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LAB DATA 157635

SURFACE SOIL
ORGANICS

SURFACE SOIL ORGANICS

CASE NARRATIVE

ecology and environment, inc.
ANALYTICAL SERVICES CENTER, P.O. BOX D, BUFFALO, NEW YORK 14225, TEL. 716-631-0360
International Specialists in the Environment

January 29, 1987

Job # U-4474

Sample # DC-SS-24 through DC-SS-44
DC-SS-45 through DC-SS-48

CASE NARRATIVE

Enclosed are the organic analytical results for soil samples received on November 24, 1986. All samples were received in good condition.

Several samples were re-analyzed for volatile organics since the surrogate recoveries fell outside of established limits. The re-analysis resulted in similar recoveries outside of control limits verifying a matrix effect.

Samples DC-SS-24 and DC-SS-36 were arbitrarily chosen for spiking. The matrix/spike duplicate recoveries and the relative percent difference reflect the non-homogeneity of the samples.

Samples DC-SS-46 and DC-SS-36 MSD were extracted for semi-volatiles outside of hold times. These samples were originally extracted on November 17, 1986, but poor surrogate recoveries necessitated re-extraction and re-analysis. Only the results obtained with acceptable surrogate recoveries have been reported.

Due to the level of contaminants, particularly PCBs, in the semi-volatile and pesticide/PCB fractions, extracts could not be concentrated and/or required dilutions preventing determination of surrogate recoveries.

As agreed upon in a November 24, 1986, conversation with Ron Turpin of IEPA, PCB second column confirmation was not performed on all samples from this batch. 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.

PCBs were detected in the semi-volatile fractions analyzed by GC/MS, confirming their presence in several samples. Since the specific aroclors were not determined by GC/MS, Form I, Part B only states if PCBs were detected and over what retention time range.

PCBs identified in some of the samples are outside the established retention time windows (Form X). In the case of PCBs, identification is primarily based on pattern recognition. Retention time windows are utilized as guides.

PCB 1260 was detected and confirmed in the blank extracted November 17 at a concentration of 220 ug/kg. This level is insignificant when compared to those detected in the samples. A blank extracted on the following day contained no contaminants.

Pentachlorophenol in sample DC-SS-39 and 4-nitrophenol in sample DC-SS-40 exceeded the linear range of the analytical instrumentation. Therefore, concentrations reported should be considered estimated values. True values are possibly underestimated.

The response factor for the following exceeded the 25% difference limit in the continuing calibration check:

vinyl chloride - file C5710 (11/25/86)
pentachlorophenol - file B3186 (12/19/86)

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

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

Andrew P Clifton / [illegible]

Andrew P. Clifton, Director
Analytical Services Center

APC/drb

Enclosures

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

CHAIN-OF-CUSTODY RECORD

Project No.: 1L3140
Project Name: DEAD CREEK
Project Manager: M. MILLER
Samplers: (Signatures) Kevin Phillips
Field Team Leader: KEVIN PHILLIPS

STATION NUMBER	DATE	TIME	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE TYPE AIR	SAMPLE INFORMATION / EXPECTED COMPOUNDS (Concentration)*	STATION LOCATION	NUMBER OF CONTAINERS	1-8oz. HSL ORGANICS	1-8oz. METALS + CYANIDE	2-120 ml. VOAS				REMARKS E+E #
DC-5524	11-11-86	1515		X		UNKNOWN. MAY CONTAIN HIGHER CONC.	GRID # G-4	4	1	1	2				0700
DC-5525	11-11-86	1515		X		AND/OR OILS	G-4	4	1	1	2				9
DC-5526	11-11-86	1540		X			H-4	4	1	1	2				92
DC-5527	11-11-86	1545		X			I-4	4	1	1	2				93
DC-5528	11-11-86	1555		X			J-4	4	1	1	2				94
DC-5529	11-11-86	1545		X			A-5	4	1	1	2				95
DC-5530	11-11-86	1600		X			B-5	4	1	1	2				96
DC-5531	11-11-86	1600		X			B-5	4	1	1	2				97
DC-5532	11-11-86	1600		X			C-5	4	1	1	2				98
DC-5533	11-12-86	1030		X			D-5	4	1	1	2				99
DC-5534	11-12-86	1050		X			E-5	4	1	1	2				0800
DC-5535	11-12-86	1100		X			F-5	4	1	1	2				01

Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Ship Via
Kevin Phillips	11-13-86/1700	FED EXP				FEDERAL EXPRESS
Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Relinquished By: (Signature)	Date/Time	Received By: (Signature)	BL/Airbill Number: 2219748285
Relinquished By: (Signature)	Date/Time: 11-14-86/0930	Received For Laboratory By: (Signature)	Relinquished By: (Signature)	Date/Time	Received For Laboratory By: (Signature)	Date: 11-13-86

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.: 1L3140
Project Name: DEAD CREEK
Project Manager: M. MILLER
Samplers: (Signatures) Kevin Phillips
Field Team Leader: KEVIN PHILLIPS

STATION NUMBER	DATE	TIME	SAMPLE TYPE: COMP	SAMPLE TYPE: GRAB	SAMPLE TYPE: AIR	SAMPLE INFORMATION / EXPECTED COMPOUNDS (Concentration)*	STATION LOCATION	NUMBER OF CONTAINERS	1-8oz. HSL ORGANICS	1-8oz. METALS + CYANIDE	2-120ml VOAS				REMARKS
DC-SS 36	11-12-86	1120		X		UNKNOWN. MAY CONTAIN HIGHER CONC./OILS	GRID# G-5	4	1	1	2				9802
DC-SS 37	11-12-86	1130		X			H-5	4	1	1	2				03
DC-SS 38	11-12-86	1100		X			A-6	4	1	1	2				04
DC-SS 39	11-12-86	1120		X			B-6	4	1	1	2				05
DC-SS 40	11-12-86	1200		X			C-6	4	1	1	2				06
DC-SS 41	11-12-86	1240		X			D-6	4	1	1	2				07
DC-SS 42	11-12-86	1245		X			F-6	4	1	1	2				08
DC-SS 43	11-12-86	1215		X			B-7	4	1	1	2				09
DC-SS 44	11-13-86	1200		X			BLANK	4	1	1	2				9810
DC-SS 46	11-13-86	1035		X			STERLING STEEL 1	4	1	1	2				11
DC-SS 47	11-13-86	1100		X			STERLING STEEL 2	4	1	1	2				12
DC-SS 48	11-13-86	1100		X			STERLING STEEL 2	4	1	1	2				9813

Relinquished By (Signature)	Date/Time	Received By (Signature)	Relinquished By (Signature)	Date/Time	Received By (Signature)
Kevin Phillips	11-13-86/1700	FED EXP			
FED EXP	11-14-86/0750	Received For Laboratory By: (Signature) R Marsh			Received For Laboratory By: (Signature)

Ship Via: FEDERAL EXPRESS
BL/Airbill Number: 2219748285
Date: 11-13-86

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files
*See CONCENTRATION RANGE on back of form.

234055

SURROGATE PERCENT RECOVERY SUMMARY

SOIL SURROGATE RECOVERY SUMMARY

Case No. 4 1474 Contract Laboratory Ecology & Environment Inc. Contract No. IL-3140

Low X Medium ____

SMO TRAFFIC NO.	TOLUENE-D8 (81-117)	BFB (74-121)	1,2 DICHLORO-ETHANE-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)
	VOLATILE			SEMI-VOLATILE								PESTICIDE
DC-SS-24	95	87	76	DL	DL	DL			DL	DL	DL	DL
DC-SS-25	109	66*	97	DL	DL	DL			DL	DL	DL	DL
DC-SS-26	115	87	95	DL	DL	DL			DL	DL	DL	DL
DC-SS-27	118*	94	98	81	89	76			68	86	42	DL
DC-SS-28	114	89	110	DL	34	DL			DL	12*	DL	DL
DC-SS-29	96	85	84	DL	DL	DL			DL	DL	DL	DL
DC-SS-30	106	84	86	DL	DL	DL			DL	DL	DL	DL
DC-SS-31	115	70*	100	DL	DL	DL			DL	DL	DL	DL
DC-SS-32	103	84	91	DL	DL	DL			DL	DL	DL	DL
DC-SS-33	86	80	71	DL	DL	DL			DL	DL	DL	DL
DC-SS-34	105	85	85	DL	DL	DL			DL	DL	DL	DL
DC-SS-35	96	86	105	DL	DL	DL			DL	DL	DL	DL
DC-SS-36	83	97	104	38	52	39			43	35	20	DL
DC-SS-37	122*	80	86	DL	38	DL			DL	23*	DL	DL
DC-SS-38	104	89	98	DL	28*	28			DL	DL	DL	DL
DC-SS-39	111	71*	92	DL	34	28			DL	72	DL	DL
DC-SS-40	112	66*	105	80	128	83			69	74	49	DL
DC-SS-41	101	74	97	DL	33	25			DL	DL	DL	DL
DC-SS-42	110	85	99	65	103	70			54	56	22	DL
DC-SS-43	107	90	79	76	106	90			86	73	37	DL
DC-SS-44	112	76	93	77	82	87			93	71	54	81
DC-SS-46	102	93	70	61	106	99			62	77	18*	75
DC-SS-47	95	85	95	74	82	88			95	31	26	130
DC-SS-48	101	93	78	74	85	114			72	87	23	106

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

**ADVISORY LIMITS ONLY

Volatiles: ____ out of ____ ; outside of QC limits

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

Pesticides: ____ out of ____ ; outside of QC limits

7/85

Page 1 of 2

Comments: DL = DILUTED OUT

FORM II

493095

SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case No. U-4474 Contract Laboratory Ecology & Environment Inc. Contract No. IL-3140

Low X Medium ____

	VOLATILE			SEMI-VOLATILE								PESTICIDE**
SMO TRAFFIC NO.	TOLUENE-D8 (81-117)	BFB (74-121)	1,2 DICHLORO-ETHANE-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)
BLKC5612	94	94	89	NR	←						→	NR
BLKC5637	95	80	96	NR	←						→	NR
BLKC5811	104	103	78	NR	←						→	NR
BLKC5679	110	120	109	NR	←						→	NR
BLKC5687	99	98	88	NR	←						→	NR
BLKC5698	100	91	98	NR	←						→	NR
BLKC5808	112	106	70	NR	←						→	NR
BLKC5592	96	74	82	NR	←						→	NR
BLKC5715	97	99	94	NR	←						→	NR
BLK 11-17	NR	←									→	98
BLK 11-16	NR	←									→	90
DC-SS-27-RE	119*	90	80	NR	←						→	NR
DC-SS-31-RE	126*	82	72	NR	←						→	NR
DC-SS-37-RE	153*	107	118	NR	←						→	NR
DC-SS-25-RE	126*	75	97	NR	←						→	NR
DC-SS-39RE	120*	98	68*	NR	←						→	NR
DC-SS-40-RE	86	67*	57*	NR	←						→	NR
B3187	NR	NR	NR	66	81	117			30	46	35	NR
D1484	NR	NR	NR	68	102	118			81	83	44	NR
DC-SS-24-ME	99	68*	86	NR	←						→	NR
DC-SS-24-MSD	107	62*	101	NR	←						→	NR
DC-SS-36 MS	NR	NR	NR	69	89	67			82	32	34	DL
DC-SS-36MSD	NR	NR	NR	120	124*	71			103	94	88	DL

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

** ADVISORY LIMITS ONLY

Volatiles: 16 out of 123 ; outside of QC limits

Semi-Volatiles: 5 out of 174 ; outside of QC limits

Pesticides: 0 out of 29 ; outside of QC limits

7/85

Comments: DL = DILUTED OUT

22 PESTICIDE SURROGATES DILUTED OUT

85 SEMI-VOLATILE SURROGATES DILUTED OUT

FORM II

493095

MS/MSD SUMMARY

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. V-4474 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-SS-24	1,1-Dicholorethene	140	0	68	49*	72	51*	6	22	59-172
	Trichloroethene	140	0	110	79	95	68	15	24	62-137
	Chlorobenzene	140	0	120	86	130	93	8	21	60-133
	Toluene	140	0	210	150*	270	190*	25*	21	59-139
	Benzene	140	0	120	86	110	79	9	21	66-142
B/N SMO SAMPLE NO. DC-SS-36	1,2,4-Trichlorobenzene	4500	65 J	3800	83	4600	101	19	23	38-107
	Acenaphthene	4500	200 J	3400	71	5200	111	42*	19	31-137
	2,4 Dinitrotoluene	4500	0	2800	62	7300	162*	89*	47	28-89
	Pyrene	4500	3100	8400	118	5800	60	37*	36	35-142
	N-Nitrosodi-n-Propylamine	4500	0	2900	64	4500	100	43*	38	41-126
	1,4-Dichlorobenzene	4500	240 J	3100	64	5100	108*	49*	27	28-104
ACID SMO SAMPLE NO. DC-SS-36	Pentachlorophenol	9040	1600 J	6500	54	22000	226*	109*	47	17-109
	Phenol	9040	0	6800	75	8600	95*	23	35	26-90
	2-Chlorophenol	9040	0	5300	59	8800	97	50	50	25-102
	4-Chloro-3-Methylphenol	9040	0	4400	49	6700	74	41*	33	26-103
	4-Nitrophenol	9040	0	1300	14	12000	133*	160*	50	11-114
PEST SMO SAMPLE NO. DC-SS-36	Lindane	36.8	0	DL		DL			50	46-127
	Heptachlor	36.8	0	DL		DL			31	35-130
	Aldrin	36.8	0	DL		DL			43	34-132
	Dieldrin	91.8	0	DL		DL			38	31-134
	Endrin	91.8	0	DL		DL			45	42-139
	4,4'-DDT	91.8	0	DL		DL			50	23-134

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD: VOAs 1 out of 5 : outside QC limits
B/N 5 out of 6 : outside QC limits
ACID 3 out of 5 : outside QC limits
PEST ___ out of ___ : outside QC limits

RECOVERY: VOAs 4 out of 10 : outside QC limits
B/N 2 out of 12 : outside QC limits
ACID 3 out of 10 : outside QC limits
PEST ___ out of ___ : outside QC limits

Comments:
DL - DILUTED OUT

FORM III

7/85

495095

STANDARDS DATA

INITIAL CALIBRATION DATA

Initial Calibration Data
HSL Compounds

Case No: U-4474 Instrument ID: HP-5995C

Contractor: E & EM INC. Calibration Date: 07/14/86

Contract No: II-3140

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

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

RF - Response Factor (Subscript is amount in NGS)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

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

Initial Calibration Data
HSL Compounds

Case No: U-4474 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=250.0,250.0,250.0,2
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

Case No: V-4474 Instrument ID: HP-5970D

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

Contract No: IL-3140

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

Laboratory ID:		>D0036	>D0037	>D0038	>D0039	>D0040				
		RF	RF	RF	RF	RF				
Compound		20.00	50.00	80.00	120.00	160.00	$\overline{RF}$	% RSD	CCC	SPCC
PHENOL-D5 (SURR)	99	1.45905	1.41913	1.41915	1.33738	1.36821	1.40059	3.415		
PENTAFLUOROPHENOL	184	-	-	-	-	-	-	-		
2-FLUOROPHENOL (SURR)	112	.92276	.93267	.97441	.89171	.88493	.92130	3.895		
PHENOL	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		
BENZOIC ACID	105	-	.15595	.20240	.22265	.23506	.20401	17.036		
2,4-DICHLOROPHENOL	162	.28939	.33168	.32894	.32204	.30635	.31568	5.601	*	
4-CHLORO-3-METHYLPHENOL	107	.29459	.33844	.35108	.35646	.33826	.33577	7.252	*	
2,4,6-TRICHLOROPHENOL	196	.42290	.47918	.46473	.45782	.45268	.45546	4.555	*	
2,4,5-TRICHLOROPHENOL	196	-	.49037	.49512	.49589	.47584	.48930	1.981		
2,4,6-TRIBROMOPHENOL(SURR)	330	.29588	.32928	.34498	.31993	.33911	.32584	5.917		
2,4-DINITROPHENOL	184	-	.13902	.16374	.19064	.18943	.17071	14.351		**
4-NITROPHENOL	139	-	.28898	.31865	.33700	.34792	.32314	7.977		**
4,6-DINITRO-2-METHYLPHENOL	198	-	.10474	.11556	.12900	.13233	.12041	10.560		
PENTACHLOROPHENOL	266	-	.17917	.18989	.19137	.19048	.18773	3.054	*	

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

$\overline{}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

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

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Initial Calibration Data
HSL Compounds

Case No: U-4474 Instrument ID: HP-5970 B

Contractor: E & E, INC. Calibration Date: 07/30/86

Contract No: IL-3140

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

Laboratory ID:		>B2318	>B2317	>B2320	>B2321	>B2322				
		RF	RF	RF	RF	RF				
Compound		20.00	50.00	80.00	120.00	160.00	$\overline{RF}$	% RSO	CCC	SPCC
ANILINE	93	1.53020	1.25644	1.62634	1.62245	1.58163	1.52341	10.122		
BIS(-2-CHLOROETHYL)ETHER	93	1.34445	1.22081	1.26618	1.07095	1.29722	1.23992	8.441		
1,3-DICHLOROBENZENE	146	1.46014	1.37957	1.42964	1.30860	1.33586	1.38276	4.559		
1,4-DICHLOROBENZENE	146	1.66736	1.29358	1.43871	1.25577	1.18343	1.36777	14.007	*	
BENZYL ALCOHOL	79	.98994	1.18557	1.00496	1.07361	1.14382	1.07958	7.887		
1,2-DICHLOROBENZENE	146	1.61074	1.48247	1.44441	1.30085	1.30196	1.42808	9.176		
BIS(2-CHLOROISOPROPYL)ETHER	45	3.10167	2.81979	3.04493	2.94413	2.94039	2.97018	3.652		
N-NITROSO-DI-N-PROPYLAMINE	70	1.28828	1.23766	1.29486	1.34328	1.29730	1.29228	2.904		**
HEXACHLOROETHANE	117	.79392	.72848	.72662	.65702	.63961	.70913	8.755		
NITROBENZENE-D5 (SURR)	82	.38965	.37305	.41065	.42325	.40762	.40084	4.898		
NITROBENZENE	77	.42892	.38234	.41415	.43943	.43255	.41948	5.417		
ISOPHORONE	82	.84007	.76477	.79107	.82839	.82546	.80995	3.848		
BIS(-2-CHLOROETHOXY)METHANE	93	.46623	.44982	.45355	.46561	.44362	.45577	2.178		
1,2,4-TRICHLOROBENZENE	180	.39238	.38210	.37397	.37375	.37036	.37851	2.345		
NAPHTHALENE	128	1.10454	.97856	1.02942	.88370	.92738	.98472	8.778		
4-CHLOROANILINE	127	.38955	.37023	.40760	.39766	.40786	.39458	3.953		
HEXACHLOROBUTADIENE	225	.28342	.26841	.25835	.24760	.23237	.25803	7.555	*	
2-METHYLNAPHTHALENE	142	.70829	.65392	.61126	.58244	.56184	.62355	9.404		
HEXACHLOROCYCLOPENTADIENE	237	.42682	.38196	.48139	.49313	.48657	.45397	10.605		**
2-FLUOROBIPHENYL (SURR)	172	1.43778	1.49608	1.31182	1.22836	1.17905	1.33061	10.128		
2-CHLORONAPHTHALENE	162	1.26208	1.35393	1.18900	1.10195	1.13384	1.20816	8.413		
2-NITROANILINE	65	.39563	.49064	.43475	.41930	.45448	.43896	8.209		
DIMETHYL PHTHALATE	163	1.53551	1.62787	1.36166	1.32005	1.34038	1.43709	9.517		
4-NITROANILINE	138	.22174	.31144	.26162	.25592	.24885	.25992	12.546		
DIBENZOFURAN	168	1.77467	1.85500	1.58680	1.39667	1.46174	1.61498	12.191		
ACENAPHTHYLENE	152	1.97143	2.08657	1.83063	1.60600	1.52393	1.80371	13.185		
FLUORENE	166	1.35721	1.41769	1.10410	1.09087	1.00139	1.19425	15.240		
3-NITROANILINE	138	.13030	.18696	.13633	.16461	.15450	.15454	14.725		
ACENAPHTHENE	153	1.32952	1.38687	1.10696	1.08827	1.02367	1.18706	13.524	*	
2,4-DINITROTOLUENE	165	.35218	.43871	.35920	.36773	.39158	.38188	9.185		
2,6-DINITROTOLUENE	165	.33892	.38691	.34388	.34507	.33955	.35087	5.793		
DIETHYLPHTHALATE	149	1.54518	1.59131	1.28601	1.21661	1.31157	1.39014	12.017		
4-CHLOROPHENYL-PHENYLETHER	204	.69494	.72268	.58641	.55946	.56319	.62534	12.397		
N-NITROSODIPHENYLAMINE	169	.46709	.47088	.43295	.40737	.34790	.42524	11.873	*	
4-BROMOPHENYL-PHENYL ETHER	248	.26935	.26406	.28047	.26087	.25818	.26659	3.303		
HEXACHLOROBENZENE	284	.36253	.33008	.33921	.34540	.32747	.34094	4.119		

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

$\overline{\ }$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

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

Initial Calibration Data
HSL Compounds

Case No: U-4474 Instrument ID: HP-5970B

Contractor: E & E, INC. Calibration Date: 07/30/86

Contract No: IL-3140

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

Laboratory ID:		>B2318 RF 20.00	>B2317 RF 50.00	>B2320 RF 80.00	>B2321 RF 120.00	>B2322 RF 160.00	$\overline{RF}$	% RSD	CCC	SPCC
PHENANTHRENE	178	1.04931	1.01512	.98050	.95298	.88999	.97758	6.231		
ANTHRACENE	178	1.12091	1.02625	1.04493	.93788	.90233	1.00646	8.678		
DI-N-BUTYLPHTHALATE	149	1.27178	1.10891	1.06851	1.11508	1.07179	1.12721	7.409		
FLUORANTHENE	202	.93206	.85951	.80155	.77543	.70727	.81517	10.452	*	
BENZIDINE		-	-	-	-	-	-	-		
PYRENE	202	1.67420	1.68596	1.76714	1.46297	1.41935	1.60192	9.479		
TERPHENYL-D14 (SURR)	244	1.14639	1.09283	1.18955	1.06562	1.05822	1.11052	5.053		
BUTYLBENZYLPHTHALATE	149	.65885	.67321	.68349	.67508	.67739	.67361	1.353		
3,3'DICHLOROBENZIDINE	252	.27363	.29497	.31038	.35282	.36231	.31882	11.871		
BENZO(A)ANTHRACENE	228	1.11295	1.16545	1.14131	1.09826	1.08387	1.12037	2.943		
BIS(2-ETHYLHEXYL)PHTHALATE	149	.89359	.90143	.88579	.90223	.92113	.90083	1.461		
CHRYSENE	228	1.21768	1.19377	1.18843	.98625	1.04715	1.12666	9.164		
DI-N-OCTYL PHTHALATE	149	1.66258	1.75298	1.71967	1.71622	1.68266	1.70682	2.056	*	
BENZO(B)FLUORANTHENE	252	1.07961	1.23626	1.14532	1.32040	1.29211	1.21474	8.303		
BENZO(K)FLUORANTHENE	252	1.41040	1.33474	1.35790	1.08149	1.00129	1.23716	14.793		
BENZO(A)PYRENE	252	1.10805	1.15079	1.13626	1.11791	1.09145	1.12089	2.078	*	
INDENO(1,2,3-CD)PYRENE	276	.91950	1.10814	1.04174	1.09403	1.04427	1.04154	7.135		
DIBENZ(A,H)ANTHRACENE	278	.98398	1.11071	1.10486	1.07317	1.06502	1.06755	4.748		
BENZO(G,H,I)PERYLENE	276	1.10921	1.20556	1.17094	1.16451	1.14309	1.15866	3.073		

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

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

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

Initial Calibration Data
HSL Compounds

Case No: U-4474 Instrument ID: HP-5970 B

ractor: E & E, INC. Calibration Date: ~~02/31/86~~ 7/30/86

Contract No: IL-3140

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

Compound		Laboratory ID: >B2323 RF 20.00	>B2324 RF 50.00	>B2325 RF 80.00	>B2326 RF 120.00	>B2327 RF 160.00	$\overline{RF}$	% RSD	CCC	SPCC
PHENOL-D5	(SURR) 99	1.33554	1.32424	1.47714	1.37903	1.37876	1.37894	4.369		
PENTAFLUOROPHENOL	184	-	-	-	-	-	-	-		
2-FLUOROPHENOL	(SURR) 112	.86601	.96224	.81732	.89616	.80413	.86917	7.349		
PHENOL	94	1.21969	1.30210	1.34366	1.27248	1.24820	1.27723	3.756	*	
2-METHYL PHENOL	108	.95956	1.15622	1.11972	1.02900	1.04621	1.06214	7.299		
2-CHLOROPHENOL	128	1.03433	1.21901	1.21545	1.19049	1.20231	1.17232	6.650		
4-METHYL PHENOL	108	.99078	1.16029	1.06554	1.03758	1.09053	1.06894	5.901		
2-NITROPHENOL	139	.16395	.20209	.20713	.20379	.18968	.19333	9.154	*	
2,4-DIMETHYLPHENOL	122	.24782	.29464	.30384	.29645	.25225	.27900	9.574		
BENZOIC ACID	105	-	.22663	.22609	.24641	.25765	.23920	6.486		
2,4-DICHLOROPHENOL	162	.27062	.28484	.33611	.32608	.29302	.30213	9.219	*	
4-CHLORO-3-METHYLPHENOL	107	.29131	.34908	.34637	.34264	.32554	.33099	7.251	*	
2,4,6-TRICHLOROPHENOL	196	.39345	.50875	.46278	.44935	.41174	.44521	10.146	*	
2,4,5-TRICHLOROPHENOL	196	.42313	.61321	.54332	.51580	.50391	.51987	13.220		
2,4,6-TRIBROMOPHENOL	(SURR) 330	.29141	.38528	.33464	.31533	.31443	.32822	10.781		
2,4-DINITROPHENOL	184	-	.16377	.13943	.16124	.18313	.16189	11.045		**
4-NITROPHENOL	139	-	.19015	.15858	.14172	.15885	.16233	12.448		**
4,6-DINITRO-2-METHYLPHENOL	198	-	.13952	.13065	.14342	.15487	.14211	7.067		
PENTACHLOROPHENOL	266	-	.17560	.16016	.16451	.18549	.17144	6.650	*	

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

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

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

Initial Calibration Data
HSL Compounds

Case No: U-4474 Instrument ID: HP-5970D

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

Contract No: IL-3140

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

Compound		RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RF}$	% RSD	CCC	SPCC
Laboratory ID:		>D0965	>D0966	>D0967	>D0968	>D0969				
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	1.33815	1.47624	5.436		
1,4-DICHLOROBENZENE	146	1.61777	1.38930	1.48504	1.45121	1.40035	1.46374	6.256	*	
BENZYL ALCOHOL	79	1.01010	1.00872	1.21875	1.21807	1.21800	1.13473	10.082		
1,2-DICHLOROBENZENE	146	1.63938	1.36507	1.53750	1.47276	1.44493	1.49193	6.908		
BIS(2-CHLOROISOPPOPYL)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	.38879	.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	.37508	.38442	6.671		
NAPHTHALENE	128	1.07749	.91373	.97630	.97339	.89249	.96668	7.446		
4-CHLOROANILINE	127	.33401	.32798	.42540	.44310	.35932	.37796	14.044		
HEXACHLOROBUTADIENE	225	.29443	.24392	.26045	.25805	.23955	.25908	8.420	*	
2-METHYLNAPHTHALENE	142	.67945	.60785	.66493	.68192	.59005	.64484	6.646		
HEXACHLOROCYCLOPENTADIENE	237	.56264	.50376	.58602	.60451	.58378	.56814	6.552		**
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	1.41934	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	1.93571	1.94866	1.91782	1.79656	1.90873	5.115		
ACENAPHTHYLENE	152	2.24178	1.99625	2.09922	2.09094	2.07505	2.10065	4.209		
FLUORENE	166	1.55490	1.33626	1.34395	1.28944	1.20896	1.34670	9.518		
3-NITROANILINE	138	-	.04883	.11452	.11792	.08856	.09246	34.506		
ACENAPHTHENE	153	1.52777	1.33286	1.39452	1.37214	1.26556	1.37857	7.016	*	
2,4-DINITROTOLUENE	165	.35967	.32328	.34179	.32754	.30831	.33212	5.867		
2,6-DINITROTOLUENE	165	.38599	.35678	.37953	.36730	.36597	.37112	3.126		
DIETHYLPHTHALATE	149	1.88063	1.62618	1.53368	1.45917	1.43355	1.58664	11.383		
4-CHLOROPHENYL-PHENYLETHER	204	.78893	.66962	.70193	.69165	.66856	.70414	7.032		
N-NITROSODIPHENYLAMINE	169	.51567	.44734	.53097	.55655	.53802	.51771	8.111	*	
4-BROMOPHENYL-PHENYL ETHER	248	.31338	.30497	.33954	.35732	.35891	.33482	7.486		
HEXACHLOROBENZENE	284	.46739	.39403	.43794	.45768	.43251	.43791	6.477		

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

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

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

Initial Calibration Data
HSL Compounds

Case No: U-4474 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 RF 20.00	>D0966 RF 50.00	>D0967 RF 80.00	>D0968 RF 120.00	>D0969 RF 160.00	$\overline{RF}$	% RSD	CCC	SPCC
PHENANTHRENE	178	1.06868	.96082	1.02609	1.02304	.99723	1.01505	3.896		
ANTHRACENE	178	1.03628	.92880	1.01124	1.03132	.98608	.99874	4.397		
DI-N-BUTYLPHTHALATE	149	1.16959	.91435	.95835	.92928	.88461	.97124	11.741		
FLUORANTHENE	202	.74009	.58463	.63445	.60617	.54197	.62146	11.974	*	
BENZIDINE		-	.65247	-	-	-	.65247	-		
PYRENE	202	2.67187	2.75714	2.57294	2.60959	2.82056	2.68642	3.814		
TERPHENYL-D14 (SURR)	244	1.42937	1.47810	1.43324	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	1.35598	1.83002	1.65900	1.98983	1.64173	16.968	*	
BENZO(B)FLUORANTHENE	252	.92969	.97296	1.14091	1.25304	1.37234	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	.98485	1.15488	1.16496	1.18217	1.10977	7.641	*	
INDENO(1,2,3-CD)PYRENE	276	.63778	.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

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

CONTINUING CALIBRATION DATA

Continuing Calibration Check
HSL Compounds

Case No: V-4474 Calibration Date: 11/18/86

Contractor: E & EM INC. Time: 21:42

Contract No: IL-3140 Laboratory ID: C5585

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	2.27773	1.10		**
BROMOMETHANE	94	1.43187	1.40251	2.05		
VINYL CHLORIDE	62	1.60438	1.45379	9.39	*	
CHLOROETHANE	64	.69191	.57839	16.41		
METHYLENE CHLORIDE	84	1.38013	1.80915	31.09		
ACETONE	43	1.61869	.51211	68.36		
TRICHLOROFLUOROMETHANE	101	3.13900	3.04107	3.12		
CARBON DISULFIDE	76	3.82990	4.63494	21.02		
,1-DICHLOROETHENE	61	3.02810	2.90079	4.20	*	
,1-DICHLOROETHANE	63	3.36439	3.07433	8.62		**
TRANS-1,2-DICHLOROETHENE	96	1.55781	1.55938	.10		
CHLOROFORM	83	3.56796	3.27884	8.10	*	
,2-DICHLOROETHANE	62	3.55680	2.78789	21.62		
,2-DICHLOROETHANE-D4(SURR)	65	2.99858	2.47256	17.54		
-BUTANONE	72	.06798	.08058	18.54		
,1,1-TRICHLOROETHANE	97	.59787	.52614	12.00		
CARBON TETRACHLORIDE	117	.59043	.52061	11.83		
VINYL ACETATE	43	1.19023	.98374	17.35		
BROMODICHLOROMETHANE	83	.65552	.56426	13.92		
,2-DICHLOROPROPANE	63	.46960	.42193	10.15	*	
TRANS-1,3-DICHLOROPROPENE	75	.70348	.72489	3.04		
TRICHLOROETHENE	130	.40336	.38769	3.88		
DIBROMOCHLOROMETHANE	129	.55837	.44435	20.42		
,1,2-TRICHLOROETHANE	97	.36284	.33083	8.82		
BENZENE	78	1.16600	1.12150	3.82		
CIS-1,3-DICHLOROPROPENE	75	.52628	.40137	23.74		
-CHLOROETHYLVINYLETHER	63	.33081	.14344	56.64		
BROMOFORM	173	.62246	.43265	30.49		**
-METHYL-2-PENTANONE	43	1.12348	.80476	28.37		
-HEXANONE	43	.92838	.63098	32.03		
TETRACHLOROETHENE	164	.47024	.49315	2.35		
,1,2,2-TETRACHLOROETHANE	83	.80085	.77050	3.79		**
TOLUENE-D8 (SURR)	98	1.36277	1.49187	9.47		
TOLUENE	92	.89572	.94602	5.62	*	
CHLOROBENZENE	112	1.10402	1.17413	6.35		**
ETHYLBENZENE	91	1.85535	1.93682	4.39	*	

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

Continuing Calibration Check
HSL Compounds

ase No: V-4474 Calibration Date: 11/18/86

ontractor: E & EM INC. Time: 21:42

ontract No: IL-3140 Laboratory ID: C5585

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	.89671	26.11		
STYRENE	104	.98269	1.46125	48.71		
TOTAL XYLENES	91	1.41320	1.93557	36.96		

