead	0.96 *	U	F	24.	Zinc	370 *		P
Cyanide		1.0	U		Percent Solids (%)		80		

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: NR: Analysis not requested.

Lab Manager M. [signature]

Form I

Sample No.
DC-P2-54

Date 5/11/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

LAB SAMPLE ID. NO. 1033 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or (mg/kg as received) (Circle One)

1.	Aluminum	1070		P	13.	Magnesium	NR	
2.	Antimony	12 R	U	P	14.	Manganese	78 *	P
3.	Arsenic	1.9 R	U	F	15.	Mercury	0.54	CV
4.	Barium	40	U	P	16.	Nickel	8.0 *	U P
5.	Beryllium	1.0	U	F	17.	Potassium	NR	
6.	Cadmium	1.0	U	P	18.	Selenium	0.95 R	U F
7.	Calcium	NR			19.	Silver	2.0	U P
8.	Chromium	2.6		P	20.	Sodium	NR	
9.	Cobalt	10	U	P	21.	Thallium	1.9	U F
10.	Copper	5.0	U	P	22.	Tin	7.6	U F
11.	Iron	3470		P	23.	Vanadium	10	U P
12.	Lead	3.0 *		F	24.	Zinc	14 *	P

Cyanide 11 Percent Solids (%) 84

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: NR: Analysis not requested.

Lab Manager M. K

Form I

Sample No.
DC-P5-55

Date 5/11/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

LAB SAMPLE ID. NO. 1034 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or (mg/kg as received) (Circle One)

1.	Aluminum	4970		P	13.	Magnesium	NR	
2.	Antimony	12	R U	P	14.	Manganese	505 *	P
3.	Arsenic ✓	2.5	R	F	15.	Mercury	0.10 U	CV
4.	Barium	66		P	16.	Nickel	12 *	P
5.	Beryllium ✓	1.0	U	F	17.	Potassium	NR	
6.	Cadmium	1.0	U	P	18.	Selenium	1.0 R U	F
7.	Calcium	NR			19.	Silver	2.0 U	P
8.	Chromium	11		P	20.	Sodium	NR	
9.	Cobalt	10	U	P	21.	Thallium	2.0 U	F
10.	Copper	13		P	22.	Tin	8.0 U	F
11.	Iron	12400		P	23.	Vanadium ✓	18	P
12.	Lead	426 *		F	24.	Zinc	40 *	P
Cyanide		12			Percent Solids (%)		81	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: NR: Analysis not requested.

Lab Manager D. [illegible]

Form I

Sample No.
DC-P5-56

Date 5/11/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

LAB SAMPLE ID. NO. 1035 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg as received (Circle One)

1.	Aluminum	4430		P	13.	Magnesium	NR	
2.	Antimony	12	R U	P	14.	Manganese	568 *	P
3.	Arsenic	3.2	R	F	15.	Mercury	0.10 U	CV
4.	Barium	95		P	16.	Nickel	18 *	P
5.	Beryllium	1.0	U	F	17.	Potassium	NR	
6.	Cadmium	1.0	U	P	18.	Selenium	0.98 R U	F
7.	Calcium	NR			19.	Silver	2.0 U	P
8.	Chromium	8.1		P	20.	Sodium	NR	
9.	Cobalt	10	U	P	21.	Thallium	2.0 U	F
10.	Copper	19		P	22.	Tin	7.8 U	F
11.	Iron	10400		P	23.	Vanadium	13	P
12.	Lead	72 *		F	24.	Zinc	59 *	P
Cyanide		1.0 U			Percent Solids (%)		80	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: NR: Analysis not requested.

Lab Manager _____

Form I

Sample No.
DC-I12-57

Date 5/11/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

LAB SAMPLE ID. NO. 1036 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or (mg/kg as received) (Circle One)

1.	Aluminum	1090	P	13.	Magnesium	NR	
2.	Antimony	12 R	U P	14.	Manganese	87 *	P
3.	Arsenic	1.9 R	F	15.	Mercury	0.10	U CV
4.	Barium	40	U P	16.	Nickel	8.0 *	U P
5.	Beryllium	1.0	U F	17.	Potassium	NR	
6.	Cadmium	1.0	U P	18.	Selenium	0.95 R	U F
7.	Calcium	NR		19.	Silver	2.0	U P
8.	Chromium	3.4	P	20.	Sodium	NR	
9.	Cobalt	10	U P	21.	Thallium	1.9	U F
10.	Copper	5.0	U P	22.	Tin	7.6	U F
11.	Iron	4360	P	23.	Vanadium	10	U P
12.	Lead	5.9 *	F	24.	Zinc	19 *	P
Cyanide		1.0	U	Percent Solids (%)		89	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: NR: Analysis not requested.

Lab Manager D. [illegible]

Form I

Sample No.
DC-I12-58

Date 5/11/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

LAB SAMPLE ID. NO. 1037 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or (mg/kg as received) (Circle One)

1.	Aluminum	988		P	13.	Magnesium	NR		
2.	Antimony	12	R U	P	14.	Manganese	52 *		P
3.	Arsenic	2.0	R U	F	15.	Mercury	0.10	U	CV
4.	Barium	40	U	P	16.	Nickel	8.0 *	U	P
5.	Beryllium	1.0	U	F	17.	Potassium	NR		
6.	Cadmium	1.0	U	P	18.	Selenium	1.0 R	U	F
7.	Calcium	NR			19.	Silver	2.0	U	P
8.	Chromium	3.2		P	20.	Sodium	NR		
9.	Cobalt	10	U	P	21.	Thallium	2.0	U	F
10.	Copper	5.0	U	P	22.	Tin	8.0	U	F
11.	Iron	3450		P	23.	Vanadium	10	U	P
12.	Lead	2.8 *		F	24.	Zinc	116 *		P
Cyanide		1.0	U		Percent Solids (%)		82		

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: NR: Analysis not requested.

Lab Manager [signature]

Form I

Sample No.
DC-01-59

Date 5/11/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

LAB SAMPLE ID. NO. 1110 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg as received (Circle One)

1.	Aluminum	1760		P	13.	Magnesium	NR	
2.	Antimony	12 R	U	P	14.	Manganese	92 *	P
3.	Arsenic	1.9 R	U	F	15.	Mercury	0.10	U CV
4.	Barium	50		P	16.	Nickel	8.0 *	U P
5.	Beryllium	1.0	U	F	17.	Potassium	NR	
6.	Cadmium	1.0	U	P	18.	Selenium	0.95 R	U F
7.	Calcium	NR			19.	Silver	2.0	U P
8.	Chromium	3.9		P	20.	Sodium	NR	
9.	Cobalt	10	U	P	21.	Thallium	2.0	U F
10.	Copper	5.0	U	P	22.	Tin	7.6	U F
11.	Iron	4550		P	23.	Vanadium	10	U P
12.	Lead	2.7 *		F	24.	Zinc	16 *	P
Cyanide		1.0	U		Percent Solids (%)		87	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: NR: Analysis not requested.

Lab Manager M. K

Form I

Sample No.
DC-02-60

Date 5/11/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

LAB SAMPLE ID. NO. 1111 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or (mg/kg as received) (Circle One)

1.	Aluminum	1500		P	13.	Magnesium	NR		
2.	Antimony	12	R U	P	14.	Manganese ✓	84 *		P
3.	Arsenic	2.0	R U	F	15.	Mercury	0.11	U	CV
4.	Barium	40	U	P	16.	Nickel	8.0 *	U	P
5.	Beryllium	1.0	U	F	17.	Potassium	NR		
6.	Cadmium	1.0 ✓	U	P	18.	Selenium	0.99 R	U	F
7.	Calcium	NR			19.	Silver	2.0	U	P
8.	Chromium	4.3		P	20.	Sodium	NR		
9.	Cobalt	10	U	P	21.	Thallium	2.0	U	F
10.	Copper	5.0	U	P	22.	Tin	7.8	U	F
11.	Iron	✓ 4450		P	23.	Vanadium	10	U	P
12.	Lead	4.5 *		F	24.	Zinc	14 *		P
Cyanide		1.0	U		Percent Solids (%)		78		

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: NR: Analysis not requested.

Lab Manager DH

Form I

Sample No.
DC-03-61

Date 5/11/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

LAB SAMPLE ID. NO. 1112 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg as received (Circle One)

1.	Aluminum	3180	P	13.	Magnesium	NR	
2.	Antimony	12 R	U P	14.	Manganese	196 *	P
3.	Arsenic	2.9 R	F	15.	Mercury	0.10	U CV
4.	Barium	110	P	16.	Nickel	8.0 *	U P
5.	Beryllium	1.0	U F	17.	Potassium	NR	
6.	Cadmium	1.0	U P	18.	Selenium	0.97 R	U F
7.	Calcium	NR		19.	Silver	2.0	U P
8.	Chromium	7.4	P	20.	Sodium	NR	
9.	Cobalt	10	U P	21.	Thallium	2.0	U F
10.	Copper	6.8	P	22.	Tin	7.8	U F
11.	Iron	8020	P	23.	Vanadium	11	P
12.	Lead	5.6 *	F	24.	Zinc	45 *	P
Cyanide		1.0	U	Percent Solids (%)		84	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: NR: Analysis not requested.

Lab Manager [signature]

Form I

Sample No.
DC-04-62

Date 5/11/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

LAB SAMPLE ID. NO. 1113 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or (mg/kg) as received (Circle One)

1.	Aluminum	4590	P	13.	Magnesium	NR	
2.	Antimony	12 R	U P	14.	Manganese	257 *	P
3.	Arsenic	0.98 R	U F	15.	Mercury	4.9	CV
4.	Barium	167	P	16.	Nickel	35 *	P
5.	Beryllium	1.0	U F	17.	Potassium	NR	
6.	Cadmium	24	P	18.	Selenium	0.98 R	U F
7.	Calcium	NR		19.	Silver	2.0	U P
8.	Chromium	14	P	20.	Sodium	NR	
9.	Cobalt	10	U P	21.	Thallium	2.0	U F
10.	Copper	160	P	22.	Tin	7.8	U F
11.	Iron	9250	P	23.	Vanadium	14	P
12.	Lead	115 *	F	24.	Zinc	1090 *	P
Cyanide		1.0 U		Percent Solids (%)		78	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: NR: Analysis not requested.

Lab Manager D. H

Form I

Sample No.
DC-05-63

Date 5/11/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

LAB SAMPLE ID. NO. 1114 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg as received (Circle One)

1.	Aluminum	2650	P	13.	Magnesium	NR	
2.	Antimony	12 R U	P	14.	Manganese	170 *	P
3.	Arsenic	2.4 R	F	15.	Mercury	0.10 U	CV
4.	Barium	87	P	16.	Nickel	9.4 *	P
5.	Beryllium	1.0 U	F	17.	Potassium	NR	
6.	Cadmium	1.0 U	P	18.	Selenium	0.97 R U	F
7.	Calcium	NR		19.	Silver	2.0 U	P
8.	Chromium	5.8	P	20.	Sodium	NR	
9.	Cobalt	10 U	P	21.	Thallium	2.0 U	F
10.	Copper	5.4	P	22.	Tin	7.8 U	F
11.	Iron	7300	P	23.	Vanadium	10 U	P
12.	Lead	5.8 *	F	24.	Zinc	30 *	P
Cyanide		1.0 U		Percent Solids (%)		82	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: NR: Analysis not requested.

Lab Manager D. H.

Form I

Sample No.
DC-05-64

Date 5/11/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

LAB SAMPLE ID. NO. 1115 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X. Sludge _____ Other _____

ug/L or (mg/kg as received) (Circle One)

1.	Aluminum	2510	P	13.	Magnesium	NR	
2.	Antimony	12 R	U P	14.	Manganese	153 *	P
3.	Arsenic	2.2 R	F	15.	Mercury	0.10	U CV
4.	Barium	83	P	16.	Nickel	7.9 *	P
5.	Beryllium	1.0	U F	17.	Potassium	NR	
6.	Cadmium	1.0	U P	18.	Selenium	1.0 R	U F
7.	Calcium	NR		19.	Silver	2.0	U P
8.	Chromium	5.2	P	20.	Sodium	NR	
9.	Cobalt	10	U P	21.	Thallium	2.0	U F
10.	Copper	5.0	U P	22.	Tin	8.0	U F
11.	Iron	6750	P	23.	Vanadium	10	U P
12.	Lead	7.1 *	F	24.	Zinc	29 *	P
Cyanide		1.0	U	Percent Solids (%)		82	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: NR: Analysis not requested.

Lab Manager _____

Form I

Sample No.
DC-05-65

Date 5/11/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

LAB SAMPLE ID. NO. 1116 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or (mg/kg as received) (Circle One)

1.	Aluminum	4910	P	13.	Magnesium	NR	
2.	Antimony	12 R	U P	14.	Manganese	252 *	P
3.	Arsenic	6.1 R	F	15.	Mercury	0.10	U CV
4.	Barium	325	P	16.	Nickel	12 *	P
5.	Beryllium	1.0	U F	17.	Potassium	NR	
6.	Cadmium	1.2	P	18.	Selenium	0.99 R	U F
7.	Calcium	NR		19.	Silver	2.0	U P
8.	Chromium	8.0	P	20.	Sodium	NR	
9.	Cobalt	10	U P	21.	Thallium	2.0	U F
10.	Copper	26	P	22.	Tin	7.9	U F
11.	Iron	10000	P	23.	Vanadium	12	P
12.	Lead	43 *	F	24.	Zinc	143 *	P
Cyanide		1.0	U	Percent Solids (%)		79	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: NR: Analysis not requested.

Lab Manager D. [signature]

Form I

Sample No.
DC-06-66

Date 5/11/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

LAB SAMPLE ID. NO. 1117 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or (mg/kg as received) (Circle One)

1.	Aluminum	1740	P	13.	Magnesium	NR	
2.	Antimony	12 R	U P	14.	Manganese	64 *	P
3.	Arsenic	1.8 K	F	15.	Mercury	0.10	U CV
4.	Barium	40	U P	16.	Nickel	8.0 *	U P
5.	Beryllium	1.0	U F	17.	Potassium	NR	
6.	Cadmium	1.0	U P	18.	Selenium	0.97 R	U F
7.	Calcium	NR		19.	Silver	2.0	U P
8.	Chromium	3.9	P	20.	Sodium	NR	
9.	Cobalt	10	U P	21.	Thallium	2.0	U F
10.	Copper	5.0	U P	22.	Tin	7.8	U F
11.	Iron	3900	P	23.	Vanadium	10	U P
12.	Lead	3.5 *	F	24.	Zinc	14 *	P
Cyanide		1.0	U	Percent Solids (%)		81	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: NR: Analysis not requested.

Lab Manager _____

Form I

Sample No.
DC-66-67

Date 5/11/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

LAB SAMPLE ID. NO. 1274 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or (mg/kg as received) (Circle One)

1.	Aluminum	1580		P	13.	Magnesium	NR	
2.	Antimony	12	R U	P	14.	Manganese	102 *	P
3.	Arsenic	2.0	R U	F	15.	Mercury	0.10 U	CV
4.	Barium	121		P	16.	Nickel	8.5 *	P
5.	Beryllium	1.0	U	F	17.	Potassium	NR	
6.	Cadmium	1.0	U	P	18.	Selenium	0.99 R U	F
7.	Calcium	NR			19.	Silver	2.0 U	P
8.	Chromium	9.8		P	20.	Sodium	NR	
9.	Cobalt	10	U	P	21.	Thallium	2.0 U	F
10.	Copper	15		P	22.	Tin	7.6 U	F
11.	Iron	5130		P	23.	Vanadium	26	P
12.	Lead	21 *		F	24.	Zinc	73 *	P
Cyanide		1.0	U		Percent Solids (%)		85	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: NR: Analysis not requested.

Lab Manager _____

Form I

Sample No.
DC-GB-68

Date 5/11/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

LAB SAMPLE ID. NO. 1275 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or (mg/kg as received) (Circle One)

1.	Aluminum	5360		P	13.	Magnesium	NR	
2.	Antimony	12 R	U	P	14.	Manganese	282 *	P
3.	Arsenic	4.4 R		F	15.	Mercury	0.10	U CV
4.	Barium	287		P	16.	Nickel	11 *	P
5.	Beryllium	1.0	U	F	17.	Potassium	NR	
6.	Cadmium	1.4		P	18.	Selenium	0.95 R	U F
7.	Calcium	NR			19.	Silver	2.0	U P
8.	Chromium	8.4		P	20.	Sodium	NR	
9.	Cobalt	10	U	P	21.	Thallium	1.9	U F
10.	Copper	24		P	22.	Tin	8.0	U F
11.	Iron	9760		P	23.	Vanadium	13	P
12.	Lead	45 *		P	24.	Zinc	133 *	P
Cyanide		1.0	U		Percent Solids (%)		79	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: NR: Analysis not requested.

Lab Manager _____

Form I

Sample No.
DC-67-69

Date 5/11/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

LAB SAMPLE ID. NO. 1276 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or (mg/kg as received) (Circle One)

1.	Aluminum	10800	P	13.	Magnesium	NR	
2.	Antimony	12 R U	P	14.	Manganese	183 *	P
3.	Arsenic	80 R	F	15.	Mercury	0.65 U	CV
4.	Barium	1010	P	16.	Nickel	80 *	P
5.	Beryllium	1.0 U	F	17.	Potassium	NR	
6.	Cadmium	8.8	P	18.	Selenium	9.7 R U	F
7.	Calcium	NR		19.	Silver	2.0 U	P
8.	Chromium	640	P	20.	Sodium	NR	
9.	Cobalt	20 U	P	21.	Thallium	1.9 U	F
10.	Copper	1440	P	22.	Tin	52	F
11.	Iron	34900	P	23.	Vanadium	855	P
12.	Lead	2030 *	P	24.	Zinc	1920 *	P
Cyanide		1.0 U		Percent Solids (%)		65	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: NR: Analysis not requested.

Lab Manager _____

Form I

Sample No.
DC-68-70

Date 5/11/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

LAB SAMPLE ID. NO. 1277 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or (mg/kg as received) (Circle One)

1.	Aluminum	3040	P	13.	Magnesium	NR	
2.	Antimony	12 R U	P	14.	Manganese	135 *	P
3.	Arsenic	11 R	F	15.	Mercury	24	CV
4.	Barium	199	P	16.	Nickel	279 *	P
5.	Beryllium	1.0 U	F	17.	Potassium	NR	
6.	Cadmium	3.5	P	18.	Selenium	9.9 R U	F
7.	Calcium	NR		19.	Silver	8.3	P
8.	Chromium	76	P	20.	Sodium	NR	
9.	Cobalt	10 U	P	21.	Thallium	2.0 U	F
10.	Copper	355	P	22.	Tin	18	F
11.	Iron	8570	P	23.	Vanadium	76	P
12.	Lead	583 *	P	24.	Zinc	2980 *	P
Cyanide		1.0 U		Percent Solids (%)		70	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: NR: Analysis not requested.

Lab Manager DK

Form I

Sample No.
DC-69-71

Date 5/11/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

LAB SAMPLE ID. NO. 1278 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or (mg/kg as received) (Circle One)

1.	Aluminum	831		P	13.	Magnesium	NR	
2.	Antimony	12 R	U	P	14.	Manganese	37 *	P
3.	Arsenic	2.0 R	U	F	15.	Mercury	0.10 U	CV
4.	Barium	114		P	16.	Nickel	8.0 * U	P
5.	Beryllium	1.0	U	F	17.	Potassium	NR	
6.	Cadmium	1.0	U	P	18.	Selenium	1.0 R U	F
7.	Calcium	NR			19.	Silver	2.0 U	P
8.	Chromium	9.3		P	20.	Sodium	NR	
9.	Cobalt	11		P	21.	Thallium	2.0 U	F
10.	Copper	8.2		P	22.	Tin	7.6 U	F
11.	Iron	3490		P	23.	Vanadium	10 U	P
12.	Lead	19 *		P	24.	Zinc	44 *	P
Cyanide		1.0	U		Percent Solids (%)		86	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: NR: Analysis not requested.

Lab Manager M. [illegible]

Form I

Sample No.
DC-09-72

Date 5/11/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

LAB SAMPLE ID. NO. 1427 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or (mg/kg as received) (Circle One)

1.	Aluminum	4020	P	13.	Magnesium	NR	
2.	Antimony	12 R U	P	14.	Manganese ✓	156 *	P
3.	Arsenic	4.6 R	F	15.	Mercury	1.4	CV
4.	Barium	135	P	16.	Nickel	31 *	P
5.	Beryllium	1.0 ✓ U	F	17.	Potassium	NR	
6.	Cadmium	3.6	P	18.	Selenium	0.94 R U	F
7.	Calcium	NR		19.	Silver	2.0 U	P
8.	Chromium	11	P	20.	Sodium	NR	
9.	Cobalt	10 U	P	21.	Thallium	0.94 U	F
10.	Copper	48	P	22.	Tin ✓	7.6 U	F
11.	Iron	9670	P	23.	Vanadium	16	P
12.	Lead	15 *	F	24.	Zinc ✓	227 *	P
Cyanide		1.0 U		Percent Solids (%)		82	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: NR: Analysis not requested.

Lab Manager DK

Form I

Sample No.
DC-09-73

Date 5/11/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

LAB SAMPLE ID. NO. 1428 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or (mg/kg as received) (Circle One)

1.	Aluminum	2710	P	13.	Magnesium	NR	
2.	Antimony	12 R U	P	14.	Manganese	123 *	P
3.	Arsenic ✓	2.5 R	F	15.	Mercury	0.27	CV
4.	Barium	101	P	16.	Nickel	8.0 * U	P
5.	Beryllium	1.0 U	F	17.	Potassium	NR	
6.	Cadmium	1.0 U	P	18.	Selenium	0.99 R U	F
7.	Calcium	NR		19.	Silver	2.0 U	P
8.	Chromium	4.9	P	20.	Sodium	NR	
9.	Cobalt	10 U	P	21.	Thallium	0.99 U	F
10.	Copper	5.0 U	P	22.	Tin	7.9 U	F
11.	Iron ✓	6140	P	23.	Vanadium	10 U	P
12.	Lead	3.7 *	F	24.	Zinc	24 *	P
Cyanide		1.0 U		Percent Solids (%)		81	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: NR: Analysis not requested.

Lab Manager D. K.

Form I

Sample No.
DC-010-74

Date 5/11/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

LAB SAMPLE ID. NO. 1429 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg as received (Circle One)

1.	Aluminum	3930	P	13.	Magnesium	NR	
2.	Antimony	12 R U	P	14.	Manganese	161 *	P
3.	Arsenic ✓	5.5 R	F	15.	Mercury	1.5	CV
4.	Barium	123	P	16.	Nickel	106 *	P
5.	Beryllium	1.0	U F	17.	Potassium	NR	
6.	Cadmium	8.5	P	18.	Selenium	0.96 R U	F
7.	Calcium	NR		19.	Silver	2.0	U P
8.	Chromium	17	P	20.	Sodium	NR	
9.	Cobalt	10	U P	21.	Thallium	0.96	U F
10.	Copper	266	P	22.	Tin	7.7	U F
11.	Iron	9290	P	23.	Vanadium	12	P
12.	Lead	55 *	F	24.	Zinc	537 *	P
Cyanide		1.0	U	Percent Solids (%)		78	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: NR: Analysis not requested.

Lab Manager _____

Form I

Sample No.
DC-010-75

Date 5/11/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

LAB SAMPLE ID. NO. 1430 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or (mg/kg as received) (Circle One)

1.	Aluminum	✓	1860		P	13.	Magnesium	NR			
2.	Antimony		12	R	U P	14.	Manganese	89	*		P
3.	Arsenic	✓	2.2	R	F	15.	Mercury	0.10		U	CV
4.	Barium	✓	40		P	16.	Nickel	✓ 9.7	*		P
5.	Beryllium		1.0		U F	17.	Potassium	NR			
6.	Cadmium		1.0		U P	18.	Selenium	0.94	R	U	F
7.	Calcium		NR			19.	Silver	2.0		U	P
8.	Chromium		3.8		P	20.	Sodium	NR			
9.	Cobalt		10		U P	21.	Thallium	0.94		U	F
10.	Copper		13		P	22.	Tin	7.6		U	F
11.	Iron		4970		P	23.	Vanadium	10		U	P
12.	Lead		5.5	*	F	24.	Zinc	38	*		P
Cyanide			1.0		U ✓	Percent Solids (%)		88			

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: NR: Analysis not requested.

Lab Manager _____

Form II

Q. C. Report No. _____

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Ecology and Environment, Inc.

CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

DATE 2/18/87

UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									P
2. Antimony									P
3. Arsenic									F
4. Barium									P
5. Beryllium									P
6. Cadmium									P
7. Calcium									
8. Chromium									P
9. Cobalt									P
10. Copper									P
11. Iron									P
12. Lead									F
13. Magnesium									
14. Manganese									P
15. Mercury									CV
16. Nickel									P
17. Potassium									
18. Selenium									F
19. Silver									P
20. Sodium									
21. Thallium									F
22. Tin									F
23. Vanadium									P
24. Zinc									P
Other:									
Cyanide 2/19/87				48	44	92			
Cyanide				48	45	94			

[1] Initial Calibration Source ASC.1 [2] Continuing Calibration Source ASC.2

[3] Control Limits: Mercury and Tin 80-120; All Other Compounds 90-110

[4] Indicate Analytical Method Used: P - ICP/Flame AA; F - Furnace

Form II

Q. C. Report No. _____

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

DATE 2/23/87 UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									P
2. Antimony									P
3. Arsenic									F
4. Barium									P
5. Beryllium									P
6. Cadmium									P
7. Calcium									
8. Chromium									P
9. Cobalt									P
10. Copper									P
11. Iron									P
12. Lead									F
13. Magnesium									
14. Manganese									P
15. Mercury	1.0	0.91	91	1.0	0.91	91	0.84	84	CV
16. Nickel									P
17. Potassium									
18. Selenium									F
19. Silver									P
20. Sodium									
21. Thallium									F
22. Tin									F
23. Vanadium									P
24. Zinc									P
Other:									
Cyanide 2/24/87				48	46	96			
nide				48	44	92			

[1] Initial Calibration Source ASC .1 [2] Continuing Calibration Source ASC .2

[3] Control Limits: Mercury and Tin 80-120; All Other Compounds 90-110

[4] Indicate Analytical Method Used: P - ICP/Flame AA; F - Furnace

Form II

Q. C. Report No. _____

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

DATE 2/23/87 UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									P
2. Antimony									P
3. Arsenic									F
4. Barium									P
5. Beryllium									P
6. Cadmium									P
7. Calcium									
8. Chromium									P
9. Cobalt									P
10. Copper									P
11. Iron									P
12. Lead									F
13. Magnesium									
14. Manganese									P
15. Mercury				1.0	0.91	91	0.77	77	CV
16. Nickel									P
17. Potassium									
18. Selenium									F
19. Silver									P
20. Sodium									
21. Thallium									F
22. Tin									F
23. Vanadium									P
24. Zinc									P
Other:									
Mercury				1.0	0.91	91			
.nide									

[1] Initial Calibration Source VHG .1 [2] Continuing Calibration Source VHG .2

[3] Control Limits: Mercury and Tin 80-120; All Other Compounds 90-110

[4] Indicate Analytical Method Used: P - ICP/Flame AA; F - Furnace

Form II

Q. C. Report No. _____

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

DATE 3/2/87 UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									P
2. Antimony									P
3. Arsenic	50	49	98	50	50	100	50	100	F
4. Barium									P
5. Beryllium									P
6. Cadmium									P
7. Calcium									
8. Chromium									P
9. Cobalt									P
10. Copper									P
11. Iron									P
12. Lead									F
13. Magnesium									
14. Manganese									P
15. Mercury	1.0	1.0	100	1.0	1.0	100			CV
16. Nickel									P
17. Potassium									
18. Selenium	50	50	100	50	51	102	50	100	F
19. Silver									P
20. Sodium									
21. Thallium									F
22. Tin									F
23. Vanadium									P
24. Zinc									P
Other: _____									
Cyanide				48	43	90			

[1] Initial Calibration Source VHG .1 [2] Continuing Calibration Source VHG .2

[3] Control Limits: Mercury and Tin 80-120; All Other Compounds 90-110

[4] Indicate Analytical Method Used: P - ICP/Flame AA; F - Furnace

Form II

Q. C. Report No. _____

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

DATE 3/3/87 UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									P
2. Antimony									P
3. Arsenic	50	50	100	50	52	104			F
4. Barium									P
5. Beryllium									P
6. Cadmium									P
7. Calcium									
8. Chromium									P
9. Cobalt									P
10. Copper									P
11. Iron									P
12. Lead									F
13. Magnesium									
14. Manganese									P
15. Mercury									CV
16. Nickel									P
17. Potassium									
18. Selenium									F
19. Silver									P
20. Sodium									
21. Thallium	50	52	104	50	48	96	48	96	F
22. Tin									F
23. Vanadium									P
24. Zinc									P
Other: _____									
Cyanide									

[1] Initial Calibration Source VHG .1 [2] Continuing Calibration Source VHG .2

[3] Control Limits: Mercury and Tin 80-120; All Other Compounds 90-110

[4] Indicate Analytical Method Used: P - ICP/Flame AA; F - Furnace

Form II

Q. C. Report No. _____

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

DATE 3/3/87 UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									P
2. Antimony									P
3. Arsenic									F
4. Barium									P
5. Beryllium									P
6. Cadmium									P
7. Calcium									
8. Chromium									P
9. Cobalt									P
10. Copper									P
11. Iron									P
12. Lead									F
13. Magnesium									
14. Manganese									P
15. Mercury									CV
16. Nickel									P
17. Potassium									
18. Selenium									F
19. Silver									P
20. Sodium									
21. Thallium				50	48	96			F
22. Tin									F
23. Vanadium									P
24. Zinc									P
Other: _____									
Cyanide									

[1] Initial Calibration Source VHG .1 [2] Continuing Calibration Source VHG .2

[3] Control Limits: Mercury and Tin 80-120; All Other Compounds 90-110

[4] Indicate Analytical Method Used: P - ICP/Flame AA; F - Furnace

Form II

Q. C. Report No. _____

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

DATE 3/4/87 UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									P
2. Antimony									P
3. Arsenic									F
4. Barium									P
5. Beryllium									P
6. Cadmium									P
7. Calcium									
8. Chromium									P
9. Cobalt									P
10. Copper									P
11. Iron									P
12. Lead	50	52	104	50	50	100	49	98	F
13. Magnesium									
14. Manganese									P
15. Mercury									CV
16. Nickel									P
17. Potassium									
18. Selenium									F
19. Silver									P
20. Sodium									
21. Thallium									F
22. Tin	100	102	102	100	102	102	98	98	F
23. Vanadium									P
24. Zinc									P
Other:									
Cyanide									

[1] Initial Calibration Source VHG .1 [2] Continuing Calibration Source VHG .2

[3] Control Limits: Mercury and Tin 80-120; All Other Compounds 90-110

[4] Indicate Analytical Method Used: P - ICP/Flame AA; F - Furnace

Form II

Q. C. Report No. _____

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

DATE 3/4/87 UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									P
2. Antimony									P
3. Arsenic									F
4. Barium									P
5. Beryllium									P
6. Cadmium									P
7. Calcium									
8. Chromium									P
9. Cobalt									P
10. Copper									P
11. Iron									P
12. Lead				50	47	94			F
13. Magnesium									
14. Manganese									P
15. Mercury									CV
16. Nickel									P
17. Potassium									
18. Selenium									F
19. Silver									P
20. Sodium									
21. Thallium									F
22. Tin				100	102	102	103	103	F
23. Vanadium									P
24. Zinc									P
Other: _____									
anide									

[1] Initial Calibration Source VHG .1 [2] Continuing Calibration Source VHG .2

[3] Control Limits: Mercury and Tin 80-120; All Other Compounds 90-110

[4] Indicate Analytical Method Used: P - ICP/Flame AA; F - Furnace

Form II

Q. C. Report No. _____

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

DATE 3/5/87 UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									P
2. Antimony									P
3. Arsenic	50	51	102	50	52	104	50	100	F
4. Barium									P
5. Beryllium									P
6. Cadmium									P
7. Calcium									
8. Chromium									P
9. Cobalt									P
10. Copper									P
11. Iron									P
12. Lead									F
13. Magnesium									
14. Manganese									P
15. Mercury									CV
16. Nickel									P
17. Potassium									
18. Selenium	50	49	98	50	49	98	53	106	F
19. Silver									P
20. Sodium									
21. Thallium	50	46	92	50	54	108	54	108	F
22. Tin									F
23. Vanadium									P
24. Zinc									P
Other: _____									
Cyanide				48	40	83			

[1] Initial Calibration Source VHG .1 [2] Continuing Calibration Source VHG .2

[3] Control Limits: Mercury and Tin 80-120; All Other Compounds 90-110

[4] Indicate Analytical Method Used: P - ICP/Flame AA; F - Furnace

Form II

Q. C. Report No. _____

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

DATE 3/5/87 UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									P
2. Antimony									P
3. Arsenic				50	50	100			F
4. Barium									P
5. Beryllium									P
6. Cadmium									P
7. Calcium									
8. Chromium									P
9. Cobalt									P
10. Copper									P
11. Iron									P
12. Lead									F
13. Magnesium									
14. Manganese									P
15. Mercury									CV
16. Nickel									P
17. Potassium									
18. Selenium				50	46	92			F
19. Silver									P
20. Sodium									
21. Thallium									F
22. Tin									F
23. Vanadium									P
24. Zinc									P
Other: _____									
Cyanide									

[1] Initial Calibration Source VHG .1 [2] Continuing Calibration Source VHG .2

[3] Control Limits: Mercury and Tin 80-120; All Other Compounds 90-110

[4] Indicate Analytical Method Used: P - ICP/Flame AA; F - Furnace

Form II

Q. C. Report No. _____

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Ecology and Environment, Inc.

CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

DATE 3/6/87

UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									P
2. Antimony									P
3. Arsenic									F
4. Barium									P
5. Beryllium									P
6. Cadmium									P
7. Calcium									
8. Chromium									P
9. Cobalt									P
10. Copper									P
11. Iron									P
12. Lead									F
13. Magnesium									
14. Manganese									P
15. Mercury	1.0	0.85	85	1.0	0.96	96	1.0	100	CV
16. Nickel									P
17. Potassium									
18. Selenium									F
19. Silver									P
20. Sodium									
21. Thallium									F
22. Tin	100	104	104	100	106	106	97	97	F
23. Vanadium									P
24. Zinc									P
Other:									
Mercury				1.0	1.0	100			
Cyanide									

[1] Initial Calibration Source VHG .1 [2] Continuing Calibration Source VHG .2

[3] Control Limits: Mercury and Tin 80-120; All Other Compounds 90-110

[4] Indicate Analytical Method Used: P - ICP/Flame AA; F - Furnace

Form II

Q. C. Report No. _____

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

DATE 3/9/87 UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									P
2. Antimony	500	457	91	500	457	91	465	93	P
3. Arsenic									F
4. Barium	10000	10700	107	500	551	110	544	109	P
5. Beryllium	10000	10200	102	500	531	106	526	105	P
6. Cadmium	10000	10100	101	500	522	104	522	104	P
7. Calcium									
8. Chromium	10000	10300	103	500	538	108	532	106	P
9. Cobalt	10000	9880	99	500	519	104	518	104	P
10. Copper	10000	10500	105	500	530	106	530	106	P
11. Iron									P
12. Lead	50	48	96	50	49	98	51	102	F
13. Magnesium									
14. Manganese	10000	10300	103	500	532	106	532	106	P
15. Mercury									CV
16. Nickel	10000	10200	102	500	526	105	517	103	P
17. Potassium									
18. Selenium									F
19. Silver	510	522	104	500	522	104	522	104	P
20. Sodium									
21. Thallium									F
22. Tin									F
23. Vanadium	10000	10800	108	500	538	108	537	107	P
24. Zinc	10000	10300	103	500	530	106	533	107	P
Other: Lead				50	57	114			F
Cyanide				48	45	94			

[1] Initial Calibration Source VHG 1 [2] Continuing Calibration Source VHG 2

[3] Control Limits: Mercury and Tin 80-120; All Other Compounds 90-110

[4] Indicate Analytical Method Used: P - ICP/Flame AA; F - Furnace

Form II

Q. C. Report No. _____

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

DATE 3/10/87 UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum	10000	9940	99	1000	1020	102	1040	104	P
2. Antimony									P
3. Arsenic	50	52	104	50	51	102	54	108	F
4. Barium									P
5. Beryllium									P
6. Cadmium									P
7. Calcium									
8. Chromium									P
9. Cobalt									P
10. Copper									P
11. Iron	100000	96400	96	1000	1020	102	1050	105	P
12. Lead	50	52	104	50	51	102			F
13. Magnesium									
14. Manganese									P
15. Mercury									CV
16. Nickel									P
17. Potassium									
18. Selenium									F
19. Silver									P
20. Sodium									
21. Thallium	50	47	94	50	46	92	45	90	F
22. Tin									F
23. Vanadium									P
24. Zinc									P
Other:									
Cyanide				48	45				

[1] Initial Calibration Source VHG .1 [2] Continuing Calibration Source VHG .2

[3] Control Limits: Mercury and Tin 80-120; All Other Compounds 90-110

[4] Indicate Analytical Method Used: P - ICP/Flame AA; F - Furnace

Form II

Q. C. Report No. _____

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Ecology and Environment, Inc.

CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

DATE 3/11/87

UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									P
2. Antimony									P
3. Arsenic									F
4. Barium									P
5. Beryllium									P
6. Cadmium									P
7. Calcium									
8. Chromium									P
9. Cobalt									P
10. Copper									P
11. Iron									P
12. Lead									F
13. Magnesium									
14. Manganese									P
15. Mercury	1.0	1.0	100	1.0	1.0	100	1.0	100	CV
16. Nickel									P
17. Potassium									
18. Selenium									F
19. Silver									P
20. Sodium									
21. Thallium									F
22. Tin									F
23. Vanadium									P
24. Zinc									P
Other: _____									
_____									
.nide									

[1] Initial Calibration Source VHG .1 [2] Continuing Calibration Source VHG .2

[3] Control Limits: Mercury and Tin 80-120; All Other Compounds 90-110

[4] Indicate Analytical Method Used: P - ICP/Flame AA; F - Furnace

Form II

Q. C. Report No. _____

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

DATE 3/12/87 UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									P
2. Antimony									P
3. Arsenic									F
4. Barium									P
5. Beryllium									P
6. Cadmium									P
7. Calcium									
8. Chromium									P
9. Cobalt									P
10. Copper									P
11. Iron									P
12. Lead									F
13. Magnesium									
14. Manganese									P
15. Mercury									CV
16. Nickel									P
17. Potassium									
18. Selenium	50	50	100	50	49	98	49	98	F
19. Silver									P
20. Sodium									
21. Thallium									F
22. Tin	100	105	105	100	110	110			F
23. Vanadium									P
24. Zinc									P
Other: _____									
Cyanide									

[1] Initial Calibration Source VHG .1 [2] Continuing Calibration Source VHG .2

[3] Control Limits: Mercury and Tin 80-120; All Other Compounds 90-110

[4] Indicate Analytical Method Used: P - ICP/Flame AA; F - Furnace

Form II

Q. C. Report No. _____

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

DATE 3/13/87 UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum	500	519	104	500	491	98	526	105	P
2. Antimony	500	467	93	500	486	97	467	93	P
3. Arsenic									F
4. Barium	500	508	102	500	497	99	517	103	P
5. Beryllium	500	503	101	500	487	97	498	100	P
6. Cadmium	500	509	102	500	489	98	500	100	P
7. Calcium									
8. Chromium	500	512	102	500	498	100	513	103	P
9. Cobalt	500	509	102	500	498	100	500	100	P
10. Copper	500	504	101	500	496	99	508	102	P
11. Iron	500	519	104	500	509	102	522	104	P
12. Lead	500	531	106	500	527	105	533	107	P
13. Magnesium									
14. Manganese	500	512	102	500	498	100	510	102	P
15. Mercury									CV
16. Nickel	500	511	102	500	487	97	493	99	P
17. Potassium									
18. Selenium									F
19. Silver	500	492	98	500	509	102	486	97	P
20. Sodium									
21. Thallium									F
22. Tin									F
23. Vanadium	500	502	100	500	489	98	508	102	P
24. Zinc	500	513	103	500	488	98	504	101	P
Other:									
Cyanide									

[1] Initial Calibration Source VHG .1 [2] Continuing Calibration Source VHG .2

[3] Control Limits: Mercury and Tin 80-120; All Other Compounds 90-110

[4] Indicate Analytical Method Used: P - ICP/Flame AA; F - Furnace

Form II

Q. C. Report No. _____

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

DATE 3/24/87 UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									P
2. Antimony									P
3. Arsenic									F
4. Barium									P
5. Beryllium									P
6. Cadmium									P
7. Calcium									
8. Chromium									P
9. Cobalt									P
10. Copper									P
11. Iron									P
12. Lead	50	51	102	50	52	104			F
13. Magnesium									
14. Manganese									P
15. Mercury									CV
16. Nickel									P
17. Potassium									
18. Selenium									F
19. Silver									P
20. Sodium									
21. Thallium									F
22. Tin									F
23. Vanadium									P
24. Zinc									P
Other: _____									
inide									

[1] Initial Calibration Source VHG .1 [2] Continuing Calibration Source VHG .2

[3] Control Limits: Mercury and Tin 80-120; All Other Compounds 90-110

[4] Indicate Analytical Method Used: P - ICP/Flame AA; F - Furnace

Form II

Q. C. Report No. _____

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

DATE 4/20/87 UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									P
2. Antimony									P
3. Arsenic									F
4. Barium									P
5. Beryllium									P
6. Cadmium									P
7. Calcium									
8. Chromium									P
9. Cobalt									P
10. Copper									P
11. Iron									P
12. Lead	50	54	108	50	51	102	50	100	F
13. Magnesium									
14. Manganese									P
15. Mercury									CV
16. Nickel									P
17. Potassium									
18. Selenium									F
19. Silver									P
20. Sodium									
21. Thallium									F
22. Tin									F
23. Vanadium									P
24. Zinc									P
Other: _____									
Cyanide									

[1] Initial Calibration Source VHG .1 [2] Continuing Calibration Source VHG .2

[3] Control Limits: Mercury and Tin 80-120; All Other Compounds 90-110

[4] Indicate Analytical Method Used: P - ICP/Flame AA; F - Furnace

Form II

Q. C. Report No. _____

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

DATE 4/20/87 UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									P
2. Antimony									P
3. Arsenic									F
4. Barium									P
5. Beryllium									P
6. Cadmium									P
7. Calcium									
8. Chromium									P
9. Cobalt									P
10. Copper									P
11. Iron									P
12. Lead				50	49	98	54	108	F
13. Magnesium									
14. Manganese									P
15. Mercury									CV
16. Nickel									P
17. Potassium									
18. Selenium									F
19. Silver									P
20. Sodium									
21. Thallium									F
22. Tin									F
23. Vanadium									P
24. Zinc									P
Other: _____									
Cyanide									

[1] Initial Calibration Source VHG .1 [2] Continuing Calibration Source VHG .2

[3] Control Limits: Mercury and Tin 80-120; All Other Compounds 90-110

[4] Indicate Analytical Method Used: P - ICP/Flame AA; F - Furnace

Form II

Q. C. Report No. _____

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Ecology and Environment, Inc.

CASE NO. U-4906/U-4928/U-4971/U-4989

SOW NO. 784

DATE 4/22/87

UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									P
2. Antimony									P
3. Arsenic									F
4. Barium									P
5. Beryllium									P
6. Cadmium									P
7. Calcium									
8. Chromium									P
9. Cobalt									P
10. Copper									P
11. Iron									P
12. Lead	50	49	98	50	48	96			F
13. Magnesium									
14. Manganese									P
15. Mercury									CV
16. Nickel									P
17. Potassium									
18. Selenium									F
19. Silver									P
20. Sodium									
21. Thallium									F
22. Tin									F
23. Vanadium									P
24. Zinc									P
Other: _____									
_____									
Cyanide									

[1] Initial Calibration Source VHG .1 [2] Continuing Calibration Source VHG .2

[3] Control Limits: Mercury and Tin 80-120; All Other Compounds 90-110

[4] Indicate Analytical Method Used: P - ICP/Flame AA; F - Furnace

Form III

Q. C. Report No. _____

BLANKS

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4

DATE 2/18/87 UNITS ug/L

Matrix water for soils

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead							
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide 2/19/87		10U				10U	
Cyanide		10U				10U	

Form III

Q. C. Report No. _____

BLANKS

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4

DATE 2/23/87 UNITS ug/L

Matrix water for soils

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead							
13. Magnesium							
14. Manganese							
15. Mercury	0.2 U	0.2U	0.2U	0.2U	0.2U	0.2U	
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium							
24. Zinc							
Other: Mercury		0.2U	0.2U				
Cyanide 2/24/87		10U				10U	
Cyanide		10U				10U	

Form III

Q. C. Report No. _____

BLANKS

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-49

DATE 3/2/87 UNITS ug/L

Matrix water for soils

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic	10U	10U	10U	10U	10U	10U	10U
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead							
13. Magnesium							
14. Manganese							
15. Mercury	0.2U	0.2U	0.2U			0.2U	
16. Nickel							
17. Potassium							
18. Selenium	5U	5U	5U			5U	5U
19. Silver							
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide		10U				10U	

Form III

Q. C. Report No. _____

BLANKS

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4

DATE 3/3/87 UNITS ug/L

Matrix water for soils

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead							
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium	10U	10U	10U	10U		10U	10U
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide							

Form III

Q. C. Report No. _____

BLANKS

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-49

DATE 3/4/87 UNITS ug/L

Matrix water for soils

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead	5U	5U	5U	5U		5U	
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
22. Tin	40 U	40U	40U	40U		40U	40U
23. Vanadium							
24. Zinc							
Other:							
Cyanide							

Form III

Q. C. Report No. _____

BLANKS

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-49

DATE 315187 UNITS ug/L

Matrix water for soils

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic	10 U	10 U	10 U	10 U		10 U	10 U
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead							
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium	5 U	5 U	5 U			5 U	
19. Silver							
20. Sodium							
21. Thallium	10 U	10 U	10 U			10 U	
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide		10 U				10 U	

Form III

Q. C. Report No. _____

BLANKS

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-49

DATE 3/6/87 UNITS ug/L

Matrix water for soils

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead							
13. Magnesium							
14. Manganese							
15. Mercury	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
22. Tin	40U	40U	40U			40U	
23. Vanadium							
24. Zinc							
Other:							
Cyanide							

Form III

Q. C. Report No. _____

BLANKS

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-49

DATE 3/9/87 UNITS ug/L

Matrix water for soils

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony	60U	60U	60U			60U	
3. Arsenic							
4. Barium	200U	200U	200U			200U	
5. Beryllium	5U	5U	5U			5U	
6. Cadmium	5U	5U	5U			5U	
7. Calcium							
8. Chromium	10U	10U	10U			10U	
9. Cobalt	50U	50U	50U			50U	
10. Copper	25U	25U	25U			25U	
11. Iron							
12. Lead	5U	5U	5U			5U	
13. Magnesium							
14. Manganese	15U	15U	15U			15U	
15. Mercury							
16. Nickel	40U	40U	40U			40U	
17. Potassium							
18. Selenium							
19. Silver	10U	10U	10U			10U	
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium	50U	50U	50U			50U	
24. Zinc	20U	20U	20U			20U	
Other:							
Cyanide		10U				10U	

Form III

Q. C. Report No. _____

BLANKS

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4

DATE 3/10/87 UNITS ug/L

Matrix water for soils

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum	200U	200U	200U			200U	
2. Antimony							
3. Arsenic	10U	10U	10U			10U	
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron	100U	100U	100U			100U	
12. Lead	5U	5U				5U	
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium	10U	10U	10U			10U	
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide		10U				10U	

Form III

Q. C. Report No. _____

BLANKS

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-

DATE 3/11/87 UNITS ug/L

Matrix water for soils

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead							
13. Magnesium							
14. Manganese							
15. Mercury	0.24	0.24	0.24	0.24		0.24	
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide							

Form III

Q. C. Report No. _____

BLANKS

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4

DATE 3/12/87 UNITS ug/L

Matrix water for soils

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead							
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium	5 U	5U	5U			5U	
19. Silver							
20. Sodium							
21. Thallium							
22. Tin	40 U	40U				40U	
23. Vanadium							
24. Zinc							
Other:							
Cyanide							

Form III

Q. C. Report No. _____

BLANKS

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4

DATE 3/13/87 UNITS ug/L

Matrix water for soils

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum	200 U	200 U	200 U			200 U	
2. Antimony	60 U	60 U	60 U			60 U	
3. Arsenic							
4. Barium	200 U	200 U	200 U			200 U	
5. Beryllium	5.0 U	5.0 U	5.0 U			5.0 U	
6. Cadmium	5.0 U	5.0 U	5.0 U			5.0 U	
7. Calcium							
8. Chromium	10 U	10 U	10 U			10 U	
9. Cobalt	50 U	50 U	50 U			50 U	
10. Copper	25 U	25 U	25 U			25 U	
11. Iron	100 U	100 U	100 U			100 U	
12. Lead	50 U	50 U	50 U			50. U	
13. Magnesium							
14. Manganese	15 U	15 U	15 U			15 U	
15. Mercury							
16. Nickel	40 U	40 U	40 U			40 U	
17. Potassium							
18. Selenium							
19. Silver	10 U	10 U	10 U			10 U	
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium	50 U	50 U	50 U			50 U	
24. Zinc	20 U	20 U	20 U			20 U	
Other:							
Cyanide							

Form III

Q. C. Report No. _____

BLANKS

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-

DATE 3/24/87 UNITS ug/L

Matrix water for soils

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead	5.0 U	5.0 U				5.0 U	
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide							

Form III

Q. C. Report No. _____

BLANKS

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-

DATE 4/20/87 UNITS ug/L

Matrix water for soils

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead	5.0 U	5.0U	5.0U	5.0U	5.0U	5.0U	
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide							

Form III

Q. C. Report No. _____

BLANKS

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4

DATE 4/22/87 UNITS ug/L

Matrix water for soils

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead	5.0 U	5.0U					
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide							

Form V

Q. C. Report No. _____

SPIKE SAMPLE RECOVERY

LAB NAME Ecology & Environment Inc.

DATE 5/11/87

CASE NO. U-4906, 4928, 4971, 4989

EPA Sample No. DC-P5-55

Lab Sample ID No. 1034

Units mg/kg as received

Matrix SOIL

Compound	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spiked Added (SA)	%R[1]
Metals:					
1. Aluminum	75-125				
2. Antimony	"				
3. Arsenic	"				
4. Barium	"				
5. Beryllium	"				
6. Cadmium	"				
7. Calcium	"				
8. Chromium	"				
9. Cobalt	"				
10. Copper	"				
11. Iron	"				
12. Lead	"				
13. Magnesium	"				
14. Manganese	"				
15. Mercury	"				
16. Nickel	"				
17. Potassium	"				
18. Selenium	"				
19. Silver	"				
20. Sodium	"				
21. Thallium	"				
22. Tin	"				
23. Vanadium	"				
24. Zinc	"				
Other:					
Cyanide	"	19.6	12	7.9	96

1 %R = [(SSR - SR)/SA] x 100 "R"- out of control

Comments: _____

Form V

Q. C. Report No. _____

SPIKE SAMPLE RECOVERY

LAB NAME Ecology and Environment, Inc.

DATE 5/11/87

CASE NO. U-4906/U-4928/U-4971/U-4989
Sample No. DC-PS-56
Lab Sample ID No. 1035
Units mg/kg as received

Matrix soil

Compound	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spiked Added (SA)	%R[1]
Metals:					
1. Aluminum	75-125				
2. Antimony	"	40	12U	100	40R
3. Arsenic	"	8.3	3.2	7.8	65R
4. Barium	"	487	95	400	98
5. Beryllium	"	9.8	1U	10	98
6. Cadmium	"	9.7	1.0U	10	97
7. Calcium	"				
8. Chromium	"	45	8.1	40	92
9. Cobalt	"	95	10U	100	95
10. Copper	"	58	19	50	78
11. Iron	"				
12. Lead	"	233	72	100	+
13. Magnesium	"				
14. Manganese	"				
15. Mercury	"				
16. Nickel	"	107	12	100	95
17. Potassium	"				
18. Selenium	"	1.05	0.98U	1.9	55R
19. Silver	"	10	20U	10	100
20. Sodium	"				
21. Thallium	"	8.66	2.0 U	9.7	89
22. Tin	"				
23. Vanadium	"	104	13	100	91
24. Zinc	"	150	59	100	91
Other:					
Cyanide	"				

1 %R = [(SSR - SR)/SA] x 100 "R"- out of control

Comments: Mn, Fe, AL values are 4X the spike amount.

+- Calculation of Pb spike recovery is not possible because of the heterogenous nature of the sample.

Form V

Q. C. Report No. _____

SPIKE SAMPLE RECOVERY

LAB NAME Ecology and Environment, Inc.

CASE NO. U-4906/U-4928/U-4971/U-498

DATE 5/11/87

Sample No. DC-PS-56

Lab Sample ID No. 1035*

Units µg/L

Matrix soil

Compound	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spiked Added (SA)	%R[1]
Metals:					
1. Aluminum	75-125				
2. Antimony	"				
3. Arsenic	"				
4. Barium	"				
5. Beryllium	"				
6. Cadmium	"				
7. Calcium	"				
8. Chromium	"				
9. Cobalt	"				
10. Copper	"				
11. Iron	"				
12. Lead	"				
13. Magnesium	"				
14. Manganese	"				
15. Mercury	"				
16. Nickel	"				
17. Potassium	"				
18. Selenium	"				
19. Silver	"				
20. Sodium	"				
21. Thallium	"				
22. Tin	"	81	7.4	80	92
23. Vanadium	"				
24. Zinc	"				
Other:					
Cyanide	"				

1 %R = [(SSR - SR)/SA] x 100 "R"- out of control

* Results in µg/L because this is A post-digestion spike.

Form V

Q. C. Report No. _____

SPIKE SAMPLE RECOVERY

LAB NAME Ecology and Environment, Inc.

CASE NO. U-4906/U-4928/U-4971/U-498

DATE 5/1/87

Sample No. PC-03-01

Lab Sample ID No. 1112

Units mg/kg as received

Matrix soil

Compound	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spiked Added (SA)	%R[1]
Metals:					
1. Aluminum	75-125				
2. Antimony	"				
3. Arsenic	"				
4. Barium	"				
5. Beryllium	"				
6. Cadmium	"				
7. Calcium	"				
8. Chromium	"				
9. Cobalt	"				
10. Copper	"				
11. Iron	"				
12. Lead	"				
13. Magnesium	"				
14. Manganese	"				
15. Mercury	"	1.3	0.1 U	1.3	100
16. Nickel	"				
17. Potassium	"				
18. Selenium	"				
19. Silver	"				
20. Sodium	"				
21. Thallium	"				
22. Tin	"				
23. Vanadium	"				
24. Zinc	"				
Other:					
Cyanide	"				

1 %R = [(SSR - SR)/SA] x 100

"R"- out of control

Form VI

Q. C. Report No. _____

DUPLICATES

LAB NAME Ecology and Environment, Inc.

CASE NO. U-4906/U-4928/U-4971/U-4989

DATE 5/11/87

Sample No. DC-PS-56

Lab Sample ID No. 1035

Units mg/kg as received

Matrix soil

Compound	Control Limit[1]	Sample(S)	Duplicate(D)	RPD[2]
Metals:				
1. Aluminum		4430	4620	4.2
2. Antimony		12 U	12 U	NC
3. Arsenic		3.2	2.5	
4. Barium		95	100	5.1
5. Beryllium		1.0 U	1.0 U	NC
6. Cadmium		1.0 U	3.2	NC
7. Calcium				
8. Chromium		8.1	7.7	5.1
9. Cobalt		10 U	10 U	NC
10. Copper		19	18	5.4
11. Iron		10400	12000	14
12. Lead		72	26	94 *
13. Magnesium				
14. Manganese		568	908	46 *
15. Mercury		0.10 U	0.10	NC
16. Nickel		18	12	40 *
17. Potassium				
18. Selenium		0.98 U	0.98 U	NC
19. Silver		2.0 U	2.0 U	NC
20. Sodium				
21. Thallium		2.0 U	2.0 U	NC
22. Tin		7.8 U	7.8 U	NC
23. Vanadium		13	13	0
24. Zinc		59	99	51 *
Other:				
Cyanide				

* Out of Control

[1] To be added at a later date.

[2] RPD = [|S - D|/((S + D)/2)] x 100

NC - Non calculable RPD due to value(s) less than CRDL

Form VI

Q. C. Report No. _____

DUPLICATES

LAB NAME Ecology & Environment Inc.

DATE 6/11/87

CASE NO. U-4906/4928/4971/4989

EPA Sample No. DC-06-66

Lab Sample ID No. 1117

Units mg/kg as received

Matrix SOIL

Compound	Control Limit[1]	Sample(S)	Duplicate(D)	RPD[2]
Metals:				
1. Aluminum				
2. Antimony				
3. Arsenic				
4. Barium				
5. Beryllium				
6. Cadmium				
7. Calcium				
8. Chromium				
9. Cobalt				
10. Copper				
11. Iron				
12. Lead				
13. Magnesium				
14. Manganese				
15. Mercury				
16. Nickel				
17. Potassium				
18. Selenium				
19. Silver				
20. Sodium				
21. Thallium				
22. Tin				
23. Vanadium				
24. Zinc				
Other:				
Cyanide		1 U	1 U	NC

* Out of Control

[1] To be added at a later date.

[2] RPD = [|S - D|/((S + D)/2)] x 100

NC - Non calculable RPD due to value(s) less than CRDL

Form VII

Q.C. Report No. _____

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-498

DATE 2/23/87 LCS UNITS (ug/L) mg/kg

(Circle One)

Compound Metals:	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l ICP/AA	Furnace	Lab Control Sample True	Found	%R
1. Aluminum	200	100				
2. Antimony	60	6	5			
3. Arsenic	10		5			
4. Barium	200	10				
5. Beryllium	5	5				
6. Cadmium	5	5	1			
7. Calcium	5000	1000				
8. Chromium	10	10				
9. Cobalt	50	10				
10. Copper	25	10				
11. Iron	100	25				
12. Lead	5	50	5			
13. Magnesium	5000	1000				
14. Manganese	15	5				
15. Mercury	0.2	0.2		4.4	4.4	100
16. Nickel	40	15				
17. Potassium	5000	1000				
18. Selenium	5		5			
19. Silver	10	10	5			
20. Sodium	5000	1000				
21. Thallium	10		5			
22. Tin	40	40	5			
23. Vanadium	50	10				
24. Zinc	20	10				
Other:						
Mercury				1.3	1.04	80
Cyanide	10					

Form VII

Q.C. Report No. _____

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

DATE 3/2/87 LCS UNITS (ug/L) mg/kg

(Circle One)

Compound	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l		Lab Control Sample		
Metals:		ICP/AA	Furnace	True	Found	%R
1. Aluminum	200	100				
2. Antimony	60	6	5			
3. Arsenic	10		5	20	21	105
4. Barium	200	10				
5. Beryllium	5	5				
6. Cadmium	5	5	1			
7. Calcium	5000	1000				
8. Chromium	10	10				
9. Cobalt	50	10				
10. Copper	25	10				
11. Iron	100	25				
12. Lead	5	50	5			
13. Magnesium	5000	1000				
14. Manganese	15	5				
15. Mercury	0.2	0.2		1.3	1.2	92
16. Nickel	40	15				
17. Potassium	5000	1000				
18. Selenium	5		5	7.9	8.8	111
19. Silver	10	10	5			
20. Sodium	5000	1000				
21. Thallium	10		5			
22. Tin	40	40	5			
23. Vanadium	50	10				
24. Zinc	20	10				
Other:						
Cyanide	10					

Form VII

Q.C. Report No. _____

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-498

DATE 3/3/87 LCS UNITS (ug/L) mg/kg

(Circle One)

Compound	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l		Lab Control Sample		
Metals:		ICP/AA	Furnace	True	Found	%R
1. Aluminum	200	100				
2. Antimony	60	6	5			
3. Arsenic	10		5			
4. Barium	200	10				
5. Beryllium	5	5				
6. Cadmium	5	5	1			
7. Calcium	5000	1000				
8. Chromium	10	10				
9. Cobalt	50	10				
10. Copper	25	10				
11. Iron	100	25				
12. Lead	5	50	5			
13. Magnesium	5000	1000				
14. Manganese	15	5				
15. Mercury	0.2	0.2				
16. Nickel	40	15				
17. Potassium	5000	1000				
18. Selenium	5		5			
19. Silver	10	10	5			
20. Sodium	5000	1000				
21. Thallium	10		5	25	25	100
22. Tin	40	40	5			
23. Vanadium	50	10				
24. Zinc	20	10				
Other:						
Cyanide	10					

Form VII

Q.C. Report No. _____

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

DATE 3/4/87 LCS UNITS (ug/L) mg/kg

(Circle One)

Compound Metals:	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l ICP/AA	Furnace	Lab Control Sample True	Found	%R
1. Aluminum	200	100				
2. Antimony	60	6	5			
3. Arsenic	10		5			
4. Barium	200	10				
5. Beryllium	5	5				
6. Cadmium	5	5	1			
7. Calcium	5000	1000				
8. Chromium	10	10				
9. Cobalt	50	10				
10. Copper	25	10				
11. Iron	100	25				
12. Lead	5	50	5	17	15	88
13. Magnesium	5000	1000				
14. Manganese	15	5				
15. Mercury	0.2	0.2				
16. Nickel	40	15				
17. Potassium	5000	1000				
18. Selenium	5		5			
19. Silver	10	10	5			
20. Sodium	5000	1000				
21. Thallium	10		5			
22. Tin	40	40	5			
23. Vanadium	50	10				
24. Zinc	20	10				
Other:						
Cyanide	10					

Form VII

Q.C. Report No. _____

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-498

DATE 3/5/87 LCS UNITS (ug/L) mg/kg

(Circle One)

Compound Metals:	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l ICP/AA	Furnace	Lab Control Sample True	Found	%R
1. Aluminum	200	100				
2. Antimony	60	6	5			
3. Arsenic	10		5	20	20	100
4. Barium	200	10				
5. Beryllium	5	5				
6. Cadmium	5	5	1			
7. Calcium	5000	1000				
8. Chromium	10	10				
9. Cobalt	50	10				
10. Copper	25	10				
11. Iron	100	25				
12. Lead	5	50	5			
13. Magnesium	5000	1000				
14. Manganese	15	5				
15. Mercury	0.2	0.2				
16. Nickel	40	15				
17. Potassium	5000	1000				
18. Selenium	5		5	7.9	7.7	97
19. Silver	10	10	5			
20. Sodium	5000	1000				
21. Thallium	10		5	25	23	92
22. Tin	40	40	5			
23. Vanadium	50	10				
24. Zinc	20	10				
Other:						
Cyanide	10					

Form VII

Q.C. Report No. _____

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-498

DATE 3/6/87 LCS UNITS (ug/l) mg/kg

(Circle One)

Compound	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l		Lab Control Sample		
Metals:		ICP/AA	Furnace	True	Found	%R
1. Aluminum	200	100				
2. Antimony	60	6	5			
3. Arsenic	10		5			
4. Barium	200	10				
5. Beryllium	5	5				
6. Cadmium	5	5	1			
7. Calcium	5000	1000				
8. Chromium	10	10				
9. Cobalt	50	10				
10. Copper	25	10				
11. Iron	100	25				
12. Lead	5	50	5			
13. Magnesium	5000	1000				
14. Manganese	15	5				
15. Mercury	0.2	0.2		1.3	1.1	85
16. Nickel	40	15				
17. Potassium	5000	1000				
18. Selenium	5		5			
19. Silver	10	10	5			
20. Sodium	5000	1000				
21. Thallium	10		5			
22. Tin	40	40	5			
23. Vanadium	50	10				
24. Zinc	20	10				
Other:						
Cyanide	10					

Form VII

Q.C. Report No. _____

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

DATE 3/9/87 LCS UNITS (ug/L) mg/kg

(Circle One)

Compound Metals:	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l ICP/AA	Furnace	Lab Control Sample True	Found	%R
1. Aluminum	200	100				
2. Antimony	60	6	5	102	94	92
3. Arsenic	10		5			
4. Barium	200	10		119600	108450	91
5. Beryllium	5	5		1000	960	96
6. Cadmium	5	5	1	250	245	98
7. Calcium	5000	1000				
8. Chromium	10	10		1000	971	97
9. Cobalt	50	10		1000	954	95
10. Copper	25	10		1000	957	96
11. Iron	100	25				
12. Lead	5	50	5	17	16	94
13. Magnesium	5000	1000				
14. Manganese	15	5		1000	978	98
15. Mercury	0.2	0.2				
16. Nickel	40	15		1000	975	98
17. Potassium	5000	1000				
18. Selenium	5		5			
19. Silver	10	10	5	6000	5540	92
20. Sodium	5000	1000				
21. Thallium	10		5			
22. Tin	40	40	5			
23. Vanadium	50	10		2500	2460	98
24. Zinc	20	10		1000	972	97
Other:						
Cyanide	10					

Form VII

Q.C. Report No. _____

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

DATE 3/10/87 LCS UNITS (ug/L) mg/kg

(Circle One)

Compound Metals:	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l ICP/AA	Furnace	Lab Control Sample True	Found	%R
1. Aluminum	200	100		5000	4840	97
2. Antimony	60	6	5			
3. Arsenic	10		5	20	21	105
4. Barium	200	10				
5. Beryllium	5	5				
6. Cadmium	5	5	1			
7. Calcium	5000	1000				
8. Chromium	10	10				
9. Cobalt	50	10				
10. Copper	25	10				
11. Iron	100	25		1000	977	98
12. Lead	5	50	5	17	16	94
13. Magnesium	5000	1000				
14. Manganese	15	5				
15. Mercury	0.2	0.2				
16. Nickel	40	15				
17. Potassium	5000	1000				
18. Selenium	5		5			
19. Silver	10	10	5			
20. Sodium	5000	1000				
21. Thallium	10		5	25	23	92
22. Tin	40	40	5			
23. Vanadium	50	10				
24. Zinc	20	10				
Other:						
Cyanide	10					

Form VII

Q.C. Report No. _____

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-498

DATE 3/11/87 LCS UNITS (ug/L) mg/kg

(Circle One)

Compound	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l		Lab Control Sample		
Metals:		ICP/AA	Furnace	True	Found	%R
1. Aluminum	200	100				
2. Antimony	60	6	5			
3. Arsenic	10		5			
4. Barium	200	10				
5. Beryllium	5	5				
6. Cadmium	5	5	1			
7. Calcium	5000	1000				
8. Chromium	10	10				
9. Cobalt	50	10				
10. Copper	25	10				
11. Iron	100	25				
12. Lead	5	50	5			
13. Magnesium	5000	1000				
14. Manganese	15	5				
15. Mercury	0.2	0.2		1.2	1.2	92
16. Nickel	40	15				
17. Potassium	5000	1000				
18. Selenium	5		5			
19. Silver	10	10	5			
20. Sodium	5000	1000				
21. Thallium	10		5			
22. Tin	40	40	5			
23. Vanadium	50	10				
24. Zinc	20	10				
Other:						
Cyanide	10					

Form VII

Q.C. Report No. _____

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-4989

DATE 3/12/87 LCS UNITS (ug/L) mg/kg

(Circle One)

Compound Metals:	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l ICP/AA	Furnace	Lab Control Sample True	Found	%R
1. Aluminum	200	100				
2. Antimony	60	6	5			
3. Arsenic	10		5			
4. Barium	200	10				
5. Beryllium	5	5				
6. Cadmium	5	5	1			
7. Calcium	5000	1000				
8. Chromium	10	10				
9. Cobalt	50	10				
10. Copper	25	10				
11. Iron	100	25				
12. Lead	5	50	5			
13. Magnesium	5000	1000				
14. Manganese	15	5				
15. Mercury	0.2	0.2				
16. Nickel	40	15				
17. Potassium	5000	1000				
18. Selenium	5		5	7.9	7.8	99
19. Silver	10	10	5			
20. Sodium	5000	1000				
21. Thallium	10		5			
22. Tin	40	40	5			
23. Vanadium	50	10				
24. Zinc	20	10				
Other:						
Cyanide	10					

Form VII

Q.C. Report No. _____

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-498

DATE 3/13/87 LCS UNITS (ug/L) mg/kg

(Circle One)

Compound Metals:	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l ICP/AA	Furnace	Lab Control Sample True	Found	%R
1. Aluminum	200	100		5000	4880	98
2. Antimony	60	6	5	102	88	86
3. Arsenic	10		5			
4. Barium	200	10		120,000	104000	87
5. Beryllium	5	5		1000	929	93
6. Cadmium	5	5	1	250	239	96
7. Calcium	5000	1000				
8. Chromium	10	10		1000	959	96
9. Cobalt	50	10		1000	947	95
10. Copper	25	10		1000	942	94
11. Iron	100	25		1000	977	98
12. Lead	5	50	5	1000	1000	100
13. Magnesium	5000	1000				
14. Manganese	15	5		1000	955	96
15. Mercury	0.2	0.2				
16. Nickel	40	15		1000	964	96
17. Potassium	5000	1000				
18. Selenium	5		5			
19. Silver	10	10	5	6000	5600	93
20. Sodium	5000	1000				
21. Thallium	10		5			
22. Tin	40	40	5			
23. Vanadium	50	10		2500	2350	94
24. Zinc	20	10		1000	951	95
Other:						
Cyanide	10					

Form VII

Q.C. Report No. _____

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-498

DATE 3/24/87 LCS UNITS (ug/L) mg/kg

(Circle One)

Compound	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l		Lab Control Sample		
Metals:		ICP/AA	Furnace	True	Found	%R
1. Aluminum	200	100				
2. Antimony	60	6	5			
3. Arsenic	10		5			
4. Barium	200	10				
5. Beryllium	5	5				
6. Cadmium	5	5	1			
7. Calcium	5000	1000				
8. Chromium	10	10				
9. Cobalt	50	10				
10. Copper	25	10				
11. Iron	100	25				
12. Lead	5	50	5	17	18	106
13. Magnesium	5000	1000				
14. Manganese	15	5				
15. Mercury	0.2	0.2				
16. Nickel	40	15				
17. Potassium	5000	1000				
18. Selenium	5		5			
19. Silver	10	10	5			
20. Sodium	5000	1000				
21. Thallium	10		5			
22. Tin	40	40	5			
23. Vanadium	50	10				
24. Zinc	20	10				
Other:						
Cyanide	10					

Form VII

Q.C. Report No. _____

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-498

DATE 4/20/87 LCS UNITS (ug/L) mg/kg

(Circle One)

Compound	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l		Lab Control Sample		
Metals:		ICP/AA	Furnace	True	Found	%R
1. Aluminum	200	100				
2. Antimony	60	6	5			
3. Arsenic	10		5			
4. Barium	200	10				
5. Beryllium	5	5				
6. Cadmium	5	5	1			
7. Calcium	5000	1000				
8. Chromium	10	10				
9. Cobalt	50	10				
10. Copper	25	10				
11. Iron	100	25				
12. Lead	5	50	5	17	14	94
13. Magnesium	5000	1000				
14. Manganese	15	5				
15. Mercury	0.2	0.2				
16. Nickel	40	15				
17. Potassium	5000	1000				
18. Selenium	5		5			
19. Silver	10	10	5			
20. Sodium	5000	1000				
21. Thallium	10		5			
22. Tin	40	40	5			
23. Vanadium	50	10				
24. Zinc	20	10				
Other:						
Cyanide	10					

Form VII

Q.C. Report No. _____

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME Ecology and Environment, Inc. CASE NO. U-4906/U-4928/U-4971/U-498

DATE 4/22/87 LCS UNITS ug/L mg/kg

(Circle One)

Compound	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l		Lab Control Sample		
Metals:		ICP/AA	Furnace	True	Found	%R
1. Aluminum	200	100				
2. Antimony	60	6	5			
3. Arsenic	10		5			
4. Barium	200	10				
5. Beryllium	5	5				
6. Cadmium	5	5	1			
7. Calcium	5000	1000				
8. Chromium	10	10				
9. Cobalt	50	10				
10. Copper	25	10				
11. Iron	100	25				
12. Lead	5	50	5	17	15	88
13. Magnesium	5000	1000				
14. Manganese	15	5				
15. Mercury	0.2	0.2				
16. Nickel	40	15				
17. Potassium	5000	1000				
18. Selenium	5		5			
19. Silver	10	10	5			
20. Sodium	5000	1000				
21. Thallium	10		5			
22. Tin	40	40	5			
23. Vanadium	50	10				
24. Zinc	20	10				
Other:						
Cyanide	10					

REPORT > SELECT RESULT

ANALYZE > MANUAL MODE

Job #4906

Ag, Al, Ba, Be, Cd, Ca, Co, Cu, Fe, Mn, Ni, Sb, V, Zn

87/03/09

15:54

Result Name: 870309?844

blank	1035.0401	1116.0401	BLK 122
standard	1005.0401 R	1117.0401	CAL BLK
standard	1035.0401 R	500 PPM ICS	500 PPB
standard	1034.0401	CAL BLK	500 PPB
EPA 386#1 10x	CAL BLK	500 PPB	500 PPM ICS
EPA 283#2 1/50	500 PPB	500 PPB	JOB#4932 B-140
EPA 1183#2	500 PPB	4936 1154.	JOB#4932 B-138
500 PPM ICS	1037.0401	1163.0101	1132.0101
CAL BLK	1110.0401	4943 1186.	1132. 1/10
10000 PPB	1111.0401	1186.0101 R1	JOB#4985 B-141
JOB#4934 B-139	1112.0401	1186.0101 R2	1422.0101
1032.0401	1113.0401	4952 1219.	1423.0101
1033.0401	1114.0401	1220.0101	1424.0101
1034.0101	1115.0401	BLK 115	CAL BLK

Command?