- Response Factor from daily standard file at 250.00 NGS

- Average Response Factor from Initial Calibration Form VI

iff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

No: V-4474 Calibration Date: 11/19/86

Contractor: E & EM INC. Time: 18:06

Contract No: IL-3140 Laboratory ID: >C5607

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	2.11760	8.05		**
BROMOMETHANE	94	1.43187	1.44123	.65		
VINYL CHLORIDE	62	1.60438	1.50173	6.40	*	
CHLOROETHANE	64	.69191	.62230	10.06		
METHYLENE CHLORIDE	84	1.38013	1.68931	22.40		
ACETONE	43	1.61869	1.25159	22.68		
TRICHLOROFLUOROMETHANE	101	3.13900	3.12051	.59		
CARBON DISULFIDE	76	3.82990	4.58213	19.64		
1,1-DICHLOROETHENE	61	3.02810	2.97710	1.68	*	
1,1-DICHLOROETHANE	63	3.36439	3.22214	4.23		**
TRANS-1,2-DICHLOROETHENE	96	1.55781	1.63251	4.80		
CHLOROFORM	83	3.56796	3.50348	1.81	*	
1,2-DICHLOROETHANE	62	3.55680	3.10773	12.63		
1,2-DICHLOROETHANE-D4(SURR)	65	2.99858	2.49958	16.64		
2-BUTANONE	72	.06798	.09105	33.94		
1,1,1-TRICHLOROETHANE	97	.59787	.56675	5.21		
CARBON TETRACHLORIDE	117	.59043	.55131	6.63		
VINYL ACETATE	43	1.19023	1.08264	9.04		
BROMODICHLOROMETHANE	83	.65552	.59594	9.09		
1,2-DICHLOROPROPANE	63	.46960	.43031	8.37	*	
TRANS-1,3-DICHLOROPROPENE	75	.70348	.75426	7.22		
TRICHLOROETHENE	130	.40336	.39511	2.04		
DIBROMOCHLOROMETHANE	129	.55837	.48480	13.18		
1,1,2-TRICHLOROETHANE	97	.36284	.35836	1.23		
BENZENE	78	1.16600	1.17298	.60		
CIS-1,3-DICHLOROPROPENE	75	.52628	.42868	18.55		
2-CHLOROETHYLVINYLETHER	63	.33081	.16969	48.71		
BROMOFORM	173	.62246	.48573	21.97		**
4-METHYL-2-PENTANONE	43	1.12348	.91729	18.35		
2-HEXANONE	43	.92838	.70661	23.89		
TETRACHLOROETHENE	164	.47024	.48859	3.90		
1,1,2,2-TETRACHLOROETHANE	83	.80085	.85719	7.04		**
TOLUENE-D8 (SURR)	98	1.36277	1.43502	5.30		
TOLUENE	92	.89572	.99089	10.63	*	
CHLOROBENZENE	112	1.10402	1.19144	7.92		**
ETHYLBENZENE	91	1.85535	2.01377	8.54	*	

r - 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

as : V-4474 Calibration Date: 11/19/86

ontractor: E & EM INC. Time: 18:06

ontract No: IL-3140 Laboratory ID: >C5607

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	.71831	1.02		
STYRENE	104	.98260	1.18609	20.71		
TOTAL XYLENES	91	1.41320	1.62882	15.26		

RF - Response Factor from daily standard file at 250.00 NGS

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

%Diff - % Difference from original average or curve

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

Continuing Calibration Check
HSL Compounds

ase No: V-4474 Calibration Date: 11/20/86

ontractor: E & EM INC. Time: 11:38

ontract No: II-3140 Laboratory ID: >C5625

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
CHLOROMETHANE	50	2.30296	2.42987	5.51		**
BROMOMETHANE	94	1.43187	1.46769	2.50		
VINYL CHLORIDE	62	1.60438	1.49358	6.91	*	
CHLOROETHANE	64	.69191	.59952	13.35		
ETHYLENE CHLORIDE	84	1.38013	1.48764	7.79		
CETONE	43	1.61869	.55949	65.44		
RICHLOROFLUOROMETHANE	101	3.13900	3.10244	1.16		
ARBON DISULFIDE	76	3.82990	4.60575	20.26		
,1-DICHLOROETHENE	61	3.02810	2.87683	5.00	*	
,1-DICHLOROETHANE	63	3.36439	3.01460	10.40		**
RANS-1,2-DICHLOROETHENE	96	1.55781	1.45683	6.48		
HLOROFORM	83	3.56796	3.24679	9.00	*	
,2-DICHLOROETHANE	62	3.55680	2.93058	17.61		
,2-DICHLOROETHANE-D4(SURR)	65	2.99858	2.46575	17.77		
-BUTANONE	72	.06798	.09080	33.58		
,1,1-TRICHLOROETHANE	97	.59787	.56597	5.34		
ARBON TETRACHLORIDE	117	.59043	.57275	3.00		
INYL ACETATE	43	1.19023	1.07259	9.88		
ROMODICHLOROMETHANE	83	.65552	.60799	7.25		
,2-DICHLOROPROPANE	63	.46960	.41063	12.56	*	
RANS-1,3-DICHLOROPROPENE	75	.70348	.73037	3.82		
RICHLOROETHENE	130	.40336	.38117	5.50		
IBROMOCHLOROMETHANE	129	.55837	.48928	12.37		
,1,2-TRICHLOROETHANE	97	.36284	.34186	5.78		
ENZENE	78	1.16600	1.12068	3.89		
IS-1,3-DICHLOROPROPENE	75	.52628	.42257	19.71		
-CHLOROETHYLVINYLETHER	63	.33081	.17099	48.31		
ROMOFORM	173	.62246	.47955	22.96		**
-METHYL-2-PENTANONE	43	1.12348	.70364	37.37		
-HEXANONE	43	.92838	.55330	40.40		
ETRACHLOROETHENE	164	.47024	.36644	22.07		
,1,2,2-TETRACHLOROETHANE	83	.80085	.61838	22.78		**
OLUENE-D8 (SURR)	98	1.36277	1.32780	2.57		
OLUENE	92	.89572	.90491	1.03	*	
HLOROBENZENE	112	1.10402	1.08807	1.45		**
TH NZENE	91	1.85535	1.94294	4.72	*	

F - Response Factor from daily standard file at 250.00 NGS

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

Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

Case No: U-4474 Calibration Date: 11/20/86

Contractor: E & EM INC. Time: 11:38

Contract No: IL-3140 Laboratory ID: >C5625

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	.69395	2.40		
STYRENE	104	.98260	1.17326	19.40		
TOTAL XYLENES	91	1.41320	1.59560	12.91		

F - Response Factor from daily standard file at 250.00 NGS

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

Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

se No: U-4474 Calibration Date: 11/20/86

ntractor: E & EM INC. Time: 22:58

ntract No: IL-3140 Laboratory ID: >C5636

istrument 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	2.06833	10.19		**
BROMOMETHANE	94	1.43187	1.46111	2.04		
VINYL CHLORIDE	62	1.60438	1.54894	3.46	*	
CHLOROETHANE	64	.69191	.61799	10.68		
ETHYLENE CHLORIDE	84	1.38013	1.29197	6.39		
ETONE	43	1.61869	.59728	63.10		
RICHLOROFLUOROMETHANE	101	3.13900	2.86495	8.73		
RBON DISULFIDE	76	3.82990	4.09129	6.82		
,1-DICHLOROETHENE	61	3.02810	2.71419	10.37	*	
,1-DICHLOROETHANE	63	3.36439	2.92688	13.00		**
RANS-1,2-DICHLOROETHENE	96	1.55781	1.40055	10.09		
LOROFORM	83	3.56796	3.19290	10.51	*	
,2-DICHLOROETHANE	62	3.55680	2.86675	19.40		
,2-DICHLOROETHANE-D4(SURR)	65	2.99858	2.49989	16.63		
-BUTANONE	72	.06798	.10072	48.17		
,1,1-TRICHLOROETHANE	97	.59787	.55404	7.33		
RBON TETRACHLORIDE	117	.59043	.54263	8.10		
INYL ACETATE	43	1.19023	1.04314	12.36		
ROMODICHLOROMETHANE	83	.65552	.58012	11.50		
,2-DICHLOROPROPANE	63	.46960	.40947	12.80	*	
RANS-1,3-DICHLOROPROPENE	75	.70348	.72364	2.87		
RICHLOROETHENE	130	.40336	.36862	8.61		
IBROMOCHLOROMETHANE	129	.55837	.47234	15.41		
,1,2-TRICHLOROETHANE	97	.36284	.34216	5.70		
ENZENE	78	1.16600	1.10520	5.21		
IS-1,3-DICHLOROPROPENE	75	.52628	.41574	21.01		
-CHLOROETHYLVINYLETHER	63	.33081	.15810	52.21		
ROMOFORM	173	.62246	.48274	22.45		**
-METHYL-2-PENTANONE	43	1.12348	.93900	16.42		
-HEXANONE	43	.92838	.75657	18.51		
ETRACHLOROETHENE	164	.47024	.45684	2.85		
,1,2,2-TETRACHLOROETHANE	83	.80085	.80649	.70		**
OLUENE-D8 (SURR)	98	1.36277	1.41068	3.52		
OLUENE	92	.89572	.90855	1.43	*	
HLOROBENZENE	112	1.10402	1.07271	2.84		**
THYLBENZENE	91	1.85535	1.89082	1.91	*	

F - Response Factor from daily standard file at 250.00 NGS

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

Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

ase No: V-4474 Calibration Date: 11/20/86

ontractor: E & EM INC. Time: 22:58

ontract No: IL-3140 Laboratory ID: >C5636

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	.84256	18.50		
STYRENE	104	.98260	1.39538	42.01		
TOTAL XYLENES	91	1.41320	1.95935	38.65		

F - Response Factor from daily standard file at 250.00 NGS

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

Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

ase No: U-4474 Calibration Date: 11/21/86

ontractor: E & EM INC. Time: 10:28

ontract No: IL-3140 Laboratory ID: C5648

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
CHLOROMETHANE	50	2.30296	2.58864	12.40		**
BROMOMETHANE	94	1.43187	1.57427	9.95		
VINYL CHLORIDE	62	1.60438	1.69532	5.67	*	
CHLOROETHANE	64	.69191	.73080	5.62		
ETHYLENE CHLORIDE	84	1.38013	1.67520	21.38		
ETONE	43	1.61869	.83167	48.62		
ICHLOROFLUOROMETHANE	101	3.13900	2.86302	8.79		
RBON DISULFIDE	76	3.82990	4.38662	14.54		
1-DICHLOROETHENE	61	3.02810	2.68488	11.33	*	
1-DICHLOROETHANE	63	3.36439	2.73912	18.58		**
ANS-1,2-DICHLOROETHENE	96	1.55781	1.37089	12.00		
LOROFORM	83	3.56796	3.01762	15.42	*	
2-DICHLOROETHANE	62	3.55680	2.67078	24.91		
2-DICHLOROETHANE-D4(SURR)	65	2.99858	2.48070	17.27		
BUTANONE	72	.06798	.08683	27.73		
1,1-TRICHLOROETHANE	97	.59787	.50761	15.10		
RBON TETRACHLORIDE	117	.59043	.50950	13.71		
NYL ACETATE	43	1.19023	.92806	22.03		
OMODICHLOROMETHANE	83	.65552	.53715	18.06		
2-DICHLOROPROPANE	63	.46960	.37743	19.63	*	
ANS-1,3-DICHLOROPROPENE	75	.70348	.66506	5.46		
ICHLOROETHENE	130	.40336	.34874	13.54		
BROMOCHLOROMETHANE	129	.55837	.44497	20.31		
1,2-TRICHLOROETHANE	97	.36284	.31816	12.31		
NZENE	78	1.16600	1.03981	10.82		
S-1,3-DICHLOROPROPENE	75	.52628	.38395	27.05		
CHLOROETHYLVINYLETHER	63	.33081	.14753	55.40		
OMOFORM	173	.62246	.42539	31.66		**
METHYL-2-PENTANONE	43	1.12348	.66013	41.24		
HEXANONE	43	.92838	.55063	40.69		
TRACHLOROETHENE	164	.47024	.37426	20.41		
1,2,2-TETRACHLOROETHANE	83	.80085	.72637	9.30		**
LUENE-D8 (SURR)	98	1.36277	1.42770	4.76		
LUENE	92	.89572	.85124	4.97	*	
LOROBENZENE	112	1.10402	1.02652	7.02		**
HYLBENZENE	91	1.85535	1.83861	.90	*	

- Response Factor from daily standard file at 250.00 NGS

- Average Response Factor from Initial Calibration Form VI

.ff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

se No: U-4474 Calibration Date: 11/21/86

ntractor: E & EM INC. Time: 10:28

ntract No: IL-3140 Laboratory ID: >C5648

strument 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
-BROMOFLUOROBENZENE(SURR)	95	.71103	.73997	4.07		
TYRENE	104	.98260	1.10078	12.03		
OTAL XYLENES	91	1.41320	1.51512	7.21		

- Response Factor from daily standard file at 250.00 NGS

- Average Response Factor from Initial Calibration Form VI

ff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

Case No: V-4474

Calibration Date: 11/24/86

Contractor: E & EM INC.

Time: 23:06

Contract No: IL-3140

Laboratory ID: C5685

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	2.09830	8.89		**
BROMOMETHANE	94	1.43187	1.32417	7.52		
VINYL CHLORIDE	62	1.60438	1.26573	21.11	*	
CHLOROETHANE	64	.69191	.53284	22.99		
METHYLENE CHLORIDE	84	1.38013	1.56332	13.27		
ACETONE	43	1.61869	1.40209	13.38		
TRICHLOROFLUOROMETHANE	101	3.13900	2.62456	16.39		
CARBON DISULFIDE	76	3.82990	4.24752	10.90		
1,1-DICHLOROETHENE	61	3.02810	2.61429	13.67	*	
1,1-DICHLOROETHANE	63	3.36439	3.05814	9.10		**
TRANS-1,2-DICHLOROETHENE	96	1.55781	1.44568	7.20		
CHLOROFORM	83	3.56796	3.34959	6.12	*	
1,2-DICHLOROETHANE	62	3.55680	3.11807	12.33		
1,2-DICHLOROETHANE-D4(SURR)	65	2.99858	2.58757	13.71		
2-BUTANONE	72	.06798	.09317	37.05		
1,1,1-TRICHLOROETHANE	97	.59787	.51674	13.57		
CARBON TETRACHLORIDE	117	.59043	.48802	17.35		
VINYL ACETATE	43	1.19023	1.09800	7.75		
BROMODICHLOROMETHANE	83	.65552	.59091	9.86		
1,2-DICHLOROPROPANE	63	.46960	.42367	9.78	*	
TRANS-1,3-DICHLOROPROPENE	75	.70348	.75043	6.67		
TRICHLOROETHENE	130	.40336	.36192	10.27		
DIBROMOCHLOROMETHANE	129	.55837	.48059	13.93		
1,1,2-TRICHLOROETHANE	97	.36284	.34764	4.19		
BENZENE	78	1.16600	1.10875	4.91		
CIS-1,3-DICHLOROPROPENE	75	.52628	.43617	17.12		
2-CHLOROETHYLVINYLETHER	63	.33031	.17998	45.59		
BROMOFORM	173	.62246	.46099	25.94		**
4-METHYL-2-PENTANONE	43	1.12348	.77400	31.11		
2-HEXANONE	43	.92838	.65761	29.17		
TETRACHLOROETHENE	164	.47024	.39207	16.62		
1,1,2,2-TETRACHLOROETHANE	83	.80085	.78740	1.68		**
TOLUENE-D8 (SURR)	98	1.36277	1.42065	4.25		
TOLUENE	92	.89572	1.12208	25.27	*	
CHLOROBENZENE	112	1.10402	1.09422	.89		**
ETHYLBENZENE	91	1.85535	1.87332	.97	*	

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

Continuing Calibration Check
HSL Compounds

Case No: V-4474

Calibration Date: 11/24/86

Contractor: E & EM INC.

Time: 23:06

Contract No: IC-3140

Laboratory ID: C5685

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	.70318	1.10		
STYRENE	104	.98260	1.15335	17.38		
TOTAL XYLENES	91	1.41320	1.55499	10.03		

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

Continuing Calibration Check
HSL Compounds

se V-4474 Calibration Date: 11/25/86

ntractor: E & EM INC. Time: 09:58

ntract No: IL-3140 Laboratory ID: >C5697

strument 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
LOROMETHANE	50	2.30296	2.18012	5.33		**
ROMOMETHANE	94	1.43187	1.40044	2.20		
INYL CHLORIDE	62	1.60438	1.43675	10.45	*	
HLOROETHANE	64	.69191	.55169	20.26		
ETHYLENE CHLORIDE	84	1.38013	1.44370	4.61		
CETONE	43	1.61869	.92859	42.63		
ICHLOROFLUOROMETHANE	101	3.13900	3.45583	10.09		
RBON DISULFIDE	76	3.82990	5.06948	32.37		
1-DICHLOROETHENE	61	3.02810	3.24600	7.20	*	
1-DICHLOROETHANE	63	3.36439	3.49743	3.95		**
ANS-1,2-DICHLOROETHENE	96	1.55781	1.70996	9.77		
LOROFORM	83	3.56796	3.76267	5.46	*	
2-DICHLOROETHANE	62	3.55680	3.37036	5.24		
2-DICHLOROETHANE-D4(SURR)	65	2.99858	2.51274	16.20		
BUTANONE	72	.06798	.10435	53.50		
1,1-TRICHLOROETHANE	97	.59787	.65846	10.13		
RBON TETRACHLORIDE	117	.59043	.64423	9.11		
NYL ACETATE	43	1.19023	1.15544	2.92		
OMODICHLOROMETHANE	83	.65552	.67986	3.71		
2-DICHLOROPROPANE	63	.46960	.47484	1.12	*	
ANS-1,3-DICHLOROPROPENE	75	.70348	.85174	21.08		
ICHLOROETHENE	130	.40336	.46262	14.69		
BROMOCHLOROMETHANE	129	.55837	.56007	.30		
1,2-TRICHLOROETHANE	97	.36284	.39743	9.53		
NZENE	78	1.16600	1.29478	11.05		
S-1,3-DICHLOROPROPENE	75	.52628	.48277	8.27		
CHLOROETHYLVINYLETHER	63	.33081	.20072	39.33		
OMOFORM	173	.62246	.56474	9.27		**
METHYL-2-PENTANONE	43	1.12348	1.02816	8.48		
HEXANONE	43	.92838	.83046	10.55		
TRACHLOROETHENE	164	.47024	.54105	15.06		
1,2,2-TETRACHLOROETHANE	83	.80085	.86173	7.60		**
LUENE-D8 (SURR)	98	1.36277	1.42593	4.63		
LUENE	92	.89572	1.08577	21.22	*	
LOROBENZENE	112	1.10402	1.27994	15.93		**
HYLBENZENE	91	1.85535	2.19459	18.28	*	

- Response Factor from daily standard file at 250.00 NGS

- Average Response Factor from Initial Calibration Form VI

ff - % Difference from original average or curve

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

Continuing Calibration Check
HSL Compounds

se V-4474 Calibration Date: 11/25/86

ntractor: E & EM INC. Time: 09:58

ntract No: IL-3140 Laboratory ID: >C5697

strument 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
BROMOFLUOROBENZENE(SURR)	95	.71103	.80569	13.31		
TYRENE	104	.98260	1.65642	68.58		
OTAL XYLENES	91	1.41320	2.29163	62.16		

- Response Factor from daily standard file at 250.00 NGS

- Average Response Factor from Initial Calibration Form VI

ff - % Difference from original average or curve

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

Continuing Calibration Check
HSL Compounds

Case No: V-4474

Calibration Date: 11/25/86

Contractor: E & EM INC.

Time: 22:07

Contract No: IL-3140

Laboratory ID: DC5710

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	1.57132	31.77		**
BROMOMETHANE	94	1.43187	.94206	34.21		
VINYL CHLORIDE	62	1.60438	.92489	42.35	*	
CHLOROETHANE	64	.69191	.31986	53.77		
METHYLENE CHLORIDE	84	1.38013	2.18028	57.98		
ACETONE	43	1.61869	.52711	67.44		
TRICHLOROFLUOROMETHANE	101	3.13900	3.10321	1.14		
CARBON DISULFIDE	76	3.82990	5.17306	35.07		
1,1-DICHLOROETHENE	61	3.02810	2.77406	8.39	*	
1,1-DICHLOROETHANE	63	3.36439	2.91123	13.47		**
TRANS-1,2-DICHLOROETHENE	96	1.55781	1.50940	3.11		
CHLOROFORM	83	3.56796	3.17297	11.07	*	
1,2-DICHLOROETHANE	62	3.55680	2.72980	23.25		
1,2-DICHLOROETHANE-D4(SURR)	65	2.99858	2.33030	22.29		
2-BUTANONE	72	.06798	.09601	41.24		
1,1,1-TRICHLOROETHANE	97	.59787	.59408	.63		
CARBON TETRACHLORIDE	117	.59043	.58105	1.59		
VINYL ACETATE	43	1.19023	.93630	21.33		
BROMODICHLOROMETHANE	83	.65552	.63185	3.61		
1,2-DICHLOROPROPANE	63	.46960	.43748	6.84	*	
TRANS-1,3-DICHLOROPROPENE	75	.70348	.78795	12.01		
TRICHLOROETHENE	130	.40336	.39267	2.65		
DIBROMOCHLOROMETHANE	129	.55837	.51495	7.78		
1,1,2-TRICHLOROETHANE	97	.36284	.37217	2.57		
BENZENE	78	1.16600	1.19742	2.69		
CIS-1,3-DICHLOROPROPENE	75	.52628	.45471	13.60		
2-CHLOROETHYLVINYLETHER	63	.33081	.16304	50.71		
BROMOFORM	173	.62246	.47975	22.97		**
4-METHYL-2-PENTANONE	43	1.12348	.83348	25.81		
2-HEXANONE	43	.92838	.67300	27.51		
TETRACHLOROETHENE	164	.47024	.44397	5.59		
1,1,2,2-TETRACHLOROETHANE	83	.80085	.81164	1.35		**
TOLUENE-D8 (SURR)	98	1.36277	1.48370	8.87		
TOLUENE	92	.89572	.94587	5.60	*	
CHLOROBENZENE	112	1.10402	1.13040	2.39		**
ETHYLBENZENE	91	1.85535	1.95504	5.37	*	

RF - Response Factor from daily standard file at 250.00 NGS

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

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

Continuing Calibration Check
HSL Compounds

Case No: U-4474

Calibration Date: 11/25/86

Contractor: E & EM INC.

Time: 22:07

Contract No: IL-3140

Laboratory ID: >C5710

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	.73862	3.88		
STYRENE	104	.98260	1.16413	18.49		
TOTAL XYLENES	91	1.41320	1.58305	12.02		

RF - Response Factor from daily standard file at 250.00 NGS

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

Continuing Calibration Check
HSL Compounds

Case No: V-4474 Calibration Date: 11/26/86

Contractor: E & EM INC. Time: 10:00

Contract No: IL-3140 Laboratory ID: C5723

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	3.02643	31.41		**
BROMOMETHANE	94	1.43187	1.76812	23.48		
VINYL CHLORIDE	62	1.60438	1.76557	10.05	*	
CHLOROETHANE	64	.69191	.89439	29.27		
METHYLENE CHLORIDE	84	1.38013	1.77499	28.61		
ACETONE	43	1.61869	1.55480	3.95		
TRICHLOROFLUOROMETHANE	101	3.13900	2.81732	10.25		
CARBON DISULFIDE	76	3.82990	4.05990	6.01		
1,1-DICHLOROETHENE	61	3.02810	2.74446	9.37	*	
1,1-DICHLOROETHANE	63	3.36439	3.15614	6.19		**
TRANS-1,2-DICHLOROETHENE	96	1.55781	1.50388	3.46		
CHLOROFORM	83	3.56796	3.64877	2.26	*	
1,2-DICHLOROETHANE	62	3.55680	3.81677	7.31		
1,2-DICHLOROETHANE-D4(SURR)	65	2.99858	3.42448	14.20		
2-BUTANONE	72	.06798	.07862	15.66		
1,1,1-TRICHLOROETHANE	97	.59787	.45627	23.68		
CARBON TETRACHLORIDE	117	.59043	.46454	21.32		
VINYL ACETATE	43	1.19023	.88136	25.95		
BROMODICHLOROMETHANE	83	.65552	.52407	20.05		
1,2-DICHLOROPROPANE	63	.46960	.38000	19.08	*	
TRANS-1,3-DICHLOROPROPENE	75	.70348	.66049	6.11		
TRICHLOROETHENE	130	.40336	.39261	2.67		
DIBROMOCHLOROMETHANE	129	.55837	.46244	17.18		
1,1,2-TRICHLOROETHANE	97	.36284	.32605	10.14		
BENZENE	78	1.16600	1.01648	12.82		
CIS-1,3-DICHLOROPROPENE	75	.52628	.40208	23.60		
2-CHLOROETHYLVINYLETHER	63	.33081	.17378	47.47		
BROMOFORM	173	.62246	.49771	20.04		**
4-METHYL-2-PENTANONE	43	1.12348	.88894	20.88		
2-HEXANONE	43	.92838	.72336	22.08		
TETRACHLOROETHENE	164	.47024	.43761	6.94		
1,1,2,2-TETRACHLOROETHANE	83	.80085	.62613	21.82		**
TOLUENE-D8 (SURR)	98	1.36277	1.37526	.92		
TOLUENE	92	.89572	.84208	5.99	*	
CHLOROBENZENE	112	1.10402	1.04142	5.67		**
ETHYLBENZENE	91	1.85535	1.73311	6.59	*	

RF - Response Factor from daily standard file at 250.00 NGS

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

Continuing Calibration Check
HSL Compounds

Case No: U-4474 Calibration Date: 11/26/86

Contractor: E & EM INC. Time: 10:00

Contract No: IL-3140 Laboratory ID: 6C5723

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	.70577	.74		
STYRENE	104	.98260	.99341	1.10		
TOTAL XYLENES	91	1.41320	1.39290	1.44		

RF - Response Factor from daily standard file at 250.00 NGS

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

NOTE: % Diff [illegible]

Continuing Calibration Check
HSL Compounds

se U-4474 Calibration Date: 11/26/86

ntractor: E & EM INC. Time: 20:57

ntract No: IL-3140 Laboratory ID: >C5810

strument 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
LOROMETHANE	50	2.30296	3.23934	40.66		**
BROMOMETHANE	94	1.43187	1.82947	27.77		
VINYL CHLORIDE	62	1.60438	1.85666	15.72	*	
CHLOROETHANE	64	.69191	.90329	30.55		
METHYLENE CHLORIDE	84	1.38013	1.91469	38.73		
ETONE	43	1.61869	.97385	39.84		
ICHLOROFLUOROMETHANE	101	3.13900	3.54199	12.84		
RBON DISULFIDE	76	3.82990	4.95725	29.44		
1-DICHLOROETHENE	61	3.02810	3.26705	7.89	*	
1-DICHLOROETHANE	63	3.36439	3.54180	5.27		**
ANS-1,2-DICHLOROETHENE	96	1.55781	1.71281	9.95		
LOROFORM	83	3.56796	4.00615	12.28	*	
2-DICHLOROETHANE	62	3.55680	4.05845	14.10		
2-DICHLOROETHANE-D4(SURR)	65	2.99858	3.04005	1.38		
BUTANONE	72	.06798	.07221	6.23		
1,1-TRICHLOROETHANE	97	.59787	.53650	10.27		
RBON TETRACHLORIDE	117	.59043	.54360	7.93		
NYL ACETATE	43	1.19023	.94767	20.38		
OMODICHLOROMETHANE	83	.65552	.58175	11.25		
2-DICHLOROPROPANE	63	.46960	.42375	9.76	*	
ANS-1,3-DICHLOROPROPENE	75	.70348	.75241	6.96		
ICHLOROETHENE	130	.40336	.45141	11.91		
BROMOCHLOROMETHANE	129	.55837	.50743	9.12		
1,2-TRICHLOROETHANE	97	.36284	.35851	1.19		
NZENE	78	1.16600	1.15837	.65		
S-1,3-DICHLOROPROPENE	75	.52628	.44459	15.52		
CHLOROETHYLVINYLETHER	63	.33081	.20307	38.61		
OMOFORM	173	.62246	.52285	16.00		**
METHYL-2-PENTANONE	43	1.12348	.95043	15.40		
HEXANONE	43	.92838	.72768	21.62		
TRACHLOROETHENE	164	.47024	.50840	8.12		
1,2,2-TETRACHLOROETHANE	83	.80085	.68100	14.97		**
LUENE-D8 (SURR)	98	1.36277	1.33640	1.94		
LUENE	92	.89572	.95443	6.55	*	
LOROBENZENE	112	1.10402	1.15542	4.65		**
HYLBENZENE	91	1.85535	1.94955	5.08	*	

- Response Factor from daily standard file at 250.00 NGS

- Average Response Factor from Initial Calibration Form VI

iff - % Difference from original average or curve

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

Continuing Calibration Check
HSL Compounds

Case : U-4474 Calibration Date: 11/26/86

Contractor: E & EM INC. Time: 20:57

Contract No: IL-3140 Laboratory ID: >C5810

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	.66839	6.00		
STYRENE	104	.98260	1.15971	18.03		
TOTAL XYLENES	91	1.41320	1.59302	12.72		

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

Cas. No: U-4474 Calibration Date: 12/04/86

Contractor: E & E, INC. Time: 10:34

Contract No: IL-3140 Laboratory ID: >B3167

Instrument ID: HP-5970 Initial Calibration Date: 07/31/86

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

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
PHENOL-D5	(SURR) 99	1.37894	1.38272	.27		
PENTAFLUOROPHENOL	184	-	-	-		
2-FLUOROPHENOL	(SURR) 112	.86917	~~.94309~~	~~8.50~~		
PHENOL	94	1.27723	1.38708	8.60	*	
2-METHYL PHENOL	108	1.06214	1.03469	2.58		
2-CHLOROPHENOL	128	1.17232	1.22900	4.83		
4-METHYL PHENOL	108	1.06894	1.06465	.40		
2-NITROPHENOL	139	.19333	.22252	15.10	*	
2,4-DIMETHYLPHENOL	122	.27900	.30053	7.72		
BENZOIC ACID	105	.23920	.21026	12.10		
2,4-DICHLOROPHENOL	162	.30213	.33996	12.52	*	
4-CHLORO-3-METHYLPHENOL	107	.33099	.29933	9.56	*	
2,4,6-TRICHLOROPHENOL	196	.44521	.52079	16.98	*	
2,4,5-TRICHLOROPHENOL	196	.51987	.53848	3.58		
2,4,6-TRIBROMOPHENOL	(SURR) 330	.32822	.24016	26.83		
2,4-DINITROPHENOL	184	.16189	.17493	8.05		**
4-NITROPHENOL	139	.16233	.09837	39.40		**
4,6-DINITRO-2-METHYLPHENOL	198	.14211	.15358	8.07		
PENTACHLOROPHENOL	266	.17144	.15834	7.64	*	

AJK RF = 1.02715 % DIFF = 18.18

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 .o: V-4474 Calibration Date: 12/04/86

ontractor: E & E, INC. Time: 11:31

ontract No: IL-3140 Laboratory ID: >B3168

nstrument ID: HP-5970 Initial Calibration Date: 07/30/86

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

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
ANILINE	93	1.52341	.91965	39.63		
BIS(-2-CHLOROETHYL)ETHER	93	1.23992	.91965	25.83		
1,3-DICHLOROBENZENE	146	1.38276	1.32914	3.88		
1,4-DICHLOROBENZENE	146	1.36777	1.34545	1.63	*	
BENZYL ALCOHOL	79	1.07958	.77026	28.65		
,2-DICHLOROBENZENE	146	1.42808	1.40141	1.87		
IS(2-CHLOROISOPROPYL)ETHER	45	2.97018	2.18373	26.48		
-NITROSO-DI-N-PROPYLAMINE	70	1.29228	.91043	29.55		**
EXACHLOROETHANE	117	.70913	.62218	12.26		
ITROBENZENE-D5 (SURR)	82	.40084	.34551	13.81		
ITROBENZENE	77	.41948	.31704	24.42		
SOPHORONE	82	.80995	.63647	21.42		
IS(-2-CHLOROETHOXY)METHANE	93	.45577	.39491	13.35		
,2,4-TRICHLOROBENZENE	180	.37851	.36108	4.61		
APHTHALENE	128	.98472	.94885	3.64		
-CHLOROANILINE	127	.39458	-	-		
EXACHLOROBUTADIENE	225	.25803	.23670	8.27	*	
-METHYLNAPHTHALENE	142	.62355	.54983	11.82		
EXACHLOROCYCLOPENTADIENE	237	.45397	.50439	11.11		**
-FLUOROBIPHENYL (SURR)	172	1.33061	1.68869	26.91		
-CHLORONAPHTHALENE	162	1.20816	1.39915	15.81		
-NITROANILINE	65	.43896	.35436	19.27		
IMETHYL PHTHALATE	163	1.43709	1.36962	4.70		
-NITROANILINE	138	.25992	.10770	58.56		
IBENZOFURAN	168	1.61498	1.62794	.80		
CENAPHTHYLENE	152	1.80371	1.95050	8.14		
LUORENE	166	1.19425	1.11056	7.01		
-NITROANILINE	138	.15454	.02744	82.25		
CENAPHTHENE	153	1.18706	1.24951	5.26	*	
,4-DINITROTOLUENE	165	.38188	.24608	35.56		
,6-DINITROTOLUENE	165	.35087	.29678	15.41		
IETHYLPHTHALATE	149	1.39014	1.17841	15.23		
-CHLOROPHENYL-PHENYLETHER	204	.62534	.55553	11.16		
-NITROSODIPHENYLAMINE	169	.42524	.51228	20.47	*	
-BROMOPHENYL-PHENYL ETHER	248	.26659	.30393	14.01		
EXACHLOROBENZENE	284	.34094	.31574	7.39		

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

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

Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

se . . . V-4474 Calibration Date: 12/04/86

ntractor: E & E, INC. Time: 11:31

ntract No: IL-3140 Laboratory ID: >B3168

strument ID: HP-5970 Initial Calibration Date: 07/30/86

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

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
HENANTHRENE	178	.97758	1.00053	2.35		
NTHRACENE	178	1.00646	.98359	2.27		
I-N-BUTYLPHTHALATE	149	1.12721	1.04541	7.26		
LUORANTHENE	202	.81517	.71542	12.24	*	
ENZIDINE		-	-	-		
RENE	202	1.60192	1.86899	16.67		
RPHENYL-D14 (SURR)	244	1.11052	1.00153	9.81		
TYLBENZYLPHTHALATE	149	.67361	.65763	2.37		
3'DICHLOROBENZIDINE	252	.31882	.14762	53.70		
ZO(A)ANTHRACENE	228	1.12037	.97824	12.69		
3(2-ETHYLHEXYL)PHTHALATE	149	.90083	.87568	2.79		
RYSENE	228	1.12666	1.10689	1.75		
-N-OCTYL PHTHALATE	149	1.70682	1.78380	4.51	*	
ZO(B)FLUORANTHENE	252	1.21474	1.04643	13.86		
ZO(K)FLUORANTHENE	252	1.23716	1.29858	4.96		
ZO(A)PYRENE	252	1.12089	1.04088	7.14	*	
ENO(1,2,3-CD)PYRENE	276	1.04154	.87987	15.52		
ENZ(A,H)ANTHRACENE	278	1.06755	.90079	15.62		
ZO(G,H,I)PERYLENE	276	1.15866	1.02837	11.25		

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

- Average Response Factor from Initial Calibration Form VI

ff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

ɜe No: V-4474 Calibration Date: 12/19/86

ıtractor: E & E, INC. Time: 11:48

ıtract No: IL-3140 Laboratory ID: ›B3184

ıtrument ID: HP-5970 Initial Calibration Date: 07/30/86

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

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
NILINE	93	1.52341	.95203	37.51		
IS(-2-CHLOROETHYL)ETHER	93	1.23992	.95203	23.22		
3-DICHLOROBENZENE	146	1.38276	1.29419	6.41		
-DICHLOROBENZENE	146	1.36777	1.33202	2.61	*	
ZYL ALCOHOL	79	1.07958	.75381	30.18		
-DICHLOROBENZENE	146	1.42808	1.38815	2.80		
(2-CHLOROISOPROPYL)ETHER	45	2.97018	2.27213	23.50		
ITROSO-DI-N-PROPYLAMINE	70	1.29228	1.03539	19.88		**
ACHLOROETHANE	117	.70913	.63405	10.59		
ROBENZENE-D5 (SURR)	82	.40084	.33614	16.14		
ROBENZENE	77	.41948	.33591	19.92		
PHORONE	82	.80995	.67808	16.28		
(-2-CHLOROETHOXY)METHANE	93	.45577	.39740	12.81		
,4-TRICHLOROBENZENE	180	.37851	.34330	9.30		
HTHALENE	128	.98472	.93894	4.65		
HLOROANILINE	127	.39458	.12401	68.57		
ACHLOROBUTADIENE	225	.25803	.21425	16.97	*	
ETHYLNAPHTHALENE	142	.62355	.58466	6.24		
ACHLOROCYCLOPENTADIENE	237	.45397	.40440	10.92		**
LUOROBIPHENYL (SURR)	172	1.33061	1.55190	16.63		
HLORONAPHTHALENE	162	1.20816	1.31473	8.82		
ITROANILINE	65	.43896	.39949	8.99		
ETHYL PHTHALATE	163	1.43709	1.42937	.54		
ITROANILINE	138	.25992	.19982	23.12		
ENZOFURAN	168	1.61498	1.64853	2.08		
NAPHTHYLENE	152	1.80371	1.96848	9.13		
ORENE	166	1.19425	1.15179	3.56		
ITROANILINE	138	.15454	.12739	17.57		
NAPHTHENE	153	1.18706	1.24097	4.54	*	
-DINITROTOLUENE	165	.38188	.34986	8.39		
-DINITROTOLUENE	165	.35087	.32646	6.96		
THYLPHTHALATE	149	1.39014	1.30896	5.84		
HLOROPHENYL-PHENYLETHER	204	.62534	.55230	11.68		
ITROSODIPHENYLAMINE	169	.42524	.45971	8.11	*	
RO ENYL-PHENYL ETHER	248	.26659	.22981	13.80		
ACHLOROBENZENE	284	.34094	.24936	26.86		

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

- Average Response Factor from Initial Calibration Form VI

Continuing Calibration Check
HSL Compounds

Case No: V-4474 Calibration Date: 12/19/86

Contractor: E & E, INC. Time: 11:48

Contract No: IL-3140 Laboratory ID: >B3184

nstrument ID: HP-5970 Initial Calibration Date: 07/30/86

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

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
PHENANTHRENE	178	.97758	.97611	.15		
ANTHRACENE	178	1.00646	1.00086	.56		
DI-N-BUTYLPHTHALATE	149	1.12721	1.23309	9.39		
LUORANTHENE	202	.81517	.95515	17.17	*	
ENZIDINE		-	-	-		
YRENE	202	1.60192	1.24664	22.18		
ERPHENYL-D14 (SURR)	244	1.11052	.75240	32.25		
UTYLBENZYLPHTHALATE	149	.67361	.65625	2.58		
,3'DICHLOROBENZIDINE	252	.31882	.30181	5.34		
ENZO(A)ANTHRACENE	228	1.12037	1.02235	8.75		
IS(2-ETHYLHEXYL)PHTHALATE	149	.90083	.91745	1.84		
HRYSENE	228	1.12666	1.04136	7.57		
I-N-OCTYL PHTHALATE	149	1.70682	1.76162	3.21	*	
ENZO(B)FLUORANTHENE	252	1.21474	1.18053	2.82		
ENZO(K)FLUORANTHENE	252	1.23716	1.06001	14.32		
ENZO(A)PYRENE	252	1.12089	1.02038	8.97	*	
NDENO(1,2,3-CD)PYRENE	276	1.04154	.99872	4.11		
IBENZ(A,H)ANTHRACENE	278	1.06755	.94721	11.27		
ENZO(G,H,I)PERYLENE	276	1.15866	1.07114	7.55		

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

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

Continuing Calibration Check
HSL Compounds

se No: V-4474 Calibration Date: 12/19/86

ntractor: E & E, INC. Time: 13:52

ntract No: IL-3140 Laboratory ID: >B3186

strument ID: HP-5970 Initial Calibration Date: 07/31/86

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

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
HENOL-D5	(SURR)	99 1.37894	1.43002	3.70		
ENTAFLUOROPHENOL		184 -	-	-		
-FLUOROPHENOL	(SURR)	112 .86917	.37506	56.85		
HENOL		94 1.27723	1.44125	12.84	*	
-METHYL PHENOL		108 1.06214	1.07387	1.10		
HLOROPHENOL		128 1.17232	1.26496	7.90		
ETHYL PHENOL		108 1.06894	1.07728	.78		
ITROPHENOL		139 .19333	.21739	12.45	*	
-DIMETHYLPHENOL		122 .27900	.28956	3.79		
ZOIC ACID		105 .23920	.17445	27.07		
-DICHLOROPHENOL		162 .30213	.32864	8.77	*	
HLORO-3-METHYLPHENOL		107 .33099	.28964	12.49	*	
,6-TRICHLOROPHENOL		196 .44521	.51136	14.86	*	
,5-TRICHLOROPHENOL		196 .51987	.50532	2.80		
,6-TRIBROMOPHENOL	(SURR)	330 .32822	.21937	33.16		
-DINITROPHENOL		184 .16189	.13403	17.21		**
ITROPHENOL		139 .16233	.08825	45.63		**
-DINITRO-2-METHYLPHENOL		198 .14211	.14215	.02		
TACHLOROPHENOL		266 .17144	.12650	26.21	*	

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

- Average Response Factor from Initial Calibration Form VI

ff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

ıse No: U-4474 Calibration Date: 12/22/86

ıntractor: E & E, INC. Time: 12:47

ıntract No: IL-3140 Laboratory ID: ›83199

ıstrument ID: HP-5970 Initial Calibration Date: 07/30/86

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

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
ANILINE	93	1.52341	1.10154	27.69		
BIS(-2-CHLOROETHYL)ETHER	93	1.23992	1.10154	11.16		
1,3-DICHLOROBENZENE	146	1.38276	1.28570	7.02		
1,4-DICHLOROBENZENE	146	1.36777	1.33225	2.60	*	
NZYL ALCOHOL	79	1.07958	.68041	36.97		
2-DICHLOROBENZENE	146	1.42808	1.36141	4.67		
S(2-CHLOROISOPROPYL)ETHER	45	2.97018	2.31905	21.92		
NITROSO-DI-N-PROPYLAMINE	70	1.29228	.99127	23.29		**
XACHLOROETHANE	117	.70913	.63177	10.91		
TROBENZENE-D5 (SURR)	82	.40084	.35356	11.80		
TROBENZENE	77	.41948	.35673	14.96		
OPHORONE	82	.80995	.65361	19.30		
S(-2-CHLOROETHOXY)METHANE	93	.45577	.41533	8.87		
2,4-TRICHLOROBENZENE	180	.37851	.34367	9.20		
PHTHALENE	128	.98472	.94038	4.50		
CHLOROANILINE	127	.39458	.04422	88.79		
XACHLOROBUTADIENE	225	.25803	.21347	17.27	*	
METHYLNAPHTHALENE	142	.62355	.56757	8.98		
XACHLOROCYCLOPENTADIENE	237	.45397	.43457	4.27		**
FLUOROBIPHENYL (SURR)	172	1.33061	1.62950	22.46		
CHLORONAPHTHALENE	162	1.20816	1.35296	11.99		
NITROANILINE	65	.43896	.39884	9.14		
METHYL PHTHALATE	163	1.43709	1.47385	2.56		
NITROANILINE	138	.25992	.03727	85.66		
BENZOFURAN	168	1.61498	1.65585	2.53		
ENAPHTHYLENE	152	1.80371	2.05352	13.85		
UORENE	166	1.19425	1.15907	2.95		
NITROANILINE	138	.15454	.03810	75.35		
ENAPHTHENE	153	1.18706	1.31432	10.72	*	
4-DINITROTOLUENE	165	.38188	.28118	26.37		
6-DINITROTOLUENE	165	.35087	.31405	10.49		
ETHYLPHTHALATE	149	1.39014	1.28682	7.43		
CHLOROPHENYL-PHENYLETHER	204	.62534	.57133	8.64		
NITROSODIPHENYLAMINE	169	.42524	.34825	18.11	*	
BROMOPHENYL-PHENYL ETHER	248	.26659	.27674	3.81		
XAC ROBENZENE	284	.34094	.28233	17.19		

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

- Average Response Factor from Initial Calibration Form VI

ff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

Case No: V-4474 Calibration Date: 12/22/86

Contractor: E & E, INC. Time: 12:47

Contract No: IL-3140 Laboratory ID: >B3199

Instrument ID: HP-5970 Initial Calibration Date: 07/30/86

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

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
PHENANTHRENE	178	.97758	.98088	.34		
ANTHRACENE	178	1.00646	.95725	4.89		
DI-N-BUTYLPHTHALATE	149	1.12721	.93906	16.69		
FLUORANTHENE	202	.81517	.62129	23.78	*	
BENZIDINE		-	-	-		
PYRENE	202	1.60192	1.73313	8.19		
TERPHENYL-D14 (SURR)	244	1.11052	.90316	18.67		
BUTYLBENZYLPHTHALATE	149	.67361	.66834	.78		
3,3'DICHLOROBENZIDINE	252	.31882	.20579	35.45		
BENZO(A)ANTHRACENE	228	1.12037	1.00852	9.98		
BIS(2-ETHYLHEXYL)PHTHALATE	149	.90083	.89959	.14		
CHRYSENE	228	1.12666	1.05851	6.05		
DI-N-OCTYL PHTHALATE	149	1.70682	1.88016	10.16	*	
BENZO(B)FLUORANTHENE	252	1.21474	1.04981	13.58		
BENZO(K)FLUORANTHENE	252	1.23716	1.27378	2.96		
BENZO(A)PYRENE	252	1.12089	1.04526	6.75	*	
INDENO(1,2,3-CD)PYRENE	276	1.04154	.96745	7.11		
DIBENZ(A,H)ANTHRACENE	278	1.06755	.94002	11.95		
BENZO(G,H,I)PERYLENE	276	1.15866	1.09189	5.76		

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

ase No: V-4474 Calibration Date: 12/22/86

ontractor: E & E, INC. Time: 13:47

ontract No: IL-3140 Laboratory ID: >B3200

nstrument ID: HP-5970 Initial Calibration Date: 07/31/86

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

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
PHENOL-D5	(SURR) 99	1.37894	1.09761	20.40		
PENTAFLUOROPHENOL	184	-	-	-		
-FLUOROPHENOL	(SURR) 112	.86917	-	-		
HENOL	94	1.27723	1.21733	4.69	*	
-METHYL PHENOL	108	1.06214	1.11051	4.55		
-CHLOROPHENOL	128	1.17232	1.34298	14.56		
-METHYL PHENOL	108	1.06894	1.15438	7.99		
-NITROPHENOL	139	.19333	.21596	11.71	*	
,4-DIMETHYLPHENOL	122	.27900	.29262	4.88		
ENZOIC ACID	105	.23920	.16475	31.13		
,4-DICHLOROPHENOL	162	.30213	.32170	6.48	*	
-CHLORO-3-METHYLPHENOL	107	.33099	.26415	20.19	*	
,4,6-TRICHLOROPHENOL	196	.44521	.52091	17.00	*	
,4,5-TRICHLOROPHENOL	196	.51987	.49826	4.16		
,4,6-TRIBROMOPHENOL	(SURR) 330	.32822	.20648	37.09		
,4-DINITROPHENOL	184	.16189	.14865	8.18		**
-NITROPHENOL	139	.16233	.13195	18.71		**
,6-DINITRO-2-METHYLPHENOL	198	.14211	.15188	6.87		
ENTACHLOROPHENOL	266	.17144	.14124	17.61	*	

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

- Average Response Factor from Initial Calibration Form VI

Continuing Calibration Check
HSL Compounds

C ɜ No: V-4474

Calibration Date: 12/22/86

Contractor: E & E, INC.

Time: 12:10

Contract No: IL-3140

Laboratory ID: >D1337

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	1.08892	29.31		
BIS(-2-CHLOROETHYL)ETHER	93	1.18428	.95262	19.56		
1,3-DICHLOROBENZENE	146	1.47624	1.33904	9.29		
1,4-DICHLOROBENZENE	146	1.46874	1.35065	8.04	*	
BENZYL ALCOHOL	79	1.13473	.90778	20.00		
1,2-DICHLOROBENZENE	146	1.49193	1.37643	7.74		
BIS(2-CHLOROISOPROPYL)ETHER	45	2.68137	2.11683	21.05		
N-NITROSO-DI-N-PROPYLAMINE	70	1.18117	.96444	18.35		**
HEXACHLOROETHANE	117	.70841	.61426	13.29		
NITROBENZENE-D5 (SURR)	82	.37437	.31702	15.32		
NITROBENZENE	77	.37969	.31984	15.77		
ISOPHORONE	82	.75594	.60614	19.82		
BIS(-2-CHLOROETHOXY)METHANE	93	.41266	.36579	11.36		
1,2,4-TRICHLOROBENZENE	180	.38442	.38132	.81		
NAPHTHALENE	128	.96668	.87840	9.13		
4-CHLOROANILINE	127	.37796	.35656	5.66		
HEXACHLOROBUTADIENE	225	.25908	.26606	2.70	*	
2-METHYLNAPHTHALENE	142	.64484	.63476	1.56		
HEXACHLOROCYCLOPENTADIENE	237	.56814	.51556	9.25		**
2-FLUOROBIPHENYL (SURR)	172	1.61321	1.60436	.55		
2-CHLORONAPHTHALENE	162	1.37281	1.35435	1.34		
2-NITROANILINE	65	.47645	.38662	18.86		
DIMETHYL PHTHALATE	163	1.71954	1.40750	18.15		
4-NITROANILINE	138	.25828	.24863	3.74		
DIBENZOFURAN	168	1.90873	1.83011	4.12		
ACENAPHTHYLENE	152	2.10065	1.94361	7.48		
FLUORENE	166	1.34670	1.23260	8.47		
3-NITROANILINE	138	.09246	.13520	46.23		
ACENAPHTHENE	153	1.37857	1.23999	10.05	*	
2,4-DINITROTOLUENE	165	.33212	.27423	17.43		
2,6-DINITROTOLUENE	165	.37112	.31369	15.47		
DIETHYLPHTHALATE	149	1.58664	1.20123	24.29		
4-CHLOROPHENYL-PHENYLETHER	204	.70414	.66053	6.19		
N-NITROSODIPHENYLAMINE	169	.51771	.46755	9.69	*	
4-BROMOPHENYL-PHENYL ETHER	248	.33482	.31508	5.90		
HEXACHLOROBENZENE	284	.43791	.32919	24.83		

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

(e No: U-4474 | Calibration Date: 12/22/86

Contractor: E & E, INC. | Time: 12:10

Contract No: IL-3140 | Laboratory ID: >D1337

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	.94606	6.80		
ANTHRACENE	178	.99874	.92978	6.90		
DI-N-BUTYLPHTHALATE	149	.97124	.80890	16.71		
FLUORANTHENE	202	.62146	.71881	15.66	*	
BENZIDINE		.65247	-	-		
PYRENE	202	2.68642	1.32217	50.78		
TERPHENYL-D14 (SURR)	244	1.48172	.80403	45.74		
BUTYLBENZYLPHTHALATE	149	.68277	.51731	24.23		
3,3'DICHLOROBENZIDINE	252	.13263	.22167	67.13		
BENZO(A)ANTHRACENE	228	.91524	.97045	6.03		
BIS(2-ETHYLHEXYL)PHTHALATE	149	.81579	.74047	9.23		
CHRYSENE	228	1.19137	.97692	18.00		
DI-N-OCTYL PHTHALATE	149	1.64173	1.38343	15.73	*	
BENZO(B)FLUORANTHENE	252	1.13479	1.25480	10.58		
BENZO(K)FLUORANTHENE	252	1.55063	.97067	37.40		
BENZO(A)PYRENE	252	1.10877	1.02120	7.90	*	
INDENO(1,2,3-CD)PYRENE	276	.99032	1.05311	6.34		
DIBENZ(A,H)ANTHRACENE	278	.81159	.97889	20.61		
BENZO(G,H,I)PERYLENE	276	1.10886	1.09962	.83		

1 - 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

.e No: V-4474

Calibration Date: 12/22/86

Contractor: E & E, INC.

Time: 13:13

Contract No: IL-3140

Laboratory ID: >D1338

Instrument ID: HP-5970D

Initial Calibration Date: 06/20/86

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	1.26540	9.65		
PENTAFLUOROPHENOL	184	-	-	-		
2-FLUOROPHENOL (SURR)	112	.92130	.91733	.43		
PHENOL	94	1.34105	1.21201	9.62	*	
2-METHYL PHENOL	108	1.03158	.97557	5.43		
2-CHLOROPHENOL	128	1.13833	1.16703	2.52		
4-METHYL PHENOL	108	1.07582	1.02091	5.10		
2-NITROPHENOL	139	.20262	.21172	4.49	*	
2,4-DIMETHYLPHENOL	122	.28916	.27847	3.70		
BENZOIC ACID	105	.20401	.21703	6.38		
2,4-DICHLOROPHENOL	162	.31568	.35753	13.26	*	
4-CHLORO-3-METHYLPHENOL	107	.33577	.33986	1.22	*	
2,4,6-TRICHLOROPHENOL	196	.45546	.55182	21.16	*	
2,4,5-TRICHLOROPHENOL	196	.48930	.57540	17.60		
2,4,6-TRIBROMOPHENOL(SURR)	330	.32584	.47680	46.33		
2,4-DINITROPHENOL	184	.17071	.24842	45.52		**
4-NITROPHENOL	139	.32314	.26423	18.23		**
4,6-DINITRO-2-METHYLPHENOL	198	.12041	.15044	24.94		
PENTACHLOROPHENOL	266	.18773	.21357	13.77	*	

k. - 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

as. : V-4474

Calibration Date: 12/23/86

ontractor: E & E, INC.

Time: 18:12

ontract No: IL-3140

Laboratory ID: >B3220

nstrument ID: HP-5970

Initial Calibration Date: 07/31/86

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

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
PHENOL-D5	(SURR) 99	1.37894	1.07100	22.33		
PENTAFLUOROPHENOL	184	-	-	-		
2-FLUOROPHENOL	(SURR) 112	.86917	.48694	43.98		
PHENOL	94	1.27723	1.34902	5.62	*	
2-METHYL PHENOL	108	1.06214	.99563	6.26		
-CHLOROPHENOL	128	1.17232	1.13929	2.82		
-METHYL PHENOL	108	1.06894	1.03120	3.53		
-NITROPHENOL	139	.19333	.19900	2.93	*	
,4-DIMETHYLPHENOL	122	.27900	.28397	1.78		
ENZOIC ACID	105	.23920	.19540	18.31		
,4-DICHLOROPHENOL	162	.30213	.32440	7.37	*	
-CHLORO-3-METHYLPHENOL	107	.33099	.30041	9.24	*	
,4,6-TRICHLOROPHENOL	196	.44521	.46758	5.02	*	
,4,5-TRICHLOROPHENOL	196	.51987	.47339	8.94		
,4,6-TRIBROMOPHENOL	(SURR) 330	.32822	.20438	37.73		
,4-DINITROPHENOL	184	.16189	.17320	6.98		**
-NITROPHENOL	139	.16233	.16450	1.34		**
,6-DINITRO-2-METHYLPHENOL	198	.14211	.14857	4.54		
ENTACHLOROPHENOL	266	.17144	.13802	19.50	*	

- 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

Continuing Calibration Check
HSL Compounds

as. .: V-4474

Calibration Date: 12/23/86

ontractor: E & E, INC.

Time: 19:03

ontract No: IL-3140

Laboratory ID: >B3221

nstrument ID: HP-5970

Initial Calibration Date: 07/30/86

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

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
ANILINE	93	1.52341	1.01335	33.48		
BIS(-2-CHLOROETHYL)ETHER	93	1.23992	1.01335	18.27		
1,3-DICHLOROBENZENE	146	1.38276	1.35064	2.32		
1,4-DICHLOROBENZENE	146	1.36777	1.32288	3.28	*	
BENZYL ALCOHOL	79	1.07958	.82174	23.88		
',2-DICHLOROBENZENE	146	1.42808	1.46293	2.44		
IS(2-CHLOROISOPROPYL)ETHER	45	2.97018	2.38677	19.64		
-NITROSO-DI-N-PROPYLAMINE	70	1.29228	1.10324	14.63		**
EXACHLOROETHANE	117	.70913	.62913	11.28		
ITROBENZENE-D5 (SURR)	82	.40084	.33030	17.60		
ITROBENZENE	77	.41948	.31035	26.01		
SOPHORONE	82	.80995	.62293	23.09		
IS(-2-CHLOROETHOXY)METHANE	93	.45577	.37160	18.47		
,2,4-TRICHLOROBENZENE	180	.37851	.36395	3.85		
APHTHALENE	128	.98472	.95835	2.68		
-CHLOROANILINE	127	.39458	.05123	87.02		
EXACHLOROBUTADIENE	225	.25803	.22234	13.83	*	
-METHYLNAPHTHALENE	142	.62355	.63102	1.20		
EXACHLOROCYCLOPENTADIENE	237	.45397	.37544	17.30		**
-FLUOROBIPHENYL (SURR)	172	1.33061	1.57848	18.63		
-CHLORONAPHTHALENE	162	1.20816	1.25606	3.96		
-NITROANILINE	65	.43896	.40796	7.06		
IMETHYL PHTHALATE	163	1.43709	1.53561	6.86		
-NITROANILINE	138	.25992	.22909	11.86		
IBENZOFURAN	168	1.61498	1.82850	13.22		
ENAPHTHYLENE	152	1.80371	2.01378	11.65		
LUORENE	166	1.19425	1.30639	9.39		
-NITROANILINE	138	.15454	.17844	15.46		
ENAPHTHENE	153	1.18706	1.21552	2.40	*	
,4-DINITROTOLUENE	165	.38188	.38362	.46		
,6-DINITROTOLUENE	165	.35087	.37059	5.62		
IETHYLPHTHALATE	149	1.39014	1.44115	3.67		
-CHLOROPHENYL-PHENYLETHER	204	.62534	.63832	2.08		
-NITROSODIPHENYLAMINE	169	.42524	.49162	15.61	*	
-BROMOPHENYL-PHENYL ETHER	248	.26659	.25793	3.25		
EXACHLOROBENZENE	284	.34094	.27858	18.29		

- 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

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

Continuing Calibration Check
HSL Compounds

as. : U-4474

Calibration Date: 12/23/86

ontractor: E & E, INC.

Time: 19:03

ontract No: IL-3140

Laboratory ID: >B3221

nstrument ID: HP-5970

Initial Calibration Date: 07/30/86

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

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
PHENANTHRENE	178	.97758	1.00148	2.45		
ANTHRACENE	178	1.00646	.93758	6.84		
DI-N-BUTYLPHTHALATE	149	1.12721	1.09398	2.95		
FLUORANTHENE	202	.81517	.70863	13.07	*	
BENZIDINE		-	.01210	-		
PYRENE	202	1.60192	1.71654	7.15		
ERPHENYL-D14 (SURR)	244	1.11052	1.01197	8.87		
UTYLBENZYLPHTHALATE	149	.67361	.69195	2.72		
,3'DICHLOROBENZIDINE	252	.31882	.16676	47.69		
ENZO(A)ANTHRACENE	228	1.12037	1.00887	9.95		
IS(2-ETHYLHEXYL)PHTHALATE	149	.90083	.92447	2.62		
HRYSENE	228	1.12666	.94882	15.78		
I-N-OCTYL PHTHALATE	149	1.70682	1.92129	12.57	*	
ENZO(B)FLUORANTHENE	252	1.21474	1.30928	7.78		
ENZO(K)FLUORANTHENE	252	1.23716	1.07649	12.99		
ENZO(A)PYRENE	252	1.12089	1.05894	5.53	*	
NDENO(1,2,3-CD)PYRENE	276	1.04154	.94456	9.31		
IBENZ(A,H)ANTHRACENE	278	1.06755	.85364	20.04		
ENZO(G,H,I)PERYLENE	276	1.15866	.94468	18.47		

- 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

- Calibration Check Compounds (*) CCCC

Continuing Calibration Check
HSL Compounds

se No: V-4474

Calibration Date: 01/09/87

Contractor: E & E, INC.

Time: 11:30

Contract No: IL-3140

Laboratory ID: >D1481

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	1.19219	22.61		
BIS(-2-CHLOROETHYL)ETHER	93	1.18428	1.06530	10.05		
1,3-DICHLOROBENZENE	146	1.47624	1.33975	9.25		
1,4-DICHLOROBENZENE	146	1.46874	1.37772	6.20	*	
BENZYL ALCOHOL	79	1.13473	1.00412	11.51		
1,2-DICHLOROBENZENE	146	1.49193	1.38653	7.06		
BIS(2-CHLOROISOPROPYL)ETHER	45	2.68137	2.70425	.85		
N-NITROSO-DI-N-PROPYLAMINE	70	1.18117	1.11173	5.88		**
HEXACHLOROETHANE	117	.70841	.65942	6.92		
NITROBENZENE-D5 (SURR)	82	.37437	.50209	34.12		
NITROBENZENE	77	.37969	.50502	33.01		
ISOPHORONE	82	.75594	.95879	26.83		
BIS(-2-CHLOROETHOXY)METHANE	93	.41266	.56397	36.67		
1,2,4-TRICHLOROBENZENE	180	.38442	.46110	19.95		
NAPHTHALENE	128	.96668	.84308	12.79		
4-CHLOROANILINE	127	.37796	.31395	16.93		
HEXACHLOROBUTADIENE	225	.25908	.29011	11.98	*	
2-METHYLNAPHTHALENE	142	.64484	.57099	11.45		
HEXACHLOROCYCLOPENTADIENE	237	.56814	.59383	4.52		**
2-FLUOROBIPHENYL (SURR)	172	1.61321	1.80980	12.19		
2-CHLORONAPHTHALENE	162	1.37281	1.41541	3.10		
2-NITROANILINE	65	.47645	.31319	34.27		
DIMETHYL PHTHALATE	163	1.71954	1.41759	17.56		
4-NITROANILINE	138	.25828	.18977	26.53		
DIBENZOFURAN	168	1.90873	1.70233	10.81		
ACENAPHTHYLENE	152	2.10065	1.92427	8.40		
FLUORENE	166	1.34670	1.13929	15.40		
3-NITROANILINE	138	.09246	.08478	8.31		
ACENAPHTHENE	153	1.37857	1.26032	8.58	*	
2,4-DINITROTOLUENE	165	.33212	.23773	28.42		
2,6-DINITROTOLUENE	165	.37112	.29953	19.29		
DIETHYLPHTHALATE	149	1.58664	1.16909	26.32		
4-CHLOROPHENYL-PHENYLETHER	204	.70414	.64369	8.59		
N-NITROSODIPHENYLAMINE	169	.51771	.49715	3.97	*	
4-BROMOPHENYL-PHENYL ETHER	248	.33482	.32639	2.52		
HEXACHLOROBENZENE	284	.43791	.32897	24.88		

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

e No: V-4474

Calibration Date: 01/09/87

Contractor: E & E, INC.

Time: 11:30

Contract No: IL-3140

Laboratory ID: >D1481

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	.92212	9.16		
ANTHRACENE	178	.99874	.88543	11.35		
DI-N-BUTYLPHTHALATE	149	.97124	.75723	22.03		
FLUORANTHENE	202	.62146	.57485	7.50	*	
BENZIDINE		.65247	.43837	32.81		
PYRENE	202	2.68642	1.96888	26.71		
TERPHENYL-D14 (SURR)	244	1.48172	1.08984	26.45		
BUTYLBENZYLPHTHALATE	149	.68277	.55846	18.21		
3,3'DICHLOROBENZIDINE	252	.13263	.15457	16.54		
BENZO(A)ANTHRACENE	228	.91524	1.00452	9.76		
BIS(2-ETHYLHEXYL)PHTHALATE	149	.81579	.83380	2.21		
CHRYSENE	228	1.19137	.96488	19.01		
DI-N-OCTYL PHTHALATE	149	1.64173	1.57617	3.99	*	
BENZO(B)FLUORANTHENE	252	1.13479	1.33690	17.81		
BENZO(K)FLUORANTHENE	252	1.55063	1.09875	29.14		
BENZO(A)PYRENE	252	1.10877	1.05559	4.80	*	
INDENO(1,2,3-CD)PYRENE	276	.99032	.99551	.52		
DIBENZ(A,H)ANTHRACENE	278	.81159	.91375	12.59		
BENZO(G,H,I)PERYLENE	276	1.10886	1.08987	1.71		

R_i - 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

se No: V-4474

Calibration Date: 01/09/87

Contractor: E & E, INC.