Sb_VHG

blank	57.23	intensity	53.79	cv	
standard	1476.00	intensity	8.41	cv	
standard	1545.00	intensity	2.75	cv	
EPA 1183#2	93.56	ug/L	38.18	cv	
500 PPM ICS	910.25	ug/L	4.52	cv	
CAL BLK	-14.69	ug/L	-215.0	cv	
JOB#4906 B-102	27.65	ug/L < 600	14.99	cv	
1032.0401	-34.71	ug/L < 12.0 mg/Kg	1.14	cv	
1033.0401	-27.15	ug/L	-94.30	cv	
1034.0401	-41.06	ug/L	-43.67	cv	
1035.0401	-30.07	ug/L	-39.13	cv	window edge
1035.0401 R	-47.13	ug/L	-105.8	cv	window edge
1035.0401 S	212.80	ug/L -44% rec	6.65	cv	40.5
1036.0401	-3.45	ug/L	-71.99	cv	100
CAL BLK	11.93	ug/L	53.14	cv	
500 PPB	457.10	ug/L	4.15	cv	
1037.0401	-25.62	ug/L ⊥	-244.8	cv	window edge
500 PPM ICS	928.45	ug/L	7.70	cv	
CAL BLK	-41.13	ug/L	-21.04	cv	window edge
500 PPB	465.20	ug/L	6.27	cv	

Zn_VHG

blank	15.41	intensity	7.59	cv	
standard	12335.00	intensity	0.13	cv	
EPA 386#1 10x	971.70	ug/L	2.31	cv	
500 PPM ICS	981.95	ug/L	5.35	cv	
CAL BLK	0.16	ug/L	812.88	cv	
10000 PPB	10285.00	ug/L	1.14	cv	
JOB#4906 B-102	3.30	ug/L < 200	48.38	cv	
1032.0401	867.5	→ 370 mg/Kg	0.12	cv	
1033.0401	33.50	→ 14.4	1.60	cv	
1034.0401	891.20	→ 39.5	0.22	cv	
1035.0401	836.25	→ 58.9	0.50	cv	
1035.0401 R	495.95	→ 99.2	0.58	cv	150 - ~~58~~ 58.9
1035.0401 S	787.65	ug/L -97%	1.55	cv	100
1036.0401	96.61	→ 19.1 ⊥	0.21	cv	
CAL BLK	-0.11	ug/L	-413.6	cv	
500 PPB	531.50	ug/L	0.05	cv	
1037.0401	95.88	→ 16.5 ⊥	0.71	cv	
500 PPM ICS	1000.25	ug/L	5.06	cv	
CAL BLK	0.97	ug/L	104.98	cv	
500 PPB	532.80	ug/L	0.56	cv	

Cd_VHG

blank	14.95	intensity	78.99	cv	
standard	7065.50	intensity	0.63	cv	
EPA 386#1 10x	244.80	ug/L	3.07	cv	
500 PPM ICS	881.30	ug/L	5.38	cv	
CAL BLK	-2.40	ug/L	-22.85	cv	window edge
10000 PPB	10071.50	ug/L	1.13	cv	
JOB#4906 B-102	-1.08	ug/L < 5.00	-84.32	cv	
1032.0401	15.73	→ 3.11 mg/Kg	3.52	cv	
1033.0401	-1.29	ug/L < 1.00	-70.36	cv	
1034.0401	3.78	ug/L ⊥	26.45	cv	
1035.0401	3.64	ug/L ⊥	5.26	cv	
1035.0401 R	15.99	→ 3.20 ⊥	7.04	cv	
1035.0401 S	48.29	ug/L 97% rec	6.65	cv	9.66 / 10

1036.0401	0.21	ug/L	<1.00mg/Kg	5.74 cv	
CAL BLK	-1.58	ug/L		-28.83 cv	
500 PPB	521.55	ug/L		0.23 cv	
1037.0401	-1.83	ug/L	⊥	-21.18 cv	
500 PPM ICS	895.85	ug/L		4.89 cv	
CAL BLK	-1.18	ug/L		-212.5 cv	window edge
500 PPB	522.40	ug/L		0.72 cv	

Co_VHG

blank	2.85	intensity		316.38 cv	window edge
standard	3441.50	intensity		0.28 cv	
EPA 386#1 10x	953.75	ug/L		1.57 cv	
500 PPM ICS	880.40	ug/L		4.55 cv	
CAL BLK	-0.68	ug/L		-931.0 cv	window edge
10000 PPB	9878.50	ug/L		0.61 cv	
JOB#4906 B-102	3.89	ug/L	<50.0	20.12 cv	
1032.0401	32.31	ug/L	<10.0mg/Kg	2.74 cv	
1033.0401	13.08	ug/L		12.37 cv	
1034.0401	34.25	ug/L		5.31 cv	
1035.0401	25.38	ug/L		0.10 cv	
1035.0401 R	37.38	ug/L		1.44 cv	
1035.0401 S	498.55	ug/L	95% recv	0.13 cv	95.0
1036.0401	13.62	ug/L	<10.0	34.54 cv	100
CAL BLK	2.79	ug/L		10.98 cv	
500 PPB	518.90	ug/L		0.44 cv	
1037.0401	12.27	ug/L	⊥	⊥ 30.13 cv	
500 PPM ICS	889.25	ug/L		2.91 cv	
CAL BLK	1.58	ug/L		125.77 cv	window edge
500 PPB	518.10	ug/L		0.44 cv	

Ni_VHG

blank	37.47	intensity		31.31 cv	
standard	8400.50	intensity		0.14 cv	
EPA 386#1 10x	974.65	ug/L		1.46 cv	
500 PPM ICS	888.95	ug/L		4.39 cv	
CAL BLK	-2.54	ug/L		-32.81 cv	window edge
10000 PPB	10175.00	ug/L		0.42 cv	
JOB#4906 B-102	-2.09	ug/L	<40.0	-206.9 cv	
1032.0401	101.68	ug/L	<20.1mg/Kg	5.87 cv	
1033.0401	19.46	ug/L	<8.00	29.05 cv	
1034.0401	60.36	ug/L	11.8	5.15 cv	
1035.0401	92.07	ug/L	17.7	4.39 cv	
1035.0401 R	59.75	ug/L	12.0	6.97 cv	107-12.0
1035.0401 S	562.45	ug/L	95% recv	1.42 cv	10P
1036.0401	33.91	ug/L	<8.00	3.89 cv	
CAL BLK	-0.76	ug/L		-117.8 cv	
500 PPB	526.20	ug/L		0.00 cv	
1037.0401	31.33	ug/L	⊥	⊥ 16.59 cv	
500 PPM ICS	900.60	ug/L		2.39 cv	
CAL BLK	-0.00	ug/L		-64960 cv	window edge
500 PPB	517.15	ug/L		1.67 cv	

Mn_VHG

blank	2.08	intensity		220.25 cv	
standard	12285.00	intensity		0.19 cv	
EPA 386#1 10x	977.65	ug/L		1.52 cv	
500 PPM ICS	932.15	ug/L		4.66 cv	
CAL BLK	0.05	ug/L		508.12 cv	
10000 PPB	10285.00	ug/L		0.59 cv	

JOB#4906 E-102	0.58	ug/L	34.32	cv
1032.0401	813.55	ug/L	0.10	cv
1033.0401	399.55	ug/L	0.61	cv
1034.0401	2577.50	ug/L	0.67	cv
1035.0401	2955.00	ug/L	0.34	cv
1035.0401 R	4540.50	ug/L	0.29	cv
1035.0401 S	3929.50	ug/L	0.92	cv
1036.0401	449.10	ug/L	0.35	cv
CAL BLK	0.01	ug/L	3868.3	cv
500 PPB	531.95	ug/L	0.03	cv
1037.0401	271.95	ug/L	0.24	cv
500 PPM ICS	946.00	ug/L	3.23	cv
CAL BLK	-0.29	ug/L	-165.6	cv
500 PPB	531.90	ug/L	0.08	cv

<15.0
1032.0401 → 161 mg/Kg
1033.0401 → 78.3
1034.0401 → 505
1035.0401 → 568
1035.0401 R → 908
1035.0401 S → N.A.
1036.0401 → 87.2
1037.0401 → 52.3 ⊥

Sample value is 3-5× greater than the spike amount

Fe_VHG

blank	37.38	intensity	73.62	cv
standard	6688.00	intensity	0.46	cv
EPA 386#1 10x	985.15	ug/L	1.45	cv
500 PPM ICS	156050.0	ug/L	0.04	cv
CAL BLK	-0.15	ug/L	-2232.	cv
10000 PPB	10370.00	ug/L	0.95	cv
JOB#4906 E-102	10.59	ug/L	9.85	cv
1032.0401	56800.00	ug/L	0.89	cv
1033.0401	13950.00	ug/L	0.15	cv
1034.0401	69950.00	ug/L	0.91	cv
1035.0401	60215.00	ug/L	0.48	cv
1035.0401 R	67510.00	ug/L	0.17	cv
1035.0401 S	61490.00	ug/L	1.17	cv
1036.0401	24325.00	ug/L	0.04	cv
CAL BLK	0.32	ug/L	197.02	cv
500 PPB	540.95	ug/L	0.01	cv
1037.0401	19305.00	ug/L	1.04	cv
500 PPM ICS	156150.0	ug/L	0.11	cv
CAL BLK	2.35	ug/L	8.74	cv
500 PPB	547.15	ug/L	0.34	cv

Refers to dilutions

Cr_VHG

blank	-1.63	intensity	-1364.	cv
standard	9314.00	intensity	0.24	cv
EPA 386#1 10x	971.05	ug/L	0.28	cv
500 PPM ICS	928.50	ug/L	4.90	cv
CAL BLK	2.71	ug/L	45.47	cv
10000 PPB	10265.00	ug/L	0.03	cv
JOB#4906 B-102	0.77	ug/L	103.05	cv
1032.0401	64.49	ug/L	1.99	cv
1033.0401	13.45	ug/L	26.69	cv
1034.0401	53.45	ug/L	1.50	cv
1035.0401	42.19	ug/L	5.66	cv
1035.0401 R	38.70	ug/L	3.97	cv
1035.0401 S	238.00	ug/L	0.47	cv
1036.0401	17.54	ug/L	7.47	cv
CAL BLK	-1.19	ug/L	-175.7	cv
500 PPB	537.90	ug/L	0.63	cv
1037.0401	16.66	ug/L	4.77	cv
500 PPM ICS	938.25	ug/L	3.16	cv
CAL BLK	2.78	ug/L	107.44	cv
500 PPB	531.65	ug/L	0.09	cv

window edge

1032.0401 → 12.8 mg/Kg
1033.0401 → 2.64
1034.0401 → 10.5
1035.0401 → 8.11
1035.0401 R → 7.74
1035.0401 S → 93% rec
1036.0401 → 3.41 ⊥
1037.0401 → 3.20 ⊥

window edge

$$\frac{45.3 - 8.11}{40}$$

V_VHG

blank	50.52	intensity	148.54	cv
standard	29080.00	intensity	0.40	cv
EPA 386#1 10x	2463.50	ug/L	1.01	cv
500 PPM ICS	966.85	ug/L	3.75	cv
CAL BLK	0.27	ug/L	723.53	cv
10000 PPB	10805.00	ug/L	0.10	cv
JOB#4906 B-102	-0.46	ug/L < 50.0	-539.8	cv
1032.0401	75.81	→ 15.0 mg/Kg	.33	cv
1033.0401	20.42	ug/L < 10.0	4.90	cv
1034.0401	91.71	→ 17.6	1.75	cv
1035.0401	67.96	→ 13.1	0.01	cv
1035.0401 R	54.13	→ 12.8	7.36	cv
1035.0401 S	544.40	ug/L -91% recv	0.34	cv
1036.0401	27.26	ug/L < 10.0	7.08	cv
CAL BLK	-1.77	ug/L	-248.7	cv
500 PPB	537.85	ug/L	0.59	cv
1037.0401	19.57	ug/L ⊥	0.17	cv
500 PPM ICS	982.90	ug/L	3.03	cv
CAL BLK	-0.80	ug/L	-148.4	cv
500 PPB	536.60	ug/L	0.05	cv

window edge

window edge

$\frac{104 - 13.1}{100}$

Be_VHG

blank	2.25	intensity	139.97	cv
standard	8169.50	intensity	0.13	cv
EPA 386#1 10x	959.60	ug/L	1.56	cv
500 PPM ICS	974.65	ug/L	3.41	cv
CAL BLK	0.27	ug/L	29.91	cv
10000 PPB	10190.00	ug/L	0.59	cv
JOB#4906 B-102	0.12	ug/L < 5.00	8.11	cv
1032.0401	2.97	ug/L < 1.00 mg/Kg	15	cv
1033.0401	0.51	ug/L	8.94	cv
1034.0401	2.08	ug/L	3.01	cv
1035.0401	3.26	ug/L	2.29	cv
1035.0401 R	2.67	ug/L	15.99	cv
1035.0401 S	51.26	ug/L -98% recv	0.32	cv
1036.0401	0.71	ug/L	6.69	cv
CAL BLK	0.19	ug/L	16.99	cv
500 PPB	527.65	ug/L	0.10	cv
1037.0401	0.32	ug/L ⊥	69.35	cv
500 PPM ICS	982.15	ug/L	1.79	cv
CAL BLK	0.19	ug/L	78.40	cv
500 PPB	526.45	ug/L	0.68	cv

$\frac{9.76}{10}$

Cu_VHG

blank	103.84	intensity	9.49	cv
standard	26410.00	intensity	0.18	cv
EPA 386#1 10x	956.95	ug/L	0.36	cv
500 PPM ICS	986.50	ug/L	3.50	cv
CAL BLK	1.19	ug/L	43.05	cv
10000 PPB	10545.00	ug/L	0.45	cv
JOB#4906 B-102	0.25	ug/L < 25.0	118.62	cv
1032.0401	200.40	→ 39.6 mg/Kg	.17	cv
1033.0401	6.56	ug/L < 5.00	1.11	cv
1034.0401	63.80	→ 12.7	0.91	cv
1035.0401	97.64	→ 18.7	1.29	cv
1035.0401 R	88.29	→ 17.7	2.25	cv
1035.0401 S	307.15	ug/L -80% recv	0.99	cv
1036.0401	15.24	ug/L < 5.00	7.00	cv

window edge

$\frac{58.5 - 18.7}{50}$

CAL BLK	-0.18	ug/L	-516.6	cv	
500 PPB	529.95	ug/L	0.12	cv	
1037.0401	12.42	ug/L <500mg/Kg	2.63	cv	
500 PPM ICS	1005.70	ug/L	1.88	cv	
CAL BLK	-0.43	ug/L	-536.8	cv	
500 PPB	530.50	ug/L	1.30	cv	

Ag_VHG

blank	87.37	intensity	39.20	cv	
standard	29910.00	intensity	0.63	cv	
EPA 283#2 1/50	110.90	ug/L	2.55	cv	
500 PPM ICS	1079.50	ug/L	3.29	cv	
CAL BLK	-2.62	ug/L	-65.07	cv	window edge
JOB#4906 B-102	-0.10	ug/L <10.0	-1250.	cv	window edge
1032.0401	5.18	ug/L <2.00mg/Kg	.30	cv	
1033.0401	-2.63	ug/L	-78.43	cv	window edge
1034.0401	1.45	ug/L	79.48	cv	
1035.0401	-0.49	ug/L	-483.7	cv	window edge
1035.0401 R	-0.00	ug/L	-14770	cv	
1035.0401 S	52.25	ug/L -100%rec	6.37	cv	9.95
1036.0401	0.96	ug/L	116.95	cv	window edge
CAL BLK	-0.77	ug/L	-603.1	cv	window edge
500 PPB	521.85	ug/L	1.16	cv	
1037.0401	-2.53	ug/L	-70.01	cv	window edge
500 PPM ICS	1087.00	ug/L	1.26	cv	
CAL BLK	-2.53	ug/L	-28.09	cv	window edge
500 PPB	522.35	ug/L	0.87	cv	

Al_VHG

blank	49.12	intensity	4.87	cv	
standard	176559.00	intensity	1.15	cv	
EPA 386#1 10x	5012.00	ug/L	0.85	cv	
500 PPM ICS	52620.00	ug/L	0.32	cv	
CAL BLK	-11.01	ug/L	-33.20	cv	window edge
10000 PPB	10740.00	ug/L	0.14	cv	
JOB#4906 B-102	8.17	ug/L	3.42	cv	
1032.0401	23115.00	ug/L	0.02	cv	
1033.0401	5884.50	ug/L	0.37	cv	
1034.0401	28775.00	ug/L	0.03	cv	
1035.0401	26335.00	ug/L	0.72	cv	
1035.0401 R	26690.00	ug/L	0.62	cv	
1035.0401 S	29185.00	ug/L	0.02	cv	
1036.0401	7263.50	ug/L	0.07	cv	
CAL BLK	5.64	ug/L	66.16	cv	
500 PPB	546.40	ug/L	1.17	cv	
1037.0401	5602.00	ug/L	0.05	cv	
500 PPM ICS	52650.00	ug/L	0.16	cv	
CAL BLK	-6.41	ug/L	-25.76	cv	window edge
500 PPB	544.35	ug/L	0.87	cv	

Refer to dilutions

Ba_VHG

blank	3.93	intensity	22.75	cv	
standard	10775.00	intensity	0.40	cv	
EPA 283#2 1/50	2169.50	ug/L	0.87	cv	
500 PPM ICS	1006.15	ug/L	2.95	cv	
CAL BLK	0.19	ug/L	33.70	cv	
10000 PPB	10670.00	ug/L	0.54	cv	
JOB#4906 B-102	0.14	ug/L <200	14.81	cv	
1032.0401	503.60	→ 10Mmg/Kg	1.21	cv	

1033.0401		159.60	ug/L	<40.0 mg/Kg	2.46	cv
1034.0401		342.90	ug/L	→ 65.9	0.58	cv
1035.0401		495.60	ug/L	→ 95.3	0.40	cv
1035.0401	R	520.10	ug/L	→ 100	0.25	cv
1035.0401	S	2556.00	ug/L	-98% rec	0.65	cv
1036.0401		162.55	ug/L	<40.0	0.27	cv
CAL BLK		0.27	ug/L		14.47	cv
500 PPB		551.05	ug/L		0.61	cv
1037.0401		107.20	ug/L	1	0.30	cv
500 PPM ICS		1018.50	ug/L		1.28	cv
CAL BLK		0.60	ug/L		60.12	cv
500 PPB		544.10	ug/L		0.16	cv

$\frac{487 - 95.3}{400}$

REPORT > SELECT RESULT

ANALYZE > MANUAL MODE

Job #4906
Al, Fe

Dead Creek

87/03/10

11:13

Result Name: 8703101014

blank	1036.0401
standard	CAL BLK
EPA 39641 10x	1.00 PPM
10.0 PPM	1037.0401
500 PPM	1110.0401
100 PPM	1111.0401
CAL BLK	1112.0401
JOB#4906 B-102	1113.0401
1032.0401	1114.0401
1033.0401	1115.0401
1034.0401	1116.0401
1035.0401	1117.0401
1035.0401 B	CAL BLK
1035.0401 S	1.00 PPM

Command?

Fe_HIGH

blank	4.46	intensity	38.29	cv	
standard	2387.500	intensity	1.57	cv	
EPA 386#1 10x	0.977	mg/L	0.45	cv	
10.0 PPM	9.978	mg/L	0.19	cv	
~~500 PPM~~	~~[illegible]~~	~~mg/L~~	~~0.40~~	~~cv~~	
100 PPM	96.385	mg/L	0.11	cv	
CAL BLK	-0.000	mg/L	-709.7	cv	
JOB#4906 B-102	0.014	mg/L <0.100 mg/L	0.12	cv	
1032.0401	51.293	mg/L → 10156 mg/Kg	.00	cv	
1033.0401	17.685	mg/L → 3468	0.06	cv	
1034.0401	63.050	mg/L → 12363	0.34	cv	
1035.0401	52.960	mg/L → 10377	1.33	cv	
1035.0401 R	60.130	mg/L → 12026	0.63	cv	
1035.0401 S	54.455	mg/L NR	0.51	cv	
1036.0401	22.435	mg/L → 4356	1.04	cv	
CAL BLK	-0.002	mg/L	-282.6	cv	
1.00 PPM	1.018	mg/L	0.38	cv	
1037.0401	17.930	mg/L → 3448 ⊥	0.70	cv	
CAL BLK	-0.003	mg/L	-26.03	cv	window edge
1.00 PPM	1.048	mg/L	1.24	cv	

Al_HIGH

blank	-53.77	intensity	-139.4	cv	
standard	3432.500	intensity	1.31	cv	
EPA 386#1 10x	4.841	mg/L	0.31	cv	
10.0 PPM	9.936	mg/L	0.13	cv	
~~500 PPM~~	~~[illegible]~~	~~mg/L~~	~~[illegible]~~	~~cv~~	
100 PPM	220.100	mg/L	0.21	cv	
CAL BLK	-0.004	mg/L	-13.15	cv	
JOB#4906 B-102	-0.003	mg/L <0.200 mg/L	0.9	cv	
1032.0401	20.265	mg/L → 4013 mg/Kg	.18	cv	
1033.0401	[illegible]	mg/L → 1067	1.00	cv	
1034.0401	[illegible]	mg/L → 4970	0.52	cv	
1035.0401	23.035	mg/L → 4430	0.01	cv	
1035.0401 R	23.090	mg/L → 4618	1.02	cv	
1035.0401 S	24.470	mg/L N.R	0.46	cv	
1036.0401	6.651	mg/L → 1291	0.24	cv	
CAL BLK	-0.010	mg/L	-135.7	cv	
1.00 PPM	1.017	mg/L	1.80	cv	
1037.0401	5.135	mg/L → 988 ⊥	1.03	cv	
CAL BLK	0.002	mg/L	1111.4	cv	
1.00 PPM	1.035	mg/L	0.54	cv	

REPORT > SELECT RESULT

ANALYZE > MANUAL MODE

Job #4928

Ag, Al, Ba, Be, Cd, Cr, Co, Cu, Fe, Mn, Ni, Se, V, Zn

Result Name: 8703090844

blank	1035.0401	1116.0401	BLK 122
standard	1035.0401 R	1117.0401	CAL BLK
standard	1035.0401 S	500 PPM ICS	500 PPB
standard	1036.0401	CAL BLK	500 PPB
EPA 336#1 10x	CAL BLK	500 PPB	500 PPM ICB
EPA 283#2 1/50	500 PPB	500 PPB	JOB#4928 B-140
EPA 1183#2	500 PPB	4936 1154.	JOB#4928 B-139
500 PPM ICS	1037.0401	1163.0101	1132.0101
CAL BLK	1110.0401	4943 1186.	1132. 1/10
10000 PPB	1111.0401	1186.0101 R1	JOB#4928 B-141
JOB#4936 B-139	1112.0401	1186.0101 R2	1402.0101
1032.0401	1113.0401	4952 1219.	1403.0101
1033.0401	1114.0401	1220.0101	1404.0101
1034.0401	1115.0401	BLK 115	CAL BLK

Command?

Sb_VHG

blank	57.23	intensity	53.77	cv	
standard	1476.00	intensity	8.41	cv	
standard	1545.00	intensity	2.75	cv	
EPA 1183#2	93.56	ug/L	38.18	cv	
500 PPM ICS	910.25	ug/L	4.52	cv	
CAL BLK	-14.69	ug/L	-215.0	cv	
JOB#4906 B-102	27.65	ug/L <60.0	14.99	cv	
CAL BLK	11.93	ug/L	53.14	cv	
500 PPB	457.10	ug/L	4.15	cv	
1110.0401	-31.67	ug/L <50.0 mg/kg	-.16	cv	window edge
1111.0401	-19.72	ug/L	-75.19	cv	
1112.0401	-1.60	ug/L	-470.9	cv	
1113.0401	-44.52	ug/L	-145.7	cv	window edge
1114.0401	-22.56	ug/L	-112.2	cv	
1115.0401	0.79	ug/L	2216.3	cv	
1116.0401	-25.77	ug/L	-3.34	cv	
1117.0401	19.27	ug/L	67.72	cv	
500 PPM ICS	928.45	ug/L	7.70	cv	
CAL BLK	-41.13	ug/L	-21.04	cv	window edge
500 PPB	465.20	ug/L	6.27	cv	

Zn_VHG

blank	15.41	intensity	7.59	cv	
standard	12395.00	intensity	0.13	cv	
EPA 386#1 10x	971.70	ug/L	2.31	cv	
500 PPM ICS	981.95	ug/L	5.35	cv	
CAL BLK	0.16	ug/L	812.88	cv	
10000 PPB	10285.00	ug/L	1.14	cv	
JOB#4906 B-102	2.30	ug/L <10.0	43.39	cv	
CAL BLK	-0.11	ug/L	-413.6	cv	
500 PPB	531.50	ug/L	0.05	cv	
1110.0401	30.40	15.5 mg/kg	3.22	cv	
1111.0401	3.27	14.1	4.11	cv	
1112.0401	228.25	44.8	0.45	cv	
1113.0401	5465.00	1093	1.99	cv	
1114.0401	135.70	29.9	0.63	cv	
1115.0401	151.40	29.2	0.29	cv	
1116.0401	756.20	143	1.12	cv	
1117.0401	75.07	14.3	0.51	cv	
500 PPM ICS	1000.25	ug/L	5.06	cv	
CAL BLK	0.97	ug/L	104.98	cv	
500 PPB	532.80	ug/L	0.56	cv	

Cd_VHG

blank	14.95	intensity	78.99	cv	
standard	7065.50	intensity	0.63	cv	
EPA 386#1 10x	244.80	ug/L	3.07	cv	
500 PPM ICS	881.30	ug/L	5.38	cv	
CAL BLK	-2.40	ug/L	-22.85	cv	window edge
10000 PPB	10071.50	ug/L	1.13	cv	
JOB#4906 B-102	-1.08	ug/L <5.00	-84.32	cv	
CAL BLK	-1.58	ug/L	-28.83	cv	
500 PPB	521.55	ug/L	0.23	cv	
1110.0401	-0.97	ug/L <1.00 mg/kg	-2.7	cv	
1111.0401	-0.43	ug/L	-128.3	cv	
1112.0401	-0.12	ug/L	-190.2	cv	
1113.0401	119.05	23.8	1.03	cv	

1114.0401	0.15	ug/L	<1.00 mg/Kg	.16 cv	
1115.0401	0.80	ug/L		205.06 cv	
1116.0401	6.34	ug/L	→ 1.23	10.82 cv	
1117.0401	-0.79	ug/L		-152.3 cv	
500 PPM ICS	895.85	ug/L		4.89 cv	
CAL BLK	-1.18	ug/L		-212.5 cv	window edge
500 PPB	522.40	ug/L		0.72 cv	

Co_VHG

blank	2.85	intensity		316.38 cv	window edge
standard	3441.50	intensity		0.28 cv	
EPA 386#1 10x	953.75	ug/L		1.57 cv	
500 PPM ICS	880.40	ug/L		4.55 cv	
CAL BLK	-0.68	ug/L		-931.0 cv	window edge
10000 PPB	9878.50	ug/L		0.61 cv	
JOB#4906 B-102	3.89	ug/L	<50.0	20.12 cv	
CAL BLK	2.79	ug/L		10.98 cv	
500 PPB	518.90	ug/L		0.44 cv	
1110.0401	7.03	ug/L	<10.0 mg/Kg	.81 cv	
1111.0401	15.57	ug/L		47.42 cv	
1112.0401	20.99	ug/L		14.54 cv	
1113.0401	25.52	ug/L		5.38 cv	
1114.0401	21.89	ug/L		10.15 cv	
1115.0401	15.44	ug/L		15.56 cv	
1116.0401	24.13	ug/L		0.92 cv	
1117.0401	14.98	ug/L		4.25 cv	
500 PPM ICS	889.25	ug/L		2.91 cv	
CAL BLK	1.58	ug/L		125.77 cv	window edge
500 PPB	518.10	ug/L		0.44 cv	

Ni_VHG

blank	37.47	intensity		31.31 cv	
standard	8400.50	intensity		0.14 cv	
EPA 386#1 10x	974.65	ug/L		1.46 cv	
500 PPM ICS	888.95	ug/L		4.39 cv	
CAL BLK	-2.54	ug/L		-32.81 cv	window edge
10000 PPB	10175.00	ug/L		0.42 cv	
JOB#4906 B-102	-2.09	ug/L	<40.0	-206.9 cv	
CAL BLK	-0.76	ug/L		-117.8 cv	
500 PPB	526.20	ug/L		0.00 cv	
1110.0401	21.48	ug/L	<8.00 mg/Kg	.31 cv	
1111.0401	28.04	ug/L		0.19 cv	
1112.0401	44.25	ug/L		1.09 cv	
1113.0401	176.75	ug/L	→ 35.4	1.32 cv	
1114.0401	48.92	ug/L	→ 9.41	5.16 cv	
1115.0401	41.10	ug/L	→ 7.92	12.30 cv	
1116.0401	61.97	ug/L	→ 11.7	11.04 cv	
1117.0401	33.86	ug/L	<8.00	25.35 cv	
500 PPM ICS	900.60	ug/L		2.39 cv	
CAL BLK	-0.00	ug/L		-64960 cv	window edge
500 PPB	517.15	ug/L		1.67 cv	

Mn_VHG

blank	2.08	intensity		220.25 cv	
standard	12285.00	intensity		0.19 cv	
EPA 386#1 10x	977.65	ug/L		1.52 cv	
500 PPM ICS	932.15	ug/L		4.66 cv	
CAL BLK	0.05	ug/L		508.12 cv	
10000 PPB	10285.00	ug/L		0.59 cv	

JOB#4906 B-102	0.58	ug/L	<15.0	34.32 cv
CAL BLK	0.01	ug/L		3868.3 cv
500 PPB	531.95	ug/L		0.03 cv
1110.0401	479.15	ug/L	92.1 mg/Kg	0.30 cv
1111.0401	438.35	ug/L	84.3	0.45 cv
1112.0401	997.75	ug/L	196.	0.86 cv
1113.0401	1284.50	ug/L	257.	1.15 cv
1114.0401	892.20	ug/L	170	0.98 cv
1115.0401	793.65	ug/L	153	0.35 cv
1116.0401	1494.50	ug/L	282	0.73 cv
1117.0401	330.80	ug/L	64.0	0.82 cv
500 PPM ICS	946.00	ug/L		3.23 cv
CAL BLK	-0.29	ug/L		-165.6 cv
500 PPB	531.90	ug/L		0.08 cv

Fe_VHG

blank	37.38	intensity		73.62 cv
standard	6636.00	intensity		0.46 cv
EPA 386#1 10x	985.15	ug/L		1.45 cv
500 PPM ICS	156050.0	ug/L		0.04 cv
CAL BLK	-0.15	ug/L		-2232. cv
10000 PPB	10370.00	ug/L		0.95 cv
JOB#4906 B-102	10.59	ug/L		9.85 cv
CAL BLK	0.32	ug/L		197.02 cv
500 PPB	540.95	ug/L		0.01 cv
1110.0401	254500.00	ug/L		0.16 cv
1111.0401	245300.00	ug/L		0.29 cv
1112.0401	442400.00	ug/L		1.57 cv
1113.0401	499395.00	ug/L		0.19 cv
1114.0401	405850.00	ug/L		0.47 cv
1115.0401	377100.00	ug/L		0.00 cv
1116.0401	562350.00	ug/L		0.28 cv
1117.0401	207150.00	ug/L		0.55 cv
500 PPM ICS	156150.0	ug/L		0.11 cv
CAL BLK	2.35	ug/L		8.74 cv
500 PPB	547.15	ug/L		0.34 cv

Refer to dilutions

Cr_VHG

blank	-1.63	intensity		-1364. cv window edge
standard	9314.00	intensity		0.24 cv
EPA 386#1 10x	971.05	ug/L		0.28 cv
500 PPM ICS	928.50	ug/L		4.90 cv
CAL BLK	2.71	ug/L		45.47 cv
10000 PPB	10265.00	ug/L		0.03 cv
JOB#4906 B-102	0.77	ug/L	<10.0	103.05 cv
CAL BLK	-1.19	ug/L		-175.7 cv window edge
500 PPB	537.90	ug/L		0.63 cv
1110.0401	40.85	ug/L	3.9 mg/Kg	7.06 cv
1111.0401	21.79	ug/L	4.27	0.23 cv
1112.0401	37.74	ug/L	7.46	0.11 cv
1113.0401	67.36	ug/L	13.5	3.14 cv
1114.0401	29.44	ug/L	5.85	3.02 cv
1115.0401	27.03	ug/L	5.20	0.26 cv
1116.0401	42.64	ug/L	8.05	8.28 cv
1117.0401	20.94	ug/L	3.89	8.44 cv
500 PPM ICS	936.25	ug/L		3.16 cv
CAL BLK	2.78	ug/L		107.44 cv
500 PPB	531.65	ug/L		0.09 cv

V_VHG

blank	50.52	intensity	143.54	cv	
standard	29080.00	intensity	0.40	cv	
EPA 386#1 10x	2463.50	ug/L	1.01	cv	
500 PPM ICS	966.85	ug/L	3.75	cv	
CAL BLK	0.27	ug/L	723.53	cv	
10000 PPB	10805.00	ug/L	0.10	cv	
JOB#4906 B-102	-0.46	ug/L	<50.0 -539.8	cv	
CAL BLK	-1.77	ug/L	-248.7	cv	window edge
500 PPB	537.85	ug/L	0.59	cv	
1110.0401	30.80	ug/L	<100mg/Kg 1.97	cv	
1111.0401	29.74	ug/L	<10.0 1.84	cv	
1112.0401	54.61	ug/L	10.7 4.62	cv	
1113.0401	68.19	ug/L	13.6 5.15	cv	
1114.0401	46.45	ug/L	<10.0 0.66	cv	
1115.0401	44.47	ug/L	0.14	cv	
1116.0401	54.23	ug/L	12.5 0.05	cv	
1117.0401	26.67	ug/L	<10.0 9.51	cv	
500 PPM ICS	982.90	ug/L	3.03	cv	
CAL BLK	-0.80	ug/L	-148.4	cv	window edge
500 PPB	536.60	ug/L	0.05	cv	

Be_VHG

blank	2.25	intensity	139.97	cv	window edge
standard	8169.50	intensity	0.13	cv	
EPA 386#1 10x	959.60	ug/L	1.56	cv	
500 PPM ICS	974.65	ug/L	3.41	cv	
CAL BLK	0.27	ug/L	29.91	cv	
10000 PPB	10190.00	ug/L	0.59	cv	
JOB#4906 B-102	0.12	ug/L	<5.00 8.11	cv	
CAL BLK	0.19	ug/L	16.99	cv	
500 PPB	527.65	ug/L	0.10	cv	
1110.0401	0.89	ug/L	<1.00mg/Kg 3.75	cv	
1111.0401	0.52	ug/L	35.75	cv	window edge
1112.0401	1.35	ug/L	3.09	cv	
1113.0401	1.69	ug/L	14.82	cv	
1114.0401	1.28	ug/L	17.03	cv	
1115.0401	1.14	ug/L	2.79	cv	
1116.0401	1.98	ug/L	5.79	cv	
1117.0401	0.11	ug/L	861.76	cv	
500 PPM ICS	982.15	ug/L	1.79	cv	
CAL BLK	0.19	ug/L	78.40	cv	
500 PPB	526.45	ug/L	0.68	cv	

Cu_VHG

blank	103.84	intensity	9.49	cv	window edge
standard	26410.00	intensity	0.19	cv	
EPA 386#1 10x	956.95	ug/L	0.36	cv	
500 PPM ICS	986.50	ug/L	3.50	cv	
CAL BLK	1.19	ug/L	43.05	cv	
10000 PPB	10545.00	ug/L	0.45	cv	
JOB#4906 B-102	0.25	ug/L	<25.0 118.62	cv	
CAL BLK	-0.18	ug/L	-516.6	cv	
500 PPB	529.95	ug/L	0.12	cv	
1110.0401	13.07	ug/L	<5.00mg/Kg 2.21	cv	
1111.0401	6.04	ug/L	1 1.41	cv	
1112.0401	31.88	ug/L	6.84 0.73	cv	
1113.0401	798.90	ug/L	160 0.66	cv	
1114.0401	27.95	ug/L	5.38 2.78	cv	

1115.0401	22.19	ug/L <5.00 mg/Kg	.05	cv	
1116.0401	133.95	ug/L 26.2	1.30	cv	
1117.0401	12.80	ug/L <5.00	21.55	cv	
500 PPM ICS	1005.70	ug/L	1.88	cv	
CAL BLK	-0.43	ug/L	-536.8	cv	
500 PPB	530.50	ug/L	1.30	cv	

Ag_VHG

blank	87.37	intensity	39.20	cv	
standard	29910.00	intensity	0.63	cv	
EPA 283#2 1/50	110.90	ug/L	2.55	cv	
500 PPM ICS	1079.50	ug/L	3.29	cv	
CAL BLK	-2.62	ug/L	-65.07	cv	window edge
JOB#4906 B-102	-0.10	ug/L <10.0	-1250.	cv	window edge
CAL BLK	-0.77	ug/L	-603.1	cv	window edge
500 PPB	521.85	ug/L	1.16	cv	
1110.0401	0.68	ug/L <2.00 mg/Kg	4.99	cv	window edge
1111.0401	-3.51	ug/L	-7.83	cv	window edge
1112.0401	1.03	ug/L	150.74	cv	
1113.0401	5.25	ug/L	4.16	cv	
1114.0401	2.83	ug/L	28.95	cv	
1115.0401	-1.47	ug/L	-199.9	cv	window edge
1116.0401	-0.66	ug/L	-343.5	cv	
1117.0401	-0.24	ug/L	-102.9	cv	window edge
500 PPM ICS	1087.00	ug/L	1.26	cv	
CAL BLK	-2.53	ug/L	-28.09	cv	window edge
500 PPB	522.35	ug/L	0.87	cv	

Al_VHG

blank	49.12	intensity	4.87	cv	
standard	17655.00	intensity	1.15	cv	
EPA 386#1 10x	5012.00	ug/L	0.85	cv	
500 PPM ICS	52620.00	ug/L	0.32	cv	
CAL BLK	-11.01	ug/L	-33.20	cv	window edge
10000 PPB	10740.00	ug/L	0.14	cv	
JOB#4906 B-102	8.17	ug/L	3.42	cv	
CAL BLK	5.64	ug/L	66.16	cv	
500 PPB	546.40	ug/L	1.17	cv	
1110.0401	10075.00	ug/L	0.39	cv	
1111.0401	8530.00	ug/L	0.38	cv	
1112.0401	17805.00	ug/L	0.18	cv	
1113.0401	25075.00	ug/L	0.27	cv	
1114.0401	14770.00	ug/L	0.73	cv	
1115.0401	14000.00	ug/L	0.19	cv	
1116.0401	28490.00	ug/L	0.14	cv	
1117.0401	9222.00	ug/L	0.38	cv	
500 PPM ICS	52650.00	ug/L	0.16	cv	
CAL BLK	-6.41	ug/L	-25.76	cv	window edge
500 PPB	544.35	ug/L	0.87	cv	

Refer to dilations

Ba_VHG

blank	3.93	intensity	22.75	cv	
standard	10775.00	intensity	0.40	cv	
EPA 283#2 1/50	2169.50	ug/L	0.87	cv	
500 PPM ICS	1006.15	ug/L	2.95	cv	
CAL BLK	0.19	ug/L	33.70	cv	
10000 PPB	10670.00	ug/L	0.54	cv	
JOB#4906 B-102	0.14	ug/L <200	14.81	cv	
CAL BLK	0.27	ug/L	14.47	cv	

500 PPB	551.05	ug/L	0.61 cv
1110.0401	259.90	ug/L ≥ 50.0	0.50 cv
1111.0401	199.85	ug/L < 40.0	0.66 cv
1112.0401	593.50	ug/L ≥ 110	0.75 cv
1113.0401	837.00	ug/L ≥ 167	0.22 cv
1114.0401	434.95	ug/L ≥ 86.7	0.80 cv
1115.0401	431.65	ug/L ≥ 83.0	0.05 cv
1116.0401	1724.00	ug/L ≥ 325	0.60 cv
1117.0401	175.45	ug/L < 40.0	0.51 cv
500 PPM ICS	1018.50	ug/L	1.28 cv
CAL BLK	0.60	ug/L	60.12 cv
500 PPB	544.10	ug/L	0.16 cv

Dead Creek

REPORT > SELECT RESULT

ANALYZE > MANUAL MODE

Job #4928
Fe, Al

87/03/10

11:16

Result Name: 8703101014

blank	1036.0401
standard	CAL BLK
EPA 3864-1 10%	1.00 PPM
10.0 PPM	1037.0401
500 PPM	1110.0401
100 PPM	1111.0401
CAL BLK	1112.0401
JOB#4906 S-100	1113.0401
1030.0401	1114.0401
1033.0401	1115.0401
1034.0401	1116.0401
1035.0401	1117.0401
1035.0401 R	CAL BLK
1035.0401 S	1.00 PPM

Command?

Fe_HIGH

blank	4.46	intensity	33.29	cv	
standard	2387.500	intensity	1.57	cv	
EPA 386#1 10x	0.977	mg/L	0.45	cv	
10.0 PPM	9.978	mg/L	0.19	cv	
500 PPM	404.250	mg/L	0.40	cv	
100 PPM	96.385	mg/L	0.11	cv	
CAL BLK	-0.000	mg/L	-709.7	cv	
JOB#4906 B-102	0.014	mg/L <0.100	0.12	cv	
CAL BLK	-0.002	mg/L	-282.6	cv	
1.00 PPM	1.018	mg/L	0.38	cv	
1110.0401	23.660	mg/L 4550 mg/Kg	0.52	cv	
1111.0401	23.130	mg/L 4448	0.43	cv	
1112.0401	40.930	mg/L 8025	0.65	cv	
1113.0401	47.180	mg/L 9251	0.04	cv	
1114.0401	37.985	mg/L 7305	0.14	cv	
1115.0401	35.110	mg/L 6752	0.12	cv	
1116.0401	53.015	mg/L 10003	0.07	cv	
1117.0401	20.465	mg/L 3895	0.04	cv	
CAL BLK	-0.003	mg/L	-26.03	cv	window edge
1.00 PPM	1.048	mg/L	1.24	cv	

Al_HIGH

blank	-53.77	intensity	-139.4	cv	
standard	3432.500	intensity	1.31	cv	
EPA 386#1 10x	4.841	mg/L	0.31	cv	
10.0 PPM	9.936	mg/L	0.13	cv	
500 PPM	300.500	mg/L	0.04	cv	
100 PPM	220.100	mg/L	0.21	cv	
CAL BLK	-0.004	mg/L	-13.15	cv	
JOB#4906 B-102	-0.003	mg/L <0.200	-130.9	cv	
CAL BLK	-0.010	mg/L	-135.7	cv	
1.00 PPM	1.017	mg/L	1.80	cv	
1110.0401	9.166	mg/L 1763 mg/Kg	0.04	cv	
1111.0401	7.813	mg/L 1497	0.47	cv	
1112.0401	16.215	mg/L 3179	0.13	cv	
1113.0401	22.962	mg/L 4593	0.02	cv	
1114.0401	13.760	mg/L 2646	0.19	cv	
1115.0401	13.035	mg/L 2507	0.05	cv	
1116.0401	26.010	mg/L 4908	0.11	cv	
1117.0401	9.124	mg/L 1738	0.21	cv	
CAL BLK	0.002	mg/L	1111.4	cv	
1.00 PPM	1.035	mg/L	0.54	cv	

REPORT > SELECT RESULT

Job # 4971

Al, Sb, Ba, Be, Cd, Ca, Co, Cu, Fe, Mn, Ni, V, Pb, Zn

87/03/13

08:45

Result Name: 8703120831

blank	CAL BLK	1278 0401	JOB#4995 B-160
standard	JOB#4971 B-124	JOB#4989 B-144	1450.0701X
standard	1274 0401	1427.0401	1451.0701X
standard	100 PPM	1428.0401	1452.0701X
500 PPB	500 PPM	1428.0401 R	1452.0701RX
500 PPB	50 PPM	1429.0401	500 PPM ICS
EPA 386#1 10x	1275 0401	1429.0401 S	CAL BLK
EPA 283#2 1/50	1275 0401 R	1430.0401	500 PPB
EPA 1183#2	1275 0401 S	1276 1/10	5043 BLK 156
EPA 1183#2	1276 0401	1277 1/10	5043 BLK 156
EPA 1183#2	CAL BLK	500 PPM ICS	1650.0301
500 PPM ICS	500 PPB	CAL BLK	1653.0301
10000 PPB	500 PPB	500 PPB	1653.0301 R
10000 PPB	1277 0401	500 PPB	1654.0301

Command?

Sb_VHG

blank	46.06	intensity	37.60	cv
standard	1540.50	intensity	1.31	cv
500 PPB	467.25	ug/L	6.83	cv
EPA 1183#2	88.48	ug/L	16.05	cv
500 PPM ICS	867.70	ug/L	13.12	cv
CAL BLK	-4.14	ug/L	-88.92	cv
JOB#4971 B-106	13.41	ug/L <60.0	84.44	cv
1274.0401	9.85	ug/L <12.0 mg/Kg	1.19	cv
1275.0401	-7.58	ug/L	-42.10	cv
1275.0401 R	6.90	ug/L	244.23	cv
1275.0401 S	131.35	ug/L 26% rec	11.23	cv
1276.0401	16.29	ug/L	27.62	cv
CAL BLK	-9.27	ug/L	-104.2	cv
500 PPB	486.30	ug/L	8.78	cv
1277.0401	49.68	ug/L	4.57	cv
1278.0401	14.65	ug/L	6.72	cv
500 PPM ICS	824.50	ug/L	11.96	cv
CAL BLK	22.87	ug/L	21.53	cv
500 PPB	466.75	ug/L	3.99	cv

25.7 / 100.0

Sn_VHG

blank	23.07	intensity	22.30	cv
standard	13370.00	intensity	1.19	cv
standard	13400.00	intensity	0.30	cv
500 PPB	513.40	ug/L	1.65	cv
EPA 386#1 10x	950.75	ug/L	0.03	cv
500 PPM ICS	918.60	ug/L	8.40	cv
10000 PPB	9990.50	ug/L	1.54	cv
CAL BLK	0.16	ug/L	59.03	cv
JOB#4971 B-106	0.91	ug/L <20.0	134.62	cv
1274.0401	[illegible]	73.2 mg/Kg	3.73	cv
1275.0401	[illegible]	133	0.69	cv
1275.0401 R	[illegible]	132	0.52	cv
1275.0401 S	1109.00	ug/L -85% rec	0.56	cv
1276.0401	[illegible]	1917	1.58	cv
CAL BLK	-0.88	ug/L	-215.7	cv
500 PPB	487.95	ug/L	0.95	cv
1277.0401	[illegible]	ug/L	2.94	cv
1278.0401	[illegible]	436	0.04	cv
1277. 1/10	1935.00	2981	0.09	cv
500 PPM ICS	935.05	ug/L	2.46	cv
CAL BLK	-0.47	ug/L	-454.0	cv
500 PPB	504.10	ug/L	0.82	cv

217 - 132 / 100

Cd_VHG

blank	4.87	intensity	140.06	cv
standard	7610.50	intensity	1.43	cv
standard	7642.00	intensity	0.46	cv
500 PPB	509.25	ug/L	1.45	cv
EPA 386#1 10x	238.55	ug/L	2.56	cv
500 PPM ICS	832.15	ug/L	6.75	cv
10000 PPB	9820.00	ug/L	0.61	cv
CAL BLK	-1.96	ug/L	-70.65	cv
JOB#4971 B-106	0.54	ug/L <5.00	334.76	cv
1274.0401	3.49	ug/L <1.00 mg/Kg	7.71	cv
1275.0401	[illegible]	1.43	12.40	cv
1275.0401 R	[illegible]	1.59	24.14	cv

window edge

1275.0401 S	51.13	ug/L	-86% rec	0.30	cv
1276.0401	[illegible]	[illegible]	→ 8.85 mg/Kg	3.76	cv
CAL BLK	0.91	ug/L		77.09	cv
500 PPB	498.65	ug/L		0.83	cv
1277.0401	[illegible]	[illegible]	→ 3.52	13.82	cv
1278.0401	0.95	ug/L	< 1.00	13.04	cv
500 PPM ICS	838.55	ug/L		2.96	cv
CAL BLK	-0.09	ug/L		-8.41	cv
500 PPB	500.30	ug/L		0.59	cv

10.0 − 1.4 / 10

PB_VHC

blank	10.60	intensity		1112.4	cv	window edge
standard	3295.00	intensity		3.57	cv
standard	3016.00	intensity		0.63	cv
500 PPB	531.10	ug/L		2.19	cv
EPA 386#1 10x	1003.00	ug/L		0.37	cv
500 PPM ICS	850.85	ug/L		6.24	cv
10000 PPB	10135.00	ug/L		0.51	cv
CAL BLK	14.98	ug/L		35.57	cv
JOB#4971 E-126	25.99	ug/L	< 100	23.75	cv
1274.0401	[illegible]	[illegible]	→ 21.5 mg/Kg	7.91	cv
1275.0401	[illegible]	[illegible]	→ 44.6	1.20	cv
1275.0401 R	[illegible]	[illegible]	→ 42.8	18.72	cv
1275.0401 S	434.47	ug/L	-86% rec	1.13	cv
1276.0401	[illegible]	[illegible]	→ 2026	1.41	cv
CAL BLK	31.60	ug/L		3.38	cv
500 PPB	526.75	ug/L		1.17	cv
1277.0401	[illegible]	[illegible]	→ 583	4.21	cv
1278.0401	[illegible]	[illegible]	→ 19.1	2.29	cv
500 PPM ICS	793.60	ug/L		2.15	cv
CAL BLK	13.80	ug/L		55.58	cv
500 PPB	533.05	ug/L		5.56	cv

129 − 42.8 / 100

CD_VHC

blank	11.92	intensity		69.58	cv
standard	3694.50	intensity		2.51	cv
standard	3610.50	intensity		0.06	cv
500 PPB	509.25	ug/L		2.21	cv
EPA 386#1 10x	947.30	ug/L		1.72	cv
500 PPM ICS	854.00	ug/L		5.49	cv
10000 PPB	9949.50	ug/L		-0.13	cv
CAL BLK	5.48	ug/L		117.32	cv
JOB#4971 B-126	-0.76	ug/L	< 50.0	-764.8	cv
1274.0401	16.28	ug/L	< 10.0 mg/Kg	35.95	cv
1275.0401	25.79	ug/L		4.22	cv
1275.0401 R	23.89	ug/L		5.70	cv
1275.0401 S	476.55	ug/L	-95% rec	0.97	cv
1276.0401	[illegible]	[illegible]	→ 20.1	6.91	cv
CAL BLK	0.84	ug/L		424.54	cv
500 PPB	497.75	ug/L		0.49	cv
1277.0401	21.35	ug/L	< 10.0	9.86	cv
1278.0401	[illegible]	[illegible]	→ 11.4	1.05	cv
500 PPM ICS	836.25	ug/L		1.64	cv
CAL BLK	-3.11	ug/L		-44.41	cv	window edge
500 PPB	500.00	ug/L		0.00	cv

95.3 / 100

NI_VHC

blank	21.71	intensity		402.10	cv	window edge
standard	8925.00	intensity		0.77	cv

500 PPB	511.65	ug/L	0.07	cv
EPA 386#1 10x	963.65	ug/L	2.15	cv
500 PPM ICS	856.20	ug/L	4.25	cv
10000 PPB	9925.50	ug/L	0.00	cv
CAL BLK	4.56	ug/L	158.21	cv
JOB#4971 B-126	-1.03	ug/L <40.0	-62.78	cv
1274.0401	18.91	→ 8.48 mg/kg	3.71	cv
1275.0401	59.48	→ 10.9	0.09	cv
1275.0401 R	59.90	→ 10.9	5.83	cv
1275.0401 S	513.15	ug/L −89% rec	0.87	cv
1276.0401	513.83	→ 79.6	0.50	cv
CAL BLK	-1.05	ug/L	-360.5	cv
500 PPB	487.40	ug/L	0.98	cv
1277.0401	1435.50	→ 279	2.14	cv
1278.0401	35.17	ug/L <8.00	4.71	cv
500 PPM ICS	826.60	ug/L	0.87	cv
CAL BLK	1.13	ug/L	896.67	cv window edge
500 PPB	493.35	ug/L	0.70	cv

100 − 10.9 / 100

Mn_VHG

blank	4.51	intensity	179.82	cv
standard	12910.00	intensity	3.63	cv
500 PPB	512.50	ug/L	0.30	cv
EPA 386#1 10x	954.65	ug/L	1.35	cv
500 PPM ICS	887.95	ug/L	4.89	cv
10000 PPB	9943.00	ug/L	0.23	cv
CAL BLK	-0.11	ug/L	-568.3	cv
JOB#4971 B-126	-0.13	ug/L <15.0	-32.68	cv
1274.0401	238.13	→ 62.5 mg/kg	3.03	cv
1275.0401	389.00	→ 282	0.43	cv
1275.0401 R	390.00	→ 283	0.07	cv
1275.0401 S	1845.50	ug/L −93% rec	0.57	cv
1276.0401	552.55	→ 193	1.10	cv
CAL BLK	-0.15	ug/L	-210.3	cv
500 PPB	498.05	ug/L	1.12	cv
1277.0401	386.90	→ 135	1.50	cv
1278.0401	103.65	→ 36.9	0.41	cv
500 PPM ICS	878.50	ug/L	1.98	cv
CAL BLK	0.07	ug/L	702.53	cv
500 PPB	509.85	ug/L	0.20	cv

366 − 283 / 100

Fe_HIGH

blank	9.13	intensity	71.35	cv
standard	2497.500	intensity	2.71	cv
standard	2426.500	intensity	0.91	cv
500 PPB	0.519	mg/L	0.54	cv
EPA 386#1 10x	0.977	mg/L	1.41	cv
500 PPM ICS	411.050	mg/L	1.22	cv
10000 PPB	9.880	mg/L	0.92	cv
CAL BLK	0.004	mg/L	25.82	cv
JOB#4971 B-126	-0.002	mg/L <0.100	-57.05	cv
1274.0401	26.950	→ 5733 mg/kg	2.58	cv
100 PPM	89.955	mg/L	0.04	cv
50 PPM	49.635	mg/L	0.26	cv
1275.0401	48.800	→ 9760	0.75	cv
1275.0401 R	43.550	→ 9447	2.41	cv
1275.0401 S	89.190	→ N.D	0.06	cv
1276.0401	[illegible]	mg/L	1.88	cv
CAL BLK	0.000	mg/L	66.59	cv

Sample amount is 3-5× greater than the spike amount.