Time: 13:24

Contract No: IL-3140

Laboratory ID: >D1483

Instrument ID: HP-5970D

Initial Calibration Date: 06/20/86

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	1.40262	.15		
PENTAFLUOROPHENOL	184	-	-	-		
2-FLUOROPHENOL (SURR)	112	.92130	1.02894	11.68		
PHENOL	94	1.34105	1.40801	4.99	*	
2-METHYL PHENOL	108	1.03158	1.05214	1.99		
2-CHLOROPHENOL	128	1.13833	1.20535	5.89		
4-METHYL PHENOL	108	1.07582	1.07308	.25		
2-NITROPHENOL	139	.20262	.16234	19.88	*	
2,4-DIMETHYLPHENOL	122	.28916	.22588	21.89		
BENZOIC ACID	105	.20401	.15573	23.67		
2,4-DICHLOROPHENOL	162	.31568	.24673	21.84	*	
4-CHLORO-3-METHYLPHENOL	107	.33577	.27007	19.57	*	
2,4,6-TRICHLOROPHENOL	196	.45546	.54175	18.94	*	
2,4,5-TRICHLOROPHENOL	196	.48930	.51531	5.31		
2,4,6-TRIBROMOPHENOL(SURR)	330	.32584	.23485	27.93		
2,4-DINITROPHENOL	184	.17071	.11652	31.74		**
4-NITROPHENOL	139	.32314	.11396	64.73		**
4,6-DINITRO-2-METHYLPHENOL	198	.12041	.12669	5.22		
PENTACHLOROPHENOL	266	.18773	.16423	12.52	*	

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

PESTICIDE STANDARDS

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

Pesticide Evaluation Standards Summary
(Page 1)

Case No: U-4474 Region: _____
Contract No: IL-3140
Date of Analysis 12-8-86

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	565	551	553	1.4
Endrin	577	580	600	2.1
4,4'- DDT(1)	244	260	283	7.8
Dibutyl Chlorendate	384	391	390	0.97

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	19:25			7.1
Eval Mix B	Run 19	6:33			5.6
Eval Mix B	Run 31	15:33			8.7
Eval Mix B	Run 43	5:52			7.3
Eval Mix B	Run 53	18:34			19.6
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 MIX A	RUN #1	1837	–	EVAL MIX B	RUN #53	1834	0.88
EVAL MIX B	RUN #2	1925	Ø	IND MIX A	RUN #54	1923	0.95
EVAL MIX C	RUN #3	2110	Ø	IND MIX B	RUN #55	1959	1.10
IND MIX A	RUN #4	2154	0.07				
IND MIX B	RUN #5	2235	0.11				
TOXAPHENE	RUN #6	2319	0.33				
CHLORDANE	RUN #7	2352	0.04				
PCB 1016/1260	RUN #8	0026	0.33				
PCB 1221	RUN #9	0059	0.26				
PCB 1232	RUN #10	0132	0.37				
PCB 1242	RUN #11	0206	0.37				
PCB 1248	RUN #12	0239	0.29				
PCB 1254	RUN #13	0312	0.26				
BLK 11-17	RUN #14	0346	0.44				
BLK 11-18	RUN #15	0420	0.33				
DC-SS-24	RUN #16	0453	DL				
DC-SS-25	RUN #17	0526	DL				
DC-SS-28	RUN #18	0600	DL				
EVAL MIX B	RUN #19	0633	0.11				
DC-SS-34	RUN #20	0706	DL				
DC-SS-36	RUN #21	0739	DL				
DC-SS-36 MS	RUN #22	0813	DL				
DC-SS-36 MSD	RUN #23	0846	DL				
DC-SS-37	RUN #24	0920	DL				
PCB 1016/1260	RUN #25	1015	1.50				
DC-SS-44	RUN #26	1055	1.32				
DC-SS-44 REP	RUN #27	1141	1.39				
DC-SS-46	RUN #28	1215	1.24				
DC-SS-47	RUN #29	1356	1.50				
DC-SS-48	RUN #30	1443	1.43				
EVAL MIX B	RUN #31	1533	1.35				
DC-SS-26	RUN #32	1850	DL				
DC-SS-27	RUN #33	2011	DL				
DC-SS-29	RUN #34	2111	DL				
DC-SS-30	RUN #35	2314	DL				
DC-SS-31	RUN #36	0004	DL				
PCB 1254	RUN #37	0055	0.29				
DC-SS-32	RUN #38	0144	DL				
DC-SS-33	RUN #39	0234	DL				
DC-SS-38	RUN #40	0323	DL				
DC-SS-39	RUN #41	0413	DL				
DC-SS-40	RUN #42	0503	DL				
EVAL MIX B	RUN #43	0552	0.33				
DC-SS-41	RUN #44	0641	DL				
DC-SS-42	RUN #45	0729	DL				
DC-SS-43	RUN #46	0820	DL				
DC-SS-27	RUN #47	0912	DL				
DC-SS-29	RUN #48	1002	DL				
IND MIX A	RUN #49	1052	0.62				
IND MIX B	RUN #50	1141	0.73				
BLANK 11-17	RUN #51	1645	1.1				
DC-SS-41	RUN #52	1740	DL				

DL = DILUTED OUT

Form VIII (Continued) 7/85

Pesticide Evaluation Standards Summary
(Page 1)

Case No: V-4474 Region: _____
Contract No: IL-3140
Date of Analysis 12-17-86 12-18-86

Laboratory: Ecology + Environment, Inc.
GC Column: SP 2250 / SP 8401
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	800	773	813	2.6
Endrin	642	610	710	7.8
4,4'- DDT(1)	85	88	101	9.3 *
Dibutyl Chlorendate	525	525	545	2.2

* PEAK HEIGHT

Evaluation Check for 4,4'- DDT/Endrin Breakdown
(percent breakdown expressed as total degradation)

	Laboratory I.D.	Time of Analysis	Endrin	4,4'- DDT	Combined(2)
Eval Mix B 72 Hour	/				
Eval Mix B	RUN 2	22:53	4.7	16 *	
Eval Mix B	RUN 20	13:19	<1.0	7.6	
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

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 MIX A	RUN 1	21:34	—				
	EVAL MIX B	2	22:53	0.23				
	EVAL MIX C	3	23:27	0.32				
	IND MIX A	4	0:00	0.41				
	IND MIX B	5	0:34	0.81				
	PCB 1016/1260	6	1:08	0.86				
	PCB 1248	7	1:42	0.77				
	PCB 1254	8	2:15	0.88				
DC-SS-26	9792	9	2:49	DL				
DC-SS-28	9794	10	3:23	DL				
DC-SS-31	9797	11	3:57	DL				
DC-SS-33	9799	12	4:31	DL				
DC-SS-35	9801	13	5:05	DL				
	PCB 1016/1260	14	5:39	0.81				
DC-SS-39	9805	15	6:13	DL				
	BLANK 1147	16	9:58	1.53				
	BLANK 1148	17	10:32	1.49				
DC-SS-46	9811	18	11:07	1.67				
DC-SS-47	9812	19	11:44	1.53				
	EVAL MIX B	20	13:19	1.53				
DC-SS-48	9813	21	14:02	1.49				
	IND MIX A	22	15:26	1.44				
	IND MIX B	23	16:00	1.31				

Form VIII (Continued)

SC3095
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PESTICIDE/PCB STANDARDS SUMMARY

Case No. V-4474 Laboratory Ecology + Environment, Inc

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

Run 8 12-9 0:26	Run 12 12-9 2:39	Run 13 12-9 3:12	DATE OF ANALYSIS 12-8-86 / TIME OF ANALYSIS 21:54 / 22:35 / LABORATORY ID Run 4 / Run 5			DATE OF ANALYSIS 12-9-85 / TIME OF ANALYSIS 10:15 / LABORATORY ID Run #25			
COMPOUND	RT	RETENTION TIME WINDOW	CALIBRATION FACTOR	CONF. OR QUANT.		RT	CALIBRATION FACTOR	CONF. OR QUANT.	PERCENT DIFF.**
alpha-BHC	2.10	2.06-2.14	583						
beta-BHC	2.23	2.19-2.27	205						
delta-BHC	2.52	2.48-2.56	525						
gamma-BHC	2.45	2.43-2.47	543						
Heptachlor	3.89	3.85-3.93	416						
Aldrin	4.80	4.75-4.85	548						
Heptachlor Epoxide	5.82	5.75-5.89	511						
Endosulfan I	7.23	7.13-7.33	477						
Dieldrin	8.43	8.31-8.55	524						
4,4'-DDE	8.33	8.17-8.49	459						
Endrin	9.40	9.21-9.59	403						
Endosulfan II	9.58	9.46-9.70	459						
4,4'-DDD	10.46	10.25-10.67	398						
Endosulfan Sulfate	12.27	12.01-12.53	330						
4,4'-DDT	13.65	13.48-13.82	242						
Methoxychlor	20.07	19.73-20.37	157						
Endrin Ketone	15.74	15.42-16.06	461						
Tech. Chlordane									
alpha-Chlordane*									
gamma-Chlordane*									
Toxaphene									
Aroclor - 1016									
Aroclor - 1221									
Aroclor - 1232									
Aroclor - 1242									
Aroclor - 1248	5.92	5.75-6.09	152	QUANT.					
Aroclor - 1254	10.20	9.89-10.51	203	QUANT.					
Aroclor - 1260	22.34	21.70-22.98	208	QUANT.		22.08	235	QUANT.	13

* SEE EXHIBIT E, PART 7

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

604095

FORM IX

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PESTICIDE/PCB STANDARDS SUMMARY

Case No. U-4474 Laboratory Ecology + Environment, Inc

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

12-9 12-9 12-9	DATE OF ANALYSIS 12-8-86	DATE OF ANALYSIS 12-10-86
0:26 2:39 3:12	TIME OF ANALYSIS 21:54 / 22:35	TIME OF ANALYSIS 0:55
Run 8. Run 12 Run 13	LABORATORY ID Run 4 / Run 5	LABORATORY ID Run 37

COMPOUND	RT	RETENTION TIME WINDOW	CALIBRATION FACTOR	CONF. OR QUANT.	RT	CALIBRATION FACTOR	CONF. OR QUANT.	PERCENT DIFF.**
alpha-BHC	2.10	2.06-2.14	583					
beta-BHC	2.23	2.19-2.27	205					
delta-BHC	2.52	2.48-2.56	525					
gamma-BHC	2.45	2.43-2.47	543					
Heptachlor	3.89	3.85-3.93	416					
Aldrin	4.80	4.75-4.85	548					
Heptachlor Epoxide	5.82	5.75-5.89	511					
Endosulfan I	7.23	7.13-7.33	477					
Dieldrin	8.43	8.31-8.55	524					
4,4'-DDE	8.33	8.17-8.49	459					
Endrin	9.40	9.21-9.59	403					
Endosulfan II	9.58	9.46-9.70	[illegible]					
4,4'-DDD	10.46	10.25-10.67	398					
Endosulfan Sulfate	12.27	12.01-12.53	330					
4,4'-DDT	13.65	13.48-13.82	242					
Methoxychlor	20.07	19.73-20.37	157					
Endrin Ketone	15.74	15.42-16.06	461					
Tech. Chlordane								
alpha-Chlordane*								
gamma-Chlordane*								
Toxaphene								
Aroclor - 1016								
Aroclor - 1221								
Aroclor - 1232								
Aroclor - 1242								
Aroclor - 1248	5.92	5.75-6.09	152	QUANT				
Aroclor - 1254	10.20	9.89-10.51	203	QUANT	10.21	213		4.9
Aroclor - 1260	22.34	21.70-22.98	208	QUANT				

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* SEE EXHIBIT E, PART 7

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

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FORM IX

PESTICIDE/PCB STANDARDS SUMMARY

Case No. V-4474 Laboratory Ecology + Environment, Inc

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

12-9 0:26 Run 8	12-9 2:39 Run 12	12-9 3:12 Run 13	DATE OF ANALYSIS 12-8-86 TIME OF ANALYSIS 21:54 / 22:35 LABORATORY ID Run 4 / Run 5			DATE OF ANALYSIS 12-10-86 TIME OF ANALYSIS 10:52 / 11:41 LABORATORY ID Run 49 / Run 50			
COMPOUND	RT	RETENTION TIME WINDOW	CALIBRATION FACTOR	CONF. OR QUANT.	RT	CALIBRATION FACTOR	CONF. OR QUANT.	PERCENT DIFF. **
alpha-BHC	2.10	2.06-2.14	583		2.08	638		9.4
beta-BHC	2.23	2.19-2.27	205		2.21	241		18
delta-BHC	2.52	2.48-2.56	525		2.50	588		12
gamma-BHC	2.45	2.43-2.47	543		2.43	589		8.5
Heptachlor	3.89	3.85-3.93	416		3.87	444		6.7
Aldrin	4.80	4.75-4.85	548		4.77	592		8.0
Heptachlor Epoxide	5.82	5.75-5.89	511		5.79	556		8.8
Endosulfan I	7.23	7.13-7.33	477		7.18	527		10
Dieldrin	8.43	8.31-8.55	524		8.37	569		8.6
4,4'-DDE	8.33	8.17-8.49	459		8.27	523		14
Endrin	9.40	9.21-9.59	403		9.34	487		21
Endosulfan II	9.58	9.46-9.70	457		9.52	500		9.4
4,4'-DDD	10.46	10.25-10.67	270 *		10.37	310 *		15
Endosulfan Sulfate	12.27	12.01-12.53	330		12.16	340		3.0
4,4'-DDT	13.65	13.48-13.82	242		13.54	224		7.4
Methoxychlor	20.07	19.73-20.37	157		19.91	164		4.5
Endrin Ketone	15.74	15.42-16.06	210 *		15.61	240 *		14
Tech. Chlordane								
alpha-Chlordane*								
gamma-Chlordane*								
Toxaphene								
Aroclor - 1016								
Aroclor - 1221								
Aroclor - 1232								
Aroclor - 1242								
Aroclor - 1248	5.92	5.75-6.09	152	QUANT.				
Aroclor - 1254	10.26	9.89-10.51	203	QUANT.				
Aroclor - 1260	22.34	21.70-22.98	208	QUANT.				

* SEE EXHIBIT E, PART 7

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

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504095

* PEAK HEIGHT

FORM IX

PESTICIDE/PCB STANDARDS SUMMARY

Case No. U-4474 Laboratory ECOLOGY + ENVIRONMENT, INC

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

	12-9 0:26 Run 8	12-9 2:39 Run 12	12-9 3:12 Run 13	12-10 19:23 Run 54	12-10 19:59 Run 55
DATE OF ANALYSIS	12-8-86			12-10	
TIME OF ANALYSIS	21:54	22:35		19:23	19:59
LABORATORY ID	Run 4	Run 5		Run 54	Run 55

COMPOUND	RT	RETENTION TIME WINDOW	CALIBRATION FACTOR	CONF. OR QUANT.	RT	CALIBRATION FACTOR	CONF. OR QUANT.	PERCENT DIFF. **
alpha-BHC	2.10	2.06-2.14	583		2.07	616		5.7
beta-BHC	2.23	2.19-2.27	205		2.21	232		13
delta-BHC	2.52	2.48-2.56	525		2.49	570		10
gamma-BHC	2.45	2.43-2.47	543		2.42	593		9.2
Heptachlor	3.89	3.85-3.93	416		3.85	417		0.24
Aldrin	4.80	4.75-4.85	548		4.76	607		11
Heptachlor Epoxide	5.82	5.75-5.89	511		5.77	571		12
Endosulfan I	7.23	7.13-7.33	477		7.16	537		13
Dieldrin	8.43	8.31-8.55	524		8.34	585		12
4,4'-DDE	8.33	8.17-8.49	459		8.24	500		8.9
Endrin	9.40	9.21-9.59	403		9.30	442		9.7
Endosulfan II	9.58	9.46-9.70	457		9.49	520		14
4,4'-DDD	10.46	10.25-10.67	398		10.35	458		15
Endosulfan Sulfate	12.27	12.01-12.53	330		12.14	299		9.4
4,4'-DDT	13.65	13.48-13.82	242		13.50	269		11
Methoxychlor	20.07	19.73-20.37	157		19.84	133		15
Endrin Ketone	15.74	15.42-16.06	461		15.55	527		14
Tech. Chlordane								
alpha-Chlordane*								
gamma-Chlordane*								
Toxaphene								
Aroclor - 1016								
Aroclor - 1221								
Aroclor - 1232								
Aroclor - 1242								
Aroclor - 1248	5.92	5.75-6.09	152	QUANT.				
Aroclor - 1254	10.20	9.89-10.51	203	QUANT.				
Aroclor - 1260	22.34	21.70-22.98	208	QUANT.				

* SEE EXHIBIT E, PART 7

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

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FORM IX

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PESTICIDE/PCB STANDARDS SUMMARY

Case No. U-4474 Laboratory ECOLOGY & ENVIRONMENT INC

Contract No. IL-3140 GC Column SP2250/SP2401 GC Instrument ID VARIAN 6000 #2

	DATE OF ANALYSIS 12-18-86				DATE OF ANALYSIS 12-18-86			
	TIME OF ANALYSIS 0:34	1:08	1:42	2:15	TIME OF ANALYSIS 6:13			
	LABORATORY ID RUN 5	6	7	8	LABORATORY ID RUN 15			
COMPOUND	RT	RETENTION TIME WINDOW	CALIBRATION FACTOR	CONF. OR QUANT.	RT	CALIBRATION FACTOR	CONF. OR QUANT.	PERCENT DIFF. **
alpha-BHC	1.69	1.65-1.72	868	CONF.				
beta-BHC	2.43	2.37-2.48	307	CONF.				
delta-BHC								
gamma-BHC								
Heptachlor								
Aldrin								
Heptachlor Epoxide								
Endosulfan I								
Dieldrin								
4,4'-DDE								
Endrin								
Endosulfan II								
4,4'-DDD	10.46	10.24-10.68	500	CONF.				
Endosulfan Sulfate								
4,4'-DDT								
Methoxychlor								
Endrin Ketone								
Tech. Chlordane								
alpha-Chlordane*								
gamma-Chlordane*								
Toxaphene								
Aroclor - 1016								
Aroclor - 1221								
Aroclor - 1232								
Aroclor - 1242								
Aroclor - 1248	4.83	4.69-4.97	256	CONF.				
Aroclor - 1254	12.36	12.11-12.61	322	CONF.				
Aroclor - 1260	19.36	18.79-19.93	343	CONF.	19.34	355		3.5

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* SEE EXHIBIT E, PART 7

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

504095

FORM IX

PESTICIDE/PCB STANDARDS SUMMARY

Case No. V-4474 Laboratory ECOLOGY & ENVIRONMENT INC
Contract No. IL-3140 GC Column SP2250 / SP2401 GC Instrument ID VARIAN 6000 #2

	DATE OF ANALYSIS 12-18-86				DATE OF ANALYSIS 12-18-86			
	TIME OF ANALYSIS 0:34	1:08	1:42	2:15	TIME OF ANALYSIS 16:00			
	LABORATORY ID RUN 5	6	7	8	LABORATORY ID RUN 23			
COMPOUND	RT	RETENTION TIME WINDOW	CALIBRATION FACTOR	CONF. OR QUANT.	RT	CALIBRATION FACTOR	CONF. OR QUANT.	PERCENT DIFF. **
alpha-BHC	1.69	1.65-1.72	868	CONF.	1.65	888		2.3
beta-BHC	2.43	2.37-2.48	307	CONF.	2.37	311		1.3
delta-BHC								
gamma-BHC								
Heptachlor								
Aldrin								
Heptachlor Epoxide								
Endosulfan I								
Dieldrin								
4,4'-DDE								
Endrin								
Endosulfan II								
4,4'-DDD	10.46	10.24-10.68	500	CONF.	10.24	552		10
Endosulfan Sulfate								
4,4'-DDT								
Methoxychlor								
Endrin Ketone								
Tech. Chlordane								
alpha-Chlordane*								
gamma-Chlordane*								
Toxaphene								
Aroclor - 1016								
Aroclor - 1221								
Aroclor - 1232								
Aroclor - 1242								
Aroclor - 1248	4.83	4.69-4.97	256	CONF.				
Aroclor - 1254	12.36	12.11-12.61	322	CONF.				
Aroclor - 1260	19.36	18.79-19.93	343	CONF.				

* SEE EXHIBIT E, PART 7

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

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FORM IX

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Pesticide/PCB Identification

Case No. U-4474 Laboratory Ecology & 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)
DC-SS-24	OV-1	PCB 1260	22.32	21.70-22.68				N
DC-SS-25		PCB 1260	22.32	21.70-22.68				N
DC-SS-26		PCB 1260	22.07	21.70-22.68	SP2250/2401	19.38	18.79-19.93	N
DC-SS-27		PCB 1260	22.24	21.70-22.68				Y
DC-SS-28		PCB 1254	7.02	9.89-10.51	SP2250/2401	5.55	12.11-12.61	N
DC-SS-28		PCB 1260	22.34	21.70-22.68	SP2250/2401	19.36	18.79-19.93	N
DC-SS-29		PCB 1248	5.90	5.75-6.09				N
DC-SS-29		PCB 1260	11.90	21.70-22.68				N
DC-SS-30		PCB 1248	5.92	5.75-6.09				N
DC-SS-30		PCB 1260	22.15	21.70-22.68				N
DC-SS-32		PCB 1260	22.38	21.70-22.68				N
DC-SS-33		PCB 1260	22.34	21.70-22.68	SP2250/2401	19.34	18.79-19.93	N
DC-SS-34		PCB 1260	22.33	21.70-22.68				Y
DC-SS-35	SP2250/2401	PCB 1260	19.31	18.79-19.93				N
DC-SS-36	OV-1	PCB 1260	22.31	21.70-22.68				Y
DC-SS-37		PCB 1260	22.20	21.70-22.68				N
DC-SS-38		PCB 1260	22.36	21.70-22.68				N
DC-SS-39		PCB 1260	22.34	21.70-22.68	SP2250/2401	19.34	18.79-19.93	N
DC-SS-40		PCB 1254	7.02	9.89-10.51				Y
DC-SS-40		PCB 1260	22.34	21.70-22.68				Y
DC-SS-41		PCB 1248	5.95	5.75-6.09				N
DC-SS-41		PCB 1260	22.20	21.70-22.68				N
DC-SS-42		PCB 1260	22.37	21.70-22.68				N
DC-SS-43		PCB 1248	5.95	5.75-6.09				N
DC-SS-43		PCB 1260	22.25	21.70-22.68				N
DC-SS-36MS		PCB 1260	22.39	21.70-22.68				N
DC-SS-36MSD		PCB 1260	22.38	21.70-22.68				N
BLANK 11-17		PCB 1260	22.30	21.70-22.68	SP2250/2401	18.91	18.79-19.93	N

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505095

FORM X

GC/MS TUNING

1. DFTPP FORM V

2. BFB FORM V

GC/MS TUNING AND MASS CALIBRATION
Decafluorotriphenylphosphine (DFTPP)

Case No. U-4474 Contractor Ecology & Environment Inc. Contract No. IC-3140

Instrument ID HP5970D Date 6/19/86 Time 1436

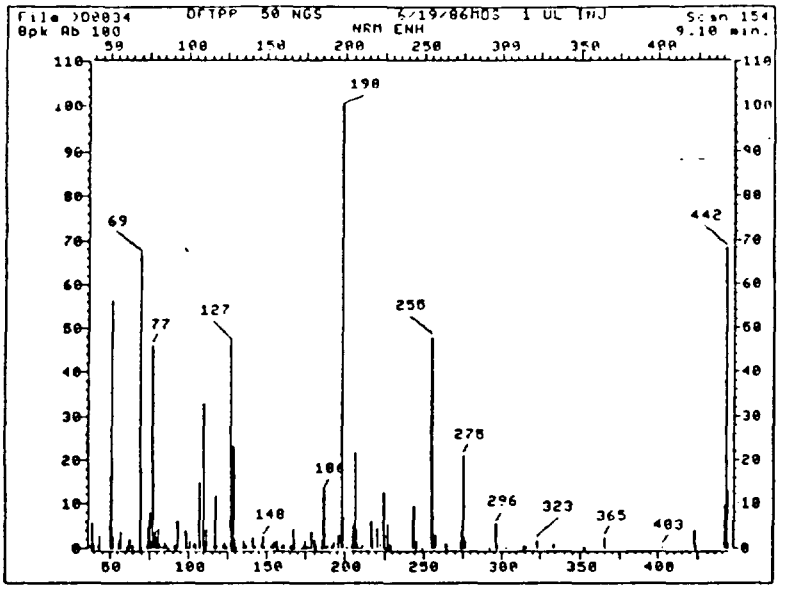
Lab ID D0034 Data Release Authorized By: C Stojowia

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

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

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

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



>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	246.95	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	.23	198.95	6.93	264.95	.97
55.95	1.77	103.00	.67	154.00	.53	200.05	.26	272.95	1.38
56.95	3.87	104.00	1.30	155.00	1.49	201.35	.40	273.95	3.92
61.05	.42	104.90	1.19	156.00	1.90	203.05	.68	274.95	21.00
61.90	.64	107.00	14.80	157.80	.22	203.95	3.15	275.95	2.42
63.00	2.24	108.00	2.15	159.00	.38	205.05	5.24	276.95	1.62
64.10	.20	110.00	32.99	160.00	.68	206.05	21.54	292.75	.38
65.00	.66	111.00	4.57	160.90	.87	207.05	4.61	295.95	5.75
69.00	67.05	111.90	.29	164.90	.82	208.05	1.11	296.85	.76
70.00	.21	116.00	.83	166.00	.71	208.75	.12	302.85	.58
73.10	.90	117.00	11.76	167.00	4.52	210.05	.17	314.90	.61
74.00	4.82	118.00	.87	168.00	2.21	210.95	.79	316.00	.38
[illegible].00	8.23	122.00	.85	171.80	.17	216.95	5.98	323.10	1.91
76.10	1.92	123.00	1.52	172.90	.45	217.95	.60	334.00	.98
77.00	46.20	123.90	.70	174.00	1.01	220.95	4.54	352.00	.46
78.10	2.96	124.80	.57	175.00	1.81	222.95	1.57	353.00	.49
79.00	4.13	127.00	46.89	176.00	.31	224.05	12.35	365.00	2.47
80.00	2.58	128.00	3.90	177.00	.77	225.05	3.21	402.90	.57
81.00	4.32	129.00	23.30	177.90	.16	225.95	.20	423.00	3.98
81.90	1.06	129.90	2.11	178.90	3.64	226.95	5.42	423.80	.60
83.10	.34	130.80	.38	180.00	2.16	227.95	.79	441.05	9.97
84.00	.38	134.00	.49	180.90	.97	228.95	.96	442.05	68.07
85.00	1.30	135.00	1.64	184.05	.18	233.85	.14	443.05	13.00
86.00	1.03	136.10	.61	185.05	2.02	237.05	.18	444.05	1.14
86.90	.40	137.10	.66	186.05	13.07	242.05	.54		

MS data file header from : >D0034

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

Chromatographic temperatures :	120.	290.	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

recycled paper ecology and environment

GC/MS TUNING AND MASS CALIBRATION
Decafluorotriphenylphosphine (DFTPP)

Case No. U-4474 Contractor Ecology & Environment Inc. Contract No. IL-3140

Instrument ID HP5970B Date 7-30-86 Time 1051

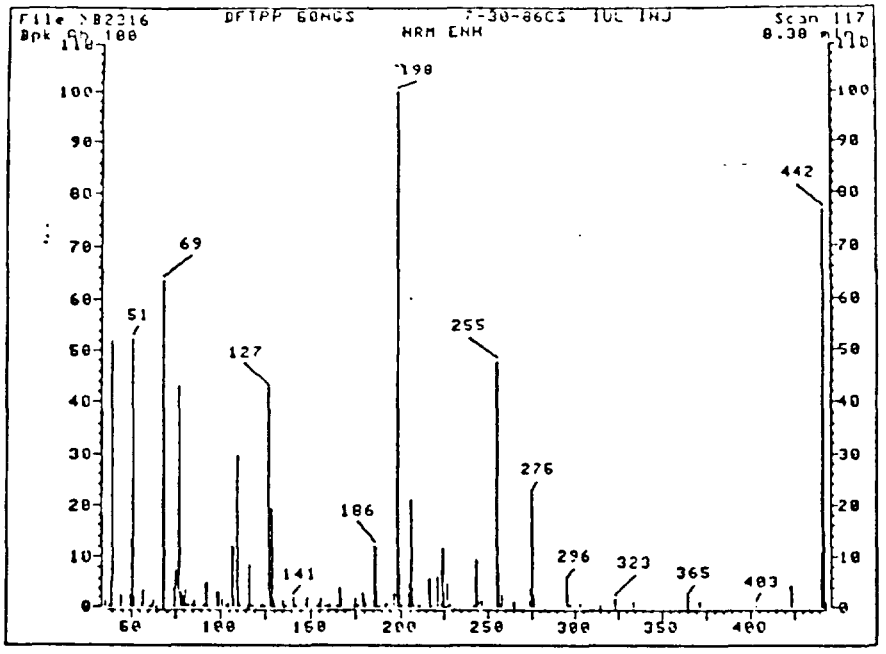
Lab ID B2316 Data Release Authorized By: C Stoytowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	52.4
68	less than 2.0% of mass 69	0 (0)[1]
69	mass 69 relative abundance	63.5
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	6.54
275	10.0 - 30.0% of mass 198	22.1
365	greater than 1.00% of mass 198	2.32
441	present, but less than mass 443	10.8
442	greater than 40.0% of mass 198	76.7
443	17.0 - 23.0% of mass 442	14.5 (18.9)[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 - 50 ng	B2317	7-30-86	1108
	20 ng	B2318		1207
	80 ng	B2320		1414
	120 ng	B2321		1505
	160 ng	B2322		1557
	AP STD 20 ng	B2323		1657
	50 ng	B2324		1748
	80 ng	B2325		1839
	120 ng	B2326		1931
	160 ng	B2327		2022



>B2316 DFTPP 50NGS 7-30-86CS 1UL INJ
117 NRM ENH

File: >B2316 Scan #: 117 Retn. time: 8.38

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.05	1.46	91.10	.41	137.10	.39	191.05	.20	244.05	9.41
38.15	.49	92.00	.52	141.00	2.08	191.95	.73	245.05	1.02
39.15	5.09	93.00	4.94	142.10	.36	192.95	.62	246.05	1.49
40.05	51.88	94.00	.24	143.00	.28	196.05	2.98	255.05	47.58
44.05	2.55	98.00	3.16	147.10	.97	197.95	100.00	256.05	6.77
49.05	2.49	99.00	2.89	148.00	1.99	198.95	6.54	257.00	.27
50.05	13.27	101.00	1.69	153.00	.44	199.95	.28	258.00	2.64
51.15	52.38	103.00	.35	154.00	.36	201.35	.26	265.00	.91
52.10	2.35	104.00	.66	155.05	.90	202.95	.36	273.00	1.41
56.00	.87	104.90	.71	156.05	1.52	204.05	2.91	274.00	3.64
57.00	3.48	107.00	12.01	158.05	.26	205.05	4.95	275.00	22.14
61.10	.36	108.00	1.77	159.95	.35	206.05	20.98	276.00	2.79
62.10	.35	110.00	29.62	161.05	.58	207.05	4.00	276.90	1.69
63.00	1.39	111.00	3.98	164.95	.45	207.95	.42	296.00	5.45
65.10	.47	112.00	.28	166.05	.39	210.25	.26	297.10	.75
69.00	63.51	116.10	.39	167.05	4.02	211.05	.51	303.10	.57
73.10	.22	117.00	8.26	168.05	1.77	216.95	5.83	315.00	.48
74.10	3.84	118.10	.34	174.05	.73	217.95	.43	323.00	1.78
75.00	7.43	122.10	.46	174.95	1.54	221.05	6.08	326.90	.16
77.10	42.88	123.10	.70	176.05	.35	223.05	1.08	334.00	.96
78.10	2.86	124.00	.34	176.95	.78	224.05	11.72	364.95	2.32
79.10	3.13	125.00	.25	178.95	3.03	225.05	2.92	371.95	.89
80.00	2.00	127.00	42.62	180.05	1.56	226.15	.18	402.95	.53
81.00	3.61	128.10	2.95	181.05	.83	227.05	4.81	423.05	4.16
82.00	.44	129.00	19.25	185.05	1.25	227.95	.54	423.95	.76
83.00	.58	129.90	1.48	186.05	11.94	229.05	.84	441.05	10.76
84.90	.58	131.00	.18	187.05	3.14	230.95	.21	442.05	76.66
86.00	1.30	135.10	1.37	188.05	.18	242.05	.34	443.05	14.52
87.00	.26	136.00	.27	188.95	.45	243.05	.32	444.05	1.19

MS data file header from : >B2316

Sample: DFTPP 50NGS Operator: USER8 MS 7/30/86 10:51
Misc : 7-30-86CS 1UL INJ
Sys. #: 2 MS model: 70 SW/HW rev.: CA ALS # : 0
Method file: DFTPP8 Tuning file: MTSON No. of extra records: 1
Source temp.: 0 Analyzer temp.: 275 Transfer line temp. : 0

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

GC/MS TUNING AND MASS CALIBRATION
Decafluorotriphenylphosphine (DFTPP)

Case No. V-4474 Contractor Ecology & Environment Inc. Contract No. IL-3140

Instrument ID HP5970D Date 10-17-86 Time 1108

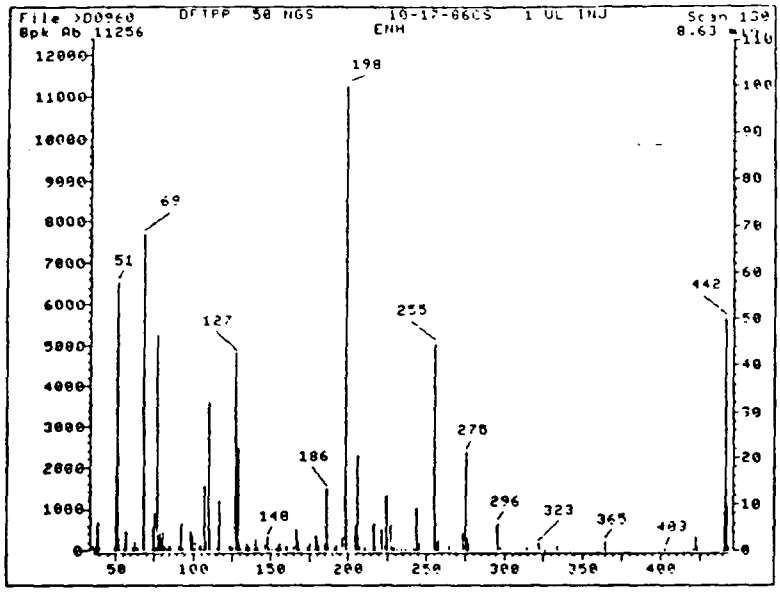
Lab ID D0960 Data Release Authorized By: C Stoytowicz

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



>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	197.95	1.34	253.20	.38
38.05	1.42	91.90	.80	142.70	.07	196.05	2.84	255.00	44.75
39.05	6.27	93.00	5.85	146.15	.43	197.95	100.00	256.00	6.54
39.95	.92	93.90	.45	146.95	1.26	198.95	6.46	256.90	.49
40.15	.32	98.00	4.29	147.95	2.82	202.55	.07	258.00	2.44
49.05	1.18	99.00	3.39	149.05	.55	204.05	3.39	264.95	.97
50.00	15.98	100.00	.44	151.35	.45	205.10	5.41	273.15	1.45
51.00	58.17	101.00	1.91	152.95	.83	206.00	20.24	273.95	3.85
52.10	2.54	103.00	.66	153.95	.54	207.10	3.06	275.05	21.18
52.80	.06	104.10	1.26	155.05	1.26	208.00	.73	276.05	2.69
55.10	.28	105.10	1.12	156.05	1.66	211.00	.84	276.95	1.72
56.10	1.70	105.90	.12	156.75	.32	216.20	.17	296.00	5.89
57.00	4.39	107.10	13.81	159.95	.92	217.00	5.97	297.10	.81
61.00	.82	107.95	1.96	161.05	1.05	218.00	.65	314.95	.60
62.10	.81	110.05	32.14	165.05	.94	221.10	4.61	315.15	.12
63.10	2.02	111.05	4.47	167.00	4.55	221.80	.19	323.00	1.62
65.10	.76	116.05	.75	168.00	2.08	223.00	1.50	326.70	.38
68.95	68.36	117.05	10.78	169.90	.45	224.05	11.74	334.10	.98
73.05	.54	122.95	1.38	173.00	.60	225.05	2.51	365.00	2.03
74.05	4.85	124.05	.68	174.00	.93	227.05	5.44	401.90	.39
74.95	8.24	125.05	.60	175.00	1.61	228.05	.62	403.10	.46
76.05	.59	127.00	42.62	177.80	.11	229.05	.93	420.75	.36
77.05	46.36	128.10	3.57	178.00	.40	230.95	.38	421.05	.08
78.15	3.18	129.00	21.86	179.00	3.29	234.05	.32	422.95	3.01
79.05	3.88	130.00	1.67	180.10	1.87	236.75	.38	423.95	.58
80.05	2.68	131.00	.42	181.10	1.09	241.95	.67	439.40	.20
81.05	3.98	134.10	.63	185.05	1.78	242.25	.11	439.80	.07
82.05	.91	135.10	1.72	186.05	13.11	242.90	.15	441.00	8.55
83.05	.85	136.00	.74	187.05	3.55	244.00	9.07	442.00	50.14
84.05	.53	136.90	.68	188.05	.36	245.00	1.13	443.00	9.72
84.95	1.02	140.00	.29	191.15	.49	246.00	1.80	444.10	.94

MS data file header from : >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. V-4474 Contractor Ecology & Environment Inc. Contract No. IL-3140

Instrument ID HP5970B Date 12/4/86 Time 1002

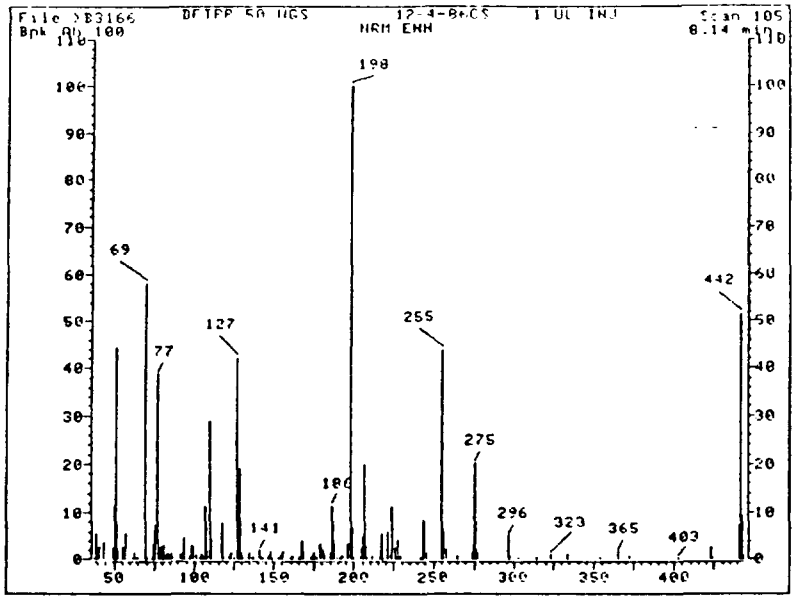
Lab ID B3166 Data Release Authorized By: C Stojowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	44.3
68	less than 2.0% of mass 69	0 (0)[1]
69	mass 69 relative abundance	58.1
70	less than 2.0% of mass 69	0.30 (0.52)[1]
127	40.0 - 60.0% of mass 198	42.1
197	less than 1.0% of mass 198	0
198	base peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.77
275	10.0 - 30.0% of mass 198	20.1
365	greater than 1.00% of mass 198	1.96
441	present, but less than mass 443	7.53
442	greater than 40.0% of mass 198	51.4
443	17.0 - 23.0% of mass 442	9.41 (18.3)[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- 50ug/L	B3167	12-4-86	1034
	BN STD -50ug/L	B3169		1131
DC-SS-31	9797	B3172		1547
DC-SS-32	9798	B3173		1638
DC-SS-33	9799	B3174		1729
DC-SS-34	9800	B3175		1821
DC-SS-26	9792	B3176		1919
DC-SS-28	9794	B3178		2102



>B3166 DFTPP 50 NGS 12-4-86CS 1 UL INJ
105 NRM ENH

File: >B3166 Scan #: 105 Retn. time: 8.14

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
38.05	.41	86.00	1.26	135.00	1.40	186.05	11.39	243.05	.46
39.15	5.40	87.10	.24	136.10	.35	187.05	3.35	244.05	8.56
40.05	2.09	91.10	1.00	137.10	.38	189.05	.45	245.15	.72
41.15	2.71	92.20	.36	141.00	1.93	190.95	.28	246.05	1.38
43.15	2.52	93.00	4.56	142.10	.49	191.95	.87	255.05	43.72
44.05	3.53	93.90	.19	143.00	.38	193.05	.70	256.05	5.94
49.15	2.73	96.00	.20	146.10	.25	196.05	3.23	258.00	2.45
50.15	11.43	97.00	.66	147.00	.69	197.95	100.00	265.00	.66
51.15	44.26	98.00	2.95	148.00	1.73	198.95	6.77	273.00	1.25
52.10	2.08	99.00	2.53	148.90	.30	199.95	.27	274.00	3.31
55.10	2.59	101.00	1.11	153.10	.53	201.45	.43	275.00	20.14
56.00	1.92	103.00	.30	154.00	.33	203.15	.38	276.00	2.15
57.00	5.68	104.00	.95	155.05	.89	204.05	2.72	277.00	1.44
62.10	.31	105.10	1.01	156.05	1.62	205.05	4.99	293.00	.24
63.00	1.30	105.90	.23	157.05	.21	206.05	20.09	296.00	5.13
65.10	.36	107.00	11.28	159.95	.39	207.05	3.01	297.00	.62
69.00	58.13	108.10	1.60	161.05	.65	208.05	.44	303.00	.33
70.00	.30	110.00	29.01	165.05	.54	211.05	.57	315.00	.32
73.30	.24	111.00	4.30	165.85	.46	215.95	.39	323.00	1.01
74.00	3.28	117.00	7.77	167.05	3.94	216.95	5.69	334.00	.92
75.00	7.32	118.00	.38	167.95	1.82	218.05	.47	354.00	.35
77.10	38.80	122.10	.66	172.95	.36	221.05	5.91	364.95	1.96
78.10	2.16	123.10	1.24	174.05	.59	223.05	.90	372.05	.70
79.10	2.94	125.10	.34	175.05	1.28	224.05	11.40	402.95	.24
80.00	1.89	127.00	42.09	176.15	.43	225.05	2.79	422.95	2.63
81.00	3.35	128.10	3.49	177.05	.49	226.05	.27	424.05	.31
82.10	.72	129.00	19.00	178.95	3.23	227.05	4.33	441.05	7.53
83.10	1.39	130.10	1.40	180.05	2.06	228.05	.41	442.05	51.39
84.00	1.48	131.10	.28	181.05	.74	229.05	.72	443.05	9.41
85.00	.76	134.10	.29	185.05	1.48	242.05	.38	444.15	.75

MS data file header from : >B3166

Sample: DFTPP 50 NGS Operator: USFPB MS 12/04/86 10:02
Misc : 12-4-86CS 1 UL INJ
Sys. #: 2 MS model: 70 SW/HW rev.: CA ALS # : 0
Method file: DFTPP8 Tuning file: MIBUN No. of extra records: 1
Source temp.: 0 Analyzer temp.: 275 Transfer line temp. : 0

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

GC/MS TUNING AND MASS CALIBRATION
Decafluorotriphenylphosphine (DFTPP)

Case No. U-4474 Contractor Ecology & Environment Inc. Contract No. IL-3140

Instrument ID HP5970 B Date 12/19/86 Time 1125

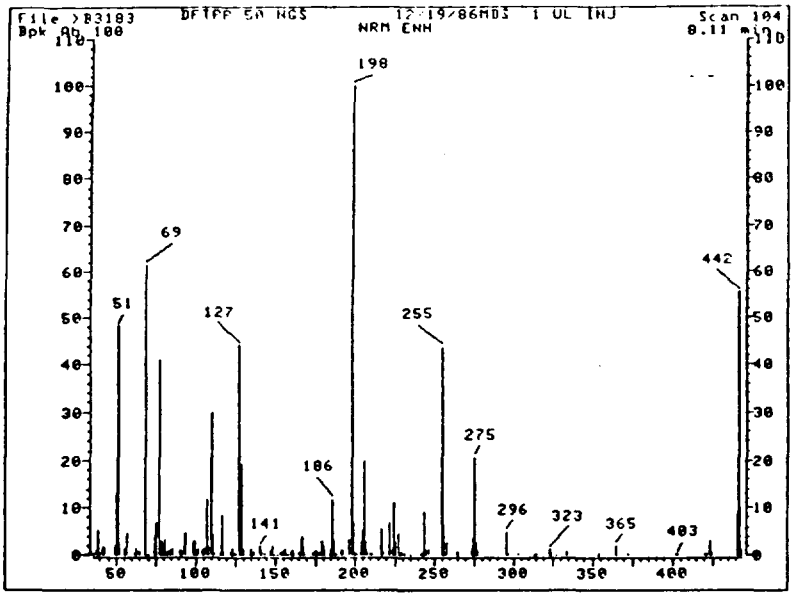
Lab ID B3183 Data Release Authorized By: C Stojowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	48.4
68	less than 2.0% of mass 69	0 (0)[1]
69	mass 69 relative abundance	61.4
70	less than 2.0% of mass 69	0.18 (0.29)[1]
127	40.0 - 60.0% of mass 198	44.3
197	less than 1.0% of mass 198	0
198	base peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.67
275	10.0 - 30.0% of mass 198	20.7
365	greater than 1.00% of mass 198	2.10
441	present, but less than mass 443	8.25
442	greater than 40.0% of mass 198	55.4
443	17.0 - 23.0% of mass 442	10.0 (18.0)[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-50ug/L	B3184	12-19-86	1148
	AP STD - 50ug/L	B3186		1352
	BLANK	B3187		1506
DC-SS-38	9804	B3191		1859
DC-SS-35	9801	B3192		1951
DC-SS-29	9795	B3193		2042
DC-SS-30	9796	B3194		2134
DC-SS-24	9790	B3195		2225
DC-SS-25	9791	B3196		2316



>B3183 DFTPP 50 NGS 12/19/86MDS 1 UL INJ
104 NRM ENH

File: >B3183 Scan #: 104 Retn. time: 8.11

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.05	.46	98.00	3.11	151.00	.21	192.05	.89	256.05	6.28
38.15	.91	99.10	2.95	153.00	.64	193.05	.99	257.00	.29
39.15	5.35	100.10	.22	154.00	.34	196.05	3.33	258.00	2.53
40.05	.49	101.00	1.45	154.95	1.09	197.95	100.00	265.00	.80
41.15	1.59	104.00	.93	156.05	1.43	198.95	6.67	273.00	1.20
43.05	1.54	105.10	1.39	156.95	.26	200.05	.30	274.00	3.53
49.05	2.03	107.00	11.51	158.05	.17	201.55	.34	275.00	20.66
50.05	12.74	108.00	1.64	160.05	.60	202.95	.40	276.00	2.52
51.15	48.37	110.00	30.01	161.05	.94	204.05	2.81	276.90	.98
52.10	2.32	111.00	4.32	161.95	.20	205.05	5.18	296.00	4.94
55.00	1.41	112.00	.45	165.05	.75	206.05	20.08	297.00	.45
56.00	1.44	116.00	.36	165.95	.38	207.05	2.89	303.00	.35
57.10	4.65	117.00	8.27	166.95	4.01	207.95	.63	314.00	.17
62.10	.52	118.00	.56	168.05	1.58	210.15	.47	315.00	.31
63.10	1.48	122.00	.68	168.95	.22	211.15	.48	323.00	1.30
65.10	.81	123.00	1.46	173.05	.30	216.95	5.53	324.00	.17
69.00	61.35	124.10	.56	174.05	.76	217.95	.65	326.90	.21
70.00	.18	125.10	.29	175.05	1.18	221.05	6.66	334.00	.67
74.00	4.01	127.00	44.26	175.95	.30	222.95	1.23	352.90	.21
75.00	6.73	128.10	3.40	176.15	.29	224.05	10.93	354.10	.30
77.10	41.15	129.00	19.41	176.95	.66	225.05	2.64	364.95	2.10
78.10	2.72	130.10	1.33	177.95	.17	227.05	4.49	372.05	.45
79.00	3.01	134.00	.23	178.95	2.95	228.05	.42	401.95	.26
80.00	2.26	135.00	1.46	180.05	1.96	229.05	.59	403.05	.28
81.00	3.40	136.00	.31	181.05	.96	231.05	.26	420.95	.27
82.10	.83	137.10	.59	184.15	.17	234.95	.23	422.05	.26
83.20	.86	141.00	1.93	185.15	1.50	242.05	.41	423.05	3.01
83.90	1.04	142.00	.77	186.05	11.68	243.05	.40	424.05	.60
85.00	.90	143.10	.48	187.05	2.95	244.05	9.08	441.15	8.25
86.00	1.24	146.10	.22	188.05	.20	245.05	1.01	442.05	55.35
91.00	.96	147.10	.92	189.15	.40	246.05	1.45	443.05	10.01
92.10	.65	148.00	1.89	191.35	.24	255.05	43.79	444.05	.91
93.10	4.57	149.10	.24						

MS data file header from : >B3183

Sample: DFTPP 50 NGS Operator: USER8 MS 12/19/86 11:25
Misc : 12/19/86MDS 1 UL INJ
Sys. #: 2 MS model: 70 SW/HW rev.: CA ALS # : 0
Method file: DFTPPB Tuning file: MTBDN No. of extra records: 1
Source temp.: 0 Analyzer temp.: 275 Transfer line temp. : 0

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

GC/MS TUNING AND MASS CALIBRATION
Decafluorotriphenylphosphine (DFTPP)

Case No. U-4474 Contractor ECOLOGY & ENVIRONMENT INC. Contract No. IL-3140

Instrument ID HP5970B Date 12/22/86 Time 1117

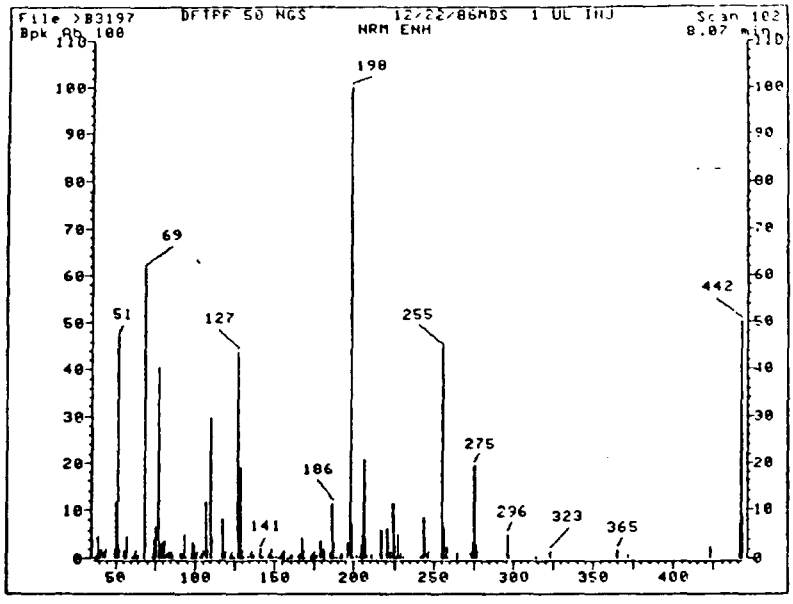
Lab ID B3197 Data Release Authorized By: C Stoytowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	47.1
68	less than 2.0% of mass 69	0 (0)[1]
69	mass 69 relative abundance	61.4
70	less than 2.0% of mass 69	0 (0)[1]
127	40.0 - 60.0% of mass 198	43.8
197	less than 1.0% of mass 198	0
198	base peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.78
275	10.0 - 30.0% of mass 198	19.4
365	greater than 1.00% of mass 198	1.83
441	present, but less than mass 443	7.15
442	greater than 40.0% of mass 198	50.1
443	17.0 - 23.0% of mass 442	8.87 17.7[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 - 50 µg/L	B3199	12-22-86	1247
	AP STD - 50 µg/L	B3200		1347
DC-SS-44	9810	B3202		1537
DC-SS-47	9812	B3204		1736
DC-SS-36	9802	B3205		1828
DC-SS-36 MS	9802 MS	B3206		1919
DC-SS-43	9809	B3208		2107
DC-SS-37	9803	B3809		2158



>B3197 DFTPP 50 NGS 12/22/86MDS 1 UL INJ
102 NRM ENH

File: >B3197 Scan #: 102 Retn. time: 8.07

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.15	.19	85.00	1.40	134.00	.37	176.95	.83	227.05	4.75
38.05	.47	86.00	1.17	135.10	1.22	178.95	3.57	228.05	.53
39.15	4.49	87.00	.28	136.00	.37	180.05	1.86	228.95	.95
40.05	.39	91.10	1.12	137.00	.69	181.05	.95	230.95	.35
41.15	2.16	92.10	.50	141.00	1.93	185.05	1.38	242.05	.55
43.15	1.29	93.00	4.74	142.10	.48	186.05	11.41	243.15	.36
44.05	2.08	94.10	.25	142.80	.31	186.95	3.27	244.05	8.54
49.05	2.12	97.10	.24	143.10	.29	189.05	.37	245.15	1.11
50.15	11.70	98.00	3.33	146.10	.29	191.15	.21	246.05	1.52
51.15	47.10	99.00	2.67	147.00	1.02	192.05	.97	255.05	44.54
52.00	2.04	100.00	.29	148.10	1.92	193.05	1.05	256.05	6.09
55.10	1.78	101.00	1.42	149.00	.31	196.05	3.19	257.00	.51
56.00	1.66	103.00	.41	151.20	.26	197.95	100.00	258.00	2.39
57.00	4.46	104.00	.63	153.10	.48	198.95	6.78	259.00	.24
60.90	.44	105.00	1.68	154.00	.33	200.05	.31	265.00	.95
62.10	.40	107.00	11.65	154.95	1.06	201.35	.59	273.00	1.28
63.00	1.73	108.00	1.73	156.05	1.57	203.05	.49	274.00	3.27
63.90	.23	110.00	29.43	157.05	.23	204.05	2.76	275.00	19.42
65.00	.58	111.10	4.27	158.05	.18	205.05	4.96	276.00	2.50
69.00	61.42	117.00	8.04	159.05	.22	206.05	20.44	276.90	1.31
73.10	.29	118.10	.47	159.95	.65	207.05	3.78	296.00	5.04
74.10	3.97	119.20	1.31	160.95	.87	208.05	.69	296.90	.62
75.00	6.57	122.00	.54	164.95	.82	211.05	.87	314.90	.53
77.00	40.32	123.00	1.29	166.05	.67	216.95	5.75	323.10	1.44
78.10	2.63	124.00	.38	166.95	4.24	218.05	.68	364.95	1.83
79.00	3.15	125.10	.38	168.05	1.73	221.05	6.07	371.95	.79
80.00	2.17	127.00	43.78	169.05	.21	223.05	1.23	422.95	2.44
81.00	3.54	128.10	3.29	173.05	.29	224.05	11.42	441.05	7.15
82.10	.73	129.00	19.12	174.05	.81	225.05	2.69	442.05	50.08
83.00	1.26	130.00	1.53	175.05	1.35	226.05	.20	443.05	8.87
84.00	1.02	131.00	.48	176.05	.42				

MS data file header from : >B3197

Sample: DFTPP 50 NGS Operator: USER8 MS 12/22/86 11:17
Misc : 12/22/86MDS 1 UL INJ
Sys. #: 2 MS model: 70 SW/HW rev.: CA ALS # : 0
Method file: DFTPP8 Tuning file: MTBUN No. of extra records: 1
Source temp.: 0 Analyzer temp.: 275 Transfer line temp. : 0

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

GC/MS TUNING AND MASS CALIBRATION
Decafluorotriphenylphosphine (DFTPP)

Case No. V-4474 Contractor Ecology & Environment Inc. Contract No. IL-3140

Instrument ID HP5970 D Date 12/22/86 Time 1139

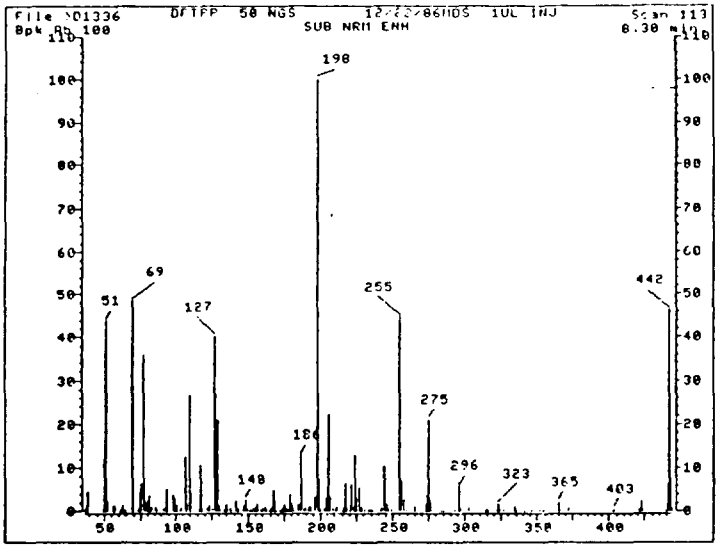
Lab ID D1336 Data Release Authorized By: C Stoytowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	43.8
68	less than 2.0% of mass 69	0 (0)[1]
69	mass 69 relative abundance	48.3
70	less than 2.0% of mass 69	0.24 (0.50)[1]
127	40.0 - 60.0% of mass 198	40.0
197	less than 1.0% of mass 198	0
198	base peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	7.06
275	10.0 - 30.0% of mass 198	21.0
365	greater than 1.00% of mass 198	2.05
441	present, but less than mass 443	6.31
442	greater than 40.0% of mass 198	46.0
443	17.0 - 23.0% of mass 442	8.52 (18.5)[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 - 50 µg/L	D1337	12-22-86	1210
	AP STD - 50 µg/L	D1338		1313
DC-SS-48	9813	D1344		1930
DC-SS-40	9806	D1346		2115
DC-SS-42	9808	D1347		2207



>D1336 DFTPP 50 NGS 12/22/86MDS 1UL INJ
113 SUB NRM ENH

File: >D1336 Scan #: 113 Retn. time: 8.30

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.95	.24	109.95	26.73	164.15	.10	208.10	.84	277.05	1.61
38.05	.60	111.05	4.15	165.05	.88	210.10	.32	283.00	.15
39.05	4.58	116.15	.45	166.10	.63	211.10	.91	285.10	.18
49.05	.46	117.05	10.72	167.00	4.73	214.90	.23	293.00	.27
50.00	12.15	118.05	.67	168.00	1.85	216.10	.63	296.00	5.80
51.00	43.84	120.05	.14	169.00	.23	217.00	6.49	297.10	.79
52.10	2.35	121.95	.79	170.90	.14	218.10	.82	303.05	.58
56.00	1.43	123.05	1.46	172.00	.27	220.00	.13	314.05	.16
57.00	1.26	125.05	.70	173.00	.54	221.10	6.20	315.05	.49
61.10	.50	127.00	40.03	174.00	.96	223.10	1.33	316.05	.24
62.00	.51	128.10	3.30	175.10	1.65	224.05	13.05	322.00	.10
63.00	1.51	129.00	20.97	176.10	.56	225.05	2.95	323.10	1.59
64.90	.45	130.00	1.50	177.10	.84	226.95	5.43	324.10	.28
68.95	48.30	131.10	.46	178.00	.36	227.95	.72	327.00	.25
69.85	.24	132.90	.11	179.00	3.90	228.95	1.10	334.10	1.04
70.95	.21	134.10	.48	180.10	2.11	230.95	.44	335.00	.17
73.05	.37	135.00	1.62	181.10	1.13	233.95	.42	340.95	.16
74.05	4.12	136.00	.55	182.10	.12	235.05	.27	346.05	.34
75.05	6.50	137.10	.81	184.10	.15	237.05	.23	352.05	.44
77.05	35.89	137.90	.12	185.05	1.70	241.05	.16	353.05	.18
78.05	2.32	138.10	.12	186.05	12.87	241.95	.63	354.05	.32
79.05	1.84	141.00	2.28	186.95	3.61	244.00	10.24	365.00	2.05
80.05	2.21	142.10	.79	188.05	.39	245.10	1.24	366.00	.23
81.05	3.71	143.00	.56	188.95	.72	246.00	1.78	372.00	.74
82.05	.59	146.00	.46	190.95	.40	247.00	.38	382.95	.23
83.05	.90	147.05	1.26	192.05	.98	249.00	.28	402.00	.22
86.05	.99	147.95	2.79	193.05	1.11	253.10	.19	403.00	.42
86.95	.33	149.05	.59	194.05	.14	255.00	44.56	403.90	.10
91.90	.62	151.05	.35	196.05	3.33	256.00	6.69	421.05	.26
93.00	5.20	151.65	.15	197.95	100.00	257.10	.57	422.05	.28
94.00	.17	152.95	.76	198.95	7.06	258.00	2.65	422.95	2.48
98.00	3.80	154.05	.52	200.05	.48	259.10	.34	423.95	.50
99.00	2.85	155.05	1.14	201.45	.50	264.95	1.05	439.10	.10
100.00	.34	156.05	1.82	203.05	.60	271.95	.11	439.80	.20
101.00	1.69	157.05	.45	204.05	3.11	273.05	1.55	441.10	6.31
103.00	.54	158.95	.37	205.00	5.75	274.05	3.88	442.00	46.04
104.00	.95	160.05	.83	206.00	22.22	275.05	20.97	443.00	8.52
107.10	12.64	161.05	1.12	207.10	3.24	276.05	2.67	444.10	.75
108.05	1.82	162.05	.34						

MS data file header from : >D1336

Sample: DFTPP 50 NGS Operator: USER6 MS 12/22/86 11:39
Misc : 12/22/86MDS 1UL INJ BTL# 1
Sys. #: 1 MS model: 70 SW/HW rev.: CA HLS # : 0
Method file: DFTPPD Tuning file: MTDON No. of extra records: 1
Source temp.: 0 Analyzer temp.: 275 Transfer line temp. : 20

Chromatographic temperatures : 120. 290. 0. 0. 0.
Chromatographic times, min. : 0.0 10.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 10.0 0.0 0.0 0.0 0.0

GC/MS TUNING AND MASS CALIBRATION
Decafluorotriphenylphosphine (DFTPP)

Case No. V-4474 Contractor Ecology & Environment Inc. Contract No. IL-3140

Instrument ID HP5970B Date 12/23/86 Time 1447

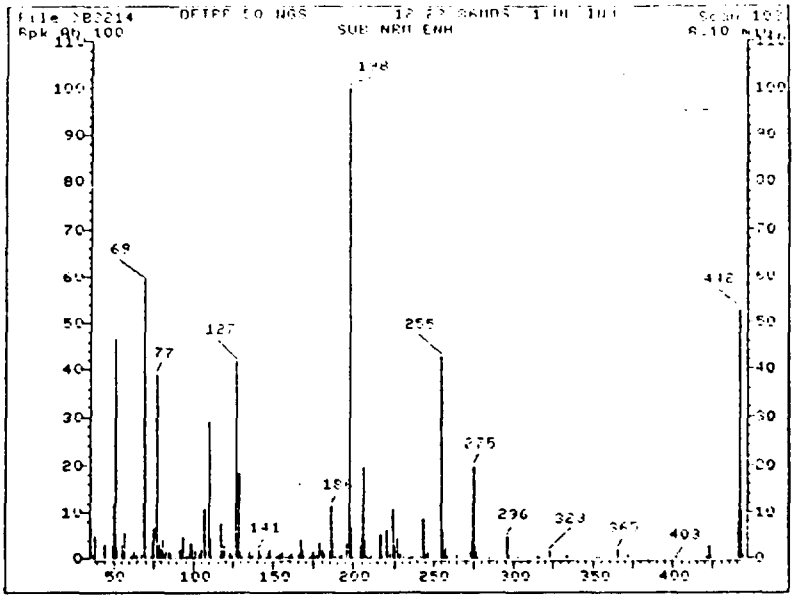
Lab ID B3214 Data Release Authorized By: C Stoytowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	46.5
68	less than 2.0% of mass 69	0 (0)[1]
69	mass 69 relative abundance	59.0
70	less than 2.0% of mass 69	0.28 (0.47)[1]
127	40.0 - 60.0% of mass 198	41.6
197	less than 1.0% of mass 198	0
198	base peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.71
275	10.0 - 30.0% of mass 198	19.7
365	greater than 1.00% of mass 198	1.95
441	present, but less than mass 443	7.86
442	greater than 40.0% of mass 198	52.3
443	17.0 - 23.0% of mass 442	10.1 (19.3)[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 - 50ug/L	B3220	12-23-86	1812
	BN STD - 50ug/L	B3221		1903
DC-SS-39	9805	B3222		2018
DC-SS-41	9807	B3223		2109
DC-SS-27	9793	B3224		2207



>B3214 DFTPP 50 NGS 12/23/86NGS 1 UL INJ
103 SUB NRM ENH

File: >B3214 Scan #: 103 Retn. time: 8.10

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
38.05	.73	96.10	.37	145.20	.09	188.15	.13	245.05	1.08
39.15	4.97	97.10	.97	146.10	.30	189.05	.57	246.05	1.45
44.15	3.06	98.00	3.17	147.10	1.16	190.95	.31	255.05	42.66
49.05	2.77	99.00	2.57	148.10	1.89	191.95	.78	256.05	6.11
50.05	11.54	100.00	.14	149.10	.46	193.05	.82	257.00	.40
51.15	46.48	101.00	1.57	151.30	.29	196.05	3.19	258.00	9.33
52.10	2.20	103.00	.39	152.00	.12	197.95	100.00	258.90	.32
55.10	2.81	104.00	.91	153.00	.67	198.95	6.71	264.90	.74
56.00	1.63	105.10	2.11	154.10	.45	199.95	.40	273.00	1.27
57.10	5.47	107.00	10.55	154.95	1.10	201.45	.46	274.00	3.45
58.00	.10	108.00	1.61	156.05	1.48	203.15	.51	275.00	19.74
61.00	.38	110.00	28.85	157.05	.39	204.05	2.67	276.00	2.53
62.10	.53	111.00	4.24	157.95	.18	205.05	4.88	277.00	1.42
63.10	1.48	112.00	.37	158.95	.27	206.05	19.77	277.90	.09
65.10	.82	116.10	.51	160.05	.57	207.05	4.08	285.00	.21
67.10	.75	117.00	7.55	161.05	.98	208.05	.58	296.00	4.81
69.00	58.99	117.90	.67	161.95	.18	209.05	.10	297.00	.60
70.00	.28	119.10	2.67	164.95	.71	210.15	.22	303.00	.43
73.00	.40	122.00	.66	166.05	.66	210.85	.73	315.00	.51
74.00	3.51	123.10	1.27	167.05	3.87	216.05	.19	316.00	.22
75.00	6.46	124.00	.60	167.95	1.70	216.95	5.19	323.10	1.56
77.10	38.86	125.10	.51	169.05	.30	218.05	.56	334.10	.80
78.10	2.57	127.00	41.56	172.05	.17	221.05	6.26	352.10	.37
79.00	3.09	128.10	3.17	173.05	.23	223.05	1.28	354.00	.36
80.00	1.95	129.00	18.36	174.05	.79	224.05	10.77	364.95	1.95
81.00	3.99	130.10	1.42	175.05	1.51	225.05	2.72	372.05	.67
82.10	.80	131.00	.47	176.15	.51	227.05	4.71	401.95	.27
83.10	1.73	132.10	.11	176.95	.28	228.05	.61	402.95	.40
85.10	1.29	134.10	.38	177.95	.26	228.95	.91	421.05	.31
86.00	1.11	135.10	1.29	178.95	3.32	231.05	.37	422.05	.33
87.00	.23	136.00	.39	180.05	1.85	233.95	.13	423.05	2.77
88.10	.11	137.20	.63	181.05	.95	235.05	.16	423.95	.51
91.00	1.97	140.10	.10	184.05	.12	236.05	.07	441.05	7.86
92.00	.74	141.10	1.96	185.05	1.50	237.15	.34	442.05	50.30
93.00	4.45	142.00	.73	186.05	11.33	242.05	.47	443.05	10.12
94.00	.16	143.00	.51	187.05	3.13	244.05	8.77	444.05	.87
95.10	.88								

MS data file header from : >B3214

Sample: DFTPP 50 NGS Operator: USERS MS 12/23/86 14:47
Misc : 12/23/86NGS 1 UL INJ
Sys. #: 2 MS model: 70 SW/HW rev.: F6 ALS # : 0
Method file: DFTPPB Tuning file: MIBOU No. of extra records: 1
Source temp.: 0 Analyzer temp.: 275 Transfer line temp. : 0

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

GC/MS TUNING AND MASS CALIBRATION
Decafluorotriphenylphosphine (DFTPP)