500 PPB	0.509	mg/L		0.45	cv
1277.0401	[illegible]	[illegible]	8566 mg/Kg	[illegible]	cv
1278.0401	[illegible]	[illegible]	3490	[illegible]	cv
1276. 1/10	[illegible]	[illegible]	34856	0.02	cv
500 PPM ICS	414.100	mg/L		0.51	cv
CAL BLK	0.002	mg/L		78.73	cv
500 PPB	0.522	mg/L		1.59	cv

Cr_VHG

blank	5.00	intensity		437.81	cv	
standard	9786.00	intensity		0.73	cv	
500 PPB	511.90	ug/L		1.39	cv	
EPA 386#1 10x	959.00	ug/L		1.18	cv	
500 PPM ICS	888.40	ug/L		4.09	cv	
10000 PPB	10035.00	ug/L		0.21	cv	
CAL BLK	-0.75	ug/L		-275.5	cv	
JOB#4971 B-126	1.01	ug/L	<10.0	35.30	cv	
1274.0401	51.52	[illegible]	9.81 mg/Kg	4.27	cv	
1275.0401	41.82	[illegible]	8.36	0.78	cv	
1275.0401 R	39.98	[illegible]	7.76	2.23	cv	$\frac{43.5-7.76}{40}$
1275.0401 S	222.10	ug/L	-89% rec	1.08	cv	
1276.0401	3327.00	[illegible]	640	1.79	cv	
CAL BLK	1.22	ug/L		121.34	cv	
500 PPB	498.35	ug/L		0.78	cv	
1277.0401	389.60	[illegible]	75.7	2.41	cv	
1278.0401	49.02	[illegible]	9.34	0.38	cv	
500 PPM ICS	875.10	ug/L		2.84	cv	
CAL BLK	0.62	ug/L		52.89	cv	
500 PPB	513.10	ug/L		0.60	cv	

V_VHG

blank	12.09	intensity		17.74	cv	
standard	30835.00	intensity		0.74	cv	
500 PPB	502.45	ug/L		0.16	cv	
EPA 386#1 10x	2347.00	ug/L		0.98	cv	
500 PPM ICS	889.65	ug/L		3.54	cv	
10000 PPB	10175.00	ug/L		0.05	cv	
CAL BLK	-0.71	ug/L		-24.98	cv	
JOB#4971 B-126	-1.88	ug/L	<50.0	-28.52	cv	
1274.0401	138.75	[illegible]	26.4 mg/Kg	0.19	cv	
1275.0401	65.38	[illegible]	13.1	1.28	cv	
1275.0401 R	67.24	[illegible]	13.1	2.52	cv	$\frac{98.8-13.1}{100}$
1275.0401 S	493.90	ug/L	-86% rec	0.52	cv	
1276.0401	4448.50	[illegible]	855	1.95	cv	
CAL BLK	0.74	ug/L		267.13	cv	
500 PPB	488.80	ug/L		1.04	cv	
1277.0401	392.90	[illegible]	76.3	2.59	cv	
1278.0401	33.77	ug/L	<10.0	12.87	cv	
500 PPM ICS	900.35	ug/L		1.82	cv	
CAL BLK	0.36	ug/L		12.07	cv	window edge
500 PPB	507.60	ug/L		0.39	cv	

Ba_VHG

blank	7.45	intensity		88.42	cv	window edge
standard	8558.00	intensity		0.07	cv	
500 PPB	502.75	ug/L		0.51	cv	
EPA 386#1 10x	929.00	ug/L		0.78	cv	
500 PPM ICS	932.70	ug/L		4.54	cv	
10000 PPB	10030.00	ug/L		0.01	cv	

CAL BLK	-0.35	ug/L	-13.03	cv	
JOB#4971 B-126	-1.32	ug/L	<5.00 -47.28	cv	
1274.0401	0.17	ug/L	<1.00 mg/Kg 5.33	cv	9.44
1275.0401	2.08	ug/L	12.99	cv	10
1275.0401 R	1.73	ug/L	3.88	cv	
1275.0401 S	47.18	ug/L	94% rec 0.59	cv	
1276.0401	2.35	ug/L	5.13	cv	
CAL BLK	-0.42	ug/L	-25.22	cv	
500 PPB	486.90	ug/L	0.26	cv	
1277.0401	0.05	ug/L	9.90	cv	
1278.0401	-0.50	ug/L	-87.64	cv	window edge
500 PPM ICS	895.10	ug/L	1.31	cv	
CAL BLK	-0.23	ug/L	-25.92	cv	
500 PPB	497.95	ug/L	0.60	cv	

Cu_VHG

blank	168.70	intensity	13.15	cv	
standard	26930.00	intensity	0.15	cv	
500 PPB	503.75	ug/L	0.09	cv	
EPA 386#1 10x	942.20	ug/L	0.65	cv	
500 PPM ICS	928.80	ug/L	3.33	cv	
10000 PPB	10330.00	ug/L	0.70	cv	
CAL BLK	-3.92	ug/L	-75.79	cv	window edge
JOB#4971 B-126	-4.49	ug/L	<25.0 -65.83	cv	window edge
1274.0401	[illegible]	[illegible]	14.6 mg/Kg	1.05	cv
1275.0401	[illegible]	[illegible]	245	0.13	cv
1275.0401 R	[illegible]	[illegible]	23.7	0.27	cv
1275.0401 S	345.50	ug/L	98% rec	1.06	cv
1276.0401	[illegible]	[illegible]	1440	0.64	cv
CAL BLK	-1.99	ug/L	-95.36	cv	
500 PPB	496.25	ug/L	0.22	cv	
1277.0401	[illegible]	[illegible]	355	2.41	cv
1278.0401	[illegible]	[illegible]	8.23	1.45	cv
500 PPM ICS	920.80	ug/L	1.74	cv	
CAL BLK	-2.14	ug/L	-31.55	cv	
500 PPB	507.85	ug/L	0.32	cv	

67.7 − 23.7 / 50

Ag_VHG

blank	2.35	intensity	1309.5	cv	window edge
standard	30520.00	intensity	0.20	cv	
500 PPB	492.25	ug/L	0.59	cv	
EPA 283#2 1/50	111.55	ug/L	0.56	cv	
500 PPM ICS	1053.00	ug/L	3.65	cv	
CAL BLK	4.72	ug/L	44.90	cv	
JOB#4971 B-126	3.76	ug/L	<10.0 60.79	cv	
1274.0401	2.88	ug/L	<2.00 mg/Kg 9.71	cv	
1275.0401	3.06	ug/L	15.24	cv	
1275.0401 R	3.71	ug/L	17.87	cv	window edge
1275.0401 S	49.21	ug/L	97% rec 3.25	cv	9.65
1276.0401	9.01	ug/L	22.69	cv	10
CAL BLK	4.44	ug/L	1.41	cv	
500 PPB	509.10	ug/L	1.58	cv	
1277.0401	[illegible]	[illegible]	8.26	10.89	cv
1278.0401	5.96	ug/L	<5.00 14.59	cv	
500 PPM ICS	1008.50	ug/L	1.07	cv	
CAL BLK	2.18	ug/L	40.86	cv	window edge
500 PPB	485.95	ug/L	1.24	cv	

Al_HIGH

blank	-76.07	intensity	-90.00	cv	
standard	3398.500	intensity	0.35	cv	
500 PPB	0.519	mg/L	6.11	cv	
EPA 386#1 10x	4.876	mg/L	1.12	cv	
500 PPM ICS	301.900	mg/L	0.00	cv	
10000 PPB	10.080	mg/L	0.27	cv	
CAL BLK	0.011	mg/L	19.76	cv	
JOB#4971 B-126	0.010	mg/L <0.200	164.79	cv	
1274.0401	8.278	mg/L → 1577mg/Kg	2.48	cv	
200 ~~100~~ PPM	213.400	mg/L	1.84	cv	
1275.0401	26.775	mg/L → 5355	1.30	cv	
1275.0401 R	25.525	mg/L → 4956	0.14	cv	
1275.0401 S	25.230	mg/L → N.A.	0.34	cv	
1276.0401	56.365	mg/L → 10839	0.55	cv	
CAL BLK	0.025	mg/L	69.41	cv	
500 PPB	0.491	mg/L	0.41	cv	
1277.0401	15.660	mg/L → 3041	1.99	cv	
1278.0401	4.364	mg/L → 831	0.12	cv	
500 PPM ICS	301.950	mg/L	0.02	cv	
CAL BLK	-0.018	mg/L	-173.2	cv	window edge
500 PPB	0.526	mg/L	6.54	cv	

Ba_VHG

blank	6.59	intensity	124.96	cv	
standard	11085.00	intensity	0.06	cv	
500 PPB	507.55	ug/L	0.47	cv	
EPA 283#2 1/502075.00		ug/L	1.52	cv	
500 PPM ICS	953.10	ug/L	0.21	cv	
10000 PPB	10040.00	ug/L	0.68	cv	
CAL BLK	-0.08	ug/L	-554.3	cv	
JOB#4971 B-126	-0.18	ug/L <200	-9.36	cv	
1274.0401	634.05	ug/L → 121mg/Kg	0.28	cv	
1275.0401	1437.00	ug/L → 287	0.21	cv	
1275.0401 R	1396.00	ug/L → 271	0.12	cv	$\frac{627-271}{400}$
1275.0401 S	2196.00	ug/L -89% res	0.09	cv	
1276.0401	5259.50	ug/L → 1011	0.60	cv	
CAL BLK	-0.21	ug/L	-55.12	cv	
500 PPB	497.30	ug/L	0.90	cv	
1277.0401	1224.00	ug/L → 199	2.38	cv	
1278.0401	599.90	ug/L → 114	0.01	cv	
500 PPM ICS	920.85	ug/L	1.49	cv	
CAL BLK	-0.25	ug/L	-71.97	cv	
500 PPB	516.60	ug/L	0.25	cv	

Dead Creek

REPORT > SELECT RESULT

Job #4989

Ag, Sb, Ba, Be, Cd, Cu, Co, Cr, Fe, Mn, Ni, V, Zn, Pb

Result Name: 8703100831

blank	CAL BLK	1278.0401	JOB#4995 B-160
standard	JOB#4971 B-126	JOB#4989 B-144	1450.0701W
standard	1274.0401	1427.0401	1451.0701W
standard	100 PPM	1428.0401	1452.0701W
500 PPB	500 PPM	1428.0401 R	1452.0701RW
500 PPB	50 PPM	1429.0401	500 PPM ICS
EPA 38441 10x	1275.0401	1429.0401 S	CAL BLK
EPA 283#2 1/50	1275.0401 R	1430.0401	500 PPB
EPA 118340	1275.0401 S	1276. 1/10	5040 BLK 154
EPA 118340	1276.0401	1277. 1/10	5040 BLK 154
EPA 118340	CAL BLK	500 PPM ICS	1450.0301
500 PPM ICS	500 PPB	CAL BLK	1450.0301
10000 PPB	500 PPB	500 PPB	1450.0301 R
10000 PPB	1277.0401	500 PPB	1454.0301

Command?

Sb_VHG

blank	46.06	intensity	37.63	cv	
standard	1540.50	intensity	1.31	cv	
500 PPB	467.25	ug/L	6.83	cv	
EPA 1183#2	88.48	ug/L	16.05	cv	
500 PPM ICS	867.70	ug/L	13.12	cv	
CAL BLK	-4.14	ug/L	-88.92	cv	
CAL BLK	-9.27	ug/L	-104.2	cv	
500 PPB	436.30	ug/L	8.78	cv	
JCD#4989 B-144	24.94	ug/L < 60.0	164.70	cv	
1427.0401	-16.54	ug/L < 40.0 mg/Kg	7.85	cv	window edge
1428.0401	-12.43	ug/L	-352.6	cv	window edge
1428.0401 R	-19.92	ug/L	-65.34	cv	
1429.0401	9.44	ug/L	98.34	cv	
1429.0401 S	253.20	ug/L 47% rec	8.75	cv	47.3 -
1430.0401	0.03	ug/L ⊥	37928.	cv	100
500 PPM ICS	824.50	ug/L	11.96	cv	
CAL BLK	22.87	ug/L	21.53	cv	
500 PPB	466.75	ug/L	3.99	cv	

Zn_VHG

blank	28.07	intensity	22.30	cv	
standard	13877.00	intensity	1.19	cv	
standard	13450.00	intensity	0.30	cv	
500 PPB	513.40	ug/L	1.65	cv	
EPA 386#1 10x	950.75	ug/L	0.03	cv	
500 PPM ICS	918.60	ug/L	8.40	cv	
10000 PPB	9990.50	ug/L	1.54	cv	
CAL BLK	0.16	ug/L	59.03	cv	
CAL BLK	-0.88	ug/L	-215.7	cv	
500 PPB	487.95	ug/L	0.95	cv	
JCD#4989 B-144	1.46	ug/L < 20.0	24.47	cv	
1427.0401	[illegible]	→ 227 mg/Kg	1.12	cv	
1428.0401	[illegible]	→ 23.9	1.28	cv	
1428.0401 R	[illegible]	→ 22.3	0.37	cv	
1429.0401	[illegible]	→ 537	0.02	cv	
1429.0401 S	[illegible]	→ N.A.	1.12	cv	Sample value 3-5x greater than the spike amount.
1430.0401	[illegible]	→ 38.1 ⊥	1.16	cv	
500 PPM ICS	935.05	ug/L	2.46	cv	
CAL BLK	-0.47	ug/L	-454.0	cv	
500 PPB	504.10	ug/L	0.82	cv	

Cd_VHG

blank	4.87	intensity	140.06	cv	
standard	7610.50	intensity	1.43	cv	
standard	7642.00	intensity	0.46	cv	
500 PPB	509.25	ug/L	1.45	cv	
EPA 386#1 10x	238.55	ug/L	2.56	cv	
500 PPM ICS	832.15	ug/L	6.75	cv	
10000 PPB	9820.00	ug/L	0.61	cv	
CAL BLK	-1.96	ug/L	-70.65	cv	window edge
CAL BLK	0.91	ug/L	77.09	cv	
500 PPB	488.65	ug/L	0.85	cv	
JCD#4989 B-144	0.59	ug/L < 5.00	106.48	cv	
1427.0401	[illegible]	→ 3.51 mg/Kg	2.09	cv	
1428.0401	[illegible]	ug/L < 1.00	33.17	cv	
1428.0401 R	1.14	ug/L ⊥	101.09	cv	
1429.0401	[illegible]	→ 8.48 ⊥	2.49	cv	

1429.0401 S	44.16	ug/L	3.29	cv	
1430.0401	2.33	ug/L	1.00	cv	
500 PPM ICS	932.50	ug/L	2.96	cv	
CAL BLK	-0.03	ug/L	-2.41	cv	
500 PPB	500.30	ug/L	0.59	cv	

Pb_VHG

blank	10.63	intensity	1112.4	cv	window edge
standard	3295.00	intensity	3.57	cv	
standard	3216.00	intensity	0.65	cv	
500 PPB	531.10	ug/L	2.19	cv	
EPA 386#1 10x	1003.00	ug/L	0.37	cv	
500 PPM ICS	830.85	ug/L	6.24	cv	
10000 PPB	10035.00	ug/L	0.51	cv	
CAL BLK	14.93	ug/L	35.57	cv	
CAL BLK	31.40	ug/L	3.38	cv	
500 PPB	526.75	ug/L	1.17	cv	
JOB#4989 B-144	12.86	ug/L	18.44	cv	
1427.0401	112.09	ug/L	15.56	cv	
1428.0401	34.75	ug/L	21.78	cv	
1428.0401 R	32.05	ug/L	41.56	cv	
1429.0401	993.38	ug/L	5.68	cv	
1429.0401 S	605.85	ug/L	3.53	cv	
1430.0401	27.49	ug/L	12.47	cv	
500 PPM ICS	793.60	ug/L	2.15	cv	
CAL BLK	13.80	ug/L	55.59	cv	
500 PPB	503.05	ug/L	3.54	cv	

Co_VHG

blank	11.92	intensity	69.58	cv	
standard	3694.50	intensity	2.51	cv	
standard	3610.50	intensity	0.06	cv	
500 PPB	509.25	ug/L	2.21	cv	
EPA 386#1 10x	947.30	ug/L	1.72	cv	
500 PPM ICS	854.00	ug/L	5.49	cv	
10000 PPB	9949.50	ug/L	0.13	cv	
CAL BLK	5.48	ug/L	117.32	cv	
CAL BLK	0.84	ug/L	424.54	cv	
500 PPB	497.75	ug/L	0.49	cv	
JOB#4989 B-144	1.02	ug/L	177.61	cv	
1427.0401	18.10	ug/L	6.99	cv	
1428.0401	11.94	ug/L	10.56	cv	
1428.0401 R	12.26	ug/L	40.68	cv	
1429.0401	29.48	ug/L	12.47	cv	
1429.0401 S	477.25	ug/L	1.41	cv	
1430.0401	13.27	ug/L	35.18	cv	
500 PPM ICS	836.25	ug/L	1.64	cv	
CAL BLK	-3.11	ug/L	-44.41	cv	window edge
500 PPB	500.00	ug/L	0.03	cv	

Ni_VHG

blank	24.71	intensity	402.10	cv	window edge
standard	8925.00	intensity	0.77	cv	
500 PPB	511.65	ug/L	0.07	cv	
EPA 386#1 10x	963.65	ug/L	2.15	cv	
500 PPM ICS	856.20	ug/L	4.25	cv	
10000 PPB	9925.50	ug/L	0.00	cv	
CAL BLK	4.56	ug/L	158.21	cv	
CAL BLK	-1.09	ug/L	-360.5	cv	

500 PPB	487.40	ug/L	0.98	cv	
JOB#4999 B-144	3.50	ug/L	<40.0 22.72	cv	
1427.0401	159.35	→ 30.9 mg/Kg	2.09	cv	
1428.0401	33.49	ug/L <8.00	7.04	cv	
1428.0401 R	34.24	ug/L ⊥	9.75	cv	
1429.0401	579.15	→ 106 mg/Kg	2.72	cv	141 − 106
1429.0401 S	760.75	ug/L -35% rec	1.40	cv	100
1430.0401	53.50	→ 9.72 ⊥	7.60	cv	
500 PPM ICS	826.60	ug/L	0.87	cv	
CAL BLK	1.13	ug/L	896.67	cv	window edge
500 PPB	493.35	ug/L	0.70	cv	

Mn_VHG

blank	4.51	intensity	178.80	cv	
standard	12910.00	intensity	0.63	cv	
500 PPB	512.50	ug/L	0.30	cv	
EPA 386#1 10x	954.65	ug/L	1.35	cv	
500 PPM ICS	887.95	ug/L	4.89	cv	
10000 PPB	9943.00	ug/L	0.23	cv	
CAL BLK	-0.11	ug/L	-568.3	cv	
CAL BLK	-0.15	ug/L	-210.3	cv	
500 PPB	498.05	ug/L	1.12	cv	
JOB#4999 B-144	0.09	ug/L <15.0	51.30	cv	
1427.0401	833.80	→ 156 mg/Kg	0.52	cv	
1428.0401	419.05	→ 123	0.47	cv	
1428.0401 R	397.40	→ 129	0.75	cv	
1429.0401	876.70	→ 161	0.15	cv	950 − 161
1429.0401 S	1350.50	ug/L -89% rec	0.13	cv	100
1430.0401	445.60	→ 89.1 ⊥	1.28	cv	
500 PPM ICS	878.50	ug/L	1.98	cv	
CAL BLK	0.07	ug/L	702.53	cv	
500 PPB	509.85	ug/L	0.20	cv	

Fe_HIGH

blank	9.18	intensity	71.35	cv	
standard	2497.500	intensity	2.71	cv	
standard	2426.500	intensity	0.91	cv	
500 PPB	0.519	mg/L	0.54	cv	
EPA 386#1 10x	0.977	mg/L	1.41	cv	
500 PPM ICS	411.050	mg/L	1.22	cv	
10000 PPB	9.880	mg/L	0.92	cv	
CAL BLK	0.004	mg/L	25.82	cv	
100 PPM	89.955	mg/L	0.04	cv	
50 PPM	49.635	mg/L	0.26	cv	
CAL BLK	0.000	mg/L	66.59	cv	
500 PPB	0.509	mg/L	0.45	cv	
JOB#4999 B-144	0.006	mg/L <0.100	137.42	cv	
1427.0401	49.815	→ 9673 mg/Kg	0.10	cv	
1428.0401	31.900	→ 6139	0.82	cv	
1428.0401 R	31.515	→ 6003	1.49	cv	
1429.0401	50.620	→ 9288	0.02	cv	
1429.0401 S	52.555	mg/L -NA-	0.18	cv	
1430.0401	24.860	→ 4972 ⊥	0.92	cv	
500 PPM ICS	414.100	mg/L	0.51	cv	
CAL BLK	0.002	mg/L	78.73	cv	
500 PPB	0.522	mg/L	1.59	cv	

Cr_VHG

blank	5.03	intensity	437.81	cv

standard	9786.00	intensity	0.73	cv
500 PPB	511.90	ug/L	1.39	cv
EPA 386#1 10x	959.00	ug/L	1.13	cv
500 PPM ICS	868.40	ug/L	4.09	cv
10000 PPB	10035.00	ug/L	0.21	cv
CAL BLK	-0.75	ug/L	-275.5	cv
CAL BLK	1.22	ug/L	121.34	cv
500 PPB	498.35	ug/L	0.78	cv
JOB#4989 B-144	1.68	ug/L <10.0	96.25	cv
1427.0401	54.86	→ 10.7 mg/kg	3.72	cv
1428.0401	24.78	→ 4.91	2.86	cv
1428.0401 R	24.52	→ 4.67	6.67	cv
1429.0401	93.33	→ 17.1	1.06	cv
1429.0401 S	254.20	ug/L -60% rec	0.71	cv
1430.0401	18.99	→ 3.80 ⊥	5.47	cv
500 PPM ICS	875.10	ug/L	2.84	cv
CAL BLK	0.62	ug/L	52.89	cv
500 PPB	513.10	ug/L	0.60	cv

$\frac{47.1 - 17.1}{50}$

V_VHG

blank	12.09	intensity	17.74	cv
standard	30825.00	intensity	0.74	cv
500 PPB	502.45	ug/L	0.16	cv
EPA 386#1 10x	2347.00	ug/L	0.93	cv
500 PPM ICS	839.65	ug/L	3.54	cv
10000 PPB	10175.00	ug/L	0.05	cv
CAL BLK	-0.71	ug/L	-24.98	cv
CAL BLK	0.74	ug/L	267.13	cv
500 PPB	488.80	ug/L	1.04	cv
JOB#4989 B-144	0.78	ug/L <50.0	90.80	cv
1427.0401	80.52	→ 15.6 mg/kg	7.90	cv
1428.0401	44.29	ug/L <10.0 mg/kg	7.95	cv
1428.0401 R	41.10	ug/L ⊥	1.15	cv
1429.0401	63.45	→ 12.2	5.81	cv
1429.0401 S	538.75	ug/L -88% rec	0.49	cv
1430.0401	31.74	ug/L <10.0 ⊥	2.94	cv
500 PPM ICS	900.35	ug/L	1.82	cv
CAL BLK	0.36	ug/L	12.07	cv window edge
500 PPB	507.60	ug/L	0.39	cv

$\frac{99.8 - 12.2}{100}$

Be_VHG

blank	7.45	intensity	88.42	cv window edge
standard	8558.00	intensity	0.07	cv
500 PPB	502.75	ug/L	0.51	cv
EPA 386#1 10x	929.00	ug/L	0.78	cv
500 PPM ICS	932.70	ug/L	4.54	cv
10000 PPB	10030.00	ug/L	0.01	cv
CAL BLK	-0.35	ug/L	-13.03	cv
CAL BLK	-0.42	ug/L	-25.22	cv
500 PPB	486.90	ug/L	0.26	cv
JOB#4989 B-144	-0.44	ug/L <5.00	-13.36	cv
1427.0401	1.05	ug/L <1.00 mg/kg	6.98	cv
1428.0401	0.33	ug/L	36.63	cv
1428.0401 R	0.36	ug/L	72.89	cv
1429.0401	1.33	ug/L	3.57	cv
1429.0401 S	47.94	ug/L -89% rec	2.04	cv
1430.0401	0.11	ug/L ⊥	105.22	cv
500 PPM ICS	895.10	ug/L	1.31	cv
CAL BLK	-0.23	ug/L	-25.92	cv

$\frac{8.87}{10.0}$

500 PPB	497.95	ug/L	0.60	cv	

Cu_VHG

blank	168.70	intensity	13.15	cv	
standard	26930.00	intensity	0.15	cv	
500 PPB	503.75	ug/L	0.09	cv	
EPA 386#1 10x	942.20	ug/L	0.65	cv	
500 PPM ICS	928.80	ug/L	3.33	cv	
10000 PPB	10330.00	ug/L	0.70	cv	
CAL BLK	-3.92	ug/L	-75.79	cv	window edge
CAL BLK	-1.99	ug/L	-95.36	cv	
500 PPB	496.25	ug/L	0.22	cv	
JOB#4989 B-144	-2.15	ug/L <25.0	-46.26	cv	
1427.0401	245.75	ug/L → 47.7 mg/Kg	.74	cv	
1428.0401	15.05	ug/L <5.00	2.92	cv	
1428.0401 R	18.59	ug/L ⊥	4.53	cv	
1429.0401	1450.00	ug/L → 266	0.09	cv	174
1429.0401 S	937.25	ug/L -N.A.	0.82	cv	
1430.0401	66.43	ug/L → 13.3 ⊥	1.00	cv	
500 PPM ICS	923.80	ug/L	1.74	cv	
CAL BLK	-2.14	ug/L	-31.55	cv	
500 PPB	507.85	ug/L	0.32	cv	

Ag_VHG

blank	2.37	intensity	1309.5	cv	window edge
standard	30520.00	intensity	0.20	cv	
500 PPB	492.25	ug/L	0.59	cv	
EPA 283#2 1/50	111.55	ug/L	0.56	cv	
500 PPM ICS	1053.00	ug/L	3.65	cv	
CAL BLK	4.72	ug/L	44.90	cv	
CAL BLK	4.44	ug/L	1.41	cv	
500 PPB	509.10	ug/L	1.58	cv	
JOB#4989 B-144	2.73	ug/L <10.0	71.58	cv	window edge
1427.0401	3.41	ug/L <2.00 mg/Kg	1.54	cv	window edge
1428.0401	3.03	ug/L	4.19	cv	
1428.0401 R	3.11	ug/L	30.43	cv	
1429.0401	2.24	ug/L	232.06	cv	window edge 9.44 / 10.0
1429.0401 S	50.99	ug/L -94% rec	6.17	cv	
1430.0401	1.85	ug/L ⊥	45.41	cv	window edge
500 PPM ICS	1008.50	ug/L	1.07	cv	
CAL BLK	2.18	ug/L	40.86	cv	window edge
500 PPB	485.95	ug/L	1.24	cv	

Al_HIGH

blank	-76.09	intensity	-90.00	cv	
standard	3393.500	intensity	0.35	cv	
500 PPB	0.519	mg/L	6.11	cv	
EPA 386#1 10x	4.876	mg/L	1.12	cv	
500 PPM ICS	301.900	mg/L	0.00	cv	
10000 PPB	10.080	mg/L	0.27	cv	
CAL BLK	0.011	mg/L	19.76	cv	
100 PPM	213.400	mg/L	1.84	cv	
CAL BLK	0.025	mg/L	69.41	cv	
500 PPB	0.491	mg/L	0.41	cv	
JOB#4989 B-144	0.007	mg/L <0.200	61.07	cv	window edge
1427.0401	20.685	mg/L → 4017 mg/Kg	2.05	cv	
1428.0401	13.670	mg/L → 2707	1.42	cv	
1428.0401 R	12.525	mg/L → 2386	0.31	cv	
1429.0401	21.430	mg/L → 3932 ⊥	1.23	cv	

1429.0401 S	[illegible]	[illegible]	N.A	0.63	cv
1430.0401	[illegible]	[illegible]	1862 mg/Kg	.16	cv
500 PPM ICB	301.950	mg/L		0.03	cv
CAL BLK	-0.018	mg/L		-173.2	cv
500 PPB	0.526	mg/L		6.54	cv

window edge

Ba_VHG

blank	6.58	intensity		124.96	cv
standard	11095.00	intensity		0.06	cv
500 PPB	507.55	ug/L		0.47	cv
EPA 283#2 1/502075.00		ug/L		1.52	cv
500 PPM ICB	953.10	ug/L		0.21	cv
10000 PPB	10040.00	ug/L		0.68	cv
CAL BLK	-0.03	ug/L		-554.3	cv
CAL BLK	-0.21	ug/L		-55.12	cv
500 PPB	497.30	ug/L		0.90	cv
JOB#4989 B-144	33.17	ug/L	<200	0.38	cv
1427 0401	[illegible]	[illegible]	135 mg/Kg	0.79	cv
1428.0401	[illegible]	[illegible]	101	0.15	cv
1428.0401 R	[illegible]	[illegible]	86.1	0.49	cv
1429.0401	[illegible]	[illegible]	123	0.57	cv
1429.0401 S	2664.00	ug/L	-936 rec	0.07	cv
1430.0401	[illegible]	[illegible]	40.3	0.27	cv
500 PPM ICB	900.85	ug/L		1.49	cv
CAL BLK	-0.23	ug/L		-71.97	cv
500 PPB	516.60	ug/L		0.25	cv

493-123 / 400

Project No._____

TITLE _____ Book No._____

From Page No.__

Test Performed: AS

Date Received: MARCH 2-3, 1987

Work Performed By: [illegible]

(SEE page 4)

S_1 = 25.0 p
S_2 = 50.0 p
S_3 = 100.0

CLP Final Volume = 200.0

Job No.	ID No.	Custody Seal Intact Yes	Custody Seal Intact No	Secure Storage Area Received From	ppb BURN 1	ppb BURN 2	ppb Avg	C.V.	20.0 ppb Spike	% Rec	D.F.	Amt. of Sample (grms.)	Units	Final Conc.
	WS 378#3				20.6	21.3	21.0	2.36	39.1	91			µg/L	21.0
	Cal Blank				0.8	0.6	0.7	–	20.2	101			µg/L	<10.0
	50.0 ppb				50.1	47.8	48.9	3.32	66.8	90			µg/L	48.9
4906	Prep Blank 103				0.1	0.2	0.2	–	19.6	98			µg/L	<10.0
	1032.0403				37.0	36.9	37.0	0.19	52.3	/		1.04	mg/kg	/
	1033.0403				7.8	8.4	8.1	5.24	26.8	94		1.05		<1.90
	1034.0403				12.9	12.3	12.6	3.37	32.3	99		1.00		2.52
	1035.0403				17.3	15.4	16.3	8.22	34.4	91		1.02		3.20
	1035. R1				12.0	13.4	12.7	7.80	31.0	92		1.02		2.49
	1035. R1S1				42.9	42.7	42.8	0.33	57.8	75		1.03		8.31
	1036.0403				10.2	10.3	10.2	0.69	29.0	94		1.05		1.94
	1037.0403				7.2	5.5	6.3	18.9	25.9	98		1.00	mg/kg	<2.00
	Cal Blank				1.1	-0.7	0.2	–	19.1	96			µg/L	<10.0
	50.0 ppb				49.8	51.0	50.4	1.68	64.9	73			µg/L	50.4
4928	Prep Blank 107				0.7	-0.6	0.1	–	20.4	102			µg/L	<10.0
	1110.0403A				6.0	5.6	5.8	4.88	24.0	91		1.05	mg/kg	<1.90
	1111.0403A				7.5	7.6	7.5	0.94	26.5	95		1.02		<1.96
	1112.0403A				15.1	14.7	14.9	1.90	32.2	87		1.03		2.89
	1113.0403A				31.4	32.0	31.7	1.34	44.3	~~85~~		1.02		/
	1114.0403A				13.1	12.1	12.6	5.61	32.1	98		1.03		2.45
	1115.0403A				11.3	11.2	11.2	0.63	28.3	86		1.00		2.24
	1116.0403A				22.3	24.6	23.4	6.94	39.9	/		1.01		/
	1117.0403A				9.3	9.5	9.4	1.50	25.5	/		1.03	mg/kg	/
	Cal Blank				-0.0	0.3	0.1	–	18.6	93			µg/L	<10.0
	50.0 ppb				49.8	49.2	49.5	0.86	64.9	77			µg/L	49.5

To Page No.__

Witnessed & Understood by me, [signature] Date

Invented by Date 3/2-3/87

Recorded by [illegible]

Project No._____

Book No._____ TITLE _____

Page No. 9

Performed: As

Received: 3/3/87

Performed By: J. CLKA

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From N	C	ppb Burn 1	ppb Burn 2	ppb Ave	CV	20.0 ppb Spike	% Rec	DF	Samp Wgt	Units	Final Conc
	WS 378#3				20.4				40.3	100			µg/L	20.4
	Cal Blk				-1.0				19.2	96			µg/L	<10.0
	50.0ppb				49.6				70.5	105			µg/L	49.6
	Blk 103				-1.1	-1.2	-1.2	/	18.1	91			~~mg/kg~~ µg/L	<10.0
906	1032.0403				-2.1	-3.0	-2.6	/	19.8	99		1.04		<0.962 ~~<10.0~~ µg
1928	1113.0403A				-2.0	-2.7	-2.4	/	20.8	104		1.02		<0.980 ~~<10.0~~ µg
	1116.0403A				30.9	30.4	30.7	1.15	54.7	120		1.01		6.08 ~~30.9~~ µg
	1117.0403A				9.4	9.3	9.3	0.76	29.9	103		1.03	mg/kg	1.81 ~~<0.971~~ ~~<10.0~~ µg
	Cal Blk				-1.7				17.7	89			µg/L	<10.0
	50.0ppb				52.0				68.1	81			µg/L	52.0

To Page No._____

Witnessed & Understood by [signature] Date

Invented by

Recorded by [signature] Date 3/3/87

HGA FORM #1

ELEMENT: Se, As, DATE: 3/2-3/87.

S_1 = 25.0 PPB., S_2 = 50.0 PPB.

S_3 = 100.0 PPB, BOOK NO. 287 . pp 8-9 .

		Se	As
	6,5_01	WS378 #14	WS378 #3
	X02	Cal Blank	
	X03	50.0 ppb	
	X04	PREP Blank 103 (4906)	
JOB #:	X05	1032.0403	
	X06	1033.	
	X07	1034.	
	X08	1035.	
	X09	1035. R1	
	X10	1035. R1S1	
	X11	1036.	
	X12	1037.	
	X13	Cal Blank	
	X14	50.0 ppb	
	X15	PREP Blank 107 (4928)	
	X16	1110.0403 BA	
	X17	1111. , S_2	
	X18	1112.	
	X19	1113.	
	X20	1114.	
	X21	1115.	
	X22	1116.	
	X23	1117.	
	X24	Cal Blank	
	X25	50.0 ppb	
	X26		
	X27		
	X28		
	X29		
	X30		
	X31		
	X32		
	X33		
	X34		
	X35	, S_3	

As + Spike

501	39.1
502	20.2
503	66.8
504	19.6
505	52.3
506	26.8
507	32.3
508	34.4
509	31.0
510	57.8
511	29.0
512	25.9
513	19.1
514	64.9
515	20.4
516	24.0
517	26.5
518	32.2
519	44.3
520	32.1
521	28.3
522	39.9
523	25.5
524	18.6
525	64.9.

recycled paper

ecology and environment

	-0.322	
	-0.321	
	-0.321	AV
	0.22	CV
	[illegible]	AV
	0.103	
	0.104	
	0.104	AV
	0.68	CV
	25.0	SD
	44.4	C
	44.2	C
	49.1	AV
	0.43	CV
	50.0	SD
	93.3	C
	93.6	C
	87.6	AV
	1.54	CV
	150.0	SD
	20.6	
	21.3	
501	21.0	AV
	2.36	CV
	0.8	
	0.6	
502	0.7	AV
	20.20	CV
	50.1	
	47.9	
503	48.9	AV
	3.32	CV
	0.1	
	0.2	
504	0.2	AV
	47.14	CV
	37.0	
	36.9	
505	37.0	AV
	0.19	CV
	7.5	
	8.4	
506	8.1	AV
	5.24	CV
	12.9	
	12.3	
507	12.6	AV
	3.37	CV
	17.3	
	15.4	
508	16.3	AV
	9.22	CV
	12.0	
	13.4	
509	12.7	AV
	7.80	CV
	42.9	
	42.7	

[illegible]	[illegible]	AV
	0.33	CV
	10.2	
	10.3	
511	10.2	AV
	6.80	CV
	7.2	
	5.5	
512	6.3	AV
	18.93	CV
	1.1	
	-0.7	
513	0.2	AV
	06	EX
	49.8	
	51.0	
514	50.4	AV
	1.68	CV
	0.7	
	-0.6	
515	0.1	AV
	06	EX
	6.0	
	5.6	
516	5.8	AV
	4.88	CV
	7.5	
	7.6	
517	7.5	AV
	0.94	CV
	15.1	
	14.7	
518	14.9	AV
	1.90	CV
	31.4	
	32.0	
519	31.7	AV
	1.34	CV
	13.1	
	12.1	
520	12.6	AV
	5.61	CV
	11.3	
	11.2	
521	11.2	AV
	0.63	CV
	22.3	
	24.6	
522	23.4	AV
	6.94	CV
	9.3	
	9.5	
523	9.4	AV
	1.50	CV
	-0.0	
	0.3	
524	0.1	AV
	[illegible]	[illegible]
	49.8	
	49.2	
525	49.5	AV
	0.86	CV

50.0ppb

Cal. Blk

WS 378 #3

90 ppb

50.0ppb

25.0ppb

As Jobs 4906, 4928

Blk

625

624

623

622

621

620

619

618

617

616

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611

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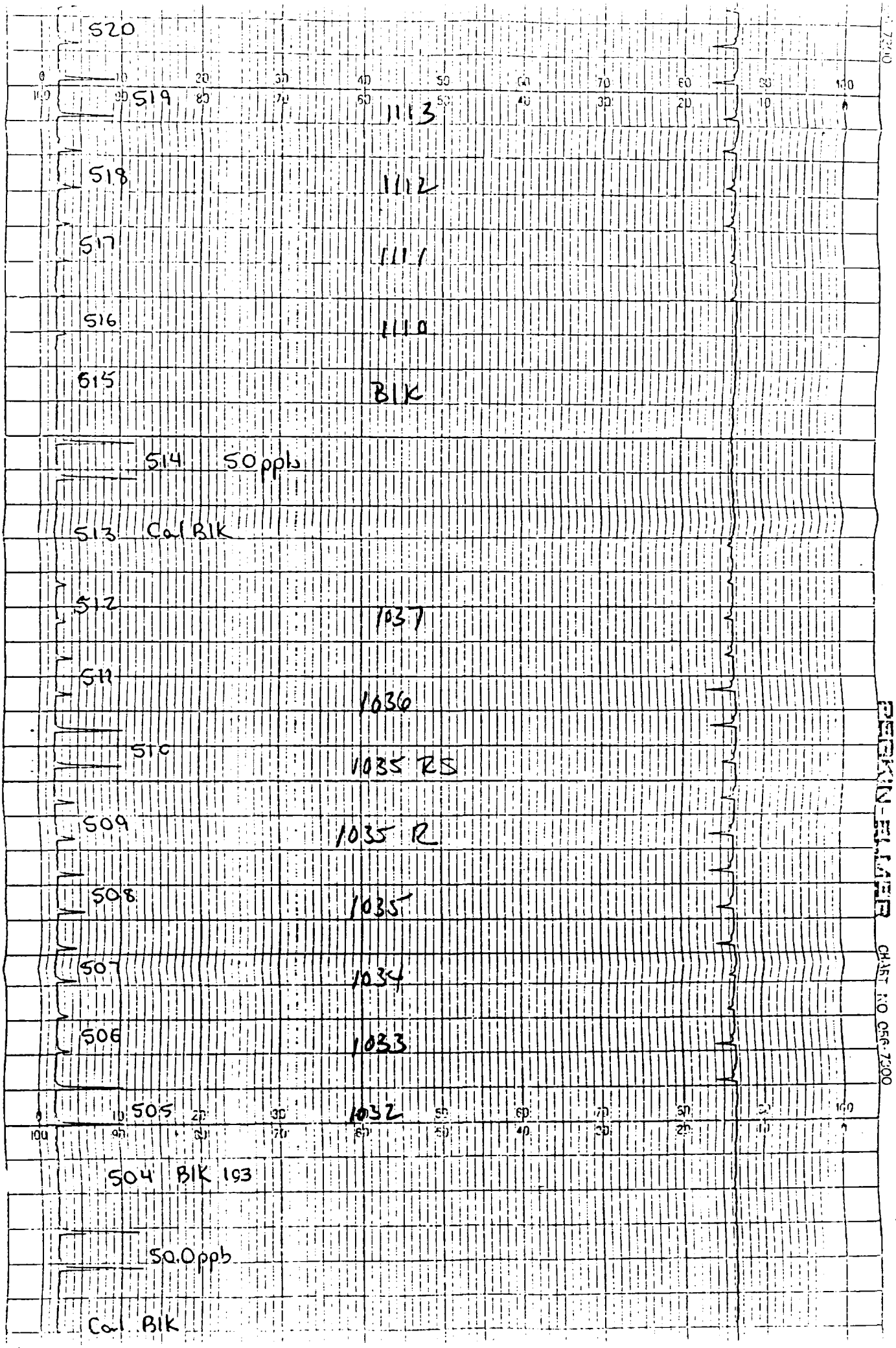
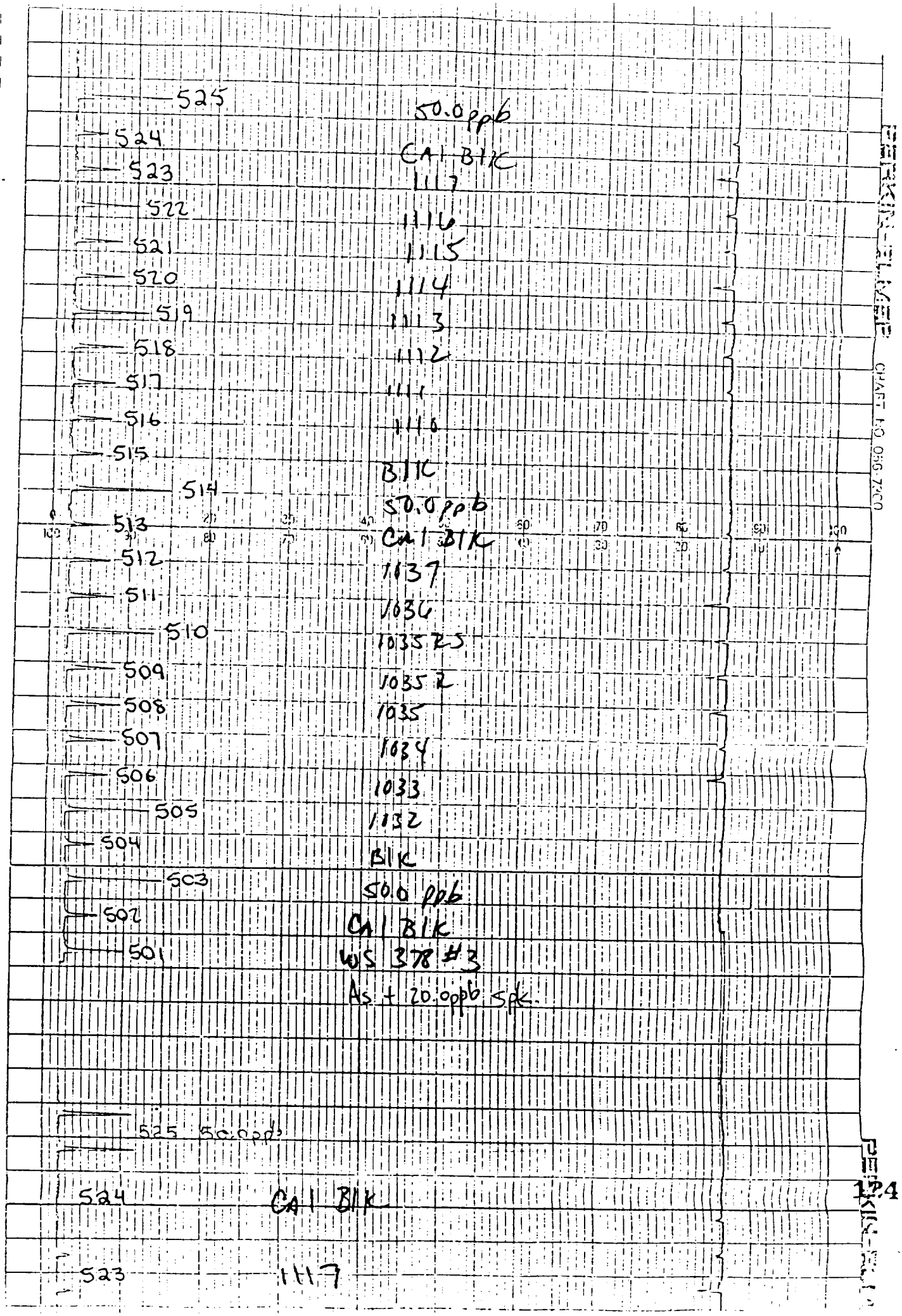
602

PERKIN-ELMER CHART NO. 650-7200


S20
S19
1113
S18
1112
S17
1111
S16
1110
S15
BLK
S14 50ppb
S13 Cal BLK
S12
1037
S11
1036
S10
1035 RS
S09
1035 R
S08
1035
S07
1034
S06
1033
S05
1032
S04 BLK 193
50.0ppb
Cal BLK
PERKIN-ELMER CHART NO 056-7300


525
524
523
522
521
520
519
518
517
516
515
514
513
512
511
510
509
508
507
506
505
504
503
502
501
50.0 ppb
CAL BLK
1117
1116
1115
1114
1113
1112
1111
1110
BLK
50.0 ppb
CAL BLK
1137
1136
1035.25
1035.2
1035
1034
1033
1032
BLK
50.0 ppb
CAL BLK
WS 378 #3
As + 20.0ppb spk.
525 50.0ppb
524 CAL BLK
523 1117

HGA
FORM
#1

ELEMENT: As, DATE: 3/3/87.
S_1 = 25.0 PPB., S_2 = 50.0 P
S_3 = 100 PPB, BOOK NO. 287, pp 9-1

S01	WS 378 #3	
X02	Cal Blk	
X03	50.0 ppb	
X04	~~1032.0403~~ Blk 103	
JOB #: X05	1032.0403	
X06	1113.0403A	
X07	1116.0403A	
X08	1117.0403A	
X09	Cal Blk	
X10	50.0 ppb	
X11		
X12		
X13		
X14		
X15		
X16		
X17	, S_2	
X18		
X19		
X20		
X21		
X22		
X23		
X24		
X25		
X26		
X27		
X28		
X29		
X30		
X31		
X32		
X33		
X34		
X35	, S_3	

	0.067	
	-0.017	
	[illegible]	AZ
	0.094	
	25.0	S1
	[illegible]	C
	50.0	S2
	[illegible]	C
	100.0	S3
501	21.2	
502	-0.3	
503	52.1	
	-0.6	
	-0.6	
504	-0.6	AV
	0.00	CV
	37.9	
	30.1	
505	34.0	AV
	16.22	CV
	31.8	
	28.9	
506	30.3	AV
	7.00	CV
	25.5	
	24.8	
507	25.2	AV
	2.25	CV
	7.6	
	7.8	
508	7.7	AV
	1.84	CV
	0.6	
	-0.4	
509	0.1	AV
	06	ER
	~~39.3~~	
	~~40.6~~	
~~510~~	~~40.0~~	~~AV~~
	~~2.65~~	~~CV~~
	48.3	
	46.2	
510	47.3	AV
	3.14	CV

recycled paper

ecology and environment

	0.499	
	0.000	AZ
	0.081	
	25.0	S1
	50.1	C
	50.0	S2
	88.4	C
	12	ER
	-0.390	C
	0.000	AZ
	0.095	C
	25.0	S1
	52.0	C
	50.0	C
	50.0	S2
	65.4	C
	99.9	S3
501	20.4	
502	-1.0	
503	49.6	
	-1.1	
	-1.2	
504	-1.2	AV
	6.15	CV
	-2.1	
	-3.0	
505	-2.6	AV
	24.96	CV
	-2.0	
	-2.7	
506	-2.4	AV
	21.06	CV
	30.9	
	30.4	
507	30.7	AV
	1.15	CV
	9.4	
	9.3	
508	9.3	AV
	0.76	CV

AS

509	-1.7
~~510~~	~~55.2~~
510	52.0

AS
Spikes

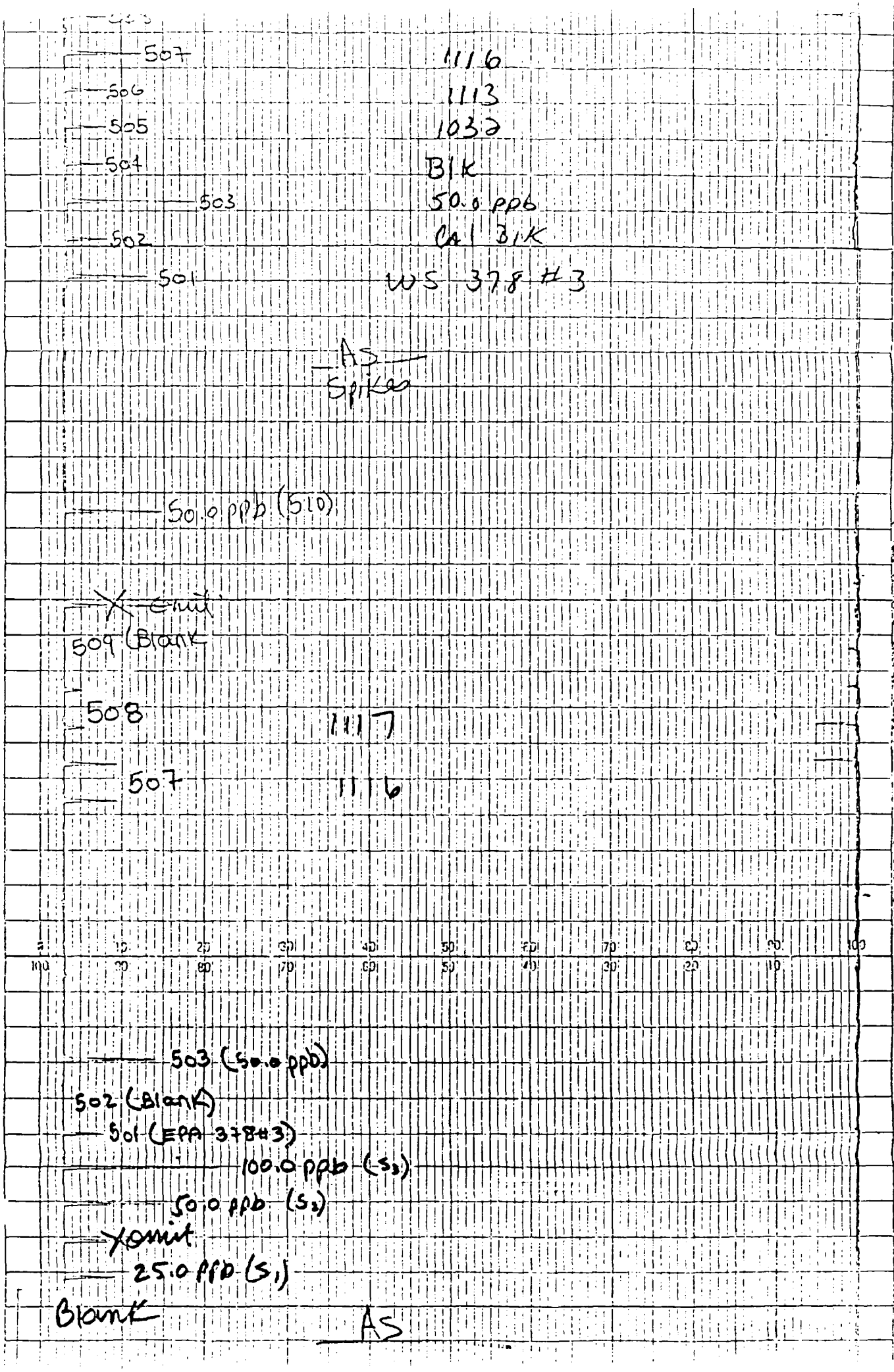
501	40.3
502	19.2
503	70.5
504	18.1
505	19.8
506	20.8
~~507~~	~~46.7~~
~~508~~	~~19.4~~
509	17.7

~~Count~~
Re Inject.

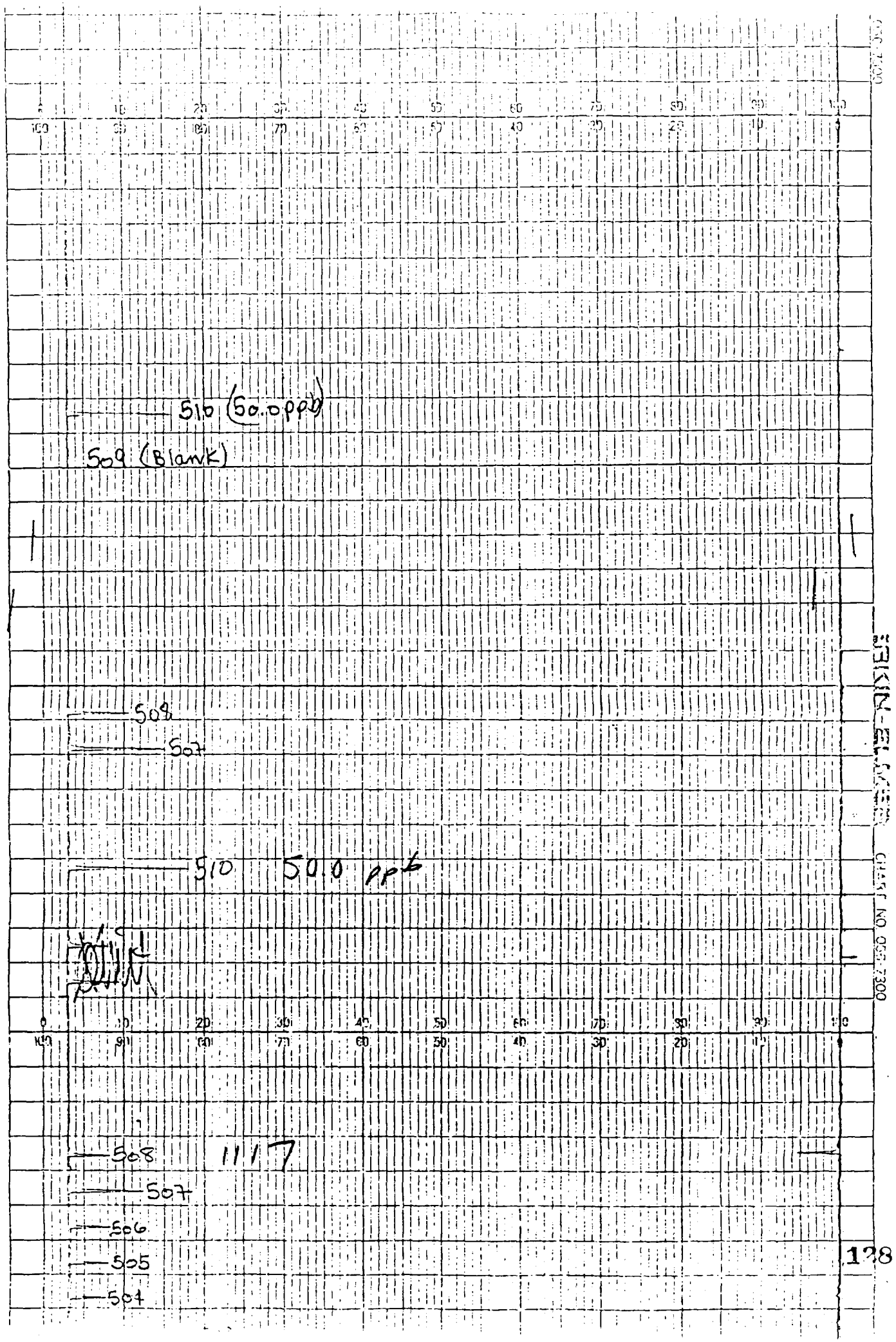
510	68.1

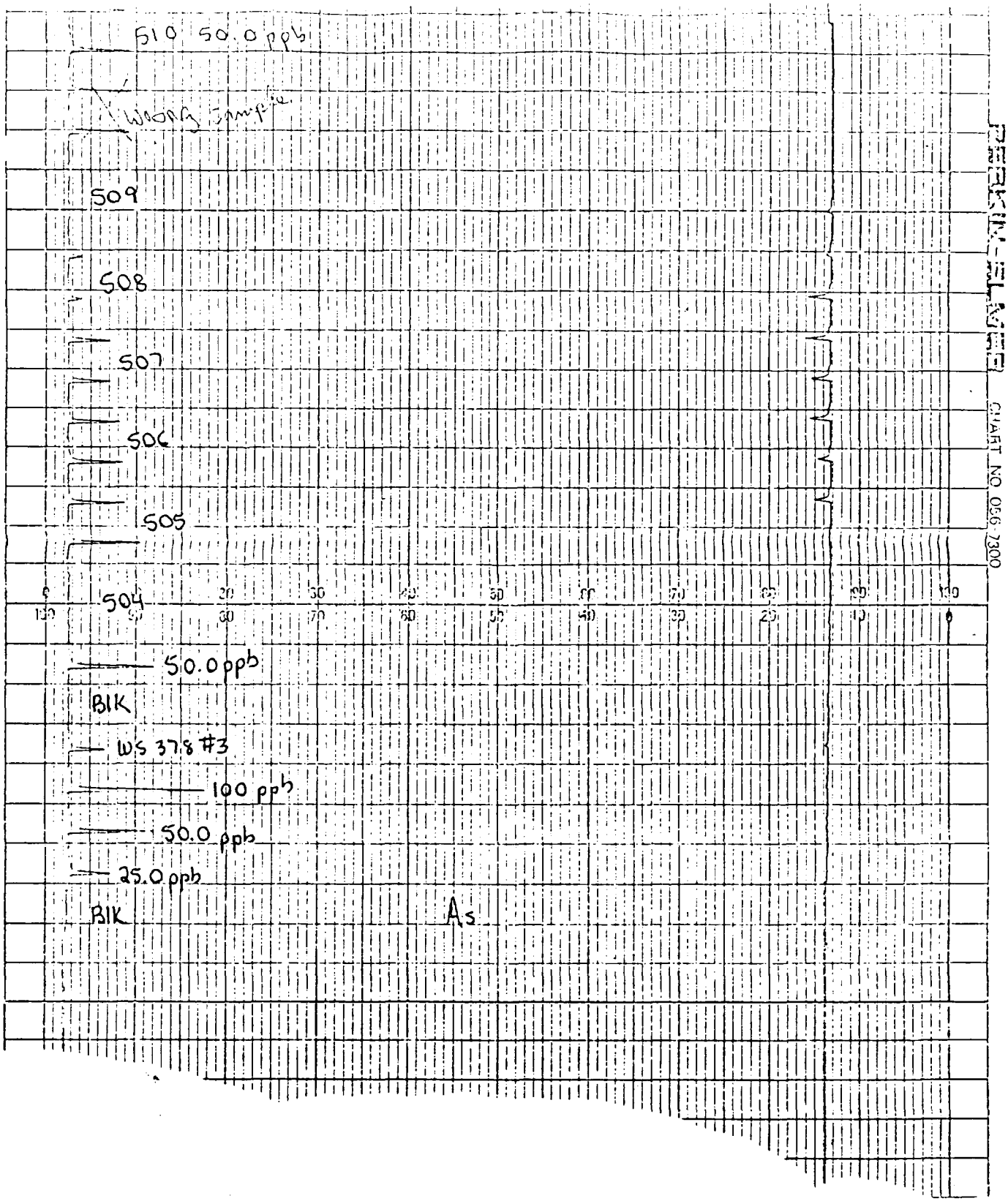
REINJECTS

507	54.7
508	29.9
509	-2.4
510	54.6



RECYCLED-RECYCLABLE


510 (50.0ppb)
509 (Blank)
508
507
510 50.0 ppb
508
507
506
505
504


510 50.0 ppb
Wood's Sample
509
508
507
506
505
504
50.0 ppb
BLK
WS 378 #3
100 ppb
50.0 ppb
25.0 ppb
BLK
As
PERKIN-ELMER CHART NO 056-7300

Project No._____

Book No._____ TITLE _____

From Page No.__ A3

Test Performed: 3/5/81

Date Received:

Work Performed By:

See pg 4

		N	C	ppb found 1	ppb Burn 2	ppb Ave	CV	20.0 ppb Spike	% Rec	DF	Samp Wgt	Units	Final Conc
	W3378#3			19.5				40.6	100			ug/l	19.5
	Cal Blk			1.2				20.1	101				<10.0
	50.0ppb			50.9				74.8	120			ug/l	50.9
4936	1154.0103			5.3	4.2	4.8	16.4	25.4	103		1.03	mg/kg	<1.94
	1155.0103			3.4	3.2	3.3	4.29	23.6	102		1.05		<1.90
	1156.0103			4.0	3.4	3.7	11.5	24.3	103		1.03		<1.94
	1163.0103			5.8	7.1	6.4	14.3	26.6	101		1.00		<2.00
	1164.0103			7.5	7.4	7.4	0.95	27.2	99		1.07		<1.87
	1165.0103			7.7	8.5	8.1	6.93	23.3	101		1.07	mg/kg	<1.87
	Blk 116			0.9	0.8	0.9	-	19.2	96			ug/l	<10.0
4971	1274.0403			4.8	6.3	5.6	17.1	27.7	111		1.01	mg/kg	<1.98
	1275.0403			23.4	22.3	22.9	3.40	45.3	112		1.05		4.36
	1275.K1			23.5	21.5	22.5	6.29	44.7	111		1.07	mg/kg	4.21
	Cal Blk			1.1	0.9	1.0	-	19.0	95			ug/l	<10.0
	50.0ppb			52.7	50.9	51.3	2.46	73.6	109			ug/l	51.8
	1275.K1S1			54.4	55.7	55.1	1.62	77.6	113		1.07	mg/kg	31%K
	1276.0403			288.0	290.7	289.3	0.66	297.2	/		1.03		/
	1277.0403			55.1	54.7	54.9	0.52	75.6	104		1.01		10.9
	1278.0403			6.6	5.6	6.1	11.6	26.2	101		1.00	mg/kg	<2.00
	Blk 127			0.1	1.2	0.6	-	18.2	91			ug/l	<10.0
4952	1219.0103			4.4	5.9	5.2	20.6	24.0	94		1.03	mg/kg	<1.94
	1220.0103			5.7	6.5	6.1	9.23	24.8	94		1.02	mg/kg	<1.96
	Blk 123			0.6	0.7	0.6	10.9	19.2	96			ug/l	<10.0
	Cal Blk			1.0	1.1	1.0	-	18.9	95				<10.0
	50.0ppb			52.2	48.7	50.5	4.91	70.6	101			ug/l	50.5
4971	1276.0403			41.4	41.3	41.4	0.17	64.1	114	1→10	1.03	mg/kg	80.4
4943	1186.0103			7.9	8.4	8.1	4.34	25.1	85		1.02		<1.96
	1186.K1			7.5	6.8	7.1	6.92	22.9	79		1.00		<2.00
	1186.K1S1			35.8	34.0	34.9	3.65	53.1	91		1.03	mg/kg	68%K

To Page No. 21

Witnessed & Understood by me, [signature] Date

Invented by

Recorded by [signature]

Date 3/5/81

From Page No. 20
Test Performed: As (cont'd)
Date Received: 3/5/87
Work Performed By: G. Oliva

Job No.	ID No.	Custody Seal Intact Yes	Custody Seal Intact No	Secure Storage Area Received From	R	C	ppb Burn 1	ppb Burn 2	ppb Ave.	CV	ug/ml Spike	% Rec	DF	Sample Wgt	Units	Final Conc
4943	1187.0102						6.6	6.8	6.7	2.11	21.8	76		1.02	mg/kg	<1.96
	1188.0103						5.7	7.3	6.5	17.4	21.9	77		1.02	mg/kg	<1.96
	Cal Blk						0.3	0.4	0.4	-	21.0	105			ug/l	<10.0
	50 ppb						50.1	49.1	49.6	1.57	69.1	98			ug/l	49.6

To Page No.

Witnessed & Understood by me. Date

Invented by Date 3/6/87

Recorded by

HGA FORM #1

ELEMENT: As, DATE: 3/5/87.

S_1 = 25.0 PPB., S_2 = 50.0 PPB.

S_3 = 100 PPB, BOOK NO. 287, pp20-21.

JOB #: _____

S01	WS 378 # 3		
X02	Cal Blk		
X03	50.0ppb		
X04	1154.0103		
X05	1155		
X06	1156		
X07	1163		
X08	1164		
X09	1165		
X10	Blk 116		
X11	1274.0403		
X12	1275		
X13	1275 R_1		
X14	Cal Blk		
X15	50.0ppb		
X16	1275.0403 R_1S_1		
X17	1276.0403, S_2		
X18	1277	527	25.1
X19	1278	528	22.9
X20	Blk 127	529	53.1
X21	1219.0103	530	21.8
X22	1220.0103	531	21.9
X23	Blk 123	532	21.0
X24	Cal Blk	533	69.1
X25	50.0ppb		
X26	1276.0403 (1→10)		
X27	1186.0103		
X28	1186. R_1		
X29	1186. R_1S_1		
X30	1187.0103		
X31	1188.0103		
X32	Cal Blk		
X33	50.0ppb		
X34			
X35	, S_3		

ATTACH TAPE HERE

recycled paper

ecology and environment

501	40.6					513	22.5	AV
502	20.1						6.29	CV
503	74.8						1.1	
504	25.4						0.9	
5[illegible]	23.6					514	1.0	AV
506	24.3						14.14	CV
507	26.6						52.7	
508	27.2						50.9	
509	28.3					515	51.8	AV
510	19.2						2.46	CV
511	27.7			-0.025			54.4	
512	45.3			[illegible]	AV		55.7	
513	44.7			0.115		516	55.1	AV
514	19.0			25.0	SI		1.67	CV
515	73.6			45.5	C		268.0	C
516	77.6			50.0	SI		290.7	C
517	297.2	C		106.2	C	517	289.3	AV
518	75.6			100.0	SS		0.66	CV
519	26.2		501	19.5			55.1	
520	18.2		502	1.2			54.7	
521	24.0		503	50.9		518	54.9	AV
522	24.8			5.3			0.52	CV
523	19.2			4.2			6.6	
524	18.9		504	4.8	AV		5.6	
525	70.6			16.38	CV	519	6.1	AV
As	41.4			3.4			11.59	CV
	41.3			3.2			0.1	
526	41.4	AV	505	3.3	AV		1.2	
	0.17	CV		4.29	CV	520	0.6	AV
				4.0			00	ER
526 + Spk	64.1			3.4			4.4	
			506	3.7	AV		5.9	
				11.47	CV	521	5.2	AV
As	7.9			5.8			20.60	CV
	8.4			7.1			5.7	
527	8.1	AV	507	6.4	AV		6.5	
	4.34	CV		14.25	CV	522	6.1	AV
	7.5			7.5			9.27	CV
	6.8			7.4			0.6	
528	7.1	AV	508	7.4	AV		0.7	
	6.92	CV		0.95	CV	523	0.6	AV
	35.8			7.7			10.88	CV
	34.0			8.5			1.0	
529	34.9	AV	509	8.1	AV		1.1	
	3.65	CV		6.98	CV	524	1.0	AV
	6.6			0.9			6.73	CV
	6.8			0.8			52.2	
530	6.7	AV	510	0.9	AV		48.7	
	2.11	CV		8.32	CV	525	50.5	AV
	5.7			4.8			4.01	CV
	7.3			6.3				
531	6.5	AV	511	5.6	AV			
	17.41	CV		19.11	CV			
	0.8			23.4				
	0.4			22.3				
532	0.6	AV	512	22.9	AV			
	47.14	CV		3.40	CV			
	50.1			23.5				
	49.0			21.5				
533	49.6	AV						
	1.57	CV						

515 50ppb

514 Cal Blk

513 1275 Rep

512 1275

511 1274.0403

510 Blk

509 1165

508 1164

507 1163

506 1156

505 1155

504 1154

50.0ppb

Cal Blk

WS375#3

100ppb

50.0ppb

25.0ppb

Blk

As # 4936, 4971, 4952, 4943

PERKIN-ELMER CHART NO 056-7300

12

508 1164

507 1163

506 1156

505 1155

504 1154

503 50.0 ppb

502 Cal Blk

501 WS 378 #3

As + Spike

525 50.0 ppb

524 Cal Blk

523 Blk

522 1220

521 1219

520 Blk 1277

519 1278

518 1277

517 1276

516 1275 R,S

515 50ppb

514 Cal Blk

PERKIN-ELMER CHART NO 056-7300

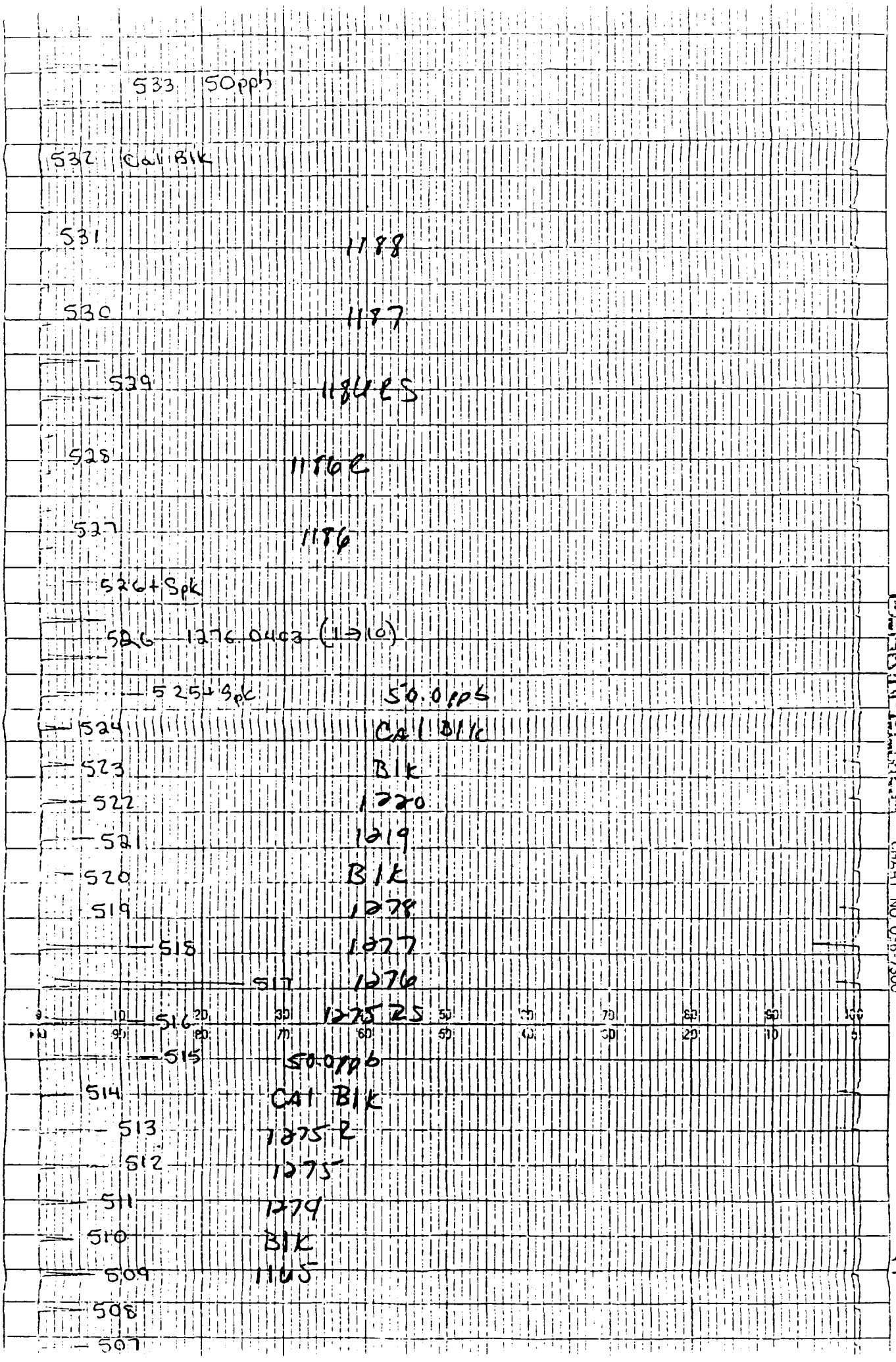


CHART NO. 010-7300

Project No._____

TITLE _____ Book No._____ 35

From Page No.___

Test Performed: As

Date Received: MARCH 10, 1987

Work Performed By J.O. [illegible]

(SEE page 4)

S_1 = 25.