Case No. U-4474 Contractor Ecology & Environment Inc. Contract No. IL-3140

Instrument ID HP5970D Date 1/9/87 Time 1106

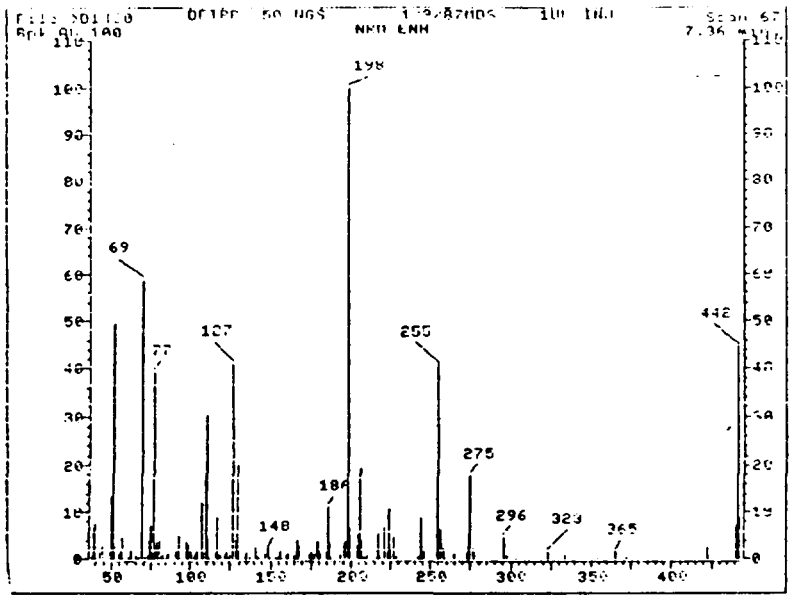
Lab ID D1480 Data Release Authorized By: C Stojowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	49.4
68	less than 2.0% of mass 69	0.29 (0.49)[1]
69	mass 69 relative abundance	58.8
70	less than 2.0% of mass 69	0 (0)[1]
127	40.0 - 60.0% of mass 198	40.9
197	less than 1.0% of mass 198	0
198	base peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.60
275	10.0 - 30.0% of mass 198	17.7
365	greater than 1.00% of mass 198	1.58
441	present, but less than mass 443	7.09
442	greater than 40.0% of mass 198	44.6
443	17.0 - 23.0% of mass 442	8.58 (19.2)[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
	BW STD - 50ug/L	D1481	1-9-87	1130
	AP STD - 50 ug/L	D1483		1324
	BLANK	D1484		1426
DC-SS-46	9811	D1485		1527
DC-SS-36 MSD	9802 MSD	D1487		1620



>D1480 DFIPP 50 NGS 1/9/87MDS 1UL INJ
67 NRM ENH

File: >D1480 Scan #: 67 Retn. time: 7.36

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
32.95	.46	83.65	.12	130.00	1.53	185.05	1.43	242.90	.55
38.95	6.41	85.05	1.09	134.10	.37	186.05	11.08	244.00	8.66
39.95	7.54	86.05	.98	135.00	1.42	186.95	3.34	245.00	.95
42.95	1.49	91.00	1.59	137.10	.25	188.05	.16	246.00	1.55
44.05	2.80	92.20	.94	141.00	2.27	193.05	.82	255.00	40.73
48.95	1.29	93.00	4.89	141.90	.50	196.05	3.45	256.00	6.07
50.00	13.42	95.10	.24	143.00	.46	197.95	100.00	258.00	2.27
51.00	49.41	98.00	3.55	147.05	1.11	198.95	6.60	259.00	.15
52.00	2.59	99.10	3.08	148.05	2.31	201.45	.16	264.95	.90
55.10	1.16	101.00	1.57	149.05	.38	204.05	2.64	272.95	1.08
56.10	1.89	103.10	.39	152.95	.52	205.00	5.21	274.05	3.44
57.10	4.49	103.90	1.04	153.95	.21	206.00	19.43	275.05	17.74
61.00	.45	105.00	1.58	155.05	.46	207.00	4.01	276.05	2.36
63.00	1.68	107.10	12.02	156.05	1.68	208.00	.46	277.05	1.23
65.00	.81	107.95	1.27	156.95	.17	208.90	.27	296.00	4.68
67.80	.29	110.05	30.04	159.95	.62	210.00	.13	297.10	.60
68.95	58.84	111.05	4.19	160.95	1.16	211.00	.67	303.05	.18
71.15	.50	111.95	.18	165.05	.59	215.90	.17	323.10	1.45
73.15	.68	116.05	.99	166.00	.44	217.00	5.16	334.10	.71
73.95	3.98	117.05	8.61	167.00	4.03	218.00	.46	352.15	.18
75.05	7.02	118.05	.61	168.00	2.54	221.10	6.41	353.95	.14
76.15	1.28	119.05	.23	174.10	.72	223.20	1.29	365.00	1.58
77.05	39.18	122.15	.28	175.00	1.44	224.05	10.75	372.00	.47
77.95	2.68	123.05	1.38	175.90	.45	225.05	2.13	423.05	2.39
79.05	3.64	125.05	.29	176.90	.91	226.95	4.58	423.95	.18
80.05	2.43	127.00	40.87	179.00	3.48	227.95	.34	441.10	7.09
80.95	4.01	128.00	3.83	180.10	1.82	228.95	.57	442.00	44.56
82.05	.65	129.00	20.09	181.00	1.08	241.95	.36	443.00	8.58
83.05	1.11								

MS data file header from : >D1480

Sample: DFIPP 50 NGS Operator: USER6 MS 1/09/87 11:06
Misc : 1/9/87MDS 1UL INJ BH # 1
Sys. #: 1 MS model: 20 SW/HW rev.: LA ALS # : 0
Method file: DFIPP0 Tuning file: MIDUN No. of extra records: 1
Source temp.: 0 Analyzer temp.: 275 Transfer line temp. : 20

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

GC/MS TUNING AND MASS CALIBRATION

Bromofluorobenzene (BFB)

Case No. U-4474 Contractor Ecology & Environment Inc. Contract No. IL-3140

Instrument ID HP5995C Date 7-14-86 Time 1426

Lab ID C3498 Data Release Authorized By: C Sojtowicz

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

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

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

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

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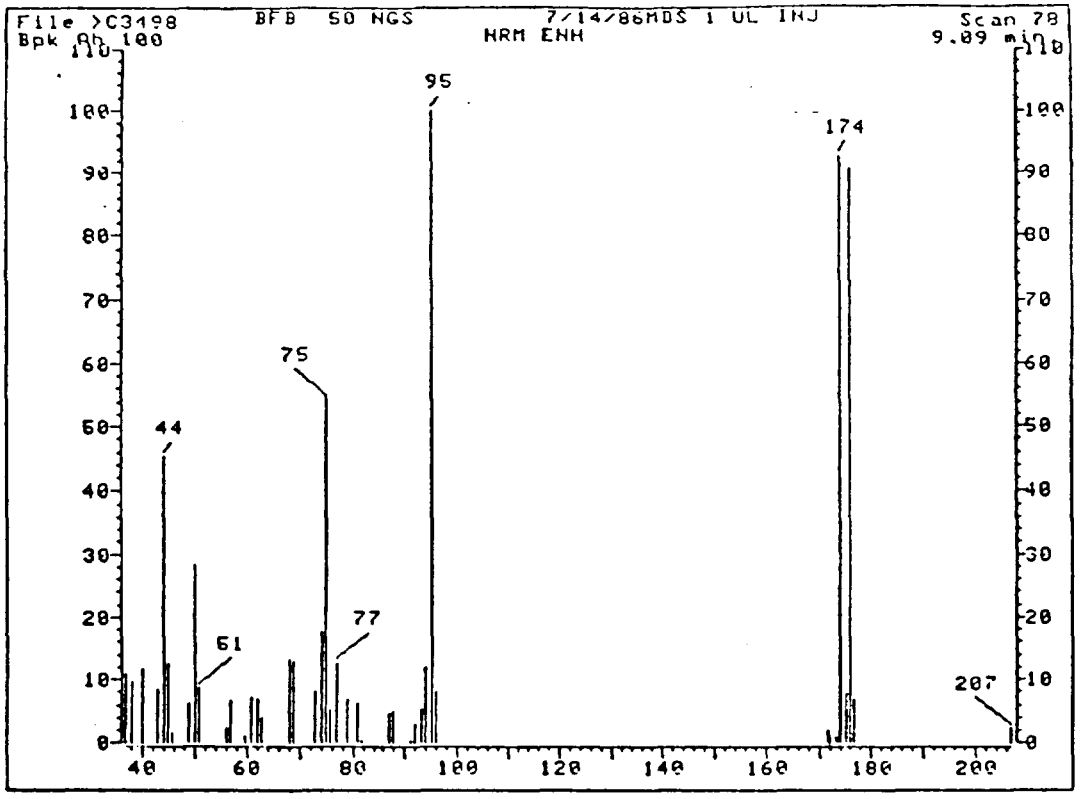
recycled paper



>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 14:26
Misc : 7/14/86MDS 1 UL INJ
Sys. #: 1 MS model: 96 SW/HW rev.: CA ALS # : 0
Method file: BFB001 Tuning file: MTCU4 No. of extra records: 1
Source temp.: 200 Analyzer temp.: 220 Transfer line temp. : 200

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

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

GC/MS TUNING AND MASS CALIBRATION

Bromofluorobenzene (BFB)

Case No. U-4474 Contractor Ecology & Environment Contract No. IL-3140

Instrument ID HP5995C Date 11-18-86 Time 20:22

Lab ID >C5583 Data Release Authorized By: [signature]

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of the base peak	26.5
75	30.0 - 60.0% of the base peak	52.2
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of the base peak	5.58
173	Less than 1.0% of the base peak	0.00
174	Greater than 50.0% of the base peak	90.8
175	5.0 - 9.0% of mass 174	7.13 (7.86)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	90.0 (99.2)[1]
177	5.0 - 9.0% of mass 176	5.11 (5.68)[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 >C5585	11-18-86	21:42
BLK C5592	Method Blank >C5592	11-19-86	04:12
DC-SS-24-MS	9790-MS >C5594	11-19-86	06:03
DC-SS-24-MSD	9790-MSD >C5595	11-19-86	06:59
DC-SS-25	9791 >C5596	11-19-86	07:55

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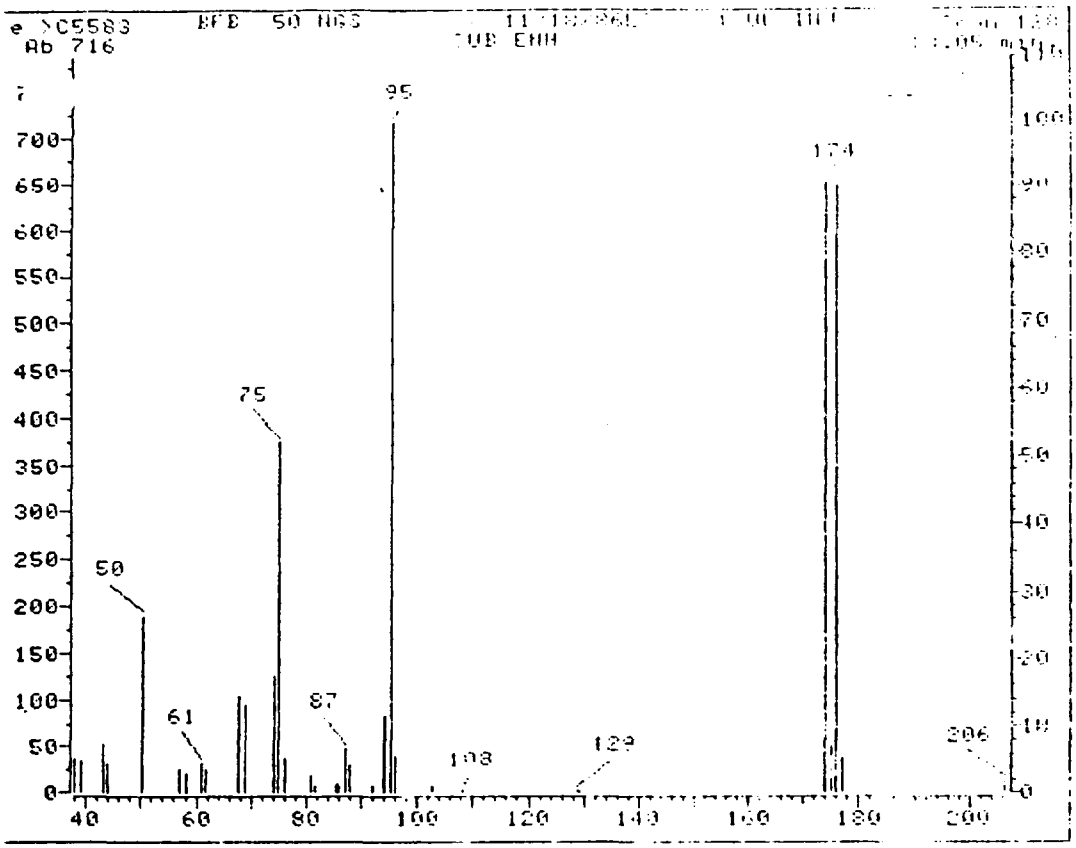


83 BFB 50 NGS 11/13/86LS 1 UL INJ
28 SUB ENH

: >C5583 Scan #: 128 Retn. time: 13.05

z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
00	36.22	60.95	32.44	76.05	36.78	92.05	7.67	129.50	1.67
00	35.89	61.65	25.00	80.75	20.00	94.15	82.67	173.95	650.56
00	52.89	61.95	20.22	81.65	6.94	95.05	716.44	174.95	51.11
00	32.00	67.85	104.56	85.75	9.22	96.05	40.90	175.95	645.90
10	189.50	69.05	94.94	86.05	6.78	102.70	7.67	177.05	35.61
10	24.94	74.05	124.89	87.05	47.61	108.20	2.11	206.60	12.11
00	22.28	75.05	374.00	88.05	31.44	129.10	1.94		

ata file header from : >C5583

le: BFB 50 NGS Operator: USEPB MS 11/18/86 20:22
: 11/18/86LS 1 UL INJ
#: 1 MS model: 96 SW/HW rev.: CA ALS # : 0
thod file: BFB001 Tuning file: MTCM4 No. of extra records: 1
rce temp.: 200 Analyzer temp.: 220 Transfer line temp. : 200

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

GC/MS TUNING AND MASS CALIBRATION

Bromofluorobenzene (BFB)

Case No. U-4474 Contractor Ecology & Environment Contract No. IL-3140

Instrument ID HP5995C Date 11-19-86 Time 17:36

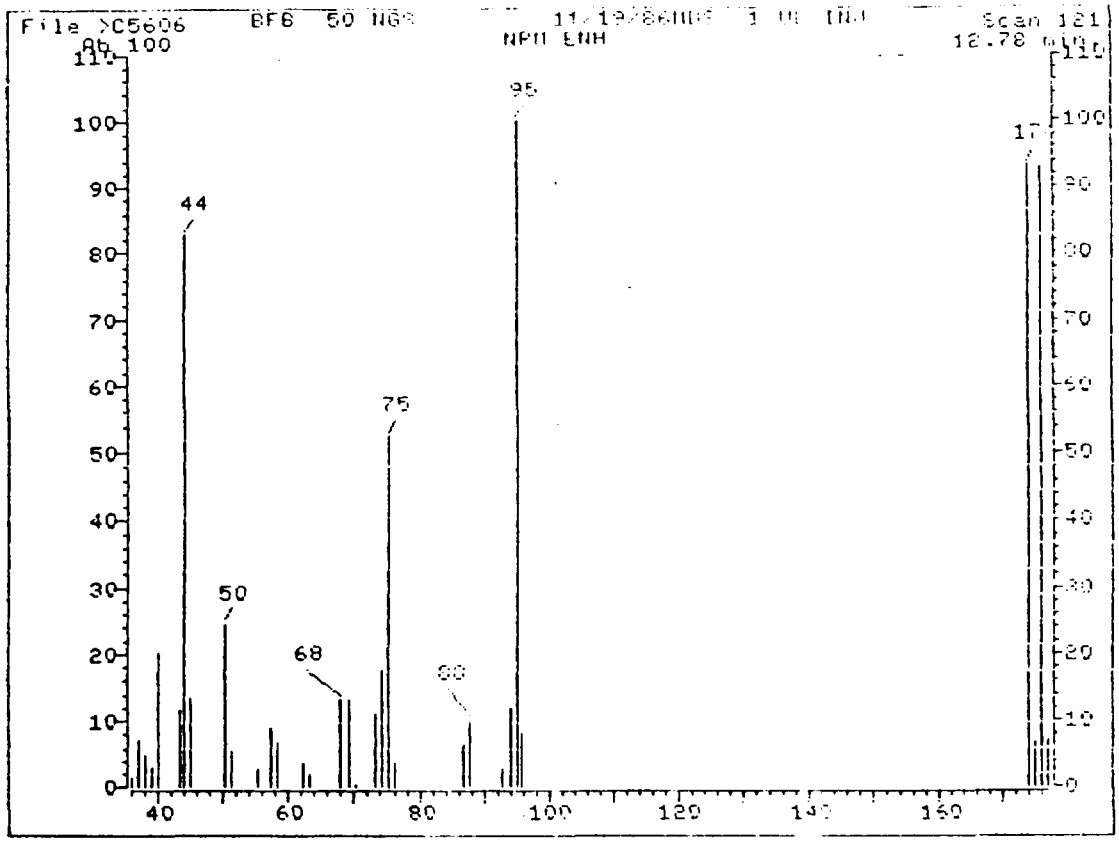
Lab ID >C5606 Data Release Authorized By: C Stojowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of the base peak	24.6
75	30.0 - 60.0% of the base peak	52.6
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of the base peak	8.05
173	Less than 1.0% of the base peak	0.00
174	Greater than 50.0% of the base peak	93.1
175	5.0 - 9.0% of mass 174	6.75 (7.25)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	93.0 (99.8)[1]
177	5.0 - 9.0% of mass 176	7.06 (7.60)[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 >C5607	11-19-86	18:06
DC-SS-26	9792 >C5609	11-19-86	20:19
DC-SS-28	9794 >C5611	11-19-86	22:10
BLK C5612	Method Blank >C5612	11-19-86	23:18
DC-SS-29	9795 >C5613	11-20-86	00:13
DC-SS-32	9798 >C5616	11-20-86	03:00
DC-SS-27	9793 >C5610	11-19-86	21:15
DC-SS-31	9797 >C5615	11-20-86	02:04



>C5606 BFB 50 NGS 11/19/86MDS 1 UL INJ
121 NRM ENH

File: >C5606 Scan #: 121 Retn. time: 12.78

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.00	1.34	45.00	13.44	63.05	1.90	75.05	52.56	95.05	100.00
37.00	7.24	50.10	24.56	67.95	13.06	76.05	3.66	95.95	8.05
38.00	4.96	51.10	5.59	69.05	1[illegible].22	86.95	6.43	173.95	93.14
39.00	3.06	55.10	2.74	70.05	.38	87.95	10.07	175.05	6.75
40.00	20.25	57.10	9.02	73.05	11.01	92.95	2.53	175.95	92.98
43.10	11.52	58.10	6.76	74.05	1[illegible].77	94.15	11.91	177.05	7.06
44.00	82.96	62.05	3.51						

MS data file header from : >C5606

Sample: BFB 50 NGS Operator: [illegible] MS 11/19/86 17:36
Misc : 11/19/86MDS 1 UL INJ
Sys. #: 1 MS model: 96 SW/HW rev.: CA ALS # : 0
Method file: BFB001 Tuning file: [illegible] No. of extra records: 1
Source temp.: 200 Analyzer temp.: [illegible] Transfer line temp. : 200

Chromatographic temperatures :	220.	225.	0.	0.	0.
Chromatographic times, min. :	10.[illegible]	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	[illegible]	0.0	0.0	0.0	0.0

GC/MS TUNING AND MASS CALIBRATION

Bromofluorobenzene (BFB)

Case No. U-4474 Contractor Ecology & Environment Contract No. IL-3140

Instrument ID HP5995C Date 11/20/86 Time 08:52

Lab ID >C5622 Data Release Authorized By: C Stojtowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of the base peak	24.2
75	30.0 - 60.0% of the base peak	52.8
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of the base peak	7.36
173	Less than 1.0% of the base peak	0.00
174	Greater than 50.0% of the base peak	95.4
175	5.0 - 9.0% of mass 174	8.25 (8.65)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	95.5 (100.1)[1]
177	5.0 - 9.0% of mass 176	6.98 (7.31)[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 >C5625	11-20-86	11:38
BLKC5626	Method Blank >C5626	11-20-86	12:34
DC-SS-37	9803 >C5632	11-20-86	18:54

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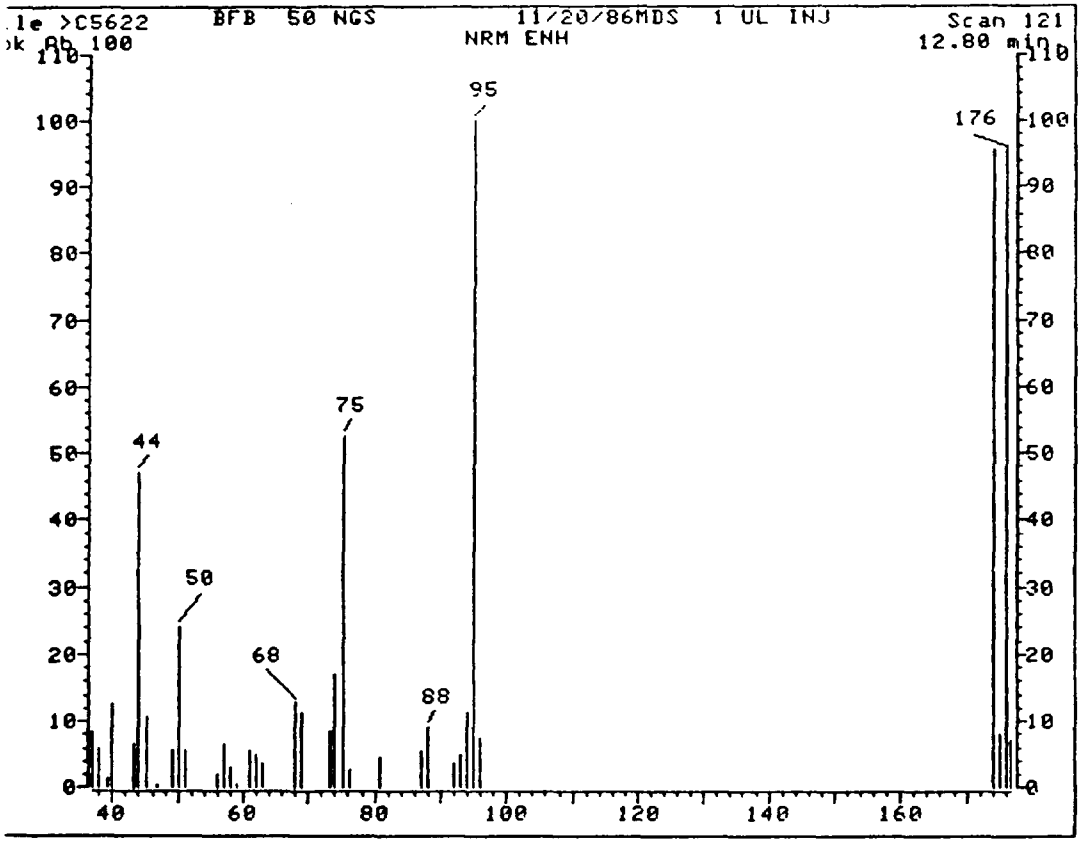
497095



C5622 BFB 50 NGS 11/20/86MDS 1 UL INJ
121 NRM ENH

ile: >C5622 Scan #: 121 Retn. time: 12.80

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.00	8.43	49.00	5.54	60.85	5.68	75.05	52.75	94.05	11.38
38.00	5.94	50.00	24.21	61.95	5.03	76.05	2.58	95.05	100.00
39.10	1.27	51.00	5.59	62.85	3.68	80.85	4.42	96.05	7.36
40.00	12.66	56.00	2.10	68.05	12.76	86.95	5.60	173.95	95.42
43.10	6.56	57.10	6.63	69.05	11.33	88.05	9.18	174.95	8.25
44.00	47.18	58.00	2.90	73.05	8.45	91.95	3.66	175.95	95.50
45.10	10.65	58.90	.50	73.95	17.09	93.05	4.87	176.85	6.98
46.90	.35								

S data file header from : >C5622

ample: BFB 50 NGS Operator: USER8 MS 11/20/86 8:52
: 11/20/86MDS 1 UL INJ
ys. #: 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

36

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. 4-4474 Contractor Ecology & Environment Contract No. IL-3140

Instrument ID HP5995C Date 11-20-86 Time 20:55

Lab ID YC5634 Data Release Authorized By: [signature]

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of the base peak	23.7
75	30.0 - 60.0% of the base peak	51.1
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of the base peak	5.94
173	Less than 1.0% of the base peak	0.00
174	Greater than 50.0% of the base peak	94.8
175	5.0 - 9.0% of mass 174	7.20 (7.59)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	93.9 (99.0)[1]
177	5.0 - 9.0% of mass 176	6.45 (6.87)[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 YC5636	11-20-86	22:58
BLKC 5637	Method Blank YC5637	11-21-86	00:02
DC-SS-41	9807 YC5740	11-21-86	02:49
DC-SS-42	9808 YC5741	11-21-86	03:44
DC-SS-44	9810 YC5744	11-21-86	06:30
DC-SS-47	9812 YC5646	11-21-86	08:21
DC-SS-39	9805 YC5738	11-21-86	00:58
DC-SS-40	9806 YC5739	11-21-86	01:53

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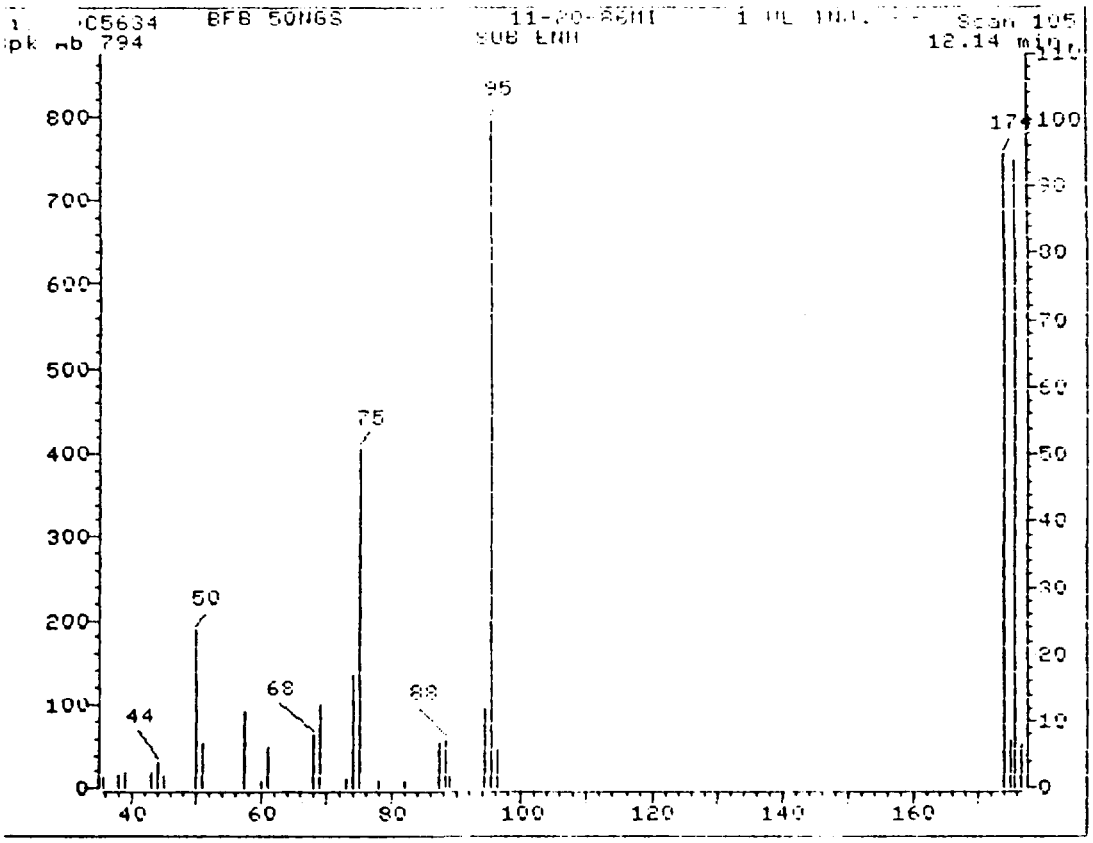
497095



>C5634 BFB 50NGS 11-20-86MI 1 UL INJ.
105 SUB NRM ENH

File: >C5634 Scan #: 105 Retn. time: 12.14

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
35.70	1.84	50.10	23.67	68.95	12.44	87.05	6.87	96.05	5.94
37.80	2.11	51.10	6.72	73.05	1.28	88.05	7.18	173.95	94.84
38.80	2.39	57.20	11.61	73.95	17.12	88.95	2.01	175.05	7.20
43.00	2.47	59.85	1.06	75.05	51.06	94.25	11.88	175.85	93.88
44.10	3.80	60.95	6.14	77.75	1.06	95.05	100.00	176.85	6.45
45.00	1.96	67.95	8.01	81.85	.93				

MS data file header from : >C5634

Sample: BFB 50NGS Operator: USEPA MS 11/20/86 20:55
Misc : 11-20-86MI 1 UL INJ.
Sys. #: 1 MS model: 96 SW/HW rev.: 0A ALS # : 0
Method file: BFB001 Tuning file: MTC14 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-4474 Contractor Ecology & Environment Contract No. IL-3140

Instrument ID HP5995C Date 11-21-86 Time 09:50

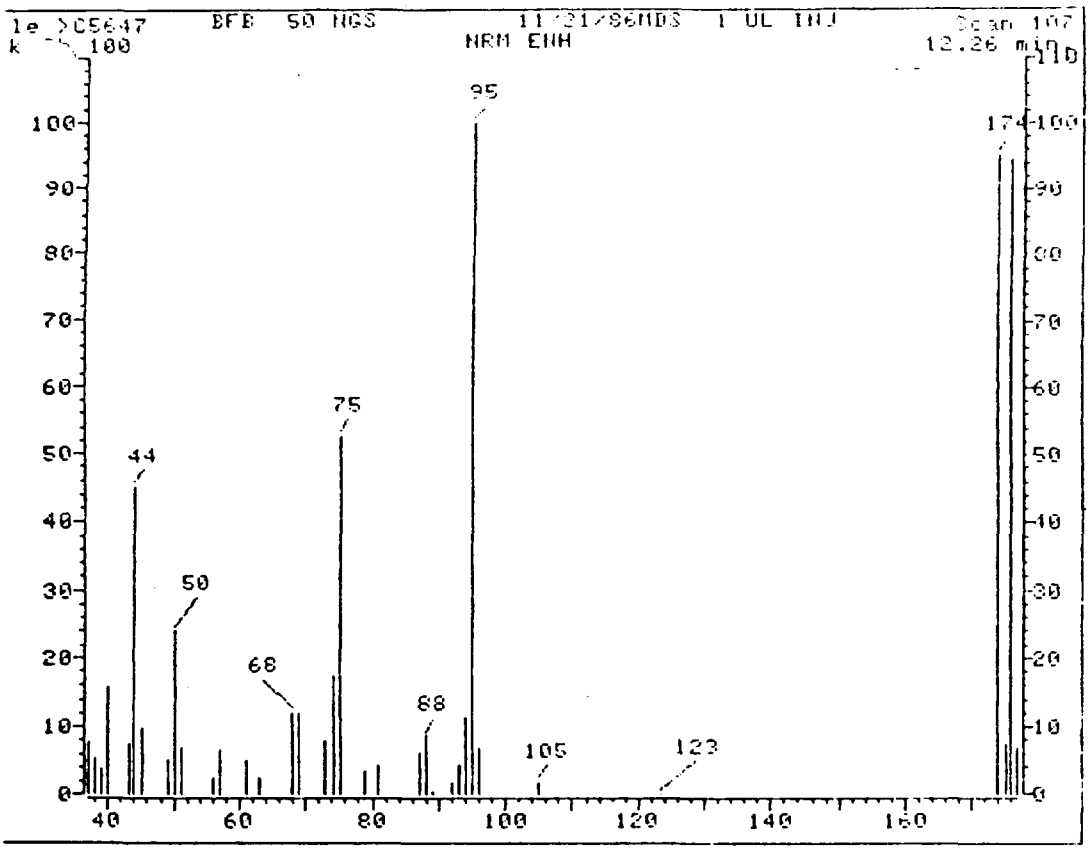
Lab ID >C5647 Data Release Authorized By: C Slojtowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of the base peak	24.1
75	30.0 - 60.0% of the base peak	52.7
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of the base peak	6.74
173	Less than 1.0% of the base peak	0.00
174	Greater than 50.0% of the base peak	95.2
175	5.0 - 9.0% of mass 174	7.57 (7.95)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	94.7 (99.5)[1]
177	5.0 - 9.0% of mass 176	6.70 (7.07)[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 >C5648	11-21-86	10:28
BLK C5649	Method Blank >C5649	11-21-86	11:28
DC-SS-36	9802 >C5650	11-21-86	12:24
DC-SS-37-RE	9803 >C5651	11-21-86	13:19



C5647 BFB 50 NGS 11/21/86MDS 1 UL INJ
107 NRM ENH

ile: >C5647 Scan #: 107 Retn. time: 12.26

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.00	7.87	49.00	4.80	68.05	11.94	87.05	6.03	96.15	6.74
38.00	5.34	50.00	24.05	68.95	11.90	88.05	8.68	105.00	1.71
39.00	3.45	51.10	6.85	73.05	7.74	89.15	.46	123.50	.08
40.00	15.79	56.00	2.19	74.05	17.30	92.05	1.83	173.95	95.21
43.10	7.59	57.00	6.40	75.05	52.67	93.05	4.15	175.05	7.57
44.00	44.97	60.95	4.74	78.95	3.30	94.05	11.25	175.95	94.70
45.10	9.74	63.05	2.42	80.95	4.15	95.05	100.00	176.95	6.70