S_2 = 50.

S_3 = 100.

C.L.P. FINAL VOLUME = 200 ml.

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From No	C	ppb Burn 1	ppb Burn 2	ppb Avg.	C.V.	20.0 ppb Spike	% Rec.	D.F.	Amt. of Sample (Gms)	Units	Final Conc.	PR DU SPI RE
	WS378#3				20.6				41.3	104			µg/L	20.6	
	Cal Blank				-0.1				21.5	108			µg/L	<5.00	
	50.0 ppb				51.8				74.9	115			µg/L	51.8	
4989	1427.0403				24.3	24.5	24.4	0.58	45.7	107		1.06	mg/Kg	4.60	
	1428.0403				13.2	12.4	12.8	4.42	33.6	104		1.01		2.53	
	1428. R1				13.4	12.8	13.1	3.24	33.3	101		1.01		2.59	
	1429.0403				28.7	28.5	28.6	0.50	50.9	112		1.04		5.50	
	1429. S1				64.8	65.5	65.2	0.76	88.9	119		1.06		12.3	85
	1430.0403				11.1	11.6	11.4	3.12	32.7	107		1.06	mg/Kg	2.15	
	PrepBlank 145				1.6	0.4	1.0	/	20.5	103			µg/L	<10.0	
4998	1458.0703				3.1	1.9	2.5	/	21.9	110				<10.0	
	1458. R3				1.7	2.6	2.2	/	22.8	114				<10.0	
	Cal Blank				-0.0	0.8	0.4	/	22.2	111				<10.0	
	50.0 ppb				52.6	49.2	50.9	4.72	71.8	105				50.9	
	1459.0703				0.5	1.1	0.8	/	21.5	108				<10.0	
	1460.0703				1.7	0.8	1.2	/	20.6	103				<10.0	
	1461.0703				1.2	0.7	0.9	/	22.8	114				<10.0	
	1464.0103				-0.1	1.0	0.5	/	21.1	106				<10.0	
	PrepBlank 149				-0.5	1.2	0.4	/	22.4	112				<10.0	
	Cal Blank				1.6				23.0	115				<10.0	
	50.0 ppb				53.6				73.3	99			µg/L	53.6	

To Page No._____

Witnessed & Understood by me, [signature] Date 3/11/87 Invented by [signature] Date 3/10/87

137

HGA FORM #1

ELEMENT: As, DATE: 3/10/87.

S_1 = 25.0 PPB., S_2 = 50.0 PPB.

S_3 = 100 PPB, BOOK NO. 287, pg 35.

JOB #: 4989

S01	WS 378 # 3
X02	Cal Blk
X03	50.0ppb
X04	1427.0403 (4989)
X05	1428
X06	1428 R_1
X07	1429
X08	1429 S_1
X09	1430
X10	Blk 145
X11	1458.0703 (4998)
X12	1458. R_3
X13	Cal Blk
X14	50.0ppb
X15	1459.0703
X16	1460
X17	1461., S_2
X18	1464.0703
X19	Blk 149
X20	Cal Blk
X21	50.0ppb
X22	
X23	
X24	
X25	
X26	
X27	
X28	
X29	
X30	
X31	
X32	
X33	
X34	
X35	, S_3

As SPIKES

501	41.3
502	21.5
503	74.9
504	45.7
505	33.6
506	33.3
507	50.0
508	88.9
509	32.7
510	20.5
511	21.0
512	22.8
513	22.2
514	71.8
515	21.5
516	20.6
517	22.8
518	21.1
519	22.4
520	23.0
521	73.3

recycled paper

ecology and environment

AS

	-0.029	
	0.000	AZ
	0.084	
	25.0	S1
	47.2	C
	50.0	S2
	95.3	C
	100.0	S3
501	20.6	
502	-0.1	
503	51.8	
	24.3	
	24.5	
504	24.4	AV
	0.58	CV
	13.2	
	12.4	
505	12.8	AV
	4.42	CV
	13.4	
	12.8	
506	13.1	AV
	3.24	CV
	28.7	
	28.5	
507	28.6	AV
	0.50	CV
	64.8	
	65.5	
508	65.2	AV
	0.76	CV
	11.1	
	11.6	
509	11.4	AV
	3.12	CV
	1.6	
	0.4	

510	1.0	AV
	84.85	CV
	3.1	
	1.9	
511	2.5	AV
	33.94	CV
	1.7	
	2.6	
512	2.2	AV
	29.60	CV
	-0.0	
	0.8	
513	0.4	AV
	06	ER
	52.6	
	49.2	
514	50.9	AV
	4.72	CV
	0.5	
	1.1	
515	0.8	AV
	53.03	CV
	1.7	
	0.8	
516	1.2	AV
	50.91	CV
	1.2	
	0.7	
517	0.9	AV
	37.22	CV
	-0.1	
	1.0	
518	0.5	AV
	06	ER
	-0.5	
	1.2	
519	0.4	AV
	06	ER
520	1.6	
521	53.6	

514 50.0 ppb

513 CAL BLK

512 1458R

511 1458

510 BLK

509 1430

508 1429.5

507 1429

506 1428R1

505 1428

504 1427

503 (50.0 ppb)

502 (BLANK)

501 (EPA 3388)

100.0 (S_3)

50.0 (S_2)

25.0 (S_1)

Blank

521	50.0 ppb
520	CAL BLK
519	BLK
518	1464
517	1461
516	1460
515	1459
514	50.0 ppb
513	CAL BLK
512	1458R
511	1458
510	BLK
509	1430
508	1429S
507	1429
506	1428R
505	1428
504	1427
503	50.0 ppb
502	CAL BLK
501	WS 378 #3

Spikes

521	50.0 ppb

PERKIN-ELMER CHART NO 050-2000

Project No._____

16 Book No._____ TITLE _____

From Page No.__

Performed: [illegible]

Date Received: 3/4/87

Work Performed By: [illegible]

(see page 1)

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From		ppb Burn 1	ppb Burn 2	ppb Ave	CV	100 ppb Spike	% Rec	DF	Samp Wt (gms)	Units	Final Conc
	WS 378 #3				15.2				25.7	105			µg/L	15.2
	Cal Blank				-1.4				10.1	101			µg/L	<5.00
	50.0 ppb				52.0				61.5	95			µg/L	52.0
	Prep Blank 103				-1.6	-1.5	-1.5	4.56	10.4	104			µg/L	<5.00
4906	1032.0403				-3.3	-3.1	-3.2	4.42	9.2	92		1.04	mg/kg	<0.962
	1033.0403				45.5	15.5	15.5	0.00	25.7	102		1.05		2.95
	1034.0403				01 ER	05 ER	05 ER	/	/	/		1.00		/
	1035.0403				863.2	922.9	892.0	/	/	/		1.02		/
	1035. R1				174.0	172.9	173.5	/	/	/		1.02		/
	1035. R1S1				05 ER	05 ER	05 ER	/	/	/		1.03		/
	1036.0403				31.0	30.5	30.8	1.15	40.3	95		1.05		~~1.90~~ 5.87 µg
	1037.0403				14.0	14.5	14.2	2.48	25.4	112		1.00	mg/kg	2.84
	Cal Blank				-1.0	-1.1	-1.1	6.73	11.1	111			µg/L	<5.00
	50.0 ppb				50.4	50.3	50.4	0.14	64.2	/			µg/L	50.4
4928	1110.0403				14.2	14.4	14.3	0.99	25.8	115		1.05	mg/kg	2.72
	1111.0403				22.8	23.2	23.0	1.23	34.3	113		1.02		4.51
	1112.0403				28.8	29.0	28.9	0.49	39.8	109		1.03		5.61
	1113.0403				05 ER	05 ER	05 ER	/	/	/		1.02		/
	1114.0403				30.4	29.3	29.8	2.61	38.4	86		1.03		5.79
	1115.0403				35.1	35.9	35.5	1.59	46.1	106		1.00		7.19
	1116.0403				267.6	259.7	263.6	/	/	/		1.01		/
	1117.0403				18.6	17.5	18.1	4.31	29.0	109		1.03	mg/kg	3.51
	Cal Blank				-0.7	-0.9	-0.8	/	11.1	111			µg/L	<5.00
	50.0 ppb				49.7	48.5	49.1	1.73	65.5	/			µg/L	49.1

To Page No. 1

Witnessed & Understood by me. [illegible] Date 3/5/87

Invented by

Recorded by: J.W.O. [illegible] Date 3/4/87

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TITLE

Project No.

Book No.

From Page No. 16

Test Performed: Pb (cont'd)

Date Received: March 4, 1987

Work Performed By: J.W.C. / [illegible]

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From	ppb Burn 1	ppb Burn 2	ppb Avg	C.V.	10.0 ppb Spike	% Rec	D.F.	Amt. of Sample (gms)	Units	Fin Conc
		No	C										
4906 (cont'd)	1034.0403			20.9	21.7	21.3	2.66	32.2	109	0.1→10	1.00	mg/kg	426.
	1035.0403			37.4	36.2	36.8	2.31	48.7	109	1→10	1.02	mg/kg	72.1
	1035. R1			13.6	13.4	13.5	1.05	24.6	111	1→10	1.02	mg/kg	26.4
	1035. R.S.			12.1 ~~59.3~~	11.9 ~~57.4~~	12.0 ~~58.4~~	1.18 ~~2.50~~	22.8	108	0.1→10	1.03	mg/kg	233.
4928 (cont'd)	1113.0403			59.3 ~~21.6~~	57.4 ~~21.7~~	58.4 ~~21.6~~	2.50 ~~0.33~~	68.8	104	1→10	1.02	mg/kg	114.[illegible]
	1116.0403			21.6	21.7	21.6	0.33	34.4	98	1→10	1.01	mg/kg	42.7
	Cal Blank			0.8				12.6	/			µg/L	<5.0[illegible]
	50.0 ppb			47.1				59.4	/			µg/L	47.[illegible]

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To Page 143

Witnessed & Understood by me, [illegible] Date [illegible] Inventor [illegible] Date 3/41

HGA FORM #1

ELEMENT: Pb, DATE: 3/4/87.

S_1 = 25.0 PPB., S_2 = 50.0 PPB.

S_3 = 100 PPB, BOOK NO. 287, pp 16-17.

JOB #:

201	WS378 #3		
X02	Cal Blk		
X03	50.0ppb		
X04	~~WS378.0403B~~ Blk 103		
X05	1038		
X06	1039		
X07	over Cal 1034		
X08	over cal. 1035 Pb		
X09	over cal 1035 R,		
X10	over cal 1035 R, S,		
X11	1036		
X12	1037		
X13	Cal Blk		
X14	50.0ppb		
X15	1110.0403A		
X16	1111		
X17	1112	S_2	
X18	over Cal 1113		
X19	1114		
X20	1115		
X21	over Cal. 1116		
X22	1117		
X23	Cal Blk		
X24	50.0ppb		
X25			
X26			
X27			
X28			
X29			
X30	~~Cal Blk~~		
X31	~~50.0~~ppb		
X32			
X33			
X34			
X35		S_3	

Pb

	0.003	
	0.000	AZ
	0.086	
	25.0	S1
	47.7	C
	50.0	S2
	95.5	C
	100.0	S3
201	15.2	
202	-1.4	
203	52.0	
201	15.0	
	-1.6	
	-1.5	
204	-1.5	AV
	4.56	CV
	-3.3	
	-3.1	
205	-3.2	AV
	4.42	CV
	15.5	
	15.5	
206	15.5	AV
	0.00	CV
	01	ER
	05	ER
207	05	ER
	60.46	CV
	663.2	C
	922.9	C
208	892.0	AV
	4.73	CV
	174.0	C
	172.9	C
209	173.5	AV
	0.45	CV
	05	ER
	05	ER

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ecology and environment

HGA FORM #1

ELEMENT: Pb (SPIKES ONLY), DATE: 3/4/87.

S_1 = 25.0 PPB., S_2 = 50.0 PPB.

S_3 = 100.0 PPB, BOOK NO. 287, 16-17

	201	WS 378 #3
	X02	Cal Blank
	X03	50.0 ppb
	X04	Prep Blank 103
JOB #:	X05	1032.0403 (4906)
	X06	1033.
	X07	1036.
	X08	1037.
	X09	Cal Blank
	X10	50.0 ppb
	X11	1110.0403A
	X12	1111.
	X13	1112.
	X14	1114.
	X15	1115
	X16	1117.
	X17	Cal Blank, S_2
	X18	50.0 ppb
	X19	
	X20	
	X21	
	X22	
	X23	
	X24	
	X25	
	X26	
	X27	
	X28	
	X29	
	X30	
	X31	
	X32	
	X33	
	X34	
	X35	, S_3

201	25.7
202	10.1
203	61.5
204	10.4
205	9.2
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
206	25.7
[redacted]	[redacted]
[redacted]	[redacted]
207	40.3
~~208~~	~~[illegible]~~
~~209~~	~~[illegible]~~
~~210~~	~~[illegible]~~
208	25.4
209	11.1
210	64.2
[redacted]	[redacted]
212	34.3
213	39.8
[redacted]	[redacted]
[redacted]	[redacted]
211	25.8
214	38.4
215	46.1
[redacted]	[redacted]
216	[illegible]
217	11.1
[illegible]	[illegible]

Book Inj

INTENTION PROBLEMS — [illegible]

recycled paper

PAGE 2

HGA FORM #1

ELEMENT: Pb (DILUTIONS), DATE: _____.

S_1 = 25.0 PPB., S_2 = 50.0 PPB.

S_3 = 100.0 PPB, BOOK NO. _____.

SAME CALIBRATION

JOB #:

219	1034	(.1→10)
220	1035	(1→10)
221	1035 R1	(1→10)
222	1035 R.S.	(.1→10)
223	1113.	(1→10)
224	1116.	(1→10)
225	Cal Blank	
226	50.0 ppb	

_____, S_2

_____, S_3

Pb DILUTIONS

	~~199.6~~	C
	~~199.0~~	C
219	~~197.9~~	AV
	~~1.39~~	CV
	37.4	
DF=1→10	36.2	
220	36.8	AV
	2.31	CV
	13.6	
DF=1→10	13.4	
221	13.5	AV
	1.05	CV
	~~137.3~~	C
	~~132.8~~	C
222	~~135.1~~	AV
	~~2.36~~	CV
	59.3	
	57.4	
223 DF=1→10	58.4	AV
	2.30	CV
	21.6	
	21.7	
224 DF=1→10	21.6	AV
	0.33	CV
	0.6	
	-0.9	
225	-0.1	AV
	0.6	CR
	~~59.3~~	
226	~~50.6~~	AV
	~~1.63~~	CV
226	47.2	

POOR INJ. RE INJECT

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210	.05	ER
	0.00	CV
	31.0	
	30.5	
211	30.8	AV
	1.15	CV
	14.0	
	14.5	
212	14.2	AV
	2.48	CV
	-1.0	
	-1.1	
213	-1.1	AV
	6.73	CV
	50.4	
	50.3	
214	50.4	AV
	0.14	CV
	14.2	
	14.4	
215	14.3	AV
	0.99	CV
	22.8	
	23.2	
216	23.0	AV
	1.23	CV
	28.8	
	29.0	
217	28.9	AV
	0.49	CV
	.05	ER
	.05	ER
218	.05	ER
	0.00	CV
	30.4	
	29.3	
219	29.8	AV
	2.61	CV
	35.1	
	35.9	
220	35.5	AV
	1.59	CV
	267.6	C
	259.7	C
221	263.6	AV
	2.12	CV
	18.6	
	17.5	
222	18.1	AV
	4.31	CV
	-0.7	
	-0.9	
223	-0.8	AV
	17.68	CV
	49.7	
	48.5	
224	49.1	AV
	1.73	CV

DF = 0.1710	20.9	
	21.7	
219	21.3	AV
	2.66	CV

DF = 0.1710	12.1	
	11.9	
222	12.0	AV
	1.18	CV

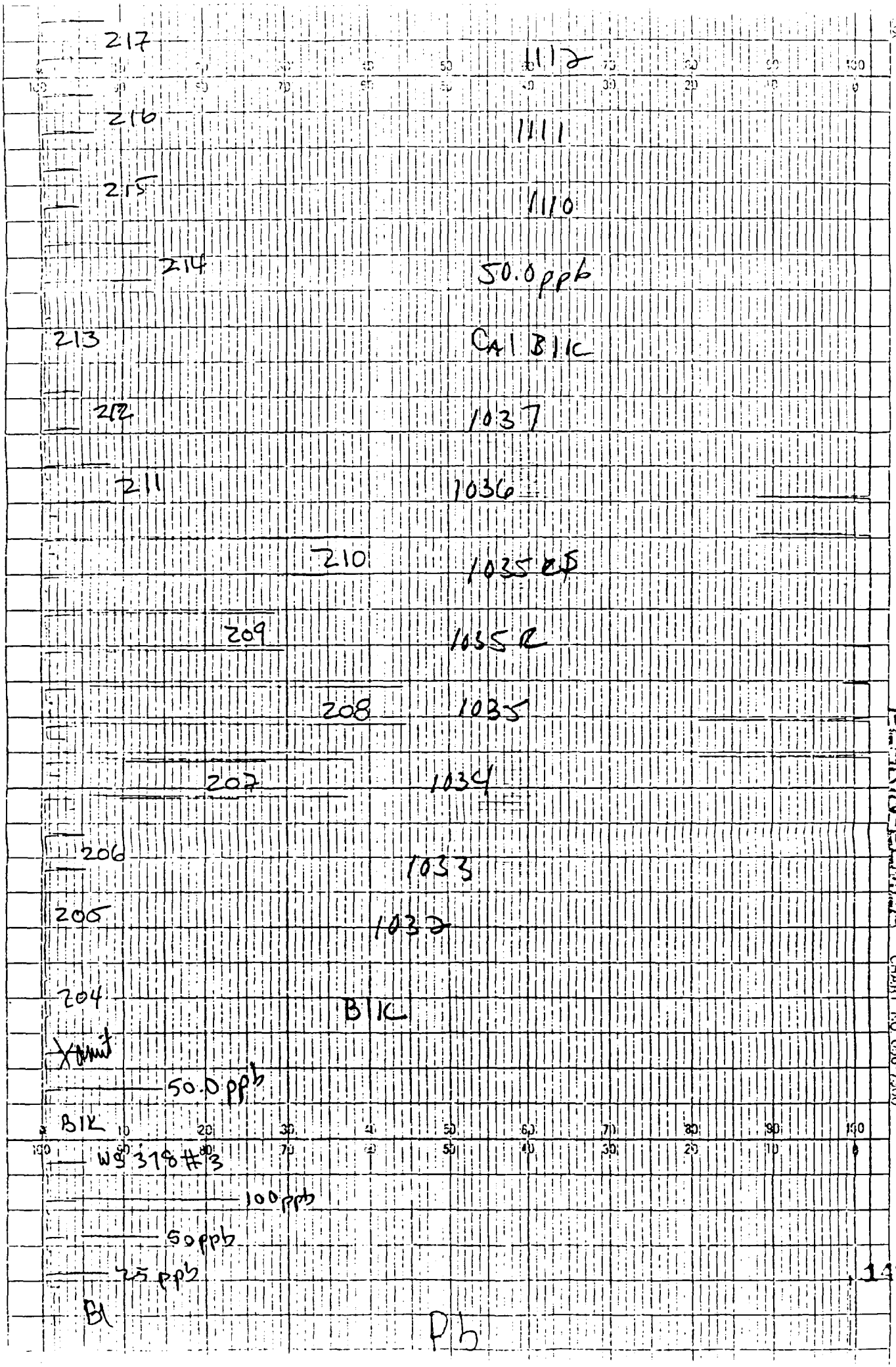
225	0.8
226	47.1

Pb
SPIKES

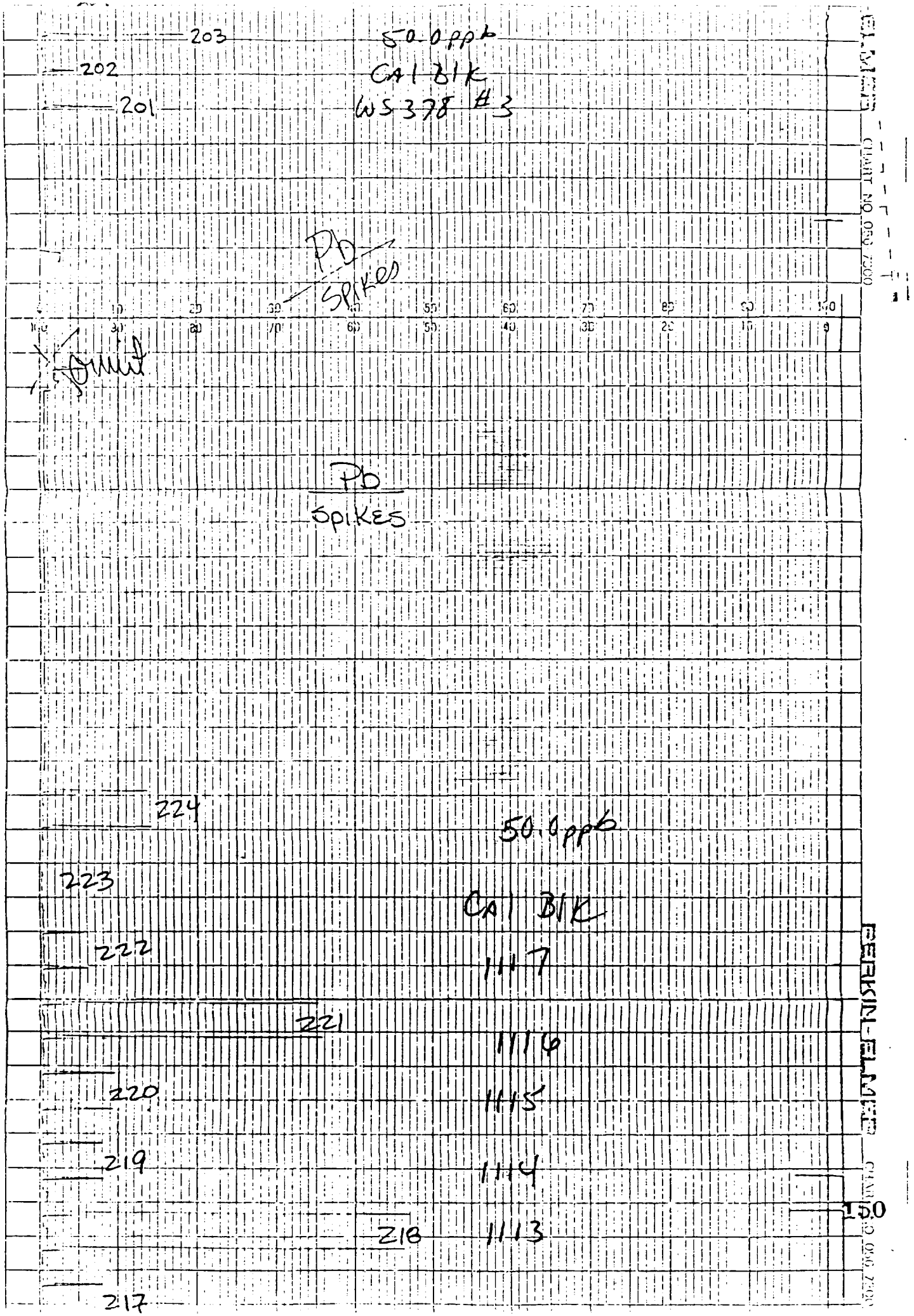
219	32.2	
~~220~~	~~[illegible]~~	POOR INJ
~~221~~	~~[illegible]~~	

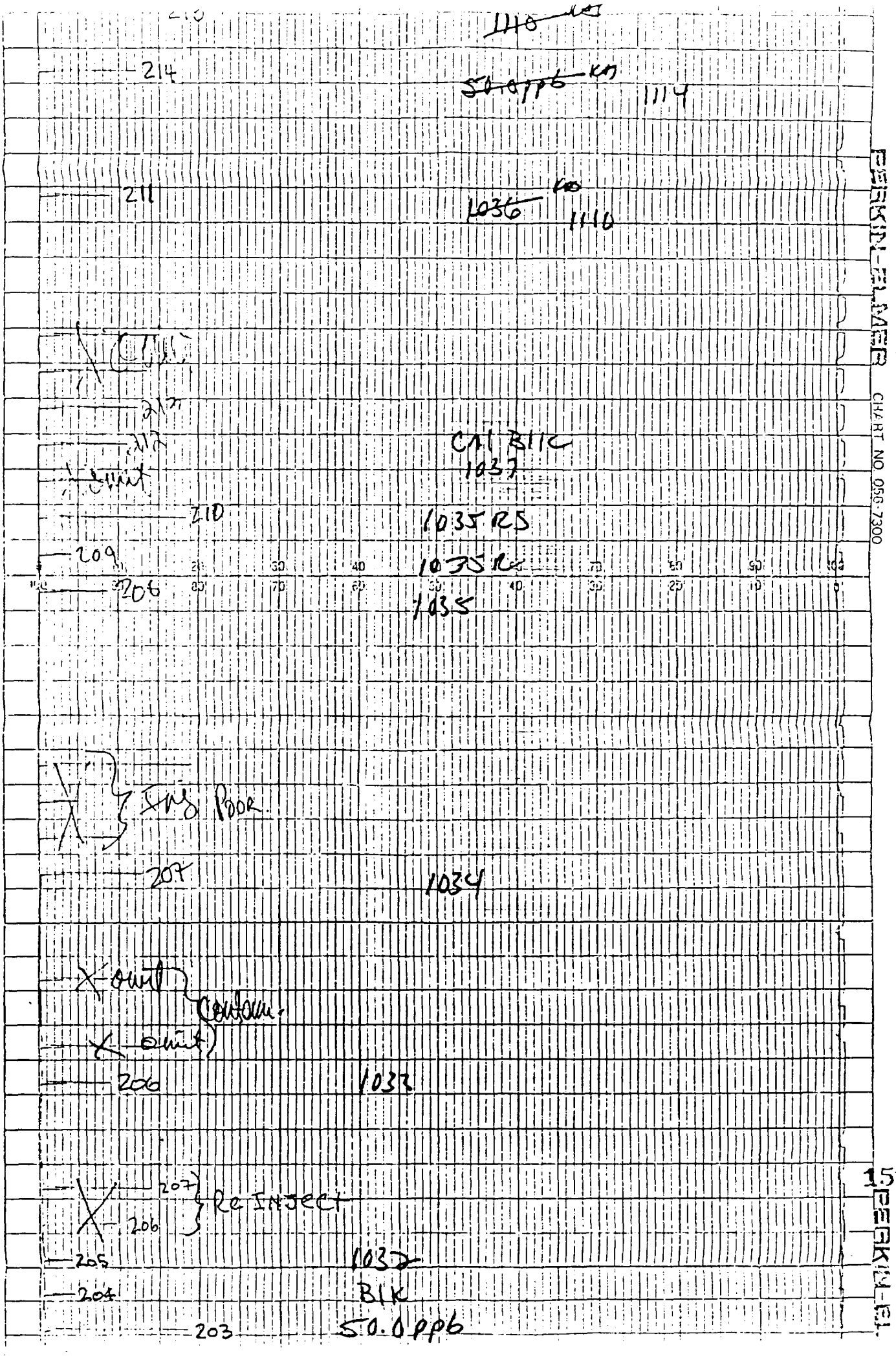
220	48.7	
221	24.6	
~~222~~	~~[illegible]~~	
~~223~~	~~24.~~	POOR
~~224~~	~~3[illegible]~~	INJ
~~225~~	~~11.1~~	

222	22.8
223	68.8
224	34.4
225	12.6
226	59.4



PERKIN-ELMER CHART NO. 056-7300


203
202
201
50.0 ppb
CAL BLK
WS378 #3
PD
SPIKES
PD
SPIKES
224
223
222
221
220
219
218
217
50.0 ppb
CAL BLK
1117
1116
1115
1114
1113
PERKIN-ELMER
CHART NO. 050 7300



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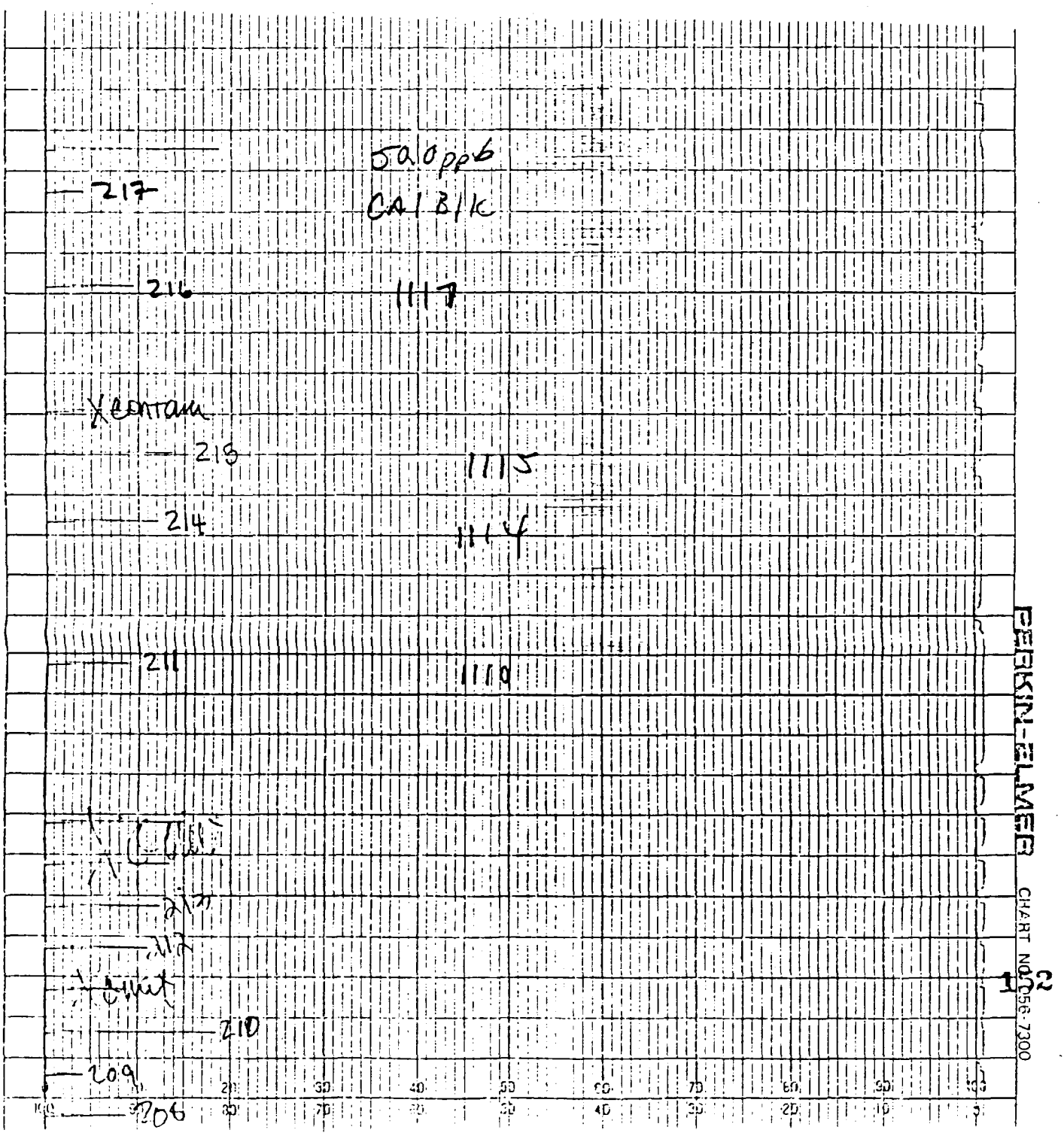


520ppb
CA/B/K
217
216
1117
X contam
215
1115
214
1114
211
1110
212
210
209
208
PERKIN-ELMER
CHART NO. 056-7300

Project No._____

TITLE _____ Book No._____

rom Page No.__

Test Performed: Pb (cont'd)

Date Received: MARCH 9-10, 1987

Work Performed By: [illegible]

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From NO	C	ppb BURN 1	ppb BURN 2	ppb Avg	C.V. % Rec.	20.0 ppb D. Spike	% Rec	D.F.	Amt of Sample (gms)	UNITS	FINAL CONC.	PRE DIG SPIK REC
4981	1379 C403				✓	✓	0.5 ER	–							
	1380 C403				✓	✓	0.5 ER	–							
	1381 C403				✓	✓	0.5 ER	–							
	1382 C403				✓	✓	0.5 ER	–							
	Cal BLK				1.0	0.3	0.7	–							
	50.0 ppb				[illegible]	49.1	49.5	1.0[illegible]							
	4.3373 #B				16.4			–	31.7	77			µg/l	16.4	
	Cal BLK				0.2			–	31.3	107				<10.0	
	50.0 ppb				51.7			–	70.1	92				51.7	
	BLK 123				1.1	0.9	1.0	–	20.5	103				<10.0	
	BLK 127				2.0	2.0	2.0	–	22.4	99			µg/l	<10.0	
4971	1274 C403				105.6	107.1	106.3	1.00	124.5	91		1.01	mg/kg	21.0	
	1273 C403				82.9	83.5	83.2	0.51	99.3	81		1.00	mg/kg	16.6	
	BLK 137				0.3	0.3	0.3		19.3	97			µg/l	<10.0	
4981	1374 C403				84.7	82.0	83.3	2.29	101.[illegible]	89				83.4	
	Cal BLK				-0.7	-0.1	-0.1	–	20.3	104				<10.0	
	50.0 ppb				50.5	51.3	50.9	1.11	70.7	99			µg/l	50.9	
4936	1154 C103				275.4	273.2	274.3	–							
	1163 C103				329.6	32[illegible]	[illegible]	–							
4943	1136 C103				✓		0.1 ER	–							
	1186 K1				6[illegible]	301.5	450.4	–							
	1186 K1S1				47[illegible]	510.3	494.[illegible]	–							
	BLK 116				8.4	6.9	7.6	–							
	Cal BLK				4.8	4.4	4.6	–							
	50.0 ppb				57.[illegible]	55.9	56.3	2.12							

Other Clients

for ICP

[illegible]

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by [illegible]	[illegible]

HGA ELEMENT: Pb, DATE: 3/10/87.
FORM S_1 = 25.0 PPB., S_2 = 50.0 PPB.
#1 S_3 = 100 PPB, BOOK NO. 287, pp32-33.

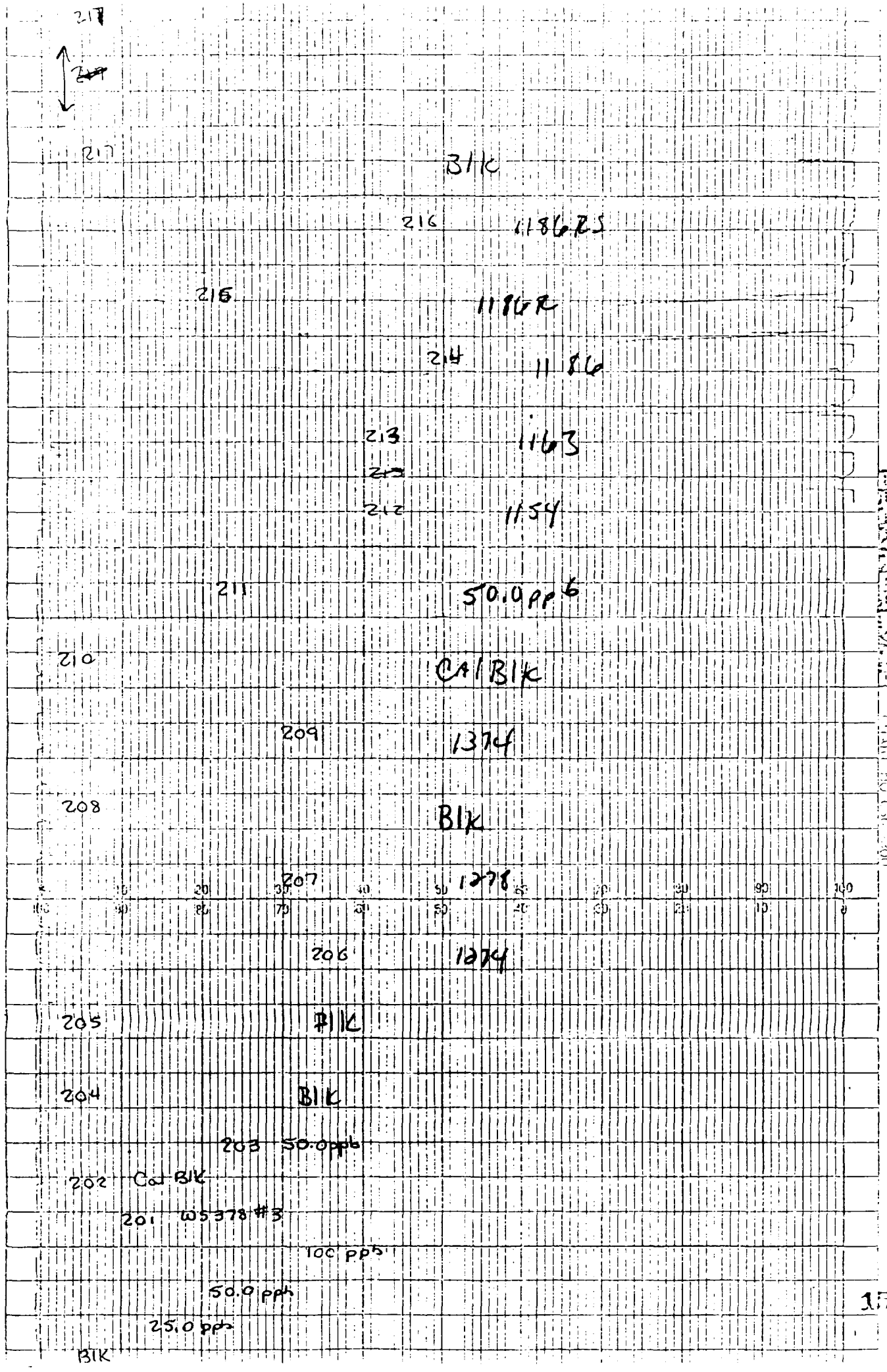
JOB #:

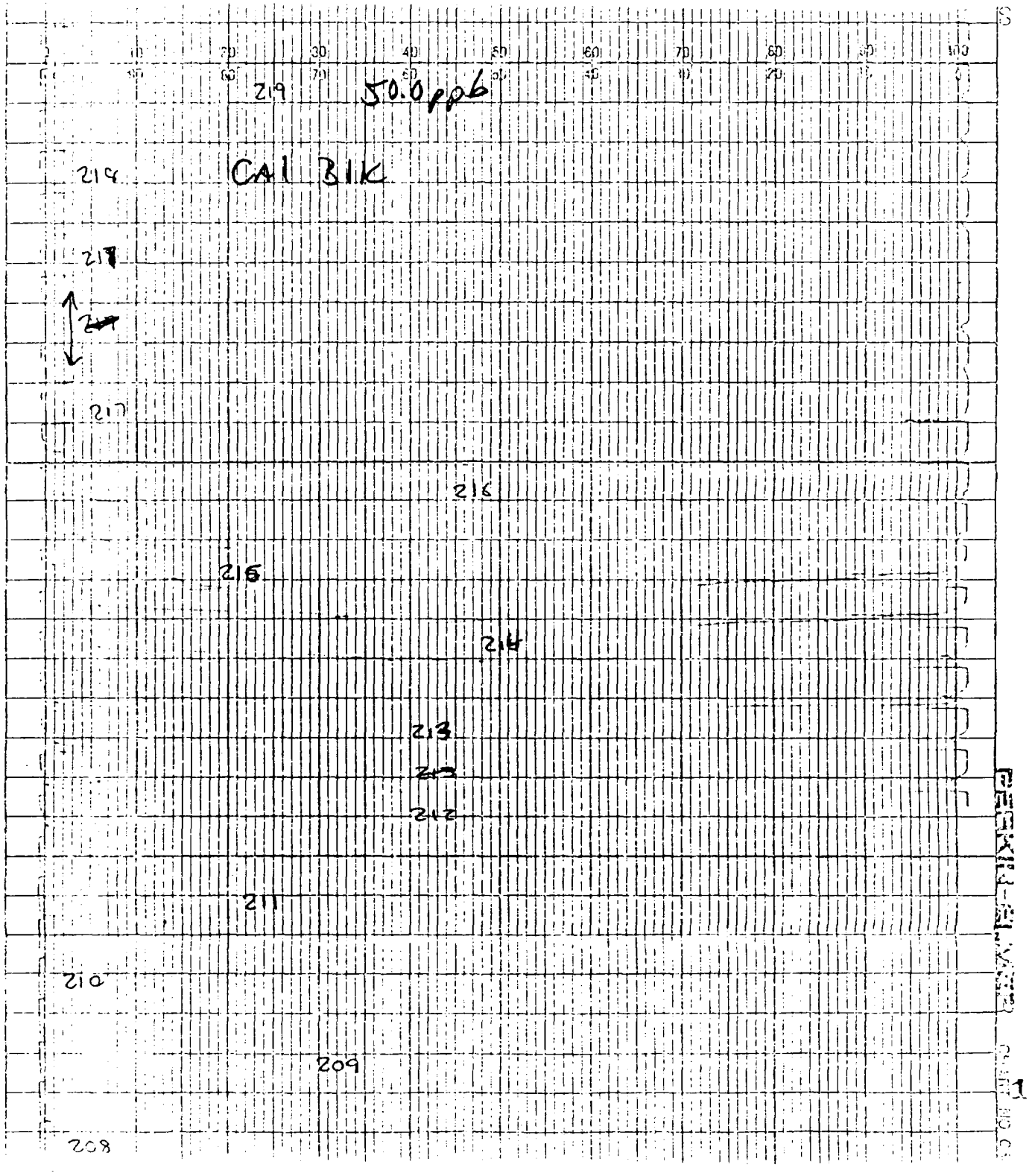
Z01	WS 378#3		
X02	Cal BLK		
X03	50.0ppb		
X04	BLK 123		-0.047
X05	BLK 127		0.050 A3
X06	1274.0403		0.157
X07	1278.0403		25.0 S1
X08	BLK 137		44.1 C
X09	1374.0403		50.0 S2
X10	Cal BLK		107.5 C
X11	50.0ppb		100.0 S3
X12	1154.0103	201	16.4
X13	1163.0103	202	0.2
X14	1186.0103	203	51.7
X15	1186 R,		1.1
X16	1186 RS,		0.9
X17	BLK 116, S_2	204	1.0 AV
X18	Cal BLK		14.14 CV
X19	50.0ppb		2.6
X20			2.6
X21		205	2.6 AV
X22			0.00 CV
X23			105.8 C
X24			107.1 C
X25		206	106.3 AV
X26			1.00 CV
X27			82.9
X28			83.5
X29		207	83.2 AV
X30			0.51 CV
X31			0.8
X32			0.8
X33		208	0.8 AV
X34			0.00 CV
X35	, S_3		84.7
			82.0
		209	83.3 AV
			2.29 CV
			-0.2
			-0.1
		210	-0.1 AV
			47.14 CV
			50.5
			51.3

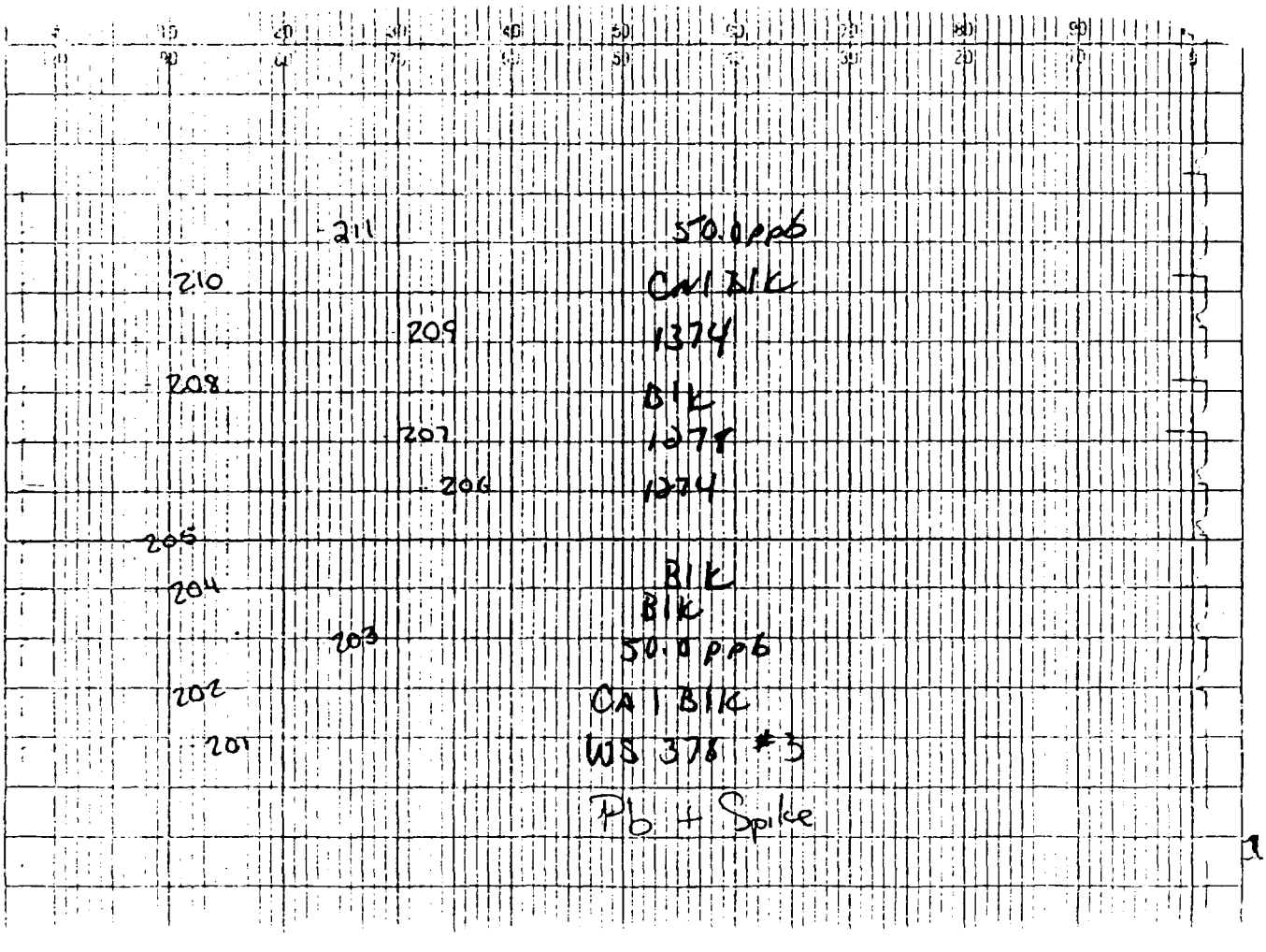
recycled paper
ecology and environment

211	50.9	AV
	1.11	CV
	275.4	C
	276.2	C
212	274.3	AV
	0.57	CV
	329.6	C
	329.9	C
213	329.8	AV
	0.06	CV
	01	ER
	01	ER
214	01	ER
	4.51	CV
	322.4	C
	301.5	C
215	450.4	AV
	49.12	CV
	476.3	C
	510.3	C
216	494.2	AV
	4.58	CV
	~~23.3~~	
	~~19.3~~	
~~217~~	~~16.9~~	AV
	~~51.24~~	CV
	8.4	
	6.9	
217	7.6	AV
	13.86	CV
	4.9	
	4.4	
218	4.6	AV
	6.15	CV
	57.6	
	55.9	
219	56.8	AV
	2.12	CV

201	31.7	
202	21.3	
203	70.1	
204	20.5	
205	22.4	
206	124.5	C
207	99.3	
208	19.3	
209	101.0	
210	20.8	
211	70.7	


217
216
215
214
213
212
211
210
209
208
207
206
205
204
203
202
201
BLK
1186.25
1186R
1186
1163
1154
50.0 ppb
Cal BLK
1374
BLK
1278
1274
BLK
BLK
50.0ppb
Cal BLK
W5378 #3
100 ppb
50.0 ppb
25.0 ppb
BLK


219
50.0 ppb
CAL BLK
214
218
217
216
216
214
213
212
211
210
209
208


211
210
209
208
207
206
205
204
203
202
201
50.0 ppb
CA1 BLK
1374
BLK
1378
1374
BLK
BLK
50.0 ppb
CA1 BLK
WS 378 #3
Pb + Spike

HGA FORM #1

ELEMENT: Pb, DATE: 3/9/87.

S_1 = 25.0 PPB., S_2 = 50.0 PPB.

S_3 = 100.0 PPB, BOOK NO. 287, pp 32-33

	201	WS 378 #3
	X02	Cal Blank
	X03	50.0 ppb
	X04	Prep Blank 123
JOB #:	X05	1219.0103 (4952)
	X06	1220.
	X07	Prep Blank 127
	X08	1274.0403 (4971)
	X09	1275.
	X10	1275. R_1
	X11	1275. R_1S_1
	X12	1276.
	X13	1277.
	X14	Cal Blank
	X15	50.0 ppb
	X16	1278.
	X17	Prep Blank 137, S_2
	X18	1371.0403 (4981)
	X19	1372.
	X20	1373.
	X21	1373. R_1
	X22	1373. R_1S_1
	X23	1374.
	X24	1375.
	X25	1376.
	X26	Cal Blank
	X27	50.0 ppb
	X28	1377.
	X29	1378.
	X30	1379.
	X31	1380.
	X32	1381.
	X33	1382.
	X34	Cal Blank
	X35	50.0 ppb, S_3

	-0.088	
	-0.088	
	-0.088	AV
	0.00	CV
	0.000	AZ
	0.157	
	0.156	
	25.0	S1
	46.2	C
	50.0	S2
	92.7	C
	100.0	S3
	5.5	
201	16.4	
	0.1	
	-0.2	
202	-0.1	AV
	06	ER
	49.0	
	47.5	
203	48.2	AV
	2.20	CV
	1.0	
	1.2	
204	1.1	AV
	12.86	CV
	05	ER
	05	ER
205	05	ER
	0.00	CV
	05	ER
	05	ER
206	05	ER
	0.00	CV
	6.1	
	4.5	
207	5.3	AV
	21.35	CV
	117.4	C
	116.9	C
208	117.1	A
	0.30	C
	01	E
	[illegible]	

recycled paper

ecology and

209	874.9	AV
	25.23	CV
	475.8	C
	721.7	C
210	699.0	AV
	4.65	CV
	05	ER
	05	ER
211	05	ER
	0.00	CV
	05	ER
	05	ER
212	05	ER
	0.00	CV
	05	ER
	05	ER
213	05	ER
	0.00	CV
	5.6	
	2.7	
214	4.1	AV
	49.41	CV
	43.9	
	43.1	
215	43.5	AV
	1.30	CV
	77.2	
	76.5	
216	76.8	AV
	0.64	CV
	1.7	
	2.5	
217	2.1	AV
	26.94	CV
	365.0	C
	291.0	C
218	323.8	AV
	16.14	CV
	05	ER
	05	ER
219	05	ER
	0.00	CV
	05	ER
	05	ER
220	05	ER
	0.00	CV
	05	ER
	05	ER
221	05	ER
	0.00	CV
	05	ER
	05	ER
222	05	ER
	0.00	CV
	82.8	
	78.8	
223	80.8	AV
	3.50	CV
	05	ER
	05	ER
224	05	ER
	0.00	CV
	05	ER
	05	ER
225	05	ER
	0.00	CV
	3.5	
	1.5	
226	2.5	AV
	56.57	CV
	51.3	
	44.0	
227	47.6	AV
	10.83	CV
	05	ER
	05	ER
228	05	ER
	0.00	CV
	05	ER
	05	ER
229	05	ER
	0.00	CV
	05	ER
	05	ER
230	05	ER
	0.00	CV
	05	ER
	05	ER
231	05	ER
	0.00	CV
	05	ER
	05	ER
232	05	ER
	0.00	CV
	05	ER
	05	ER
233	05	ER
	0.00	CV
	1.0	
	0.8	
234	0.9	AV
	15.71	CV
	49.8	
	49.1	
235	49.5	AV
	1.00	CV

235 (50.0 ppb)

234 (BLANK)

233 (1382.0403)

232 (1381.0403)

231 (1380.0403)

230 (1379.0403)

229 (1378.0403)

228 (1377.0403)

227 (50.0 ppb)

226 (BLANK)

225 (1376.0403)

224 (1375.0403)

223 (1374.0403)

222 (1373.R.S.)

221 (1373.R.)

220 (1373.0403)

219 (1372.0403)

218 (1371.0403)

217 (Prep Blank. 137)

223 (1374.0403)

222 (1373. R,S,)

221 (1373. R,)

220 (1373.0403)

219 (1372.0403)

218 (1371.0403)

217 (Prep Blank 137)

216 (1278.0403)

215 (500 ppb)

214 (Blank)

213 (1277.0403)

212 (1276.0403)

211 (1275 R,S,)

210 (1275. R,)

209 (1275.0403)

208 (1274.0403)

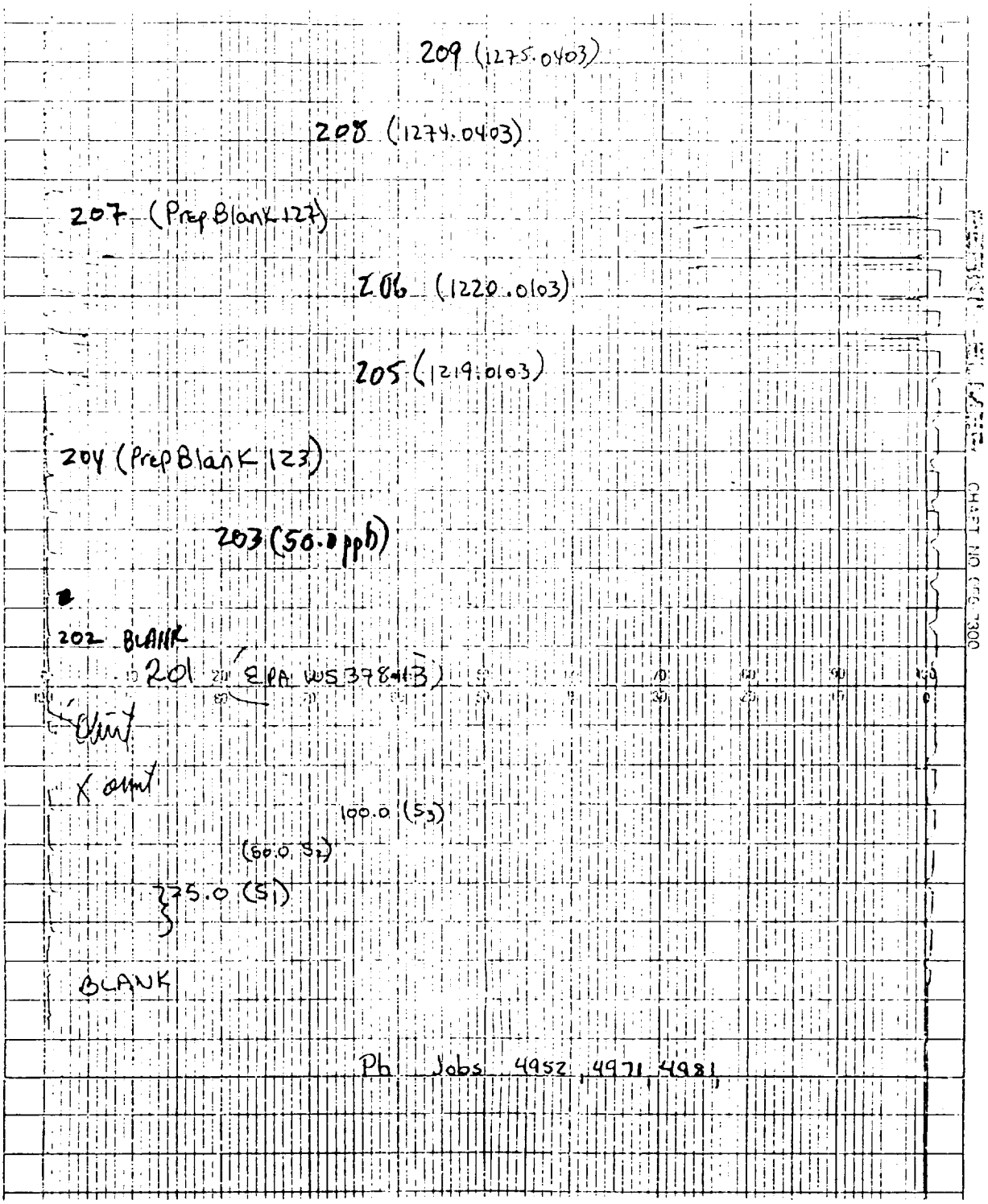
207 (Prep Blank 127)

206 (1220.0103)

205 (1219.0103)

204 (Prep Blank 123)

203 (50.0 ppb)



209 (1275.0403)

208 (1274.0403)

207 (Prep Blank 127)

206 (1220.0103)

205 (1219.0103)

204 (Prep Blank 123)

203 (50.0 ppb)

202 BLANK

201 (EPA WS 378-13)

Omit

X omit

100.0 (S_3)

(50.0 S_2)

25.0 (S_1)

BLANK

Pb Jobs 4952, 4971, 4981,

Project No._____

Book No._____ TITLE _____

From Page No.__ Pb
Test Performed:_____
Date Received: 3/24/87
Work Performed By: J. OLKA

See pg 1

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From N	C	ppb Burn1	ppb Burn2	ppb Ave	CV	10.0ppb Spike	% Rec	DF	Samp. Wgt	Units	Final Conc	
	WS378#3				17.9				23.5	106			µg/l	17.9	
	Cal Blk.				0.7				12.0	120				<5.00	
	50.0ppb				50.9				60.5	96				50.9	
	Blk 140				2.6	2.9	2.8	7.71	13.0	102			µg/l	<5.00	
4906	1035.0403X,				46.5	46.2	46.3	0.46	57.7	114	1→10	1.02	mg/kg	90.8	90.8
	1035.0403X,R,				16.8	16.0	16.4	3.45	27.1	107	1→10	1.06		30.9	
	1035.X,R,S,				26.1	25.8	25.9	0.82	36.1	102	1→10	1.00	mg/kg	51.8	
	Cal Blk				0.4	-0.2	0.0		9.7	97			µg/l	<5.00	
	50.0ppb				52.1	51.1	51.6	1.37	61.6	100			µg/l	51.6	

To Page No.___

Witnessed & Understood by me. | Date | Invented by | Date 3/24/87

Recorded by J. Olka

HGA FORM #1

ELEMENT: Pb, DATE: 3/24/87.

S_1 = 25.0 PPB., S_2 = 50.0 PPB.