S data file header from : >C5647

ample: BFB 50 NGS Operator: USEPB MS 11/21/86 9:50
isc : 11/21/86MDS 1 UL INJ
ys. #: 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. : 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. 4-4474 Contractor Ecology & Environment Contract No. 2-3140

Instrument ID #P5995C Date 11-24-86 Time 21:11

Lab ID >C5683 Data Release Authorized By: [illegible]

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of the base peak	26.5
75	30.0 - 60.0% of the base peak	51.8
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of the base peak	7.75
173	Less than 1.0% of the base peak	0.00
174	Greater than 50.0% of the base peak	89.1
175	5.0 - 9.0% of mass 174	6.96 (7.81)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	89.7 (100.7)[1]
177	5.0 - 9.0% of mass 176	5.90 (6.58)[2]

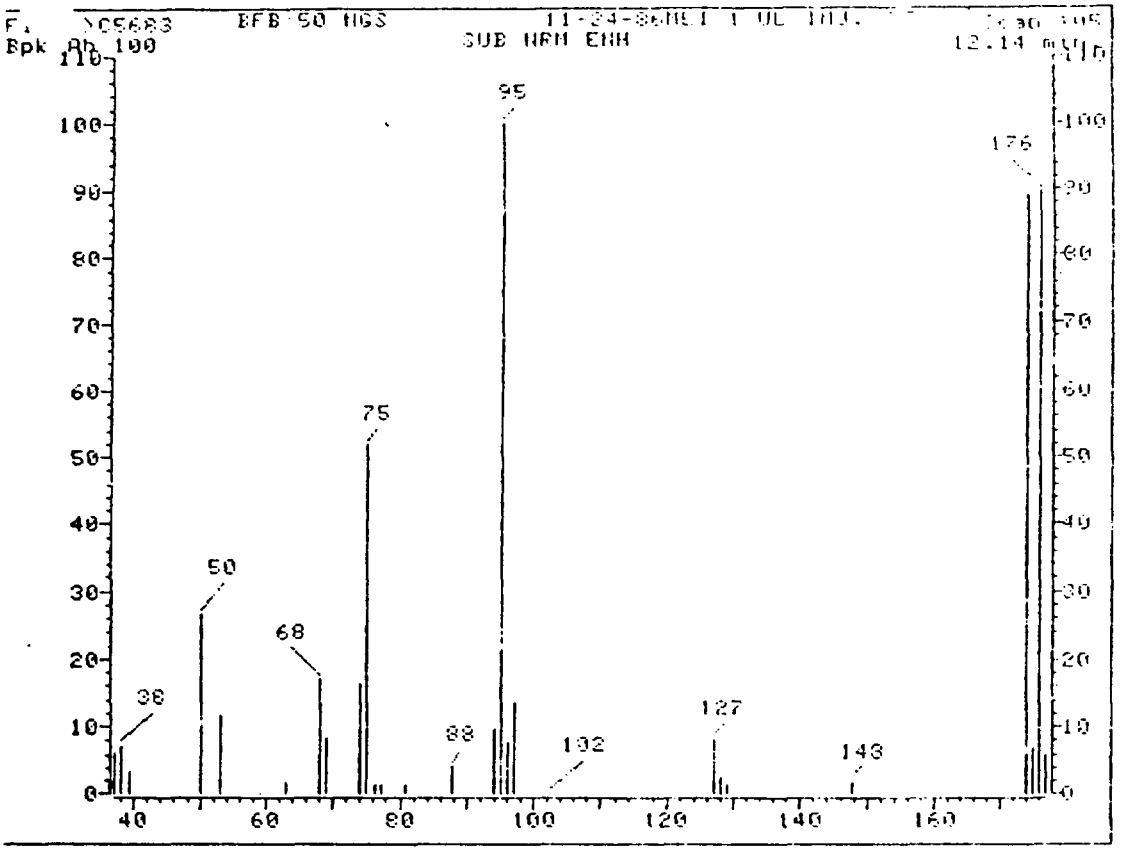
THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

[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 >C5685	11-24-86	23:06
BLK C5687	Method Blank >C5687	11-25-86	00:50
DC-SS-30	9796 >C5691	11-25-86	04:26
DC-SS-34	9800 >C5692	11-25-86	05:21

FORM V 7/85

497095



>C5683 BFB 50 NGS 11-24-86MEI 1 UL INJ.
105 SUB NRM ENH

File: >C5683 Scan #: 105 Retn. time: 12.14

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.00	6.02	63.05	1.73	77.05	1.31	97.05	13.38	147.95	1.78
38.00	7.20	67.95	17.00	80.95	1.42	102.60	.13	173.95	89.13
39.10	3.41	69.05	8.44	87.85	4.17	127.10	8.10	174.95	6.96
50.00	26.51	73.95	16.47	93.95	9.72	128.10	2.64	175.95	89.72
53.00	11.65	74.95	51.81	95.05	100.00	129.00	1.22	176.95	5.90
58.90	.15	76.05	1.27	95.95	7.75				

MS data file header from : >C5683

Sample: BFB 50 NGS Operator: USER6 MS 11/24/86 21:11
Misc : 11-24-86MEI 1 UL INJ.
Sys. #: 1 MS model: 96 SW/HW rev.: CH 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-4474 Contractor Ecology & Environment Contract No. EL-3140

Instrument ID HP5995C Date 11-25-86 Time 09:26

Lab ID >C5696 Data Release Authorized By: C Hojtowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of the base peak	24.6
75	30.0 - 60.0% of the base peak	54.1
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of the base peak	7.67
173	Less than 1.0% of the base peak	0.00
174	Greater than 50.0% of the base peak	97.9
175	5.0 - 9.0% of mass 174	7.74 (7.91)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	97.2 (99.3)[1]
177	5.0 - 9.0% of mass 176	7.21 (7.48)[2]

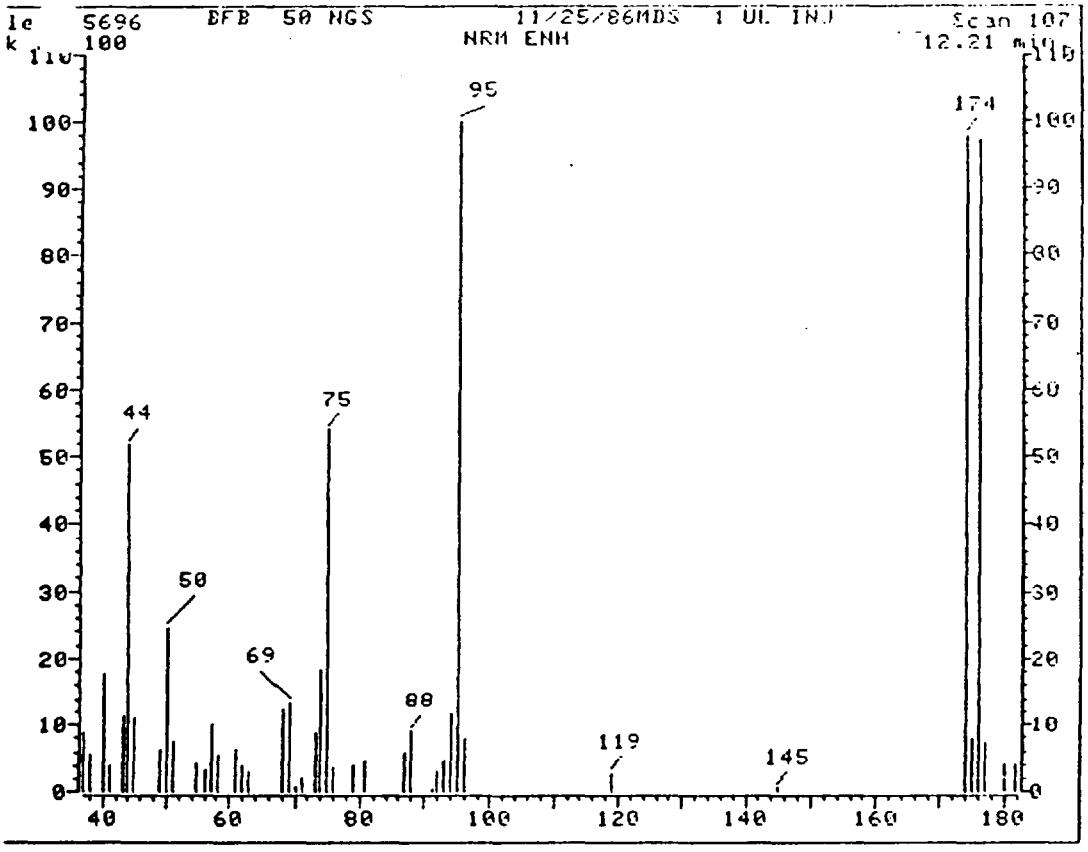
THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

[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 >C5697	11-25-86	09:58
BLK C5698	Method Blank >C5698	11-25-86	11:05
DC-SS-25-RE	9791 RE >C5707	11-25-86	19:50

FORM V 7/85

497095



C5696 BFB 50 NGS 11/25/86MDS 1 UL INJ
107 NRM ENH

ile: >C5696 Scan #: 107 Retn. time: 12.21

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.10	8.81	51.00	7.59	68.05	12.36	80.85	4.47	119.00	2.77
38.00	5.68	54.90	4.17	68.95	13.30	86.95	5.75	145.05	.57
40.00	17.62	56.10	3.43	70.05	.73	88.05	9.02	173.95	97.85
41.10	3.84	56.30	.70	71.05	2.16	91.45	.25	175.05	7.74
43.10	11.27	57.10	9.89	73.05	8.75	92.05	2.86	175.95	97.20
44.00	51.84	58.10	5.69	74.05	18.26	93.05	4.62	177.05	7.27
45.00	11.04	60.95	6.28	75.05	54.05	94.05	11.62	179.90	3.89
49.10	6.22	62.05	3.99	76.05	3.56	95.05	100.00	181.90	3.86
50.10	24.56	62.95	2.87	78.95	4.01	95.95	7.67		

S data file header from : >C5696

am, .e: BFB 50 NGS Operator: USER6 MS 11/25/86 9:26
.sc : 11/25/86MDS 1 UL INJ
ns. #: 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.

GC/MS TUNING AND MASS CALIBRATION

Bromofluorobenzene (BFB)

Case No. U-4474 Contractor Ecology & Environment Contract No. IL-3140

Instrument ID HP5995C Date 11-25-86 Time 20:40

Lab ID YC5708 Data Release Authorized By: C Stojtowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of the base peak	20.3
75	30.0 - 60.0% of the base peak	54.3
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of the base peak	6.96
173	Less than 1.0% of the base peak	0.00
174	Greater than 50.0% of the base peak	94.6
175	5.0 - 9.0% of mass 174	7.91 (8.36) [1]
176	Greater than 95.0%, but less than 101.0% of mass 174	94.9 (100.4) [1]
177	5.0 - 9.0% of mass 176	6.22 (6.55) [2]

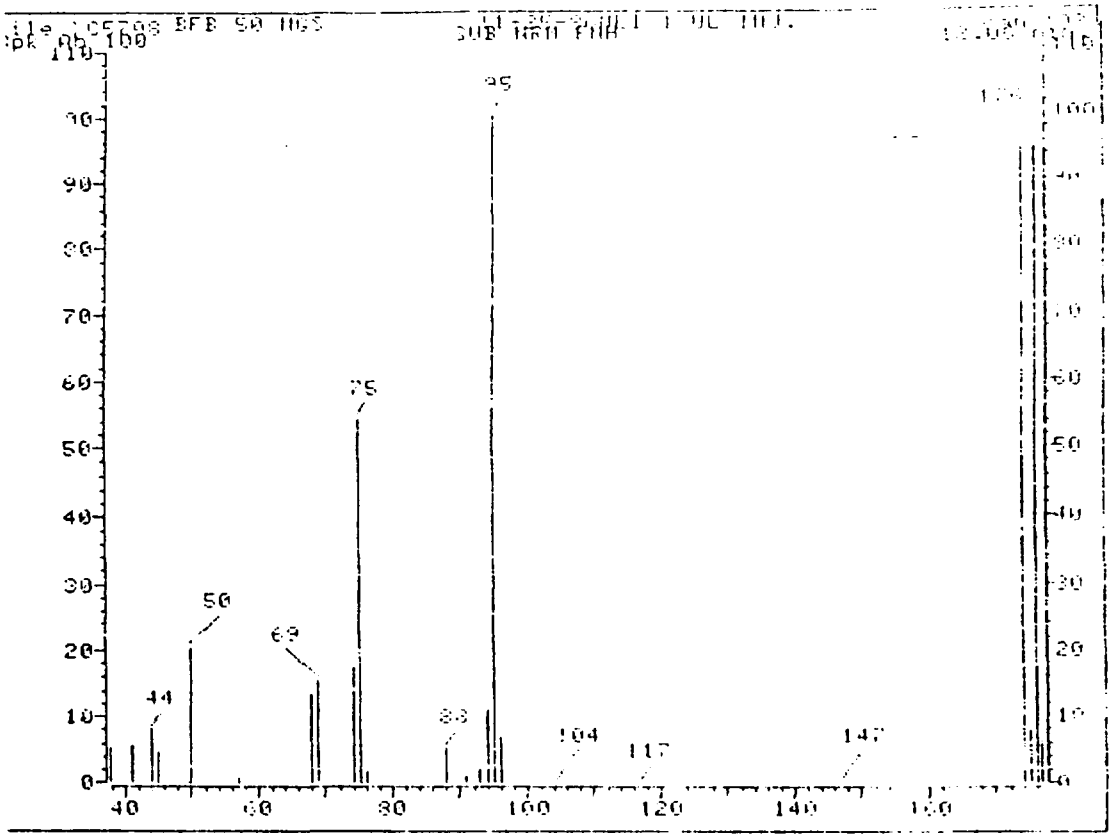
THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

[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 YC5710	11-25-86	22:07
BLK C5715	Method Blank YC5715	11-26-86	02:47
DC-SS-35	9801 YC5713	11-26-86	00:57
DC-SS-38	9804 YC5714	11-26-86	01:52

FORM V 7/85

497095



:C5708 BFB 50 NGS 11-25-86MEI 1 UL INJ. S

102 SUB NRM ENH

File: :C5708 Scan #: 102 Ret. time: 12.06

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.80	5.25	57.10	.70	74.15	1.68	75.05	100.00	146.85	.04
41.10	5.59	68.05	13.16	87.95	5.09	96.05	6.96	173.95	94.57
44.10	8.06	68.95	15.36	90.95	.90	104.30	.05	174.95	7.91
45.00	4.61	74.05	17.37	92.95	1.08	117.10	.07	175.95	94.94
49.40	.04	75.05	54.30	94.05	11.12	132.90	.05	176.85	6.22
50.00	20.33								

MS data file header from : :C5708

Sample: BFB 50 NGS Operator: USEPA MS 11-25-86 20:40
Disc : 11-25-86MEI 1 UL INJ. S
Sys. #: 1 MS model: 96 SW/HW rev.: CH Job # : 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. 220. 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-4414 Contractor Ecology & Environment Contract No. IL-3140

Instrument ID HP5995C Date 11-26-86 Time 09:25

Lab ID YC5722 Data Release Authorized By: C Slotowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of the base peak	25.0
75	30.0 - 60.0% of the base peak	50.7
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of the base peak	7.10
173	Less than 1.0% of the base peak	0.00
174	Greater than 50.0% of the base peak	98.2
175	5.0 - 9.0% of mass 174	7.88 (8.03)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	97.8 (99.6)[1]
177	5.0 - 9.0% of mass 176	6.61 (6.76)[2]

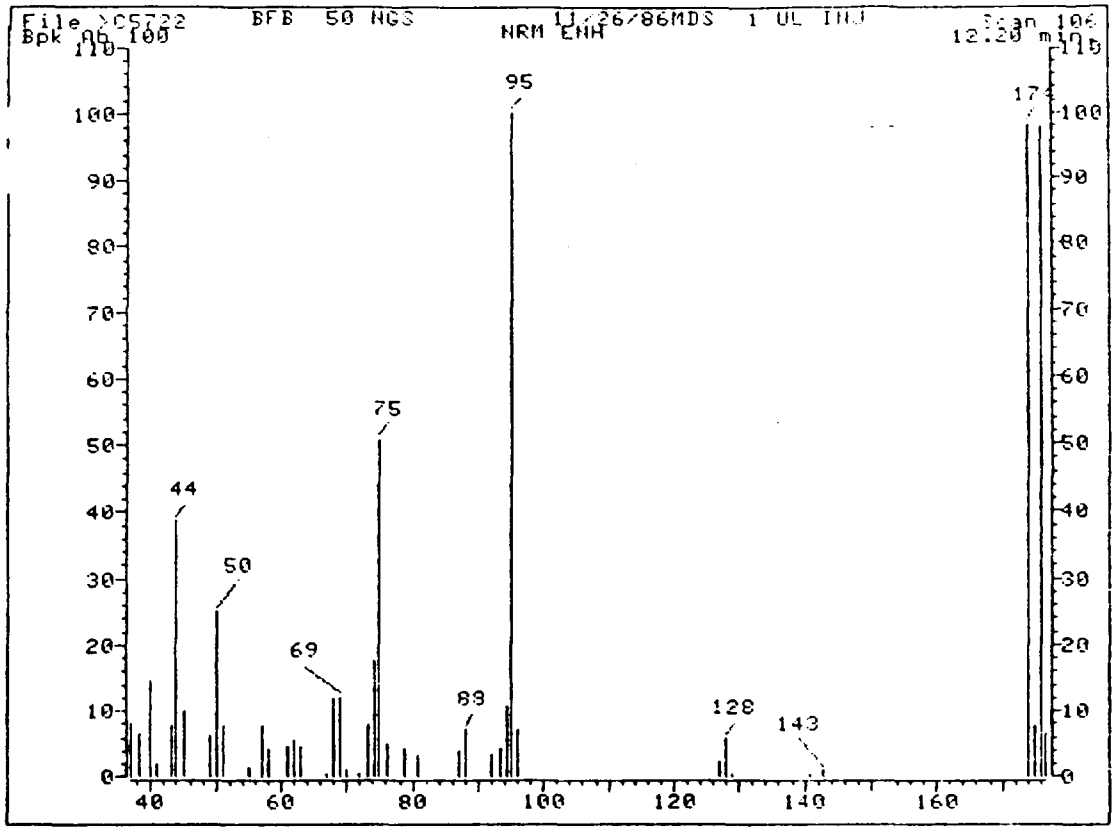
THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

[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 YC5723	11-26-86	10:00
DC-SS-39-RE	9805 RE YC5800	11-26-86	12:08
DC-SS-40-RE	9806 RE YC5801	11-26-86	13:03
DC-SS-43	9809 YC5802	11-26-86	13:58
DC-SS-46	9811 YC5803	11-26-86	14:53
DC-SS-48	9813 YC5805	11-26-86	16:43
BLKC5808	Method Blank YC5808	11-26-86	19:29

FORM V 7/85

497095



>C5722 BFB 50 NGS 11/26/86MDS 1 UL INJ
106 NRM ENH

File: >C5722 Scan #: 106 Retn. time: 12.20

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.00	8.06	51.00	7.82	69.05	12.03	87.05	4.07	128.00	5.84
38.10	6.37	55.00	1.39	69.95	.92	87.95	6.99	129.00	.36
40.00	14.65	57.10	7.70	71.85	.44	91.95	3.19	140.95	.46
40.90	2.16	58.10	4.21	73.05	7.82	93.15	4.18	142.85	.93
43.10	7.86	60.95	4.41	74.05	17.66	94.15	10.74	173.95	98.16
44.00	38.72	61.95	5.68	74.95	50.72	95.05	100.00	174.95	7.88
45.10	10.01	63.05	4.43	76.05	5.04	96.05	7.10	175.95	97.81
49.00	6.07	67.05	.46	78.95	4.28	126.90	2.23	176.85	6.61
50.00	25.03	68.05	11.97	80.75	3.41				

MS data file header from : >C5722

Sample: BFB 50 NGS Operator: USER6 MS 11/26/86 9:25
Misc : 11/26/86MDS 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. :	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-4474 Contractor Ecology & Environment Contract No. IL-3140

Instrument ID HP 5995C Date 11-26-86 Time 20:27

Lab ID >C5809 Data Release Authorized By: C Stojtowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE	
50	15.0 - 40.0% of the base peak	26.4	
75	30.0 - 60.0% of the base peak	51.6	
95	Base peak, 100% relative abundance	100	
96	5.0 - 9.0% of the base peak	8.49	
173	Less than 1.0% of the base peak	0.00	
174	Greater than 50.0% of the base peak	98.8	
175	5.0 - 9.0% of mass 174	8.78	(8.89) [1]
176	Greater than 95.0%, but less than 101.0% of mass 174	98.4	(99.6) [1]
177	5.0 - 9.0% of mass 176	4.99	(5.07) [2]

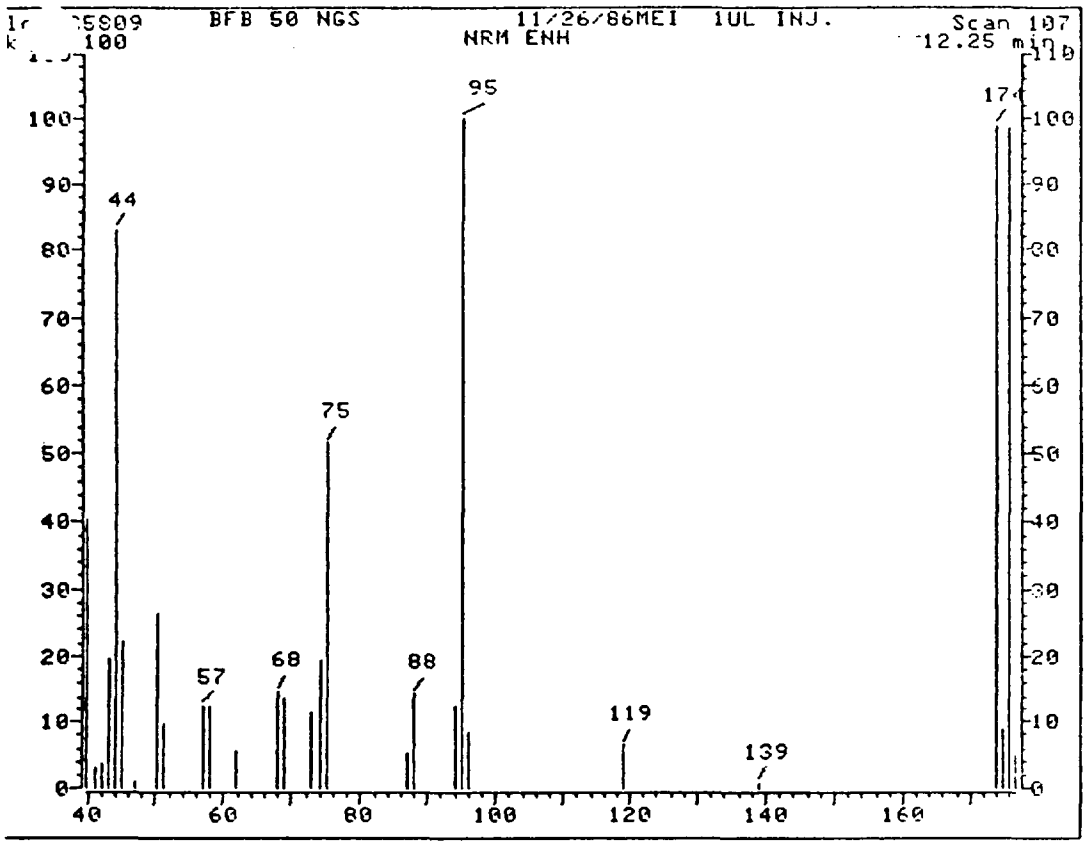
THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

[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 >C5810	11-26-86	20:57
BLK C5811	Method Blank >C5811	11-26-86	22:03
DC-SS-27-RE	9793 RE >C5812	11-26-86	23:10
DC-SS-33	9799 >C5814	11-27-86	01:00
DC-SS-31-RE	9797 >C5816	11-27-86	02:50
DC-SS-24	9790 >C5817	11-27-86	03:46

FORM V 7/85

497095



C5809 BFB 50 NGS 11/26/86MEI 1UL INJ.
107 NRM ENH

ile: >C5809 Scan #: 107 Retn. time: 12.25

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
39.90	40.27	47.00	.92	67.95	14.74	88.05	14.40	138.90	.83
41.10	3.04	50.10	26.36	69.05	13.45	94.05	12.38	173.95	98.78
42.20	3.65	51.10	9.68	72.85	11.31	95.05	100.00	174.95	8.78
43.10	19.70	57.10	12.40	73.95	19.14	95.95	8.49	175.95	98.37
44.00	83.15	58.00	12.31	75.05	51.63	119.00	6.44	176.95	4.99
45.10	22.08	61.95	5.37	86.85	5.33				

S data file header from : >C5809

ample: BFB 50 NGS Operator: USER6 MS 11/26/86 20:27
isc : 11/26/86MEI 1UL INJ.
ys. #: 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

110

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

SAMPLE DATA

SAMPLE NUMBER DC-SS-24

481095

Sample Number
DC-SS-24

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474

Lab Sample ID No: 9790 QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: [signature] Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-27-86

Conc/Dil Factor: 3 pH 6.7

Percent Moisture: (Not Decanted) 28

CAS Number		ug/l or (ug/Kg) (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	71 B
67-64-1	Acetone	39 B
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	30u
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or (ug/Kg) (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	15u
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	15u
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	320
591-78-6	2-Hexanone	51 B
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	15u
108-90-7	Chlorobenzene	15u
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

Data Reporting Qualifiers

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

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

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

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

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

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

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

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Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No. U-4474

Sample Number DC-SS-24

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed: 12-19-86

Conc/Dil Factor: 50

Percent Moisture (Decanted) 28

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	11000	U
111-44-4	bis(-2-Chloroethyl)Ether	11000	U
95-57-8	2-Chlorophenol	11000	U
541-73-1	1 3-Dichlorobenzene	11000	U
106-46-7	1. 4-Dichlorobenzene	11000	U
100-51-6	Benzyl Alcohol	11000	U
95-50-1	1. 2-Dichlorobenzene	11000	U
95-48-7	2-Methylphenol	11000	U
39638-32-9	bis(2-chloroisopropyl)Ether	11000	U
106-44-5	4-Methylphenol	11000	U
621-64-7	N-Nitroso-Di-n-Propylamine	11000	U
67-72-1	Hexachloroethane	11000	U
98-95-3	Nitrobenzene	11000	U
78-59-1	Isophorone	11000	U
88-75-5	2-Nitrophenol	11000	U
105-67-9	2. 4-Dimethylphenol	11000	U
65-85-0	Benzoic Acid	56000	U
111-91-1	bis(-2-Chloroethoxy)Methane	11000	U
120-83-2	2 4-Dichlorophenol	11000	U
120-82-1	1 2. 4-Trichlorobenzene	11000	U
91-20-3	Naphthalene	11000	U
106-47-8	4-Chloroaniline	11000	U
87-68-3	Hexachlorobutadiene	11000	U
59-50-7	4-Chloro-3-Methylphenol	11000	U
91-57-6	2-Methylnaphthalene	11000	U
77-47-4	Hexachlorocyclopentadiene	11000	U
88-06-2	2 4 6-Trichlorophenol	11000	U
95-95-4	2. 4. 5-Trichlorophenol	56000	U
91-58-7	2-Chloronaphthalene	11000	U
88-74-4	2-Nitroaniline	56000	U
131-11-3	Dimethyl Phthalate	11000	U
[illegible]-96-8	Acenaphthylene	11000	U
[illegible]09-2	3-Nitroaniline	56000	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	11000	U
51-28-5	2. 4-Dinitrophenol	56000	U
100-02-7	4-Nitrophenol	56000	U
132-64-9	Dibenzofuran	11000	U
121-14-2	2 4-Dinitrotoluene	11000	U
606-20-2	2 6-Dinitrotoluene	11000	U
84-66-2	Diethylphthalate	11000	U
7005-72-3	4-Chlorophenyl-phenylether	11000	U
86-73-7	Fluorene	11000	U
100-01-6	4-Nitroaniline	56000	U
534-52-1	4. 6-Dinitro-2-Methylphenol	56000	U
86-30-6	N-Nitrosodiphenylamine (1)	11000	U
101-55-3	4-Bromophenyl-phenylether	11000	U
118-74-1	Hexachlorobenzene	11000	U
87-86-5	Pentachlorophenol	56000	U
85-01-8	Phenanthrene	11000	U
120-12-7	Anthracene	11000	U
84-74-2	Di-n-Butylphthalate	11000	U
206-44-0	Fluoranthene	11000	U
129-00-0	Pyrene	5500	J
85-68-7	Butylbenzylphthalate	11000	U
91-94-1	3 3 -Dichlorobenzidine	23000	U
56-55-3	Benzo(a)Anthracene	11000	U
117-81-7	bis(2-Ethylhexyl)Phthalate	11000	U
218-01-9	Chrysene	11000	U
117-84-0	Di-n-Octyl Phthalate	11000	U
205-99-2	Benzo(b)Fluoranthene	11000	U
207-08-9	Benzo(k)Fluoranthene	6500	J
50-32-8	Benzo(a)Pyrene	11000	U
193-39-5	Indeno(1 2 3-cd)Pyrene	11000	U
53-70-3	Dibenzo(a h)Anthracene	11000	U
191-24-2	Benzo(g h i)Perylene	11000	U

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No U-4474

Sample Number DC-SS-24

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed 12-9-86

Conc/Dil Factor: 500

Percent Moisture (decanted) 27.8

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	8,000 U
319-85-7	Beta BHC	8,000 U
319-86-8	Delta BHC	8,000 U
58-89-9	Gamma BHC (Lindane)	8,000 U
76-44-8	Heptachlor	8,000 U
309-00-2	Aldrin	8,000 U
1024-57-3	Heptachlor Epoxide	8,000 U
959-98-8	Endosulfan I	8,000 U
60-57-1	Dieldrin	16,000 U
72-55-9	4,4'-DDE	16,000 U
72-20-8	Endrin	16,000 U
33213-65-9	Endosulfan II	16,000 U
72-54-8	4,4'-DDD	16,000 U
1031-07-8	Endosulfan Sulfate	16,000 U
50-29-3	4,4'-DDT	16,000 U
72-43-5	Methoxychlor	80,000 U
53494-70-5	Endrin Ketone	16,000 U
57-74-9	Chlordane	80,000 U
8001-35-2	Toxaphene	160,000 U
12674-11-2	Aroclor-1016	80,000 U
11104-28-2	Aroclor-1221	80,000 U
11141-16-5	Aroclor-1232	80,000 U
53469-21-9	Aroclor-1242	80,000 U
12672-29-6	Aroclor-1248	80,000 U
11097-69-1	Aroclor-1254	160,000 U
11096-82-5	Aroclor-1260	117,000 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 30 V_t 1000 V_i 4

Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No U-4474

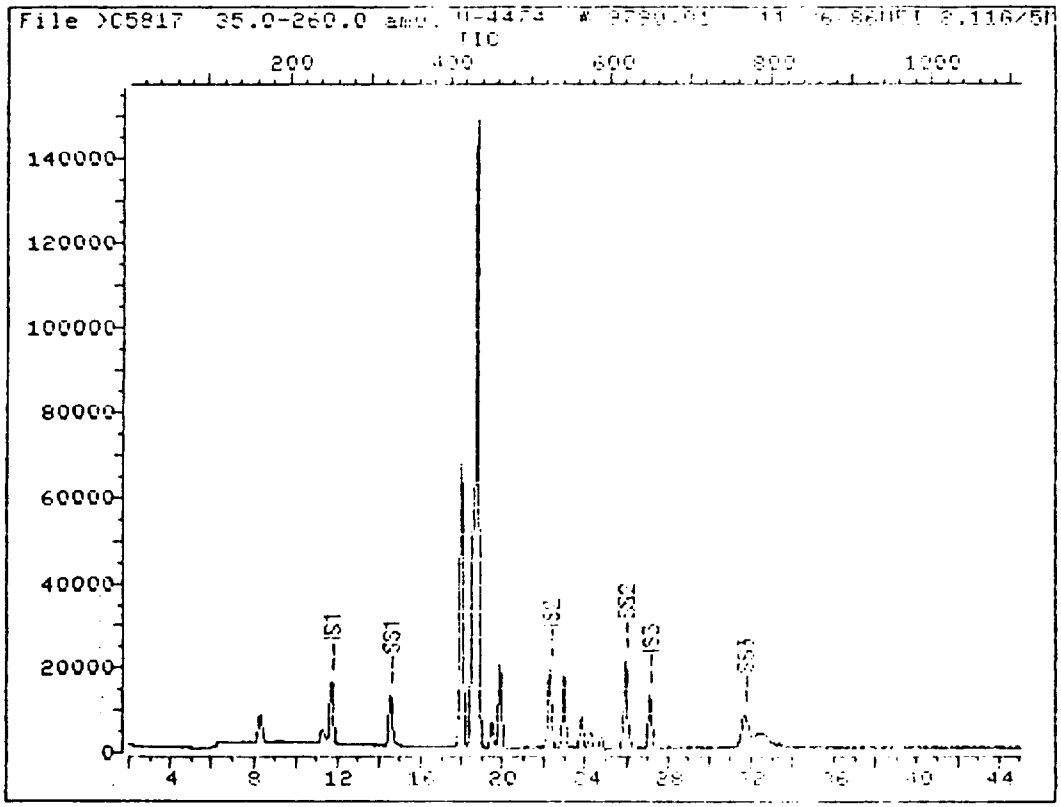
Sample Number DC-SS-24

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number MIN	Estimated Concentration (ug/l or ug/kg)	
1.	HEXENE ISOMER	VOA	18.0	440	J
2.	HEXENE ISOMER		18.8	1200	J
3.	HEXENE ISOMER		19.5	28	J
4.	HEXENE ISOMER		19.9	130	J
5.	UNKNOWN ALCOHOL		23.8	69	J
6.	HEXANE ISOMER		24.3	22	J
7.	UNKNOWN HYDROCARBON		24.8	37	J
8.					
9.	UNKNOWN AROMATIC	BNA	20.8	33000	J
10.	UNKNOWN AROMATIC		20.9	17000	J
11.	UNKNOWN AROMATIC		21.0	17000	J
12.	UNKNOWN AROMATIC		21.3	22000	J
13.	UNKNOWN		22.5	15000	J
14.	UNKNOWN		22.6	17000	J
15.	UNKNOWN HYDROCARBON		23.2	7900	J
16.	UNKNOWN		23.4	49000	J
17.	UNKNOWN HYDROCARBON		24.3	8600	J
18.	UNKNOWN		24.5	150000	J
19.	UNKNOWN HYDROCARBON		25.4	7800	J
20.	UNKNOWN		25.8	160000	J
21. 10544500	MOLECULAR SULFUR		26.0	10000	J
22.	UNKNOWN HYDROCARBON		26.6	15000	J
23.	UNKNOWN HYDROCARBON		27.2	31000	J
24.	UNKNOWN HYDROCARBON		28.4	58000	J
25.	UNKNOWN HYDROCARBON		29.3	52000	J
26.	UNKNOWN HYDROCARBON		31.3	58000	J
27. 3268879	OCTACHLORODIBENZO[B,E][1,4] DIOXIN		37.4	36000	J
28.					
29.					
30.					