S_3 = 100 PPB. BOOK NO. 287, pg. 72

JOB #: _____

Z01	WS 378#3	
X02	Cal Blk.	
X03	50.0 ppb	
X04	Blk 140	
X05	1035.0403 X_1 (1→10)	
X06	1035. X_1R_1	|
X07	1035. $X_1R_1S_1$	|
X08	Cal Blk	
X09	50.0 ppb	
X10		
X11		
X12		
X13		
X14		
X15		
X16		
X17	_____, S_2	
X18		
X19		
X20		
X21		
X22		
X23		
X24		
X25		
X26		
X27		
X28		
X29		
X30		
X31		
X32		
X33		
X34		
X35	_____, S_3	

	-0.227	
	-0.287	
	[illegible]	[illegible]
	0.085	
	[illegible]	[illegible]
	[illegible]	[illegible]
	[illegible]	[illegible]
	[illegible]	[illegible]
~~201~~	~~29.1~~	
202	0.7	
203	50.0	
204	17.9	
	2.8	
	2.9	
204	2.8	AV
	7.71	CV
	46.5	
	46.2	
205	46.3	AV
	0.46	CV
	16.6	
	16.0	
206	16.4	AV
	3.45	CV
	26.1	
	25.8	
207	25.9	AV
	0.83	CV
	~~11.1~~	
	0.4	
208	13.1	AV
	[illegible]	[illegible]
	52.1	
	51.1	
209	51.6	AV
	1.37	CV
201	28.5	
202	12.0	
203	60.5	
206	13.0	
205	57.7	
206	27.1	
207	36.1	
208	3.7	
209	61.6	

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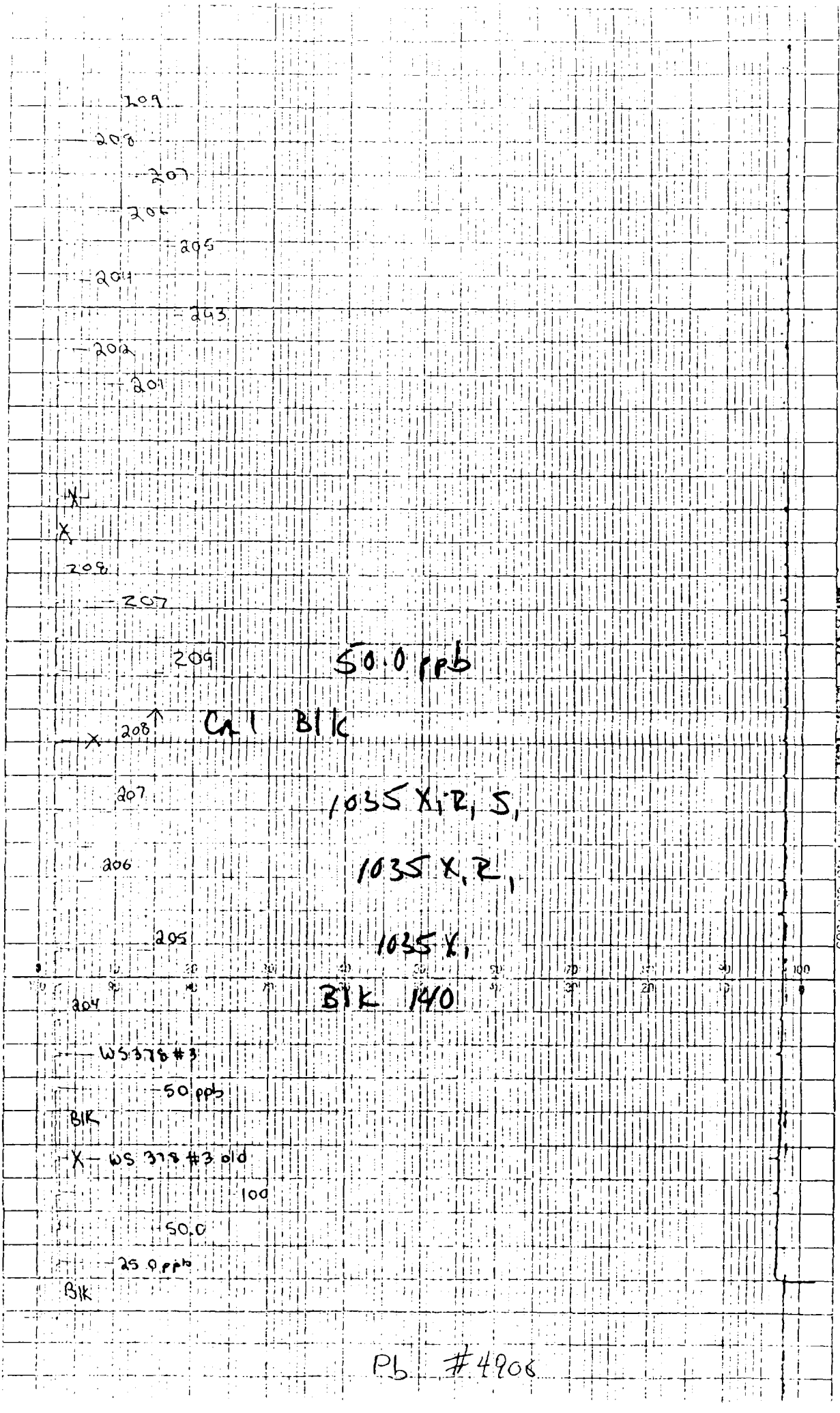
209
208
207
206
205
204
203
202
201
X
X
208
207
209
208
207
206
205
204
50.0 ppb
Cal Blk
1035 X, R, S,
1035 X, R,
1035 X,
Blk 140
WS378#3
50 ppb
Blk
X - WS 378 #3 old
100
50.0
25.0 ppb
Blk
Pb #4906

Project No. _____

12 Book No. _____ TITLE _____

From Page No. __

(See page3) 200 ml Final Vol. (soils)

Performed: Pb

Date Received: 4/20-21/87

Work Performed By: J. OLKA

Job No.	ID No.	Custody Seal Intact Yes	Custody Seal Intact No	Secure Storage Area Received From	ppb Burn 1	ppb Burn 2	ppb Ave	CV	10.0ppb Spike	% Rec	DF	Samp Wgt (Gms)	Units	Final Conc
	WS378#3				15.7				25.2	95			µg/L	15.7
	Cal Blk				-0.4				9.5	95				<5.00
	50.0ppb				54.1				61.7	46				54.1
5141	2116.1803				22.0	24.5	23.2	8.18	32.8	96				23.2
	2116.R1				35.1	31.6	33.3	8.02	40.3	87				33.3
	2116.R1S1				46.0	37.3	41.6	15.7	50.4	88				41.6
	Blk 281				1.3	0.6	0.9	-	11.1	111			µg/L	<5.00
5169	2225.1003				30.0	29.6	29.8	1.22	39.3	97				29.8
	2227.1303				44.3	42.5	43.4	3.13	56.5					—
	2227.R1				46.0	44.0	45.0	3.25	58.3	—				—
	2227.R1S1				59.8	59.3	59.6	0.66	71.9	—				—
5119	2002.0603				8.8	10.5	9.7	14.2	16.3	—				—
	2006.0603				-0.9	0.1	-0.4	-	0.5	—				—
	Cal Blk				0.8	0.0	0.2	-	9.9	99			µg/L	<5.00
	50.0ppb				51.4	49.7	50.6	2.72	63.7	131			µg/L	50.6
5129	2037.0603X5				12.0	13.0	12.5	6.23	21.0	85				12.5
	2038.0603				1.4	1.4	1.4	0	12.7	113				<5.00
	Blk 286				0.2	-0.2	0.0		10.6	106			µg/L	
5162	2210.0603				-0.8	-0.8	-0.8		5.3	53				
	2215.0603				-0.2	0.0	-0.1		4.7	47				
	2219.0603				-0.7	-0.6	-0.6		5.8	58				
5171	2241.0603				-0.2	-1.1	-0.6		5.6	56				
	2242.0603				-0.9	-0.4	-0.6		4.1	41				
	2244.0603				-0.7	-0.9	-0.8		4.6	46				
	2247.0603				0.9	2.0	1.4		11.0	110				
	Cal Blk				-0.7	-0.2	-0.5		9.7	97			µg/L	<5.00
	50.0ppb				50.3	50.3	50.3	0.04	~~0.04~~ 60.3	100			µg/L	50.3
4989	1427.0403				79.4	84.3	81.8	4.98	90.7	89		1.06	mg/kg	15.4
	1428.0403				17.4	18.5	18.0	4.58	29.4	114		1.01	mg/kg	3.56

To Page No. ___

Upper limits

Witnessed & Understood by me, _____ Date _____

Invented by _____ Date 4/21/87

Recorded by J. Olka

Page No.
Test Performed: Pb (cont'd)
Date Received: 4/20-21/87
Work Performed By: J. OLEN

200 ml Final Vol. (soils)

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From N C	ppb Burn 1	ppb Burn 2	ppb Burn Ave	CV	10.0 ppb Spike	% Rec	DF	Samp Wgt (GMS)	Units	Final Conc.
4989	1428. R,			20.3	21.7	21.0	5.09	33.5	/		1.01	mg/kg	/
	1429.0403			285.6	285.2	285.4	0.12	591.0	/		1.04	↓	/
	1429.0403S			303.3	303.9	303.1	0.12	E05	/		1.06	↓	/
	1430.0403			31.2	27.1	29.1	11.1	38.2	91		1.06	mg/kg	5.49
	BLK 211			0.9	1.9	1.4	—	11.0	110			µg/L	<5.00
	Cal Blk			1.0	-0.2	0.4	—	10.1	101			µg/L	<5.00
	50.0 ppb			49.4	48.6	49.0	1.53	58.3	93			µg/L	49.0
5169	2227.1303			7.9	7.7	7.8	2.36	18.1	103	2→10		µg/l	39.0
	2227. R,			7.8	8.0	7.9	4.25	18.9	111	2→10		↓	39.0
	2227. R,S,			10.8	10.6	10.7	1.07	20.5	98	2→10		↓	53.5
5119	2002.0603			4.7	6.5	5.6	23.4	13.9	83	2→10		↓	/
	2006.0603			1.3	0.9	1.1	—	8.7	87	1→10		µg/l	<50.0
4989	1428.0403			5.3	5.1	5.2	3.57	14.4	92	2→10	1.01	mg/kg	5.15
	1428. R,			5.2	3.8	4.5	22.3	14.3	98	2→10	1.01	↓	<4.95
	1429.0403			26.9	28.0	27.4	2.90	39.3	119	1→10	1.04	↓	/
	1429. S,			34.2	33.5	33.8	1.48	42.1	83	1→10	1.06	mg/kg	/
	Cal Blank			0.5								µg/l	<5.00
	50.0 ppb			53.8								µg/l	53.8

Other Charts

To Page No.

Witnessed & Understood by me, Date

Invented by Date

Recorded by g. Olen 4/21/87

HGA FORM #1

ELEMENT: Pb, DATE: 4/20/87.

S_1 = 100 PPB., S_2 = 50 PPB.

S_3 = 25 PPB, BOOK NO. 294, pp 12-13.

JOB #: _____

101	WS 378 # 3	ATTACH
X02	Cal Pb Blk	
X03	50.0 ppb	TAPE
X04	2116.1803 (5141)	
X05	2116. R_1	HERE
X06	2116. R_1S_1	
X07	Blk 281	
X08	2225.1003 (5169)	
X09	13 2227.1303	
X10	14 2227. R_1	
X11	15 2227. R_1S_1	
X12	16 2002.0603 (5119)	
X13	17 2006.0603	
X14	18 Cal Blk	
X15	19 50.0 ppb	
X16	2037.0603 x S_2 (5129)	
X17	2038.0603, S_2	
X18	Blk 286	
X19	2210.0603 (5162)	
X20	2215.0603	
X21	2219.0603	
X22	2241.0603 (5171)	
X23	2242.0603	
X24	2244.0603	
X25	2247.0603	
X26	Cal Blk	
X27	50.0 ppb	
X28	1427.0403 (4989)	
X29	32 1428.0403	
X30	1428. R	
X31	1429.0403	
X32	1429. S_1	
X33	1430.0403	
X34	Blk 211	
X35	Cal Blk, S_3	
36	50.0 ppb	

other client

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ecology and environment

```
PB
                                        AA              ZAA             BG
PEAK HEIGHT (ABSORBANCE)              0.012           0.015           0.008
PEAK AREA (ABS-SECONDS)              -0.110           0.013          -0.123

  -0.097
*****************************************************************************
   0.000          AUTOZERO
*****************************************************************************
PB
                                        AA              ZAA             BG
PEAK HEIGHT (ABSORBANCE)              1.104           0.749           0.355
PEAK AREA (ABS-SECONDS)               0.443           0.390           0.053

   0.377
         E-87: VALUE GREATER THAN ROLLOVER ABSORBANCE
*****************************************************************************
   100.0          STANDARD    1
*****************************************************************************
PB
                                        AA              ZAA             BG
PEAK HEIGHT (ABSORBANCE)              0.775           0.527           0.250
PEAK AREA (ABS-SECONDS)               0.197           0.223          -0.026

    55.8
*****************************************************************************
    50.0          STANDARD    2
*****************************************************************************
PB
                                        AA              ZAA             BG
PEAK HEIGHT (ABSORBANCE)              0.420           0.299           0.124
PEAK AREA (ABS-SECONDS)               0.045           0.133          -0.088

    27.0
*****************************************************************************
    25.0          STANDARD    3
*****************************************************************************
PB    0 1 0 1
                                        AA              ZAA             BG
PEAK HEIGHT (ABSORBANCE)              0.265           0.195           0.072
PEAK AREA (ABS-SECONDS)               0.013           0.096          -0.083

    15.7
*****************************************************************************
PB    0 1 0 2
                                        AA              ZAA             BG
PEAK HEIGHT (ABSORBANCE)              0.012           0.014           0.009
PEAK AREA (ABS-SECONDS)              -0.088           0.010          -0.097

    -0.4
*****************************************************************************
PB    0 1 0 3
                                        AA              ZAA             BG
PEAK HEIGHT (ABSORBANCE)              0.758           0.520           0.238
PEAK AREA (ABS-SECONDS)               0.235           0.237          -0.003
```

54.1

****

PB 0104

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.330	0.231	0.107
P % AREA (ABS-SECONDS)	0.043	0.121	-0.078

READ: 22.0

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.340	0.230	0.110
PEAK AREA (ABS-SECONDS)	0.122	0.131	-0.008

READ: 24.5

MEAN= 23.2 STD.DEV.= COEF.VAR.= 8.18 %

****

PB 0105

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.428	0.292	0.136
PEAK AREA (ABS-SECONDS)	0.200	0.171	0.029

READ: 35.1

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.415	0.274	0.141
PEAK AREA (ABS-SECONDS)	0.184	0.158	0.026

READ: 31.6

MEAN= 33.3 STD.DEV.= COEF.VAR.= 8.02 %

****

PB 0106

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.528	0.367	0.165
PEAK AREA (ABS-SECONDS)	0.237	0.210	0.027

READ: 46.0

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.473	0.334	0.141
PEAK AREA (ABS-SECONDS)	0.175	0.179	-0.003

READ: 37.3

MEAN= 41.6 STD.DEV.= COEF.VAR.= 15.72 %

****

PB 0107

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.036	0.028	0.015
PEAK AREA (ABS-SECONDS)	-0.068	0.023	-0.090

READ: 1.3

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.037	0.026	0.012
PEAK AREA (ABS-SECONDS)	-0.063	0.018	-0.081

READ: 0.6

MEAN= 0.9 STD.DEV.= COEF.VAR.= 55.32 %

****

PB 0108

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.457	0.306	0.152
PEAK AREA (ABS-SECONDS)	0.165	0.152	0.013

READ: 30.0

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.440	0.293	0.148
PEAK AREA (ABS-SECONDS)	0.176	0.150	0.025

READ: 29.6

MEAN= 29.8 STD.DEV.= COEF.VAR.= 1.22 %

****

PB 0109

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.511	0.343	0.170
PEAK AREA (ABS-SECONDS)	0.252	0.203	0.049

READ: 44.3

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.618	0.410	0.208
PEAK AREA (ABS-SECONDS)	0.241	0.197	0.044

READ: 42.5

MEAN= 43.4 STD.DEV.= COEF.VAR.= 3.13 %

****

PB 0110

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.584	0.386	0.198
PEAK AREA (ABS-SECONDS)	0.256	0.209	0.047

READ: 46.0

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.570	0.383	0.192
PEAK AREA (ABS-SECONDS)	0.259	0.203	0.056

READ: 44.0

MEAN= 45.0 STD.DEV.= COEF.VAR.= 3.25 %

****

PB 0111

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.758	0.508	0.254
PEAK AREA (ABS-SECONDS)	0.347	0.257	0.090

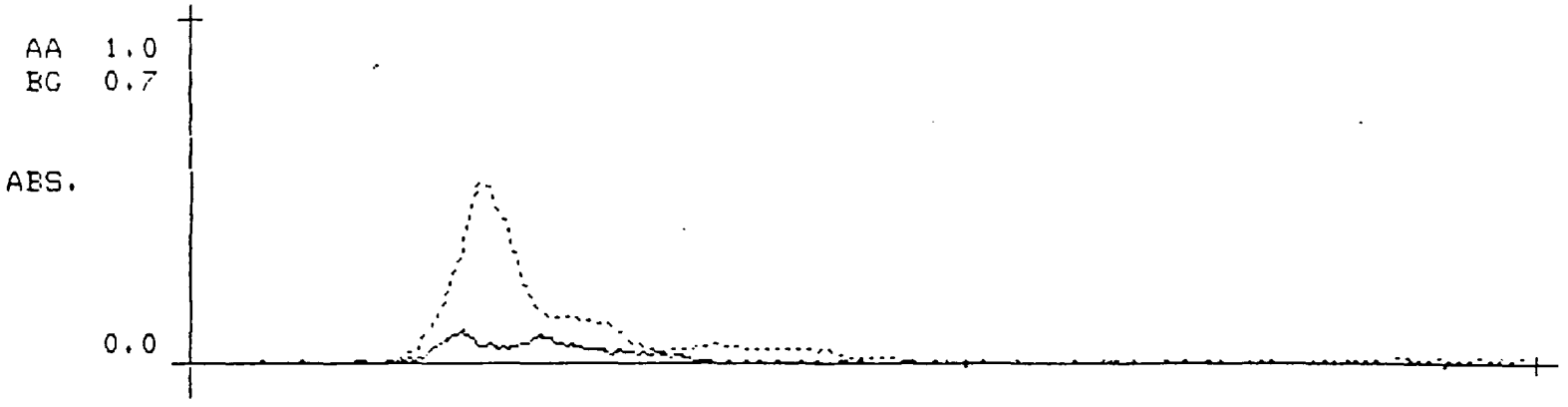
READ: 59.8

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.624	0.418	0.210
PEAK AREA (ABS-SECONDS)	0.325	0.255	0.070

READ: 59.3

****

PB 0112



	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.436	0.106	0.377
PEAK AREA (ABS-SECONDS)	0.239	0.065	0.174

READ: 8.8

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.412	0.096	0.339
PEAK AREA (ABS-SECONDS)	0.234	0.073	0.161

READ: 10.5

MEAN= 9.7 STD.DEV.= COEF.VAR.= 14.15 %

****

PB 0113

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.222	0.013	0.218
PEAK AREA (ABS-SECONDS)	0.371	0.004	0.367

READ: -0.9

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.220	0.014	0.223
PEAK AREA (ABS-SECONDS)	0.332	0.014	0.318

READ: 0.1

MEAN= -0.4 STD.DEV.= COEF.VAR.= 99.99 %

****

PB 0114

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.020	0.015	0.009
PEAK AREA (ABS-SECONDS)	-0.067	0.016	-0.083

READ: 0.3

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.014	0.014	0.007
PEAK AREA (ABS-SECONDS)	-0.080	0.013	-0.094

READ: 0.0

MEAN= 0.2 STD.DEV.= COEF.VAR.= 99.99 %

****

READ: -0.9

MEAN= -1.1 STD.DEV.= COEF.VAR.= 16.13 %

****

PB 115

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.674	0.472	0.204
PEAK AREA (ABS-SECONDS)	0.295	0.246	0.049

READ: 51.4

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.749	0.506	0.243
PEAK AREA (ABS-SECONDS)	0.274	0.240	0.034

READ: 49.7

MEAN= 50.6 STD.DEV.= COEF.VAR.= 2.72 %

****

PB 0116

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.221	0.121	0.106
PEAK AREA (ABS-SECONDS)	0.071	0.074	-0.003

READ: 12.0

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.209	0.113	0.096
PEAK AREA (ABS-SECONDS)	0.070	0.079	-0.010

READ: 13.0

MEAN= 12.5 STD.DEV.= COEF.VAR.= 6.23 %

****

PB 0117

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.041	0.030	0.012
PEAK AREA (ABS-SECONDS)	-0.048	0.016	-0.064

READ: 1.4

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.045	0.032	0.013
PEAK AREA (ABS-SECONDS)	-0.047	0.016	-0.063

READ: 1.4

MEAN= 1.4 STD.DEV.= COEF.VAR.= 2.40 %

****

PB 0118

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.031	0.026	0.012
PEAK AREA (ABS-SECONDS)	-0.055	0.009	-0.064

AD: 0.2

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.032	0.026	0.008
PEAK AREA (ABS-SECONDS)	-0.050	0.007	-0.057

READ: -0.2

MEAN= 0.0 STD.DEV.= COEF.VAR.= %

****

PB 0119

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.237	0.015	0.238
PEAK AREA (ABS-SECONDS)	0.328	0.003	0.325

READ: -0.8

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.292	0.015	0.283
PEAK AREA (ABS-SECONDS)	0.363	0.003	0.360

READ: -0.8

MEAN= -0.8 STD.DEV.= COEF.VAR.= 0.84 %

****

PB 0120

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.236	0.016	0.241
PEAK AREA (ABS-SECONDS)	0.095	0.007	0.089

READ: -0.2

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.238	0.018	0.246
PEAK AREA (ABS-SECONDS)	0.084	0.008	0.077

READ: 0.0

MEAN= -0.1 STD.DEV.= COEF.VAR.= 99.99 %

****

PB 0121

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.109	0.018	0.110
PEAK AREA (ABS-SECONDS)	0.071	0.004	0.067

READ: -0.7

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.113	0.018	0.110
PEAK AREA (ABS-SECONDS)	0.066	0.004	0.062

READ: -0.6

MEAN= -0.6 STD.DEV.= COEF.VAR.= 7.46 %

****

PB 0122

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.383	0.020	0.392
PEAK AREA (ABS-SECONDS)	0.101	0.007	0.095

READ: -0.2

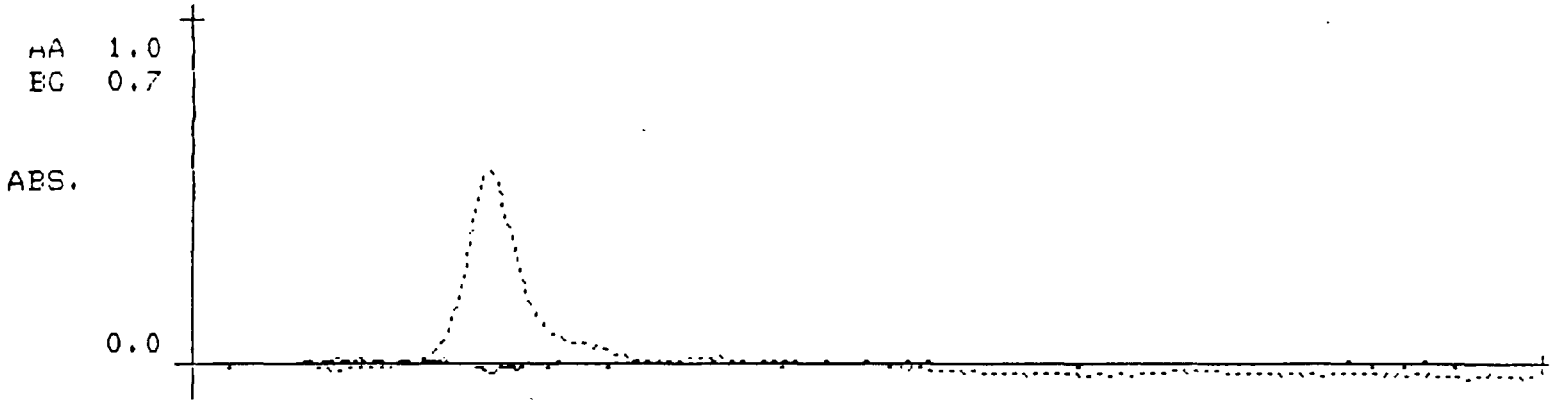
	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.407	0.017	0.417
PEAK AREA (ABS-SECONDS)	0.103	0.001	0.102

READ: -1.1

MEAN= -0.6 STD.DEV.= COEF.VAR.= 94.74 %

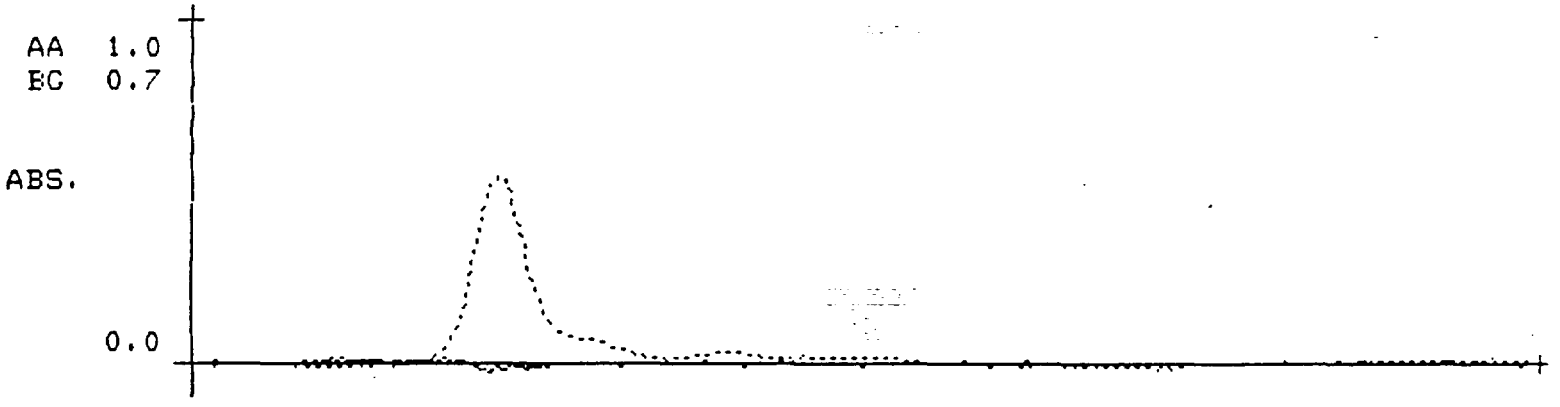
****

PB 0123



	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.371	0.017	0.396
PEAK AREA (ABS-SECONDS)	0.056	0.003	0.054

READ: -0.9



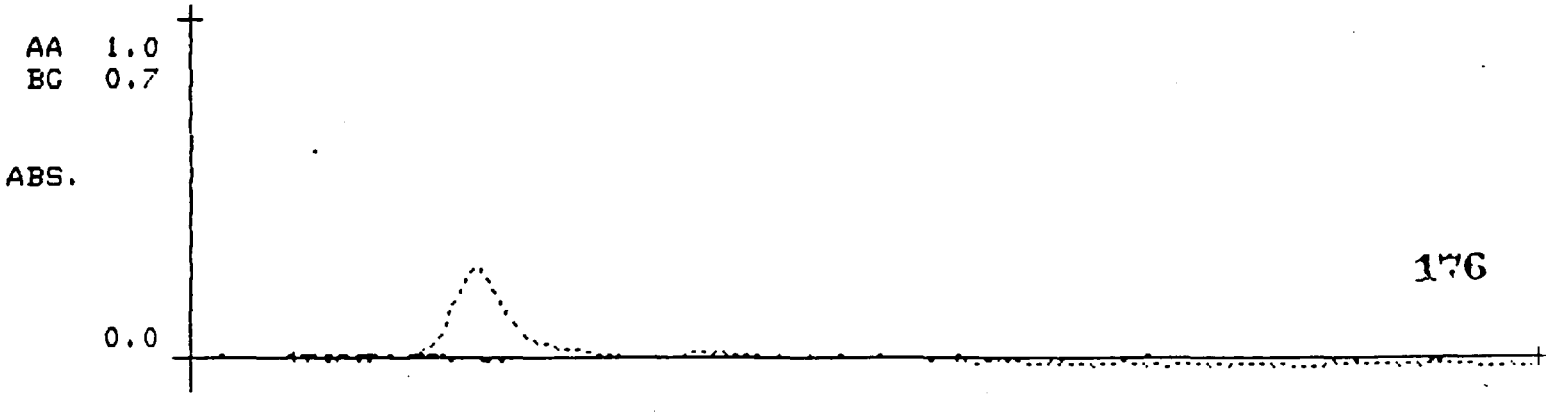
	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.376	0.017	0.393
PEAK AREA (ABS-SECONDS)	0.123	0.006	0.118

READ: -0.4

MEAN= -0.6 STD.DEV.= COEF.VAR.= 55.45 %

****

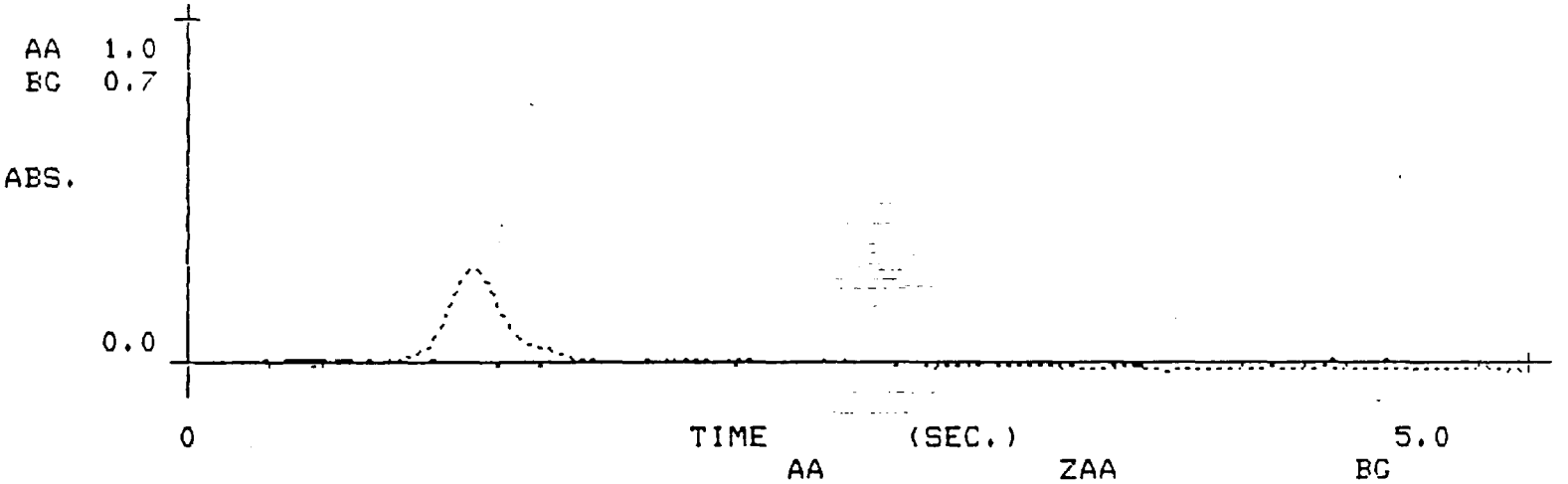
PB 0124



0124 (CONTINUED)

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.188	0.017	0.191
PEAK AREA (ABS-SECONDS)	0.025	0.003	0.022

READ: -0.7



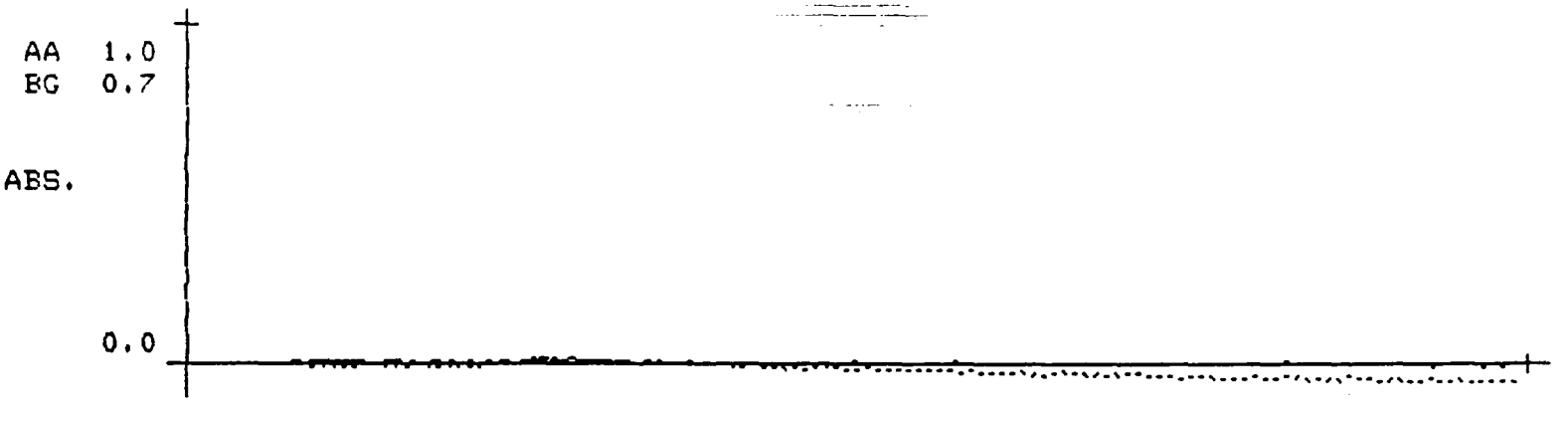
	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.195	0.014	0.195
PEAK AREA (ABS-SECONDS)	0.029	0.003	0.026

READ: -0.9

MEAN= -0.8 STD.DEV.= COEF.VAR.= 11.19 %

****

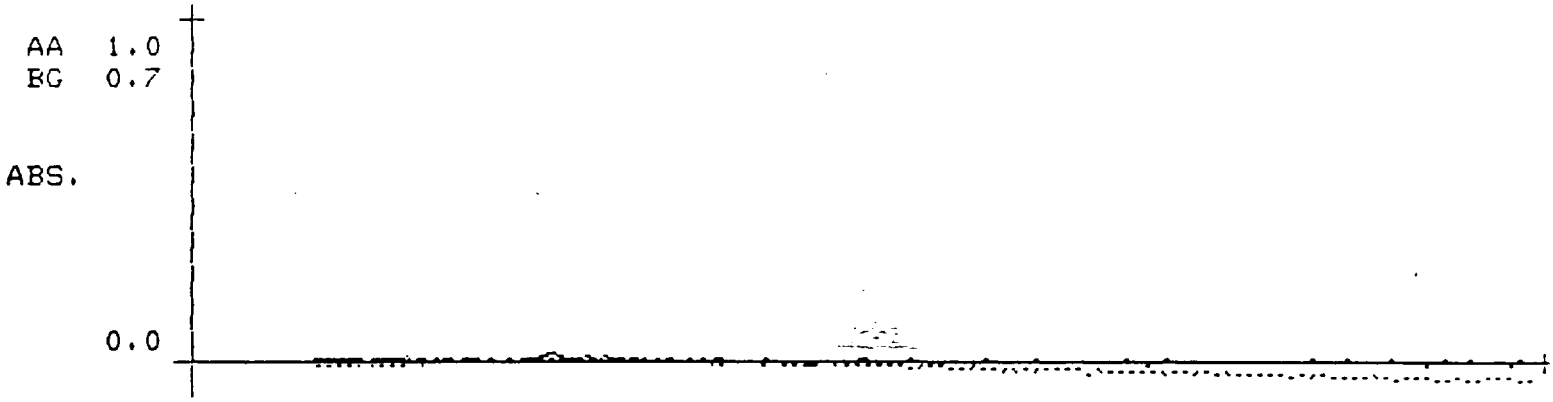
PB 0125



	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.031	0.023	0.012
PEAK AREA (ABS-SECONDS)	-0.058	0.013	-0.071

R): 0.9

0125 (CONTINUED)



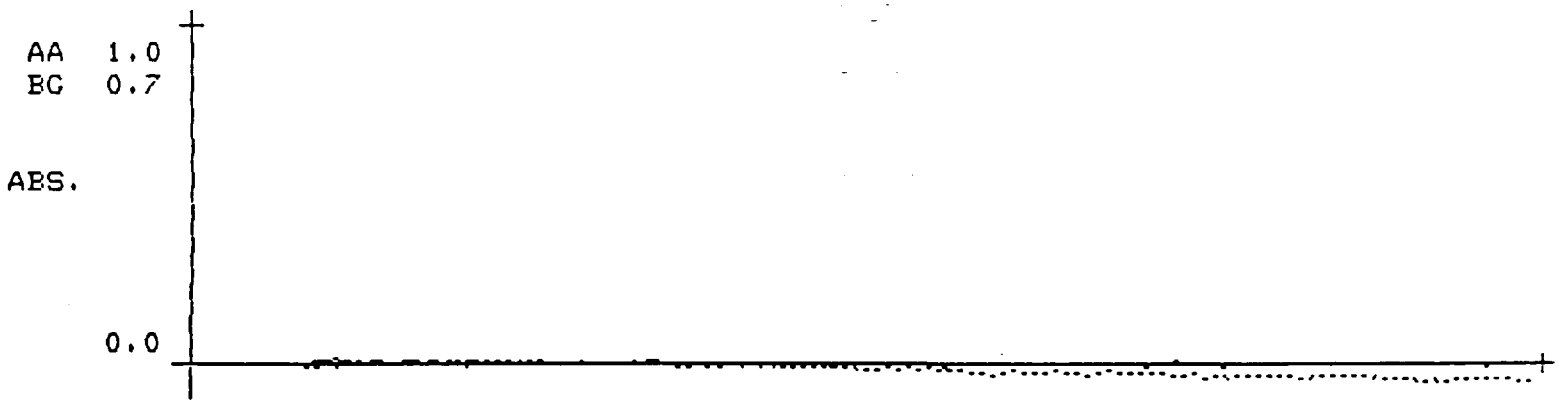
	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.035	0.026	0.010
PEAK AREA (ABS-SECONDS)	-0.042	0.020	-0.061

READ: 2.0

MEAN= 1.4 STD.DEV.= COEF.VAR.= 56.33 %

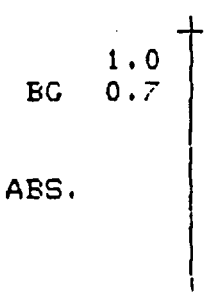
****

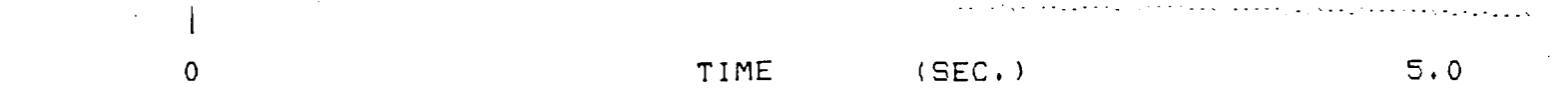
PB 0126



	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.015	0.018	0.009
PEAK AREA (ABS-SECONDS)	-0.058	0.003	-0.061

READ: -0.7.





0126 (CONTINUED)

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.013	0.018	0.009
PEAK AREA (ABS-SECONDS)	-0.059	0.007	-0.066

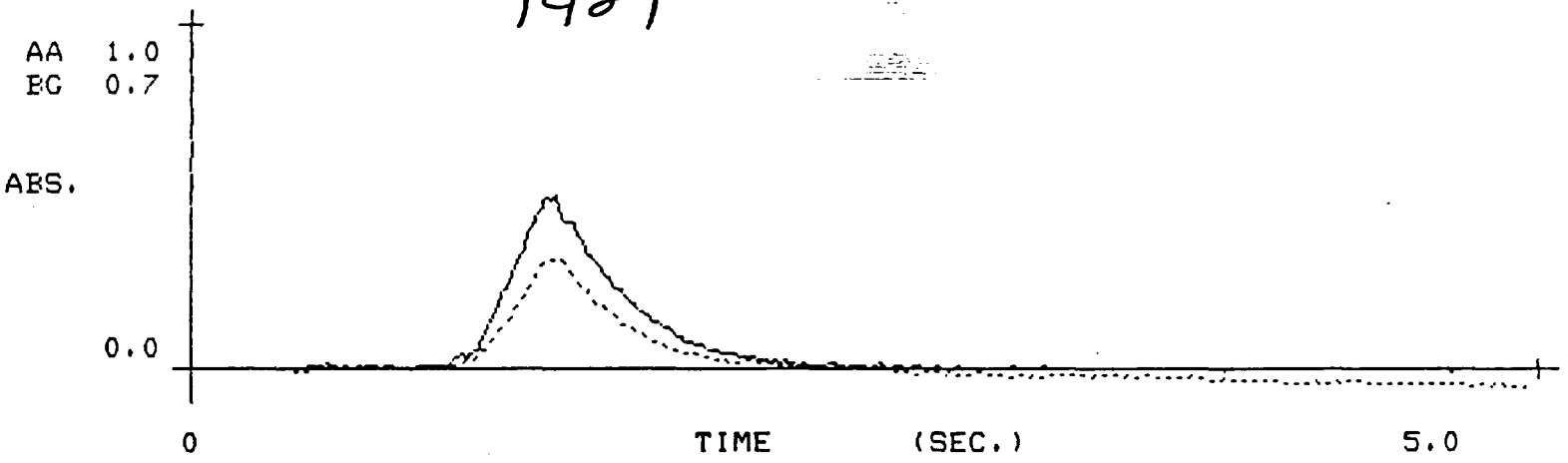
READ: -0.2

MEAN= -0.5 STD.DEV.= COEF.VAR.= 82.17 %

****

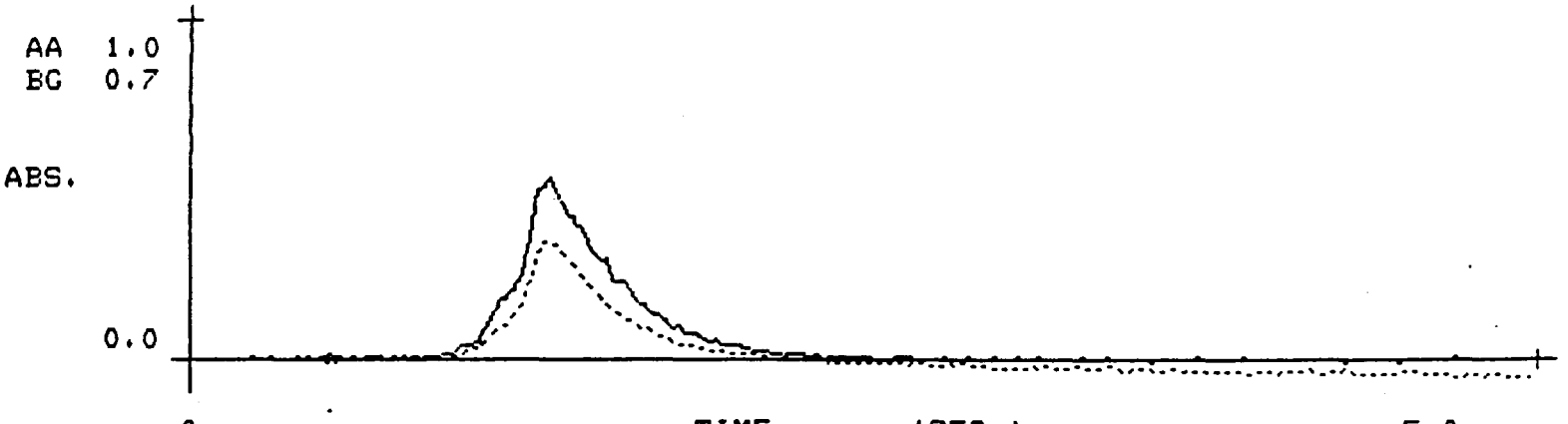
PB 0127

1427



	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.734	0.505	0.229
PEAK AREA (ABS-SECONDS)	0.288	0.242	0.046

READ: 50.3



	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.789	0.546	0.249
PEAK AREA (ABS-SECONDS)	0.283	0.242	0.041

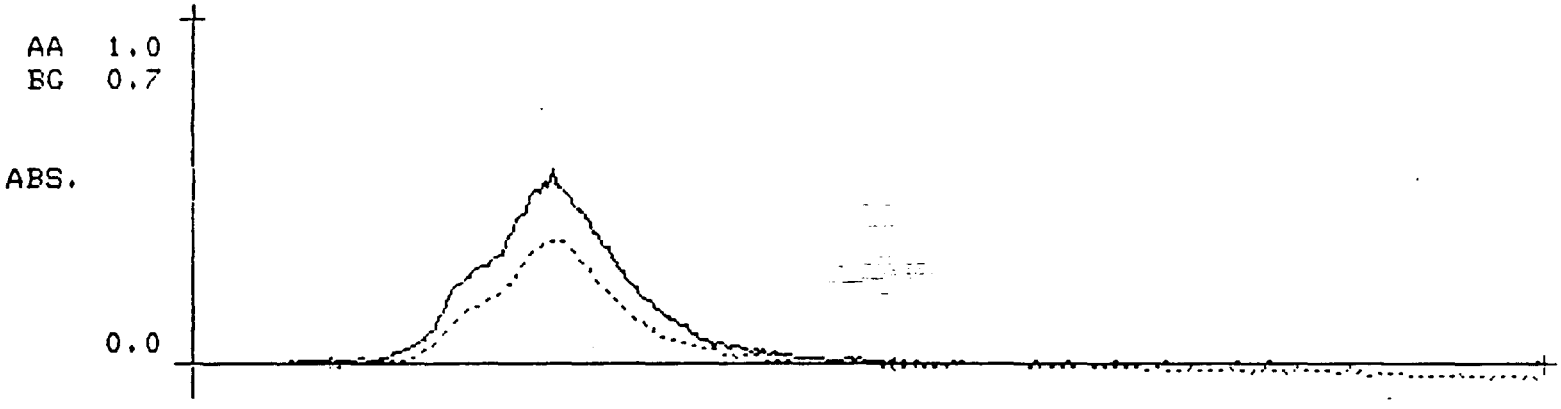
READ: 50.3

179

MEAN= 50.3 STD.DEV.= COEF.VAR.= 0.04 %

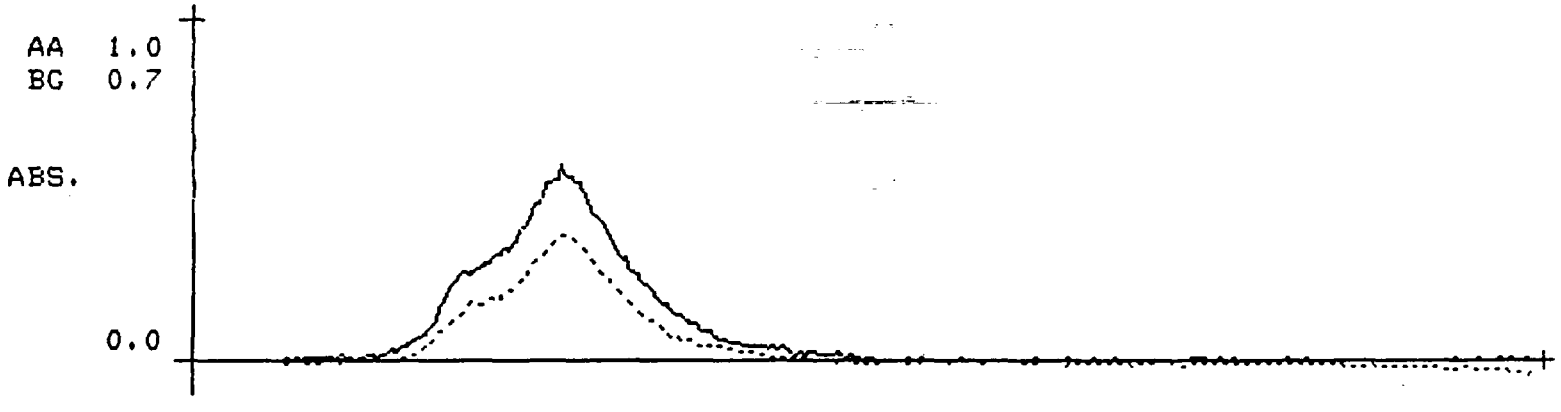
****

PB 0128 (CONTINUED)



	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.820	0.569	0.253
PEAK AREA (ABS-SECONDS)	0.455	0.344	0.111

READ: 79.4



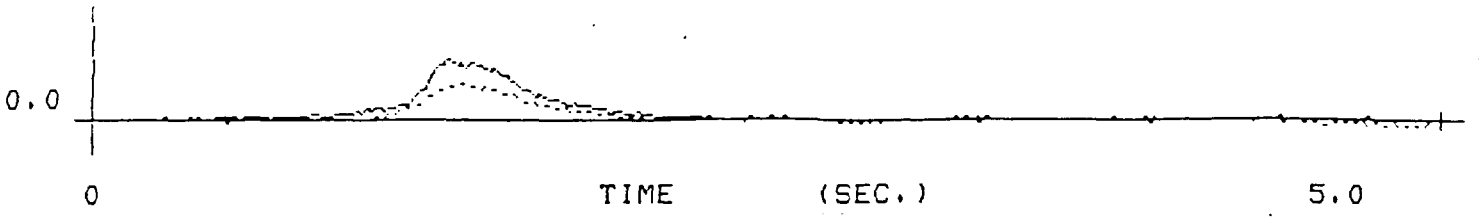
	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.833	0.574	0.259
PEAK AREA (ABS-SECONDS)	0.478	0.360	0.118

READ: 84.3

MEAN= 81.8 STD.DEV.= COEF.VAR.= 4.98 %

****

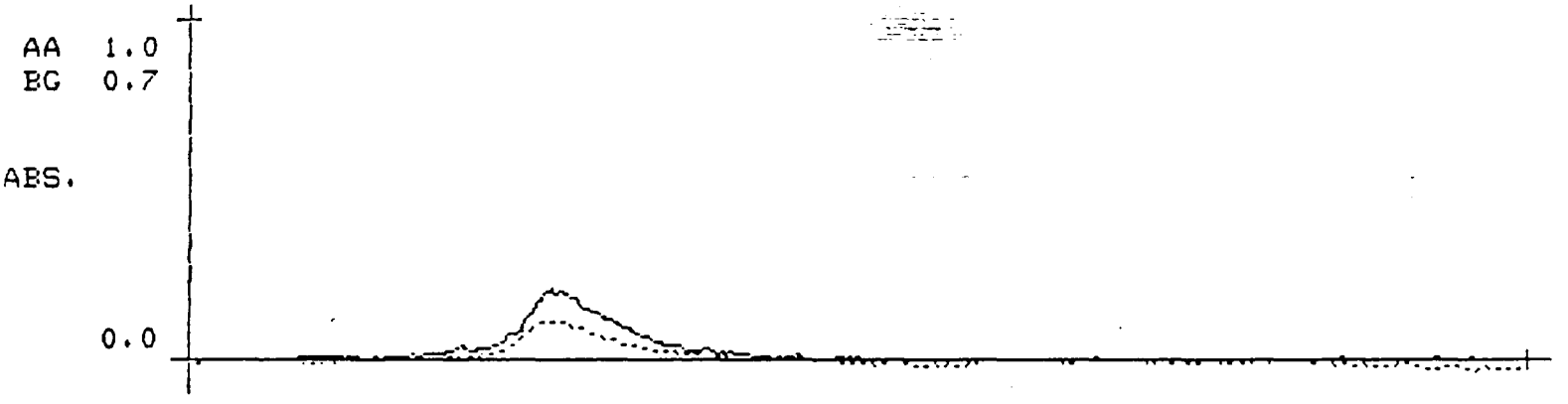
PB 0129



0129 (CONTINUED) 1428

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.262	0.187	0.078
PEAK AREA (ABS-SECONDS)	0.135	0.101	0.034

READ: 17.4



	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.290	0.212	0.080
PEAK AREA (ABS-SECONDS)	0.120	0.106	0.013

READ: 18.5

MEAN= 18.0 STD.DEV.= COEF.VAR.= 4.58 %

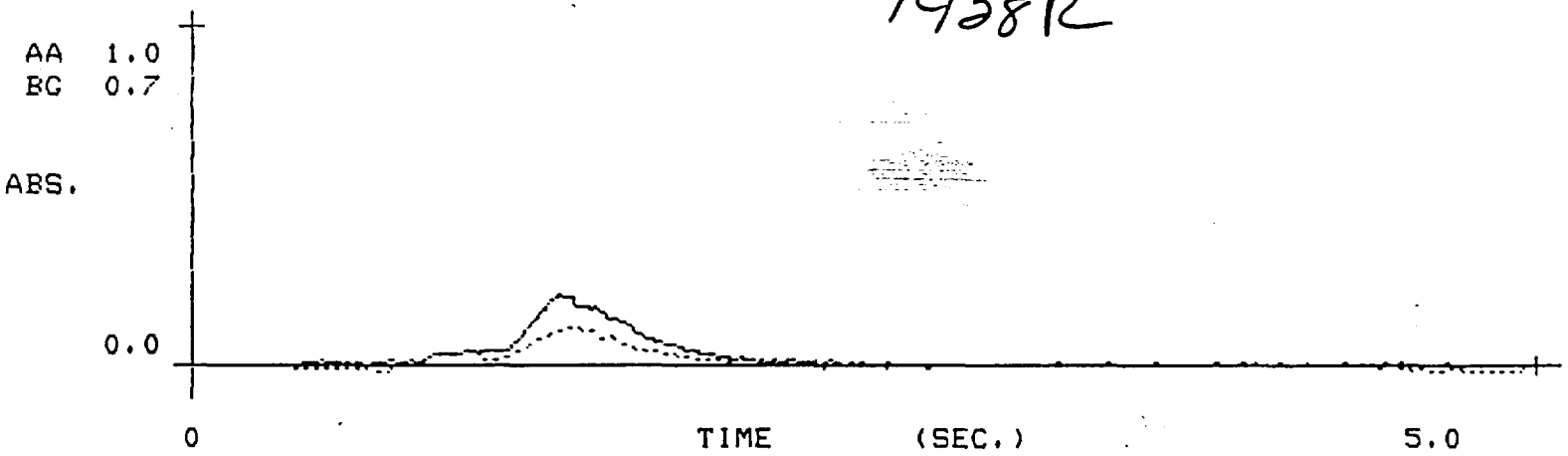
****

PB 0130

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.294	0.201	0.093
PEAK AREA (ABS-SECONDS)	0.147	0.115	0.032

READ: 20.3

0130 (CONTINUED) 1428R



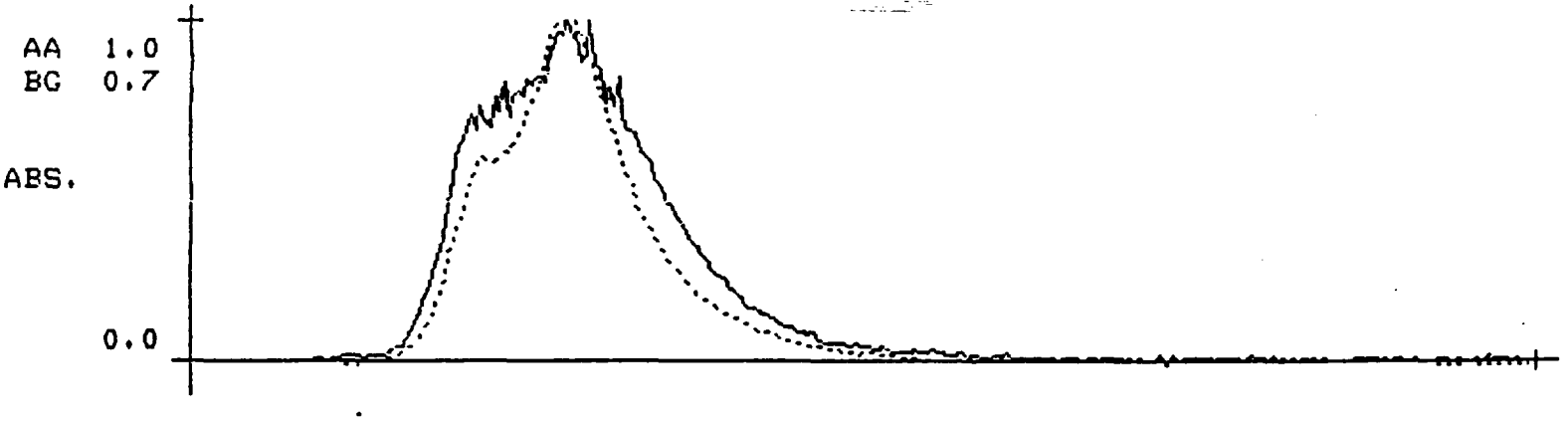
	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.288	0.213	0.080
PEAK AREA (ABS-SECONDS)	0.147	0.122	0.026

READ: 21.7

MEAN= 21.0 STD.DEV.= COEF.VAR.= 5.09 %

****

PB 0131



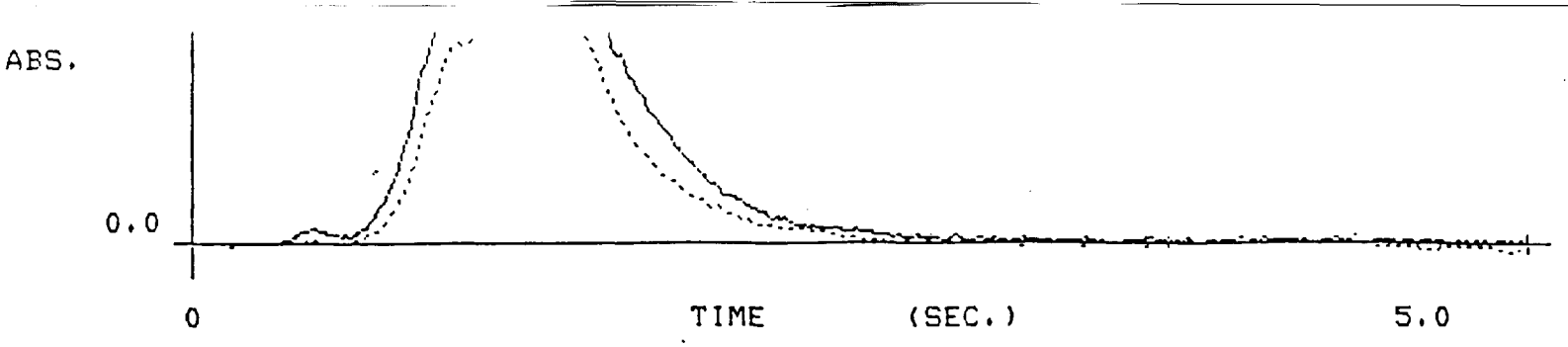
	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	1.739	1.045	0.732
PEAK AREA (ABS-SECONDS)	1.276	0.822	0.453

READ: 285.2

E-87: VALUE GREATER THAN ROLLOVER ABSORBANCE

182

AA 1.0



1429

0131 (CONTINUED)

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	1.734	1.060	0.674
PEAK AREA (ABS-SECONDS)	1.253	0.823	0.430

READ: 285.6
E-87: VALUE GREATER THAN ROLLOVER ABSORBANCE

MEAN= 285.4 STD.DEV.= COEF.VAR.= 0.12 %

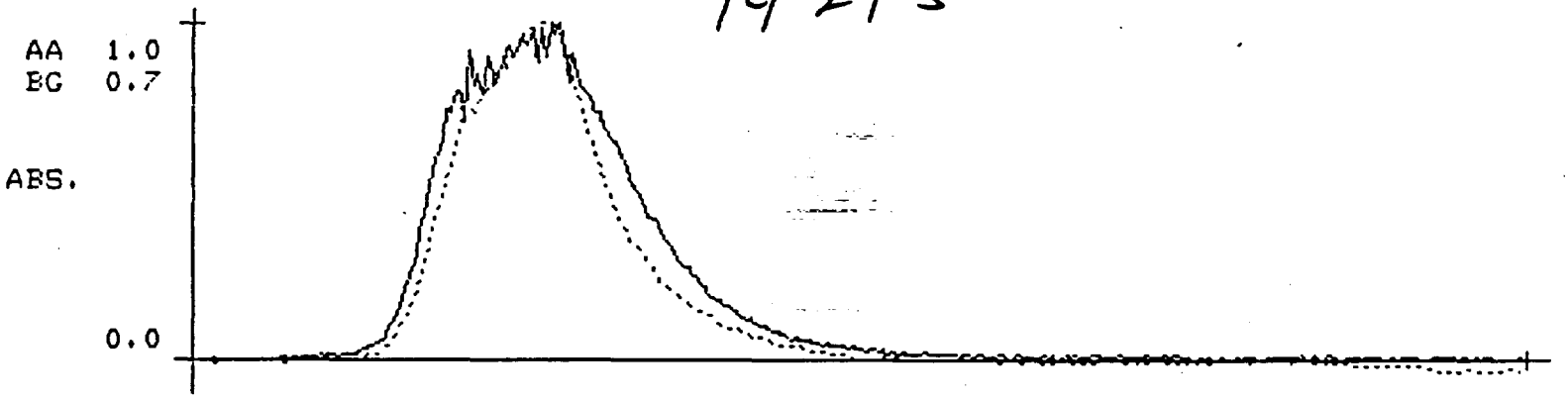
****

285.4
E-50: READING GREATER THAN HIGHEST STANDARD

****

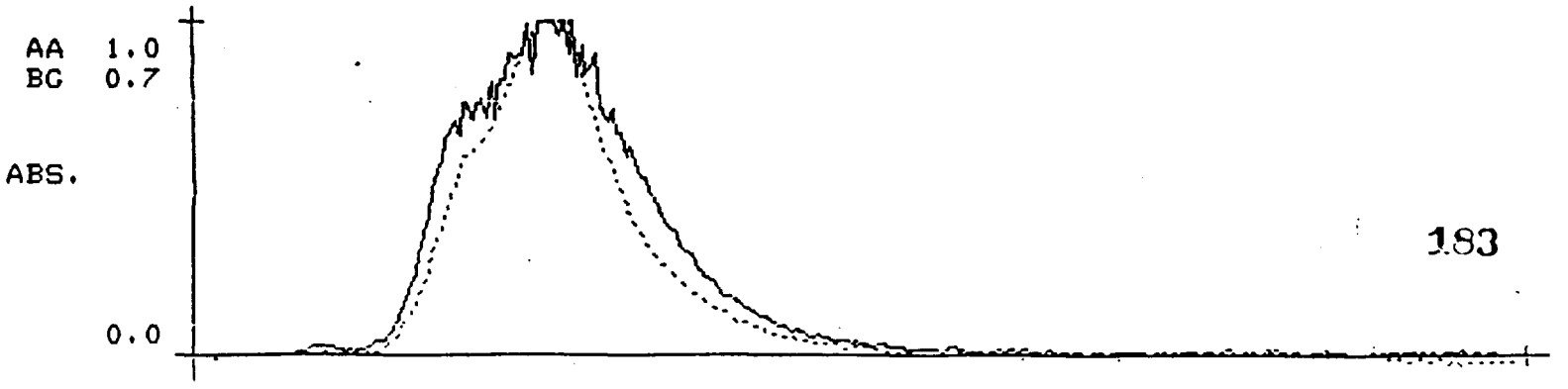
PB 0132

1429S



	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	1.747	1.063	0.727
PEAK AREA (ABS-SECONDS)	1.316	0.854	0.463

READ: 303.3
E-87: VALUE GREATER THAN ROLLOVER ABSORBANCE



PEAK HEIGHT (ABSORBANCE)	1.862	1.125	0.763
PEAK AREA (ABS-SECONDS)	1.328	0.853	0.475

READ: 302.9

E-87: VALUE GREATER THAN ROLLOVER ABSORBANCE

MEAN= 303.1 STD.DEV.= COEF.VAR.= 0.12 %

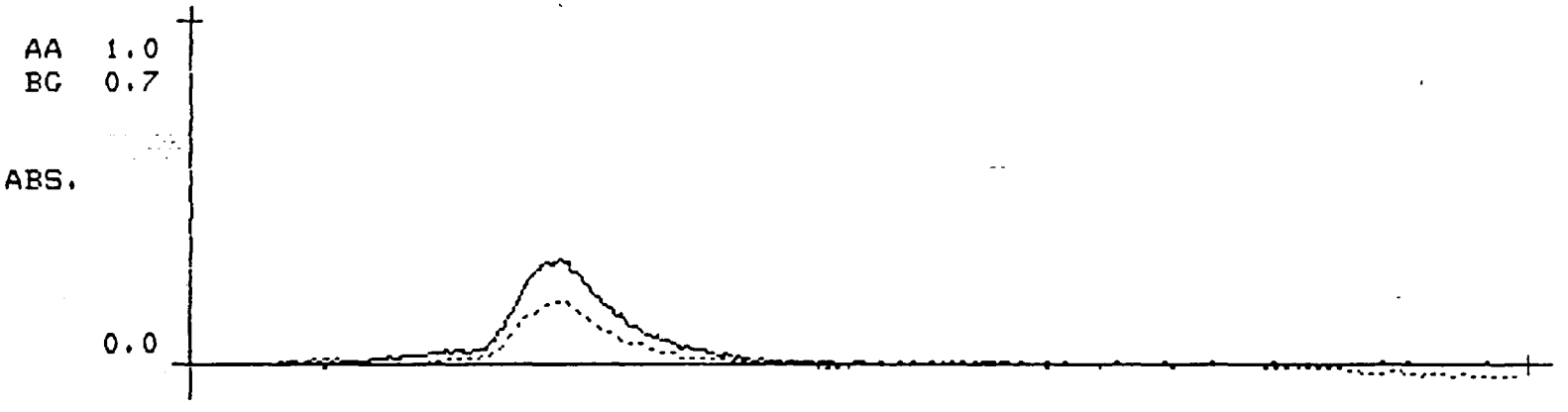
****

303.1

E-50: READING GREATER THAN HIGHEST STANDARD

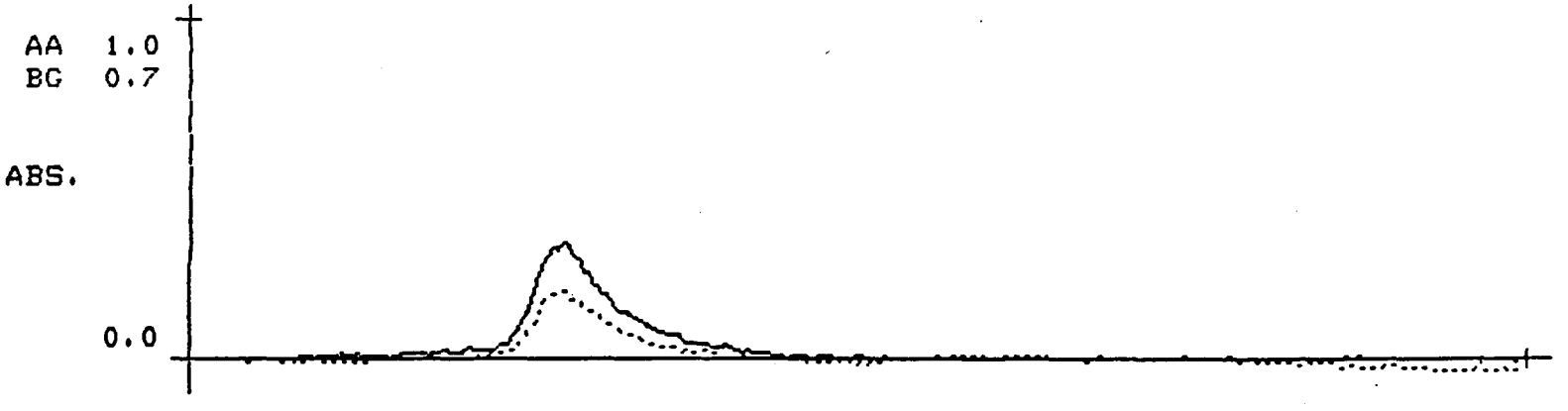
****

PB 0133



	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.436	0.306	0.133
PEAK AREA (ABS-SECONDS)	0.204	0.164	0.040

READ: 31.2



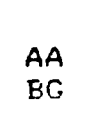
	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.484	0.344	0.140
PEAK AREA (ABS-SECONDS)	0.174	0.146	0.028

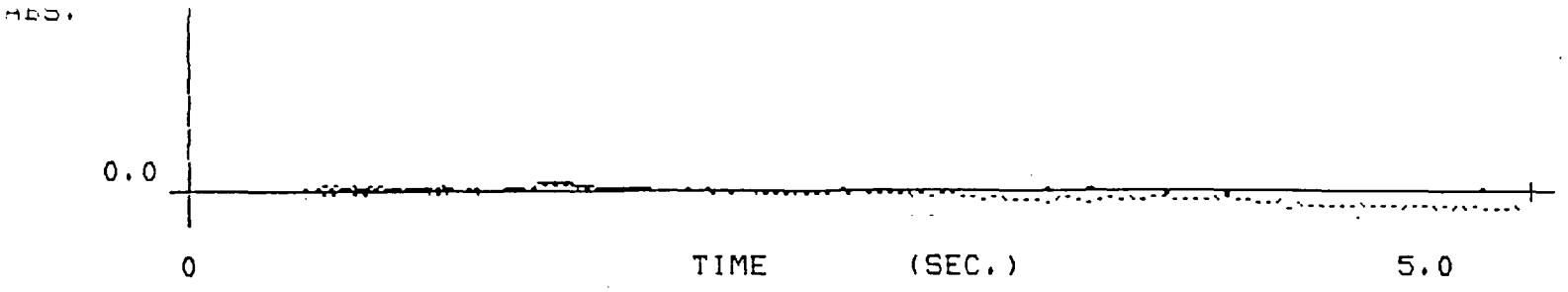
RE : 27.1

MEAN= 29.1 STD.DEV.= COEF.VAR.= 11.08 %

****

PB 0134

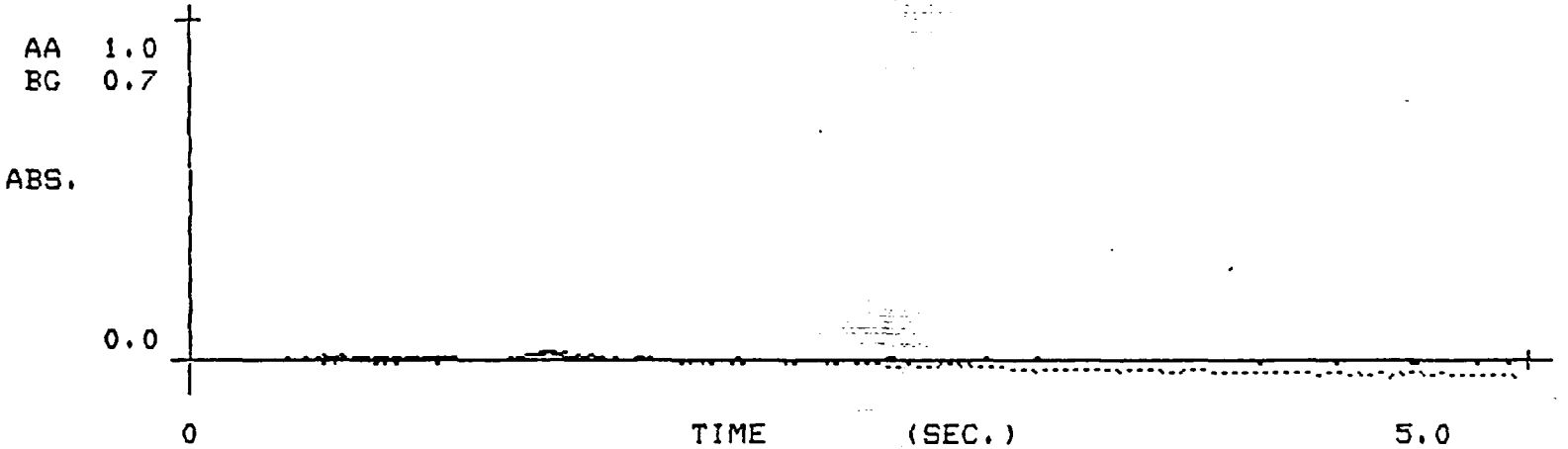




0134 (CONTINUED)

	AA	ZAA	BC
PEAK HEIGHT (ABSORBANCE)	0.044	0.028	0.017
PEAK AREA (ABS-SECONDS)	-0.040	0.019	-0.059

READ: 1.9



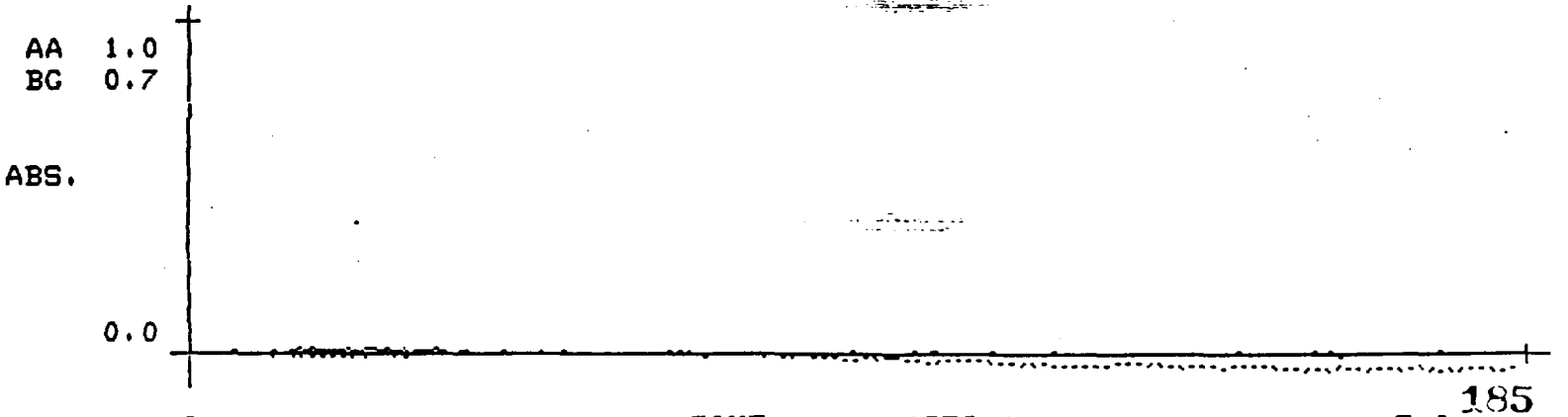
	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.044	0.030	0.017
PEAK AREA (ABS-SECONDS)	-0.045	0.013	-0.058

READ: 0.9

MEAN= 1.4 STD.DEV.= COEF.VAR.= 53.99 %

****

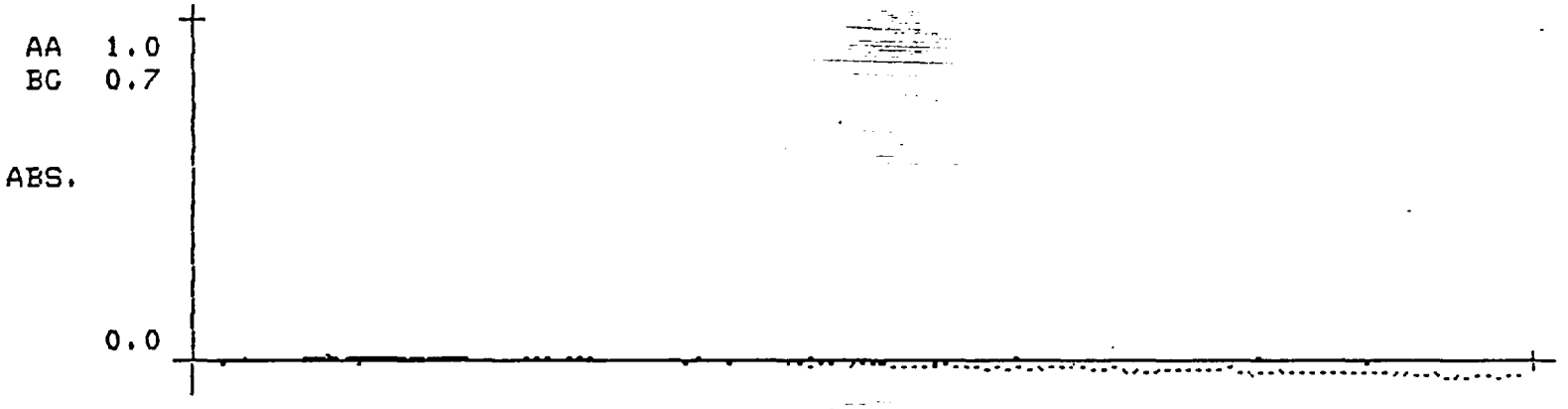
PB 0135



	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.014	0.022	0.007

READ: 1.0

0135 (CONTINUED)



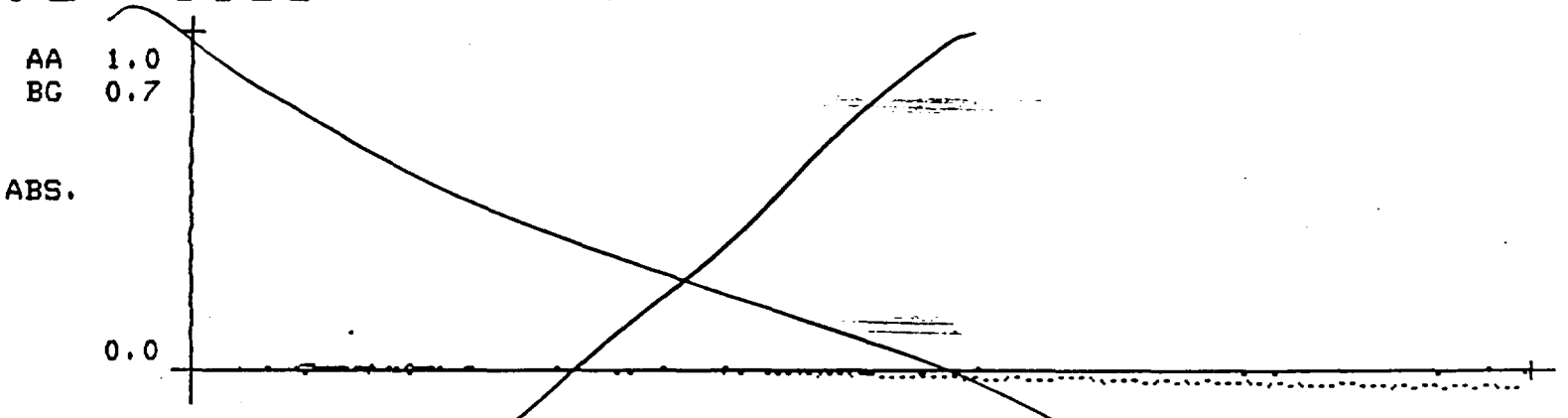
	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.013	0.016	0.008
PEAK AREA (ABS-SECONDS)	-0.048	0.007	-0.055

READ: -0.2

MEAN= 0.4 STD.DEV.= COEF.VAR.= 99.99 %

****

PB 0136



	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.015	0.018	0.008
PEAK AREA (ABS-SECONDS)	-0.057	0.005	-0.062

READ: -0.5

PEAK HEIGHT (ABSORBANCE)	0.796	0.562	0.236
PEAK AREA (ABS-SECONDS)	0.305	0.260	0.045

READ: 50.2

MEAN= 50.5 STD.DEV.= COEF.VAR.= 1.03 %

****

PB 0136

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.749	0.518	0.230
PEAK AREA (ABS-SECONDS)	0.299	0.257	0.042

READ: 49.4

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.768	0.535	0.242
PEAK AREA (ABS-SECONDS)	0.306	0.253	0.052

READ: 48.6

MEAN= 49.0 STD.DEV.= COEF.VAR.= 1.53 %

****

```
'E    0101                29.0
'B    0102                10.4
'E    0103                62.2
        E-87: VALUE GREATER THAN ROLLOVER ABSORBANCE
'B    0104                32.3
'B    0105                40.3 used
'E    0106                50.4 used
'B    0107                13.1
'E    0108                39.9
'B    0109                56.5
'B    0110                58.3
'B    0111                71.9
'E    0112                16.3
'B    0113                 0.5
'E    0114                12.2
'B    0115                63.7
        E-87: VALUE GREATER THAN ROLLOVER ABSORBANCE
'B    0116                23.1
'B    0117                14.0
'B    0118                12.0
'E    0119                 6.4
'B    0120                 5.3
'B    0121                 7.6
'B    0122                 4.8
'B    0123                 4.0
'B    0124                 5.4
'B    0125                13.7
'B    0126                12.8
'B    0127                62.1
        E-87: VALUE GREATER THAN ROLLOVER ABSORBANCE
'B    0128      1427      90.7
        E-87: VALUE GREATER THAN ROLLOVER ABSORBANCE
'B    0129      1428      29.4
'B    0130      1428R     33.5
'E    0131      1429     591.0
        E-50: READING GREATER THAN HIGHEST STANDARD
'B    0132      1429S    ---.-
        E-50: READING GREATER THAN HIGHEST STANDARD
'B    0133      1430      42.6
'B    0134                12.8
'B    0135                12.9
'B    0136                61.0
        E-87: VALUE GREATER THAN ROLLOVER ABSORBANCE
```

****

PB 0101

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.524	0.377	0.150
PEAK AREA (ABS-SECONDS)	0.131	0.148	-0.016

used

.2

****

PB 0102

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.208	0.155	0.053
PEAK AREA (ABS-SECONDS)	0.014	0.066	-0.051

used

9.5

****

PB 0103

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.844	0.583	0.262
PEAK AREA (ABS-SECONDS)	0.357	0.304	0.053

used

61.7

****

PB 0104

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.460	0.333	0.134
PEAK AREA (ABS-SECONDS)	0.180	0.161	0.019

27.8

****

PB 0105

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.454	0.322	0.135
PEAK AREA (ABS-SECONDS)	0.241	0.200	0.041

36.2

****

PB 0106

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.676	0.475	0.210
PEAK AREA (ABS-SECONDS)	0.319	0.242	0.077

45.9

****

PB 0107

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.229	0.165	0.064
PEAK AREA (ABS-SECONDS)	0.028	0.075	-0.047

used

11.1

****

PB 0108

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.515	0.351	0.164
PEAK AREA (ABS-SECONDS)	0.268	0.214	0.054

used

9.3

****

PB 0109

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.628	0.433	0.199
PEAK AREA (ABS-SECONDS)	0.264	0.263	0.001

51.1

****

PB 0110

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.624	0.425	0.199
PEAK AREA (ABS-SECONDS)	0.333	0.267	0.065

1.1

****

PB 0111

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.809	0.538	0.276
PEAK AREA (ABS-SECONDS)	0.427	0.319	0.108

66.1

****

PB 0112

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.553	0.139	0.452
PEAK AREA (ABS-SECONDS)	0.324	0.099	0.225

15.6

****

PB 0113

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.234	0.033	0.232
PEAK AREA (ABS-SECONDS)	0.464	0.012	0.452

0.2

****

PB 0114

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.217	0.164	0.055
PEAK AREA (ABS-SECONDS)	-0.046	0.068	-0.114

used

9.9

****

PB 0115

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.934	0.644	0.294
PEAK AREA (ABS-SECONDS)	0.315	0.290	0.025

57.9

E-87: VALUE GREATER THAN ROLLOVER ABSORBANCE

****

PB 0116

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.302	0.179	0.134
PEAK AREA (ABS-SECONDS)	0.098	0.112	-0.014

18.2

****

PB 0117

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.238	0.171	0.067
PEAK AREA (ABS-SECONDS)	0.009	0.083	-0.074

used

2.7

****

PB 0118

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.216	0.150	0.066
PEAK AREA (ABS-SECONDS)	0.017	0.071	-0.054

10.6

****

PB 0119

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.278	0.054	0.263
PEAK AREA (ABS-SECONDS)	0.357	0.042	0.314

5.3

****

PB 0120

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.297	0.070	0.266
PEAK AREA (ABS-SECONDS)	0.147	0.039	0.108

4.7

****

PB 0121

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.155	0.058	0.126
PEAK AREA (ABS-SECONDS)	0.108	0.045	0.063

5.8

****

PB 0122

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.459	0.043	0.423
PEAK AREA (ABS-SECONDS)	0.116	0.029	0.087

3.0

****

PB 0123

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.422	0.040	0.398
PEAK AREA (ABS-SECONDS)	0.157	0.033	0.124

3.7

****

PB 0124

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.254	0.050	0.218
PEAK AREA (ABS-SECONDS)	0.053	0.038	0.015

4.6

****

PB 0125

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.223	0.164	0.059
PEA REA (ABS-SECONDS)	0.012	0.074	-0.061

11.0

****

PB 0126

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.220	0.161	0.060

EAK AREA (ABS-SECONDS)	0.009	0.066	-0.057

9.7

****

>B 0127

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.841	0.571	0.270
EAK AREA (ABS-SECONDS)	0.346	0.299	0.047

60.3

****

>B 0128 1427

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.852	0.586	0.270
EAK AREA (ABS-SECONDS)	0.501	0.378	0.124

84.4

E-87: VALUE GREATER THAN ROLLOVER ABSORBANCE

****

>B 0129 1428

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.438	0.309	0.129
EAK AREA (ABS-SECONDS)	0.185	0.153	0.032

26.3

****

>B 0130 1428R

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.385	0.271	0.116
EAK AREA (ABS-SECONDS)	0.189	0.160	0.029

27.6

****

>B 0131 1429

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	2.640	1.615	1.042
EAK AREA (ABS-SECONDS)	1.255	0.761	0.494

880.9

E-50: READING GREATER THAN HIGHEST STANDARD

****

>B 0132 1429S

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	2.301	1.203	1.106
EAK AREA (ABS-SECONDS)	1.242	0.733	0.510

.3

E-50: READING GREATER THAN HIGHEST STANDARD

****

>B 0133 1430

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.631	0.430	0.202
EAK AREA (ABS-SECONDS)	0.285	0.209	0.076

38.2 used

****

PB 0134

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.257	0.183	0.075
EAK AREA (ABS-SECONDS)	0.028	0.074	-0.046

used

11.0

****

PB 0135

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.235	0.175	0.064
EAK AREA (ABS-SECONDS)	0.017	0.069	-0.052

used

10.1

****

PB 0136

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.949	0.636	0.314
EAK AREA (ABS-SECONDS)	0.350	0.291	0.059

used

58.3

E-87: VALUE GREATER THAN ROLLOVER ABSORBANCE

****

>B 0101

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.540	0.387	0.157
EAK AREA (ABS-SECONDS)	0.085	0.154	-0.069

29.4

*** **********

>B 0102

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.202	0.147	0.057
EAK AREA (ABS-SECONDS)	0.010	0.059	-0.048

8.3

****

>B 0103

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.952	0.650	0.308
EAK AREA (ABS-SECONDS)	0.345	0.290	0.055

58.0

E-87: VALUE GREATER THAN ROLLOVER ABSORBANCE

****

>B 0104

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.463	0.332	0.137
EAK AREA (ABS-SECONDS)	0.218	0.184	0.033

used

32.8

****

>B 0105

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.458	0.310	0.158
EAK AREA (ABS-SECONDS)	0.269	0.208	0.061

38.0

****

>B 0105

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.479	0.330	0.150
EAK AREA (ABS-SECONDS)	0.237	0.204	0.034

37.0

****

>B 0106

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.667	0.465	0.216
EAK AREA (ABS-SECONDS)	0.314	0.254	0.061

48.7

****

>B 0107

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.266	0.194	0.074
EAK AREA (ABS-SECONDS)	0.035	0.084	-0.050

12.9

****

=B 0108

	AA	ZAA	BG
EAK 'EIGHT (ABSORBANCE)	0.547	0.368	0.179
EAK REA (ABS-SECONDS)	0.294	0.236	0.057

44.5

****

=B 0109

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.731	0.494	0.238
EAK AREA (ABS-SECONDS)	0.367	0.289	0.078

57.8

****

=B 0110

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.750	0.510	0.241
EAK AREA (ABS-SECONDS)	0.376	0.299	0.077

60.4

****

=B 0111

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.926	0.614	0.311
EAK AREA (ABS-SECONDS)	0.467	0.356	0.111

77.1

E-87: VALUE GREATER THAN ROLLOVER ABSORBANCE

****

=B 0112

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.558	0.140	0.448
EAK AREA (ABS-SECONDS)	0.314	0.101	0.212

16.1

****

=B 0113

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.231	0.046	0.233
EAK AREA (ABS-SECONDS)	0.401	0.003	0.398

-1.4

****

=B 0114

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.261	0.192	0.075
EAK AREA (ABS-SECONDS)	0.026	0.087	-0.061

13.4

****

=B 0115

	AA	ZAA	BG
EAK EIGHT (ABSORBANCE)	0.986	0.662	0.324
EAK AREA (ABS-SECONDS)	0.370	0.312	0.058

64.0

E-87: VALUE GREATER THAN ROLLOVER ABSORBANCE

****

=B 0116

	AA	ZAA	BG

EAK HEIGHT (ABSORBANCE)	0.335	0.228	0.120
EAK AREA (ABS-SECONDS)	0.152	0.127	0.025

21.0

****

PB 0117

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.298	0.213	0.086
EAK AREA (ABS-SECONDS)	0.070	0.091	-0.020

14.1

****

PB 0118

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.274	0.200	0.074
EAK AREA (ABS-SECONDS)	0.032	0.084	-0.052

12.9

****

PB 0119

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.268	0.063	0.260
EAK AREA (ABS-SECONDS)	0.369	0.049	0.321

6.5

****

PB 0120

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.294	0.077	0.262
EAK AREA (ABS-SECONDS)	0.179	0.050	0.129

6.7

****

B 0121

	AA	ZAA	BG
AK HEIGHT (ABSORBANCE)	0.156	0.080	0.115
EAK AREA (ABS-SECONDS)	0.127	0.060	0.066

8.6

****

PB 0122

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.456	0.055	0.409
EAK AREA (ABS-SECONDS)	0.152	0.043	0.109

5.6

****

PE 0123

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.460	0.057	0.436
EAK AREA (ABS-SECONDS)	0.182	0.035	0.147

4.1

****

PB 0124

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.267	0.058	0.233
PEAK AREA (ABS-SECONDS)	0.064	0.041	0.024

5.1

****

PB 0125

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.280	0.203	0.076
PEAK AREA (ABS-SECONDS)	0.043	0.092	-0.049

14.3

****

PB 0126

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.292	0.212	0.081
PEAK AREA (ABS-SECONDS)	0.029	0.084	-0.055

12.9

****

PB 0127

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	1.032	0.697	0.335
PEAK AREA (ABS-SECONDS)	0.355	0.303	0.052

61.5

E-87: VALUE GREATER THAN ROLLOVER ABSORBANCE

****

PB 0128 1428

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.959	0.637	0.333
PEAK AREA (ABS-SECONDS)	0.474	0.363	0.112

79.3

E-87: VALUE GREATER THAN ROLLOVER ABSORBANCE

****

PB 0129 1428

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.520	0.374	0.152
PEAK AREA (ABS-SECONDS)	0.202	0.183	0.019

32.5

****

PB 0130 1428R

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.506	0.359	0.147
PEAK AREA (ABS-SECONDS)	0.220	0.190	0.030

34.1

****

PB 0131 1429

197

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	2.162	1.203	1.080
PEAK AREA (ABS-SECONDS)	1.217	0.754	0.462

791.2

E-50: READING GREATER THAN HIGHEST STANDARD

****

B 0132 14295

	AA	ZAA	BG
AK HEIGHT (ABSORBANCE)	2.359	1.397	1.043
AK AREA (ABS-SECONDS)	1.232	0.757	0.475

822.9

E-50: READING GREATER THAN HIGHEST STANDARD

****

'B 0133 1430

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.624	0.434	0.190
EAK AREA (ABS-SECONDS)	0.240	0.210	0.029

38.5

****

PB 0134 Blk 2(1

	AA	ZAA	BG
EAK HEIGHT (ABSORBANCE)	0.330	0.241	0.094
PEAK AREA (ABS-SECONDS)	0.019	0.098	-0.079

15.5

****

PB 0135 Cal Blk

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.276	0.210	0.072
PEAK AREA (ABS-SECONDS)	0.000	0.087	-0.087

13.4

****

PB 0136 50.0 ppb

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.955	0.641	0.316
PEAK AREA (ABS-SECONDS)	0.332	0.301	0.031

0.8

E-87: VALUE GREATER THAN ROLLOVER ABSORBANCE

****

?E	0109	15.1
?E	0110	18.9
?E	0111	20.5
?B	[illegible]	[illegible]
?E	0112	13.9
?B	0113	8.7
?E	0129	14.4
?E	0130	14.3
?E	0131	39.3
?E	0132	42.1

Pb SPIKES

From Page No.
Test Performed: Pb (cont'd)
Date Received: 4/22/87
Work Performed By: J. OLKA

Job No.	ID No.	Custody Seal Intact Yes	Custody Seal Intact No	Secure Storage Area Received From N	Secure Storage Area Received From C	ppb Burn 1	ppb Burn 2	ppb Ave	CV	10.0 ppb Spike	% Rec.	DF	Samp Wgt	Units	Final Conc
	WS378#3					15.4				28.1	127			µg/l	15.4
	Cal Blk					-0.6				11.2	112				<5C
	50.0ppb					49.1				60.4	113				49.
	1428.0403					18.6	18.4	18.5	0.8C	27.4	89		1.01	mg/kg	3.6
	1428.R1					21.4	20.5	21.0	3.52	31.6	106		1.01		4.1
	1429.0403					28.7	29.0	28.8	0.92	40.7	114	1→10	1.04		55.
	1429.S1					29.6	32.1	30.8	6.41	41.7	104	1→10	1.06	mg/kg	58
	2002.0603					5.2	6.2	5.7	12.8	14.9	92	2→10		µg/l	28
	Cal Blk					1.1	1.0	1.1	T	10.5	105				<5/
	50.0ppb					48.8	46.9	47.9	3.17	58.9	110				47

To Page No

Witnessed & Understood by me, Date

Invented by Date

Recorded by JOlka 4/22/87

HGA FORM #1

ELEMENT: Pb, DATE: 4/22/87.

S_1 = 100 PPB., S_2 = 50 PPB.

S_3 = 75 PPB, BOOK NO. 294, pg 14.

JOB #: _____

I 01	W3378 #3	
X02	Cal Blk	
X03	50.0ppb	
X04	1428.0403	
X05	1423. R,	
X06	1429.0403 (1→10)	
X07	1429. S_1 (1→10)	
X08	2002.0603 (2→10)	
X09	Cal Blk	
X10	50.0ppb	
X11		
X12		
X13		
X14		
X15		
X16		
X17	, S_2	
X18		
X19		
X20		
X21		
X22		
X23		
X24		
X25		
X26		
X27		
X28		
X29		
X30		
X31		
X32		
X33		
X34		
X35	, S_3	

ATTACH TAPE HERE

recycled paper

ecology and environment

```
PB                          0.003
  0.000          AUTOZERO
*****************************************************************************
PB                          0.382
        E-87: VALUE GREATER THAN ROLLOVER ABSORBANCE
  100.0          STANDARD    1
*****************************************************************************
PB                            58.1
   50.0          STANDARD    2
*****************************************************************************
PB                            26.6
   25.0          STANDARD    3
*****************************************************************************
PB    0101                    15.1
PB    0101                    14.0
PB    0102                    -1.3
PB    0103                    49.4
```

jobs 5119, 4989

```
PB    0101                    12.8
PB    0102                    -1.7
PB                         -0.006
  0.000          AUTOZERO
*****************************************************************************
PB                          0.391
        E-87: VALUE GREATER THAN ROLLOVER ABSORBANCE
  100.0          STANDARD    1
*****************************************************************************
PB                            57.6
   50.0          STANDARD    2
*****************************************************************************
PB                            25.2
   25.0          STANDARD    3
*****************************************************************************
PB    0101                    15.4
PB    0102                    -0.6
PB    0103                    49.1
   18.7
-----------------------------------------------------------------------------
MEAN=      18.4     STD.DEV.=                COEF.VAR.=  2.78  %
*****************************************************************************
PB    0104                    1428
   18.6              18.4
-----------------------------------------------------------------------------
MEAN=      18.5     STD.DEV.=                COEF.VAR.=  0.86  %
*****************************************************************************
PB    0105                    1428 R1
   21.4              20.5
-----------------------------------------------------------------------------
MEAN=      21.0     STD.DEV.=                COEF.VAR.=  3.52  %
*****************************************************************************
PB    0106                    1429
   28.7              29.0
-----------------------------------------------------------------------------
MEAN=      28.8     STD.DEV.=                COEF.VAR.=  0.92  %
*****************************************************************************

PB    0107
   29.6              32.1
```

```
-----------------------------------------------------------------------------
MEAN=      21.0     STD.DEV.=                COEF.VAR.=  3.52  %
*****************************************************************************
PB    0106
   28.7              29.0
-----------------------------------------------------------------------------
  AN=      28.8     STD.DEV.=                COEF.VAR.=  0.92  %
*****************************************************************************


PB    0107                    1429 S1
   29.6              32.1
-----------------------------------------------------------------------------
MEAN=      30.8     STD.DEV.=                COEF.VAR.=  6.41  %
*****************************************************************************
PB    0108
    5.2               6.2
-----------------------------------------------------------------------------
MEAN=       5.7     STD.DEV.=                COEF.VAR.=  12.78 %
*****************************************************************************
PB    0109                    CAl B/K
    1.1               1.0
-----------------------------------------------------------------------------
MEAN=       1.1     STD.DEV.=                COEF.VAR.=  9.47  %
*****************************************************************************
PB    0110                    50.0 ppb
   48.8              46.9
-----------------------------------------------------------------------------
MEAN=      47.9     STD.DEV.=                COEF.VAR.=  3.17  %
*****************************************************************************
PB    0101                28.1
PB    0102                11.2
PB    0103                60.4
        E-87: VALUE GREATER THAN ROLLOVER ABSORBANCE
PB    0104                27.4
PB    0105                31.6
PB    0106                40.2
PB    0107                41.2
PB    0108                14.9
PB    0109                10.5
PB    0110                58.9
        E-87: VALUE GREATER THAN ROLLOVER ABSORBANCE
```

Project No.

TITLE Book No. 99

Fro ge No.

Test Performed: Hg

Date Received: 2/23/87

Work Performed By: Jy.

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From		Read	Conc. ug	D.F.	Amount of Sample	Units	Final Conc	r = .99922 y = .003412 - .02872
	Blank				3	<.02			ug/L	<0.20	
	10 ~~0.02~~ ug										
	0.04				22	0.046				0.46	
	0.08				33	0.084				0.84	
	0.20				72	0.22				2.17	
	0.40				124	0.39				3.94	
	0.80				242	0.80				7.97	
	WP1183 #1				39	.104				1.04	Known = 1.30
	WP37844				137	.438				4.38	Known = 4.40
	Blank				4	<.02				<0.20	
	CCVS				35	0.091				0.91	
4825	0699.01		NO	M	83	0.25	1→~~50~~ 2 Hg	(50mls) 100mL	ug/L	~~0.51~~	5.00 ug/L > 5.1
	0699.01				46	0.13	1→4	100mL		~~0.51~~	5.20 ⊥
	0699.01+4.0ppb				78.0	(0.24)	(1→4)	100mL			(9.6) 113%
						Note: Dilution Assumed Rec					
	0700.01		NO	M	129	0.41		100mL	ug/L	4.11	86% recovery
	0700.01				129	0.41		100mL		4.11	
	0700.01+4.0ppb				230	0.76		100mL		7.56	
4896	0999.01		NO	A-3	14	0.019		0.35g	mg/kg	<0.10	
	0999.01				24	0.053		0.30		0.18	
	0999.01				10	<.02		0.33		<0.10	
	0999.01+4.0ppb				119	.38		0.30			95% recovery
	Blank				4	<.02				<0.20	
	CCVS				35	0.091		100mL	ug/L	0.91	Mix well + REPEAT
	1176.01		Yes	A29	7	<.02	1→10	0.26	mg/kg	<1.0	NG
	1176.01				>8.0			0.23			NG
	1176.01				~~105~~	~~0.33~~	~~1→2~~	~~0.45~~		~~1.46~~	1.0 ?

Other Clients

To Page No. 100

Witnessed & Understood by me, RON | Date | Invented by | Date 2/23/87

Recorded by Timothy J. Glunzal

From Page No. 99

Test performed: Hg (con't)

Date Received: _____

Work Performed By: _____

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From		Read	Conc	D.F.	Amount of Sample	Units	Final Conc	
	1176.01				12	.0122 → [illegible]	1→4	1.26g	mg/kg	0.19	
	1177.01	Yes	A29		64	0.19		0.20g	mg/kg	0.95	
con't)	1177.01				95	0.38		0.26		1.14	CK
	1177.01				69	0.21		0.23		0.90	
	1178.01	Yes	A29		7	<0.02		0.28	mg/kg	<0.10	?
	1178.01				15	.022		0.25		<0.10	
	1178.01				30	0.074		0.20		.37	
	Blank				2	<0.02				<0.20	
	CCVS				33	0.084		100mL	ug/L	0.84	
4906	1032.04	NO	A12		43	0.12	1→10	0.35g	mg/kg	3.37	
	1032.04	⊥	⊥		38	0.10	1→10	0.35	⊥	2.88	
	1033.04	NO	A12		27	0.063		0.30	mg/kg	0.21	mit with report
	1033.04	⊥	⊥		14	0.019		0.23	⊥	0.083	
	1034.04	NO	A12		3	<0.02		0.23	mg/kg	<0.10	✓
	1034.04	⊥	⊥		2	<0.02		0.24	⊥	<0.10	
	1035.04	NO	A13		6	<0.02		0.26	mg/kg	<0.10	✓
	1035.04	⊥	⊥		8	<0.02		0.30	⊥	<0.10	
	1036.04	NO	A12		1	<0.02		0.28	mg/kg	<0.10	✓
	1036.04	⊥	⊥		2	<0.02		0.23	⊥	<0.10	
	Blank				4	<0.02				<0.20	✓
	CCVS				35	0.091		100mL	ug/L	0.91	

mit THE SAMPLE WITH REPORT

Other

To Page No. 101

Witnessed & Understood by me. _____ Date _____

Invented by _____ Date 2/23/97

Recorded by Timothy J. Thomson

From Page No. 100
Test Performed: Hg (Con't)
Date Received:
Work Performed By:

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From	Read	Conc	D.F.	Amount of Sample	Units	Final Conc	
4906	1037.04	NO	AQ	2	<0.02		0.22g	mg/kg	<0.10	
	1037.04	⊥	⊥	3	<0.02		0.24g	⊥	<0.10	
	1037.04+1.0ppb			29	0.070		0.22	⊥		70% recovery
4928	1110.04	NO	All	2	<0.02		0.32	mg/kg	<0.10	✓
	1110.04	⊥	⊥	2	<0.02		0.27	⊥	<0.10	
	1111.04	NO	All	2	<0.02		0.29	mg/kg	<0.10	✓
	1111.04	⊥	⊥	2	<0.02		0.28	⊥	<0.10	
	1112.04	NO	All	2nd 8	<0.02		0.29	mg/kg	<0.10	✓
	1112.04	⊥	⊥	6	<0.02		0.27	⊥	<0.10	
	1112.04+1.0ppb	⊥	⊥	38	.10		0.32	⊥		101% recovery
	~~1113.04~~ 2nd to.									
	1113									
	Blank			3	<0.02				<0.20	
	CCVS			31	0.077		100mL	mg/L	0.77	
	1113.04	NO	All	7810			0.27	mg/kg		
	1113.04	⊥	⊥	46	0.128	1→10	0.26	⊥	4.93	
	113.04	NO	All	48	0.135	1→10	0.26	mg/kg	5.19	
	1114.04	NO	All	4	<0.02		0.31	mg/kg	<0.10	
	1114.04	⊥	⊥	2	<0.02		0.30	⊥	<0.10	
	1115.04	NO	All	4	<0.02		0.34	mg/kg	<0.10	
	1115.04	⊥	⊥	3	<0.02		0.38	⊥	<0.10	
	1116.04	NO	All	4	<0.02		0.38	mg/kg	<0.10	
	1116.04	⊥	⊥	3	<0.02		0.31	⊥	<0.10	

MUST REDIL. TOO LOW 80-120 OTHERS ARE OK

To Page No. 102

Witnessed & Understood by me. Date

Invented by Date 2/23/87

Recorded by Timothy J. Hunyadi

Project No._____

102 Book No._____ TITLE _____

Fro ıge No. 101

Test Performed: Hg (Con't)

Date Received:

Work Performed By:

Job No.	ID No.	Custody Seal Intact Yes	Custody Seal Intact No	Secure Storage Area Received From		Read	Conc.	D.F.	Amount of Sample	Units	Final Conc
4928	1117.04			MO	All	2	<0.02		0.35	mg/kg	<0.10
(con't)	1117.04			↓	↓	2	<0.02		0.39	↓	<0.10
	Blank					2	<0.02				<0.20
	CCVS					35	0.091		100mL	mg/L	0.91

TR
2/23/87

To Page No.__

Witnessed & Understood by me,	Date	Invented by	Date	207
		Recorded by Timothy J. Thurgate	2/23/87	

Project No. _____
Book No. _____ TITLE _____

rom Page No. —

Test Performed: Hg
Date Received: 3/6/87
Work Performed By: BG

SEE PALE 1

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From	READ.	CONC.	DF	Amount of SAMPLE	UNITS	FINAL CONC.	
	BLANK			5						
	0.2			12						r = 0.99973
	0.4			21						y = 0.036x - 0.24
	0.8			29						
	2.0			59						
	4.0			117						
	8.0			226						
	WP 1183 #1			38	1.14			mg/L	1.14	(KNOWN = 1.3)
4971	1274.04	NO	A28	5	< 0.20		0.40 g	mg/kg	< 0.10	
				4	< 0.20		0.37 g		< 0.10	
	1275.04			5	< 0.20		0.39 g		< 0.10	
				4	< 0.20		0.33 g		< 0.10	
	1276.04			62	2.02		0.33 g		0.61	
				66	2.16		0.32 g		0.68	0.65 Ave
	1277.04			34	1.00	1→100	0.39 g		25.64	
				127	4.46	1→20	0.37 g		22.87	
	1278.04			6	< 0.20		0.36 g		< 0.10	
				5	< 0.20		0.38 g		< 0.10	
	BLANK			2	< 0.20				< 0.20	
	CCV 5			30	0.85				0.85	
	1278.04 + 1.0 ppb	NO	A28	32	0.92		0.38 g	mg/kg	~~0.24~~	92% REC
4936	1154.01		A20	5	< 0.20		0.30		< 0.10	
				3	~~< 0.20~~		0.47 g		< 0.10	
	1163.01			2	< 0.20		0.37 g		< 0.10	
				3	< 0.20		0.35 g		< 0.10	

To Page No. 101

Witnessed & Understood by me. Date 3/10/87

Invented by

Recorded by

Date 3/6/87

Test Performed: Hg (cont)
Date Received: 3/6/87
Work Performed By: GM

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From	READ.	CONC.	DF	Amount of Sample	Units	FINAL CONC.	
4932	1132.01	NO	A2	46	1.43		0.30	mg/kg	0.48	
			↓	64	2.09		0.41		0.51	0.50 Acc
4986	1424.01		A14	20	0.49		0.32		0.15	
				23	0.57		0.35		0.17	0.16 Acc
	+4.0 ppb	↓	↓	95	3.22		0.38	↓		67% REC
	BLANK			3	< 0.20				< 0.20	
	CCVS			34	1.00				1.00	
4992	1437.06	NO	A14	2	< 0.20		100 ml	mg/L	< 0.20	
	1438.06		↓	6	< 0.20				< 0.20	
4985	1422.01		A8	5	< 0.20				< 0.20	
	1423.01		↓	6	< 0.20				< 0.20	
4995	1450.07		A7	2	< 0.20				< 0.20	
	1451.07			3	< 0.20				< 0.20	
	1452.07			2	< 0.20				< 0.20	
	1452.07R			2	< 0.20				< 0.20	
	+4.0 ppb	↓	↓	121	4.17		↓			104% REC
	BLANK			2	< 0.20				< 0.20	
	CCVS			33	0.96				0.96	
5000	1469.01	YES	A9	4	< 0.20		100 ml		< 0.20	
4998	1458.07	YES	A9	4	< 0.20				< 0.20	
	1459.07	↓	↓	3	< 0.20		↓		< 0.20	
	1460.07			2	< 0.20				< 0.20	

Other Blanks

To Page No. 110

Project No._____

110 Book No._____ TITLE _____

From Page No. 109

Test Performed: Hg (CON'T)
Date Received: 3/6/87
Work Performed By: PM

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From		READ.	CONC.	DF	AMOUNT OF SAMPLE	UNITS	FINAL CONC.	
4998	1461.07	YES	A7		2	<0.20		100ml	mg/L	<0.20	
(CON'T)	1464.01				3	<0.20				<0.20	
	1464.01R				3	<0.20				<0.20	
	+4.0 ~~1.0~~ PM				17	4.02					101% REC
4948	1204.01	NO	A4		3	<0.20	1→10	10ml		<2.0	
	BLANK				2	<0.20				<0.20	
	CCVS				34	1.00				1.00	

Other Clients

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date	
JO	3/10/87	Recorded by [signature]	3/6/87	210

Project No._____

TITLE_____ Book No._____

Page No.___

Test Performed: Hg

Date Received: 3/11/87

Work Performed By: [illegible]

SEE PAGE 1

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From	READ.	CONC.	DF	AMOUNT OF SAMPLE	UNITS	FINAL CONC.	
	BLANK			3						r = 0.9996
	0.2			8						y = 0.032x - 0.05
	0.4			16						
	0.8			28						
	2.0			59						
	4.0			125						
	8.0			252						
	WP1183 #1			38	1.17			µg/L	1.17	(KNOWN = 1.3)
4995	1450.07	NO	A7	4	<0.20		100ml	µg/L	<0.20	
	1451.07			3	<0.20				<0.20	
	1452.07			3	<0.20				<0.20	
	1451.07R			4	<0.20				<0.20	
	+1ppb			31	0.94					94% REC
5004	1484.04	NO	BILL MAY	14	0.40				0.40	
	1485			10	0.27				0.27	
	1486			17	0.49				0.49	
	1487			[illegible]	0.49				0.49	
	1488			7	<0.20				<0.20	
	1489			13	0.36				0.36	
	1489.04R			6	<0.20				<0.20	
	+4.0ppb			143	4.54					104.5% REC
	BLANK			3	<0.20				<0.20	
	CCVS			34	1.04				1.04	
[illegible]	1511.01	NO	A28	5	<0.20	1→10	10ml		<2.0	

0 Hor Charts

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
gc	3/12/87	Recorded by P. Mazierski	3/11/87

Project No.
Book No. TITLE

om Page No.

Test Performed: Hg (CONT)
Date Received: 3/11/87
Work Performed By: [illegible]

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From	READ.	CONC.	DF	AMOUNT OF SAMPLE	UNITS	FINAL CONC.	
5017	1530.04	NO	A14	30	0.91		100ml	mg/L	0.91	
	1531			11	0.30				0.30	
	1532			223	7.11				7.11	
	1533			☆						
	1534			8	0.20				0.20	
	1535			3	<0.20				<0.20	
	1536.05			2	<0.20				<0.20	
	1537			2	<0.20				<0.20	
	1538			3	<0.20				<0.20	
	1539			3	<0.20				<0.20	
	1539.04R			4	<0.20				<0.20	
	+4.0ppb			130	4.12					103% REC
	BLANK			2	<0.20				<0.20	
	CCVS			33	1.01				1.01	
4989	1427.04	NO	[illegible] B	62	1.94	AV 4.79	.37 g	mg/kg	0.52	AV 1.38
				239	7.63		.34 g		2.24	
	1428.04			26	0.78	AV 0.86	.30 g		0.26	AV 0.27
				31	0.94		.35 g		0.27	
	1429.04			234	7.47	AV 5.14	.33 g		2.26	AV 1.50
				89	2.81		.38 g		0.74	
	1430.04			8	0.20	AV <0.20	.34 g		<0.10	AV <0.10
				6	<0.20		.31 g		<0.10	
	+1.0ppb			33	1.01		.30 g			101% REC
	BLANK			3	<0.20			mg/L	<0.20	
	CCVS			33	1.01				1.01	

Other Clients

To Page No.

Witnessed & Understood by me.	Date	Invented by	Date	
[illegible]	3/12/87	Recorded by P. Mazierski	3/11/87	212

Project No._____

TITLE _____ Book No._____ 113

om Page No.__

Test Performed: Hg (cont)
Date Received: 3/11/87
Work Performed By: [illegible]

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From		READ.	CONC.	DF	AMOUNT OF SAMPLE	UNITS	FINAL CONC.	
5007	1495.0107		EP TOX	BILL MAY	2	<0.20	1→4	25ml	µg/L	<0.80	r = 0.9994
	+0.8				19						y = 0.04x - 0.0
	+2.0				52						
	+4.0				99						
	BLANK OBLT				3	<0.20	1→4	25ml	µg/L	<0.80	r = 0.9996
	+0.8				20						y = 0.04x - 0.07
	+2.0				51						
	+4.0				101						

Other Charts

☆ AERATOR TUBE BROKE UPON INSERTION INTO BOD HOLDING 1533.04.
SAMPLE MUST BE RE-RUN.

To Page No.____

Witnessed & Understood by me,	Date	Invented by	Date	
JO	3/12/87	Recorded by P. Mazierski	3/11/87	213

From Page No.
Test Performed: SE
Date Received: MARCH 2-3, 1987
Work Performed By:

(SEE page 6)

S_1 = 25.0 ppb
S_2 = 50.0 ppb
S_3 = 100.0 ppb
CLP FINAL VOLUME = 200.0 mL.

Job No.	ID No.	Custody Seal Intact Yes	Custody Seal Intact No	Secure Storage Area Received From	ppb BURN 1	ppb BURN 2	ppb AVG.	C.V.	10.0 ppb SPIKE	% REC	D.F.	Amt. of Sample (GMS)	UNITS	FINAL CONC	PRE-DIG. SPIKE REC
	WS378 #14				8.8				18.9	191			µg/L	8.80	
	Cal Blank				0.4				10.9	109			µg/L	<5.00	
	50.0 ppb				50.1				64.5	144			µg/L	50.1	
4906	PrepBlank 103				-0.1	0.0	-0.0	/	9.2	92			µg/L	<5.00	
	1032.0403				-5.2	-4.9	-5.1	4.20	-2.1	/		1.04	mg/kg	~~<.961~~	30
	1033.0403				0.1	0.1	0.1	0.00	8.9	89		1.05	↓	<.952	
	1034.0403				-2.0	-2.8	-2.4	/	4.1	41		1.00		<1.00	
	1035.0403				-1.3	-1.4	-1.4	/	6.5	65		1.02		<.980	
	1035. R1				-0.2	-0.4	-0.3	/	8.2	82		1.02		<.980	
	1035. R1S1				5.1	5.6	5.4	6.61	12.2	68		1.03		1.05	54%
	1036.0403				0.1	0.2	0.1	/	7.7	77		1.05		<.952	
	1037.0403				0.2	-0.1	0.0	/	8.8	88		1.00	mg/kg	<1.00	
	Cal Blank				-0.0	0.1	0.0	/	9.8	98			µg/L	<5.00	
	50.0 ppb				51.0	50.6	50.8	0.56	63.2	124			µg/L	50.8	
4928	PrepBlank 107				0.7	0.1	0.4	/	9.8	98			µg/L	<5.00	
	1110.0403 A				0.7	0.4	0.5	/	8.6	86		1.05	mg/kg	<.952	
	1111.0403 A				0.8	0.7	0.7	9.43	7.8	78		~~1.02~~ 1.03		<.980	
	1112.0403 A				-0.6	-0.0	-0.3	/	6.8	68		~~1.03~~ 1.00		<.971	
	1113.0403 B				0.7	1.0	0.8	/	4.7	47		1.02		<.980	
	1114.0403 A				0.2	-0.0	0.1	/	8.5	85		1.03		<.971	
	1115.0403 A				-0.1	-0.0	-0.1	/	7.7	77		1.00		<1.00	
	1116.0403 A				-1.2	-1.3	-1.2	5.66	5.7	57		1.01		<.990	
	1117.0403 A				0.2	0.1	0.1	/	8.8	88		1.03	mg/kg	<.971	
	Cal Blank				-0.5				9.6	96			µg/L	<5.00	
	50.0 ppb				49.6				66.2	166			µg/L	49.6	

To Page No. 11

Witnessed & Understood by me. Date

Invented by Date 3/2-3/87

Recorded by Q.C. M.P.

Project No. _____

Title _____ Book No. _____

om Page No. 8

Test Performed: Se

Date Received: 3/3/87

Work Performed By: J. Gikr

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From N	C	ppb Burn 1	ppb Burn 2	ppb Ave	CV	10.0 ppb Spike	% Rec	DF	Samp Wgt.	Units	Final Conc
	WS 372 #14				8.7				20.3	116			µg/l	8.70
	Cal Blk				0.1				11.2	112				<5.00
	50.0 ppb				53.8				66.6	128			µg/l	53.8
4906	~~Blk~~ 103.[illegible]	[illegible]	3		-0.6	-0.9	-0.8	-	11.3	113		1.04	mg/kg	<.962
JO	~~1032~~ ~~[illegible]~~		7		-1.1	-1.7	-1.6	-	10.9	109			µg/l	<5.00
	Cal Blk -													
	50.0 ppb				51.3	50.7	51.2	1.2[illegible]	70.8	—			µg/l	51.2

To Page No. ____

Witnessed & Understood by me, | Date | Invented by | Date

Recorded by [illegible] | 3/5/87

HGA FORM #1

ELEMENT: ~~Se~~, As, DATE: 3/2-3/87.

S_1 = 25.0 PPB., S_2 = 50.0 PPB.

S_3 = 100.0 PPB, BOOK NO. 287, pp 8-9.

JOB #:

		Se	As
	6,5_01	WS378#14	WS378#3
	X02	Cal Blank	
	X03	50.0 ppb	
	X04	PREP Blank 103 (4906)	
	X05	1032.0403	
	X06	1033.	
	X07	1034.	
	X08	1035.	
	X09	1035. R_1	
	X10	1035. R_1S_1	
	X11	1036.	
	X12	1037.	
	X13	Cal Blank	
	X14	50.0 ppb	
	X15	PREP Blank 107 (4928)	
	X16	1110.0403 BA	
	X17	1111., S_2	
	X18	1112.	
	X19	1113.	
	X20	1114.	
	X21	1115.	
	X22	1116.	
	X23	1117.	
	X24	Cal Blank	
	X25	50.0 ppb	
	X26		
	X27		
	X28		
	X29		
	X30		
	X31		
	X32		
	X33		
	X34		
	X35	, S_3	

As + Spike

501	39.1
502	20.2
503	66.8
504	19.6
505	52.3
506	26.8
507	32.3
508	34.4
509	31.0
510	57.8
511	29.0
512	25.9
513	19.1
514	64.9
515	20.4
516	24.0
517	26.5
518	32.2
519	44.3
520	32.1
521	28.3
522	39.9
523	25.5
524	18.6
525	64.9.

recycled paper

ecology and environment

	-0.275	
	[illegible]	AV
	0.073	
	25.0	SI
	43.1	C
	50.0	S2
	98.7	C
	100.0	S3
601	8.8	
602	0.4	
603	50.1	
	-0.1	
	0.0	
604	-0.0	AV
	06	ER
	-5.2	
	-4.9	
605	-5.1	AV
	4.20	CV
	0.1	
	0.1	
606	0.1	AV
	0.00	CV
	-2.0	
	-2.8	
607	-2.4	AV
	23.57	CV
	-1.3	
	-1.4	
608	-1.4	AV
	5.24	CV
	-0.2	
	-0.4	
609	-0.3	AV
	47.14	CV
	5.1	
	5.6	
610	5.4	AV
	6.61	CV
	0.1	
	0.2	
611	0.1	AV
	47.14	CV
	0.2	
	-0.1	
612	0.0	AV
	06	ER
	-0.0	
	0.1	
613	0.0	AV
	06	ER
	51.0	
	50.6	
614	50.8	AV
	0.56	CV

615	0.4	AV
	06	ER
	0.7	
	0.4	
616	0.5	AV
	38.57	CV
	0.8	
	0.7	
617	0.7	AV
	9.43	CV
	-0.6	
	-0.0	
618	-0.3	AV
	06	ER
	0.7	
	1.0	
619	0.8	AV
	24.96	CV
	0.2	
	-0.0	
620	0.1	AV
	06	ER
	-0.1	
	-0.0	
621	-0.1	AV
	06	ER
	-1.2	
	-1.3	
622	-1.2	AV
	5.66	CV
	0.2	
	0.1	
623	0.1	AV
	47.14	CV
	[illegible]	
	[illegible]	
[illegible]	[illegible]	AV
	2.61	CV
624	-0.5	
625	49.6	

Set + Spike

601	18.9
602	10.9
603	64.5
604	9.2
605	-2.1
606	8.9
607	4.1
608	6.5
609	8.2
610	12.2
611	7.7
612	8.8
613	9.8
614	63.2
615	9.8
616	8.6
617	7.8
618	6.8
619	4.7
620	8.5
621	7.7
622	5.7
623	8.8
624	9.6
625	66.2

616 1110

615 BLK 107

614 (50.0 ppb)

613 (Cal Blank)

612 1037

611 1036

610 1035 $R_1 S_1$

609 1035 R_1

608 1035
1034

606 1033

605 1032

604 BLK 103

50.0 ppb

BLANK

EPA 378# 14

100.0 (S_3)

50.0 (S_2)

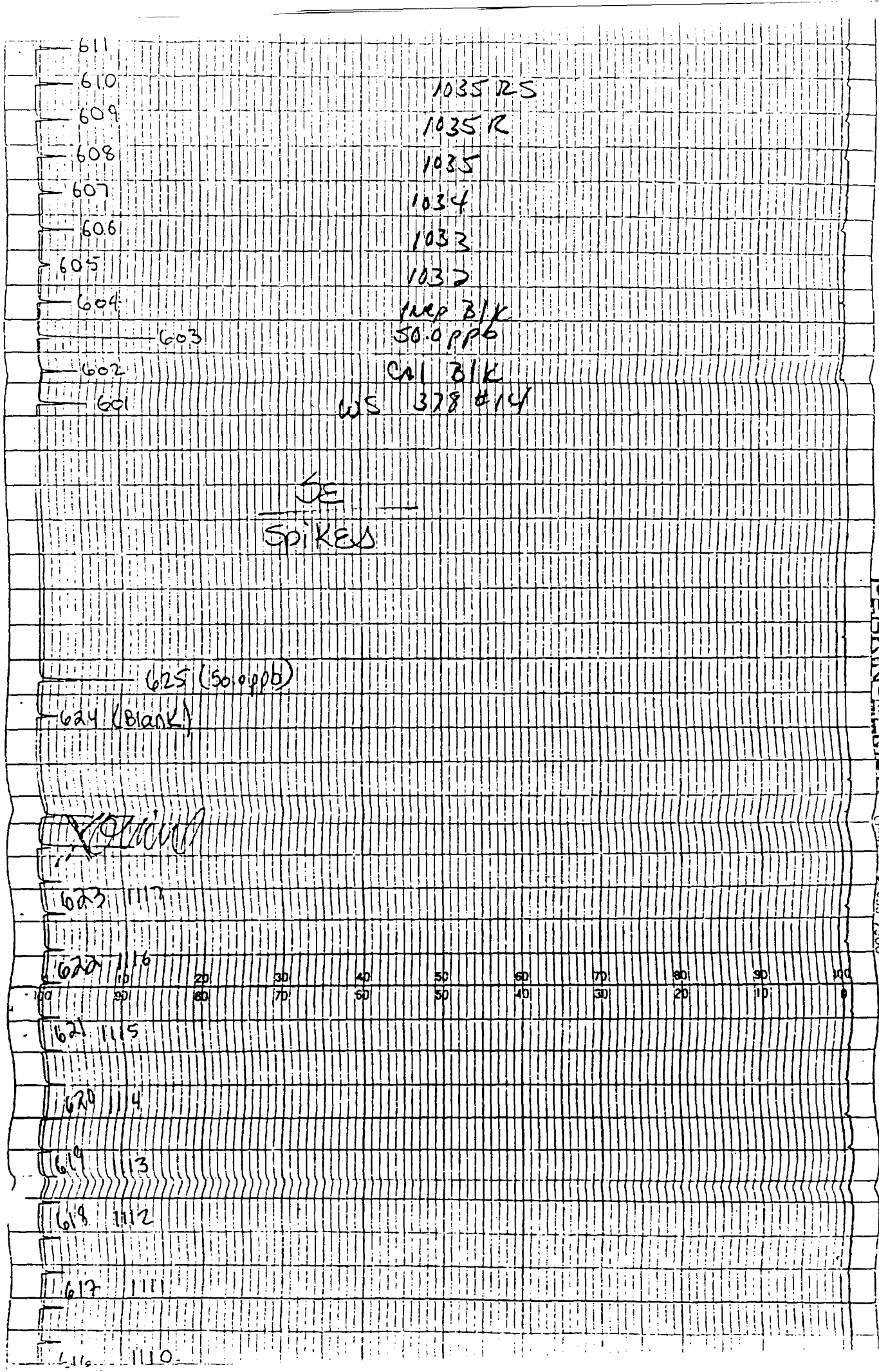
25.0 (S_1)

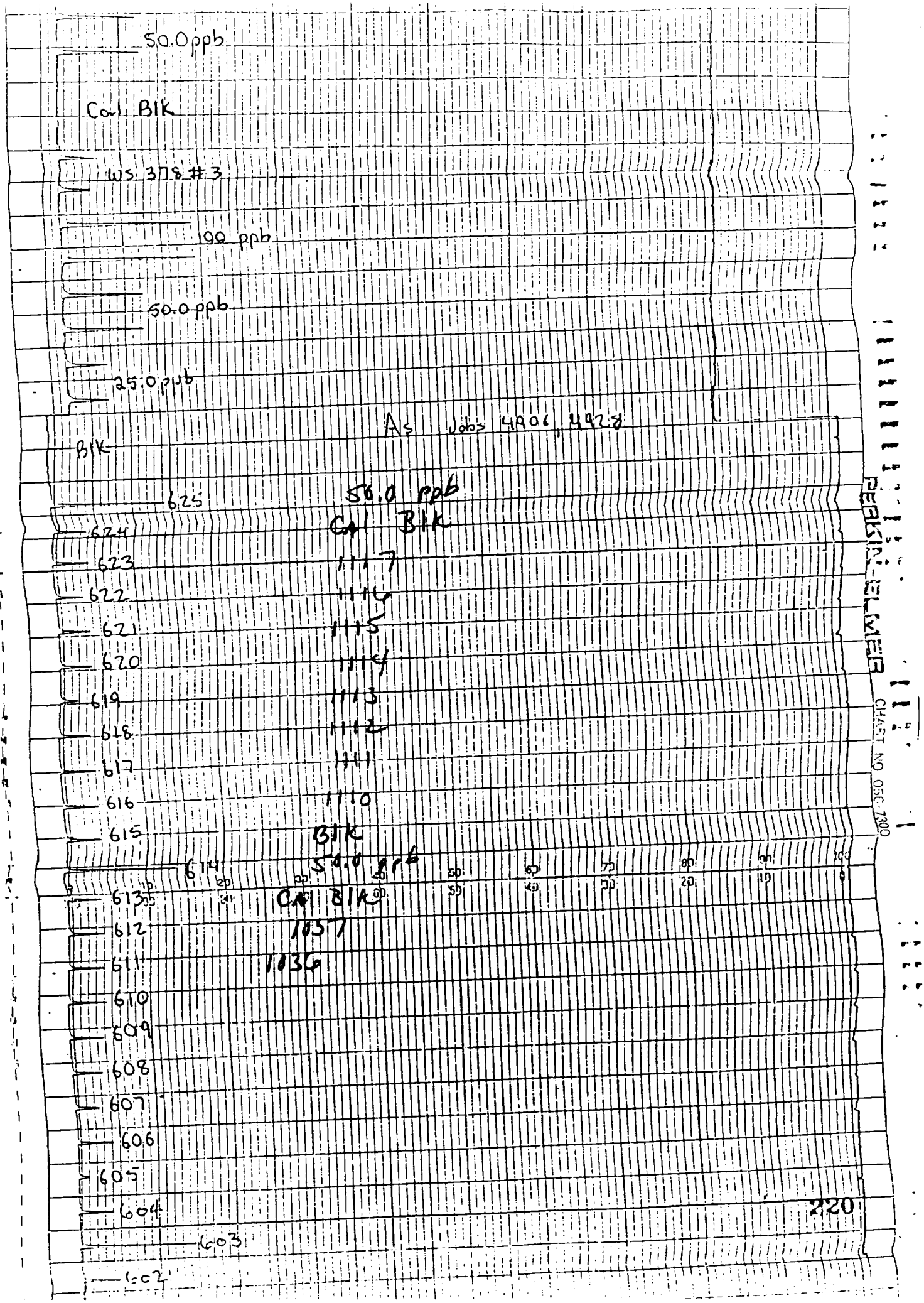
Blank

SE

Jobs: 4906
4928

PERKIN-ELMER CHART NO 060


611
610
609
608
607
606
605
604
603
602
601
1035 RS
1035 R
1035
1034
1033
1032
Prep Blk
50.0 ppb
Cal Blk
WS 378 #14
SE
SPIKES
625 (50.0 ppb)
624 (Blank)
623
622
621
620
619
618
617
616
1117
1116
1115
1114
1113
1112
1111
1110
100 90 80 70 60 50 40 30 20 10 0
PERKIN-ELMER
CHART NO. 056-7300


50.0ppb
Cal BLK
WS 378 #3
100 ppb
50.0ppb
25.0ppb
BLK
As Jobs 4906, 4928
625
624
623
622
621
620
619
618
617
616
615
614
613
612
611
610
609
608
607
606
605
604
603
602
50.0 ppb
Cal BLK
1117
1116
1115
1114
1113
1112
1111
1110
BLK
50.0 ppb
Cal BLK
1057
1036
PERKIN-ELMER
CHART NO. 056-7300
220

HGA FORM #1

ELEMENT: Se, DATE: 3/3/87.

S_1 = 25.0 PPB., S_2 = 50.0 PPB.

S_3 = 100 PPB, BOOK NO. 287, pg 11.

JOB #: _____

X01	WS378#14	
X02	Cal Blk	
X03	50.0ppb	
X04	1032.0403	
X05	Cal Blk	
X06	50.0ppb	
X07		
X08		
X09		
X10		
X11		
X12		
X13		
X14		
X15		
X16		
X17	, S_2	
X18		
X19		
X20		
X21		
X22		
X23		
X24		
X25		
X26		
X27		
X28		
X29		
X30		
X31		
X32		
X33		
X34		
X35	, S_3	

	-0.213	C
	0.006	AZ
	0.077	C
	25.0	S1
	47.4	C
	50.0	S2
	104.5	C
	100.0	S3
601	8.7	
602	0.1	
603	53.8	
	-0.6	
	-0.9	
604	-0.8	AV
	28.28	CV
	-1.7	
	-1.5	
605	-1.6	AV
	8.84	CV
	51.8	
	50.7	
606	51.2	AV
	1.52	CV

601	20.3
602	11.2
603	66.6
604	11.3
605	10.9
606	70.8

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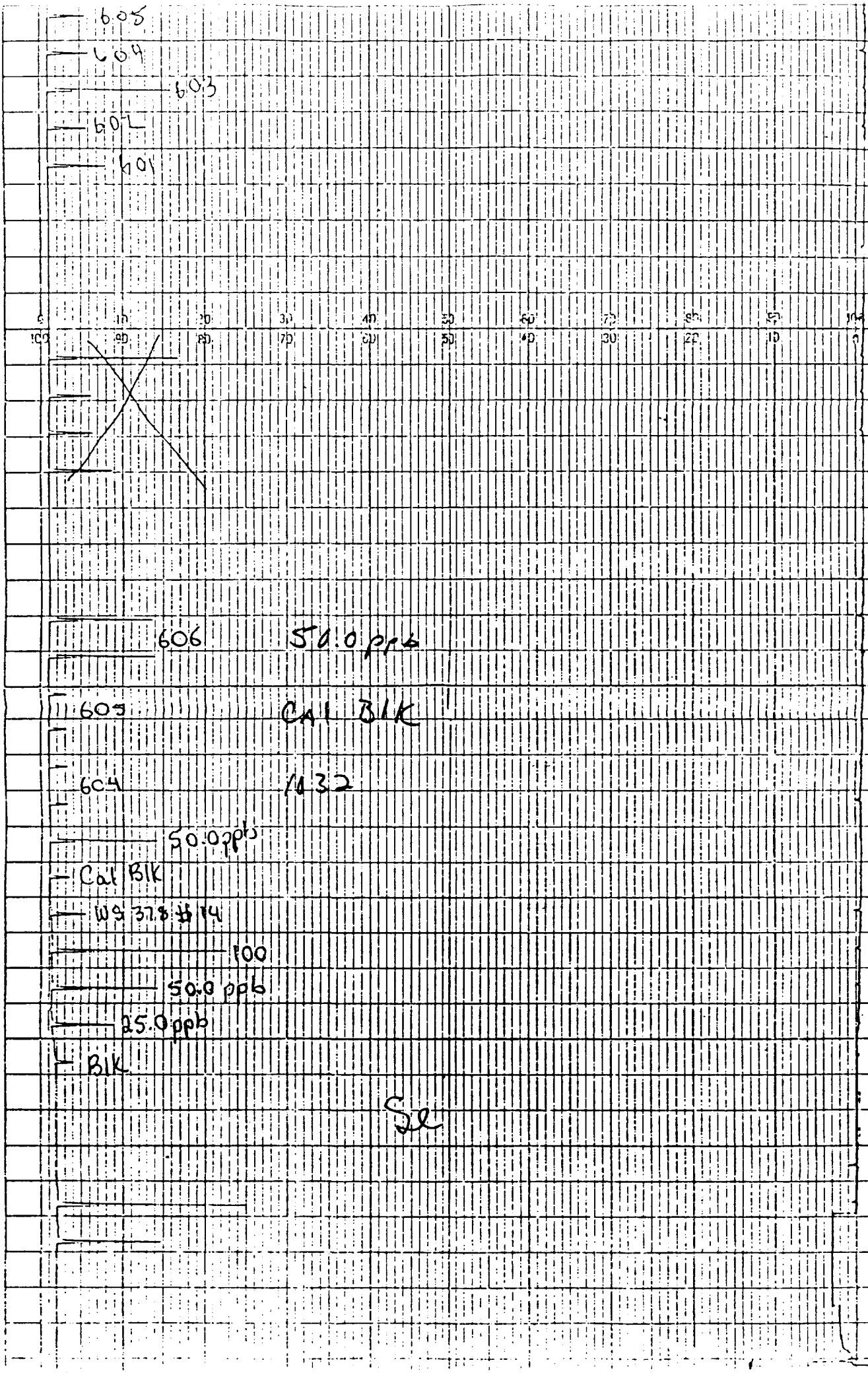
605
604
603
602
601
606
50.0 ppb
605
Cal Blk
604
1132
50.0ppb
Cal Blk
WS 378 #14
100
50.0 ppb
25.0ppb
Blk
SL

From Page No.

Tes. formed: SO
Date Received: 3/5/87
Work Performed By: J. CLARK

(SEE PAGE 6)

S_1 = 25.0
S_2 = 50.0
S_3 = 100.0

CLP FINAL VOLUME = 200 ml

Job No.	ID No.	Custody Seal Intact Yes	Custody Seal Intact No	Secure Storage Area Received From	ppb Burn 1	ppb Burn 2	ppb Burn Ave	CV	10.0 ppb Spike	% Rec	DF	Samp Wgt	Units	Final Conc
	WS378#14				4.7				16.6	89			µg/L	7.70
	Cal Blk				-0.2				7.9	79			µg/L	<5.00
	50.0 ppb				48.7				57.8	91			µg/L	48.7
4936	1154.C103				-2.3	-2.9	-2.6	/	1.7	/		1.03	mg/kg	~~-6.11~~
	1163.C103				~~-5.1~~ ~~2.4~~	-5.6	-5.3	/	1.5	/		1.00		/
4945	1196.C103				~~-10.1~~ ~~2.6~~	-10.2	-10.1	/	=9.2	/		1.02		/
	1186.R1				-9.7	-9.2	-9.5	/	-8.7	/		1.00		/
	1186.R1S1				-9.2	-8.4	-8.8	/	-5.9	/		1.03		/
	Blk 116				-0.6	-0.4	-0.5	/	9.2	92			µg/L	<5.00
4952	1219.C103				-8.0	-7.9	-7.9	/	-5.8	/		1.03	mg/kg	/
	1220.C103				-8.5	-8.7	-8.6	/	-7.1	/		1.02	mg/kg	/
	Blk 123				0.8	0.0	0.4	/	8.2	82			µg/L	<5.00
4971	1274.C103				0.0	0.5	0.3	/	6.8	68		1.01	mg/kg	<0.990
	Cal Blk				0.4	0.9	0.6	/	7.1	71			µg/L	<5.00
	50.0 ppb				49.9	47.9	48.9	2.89	51.2	/			µg/L	48.9
	1275.C103				-0.8	-0.4	-0.6	/	7.3	73		1.05	mg/kg	<0.952
	1275.R1				-0.3	-0.1	-0.2	/	7.7	77		1.07		<0.935
	1275.R1S1				4.8	4.9	4.8	1.46	13.8	90		1.02		<0.980
	1276.C103				-7.5	-6.8	-7.1	/	-4.0	/		1.03		/
	1277.C103				-10.3	-9.9	-10.1	/	-8.3	/		1.01		/
	1278.C103				-0.8	-0.4	-0.6	/	6.9	69		1.00	mg/kg	<1.00
	Blk 127				1.0	0.3	0.7	/	11.5	115			µg/L	<5.00
	Cal Blk				0.5	0.6	0.5	/	8.3	83			µg/L	<5.00
	50.0 ppb				51.9	54.4	53.1	3.33	61.4	/			µg/L	53.1
4952	1219.C103				~~-6.8~~	~~-7.0~~	-6.9		9.0	90	1 → 10	1.03	mg/kg	<9.71
	1220.C103				~~-6.8~~	-6.8	-6.7		9.4	94	1 → 10	1.02	mg/kg	<9.80

Other Clients

To Page No.

Witnessed & Understood by me. Date 3/6/87

Invented by

Recorded by J.C. Clark Date 3/5/87

Project No._____

TITLE _____ Book No._____

Page No.__

Test Performed: SE (cont'd)

Date Received: MARCH 5, 1987

Work Performed By: [illegible]

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From No	C	ppb Burn 1	ppb Burn 2	ppb Avg	C.Y.	10.0 ppb Spike	% Rec	D.F.	Amt. of Sample (cont)	Units	Final Conc.	Pre Dig Sa Re
4936	1154.0103				-1.4	-0.5	-1.0	/	9.0	90	1→10	1.03	mg/kg	<9.71	
	1163.0103				-0.2	-0.1	-0.2	/	9.4	94	1→10	1.00	mg/kg	<10.0	
4943	1186.0103				-0.0	0.0	-0.0	/	7.0	70	0.1→10	1.02	mg/kg	<96.0	
	1186.R1				0.3	-0.5	-0.1	/	6.3	63	0.1→10	1.00	mg/kg	<100.0	
	1186.R1S1				-1.3	-0.8	-1.0	/	5.9	59	0.1→10	1.03	mg/kg	<97.1	
4971	1276.0403				-5.8	-2.6	-4.2	/	5.0	50	1→10	1.03	mg/kg	<9.71	
	1277.0403				-4.7	-3.8	-4.3	/	5.0	50	1→10	1.01	mg/kg	<9.90	
	Cal Blank				0.0				9.1	91			µg/L	<5.00	
	50.0 ppb				46.0				61.6	/			µg/L	46.0	

Other Clients

To Page No.____

Witnessed & Understood by me. 90 | Date 3/6/87 | Invented by [signature] | Date 3/5/87

HGA
FORM
#1

ELEMENT: Se, DATE: 3/5/87.
S_1 = 25.0 PPB., S_2 = 50.0 PPB.
S_3 = 100 PPB, BOOK NO. 287, 22-23.

JOB #:

601	WS378 #14
X02	Cal Blk
X03	50.0ppb
X04	1154.0103
X05	1163.0103
X06	1186.0103
X07	1186 R1
X08	1186. R1S1
X09	Blk 116
X10	1219.0103
X11	1220.0103
X12	Blk 123
X13	1274.0403
X14	Cal Blk
X15	50.0ppb
X16	1275.0403
X17	1275. R1, S_2
X18	1275. R1S1
X19	1276
X20	1277
X21	1278
X22	Blk 127
X23	Cal Blk
X24	50.0ppb
X25	
X26	
X27	
X28	
X29	
X30	
X31	
X32	
X33	
X34	
X35	, S_3

601	16.6
602	7.9
603	57.8
604	1.7
605	-1.5
606	-9.2
607	-8.7
608	-5.9
609	9.2
610	-5.8
611	-7.1
612	8.2
613	6.8
614	7.1
615	51.2
616	7.3
617	7.7
618	13.8
619	-4.0
620	-8.3
621	6.9
622	11.5
623	8.3
624	61.4

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ecology and environment

	-1.4	
	-0.5	
604	-1.0	AV
	66.99	CV
	-0.2	
	-0.1	
605	-0.2	AV
	47.14	CV
	-6.8	
	-7.0	
606	-6.9	AV
	2.05	CV
	-6.7	
	-6.8	
607	-6.7	AV
	1.05	CV
	-6.9	
	-6.7	
608	-6.8	AV
	2.08	CV
	-5.8	
	-2.6	
619	-4.2	AV
	53.87	CV
	-4.7	
	-3.8	
620	-4.3	AV
	14.97	CV
623	0.1	
624	49.9	

606	7.0	
607	6.3	
608	5.9	
	-0.0	
	0.0	
606	-0.0	AV
	00	CV
	0.3	
	-0.5	
607	-0.1	AV
	00	CV
	-1.3	
	-0.8	
608	-1.0	AV
	33.67	CV
619	5.0	
620	5.0	
621	0.0	
622	46.0	
623	9.1	
624	61.6	

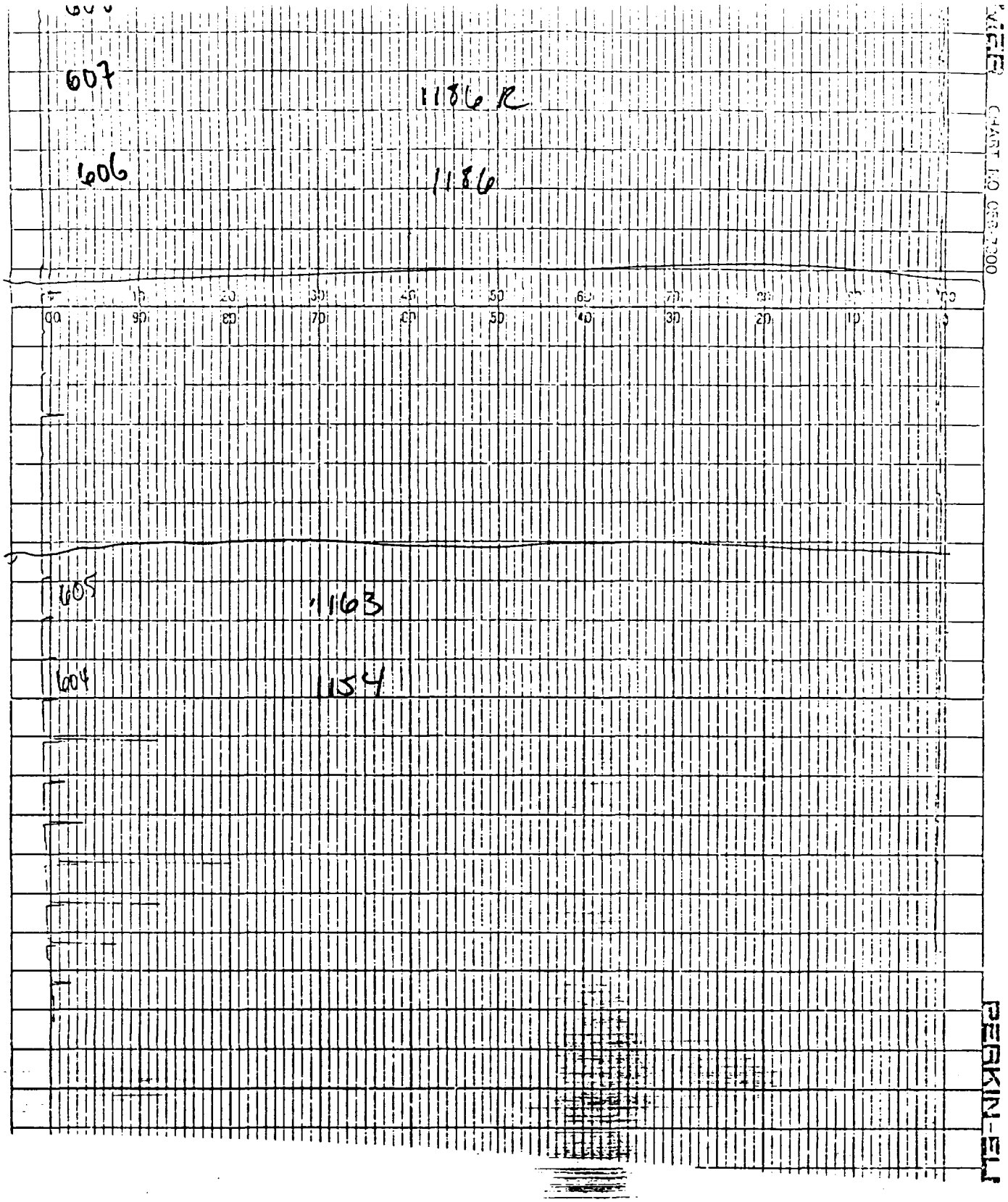
DF=a1->b

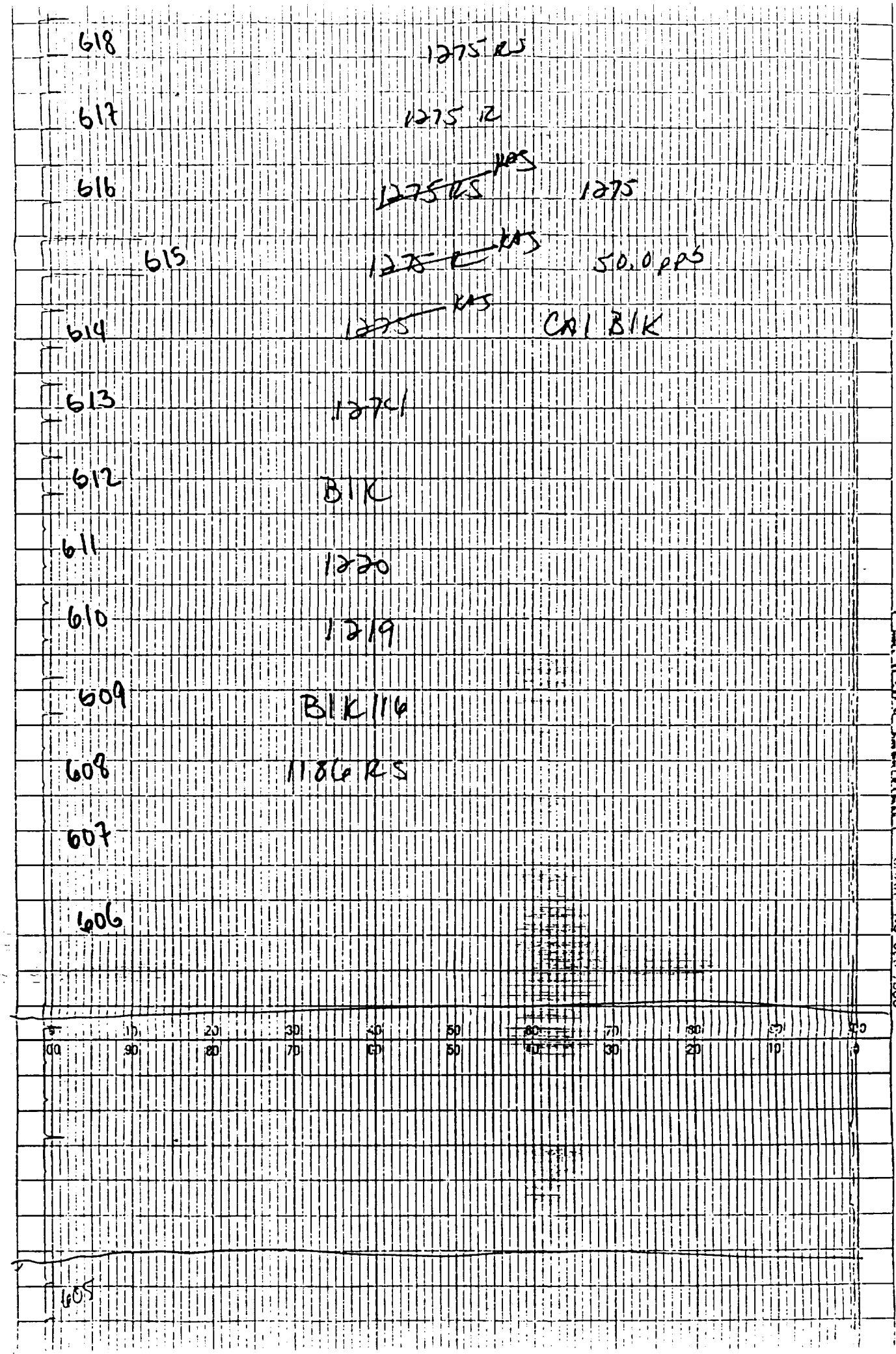
50

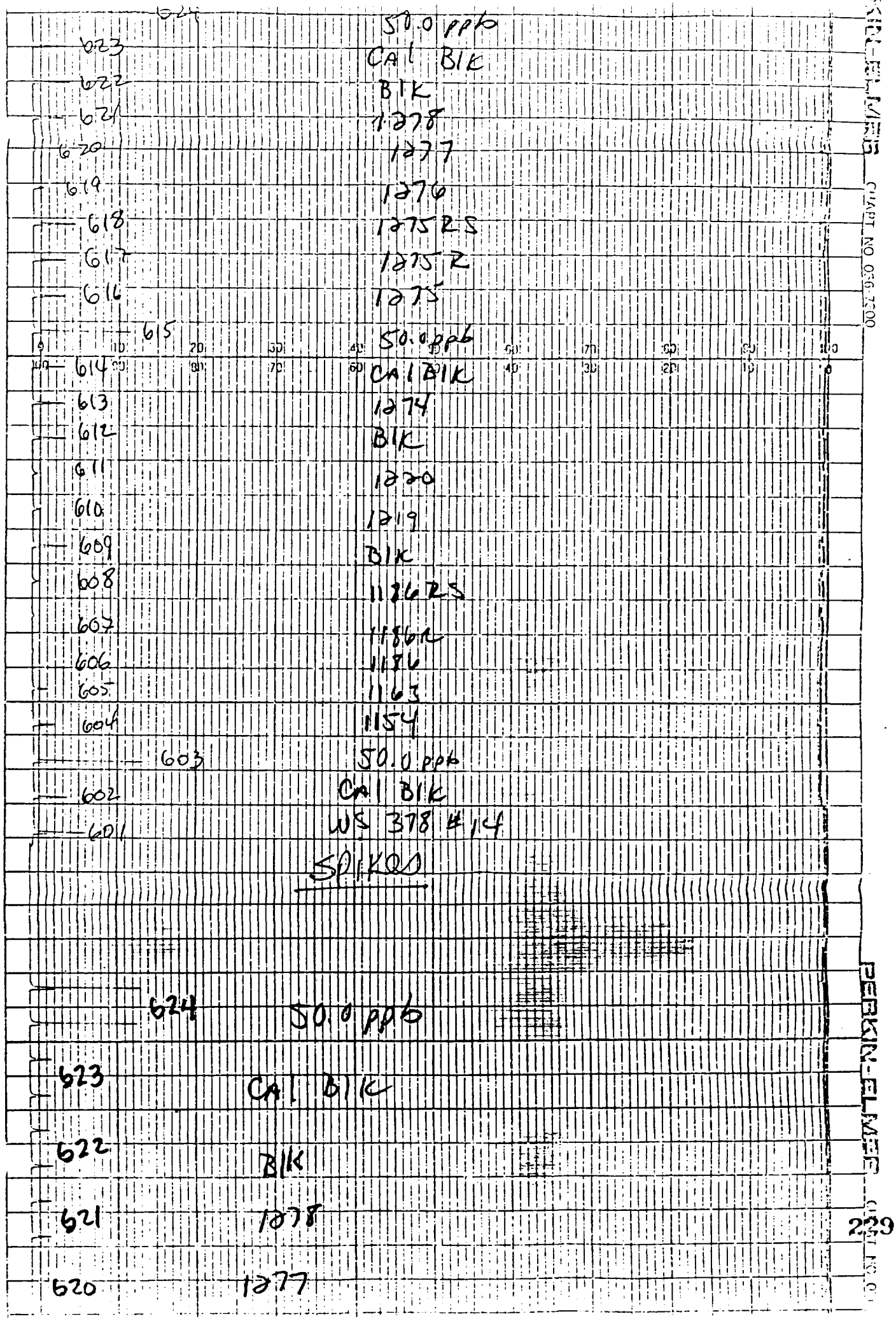
	-0.268	
	0.069	AV
	25.0	SI
	47.5	C
	50.0	SI
	99.4	C
	100.0	SI
601	7.7	
602	-0.2	
603	48.7	
	-2.3	
	-2.9	
604	-2.6	AV
	16.32	CV
	-5.1	
	-5.6	
605	-5.3	AV
	6.61	CV
606	-9.7	
607	-9.2	
608	-9.0	
609	0.4	
610	-8.3	
611	-9.5	
612	-1.0	

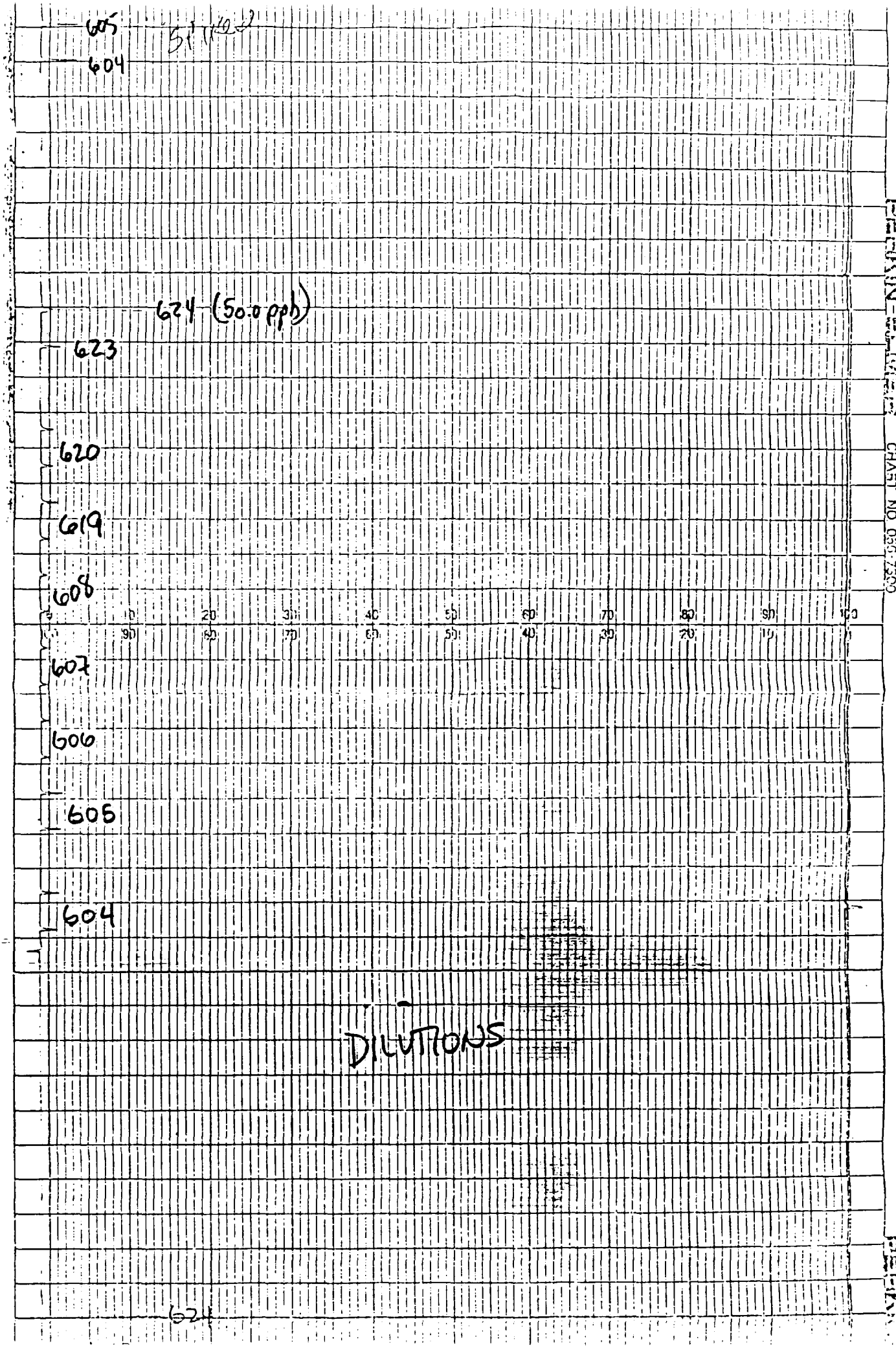
	-10.1	
	-10.2	
608	-10.1	AV
	0.70	CV
	-9.7	
	-9.2	
607	-9.5	AV
	3.74	CV
	-9.2	
	-8.4	
608	-8.8	AV
	6.43	CV
	-8.6	
	-8.4	
609	-8.5	AV
	28.28	CV
	-8.0	
	-7.9	
610	-7.9	AV
	0.89	CV
	-8.5	
	-8.7	
611	-8.6	AV
	1.64	CV
	0.8	
	0.0	
612	0.4	AV
	00	CV
	0.0	
	0.5	
613	0.3	AV
	00	CV
	0.4	
	0.9	
614	0.6	AV
	54.39	CV
	49.9	
	47.9	
615	48.9	AV
	2.89	CV
	-0.8	
	-0.4	
616	-0.6	AV
	47.14	CV
	-0.3	
	-0.1	
617	-0.2	AV
	70.71	CV
	4.8	
	4.9	
618	4.8	AV
	1.46	CV
	-7.5	
	-6.8	
619	-7.1	AV
	6.92	CV
	-10.3	
	-9.9	
620	-10.1	AV
	2.80	CV
	-0.8	
	-0.4	
621	-0.6	AV
	47.14	CV
	1.0	
	0.3	

622	0.7	AV
	76.15	CV
	1.5	
	0.6	
623	0.5	AV
	12.86	CV
	51.9	
	54.4	
624	53.1	AV
	3.33	CV


607
606
605
604
1186 R
1186
1163
1154
PERKIN-ELM


618
1275 RS
617
1275 12
616
1275 RS
1275
615
1275 RS
50.0 PPS
614
1275 RS
CAL BLK
613
1271
612
BLK
611
1220
610
1219
609
BLK 116
608
1186 RS
607
606
605
PERKIN-ELMER CHART NO 056-7300


50.0 ppb
CAL BLK
BLK
1278
1277
1276
1275RS
1275R
1275
50.0 ppb
CAL BLK
1274
BLK
1220
1219
BLK
1126RS
1186R
1186
1163
1154
50.0 ppb
CAL BLK
WS 378 #14
50 KOS
624
50.0 ppb
623
CAL BLK
622
BLK
621
1278
620
1277
PERKIN-ELMER
CHART NO. 056-7300


605
604
624 (50.0 ppb)
623
620
619
608
607
606
605
604
DILUTIONS
624
PERKIN-ELMER CHART NO 090-7300
PERKIN

624

623 (spiky)

624

623

620

*reinject

619

(spiky)

608

607

DF = 0.1 → 10

606

608

607

606 } DF = 0.1 → 10 (spiky)

605

CHART NO GSC-2300

231

From Page No. 40

Test Performed: Qo

Date Received: 3/13/97

Work Performed By: J. Clark

Take pg 6

Job No.	ID No.	Custody Seal Intact Yes	Custody Seal Intact No	Secure Storage Area Received From	ppb Burn 1	ppb Burn 2	ppb Ave	CV	10.0 ppb Spike	% Rec	DF	Samp Wgt	Units	Final Conc	% Rec Pre-L
	WS 378 #14				7.8				19.1	113			ug/L	7.80	
	Col Blk				0.3				11.6	110				<5.00	
	50.0 ppb				50.2				62.1	119			ug/L	50.2	
4956	1427.0403				1.7	2.4	2.0	-	9.9	99		1.06	mg/kg	<.943	
	1428.0403				-0.6	-0.6	-0.5	-	9.0	90		1.01		<.990	
	1426. Ki				-0.2	0.0	-0.1	-	9.7	97		1.01		<.990	
	1429.0403				3.0	2.2	2.6	-	10.7	107		1.04		<.962	
	1429 S1				7.8	7.5	7.7	2.77	14.9	77		1.00		1.45	77%
	1430.0403				0.9	0.7	0.8	-	10.7	107		1.06	mg/kg	<.943	
	Blk 145				0.5	0.3	0.4	-	10.4	104			ug/L	<5.00	
	Col Blk				-0.6	0.1	-0.3	-	11.8	118				<5.00	
	50.0 ppb				48.5	48.6	48.6	0.15	59.3	115			ug/L	48.6	
4993	1433.0403				21.0	20.2	20.6	2.75	29.7	91	2→10			103	
	1433. Rep				20.0	20.2	20.1	0.70	29.2	91	2→10			101	
	1429.0403				2.3	1.5	1.9	-	10.5	105				<5.00	
	1440.0403				-1.4	-1.7	-1.6	-	2.0	60				<5.00	
	1461.0403				19.6	19.4	19.5	0.73	29.9	104	2→10			97.5	
	1464.0403				-1.1	-1.1	-1.1	0.00	9.5	95				<5.00	
	Blk 141				-1.3	-1.2	-1.2	-	10.7	107				<5.00	
	Col Blk 2				-0.7	-0.6	-0.7	-	11.3	113				<5.00	
	50.0 ppb				48.7	48.4	48.6	0.73	60.1	118			ug/L	48.6	

Other Clients

To Page No. 42

Witnessed & Understood by me, Date

Invented by Date

Recorded by C. Clark 3/12/97

HGA FORM #1

ELEMENT: Se, DATE: 3/12/87.

S_1 = 25.0 PPB., S_2 = 50.0 PPB.

S_3 = 100 PPB, BOOK NO. 257, pg 41.

JOB #:

6_01	WS 378 #14	
X02	Cal Blk	
X03	50.0ppb	
X04	1427.0403	
X05	1428.	
X06	1428. R_1	
X07	1429	
X08	1429. S_1	
X09	1430.	
X10	Blk 145	
X11	Cal Blk	
X12	50.0ppb	
X13	1458.0703 (2→10)	
X14	1458. R_1 (2→10)	
X15	1459.0703	
X16	1460.0703	
X17	1461.0703 (2→10), S_2	
X18	1464.0103	
X19	Blk 149	
X20	Cal Blk	
X21	50.0ppb	
X22		
X23		
X24		
X25		
X26		
X27		
X28		
X29		
X30		
X31		
X32		
X33		
X34		
X35	, S_3	

ATTACH TAPE HERE

601	19.6
602	11.0
603	52.1 C
604	9.9
605	9.0
606	9.7
607	10.7
608	14.9
609	10.7
610	10.4
611	11.8
612	55.8 C
613	29.7
614	29.2
615	10.5
616	6.0
617	29.9
618	9.5
619	10.7
620	-12.7
620	11.3
621	50.4 C

recycled paper

ecology and environment

	-0.325	C
	0.000	AZ
	0.056	C
	25.0	S1
	50.1	C
	50.0	S2
	93.7	C
	12	ER
601	7.8	
602	0.3	
603	50.2	
	1.7	
	2.4	
604	2.0	AV
	24.15	CV
	-0.5	
	-0.6	
605	-0.5	AV
	12.86	CV
	-0.2	
	0.0	
606	-0.1	AV
	06	ER
	3.0	
	2.2	
607	2.6	AV
	21.76	CV
	7.8	
	7.5	
608	7.7	AV
	2.77	CV
	0.9	
	0.7	
609	0.8	AV
	17.68	CV
	0.5	
	0.3	
610	0.4	AV
	35.36	CV
	-0.6	
	0.1	
611	-0.3	AV
	06	ER
	48.5	
	48.6	
612	48.6	AV
	0.15	CV
	21.0	
	20.2	
613	20.6	AV
	2.75	CV
	20.0	
	20.2	
614	20.1	AV
	0.70	CV
	2.3	
	1.5	
615	1.9	AV
	29.77	CV
	-1.4	
	-1.8	
616	-1.6	AV
	17.68	CV
	19.6	
	19.4	
617	19.5	AV
	0.73	CV
	-1.1	
	-1.1	
618	-1.1	AV
	0.00	CV
	-1.3	
	-1.2	
619	-1.2	AV
	5.66	CV
	-0.7	
	-0.6	
620	-0.7	AV
	10.88	CV
	48.9	
	48.4	
621	48.6	AV
	0.73	CV

617 1461

616 1460

615 1459

614 1458R

613 1458

612 50.0ppb

611 CA1 BLK

610 BLK

609 1430

608 1429S

607 1429

606 1428R

605 1428

604 1427

50.0ppb

BLK

WS378 #14

100

50

25

BLK

Se # 4989

PERKIN-ELMER CHART NO. 056-7300

65 1459

64 1458R

63 1458

612 50.0 ppb

611 Cal Blk

610 Blk

609 1430

605 1429 S

607 1429

606 1428R

605 1428

604 1427

603 50.0 ppb

602 Cal Blk

601 WS 378 @ 14
Se + Spk

621 50.0 ppb

620 Cal Blk

619 Blk

618 1464

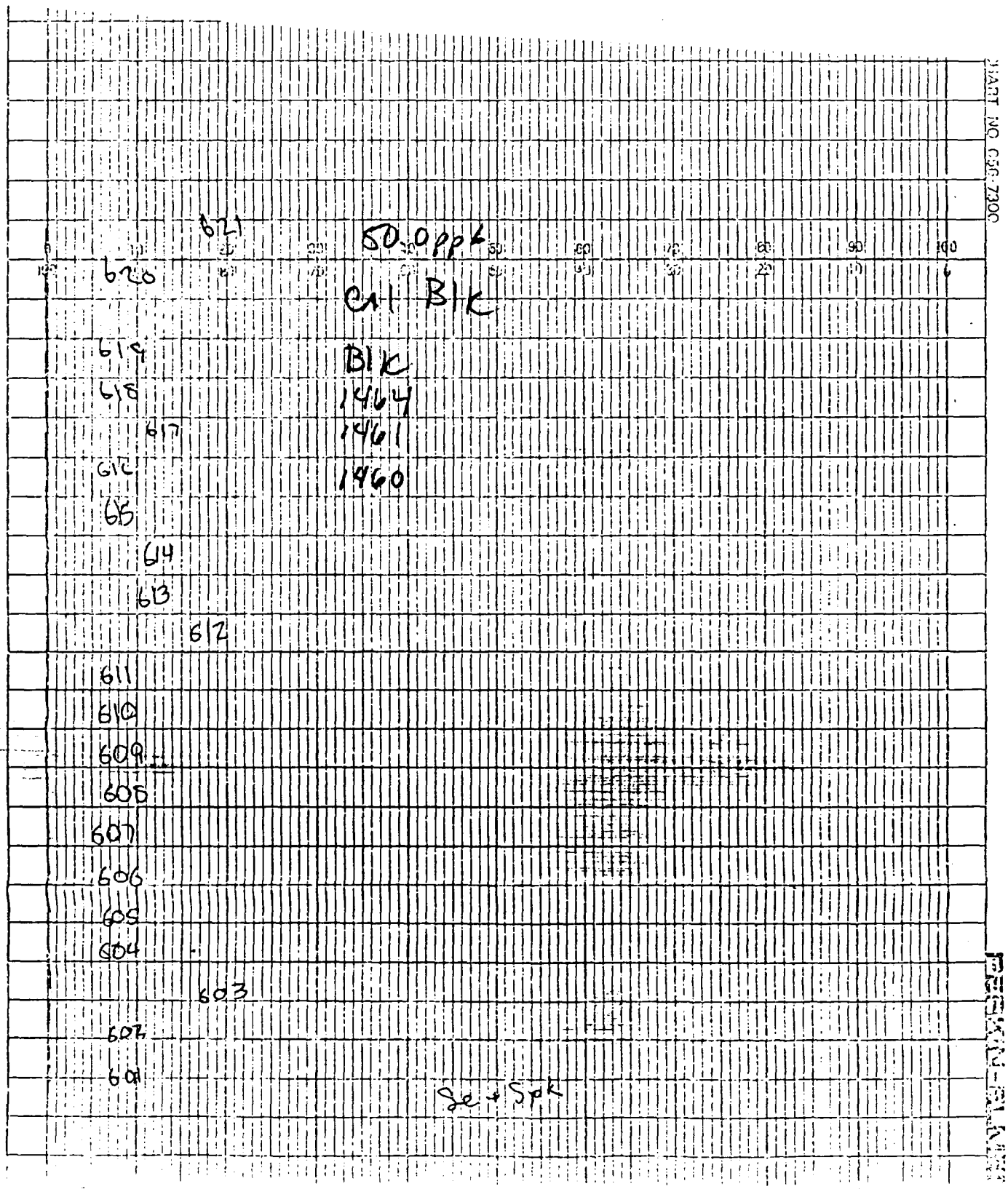
617

616

615

614

KEUFFEL & ESSER CO. MADE IN U.S.A.
CHART NO. 6558-730C



621
50.0ppb
620
Cal Blk
619
Blk
618
1464
617
1461
616
1460
615
614
613
612
611
610
609
608
607
606
605
604
603
602
601
Se + Spk

Project No. X

Book No. X TITLE

m Pa No.

t Performed: TL

e Received: MARCH 3, 1987

rk Performed By: MSP

λ = 276.8
ENERGY = 59
Time = 5.0 sec.

S_1 = 25.0 ppb
S_2 = 50.0 ppb
S_3 = 100.0 ppb

SEE Logbook #126 for STD CONC

CLP FINAL VOLUME = 200 ml

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From No	C	ppb BURN 1	ppb BURN 2	ppb Avg	C.V	20.0 ppb SPIKE	% REC	D.F.	Amt of SAMPLE (GMS)	UNITS	FINAL CONC	PRE DIG SPIKE REC
	WP1183(II)#1				24.5	25.2	24.9	1.99	47.2	112			µg/L	24.9	
	Cal Blank				0.1	-0.0	0.0	/	20.2	101			µg/L	<10.0	
	50.0 ppb				52.2	51.0	51.6	1.64	71.9	102			µg/L	51.6	
	PrepBlank 103				-0.2	-0.1	-0.2	/	21.2	106			µg/L	<10.0	
906	10.32.0403				1.7	2.0	1.8	/	20.1	101		1.04	mg/kg	<1.92	
	10.33.0403				0.1	0.4	0.2	/	19.3	97		1.05		<1.90	
	10 34.0403				0.3	-0.2	0.0	/	20.8	104		1.00		<2.00	
	1035.0403				0.4	0.5	0.5	/	20.2	101		1.02		<1.96	
	1035.0403 R1				0.2	0.2	0.2	0.00	19.6	98		1.02		<1.96	8.66
	1035. R1S1				44.5	44.6	44.6	0.16	70.9	/		1.03		89%	89%
	1036.0403				-0.3	0.0	-0.1	/	19.8	99		1.05		<1.90	
	1037.0403				-0.1	0.0	-0.1	/	21.1	106		1.00	mg/kg	<2.00	
	Cal Blank				0.0	-0.6	-0.3	/	20.5	103			µg/L	<10.0	
	50.0 ppb				48.0				72.6	/			µg/L	48.0	
4928	1110.0403				-0.1	0.4	0.2	/	21.2	106		1.05	mg/kg	<1.90	
	1111.0403				0.3	0.0	0.2	/	19.9	100		1.02		<1.96	
	1112.0403				0.4	0.5	0.4	/	20.0	100		1.03		<1.94	
	1113.0403				0.4	0.7	0.6	/	20.9	102		1.02		<1.96	
	1114.0403				0.5	0.6	0.6	/	21.1	106		1.03		<1.94	
	1115.0403				0.2	0.3	0.2	/	21.0	105		1.00		<2.00	
	1116.0403				0.6	0.7	0.7	/	22.1	111		1.01		<1.98	
	1117.0403				0.1	0.1	0.1	0.00	19.6	98		1.03	mg/kg	<1.94	
	Cal Blank				-0.1	-0.1	-0.1	0.00	21.0	105			µg/L	<10.0	
	50.0 ppb				48.1	48.1	48.1	0.00	74.8	/			µg/L	48.1	
	PrepBlank082				-0.1	-0.2	-0.1	/	22.6	113			µg/L	<10.0	
4872	0900.0403				1.0	1.2	1.1	12.86	23.0	115		1.02	mg/kg	<1.96	
	0900. R2				0.8	0.7	0.8	9.43	19.6	98		1.01		<1.98	
	0900. R2S2				52.5	51.9	52.2	0.81	75.7	118		1.04	mg/kg	10.0	104%

To Page No. (13)

Witnessed & Understood by me. MSP Date

Invented by

Recorded by G.O.M.P.

Date 3/4/87

228

From Page No. (12)

Test Performed: Tl (CONT'D)
Date Received: MARCH 3, 1987
Work Performed By:

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From		ppb BURN 1	ppb BURN 2	ppb Avg	C.V.	20.0 ppb SPIKE	% REC	D.F.	Amt of SAMPLE (GMS.)	UNITS	FINAL CONC	PRE DIG SPIKE REC.
4872	0901.0403		NO	C	-.00	~~.03~~	0.2	/	19.2	96		1.04	mg/kg	<1.92	
	Cal Blank						0.0	/	19.8	99			µg/l	<40.0	Jo
	50.0 ppb				~~48.4~~	48.3	48.3	0.15	86.1	/			µg/l	48.3	

Other Clients

To Page No.

Witnessed & Understood by me,	Date	Invented by	Date	239
		Recorded by G.O.M.P.	3/3-4/87	

HGA FORM #1

ELEMENT: Pb, DATE: 3/3/87.

S_1 = 25.0 PPB., S_2 = 50.0 PPB.

S_3 = 100.0 PPB, BOOK NO. 287, pg 12-13.

ATTACH TAPE . . . HERE

JOB #:

401	WP1183 (II) #1	
X02	Cal Blank	
X03	50.0 ppb	
X04	PREP Blank 0103 (4906)	
X05	1032.0403	
X06	1033.	
X07	1034.	
X08	1035.	
X09	1035. R_1	
X10	1035. R_1S_1	
X11	1036.	
X12	1037.	
X13	Cal Blank	
X14	50.0 ppb	
X15	1110.0403 A (4928)	
X16	1111.	
X17	1112., S_2	
X18	1113.	
X19	1114.	
X20	1115.	
X21	1116.	
X22	1117.	
X23	Cal Blank	
X24	50.0 ppb	
X25	PREP BLANK 082 (4872)	
X26	0900.0403	
X27	0900. R_2	
X28	0900. R_2S_1	
X29	0901.	
X30	Cal Blank	
X31	50.0 ppb	
X32		
X33		
X34		
X35	, S_3	

401	47.2
402	20.2
403	71.9
404	21.2
405	20.1
406	19.3
407	20.8
408	20.2
409	19.6
410	70.9
411	19.8
412	21.1
413	20.5
414	72.6
415	21.2
416	19.9
417	20.0
418	20.4
419	21.1
420	21.0
421	22.1
422	19.6
423	21.0
424	74.8
425	22.6
426	23.0
427	19.6
428	75.7
429	19.2
430	19.8
431	96.1

recycled paper

ecology and environment

	-0.021	
	-0.020	
	-0.021	AV
	3.45	CV
	0.366	AZ
	0.069	
	0.069	
	0.069	AV
	0.00	CV
	25.0	S1
	46.8	C
	45.1	C
	46.5	AV
	1.07	CV
	50.0	S2
	101.8	C
	99.2	C
	100.5	AV
	1.83	CV
	100.0	S3
	24.5	
	25.2	
401	24.9	AV
	1.99	CV
	0.1	
	-0.0	
402	0.0	AV
	0.0	ER
	52.2	
	51.0	
403	51.6	AV
	1.64	CV
	-0.2	
	-0.1	
404	-0.2	AV
	47.14	CV
	1.7	
	2.0	
405	1.8	AV
	11.47	CV
	0.1	
	0.4	
406	0.2	AV
	84.85	CV
	0.3	
	-0.2	
407	0.0	AV
	0.0	ER
	0.4	
	0.5	
408	0.5	AV
	15.71	CV
	0.2	
	0.2	
409	0.2	AV
	0.00	CV
	44.5	
	44.6	
410	44.6	AV
	0.16	CV
	-0.3	
	0.0	
411	-0.1	AV
	0.0	ER
	-0.1	
	0.0	
412	-0.1	AV
	0.0	ER
	0.0	
	-0.6	
413	-0.3	AV
	0.0	ER
	[illegible]	
	[illegible]	
	[illegible]	
	0.00	CV
	-0.1	
	-0.0	
415	0.0	AV
	0.0	ER
	[illegible]	
	[illegible]	
414	[illegible] 56.9	
414	48.0	
	[illegible]	
	-0.1	
	-0.4	
415	0.2	AV
	0.0	ER
	0.3	
	0.0	
416	0.2	AV
	0.0	ER
	0.4	
	0.5	
417	0.4	AV
	15.71	CV
	0.4	
	0.7	
418	0.6	AV
	38.57	CV
	0.5	
	0.6	
419	0.6	AV
	12.86	CV
	0.2	
	0.3	
420	0.2	AV
	28.28	CV
	0.6	
	0.7	
421	0.7	AV
	10.88	CV
	0.1	
	0.1	
422	0.1	AV
	0.00	CV
	-0.1	
	-0.1	
423	-0.1	AV
	0.00	CV
	48.1	
	48.1	
424	48.1	AV
	0.00	CV
	-0.1	
	-0.2	
425	-0.1	AV
	47.14	CV
	1.0	
	1.2	
426	1.1	AV
	12.86	CV
	0.8	
	0.7	
427	0.8	AV
	9.43	CV
	52.5	
	51.9	
428	52.2	AV
	0.81	CV
	-0.0	
	-0.3	
429	-0.2	AV
	0.0	ER
	0.2	
	-0.2	
430	-0.0	AV
	0.0	ER
	48.4	
	48.3	
431	48.3	AV
	0.15	CV

415 1110

414 50.0 ppb

Xomit

X 414 Omit

410 1035 R.S.

403 (500 ppb)

402 CAL BLK

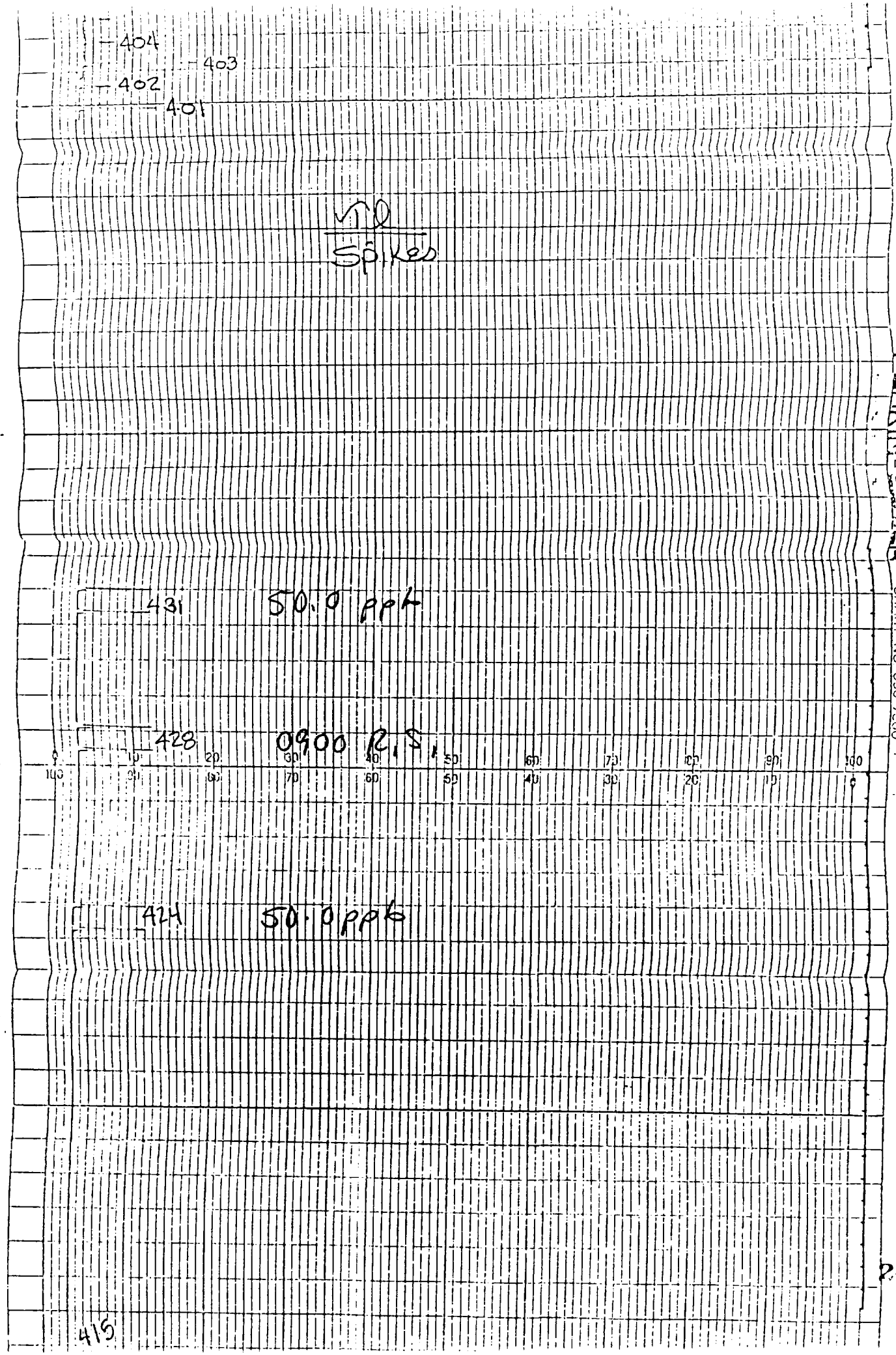
401 (EPA 1983(II) #1)

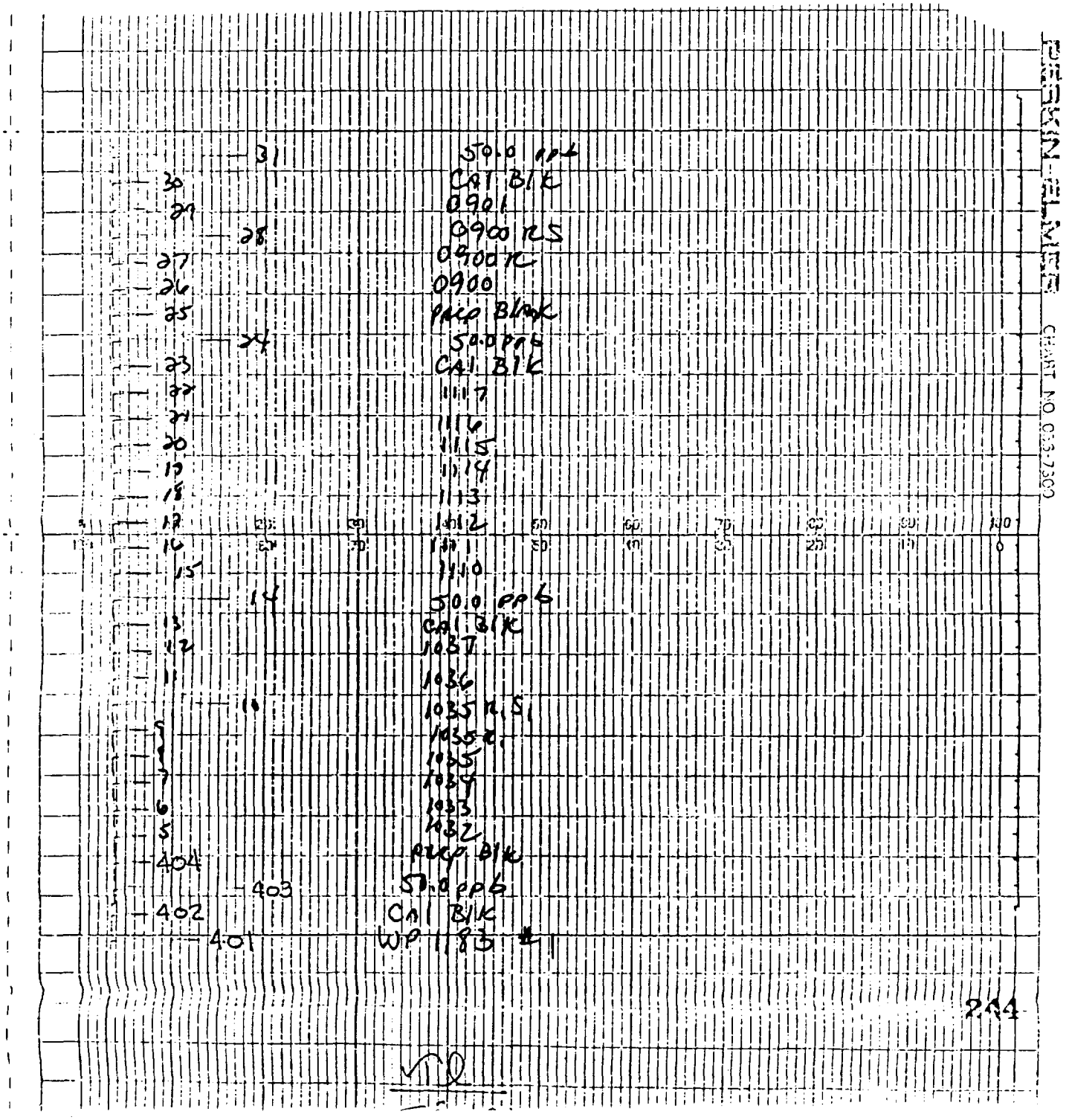
100.0 ppb (S3)

50.0 ppb (S2)

25.0 ppb (S1)

BLANK


404
403
402
401
Spikes
431
50.0 ppb
428
0900 R.S.
424
50.0 ppb
415
PERKIN-ELMER
CHART NO 056-7300


PERKIN-ELMER
CHART NO 033-7300
31
50.0 ppb
30
CAL BLK
29
0901
28
0900 RS
27
0900 R
26
0900
25
PREP BLANK
24
50.0 ppb
23
CAL BLK
22
1117
21
1116
20
1115
19
1114
18
1113
17
1112
16
1111
15
1110
14
50.0 ppb
13
CAL BLK
12
1037
11
1036
10
1035 R1 S1
9
1035 R1
8
1035
7
1034
6
1033
5
1032
404
PREP BLK
403
50.0 ppb
402
CAL BLK
401
WP 1183 #1
244

Project No._____

Book No._____ TITLE _____

From Page No.__

Te formed: TI

Date Received: 3/5-6/87

Work Performed By: J.C.M.P.

Sec pg 12

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From N	C	ppb Burn 1	ppb Burn 2	ppb Ave	CV	20.0 ppb Spike	% Rec	DF	Samp Wgt	Unit	Final Conc
	WP1183#1				23.2	22.7	22.9	1.54	44.4	108			µg/l	22.9
	Cal Blk				-0.1	0.1	0.0	-	20.8	104				<10.0
	50.0 ppb				46.2	46.1	46.1	0.15	64.9	94			µg/l	46.1
4936	1154.0103				0.1	0.2	0.1	-	20.0	100		1.03	mg/kg	<~~2.00~~ 1.94
	1163.0103				-0.2	0.2	0.0	-	21.1 ~~17.9~~ JO	106		1.00		<2.00
4943	1186.0103				0.2	0.1	0.1	-	17.4	87		1.02		<1.96
	1186.K1				0.2	-0.0	0.1	-	20.2	101		1.00		<2.00
	1186.0103K1				0.1	0.1	0.1	-	19.3	97		1.03	mg/kg	<1.94
	Blk 116				0.1	0.0	0.0	-	18.3	94			µg/l	<10.0
4952	1219.0103				0.2	0.1	0.2	-	16.4	82		1.03	mg/kg	<1.94
	1220.0103				0.0	0.1	0.1	-	17.4	87		1.02		<1.96
	~~12~~ JO Blk 123				0.2	-0.0	0.1	-	16.5	83			µg/l	<10.0
4971	1274.0403				1.1	0.9	1.0	-	18.4	92		1.01	mg/kg	<1.93
	Cal Blk				0.0	0.0	0.0	-	16.8	84			µg/l	<10.0
	50.0 ppb				53.5	53.9	53.7	0.53	62.2	/			µg/l	53.7
	1275.0403				1.1	1.3	1.2	-	17.6	88		1.05	mg/kg	<1.90
	1275.K1				1.0	0.9	1.0		18.0	90		1.07		<1.87
	1275.K1S1				52.3	52.6	52.5	0.40	60.2	/		1.02	10.3	~~<1.96~~ JO 105.2
	1276.0403				2.9	3.2	3.1	6.96	21.5	108		1.03		<1.94
	1277.0403				2.2	2.5	2.3	9.03	17.5	88		1.01		<1.98
	1278.0403				0.2	0.1	0.2		17.1	86		1.00	mg/kg	<2.00
	Blk 127				-0.1	-0.1	-0.1		20.5	104			µg/l	<10.0
	Cal Blk				0.1	-0.2	-0.0		18.3	92				<10.0
	50.0 ppb				54.0	54.3	54.2		63.2	/			µg/l	54.2

Other Clients

To Page No.____

Witnessed & Understood by me. JC

Date 3/7/87

Invented by

Recorded by J.C. [illegible]

Date 3/6/87

HGA FORM #1

ELEMENT: Tl, DATE: 3/5/87.

S_1 = 25.0 PPB., S_2 = 50.0 PPB.

S_3 = 109 PPB, BOOK NO. 287, pg 24.

JOB #:

401	WP 1183 #1
X02	Cal Blk
X03	50.0 ppb
X04	1154.0103
X05	1163.0103
X06	1186.0103
X07	1186. R_1
X08	1186. R_1S_1
X09	Blk 116
X10	1219.0103
X11	1220.0103
X12	Blk 123
X13	1274.0403
X14	Cal Blk
X15	50.0 ppb
X16	1275.0403
X17	1275. R_1, S_2
X18	1275. R_1S_1
X19	1276.0403
X20	1277
X21	1278
X22	Blk 127
X23	Cal Blk
X24	50.0 ppb
X25	
X26	
X27	
X28	
X29	
X30	
X31	
X32	
X33	
X34	
X35	, S_3

ATTACH TAPE HERE

401	44.4	
402	~~20.8~~	
403	~~64.9~~	C
404	20.0	
~~405~~	~~24.4~~	
406	17.4	
~~407~~	~~24.9~~	
~~408~~	~~74.0~~	
~~409~~	~~23.6~~	

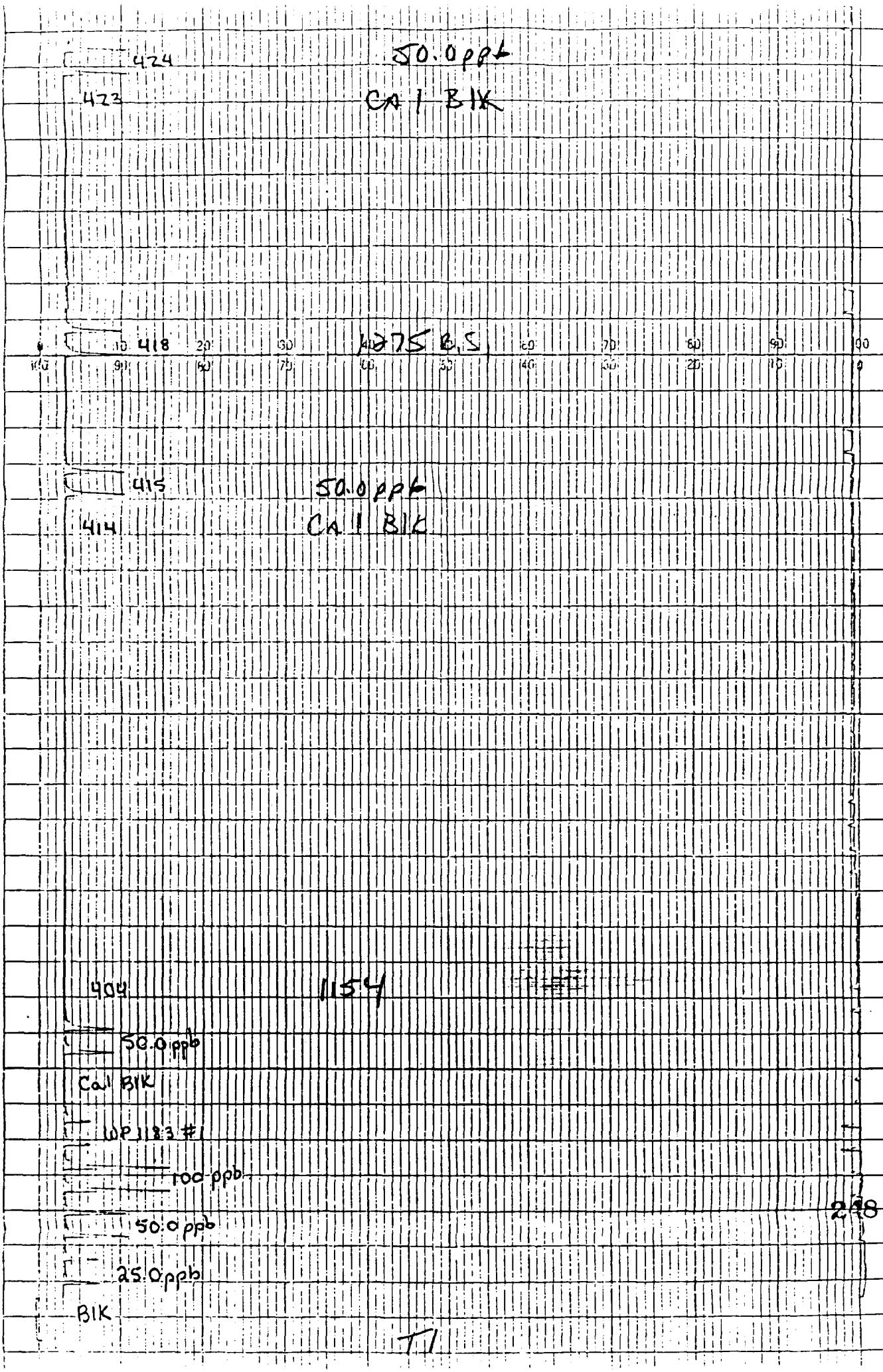
405	21.1	
~~406~~	~~14.4~~	
407	20.2	
408	19.3	
409	18.8	
410	16.4	
411	17.4	
412	16.5	
413	18.4	
414	16.8	
415	62.2	C
416	17.6	
417	18.0	
418	60.2	C
419	21.5	
420	17.5	
421	17.1	
422	20.8	
423	18.3	
424	63.2	C

recycled paper

ecology and environment

	-0.336	
	-0.336	
	-0.336	AV
	0.00	CV
	0.000	AZ
	0.094	
	0.096	
	0.095	AV
	1.49	CV
	25.0	S1
	47.0	C
	47.8	C
	47.4	AV
	1.19	CV
	50.0	S2
	103.1	C
	103.3	C
	103.2	AV
	0.14	CV
	100.0	S3
	23.2	
	22.7	
401	22.9	AV
	1.54	CV
	-0.1	
	0.1	
402	0.0	AV
	06	ER
	46.2	
	46.1	
403	46.1	AV
	0.15	CV
	0.1	
	0.2	
404	0.1	AV
	47.14	CV
	-0.2	
	0.2	
405	0.0	AV
	06	ER
	0.2	
	0.1	
406	0.1	AV
	47.14	CV
	0.2	
	-0.0	
407	0.1	AV
	06	ER
	0.1	
	0.1	
408	0.1	AV
	0.00	CV
	0.1	
	0.0	

409	06	ER
	0.2	
	0.1	
410	0.2	AV
	47.14	CV
	0.0	
	0.1	
411	0.1	AV
	06	ER
	0.2	
	-0.0	
412	0.1	AV
	06	ER
	1.1	
	0.9	
413	1.0	AV
	14.14	CV
	0.0	
	0.0	
414	0.0	AV
	06	ER
	53.5	
	53.9	
415	53.7	AV
	0.53	CV
	1.1	
	1.3	
416	1.2	AV
	11.79	CV
	1.0	
	0.9	
417	1.0	AV
	7.44	CV
	52.3	
	52.6	
418	52.5	AV
	0.40	CV
	2.9	
	3.2	
419	3.1	AV
	6.96	CV
	2.2	
	2.5	
420	2.3	AV
	9.03	CV
	0.2	
	0.1	
421	0.2	AV
	47.14	CV
	-0.1	
	-0.1	
422	-0.1	AV
	0.00	CV
	0.1	
	-0.2	
423	-0.0	AV
	06	ER
	54.0	
	54.3	
424	54.2	AV
	0.39	CV


50.0 ppb
CAL BLK
424
423
418
1375 BLS
415
50.0 ppb
CAL BLK
414
409
1154
50.0 ppb
Cal BLK
WP1183 #1
100 ppb
50.0 ppb
25.0 ppb
BLK
T1
PERKIN-ELMER
CHART NO 056-7300

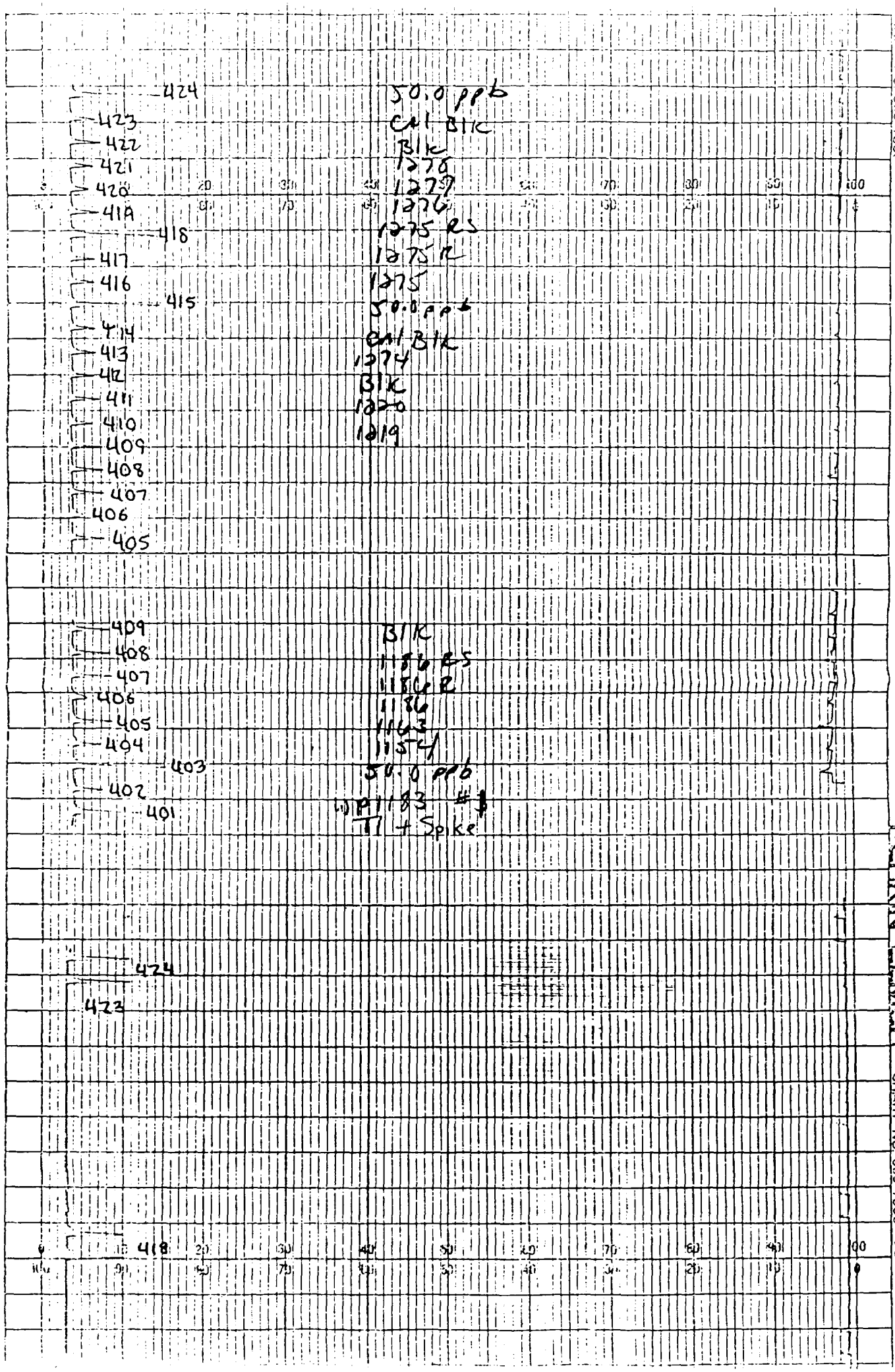


CHART NO. 056-7300
PERKIN-ELMER
CHART NO. 056-7300

Project No._____

34 Book No._____ TITLE _____

om r e No.__

Test Performed: TI

Date Received: 3/10/81

Work Performed By: [illegible]

See pg 12

Job No.	ID No.	Custody Seal Intact Yes	Custody Seal Intact No	Secure Storage Area Received From N	Secure Storage Area Received From C	ppb Burrill	ppb Burrl 2	ppb Ave	CV	20 ppb Spike	% Rec	DF	Samp Wgt	Units	Final Conc
	WP1126#1					23.1				42.9	99			µg/l	23.1
	Cal Blk					0.4				19.9	100				<10.0
	50 ppb					47.4				64.9	88			µg/l	47.4
4948	1204.011					0.4				16.9	85		50.45	ng/kg	<0.01
4939	1427.0403					1.0	1.0	1.0	0	21.0	105		1.00		<0.945
	1428.0403					0.6	0.5	0.7		18.7	94		1.01		<0.910
	1428. K1					5.6	0.4	0.5		19.4	97		1.01		<0.910
	1429.0403					1.2	0.9	1.1		19.8	99		1.04		<0.962
	1429. S1					46.8	48.0	47.4		65.7	92		1.01		39.4
	1430.0403					0.7	0.6	0.6		18.7	95		1.00	ng/kg	0.945
	"L4 Blk 145					0.6	0.4	0.5		16.3	82			µg/l	<10.0
4998	1458.0103					0.3	0.4	0.3		15.7	79				<10.0
	1458. K3					0.7	0.4	0.5		15.7	79				<10.0
	Cal Blk					0.5	0.5	0.5		17.5	88				<10.0
	50 ppb					46.1	45.7	45.9	0.62	60.4	75				45.9
	1459.0103					0.4	0.4	0.4		15.2	76				<10.0
	1460.0103					0.4	0.3	0.3		15.2	76				<10.0
	1461.0103					0.4	0.4	0.4		14.5	73				<10.0
	1464.0103					0.5	0.4	0.4		16.6	83				<10.0
	Blk 149					0.6	0.6	0.6		20.7	104			µg/l	<10.0
5012	1511.01					0.4	0.3	0.3		13.5	68		50.70		<0.01
	Cal Blk					0.5				20.3	102				<10.0
	50 ppb					45.3				69.2	100				45.3
5012	1511.01					0.9	1.0	0.9		18.6	93	1→2	50.2	ng/kg	<0.02

Other Charts

To Page No.____

Witnessed & Understood by me, Date

Invented by Date

Recorded by

HGA FORM #1

ELEMENT: Tl, DATE: 3/10/87.

S_1 = 25.0 PPB., S_2 = 50.0 PPB.

S_3 = 100 PPB, BOOK NO. 287, pg 34.

JOB #:

401	WP1183 #1	
X02	Cal BIK	
X03	50.0 ppb	
X04	1204.01 (4948)	
X05	1427.0403 (4989)	
X06	1428.0403	
X07	1428 R_1	
X08	1429.0403	
X09	1429 S_1	
X10	1430.0403	
X11	BIK 145	
X12	1458.0703 (4998)	
X13	1458. R_3	
X14	Cal BIK	
X15	50.0ppb	
X16	1459.0703	
X17	1460.0703, S_2	
X18	1461.0703	
X19	1464.0103	
X20	BIK 149	
X21	1511.01 (5012)	
X22	Cal BIK	
X23	50.0ppb	
X24		
X25		
X26		
X27		
X28		
X29		
X30		
X31		
X32		
X33		
X34		
X35	, S_3	

424 0.9

-0.013

~~0.003~~ A2

0.093

~~25.0~~ S1

~~46.3~~ C

~~100.0~~ S2

~~05~~ ER

~~0.~~ S3

501 ~~0.082~~

401	42.9
402	19.9
403	64.9
404	16.9
405	21.0
406	18.7
407	19.4
408	19.8
409	65.7
410	18.9
411	16.3
412	15.7
413	15.7
414	17.5
415	60.4
416	15.2
417	15.2
418	14.5
419	16.6
420	1.5
421	8.8
422	17.2
423	57.6
404	16.4
420	20.7
421	13.5
422	20.3
423	69.2

424 18.6

recycled paper

ecology and environment

	-0.465	
	0.000	AZ
	0.128	
	25.0	S1
	45.7	C
	50.0	S2
	105.1	C
	100.0	S3
401	23.1	
402	0.4	
403	47.4	
404	0.4	
	1.0	
	1.0	
405	1.0	AV
	0.00	CV
	0.6	
	0.8	
406	0.7	AV
	20.20	CV
	0.6	
	0.4	
407	0.5	AV
	28.28	CV
	1.2	
	0.9	
408	1.1	AV
	20.20	CV
	46.8	
	48.0	
409	47.4	AV
	1.79	CV
	0.7	
	0.6	
410	0.6	AV
	10.88	CV
	0.6	
	0.4	
411	0.5	AV
	28.28	CV
	0.3	
	0.4	
412	0.3	AV
	20.20	CV
	0.7	
	0.4	
413	0.5	AV
	38.57	CV
	0.5	
	0.5	
414	0.5	AV
	0.00	CV
	44.7	
	46.1	
	45.7	
415	45.9	AV
	0.62	CV
	0.4	
	0.4	
416	0.4	AV
	0.00	CV
	0.4	
	0.2	
417	0.3	AV
	47.14	CV
	0.4	
	0.3	
418	0.4	AV
	20.20	CV
	0.5	
	0.4	
419	0.4	AV
	15.71	CV
	0.7	
	0.6	
420	0.6	AV
	10.88	CV
	0.4	
421	0.3	
422	0.5	
423	45.3	

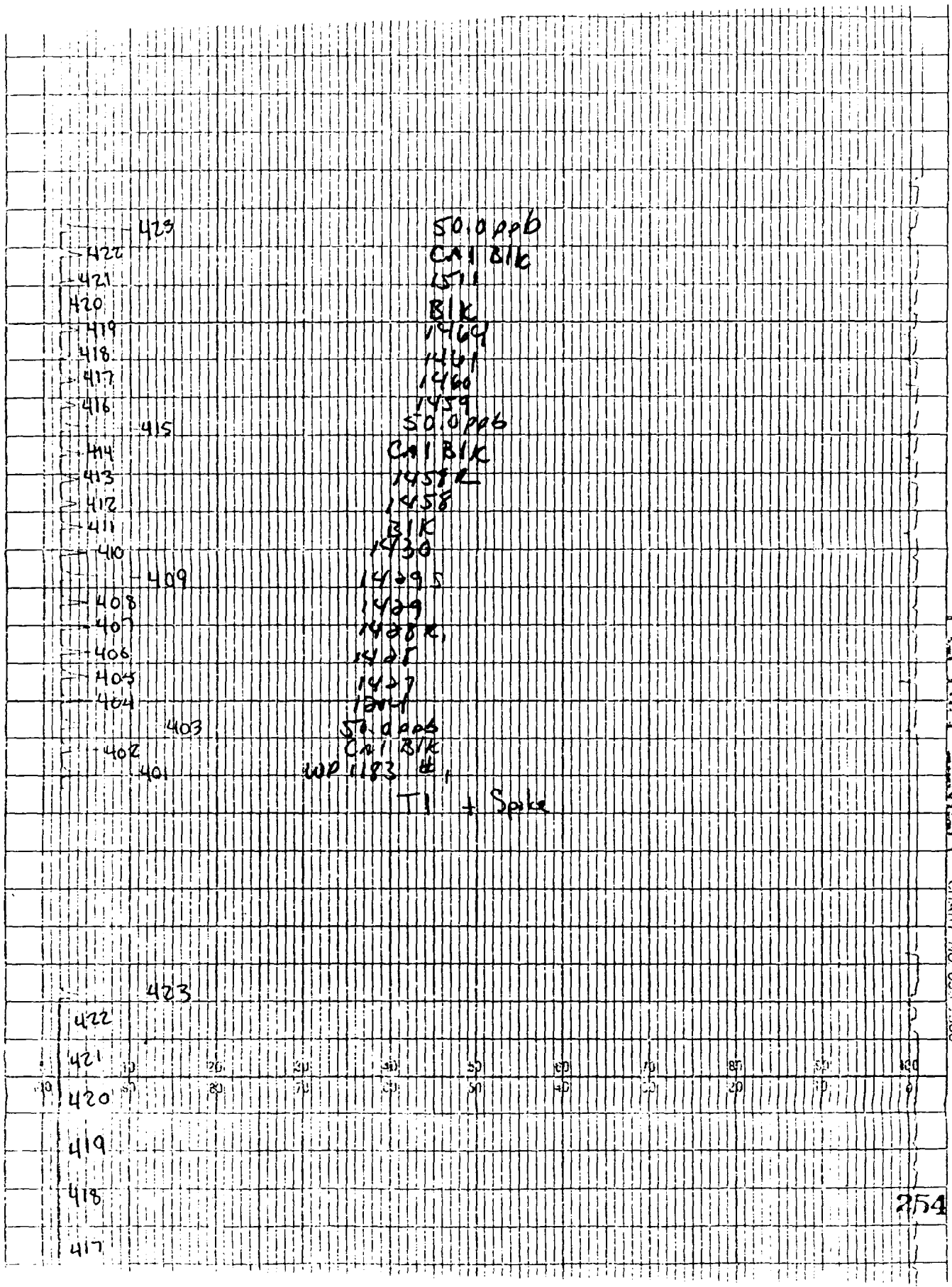
404
403
402
401

T1 + Spike

423 50.0 ppb
422 CAL BLK
421 1511
420 BLK
419 1464
418 1461
417 1460
416 1459
416 50.0 ppb
X X
414 CAL BLK
413 1458R
412 1458
411 BLK
410 1430
409 1429S
408 1429
407 1428R
406 1428
405 1427
404 1204
50 ppb
BLK
WP 1183 #1
100 ppb
50 ppb
25 ppb
BLK

T1 # 4948, 4989, 4998, 5012

CHART NO 056 7300
PERKIN-ELMER
CHART NO 056-7



PERKIN-ELMER CHART NO 056-7300

Project No._____

Book No._____ TITLE _____

Page No.__

Performed: Sn

Received: 3/4/87

Performed By: J. Olka

λ 286.3 S1 50.0ppb See Book # 126 for Std Cond

Time: 5 sec S2 100

Energy: 49 S3 200

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From N	C	ppb Burn 1	ppb Burn 2	ppb Ave	CV	80.0ppb Spike	% Rec	DF	Sample Wgt	Units	Final Conc
	100.0 ppb				102.3				186.4	105			ug/l	102
	Cal Blk				0.4				78.9	99				<40.0
	100.0 ppb				102.5				184.8	103				<103
	Blk 103				21.9	21.5	21.7	1.30	97.3	95			ug/l	<40.0
06	1032.0403				9.9	7.5	8.7	19.5	80.4	90		1.04	mg/kg	<7.69
	1033.0403				11.9	12.5	12.2	3.45	88.9	96		1.05		<7.62
	1034.0403				6.4	6.7	6.5	3.24	77.0	88		1.00		<8.00
	1035.0403				7.4	7.3	7.4	0.96	80.9	92		1.02		<7.84
	1035 K1				10.8	10.2	10.5	4.04	81.9	89		1.02		<7.84
	1035 K1S1				9.1	8.8	9.0	2.37	79.8	89		1.03		<7.77
	1036.0403				13.3	13.1	13.2	1.07	90.5	97		1.05		<7.62
	1037.0403				15.4	15.3	15.3	0.46	89.6	93		1.00	mg/kg	<8.00
	Cal Blk				0.3	0.1	0.2	-	82.4	103			ug/l	<40.0
	100.0ppb				97.8	98.7	98.3	0.65	180.8	103			ug/l	98.3
928	1110.0403A				11.6	11.7	11.6	0.61	86.5	94		1.05	mg/kg	<7.62
	1111.0403A				11.3	10.9	11.4	5.61	88.3	96		1.02		<7.84
	1112.0403A				8.9	8.0	8.4	7.53	84.6	95		1.03		<7.77
	1113.0403A				25.0	23.4	24.2	4.63	91.1	84		1.02		<7.84
	1114.0403A				8.9	8.0	8.5	7.53	86.3	97		1.03		<7.77
	1115.0403A				9.0	9.2	9.1	1.55	87.0	~~95~~ 97		1.00		<8.00
	1116.0403A				6.8	7.0	6.9	2.95	85.0	~~103~~ 98		1.01		<7.92
	1117.0403A				10.3	11.0	10.7	4.65	89.5 ~~62.5~~	~~65~~ 99		1.03	mg/kg	<7.77
	Cal Blk				-1.1	-1.1	-1.1	-	62.3	787			ug/l	<40.0
	100.0ppb				103.2	101.4	102.3	1.24	189.6	109				102.3
	Blk 87				14.3	14.2	14.3	0.56	92.2	97			ug/l	<40.0
872	0900.0403				14.2	13.9	14.1	1.51	82.6	86		1.02	mg/kg	<7.84
	0900 K1				22.1	21.3	22.0	0.64	89.9	85		1.01		<7.92
	0900 K1S1				21.1	20.4	20.8	2.39	84.5	80		1.04		<7.69

Other Charts

To Page No._____

Witnessed & Understood by me, [signature] Date

Invented by

Recorded by J. Olka

Date 3/4/87

255

Project No._____

TITLE _____ Book No._____ 15

Page No.__

Test Performed: Sn

Date Received: 2/4/87

Work Performed By: J. Gurn

Job No.	ID No.	Custody Seal Intact Yes	Custody Seal Intact No	Secure Storage Area Received From	ppb Burn1	ppb Burn2	ppb Ave	C.V	SC ppb Spk	% Rec	DF	Samp Wt	Units	Final Conc
4372	C901.9403				Other	Clients		0.35	99.5	99		1.04	mg/kg	<7.69
	Cal BIK							-	79.4	99			µg/l	<40.0
	100.0 ppb				102.8	103.5	103.1	0.43	191.5	111			µg/l	103

To Page No.__

Witnessed & Understood by me,	Date	Invented by	Date	256
		Recorded by C. C. Mo.	2/4/87	

HGA FORM #1

ELEMENT: Sn, DATE: 3/4/87.

S_1 = 50.0 PPB., S_2 = 100 PPB.

S_3 = 200 PPB, BOOK NO. 287, 14-15.

JOB #: _____

X01	100.0 ppb
X02	Cal Blk
X03	100.0 ppb
X04	Blk 103
X05	1032.0403
X06	1033
X07	1034
X08	1035
X09	1035 R_1
X10	1035 R_1S_1
X11	1036
X12	1037
X13	Cal Blk
X14	100.0ppb
X15	1110.0403A
X16	1111
X17	1112, S_2
X18	1113
X19	1114
X20	1115
X21	1116
X22	1117
X23	Cal Blk
X24	100.0ppb
X25	Blk 87
X26	0900.0403
X27	0900 R_1
X28	0900 R_1S_1
X29	0901
X30	Cal Blk
X31	100.0ppb
X32	
X33	
X34	
X35	, S_3

ATTACH

TAPE

301	186.4
302	78.9
303	194.8
304	97.3
305	80.4
306	88.9
307	77.0
308	80.9
309	81.9
310	79.8
311	90.5
312	89.6
313	82.4
314	180.8
315	86.5
316	88.3
317	84.6
318	91.1
319	86.3
320	87.0
321	85.0
322	89.5
323	62.3
324	189.6
325	92.2
326	82.6
327	89.9
328	84.5
329	99.5
330	79.4
331	191.5

recycled paper

	-0.007	
	0.000	AV
	0.143	
	50.0	SD
	99.6	C
	199.6	SZ
	199.6	C
	200.0	SS
301	102.3	
302	0.4	
303	102.5	
	21.9	
	21.5	
304	21.7	AV
	1.30	CV
	9.9	
	7.5	
305	8.7	AV
	19.51	CV
	11.9	
	12.5	
306	12.2	AV
	3.48	CV
	6.4	
	6.7	
307	6.5	AV
	3.24	CV
	7.4	
	7.3	
308	7.4	AV
	0.96	CV
	10.8	
	10.2	
309	10.5	AV
	4.04	CV
	9.1	
	8.8	
310	9.0	AV
	2.37	CV
	13.3	
	13.1	
311	13.2	AV
	1.07	CV
	15.4	
	15.3	
312	15.3	AV
	0.46	CV
	0.3	
	0.1	
313	0.2	AV
	70.71	CV
	~~116.3~~	
	~~111.5~~	
~~314~~	~~111.1~~	AV
Repeat	~~0.45~~	CV
	~~111.6~~	
	97.9	
	98.7	

314	98.3	AV
	0.65	CV
	11.6	
	11.7	
315	11.6	AV
	0.61	CV
	11.8	
	10.9	
316	11.4	AV
	5.61	CV
	8.9	
	8.0	
317	8.4	AV
	7.53	CV
	25.0	
	23.4	
318	24.2	AV
	4.68	CV
	8.9	
	8.0	
319	8.5	AV
	7.53	CV
	9.0	
	9.2	
320	9.1	AV
	1.55	CV
	6.8	
	7.0	
321	6.9	AV
	2.05	CV
	10.3	
	11.0	
322	10.7	AV
	4.65	CV
	-1.1	
	-1.1	
323	-1.1	AV
	0.00	CV
	103.2	
	101.4	
324	102.3	AV
	1.24	CV
	14.3	
	14.2	
325	14.3	AV
	0.50	CV
	14.2	
	13.9	
326	14.1	AV
	1.51	CV
	22.1	
	21.9	
327	22.0	AV
	0.64	CV
	21.1	
	20.4	

328	20.8	AV
	2.39	CV
	20.0	
	19.9	
329	20.0	AV
	0.35	CV
	-1.0	
	-1.1	
330	-1.1	AV
	6.73	CV
	102.5	
	103.5	
331	103.1	AV
	0.48	CV

325 PCP BLK

324 100 ppb

323 Cal Blk

322 1117

321 1116

320 1115

319 1114

318 1113

317 1112

316 1111

315 1110

314 repeated

314 100 ~~105~~ 50.0 ppb

313 Cal Blk

312 1037

311 1036

310 1035 R, S,

309 1035 R,

308 1035

307 1034

306 1033

305 1032

304 PCP Blk

100 ppb

Blk 100 ppb

200 ppb

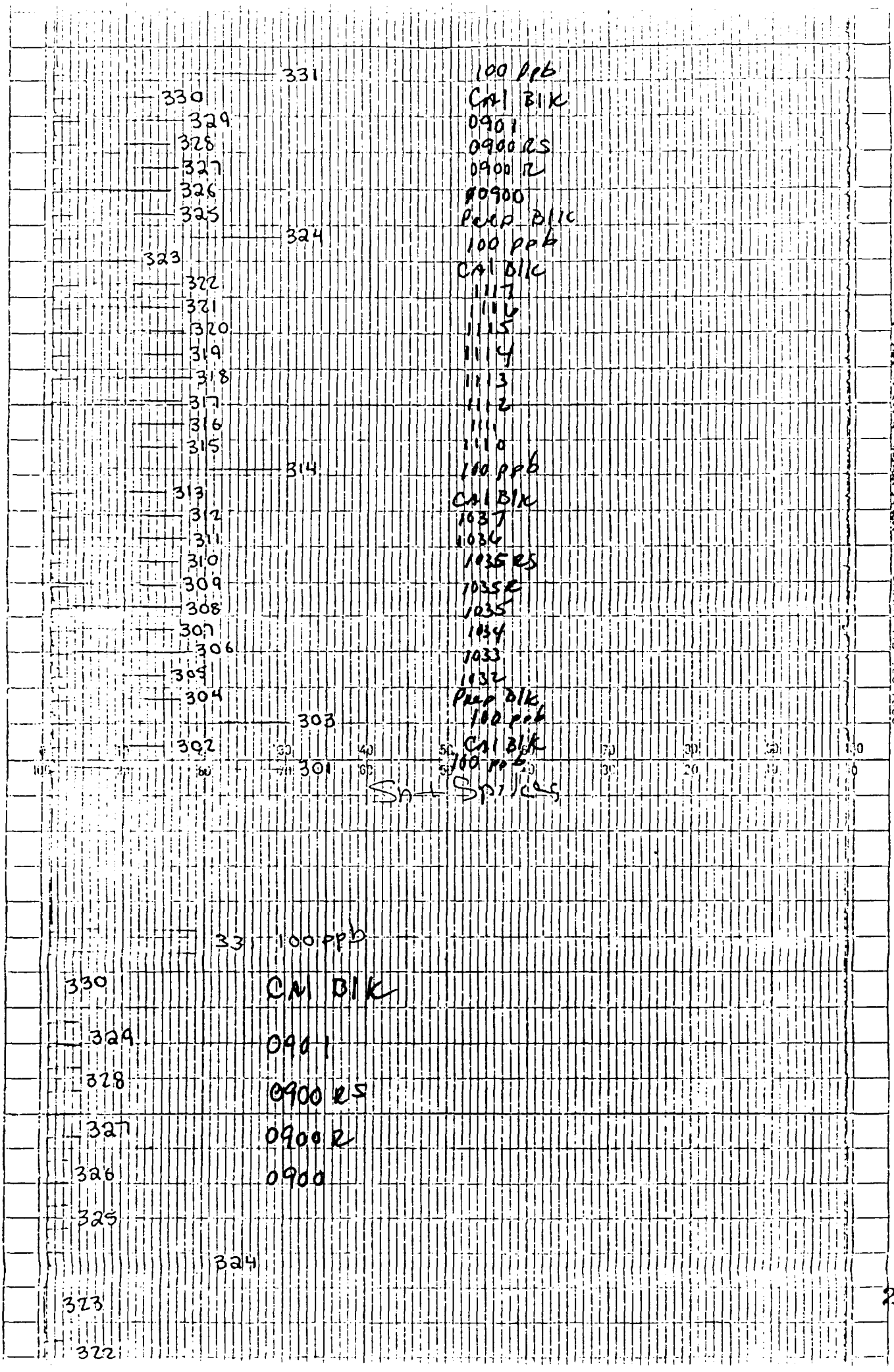
100 ppb

50 ppb

Blk

Sm Jobs 4906, 4928, 4872

259



331	100 ppb
330	Cal Blk
329	0901
328	0900 RS
327	0900 R
326	0900
325	Prep Blk
324	100 ppb
323	Cal Blk
322	1117
321	1116
320	1115
319	1114
318	1113
317	1112
316	1111
315	1110
314	100 ppb
313	Cal Blk
312	1037
311	1036
310	1035 RS
309	1035 R
308	1035
307	1034
306	1033
305	1032
304	Prep Blk
303	100 ppb
302	Cal Blk
301	100 ppb

Sn + Spikes

331	100 ppb
330	Cal Blk
329	0901
328	0900 RS
327	0900 R
326	0900
325	
324	
323	
322	

PERKIN-ELMER CHART NO 056-7500

Project No._____

TITLE _____ Book No._____ 2

From Page No.

Test Performed: [illegible]

Date Received: 3/6/87

Work Performed By: [illegible]

See pg 14

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From N	C	ppb Burn 1	ppb Burn 2	ppb Ave	CV	80.0 ppb Spike	% Rec	DF	Samp Wgt	Units	Final Conc
	100.0 ppb				104.0				171.3	84			µg/l	104
	Cal Blk				1.0				81.9	102				<40.0
	100.0 ppb				100.3				167.0	83			µg/l	101
4971	1274.0401				11.5	9.4	10.4	14.2	87.9	97		1.05	mg/kg	<7.62
	1275.0401				19.7	19.7	19.7	0.00	89.9	88		1.00		<8.00
	1275.R1				16.4	15.5	15.9	4.91	87.2	89		1.03		<7.77
	1275.R1S1				27.7	29.3	28.4	3.73	97.1	86		1.02		<7.84
	1276.0401				267.9	272.1	270.0	1.10	342.7	91		1.04		51.9
	1277.0401				93.3	87.5	90.5	5.08	178.5	110		1.03		17.6
	1278.0401				40.0	38.9	39.4	1.97	[illegible]	82		1.05	mg/kg	<7.62
	Blk 126				4.6	3.6	4.1	17.3	73.2	92			µg/l	<40.0
	Cal Blk				-0.4	-0.4	-0.4	0	72.0	90				<40.0
	100.0 ppb				105.7				160.8	69			µg/l	106
4922	1085.0201				89.8				168.5	98				89.8
Repeat	1085.R1				237.9				301.7	80				237.9
	Blk 112				58.2				142.7	106				58.2
4961	1253.0201				76.1				157.5	102				76.1
	Blk 124				6.6				91.5	106				<40.0
	Cal Blk				0.8				78.5	98				<40.0
	100 ppb				96.9				183.0	108			µg/l	96.9

Other Clients

To Page No.____

Witnessed & Understood by me, [illegible] Date 3/6/87

Invented by

Recorded by [illegible] Date 3/6/87

HGA
FORM
#1

ELEMENT: Sn, DATE: 3/6/87.

S_1 = 50.0 PPB., S_2 = 100 PPB.

S_3 = 200 PPB, BOOK NO. 287, pg 25.

JOB #: _____

X01	100.0 ppb	
X02	Cal Blk	
X03	100.0 ppb	
X04	1274.0401	
X05	1275	
X06	1275 R1	
X07	1275 R1 S1	
X08	1276	
X09	1277	
X10	1278	
X11	Blk 126	
X12	Cal Blk	
X13	100 ppb	
X14	1085.0201	
X15	1085. R1	
X16	Blk 112	
X17	1253.0201 , S_2	
X18	Blk 124	
X19	Cal Blk	
X20	100 ppb	
X21		
X22		
X23		
X24		
X25		
X26		
X27		
X28		
X29		
X30		
X31		
X32		
X33		
X34		
X35	, S_3	

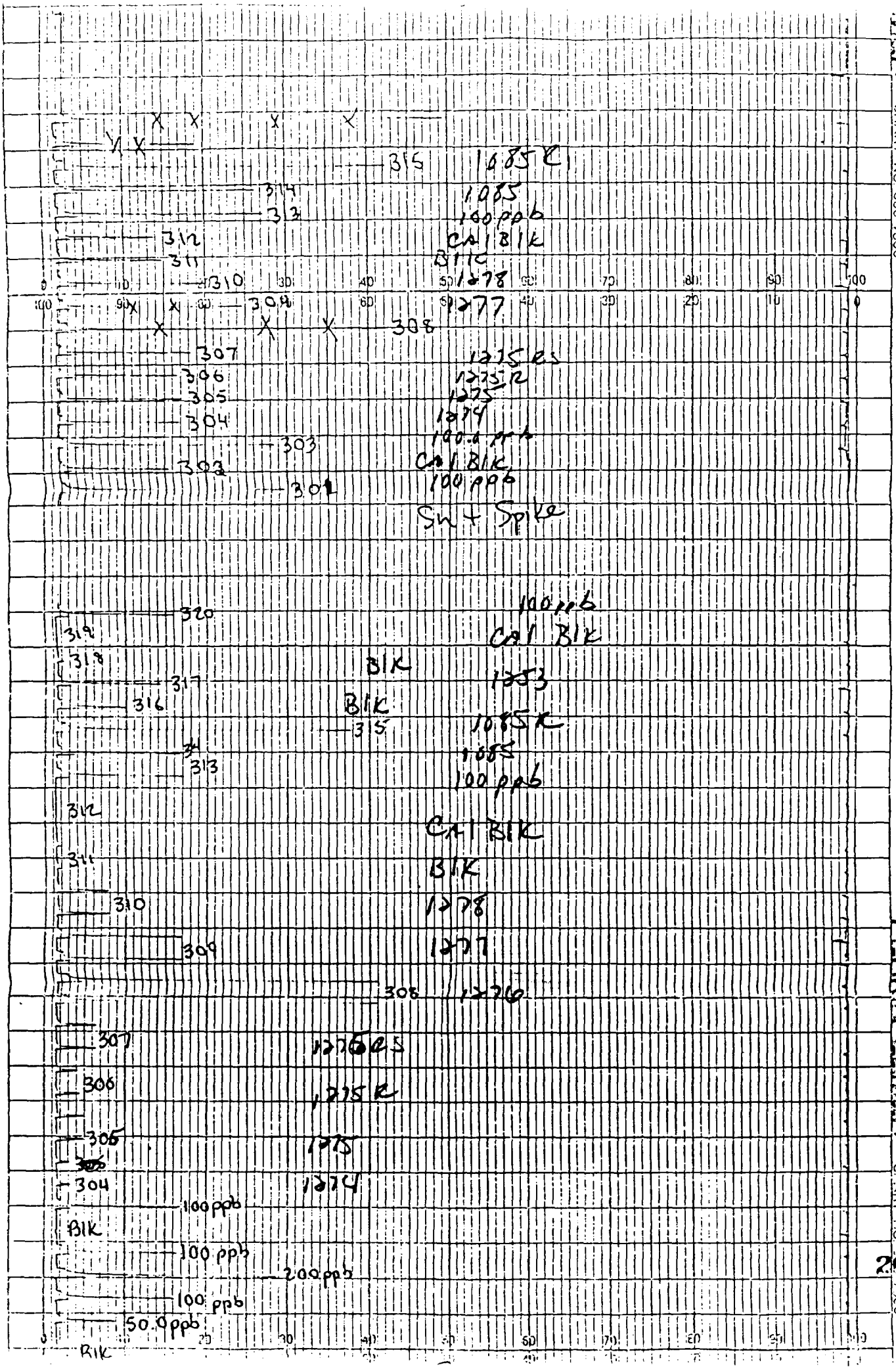
ATTACH TAPE HERE

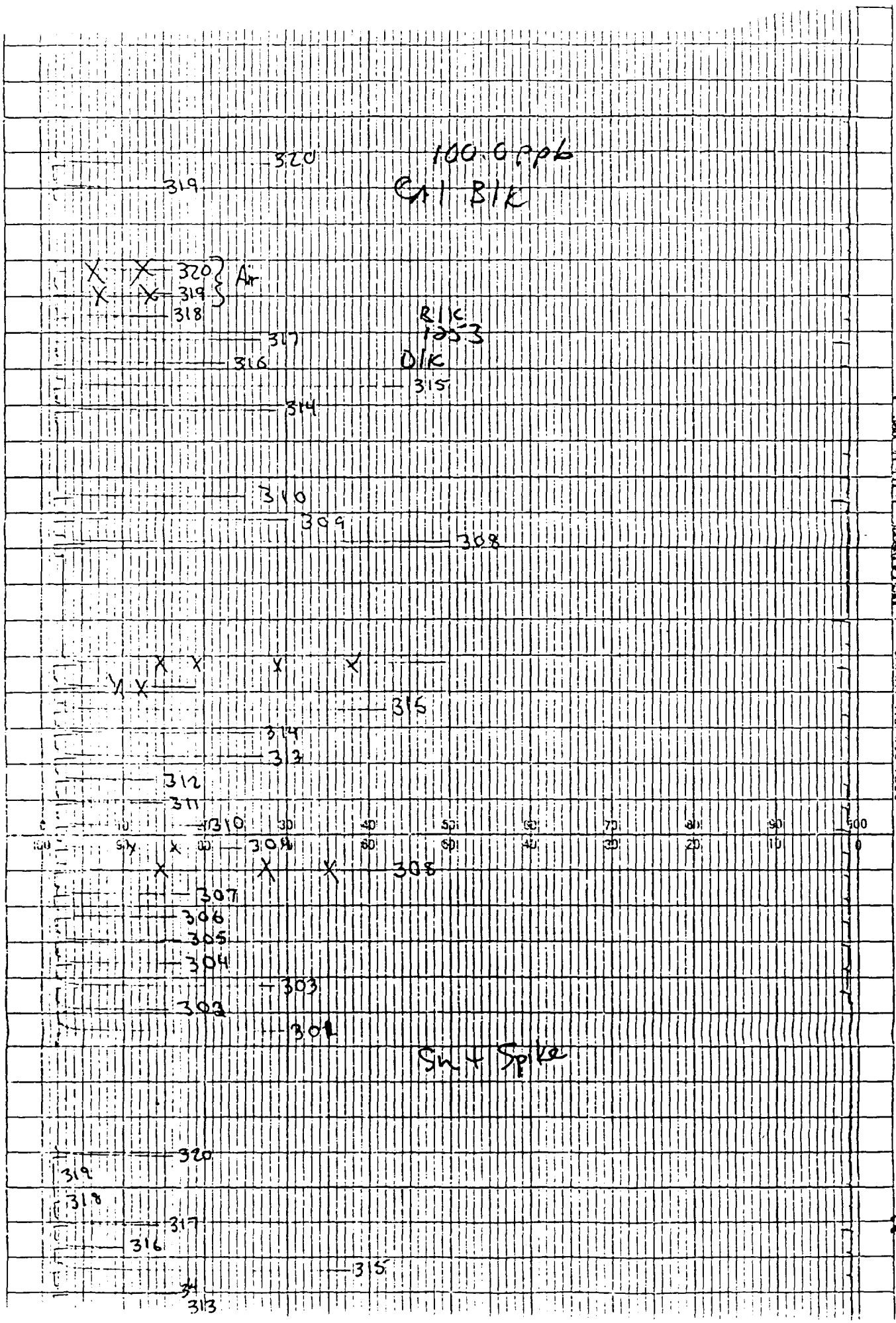
301	171.3	
302	81.9	
303	167.0	
304	87.9	
305	89.9	
306	87.2	
307	97.1	
308	273.5	C
309	125.4	
310	105.1	
311	73.2	
312	72.0	
313	160.8	
314	145.2	
315	271.8	C
308	342.7	C
309	178.5	
310	149.5	
314	168.5	
315	301.7	C
316	142.7	
317	157.5	
318	91.5	
319	90.6	
320	90.0	
319	78.5	
320	183.0	

recycled paper

ecology and environment

	0.001	
	0.306	AZ
	0.138	
	50.0	S1
	97.5	C
	100.0	S2
	200.0	C
	200.0	S3
301	104.0	
302	1.0	
303	100.8	
	11.5	
	9.4	
304	10.4	AV
	14.21	CV
	19.7	
	19.7	
305	19.7	AV
	0.00	CV
	16.4	
	15.3	
306	15.9	AV
	4.91	CV
	27.7	
	29.2	
307	28.4	AV
	3.73	CV
	267.9	C
	272.1	C
308	270.0	AV
	1.10	CV
	93.8	
	87.3	
309	90.5	AV
	5.08	CV
	40.0	
	38.9	
310	39.4	AV
	1.97	CV
	4.6	
	3.6	
311	4.1	AV
	17.25	CV
	-0.4	
	-0.4	
312	-0.4	AV
	0.00	CV
313	105.7	
314	89.8	
315	237.9	C
316	58.2	
317	76.1	
318	6.6	
319	0.8	
320	96.9	


PERKIN-ELMER
CHART NO. 056-7300
315
1685 C
1085
100 ppb
Cal Blk
Blk
1278
1277
308
1275 es
1275 2
1275
1274
100.0 ppb
Cal Blk
100 ppb
SW + Spike
320
100 ppb
Cal Blk
Blk
1253
Blk
315
1085 K
1085
100 ppb
Cal Blk
Blk
1278
1277
308
1276
1276 es
1275 K
1275
1274
100 ppb
Blk
100 ppb
200 ppb
100 ppb
50.0 ppb
Blk


100.0 ppb
Cal Blk
320
319
320
319
Air
318
Blk
1253
317
316
Blk
315
314
310
309
308
315
314
313
312
311
310
309
308
307
306
305
304
303
302
301
Sn + Spike
320
319
318
317
316
315
313
PERKIN-ELMER
CHART NO. 056-7300

Project No._____

Book No._____ TITLE _____

42

m Page No.__

Test Performed: OM

Date Received: 3/11-12/87

Work Performed By: J.O.M.P.

Sample pg 14

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From N	C	ppb Burn 1	ppb Burn 2	ppb Ave	CV	80.0 ppb Spike	% Rec	DF	Samp Wgt	Units	Final Conc
	Cal Blk				3.6	2.5	3.1	-	72.1	90			µg/l	<40.0
	100 ppb				106.2	104.0	105.1	1.48	185.2	100			µg/l	105
4989	1427.0403				10.5	9.3	9.9	8.57	80.0	100		1.01	mg/kg	<7.55
	1428.0403				5.8	3.7	4.8	-	78.4	98		1.01		<7.92
	1428.R1				1.6	1.6	1.6	0	78.9	99		1.01		<7.92
	1429.0403				6.5	6.7	6.6	2.14	74.2	93		1.04		<7.69
	1429.S1				6.6	5.9	6.3	7.92	74.7	93		1.06		<7.55
	1430.0403				4.2	3.5	3.9	-	83.2	104		1.06	mg/kg	<7.55
	Blk 145				2.3	2.3	2.3	0	84.9	106			µg/l	<40.0
	Cal Blk				-0.5	0.1	-0.2	-	90.1	113				<40.0
	100 ppb				111.6	107.5	109.5	2.65	184.6	94			µg/l	110

To Page No.

Witnessed & Understood by me. | Date | Invented by | Date

Recorded by J. Olsen | 3/12/87

266

HGA FORM #1

ELEMENT: Sn, DATE: 3/11/87.

S_1 = 50.0 PPB., S_2 = 100.0 PPB.

S_3 = 200.0 PPB, BOOK NO. ,

JOB #:

	X01	Cal Blank	
	X02	100.0 ppb	
	X03	1427.0403 (4989)	
	X04	1428.	
	X05	1428. R1	
	X06	1429.	
	X07	1429. S1	
	X08	1430.	
	X09	PREP Blank 145	
	X10	Cal Blank	
	X11	100.0 ppb	
	X12		
	X13		
	X14		
	X15		
	X16		
	X17	, S_2	
	X18		
	X19		
	X20		
	X21		
	X22		
	X23		
	X24		
	X25		
	X26		
	X27		
	X28		
	X29		
	X30		
	X31		
	X32		
	X33		
	X34		
	X35	, S_3	

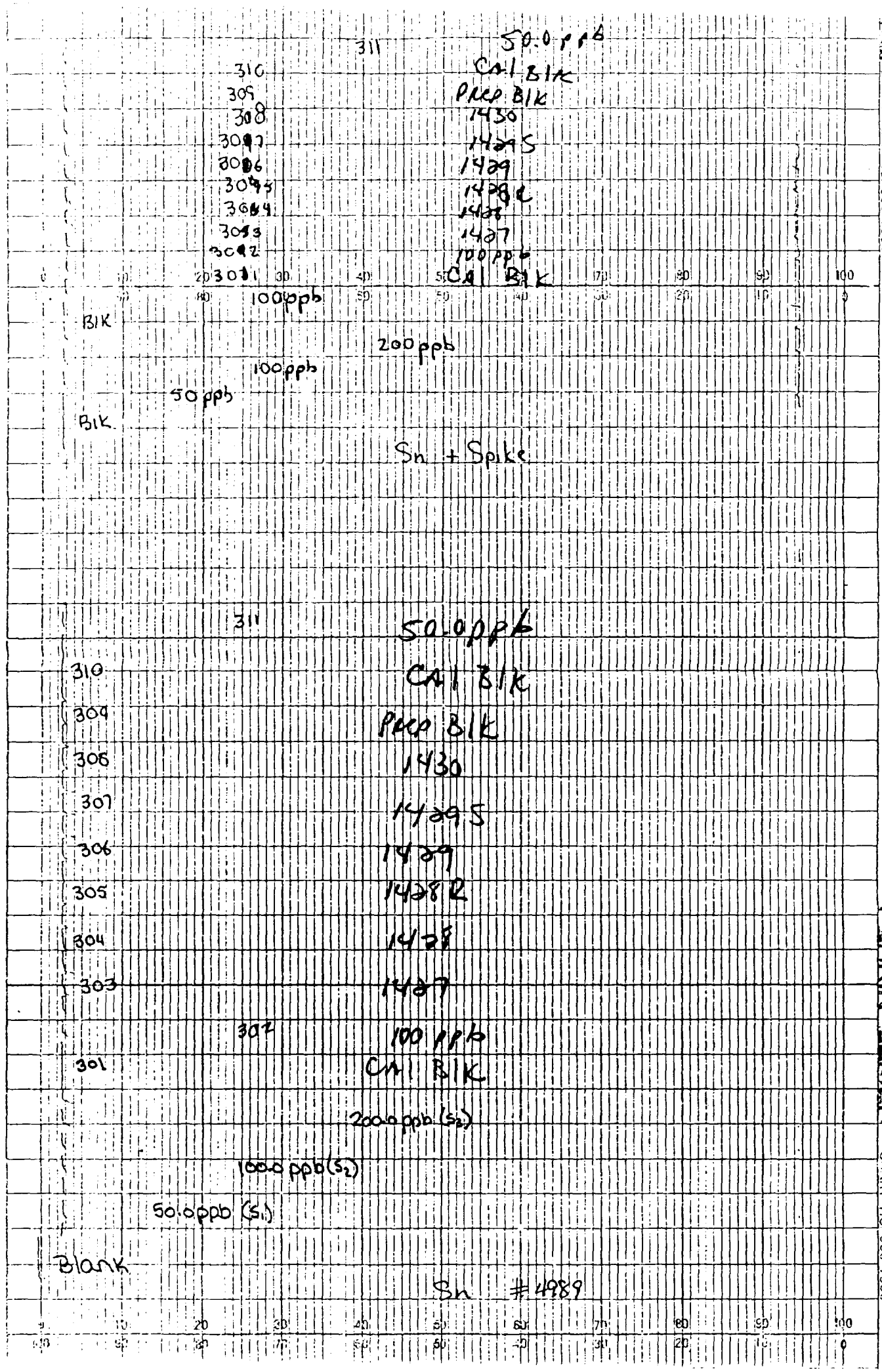
	-0.311	
	-0.310	
	-0.310	AV
	0.23	CV
	0.000	AZ
	0.177	
	0.176	
	0.176	AV
	0.40	CV
	50.0	S1
	93.7	C
	94.8	C
	94.2	AV
	0.83	CV
	100.0	S2
	210.5	C
	211.9	C
	211.1	AV
	0.44	CV
	200.0	S3
	3.6	
	2.5	
301	3.1	AV
	25.50	CV
	106.2	
	104.0	
302	105.1	AV
	1.48	CV
	10.5	
	9.3	
303	9.9	AV
	8.57	CV
	5.8	
	3.7	
304	4.8	AV
	31.26	CV
	1.6	
	1.6	

recycled paper

ecology and environment

305	1.6	AV
	0.00	CV
	6.5	
	6.7	
306	6.6	AV
	2.14	CV
	6.6	
	5.9	
307	6.3	AV
	7.92	CV
	4.2	
	3.5	
308	3.9	AV
	12.86	CV
	2.3	
	2.3	
309	2.3	AV
	0.00	CV
	-0.5	
	0.1	
310	-0.2	AV
	06	ER
	111.6	
	107.5	
311	109.5	AV
	2.65	CV
	-0.004	
	-0.006	
	-0.005	AV
	28.28	CV
	0.000	AZ
	0.199	
	50.0	S1
	93.7	C
	100.0	S2
	206.4	C
	200.0	S3
301	1.1	
302	104.5	

301	72.1
302	185.2
303	80.0
304	78.4
305	78.9
306	74.2
307	74.7
308	83.2
309	84.9
310	90.1
311	184.6


311
310
309
308
307
306
305
304
303
302
301
50.0 ppb
Cal Blk
PACP Blk
1430
1429.5
1429
1428.2
1428
1427
100 ppb
Cal Blk
100ppb
Blk
200 ppb
100ppb
50 ppb
Blk
Sn + Spike
311
50.0ppb
310
Cal Blk
309
PACP Blk
308
1430
307
1429.5
306
1429
305
1428.2
304
1428
303
1427
302
100 ppb
301
Cal Blk
200.0 ppb (S2)
100.0 ppb (S2)
50.0 ppb (S1)
Blank
Sn #4989
PERKIN-ELMER
CHART NO. 056-7300

om Page No.
st Performed: DIGESTIONS
ate Received: 2/30/87
ork Performed By: W.M.

Job No.	ID No.	Custody Seal Intact Yes	Custody Seal Intact No	Secure Storage Area Received From	Amount of Sample (01 Digestion)	Amount of Sample (03 Digestion)	Final Volume
906	1032.04	YES		A-12	1.01g.	1.04g.	200 ml.
	1033.01				1.02g.	1.05g.	
	1034.01				1.02g.	1.00g.	
	1035.01				1.04g.	1.02g.	
	1035.01R1				1.00g.	1.02g.	
	1035.01S1				1.05g.	1.03g.	
	1036.01				1.03g.	1.05g.	
	1037.01				1.04g.	1.00g.	
1928	1110.04A	YES		A-11	1.04g.	1.05g.	200 ml.
	1111.04A				1.04g.	1.02g.	
	1112.04A				1.02g.	1.03g.	
	1113.04A				1.00g.	1.02g.	
	1114.04A				1.04g.	1.03g.	
	1115.04A				1.04g.	1.00g.	
	1116.04A				1.06g.	1.01g.	
	1117.04A				1.05g.	1.03g.	
	BLANK 102				—	01 DIGESTION	200 ml.
	BLANK 103				—	03 DIGESTION	200mL

To Page No.

Witnessed & Understood by me,	Date	Invented by	Date	
		Recorded by William May	2/20/87	270

Project No._____

Book No._____ TITLE _____

om Page No.__

Test Performed: DIGESTIONS
Date Received: 2/23/87
Work Performed By: W.M.

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From	AMOUNT OF SAMPLE (01 DIGESTION)	AMOUNT OF SAMPLE (03 DIGESTION)	FINAL VOLUME
4927	1098.01	YES	A-29	1.04g.	1.03g.	200 ml.
	1099.01			1.00g.	1.05g.	
	1100.01			1.00g.	1.01g.	
	1101.01			1.03g.	1.02g.	
	1102.01			1.01g.	1.01g.	
	1103.01			1.04g.	1.06g.	
	1104.01			1.05g.	1.02g.	
	1104.01 R1			1.00g.	1.00g.	
	1104.01S1			1.02g.	1.00g.	
	1105.01			1.01g.	1.03g.	
	1106.01			1.02g.	1.01g.	
	1107.01			1.05g.	1.07g.	
	1109.02			100 ml.		100 ml.
4928	1110.04 B	YES	A-11	1.01g.	1.04g.	200 ml.
	1111.04 B			1.06g.	1.00g.	
	1112.04 B			1.00g.	1.00g.	
N.M.	~~1113.04 B~~					
	1112.04 R2 B			1.08g.	1.02g.	
	1112.04 S2 B			1.05g.	1.04g.	
	1113.04 B			1.03g.	1.01g.	
	1114.04 B			1.01g.	1.01g.	
	1115.04 B			1.03g.	1.07g.	
	1116.04 B			1.02g.	1.03g.	
	1117.04 B			1.00g.	1.08g.	
	BLANK 106			01 DIGESTION		200 ml.
	BLANK 107			03 DIGESTION		200 ml.
	BLANK 108			01 DIGESTION (water)		100 ml.

Other Clients

To Page No.__

Witnessed & Understood by me,	Date	Invented by	Date	
		Recorded by William May	2/23/87	271

Page No.

Test Performed: DIGESTIONS
Date Received: 3/3/87
Work Performed By: W.G.M.

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From	AMOUNT OF SAMPLE (01 DIGESTION)	AMOUNT OF SAMPLE (03 DIGESTION)	FINAL VOLUME
4971	1274.04	YES	A-28	1.05 g.	1.01 g.	200 ml.
(CLP)	1275.04			1.00 g.	1.05 g.	
	1275.04R1			1.03 g.	1.07 g.	
	1275.04S1			1.02 g.	1.02 g.	
	1276.04			1.04 g.	1.03 g.	
	1277.04			1.03 g.	1.01 g.	
	1278.04			1.05 g.	1.00 g.	
4972	1279.02	YES	A-29	1.07 g.	1.07 g.	100 ml.
	1280.02			1.03 g.	1.07 g.	
	1281.02			1.05 g.	1.02 g.	
	1282.02			1.01 g.	1.04 g.	
	1283.02			1.02 g.	1.06 g.	
	1284.02			1.06 g.	1.01 g.	
	1284.02R2			1.05 g.	1.03 g.	
	1284.02S2			1.05 g.	1.07 g.	
	1285.02			1.06 g.	1.06 g.	
	1286.02			1.03 g.	1.03 g.	
	1287.02			1.03 g.	1.02 g.	
	1288.02			1.02 g.	1.07 g.	
	1289.02			1.04 g.	1.07 g.	
	1290.02			1.08 g.	1.02 g.	
	1291.02			1.03 g.	1.04 g.	
	1292.02			1.08 g.	1.06 g.	
	1293.02			1.03 g.	1.00 g.	
	1294.02			1.06 g.	1.02 g.	
	1295.02			1.04 g.	1.05 g.	
	1296.02			1.02 g.	1.04 g.	
	1297.02			1.07 g.	1.01 g.	

Other Clients

To Page No.

Witnessed & Understood by me, | Date | Invented by | Date 3/3/87 | Recorded by William Gray | 272

Project No._____

TITLE _____ Book No._____ 8

om Page No.___

Test Performed: DIGESTIONS
Date Received: 3/9/87
Work Performed By: W. M.

Job No.	ID No.	Custody Seal Intact Yes	Custody Seal Intact No	Secure Storage Area Received From	Amount of Sample 01 Digestion	Amount of Sample 03 Digestion	Final Volume
4989	1427.04	YES		A-34	1.03g.	1.06g.	200ml
(CLP)	1428.04				1.01g.	1.01g.	
	1428.04R1				1.05g.	1.01g.	
	1429.04				1.09g.	1.04g.	
	1429.04S1				1.05g.	1.06g.	
	1430.04				1.00g.	1.06g.	
4993	1439.02	YES		A-35	1.06g.	1.01g.	100ml
	1440.02				1.03g.	1.00g.	
	1440.02R2				1.00g.	1.08g.	
	1441.02				1.02g.	1.07g.	
	1441.02S2				1.06g.	1.03g.	
	1442.02				1.01g.	1.05g.	
	1443.02				1.02g.	1.05g.	
	1444.02				1.01g.	1.02g.	
	1445.02				1.05g.	1.04g.	
	1446.02				1.06g.	1.01g.	

Other Clients

Job No.	ID No.	Custody Seal Intact Yes	Custody Seal Intact No	Secure Storage Area Received From	Amount of Sample	Type of Digestion	Initial pH	Final Volume
4998	1458.07	NO		A-9	100ml.	01,03	1	100ml
	1458.07R3						1	
	1459.07						1	
	1460.07						1	
	1461.07						1	
	1464.01						1	
5000	1469.01	NO		A-9	100ml.	01	1	100ml

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Witnessed & Understood by me,	Date	Invented by	Date
gj	3/10/87	Recorded by William Mac	3/9/87

Project No._____

TITLE_____ Book No._____ 11

Fror ge No.__

Method EPA-335.2
Instrument Spec 88
Stock CN⁻ 0.0185N .963mg/ml
Prepared 11/5/86 Book, page 251, 19
Stand. 11/7/86 Book, page 210, 61
Curve Date 11/7/86 Expires 12/7/86
Other:

STD① = 100ml Stock/1000
STD② = 100ml STD①/1000

Test Performed: CN⁻ Curve
Date Received: 11-7-86
Work Performed By: D. [illegible]

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From	Dilution	mls for Color	Abs
	Blank				50	set @ 0.000
	4.82 ug			0.5ml STD②/250	50	0.029
	9.63 ug			1.0ml STD②/250	50	0.060
	19.26 ug			2.0ml STD②/250	50	0.119
	48.15 ug			5.0ml STD②/250	50	0.295
	96.3 ug			10.0 ml STD②/250	50	0.581
	144.45 ug			15.0 ml STD②/250	50	0.829

Corr = 0.9995 ✓

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Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by	

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Project No.

58 Book No. TITLE

From Page No.

Method EPA 335.2
Instrument SPEC 88
Stock Cr 0.0184N 0.958 mg/ml
Prepared 1/16/87 Book, page 251,46
Stand. 2/16/87 Book, page 210,79
Curve Date 2/16/87 Expires 3/16/87
Other:

mg/L Cr = $\frac{A+50}{B+C}$

STD① = 100ml STOCK/1000
STD② = 100ml STD①/1000

Test Performed: Cr
Date Received: 2-18-87
Work Performed By: A. Thayer

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From	@mls distilled	@mls for color	Abs	Wig from curve	Result
UNDISTILLED	BLANK			—	50	Set @0.000		
	BLANK			500ml	50	0.005	-0.31	
D1	SPIKE	47.90		5ml STD②/500	50	0.279	44.996	93.9% rec
4900	1014.06	Y	A-9	500ml	50	0.070	10.44	0.021 mg/L
4902	1018.12	Y	A-27	500ml	50	0.080	12.09	0.024 mg/L
4902	1019.12	Y	A-27	500ml	50	0.010	0.52	<0.02 mg/L
4902	1020.12	Y	A-27	500ml	50	0.017	1.67	<0.02 mg/L
4902	1021.12	Y	A-27	500ml	50	0.000	-1.13	<0.02 mg/L
4906	1032.04	Y	A-12	6.123 g/500	50	0.010	0.52	<1.0 mg/kg
4906	1033.04	Y	A-12	6.134 g/500	50	0.406	66.00	10.8 mg/kg
4906	1034.04	Y	A-12	6.258 g/500	50	0.453	73.77	11.8 mg/kg
4906	1034.04	SPIKE	A-12	5ml STD② + 6.094 g/500	50	0.730	119.57	95.6% rec
			QC IN AN	CHART				

Other Charts

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Witnessed & Understood by me. | Date | Invented by | Date | Recorded by

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Project No. _____

TITLE _____ Book No. 258

Page No. ___

Method EPA 335.2
Instrument SPEC 88
Stock Cn 0.0184 N 0.88 mg/ml
Prepared 2/4/87 Book, page 251, 46
Stand. 2/16/87 Book, page 240, 79
Curve Date 2/16/87 Expires 3/16/87
Other: _____

mg/L Cn⁻ = $\frac{A \times 50}{B \times C}$

STD ① = 100ml STOCK/1000
STD ② = 100ml STD①/1000

Test Performed: Cn⁻
Date Received: 2-19-87
Work Performed By: [illegible]

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From	③mls distilled	②mls for color	Abs	④ug from curve	Results
UNDISTILLED BLANK				—	50	Set@0.000	-1.13	<0.02 <.11
	BLANK	17.90		500ml	50	0.001	-0.97	<0.02
D1	SPIKE	↓		5ml STD②/500	50	0.271	43.67	91.2% rec ✓
4906	1035.04	Y	A-12	6.034 g/500	50	0.009	0.35	<1 mg/kg
4906	1036.04	Y	A-12	6.031 g/500	50	0.005	0.31	<1 mg/kg
4906	1037.04	Y	A-12	6.337 g/500	50	0.005	0.31	<1 mg/kg
4910	1058.01	N	A-32	6.224 g/500	50	0.016	1.50	<1 mg/kg ✓
4910	1059.01	N	A32	6.009 g/500	50	0.062	9.11	1.52 mg/kg ✓
4913	1072.01	Y	A-1	500ml	50 10ml/50 5ml/50	>1 1.280 AN ~~[illegible]~~ 0.487	— 79.39	1.59 mg/L ✓
4913	1072.01	AMENABLE		500ml	50 10ml/50 5ml/50	>1 1.200 0.453	73.77	FREE 1.48 mg/L / AMENABLE 0.11 mg/L ✓
	1083.01	Y	A-1	500ml	50 25ml/50	01.475 ~~[illegible]~~ 0.884	137.60	0.55 mg/L ✓
	1083.01	REP		500ml	50 25ml/50	1.425 0.850	139.42	0.56 mg/L ✓ 1.8 RPD

Other Clients

QC in chart
AN

To Page No. ___

Witnessed & Understood by me, | Date | Invented by | Date

Recorded by

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Project No._____

TITLE_____ Book No._____

Page No.___

Method [illegible]
Instrument [illegible]
Stock [illegible] 0.01340 [illegible]
Prepared [illegible] Book, page 251, 46
Stand. [illegible] Book, page [illegible]
Curve Date [illegible] Expires [illegible]
Other: _____

Test Performed: T-CN Amenable CN
Date Received: [illegible]
Work Performed By: [illegible]

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From	pH	Ph	KI	(B) ml distilled	(C) ml for Color	Abs	(A) ug from Curve	Results
	Blank	—	—				500	50	0.007	0.02	<0.02 mg/l
	DI Spike	—	—				5 ml STD(B)/500	50	0.276	44.5	92.9% Rec ✓
~~[illegible]~~	~~1015.01~~	~~N~~	~~A-1~~				~~500~~				DA See Pg. 63
~~[illegible]~~	~~1127.01~~	~~Y~~	~~A-1~~	~~13~~	~~10~~	~~10~~	~~500~~				DA See Pg 62
	~~1127.01~~	~~[illegible]~~	~~A-1~~	~~13~~	~~10~~	~~10~~	~~500~~				DA See Pg 62
4928	1110.04	N	A 11				7.281g/500	50	0.006	-0.14	<1 mg/kg
	1111.04						5.831g/500	50	0.007	0.02	<1
	1112.04						5.194g/500	50	0.012	0.85	<1
	1113.04						5.313g/500	50	0.031	3.99	<1 ✓
	1114.04						5.864g/500	50	0.016	1.51	<1
	1114.04	spike					5.440g/500 9.805	50	0.309	49.96 9.184	104.3% Rec ✓
	Undistilled	Blank						50	[illegible]		

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Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by	277

DIP

Project No.____

TITLE _____ Book No._____

From Page No.___

Method EPA 335.2
Instrument Spec 88
Stock CN .0194N 958mg/ml
Prepared 2/14/87 Book, page 251,41
Stand. 2/14/87 Book, page 210,79
Curve Date 2/14/87 Expires 3/14/87
Other:_____

Test Performed: T.CN ; Amenable CN
Date Received: 2-24-87
Work Performed By: D. Bodtker

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From	pH	Pb	KI	@ml distilled	@ml for Color	Abs	@µg from Curve	Results
	Blank	—	—				500	50	0.000	-1.1	<0.02 mg/l
	DI spike	—	—				5.0ml STD @/500	50	0.285	45.99	96.0% Rec.
Prem.	1083.01	N	A-1	13	N	N	200/500	25	0.304	49.13	~~0.49~~ 0.38 mg/l
4939 mp Prem	1173.01	Y	A-29	13	N	N	200/500	10	0.515	84.02	2.10 Repeat
T.CN	1083.01	N	A-1	13	N	N	200/500	25	0.535	87.33	~~0.84~~ 0.87 mg/l
T.CN	1173.01	N	A-29	13	N	N	200/500	25	0.830	136.11	1.36
~~4938~~	1115.04	N	A-11				5.4184g/500				OA sample bumped out
4938	1116.04	N	A-11				5.1111g/500	50	0.010	0.52	<1 mg/Kg
	1117.04	N	A-11				5.5133g/500	50	0.010	0.52	<1
	1117.04	Dup	A-11				5.7604g/500	50	0.010	0.52	<1 0.0 RPD
	Undistilled Blank							50	set @ 0.000		

Other Clients

QC

To Page No.___

Witnessed & Understood by me, Date

Invented by 3/13/87 Date

Recorded by

278

Project No._____

Book No._____ TITLE _____

From Page No.__

Method EPA 3352

Instrument SPEC BB

Stock Cn 0.0184 N 0.458 mg/ml

Prepared 2/16/87 Book, page 25146

Stand. 2/16/87 Book, page 310,79

Curve Date 2/16/87 Expires 3/16/87

Other:

mg/L Cn = $\frac{A \cdot 50}{B \cdot C}$

STD① = 100ml STOCK/1000

STD② = 100ml STD①/1000

Test Performed: Cn

Date Received: 3/2/87

Work Performed By: A Nagel

	Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From	③ mls distilled	④ mls for color	Abs	⑤ mg from curve	Result
		BLANK	- UNDISTILLED		—	50	Set @ 0.000	-1.13	—
1		BLANK			500	50	0.002	-0.81	<0.02 mg/L
2	DI	SPIKE	4780		5ml STD②/500	50	0.265	42.68	89.1 % rec
3	4928	1115.04	N	A-11	5.177g/500	50	0.005	-0.3	< 1 mg/kg
4	4939	1173.01	N	A-29	100ml/500	~~50~~ 5.0	0.139	21.85	2.185 mg/l
5	4939	1173.01	AMENABLE		100ml/500	~~50~~ 5.0	0.138	21.68	2.168 mg/l (.017)
6	4955	1234.01	N	A-29	5.010g/500	50	0.039	5.31	1.06 mg/kg
7	4955	1235.01	~~N~~ AN Y	A-29	2.010g/500	50	0.002	-0.81	<1 mg/kg
8	4956	1236.01	Y	A-2	500ml	50	0.317	51.28	0.103 mg/L
9	4956	1237.01	Y	A-2	500ml	10	0.062	9.11	0.091 mg/L
10	4977	1313.01	Y	A-26	450 ml/500	10	0.183	29.12	0.324 mg/l
11	4977	1313.01	SPIKE	A-26	5ml STD② + 450 ml/500	10	0.191	30.45	0.338 ??
		1313.01	Y	A-26	450/500	50	~~0.19~~ 0.891	146.2	0.325 mg/l
		1313.01	Spike	A-26	5ml STD② + 450/500	50	0.922	151.3	0.336

Other Clients

Accepted on basis of DI spike recovery.

To Page

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by	279

Project No. _____

Book No. _____ TITLE _____

From Page No. _____

Method EPA 335.2
Instrument Spec 88
Stock CN 0.01840 .958 mg/ml
Prepared 2/16/87 Book, page 251.46
Stand. 2/16/87 Book, page 210.79
Curve Date 2/16/87 Expires 3/16/87
Other: _____

Test Performed: CN
Date Received: 3-5-87
Work Performed By: Instrument

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From	pH	@mls distilled	@mls for Color	Abs	@ mg from Curve	DF	Results
	Blank	—	—		500	50	0.002	-0.8		<0.02
	OI spike	—	—		5mls STD2/500	50	0.250	40.20		83.9% Rec
	1307.01	Y	A-6		5.13g/500		0.022	2.50		<1 mg/kg
	1305.01	N			10.0ml/500	50	0.000	-1.14		<.5 mg/L
	1306.01	N			10.0ml/500	50	0.019	2.00		<.5 mg/L
	1274.04	N	A-28 Lcon		10.190g/500	25/50	0.005	-0.3		<1 mg/kg
	1275.04				10.255g/500	25/50	0.007	0.02		<1
	1276.04				10.010g/500	50	0.048	6.80		<1
	1277.04				10.27g/500	50	0.003	-0.6		<1
	1278.04				10.101g/500	50	0.010	0.52		<1
	1278.04	spike		5mls STD	10.076g/500 4.75 3/1	50	0.252	40.53 4.0224		84.6% Rec
	Undistilled Blank					50	set@0.000			

Other Clients

To Page No. _____

Witnessed & Understood by me, _____ Date _____

Invented by _____ Date 280

Recorded by _____

Project No._____
Book No._____ TITLE _____

From Page No.__

Method EPA 335.2
Instrument —
Stock (A) 0.0184N .953 mg/ml
Prepared 2/16/87 Book, page 251.46
Stand. 2/16/87 Book, page 210.79
Curve Date 2/16/87 Expires 3/16/87
Other:

Test Performed: CN
Date Received: 3-9-87
Work Performed By: D. [illegible] AN

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From	pH	Pb	KI	(B) mls distilled	(C) mls for Color	Abs	(A) ug from Curve	Results
	Blank	—	—				500	50	0.007	0.02	<0.02 mg/l
	DI spike	—	—				50 mls STD (2)/500	50	0.279	45.00	93.9% Rec ✓
Amen	1594.01	N	A-22				500	50	Titrate		DA See Pg. 74
Amen	1595.01	N	A-22				500	50			DA See Pg. 74
Amen	1596.01	N	A-22				500	50			DA See Pg. 74
Amen	1601.01	N	A-22				500	10	0.198	31.60	0.32 (14.12 mg/l)
4988	1426.01	Y	A-3				500	10 10	0.083 0.158	12.89 24.99	0.13 0.12 mg/l
4987	1425.08	Y	A-3				10.045g/500	10	0.181	28.79	14.33 mg/Kg
4989	1427.04	N	A-34				10.133g/500	50 ~~0.0040~~	0.040	5.48	<1 mg/Kg
4989	1428.04	N	A-34				10.085g/500	50 ~~0.020~~ AN	0.020	2.17	<1 mg/Kg
4984	1428.04	Dup	A-34				10.043g/500	50 ~~0.019~~ AN	0.019	2.00	<1 mg/Kg 0.0 RPD
	~~1595.01~~						500	5	0.229	36.73	0.73 mg/l
	1595.01	from p.70					500	1	0.080	12.09	1.21 ✓
	1597.01						500	5	0.060	8.78	0.18
	1598.01						500	5	0.212	33.92	0.68
	1597.01						500	10	0.090	13.74	0.14
undistilled		Blank					—	50	[illegible]		

Other Clients

Other Clients

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Witnessed & Understood by me. | Date | Invented by | Date 281

Recorded by

Project No._____

TITLE _____ Book No._____

Page No.___

Method EPA 335.2

Instrument SPEC 88

Stock Cn - 0.0188N

Prepared 2/16/87 Book, page 251, 46

Stand. 2/16/87 Book, page 210, 79

Curve Date 2/16/87 Expires 3/16/87

Other:

$mg/L = \frac{A+50}{B+C}$

Test Performed: Cn / Total & Amen

Date Received: 3/10/87

Work Performed By: A. Nagel

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From	KI	pH	③ mls distilled	② mls for color	Abs	④ µg from curve	Results (mg/L)
Undistilled		Blank				–	50	Set 100		
	BLANK			–	–	500	50	0.010	0.52	<0.02 + 0.01
D1	SPIKE			–	–	5ml STD(2)/500	50	0.279	44.996	93.9% rec
	1639.01 Amen.	N	A-26	N	12	500	5			FREE AMENABLE TITRATE
	1640.01 Amen.	N	A-26	N	13	500	5	0.800	131.15 AN	2.62 (2.16)
	1641.01 Amen.	N	A-26	N	13	500	5			TITRATE
	1642.01 Amen.	N	A-26	N	12	500	5	0.187	29.78	0.596 (21.2)
4989	1429.04	N	A-34	–	–	6.427 g/500	50	0.019	2.00	TOTAL <1 mg/kg
4989	1430.04	N	A-34	–	–	6.464 g/500	50	0.040	5.48	<1 mg/kg
4974	1308.01	N	A-6	–	–	1.694 g/500	50	0.041	5.64	~~3.33~~ mg/kg
5000	1468.01	Y	A-9	N	[illegible]	475 [illegible]	20	0.113	17.55	0.92 ~~0.080~~ AN mg/L
5000	1468.01	SPIKE	A-9	N	14	475ml+5ml STD(2)	20	0.204	32.59	0.172 ~~0.168~~ AN 78.3% rec

Other Clients

**Turned yellow (NaOH)

To Page No._____

Witnessed & Understood by me, | Date | Invented by | Date

Recorded by