TOTAL ION CHROMATOGRAM

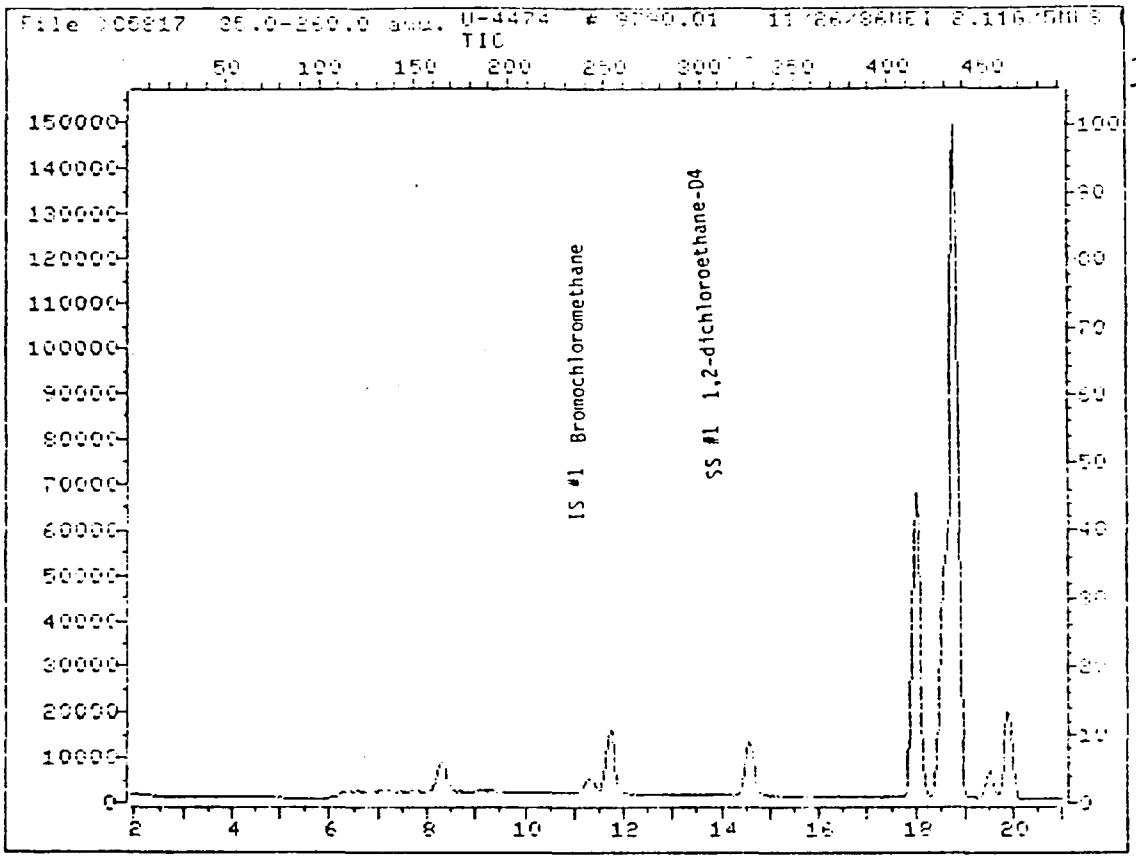


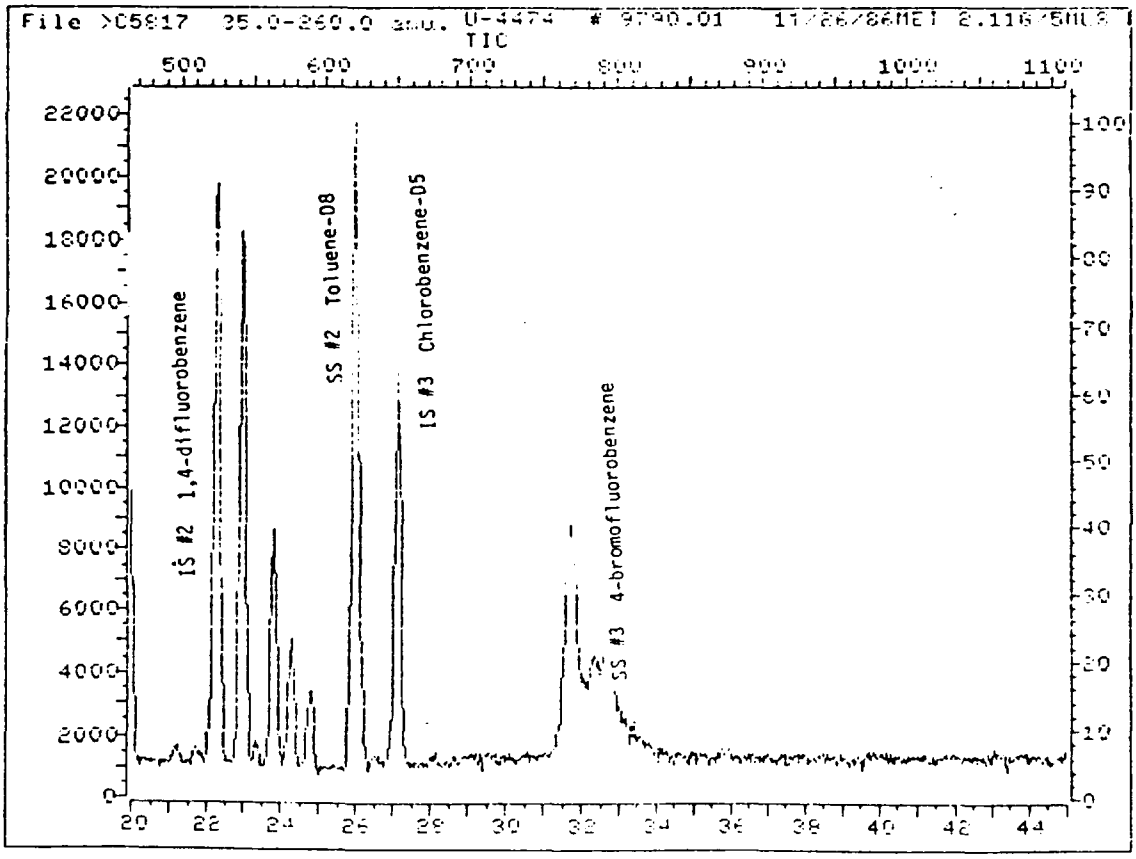
Data File: >C5817::[illegible]
Name: U-4474 # 9790.01 DC-SS-24
Misc: 11/26/86MEI 2.11G/[illegible]MLS DI [illegible] 10UL IS/SS

Id File: VOACRS::D[illegible]
Title: VOA ID FILE FOR HP-5995 [illegible] AL.
Last Calibration: 861126 21:46

Operator ID: USER6
Quant Time: 861127 12:15
Injected at: 861127 03:46

DC-SS-24


File >C5817 35.0-260.0 amu. U-4474 # 9790.01 11/26/86MEI 2.116/5MLS
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File >C5817 35.0-260.0 amu. U-4474 # 9790.01 11/26/86MEI 2.116/5MLS
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

QUANT REPORT

perator ID: USER6 Quant Rev: 4 Quant Time: 861127 12:15
utput File: ^C5817::D2 Injected at: 861127 03:46
ata File: >C5817::D3 Dilution Factor: 1.00
ame: U-4474 # 9790.01 DC-SS-24
isc: 11/26/86MEI 2.11G/5MLS DI + 10UL IS/SS

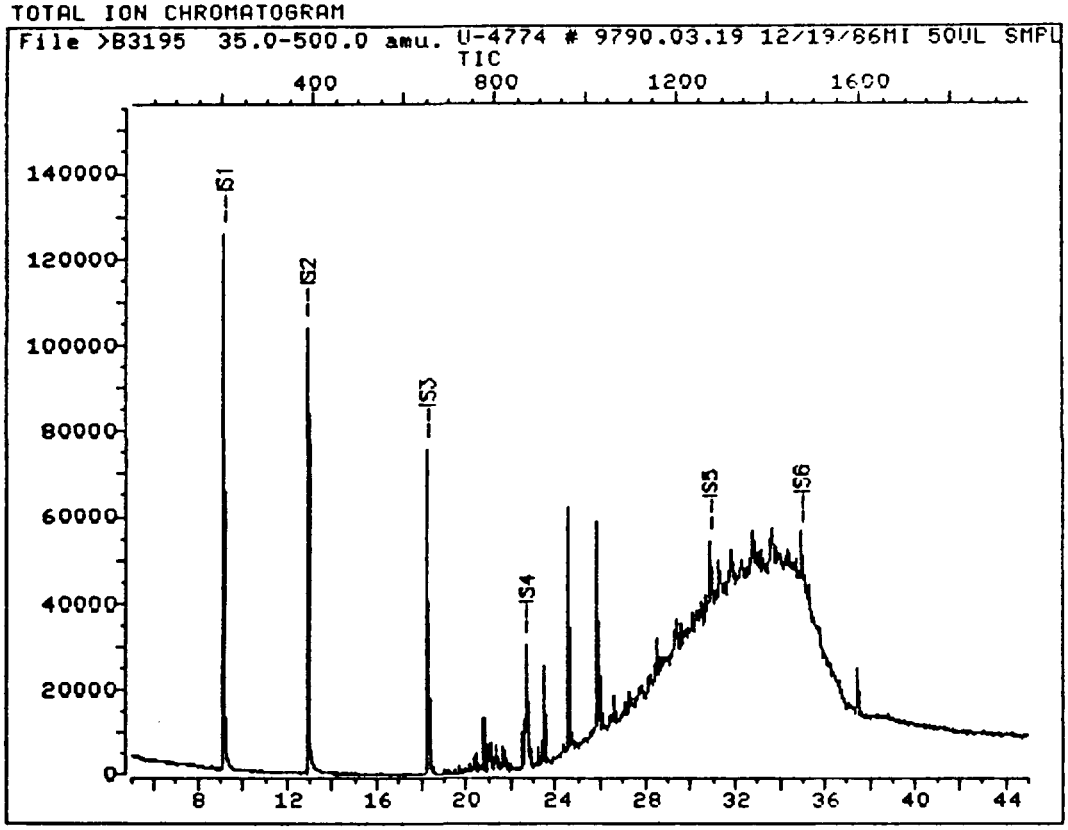
D File: VOACRS::D2
itle: VOA ID FILE FOR HP-5995 (CONT. CAL.)
ast Calibration: 861126 21:46

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.72	253	21999	250.00	NGS	100
6)	METHYLENE CHLORIDE		84	8.31	165	18133	107.62	NGS	100
7)	ACETONE		43	9.24	189	5175	60.39	NGS	100
5)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.56	326	50489	188.73	NGS	88
6)	*1,4-DIFLUOROBENZENE	(IS)	114	22.28	525	81885	250.00	NGS	100
1)	*CHLOROBENZENE-D5	(IS)	117	27.13	650	42571	250.00	NGS	100
2)	4-METHYL-2-PENTANONE		43	22.94	542	78574	485.49	NGS	92
2)	~~4-METHYL-2-PENTANONE~~		~~43~~	~~23.79~~	~~564~~	~~11548~~	~~71.35~~	~~NGS~~	53
3)	~~2-HEXANONE~~		~~43~~	~~23.79~~	~~564~~	~~11548~~	~~93.19~~	~~NGS~~	100
3)	~~2-HEXANONE~~		~~43~~	~~24.26~~	~~576~~	~~10893~~	~~87.91~~	~~NGS~~	100
3)	2-HEXANONE		43	24.76	589	9616	77.60	NGS	100
5)	TOLUENE-D8	(SURR)	98	25.96	620	53882	236.77	NGS	93
0)	4-BROMOFLUOROBENZENE	(SURR)	95	31.71	768	24837	218.22	NGS	100

no cw

* Compound is ISTD

TOTAL ION CHROMATOGRAM

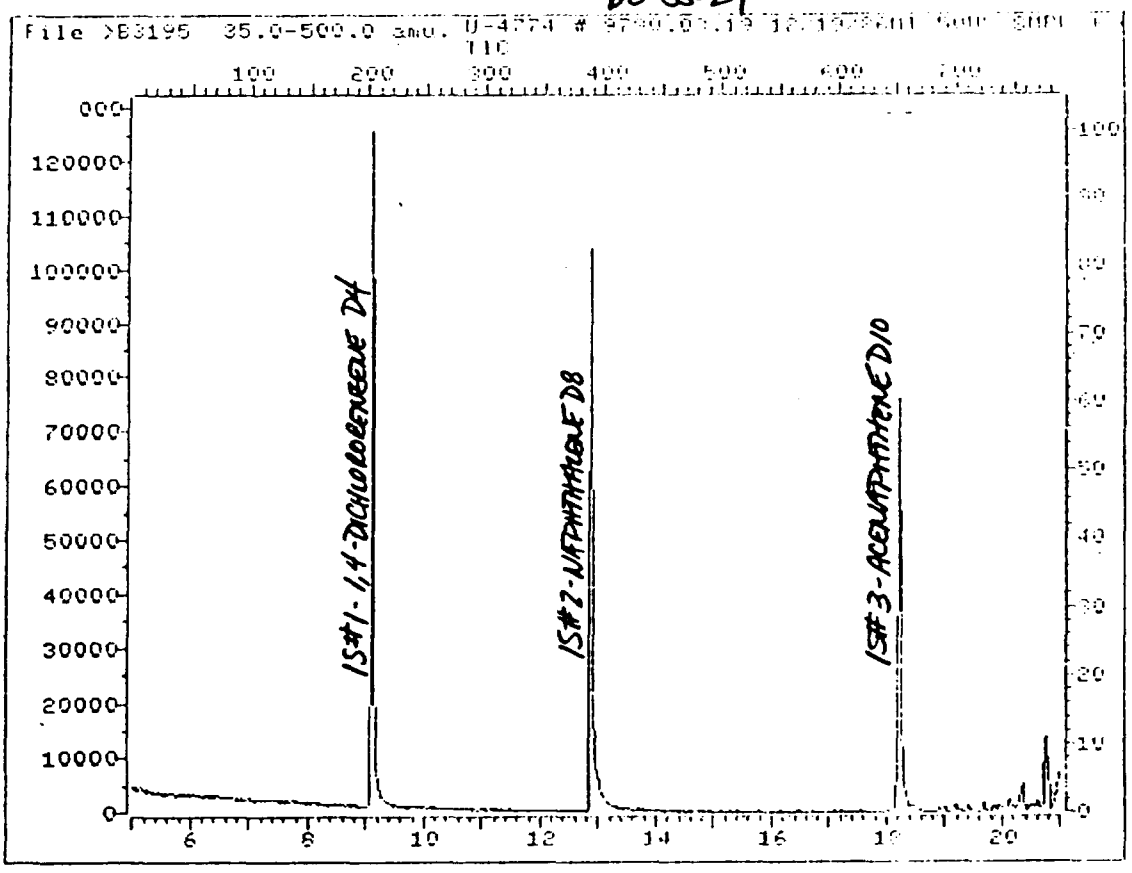


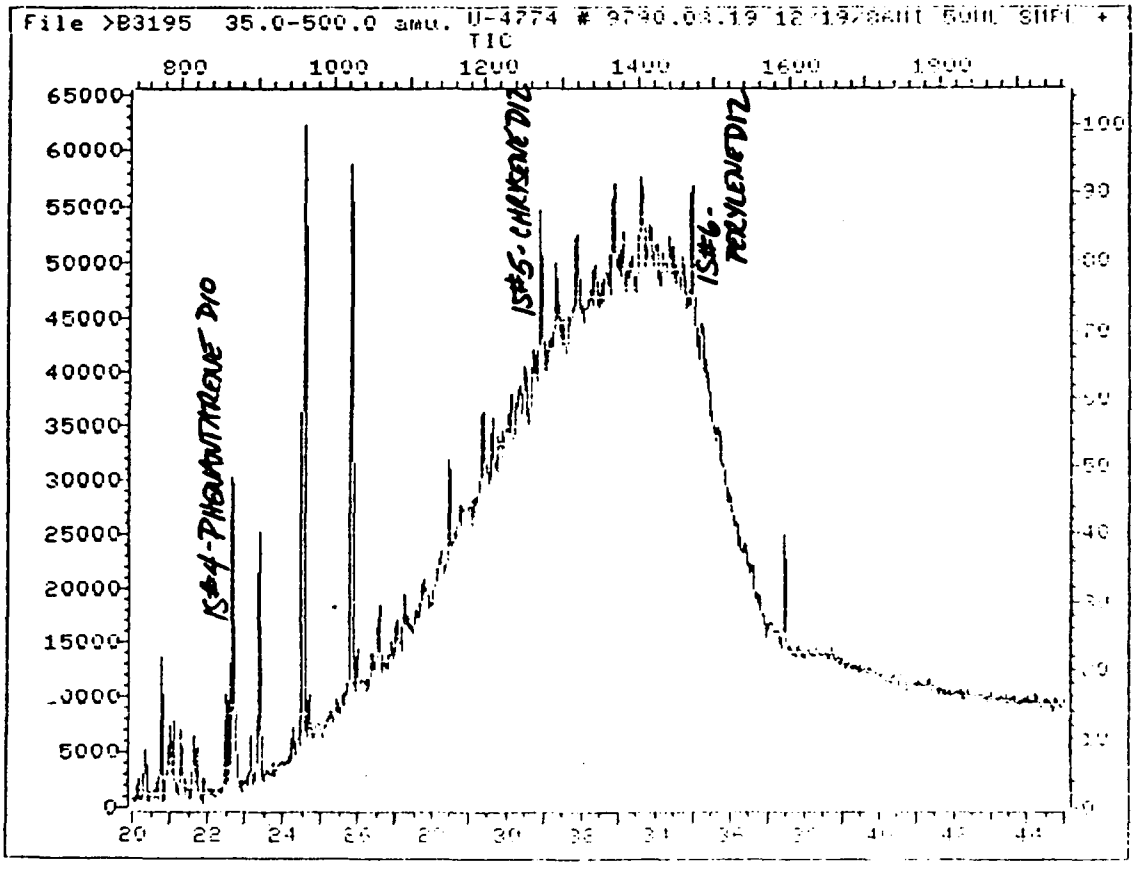
Data File: >B3195::D4
Name: U-4774 # 9790.03.19 DC-SS-24
Misc: 12/19/86MI 50UL SMPL + 450UL MECL2 + 5UL IS (10X)

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861224 12:42

Operator ID: USER8
Quant Time: 861226 09:28
Injected at: 861219 22:25

DC-SS-24


File >B3195 35.0-500.0 amu. U-4774
TIC
IS#1-1,4-DICHLOROBENZENE D4
IS#2-NAPHTHALENE D8
IS#3-ACENAPHTHENE D10


File >B3195 35.0-500.0 amu. U-4774
TIC
IS#4-PHENANTHRENE D10
IS#5-CHRYSENE D12
IS#6-PERYLENE D12

TICS
HITS
AREAS

QUANT REPORT

perator ID: USER8 Quant Rev: 4 Quant Time: 861226 09:28
utput File: ^B3195::Q2 Injected at: 861219 22:25
ata File: >B3195::D4 Dilution Factor: 10.00
ame: U-4774 # 9790.03.19 DC-SS-24
isc: 12/19/86MI 50UL SMPL + 450UL MECL2 + 5UL IS (10X) FINAL VOLUME - 5.0ml

) File: BNABR::D2
itle: BNA ID FILE FOR THE HP 5970 (B)
ast Calibration: 861224 12:42

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.10	203	60008	40.00	UG/L	87
9)	*NAPHTHALENE-D8	(IS)	136	12.86	388	192805	40.00	UG/L	100
4)	*ACENAPHTHENE-D10	(IS)	162	18.23	652	60357	40.00	UG/L	98
~~1)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.23~~	~~652~~	~~17487~~	~~81.08~~	~~UG/L~~	~~100~~
~~1)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.23~~	~~652~~	~~7399~~	~~150.20~~	~~UG/L~~	~~100~~
5)	*PHENANTHRENE-D10	(IS)	188	22.66	870	55502	40.00	UG/L	96
5)	*CHRYSENE-D12	(IS)	240	30.83	1271	24163	40.00	UG/L	100
7)	PYRENE		202	27.04	1085	1786	23.72	UG/L	86
4)	*PERYLENE-D12	(IS)	264	34.91	1471	23885	40.00	UG/L	100
~~5)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.63~~	~~1408~~	~~178~~	~~1.69~~	~~UG/L~~	~~100~~
~~5)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.95~~	~~1424~~	~~216~~	~~2.05~~	~~UG/L~~	~~100~~
~~5)~~	~~BENZO(B)FLUORANTHENE~~		~~252~~	~~34.02~~	~~1427~~	~~1776~~	~~25.19~~	~~UG/L~~	~~100~~
7)	BENZO(K)FLUORANTHENE		252	34.02	1427	1776	28.06	UG/L	100
~~3)~~	~~BENZO(A)PYRENE~~		~~252~~	~~34.65~~	~~1450~~	~~816~~	~~13.39~~	~~UG/L~~	~~100~~
~~3)~~	~~BENZO(A)PYRENE~~		~~252~~	~~34.79~~	~~1465~~	~~678~~	~~11.08~~	~~UG/L~~	~~100~~
~~1)~~	~~INDENO(1,2,3-CD)PYRENE~~		~~276~~	~~37.62~~	~~1604~~	~~129~~	~~2.16~~	~~UG/L~~	~~100~~
~~1)~~	~~BENZO(G,H,I)PERYLENE~~		~~276~~	~~37.62~~	~~1604~~	~~129~~	~~2.02~~	~~UG/L~~	~~100~~

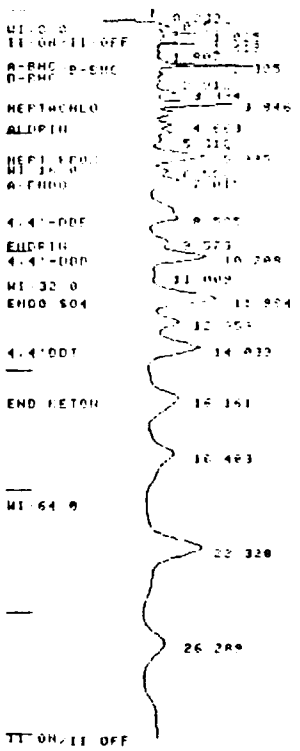
NOT BNA

NOT BNA

NOT BNA

* Compound is ISTD

77CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 102 5 MIN/TICK



RECALCULATE ON FILE: D.CREEK3539

CHANNEL: 1A - 1 TITLE: RUN# 16 4:53 9 DEC 86

DC-SS-24

SAMPLE: 9790.03.19A1 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1	~~B-BHC~~	322.0541	2.305	0.075	[illegible]	VV	5.44
2		0.0000	3.394		20901	VV	7.63
3	~~HEPTACHLO~~	206.9039	3.946	-0.044	102763	VV	8.88
4		0.0000	4.165		[illegible]	VV	17.00
5	~~ALDRIN~~	47.8394	4.663	-0.137	[illegible]	VV	11.88
6		0.0000	4.977		[illegible]	VV	10.31
7	~~HEPT EPOX~~	256.0953	5.995	0.175	[illegible]	VV	? 23.81
8		0.0000	~~6.[illegible]~~		[illegible]	VV	? 13.81
9	~~A-ENDO~~	125.0450	7.015	-0.215	[illegible]	VB	18.94
10	~~DIELDRIN~~	225.1220	8.595	0.165	[illegible]	BV	? 40.81
11	~~B-ENDO~~	106.1001	9.573	-0.007	[illegible]	VV	? 23.19
12	~~4,4'-DDD~~	360.5930	10.209	-0.232	[illegible]	VV	24.44
13	~~ENDO SO4~~	736.6281	11.984	-0.286	[illegible]	VV	32.13
14		0.0000	12.959		[illegible]	VV	30.75
15	~~4,4'-DDT~~	832.0000	14.039	0.383	[illegible]	VV	33.75
16	~~END KETON~~	385.2252	16.161	0.421	[illegible]	VV	54.75
17		0.0000	18.483		[illegible]	VB	54.38
18		0.0000	22.220		[illegible]	BV	50.19
19	~~DDE~~	352.5099	25.289	-1.091	[illegible]	VB	62.25
TOTALS:		3983.229		-0.727	2672152		

DETECTED PKS: 35 REJECTED PKS: 16

DIVISOR: 1.50000 MULTIPLIER: 500/2000

NOISE: 22.9 OFFSET: -9

RACK: 2 VIAL: 1 INJ: 1

NOTES:
NOTEBOOK:259-52 ANALYST:RICHARD SAMSON
SECURE AREA:D JOB# 0-4[illegible]
INST:VARIAN 6000#2 W ECD (OX)
COLUMN: 6' GLASS 4MM ID 120/100 SUPELCOPORT
LIQUID PHASE:3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN.
DET:300 C INJ:220 C
200 C ISOTHERMAL 4 UL INJECTION
AUTO-[illegible]

SAMPLE NUMBER DC-SS-25

Sample Number
DC-SS-25

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No. U-4474

Lab Sample ID No: 9791 QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: [illegible] Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-19-86

Conc/Dil Factor: 3 pH 6.7

Percent Moisture: (Not Decanted) 31

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	79 B
67-64-1	Acetone	90
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	30u
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	15u
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	15u
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	610
591-78-6	2-Hexanone	30u
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	45
108-90-7	Chlorobenzene	15u
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

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 identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J). If limit of detection is 10 ug/l and a concentration of 3 ug/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.

Sample Number
DC-SS-25-RE

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474

Lab Sample ID No: 9791 RE QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: C Stojtowicz Date Sample Received: 11-14-86

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-25-86

Conc/Dil Factor: 3 pH: 6.7

Percent Moisture: (Not Decanted) 31

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	76 B
67-64-1	Acetone	47 B
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	54 B
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	15u
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	15u
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	91 B
591-78-6	2-Hexanone	18 BJ
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	15u
108-90-7	Chlorobenzene	15u
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

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 1 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.

Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No U-4474

Sample Number DC-SS-25

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed: 12-19-86

Conc/Dil Factor: 50

Percent Moisture (Decanted) 31

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	12000 U
111-44-4	bis(-2-Chloroethyl)Ether	12000 U
95-57-8	2-Chlorophenol	12000 U
541-73-1	1 3-Dichlorobenzene	12000 U
106-46-7	1. 4-Dichlorobenzene	12000 U
100-51-6	Benzyl Alcohol	12000 U
95-50-1	1. 2-Dichlorobenzene	12000 U
95-48-7	2-Methylphenol	12000 U
39638-32-9	bis(2-chloroisopropyl)Ether	12000 U
106-44-5	4-Methylphenol	12000 U
621-64-7	N-Nitroso-Di-n-Propylamine	12000 U
67-72-1	Hexachloroethane	12000 U
98-95-3	Nitrobenzene	12000 U
78-59-1	Isophorone	12000 U
88-75-5	2-Nitrophenol	12000 U
105-67-9	2. 4-Dimethylphenol	12000 U
65-85-0	Benzoic Acid	58000 U
111-91-1	bis(-2-Chloroethoxy)Methane	12000 U
120-83-2	2. 4-Dichlorophenol	12000 U
120-82-1	1. 2. 4-Trichlorobenzene	12000 U
91-20-3	Naphthalene	12000 U
106-47-8	4-Chloroaniline	12000 U
87-68-3	Hexachlorobutadiene	12000 U
59-50-7	4-Chloro-3-Methylphenol	12000 U
91-57-6	2-Methylnaphthalene	12000 U
77-47-4	Hexachlorocyclopentadiene	12000 U
88-06-2	2 4 6-Trichlorophenol	12000 U
95-95-4	2. 4. 5-Trichlorophenol	58000 U
91-58-7	2-Chloronaphthalene	12000 U
88-74-4	2-Nitroaniline	58000 U
131-11-3	Dimethyl Phthalate	12000 U
[illegible]-96-8	Acenaphthylene	12000 U
[illegible]-09-2	3-Nitroaniline	58000 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	12000 U
51-28-5	2. 4-Dinitrophenol	58000 U
100-02-7	4-Nitrophenol	58000 U
132-64-9	Dibenzofuran	12000 U
121-14-2	2 4-Dinitrotoluene	12000 U
606-20-2	2 6-Dinitrotoluene	12000 U
84-66-2	Diethylphthalate	12000 U
7005-72-3	4-Chlorophenyl-phenylether	12000 U
86-73-7	Fluorene	12000 U
100-01-6	4-Nitroaniline	58000 U
534-52-1	4. 6-Dinitro-2-Methylphenol	58000 U
86-30-6	N-Nitrosodiphenylamine (1)	12000 U
101-55-3	4-Bromophenyl-phenylether	12000 U
118-74-1	Hexachlorobenzene	12000 U
87-86-5	Pentachlorophenol	18000 J
85-01-8	Phenanthrene	12000 U
120-12-7	Anthracene	12000 U
84-74-2	Di-n-Butylphthalate	12000 U
206-44-0	Fluoranthene	6700 J
129-00-0	Pyrene	9000 J
85-68-7	Butylbenzylphthalate	12000 U
91-94-1	3 3 -Dichlorobenzidine	24000 U
56-55-3	Benzo(a)Anthracene	5100 J
117-81-7	bis(2-Ethylhexyl)Phthalate	12000 U
218-01-9	Chrysene	6400 J
117-84-0	Di-n-Octyl Phthalate	12000 U
205-99-2	Benzo(b)Fluoranthene	12000 U
207-08-9	Benzo(k)Fluoranthene	10000 J
50-32-8	Benzo(a)Pyrene	4500 J
193-39-5	Indeno(1 2. 3-cd)Pyrene	12000 U
53-70-3	Dibenzo(a h)Anthracene	12000 U
191-24-2	Benzo(g h i)Perylene	12000 U

(1) Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No U-4474

Sample Number DC-SS-25

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed 12-9-86

Conc/Dil Factor 500

Percent Moisture (decanted) 30.7

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	8,000 U
319-85-7	Beta BHC	8,000 U
319-86-8	Delta BHC	8,000 U
58-89-9	Gamma BHC (Lindane)	8,000 U
76-44-8	Heptachlor	8,000 U
309-00-2	Aldrin	8,000 U
1024-57-3	Heptachlor Epoxide	8,000 U
959-98-8	Endosulfan I	8,000 U
60-57-1	Dieldrin	16,000 U
72-55-9	4,4'-DDE	16,000 U
72-20-8	Endrin	16,000 U
33213-65-9	Endosulfan II	16,000 U
72-54-8	4,4'-DDD	16,000 U
1031-07-8	Endosulfan Sulfate	16,000 U
50-29-3	4,4'-DDT	16,000 U
72-43-5	Methoxychlor	80,000 U
53494-70-5	Endrin Ketone	16,000 U
57-74-9	Chlordane	80,000 U
8001-35-2	Toxaphene	160,000 U
12674-11-2	Aroclor-1016	80,000 U
11104-28-2	Aroclor-1221	80,000 U
11141-16-5	Aroclor-1232	80,000 U
53469-21-9	Aroclor-1242	80,000 U
12672-29-6	Aroclor-1248	80,000 U
11097-69-1	Aroclor-1254	160,000 U
11096-82-5	Aroclor-1260	122,000 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 30 V_t 1000 V_i 4

Laboratory Name ecology and environment, inc.

Case No 11-11171

Sample Number DC-SS-25

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. 79209	Acetic Acid, methyl ester	VOA	11.5	440 J
2.	Hexene isomer		18.3	140 J
3.	Hexene isomer		19.0	390 J
4.	Hexene isomer		20.1	36 J
5.	Unknown alcohol		24.0	120 J
6.	Unknown hydrocarbon		25.0	23 J
7.	Dichlorobenzene isomer		41.0	120 BJ *
8.				
9.	UNKNOWN AROMATIC	BNA	20.4	21000 J
10.	UNKNOWN AROMATIC		20.8	48000 J
11.	UNKNOWN AROMATIC		21.0	34000 J
12.	UNKNOWN AROMATIC		21.1	24000 J
13.	UNKNOWN AROMATIC		21.3	29000 J
14.	UNKNOWN AROMATIC		21.6	18000 J
15.	UNKNOWN		22.5	23000 J
16.	UNKNOWN		22.6	100000 J
17.	UNKNOWN HYDROCARBON		23.2	14000 J
18.	UNKNOWN		23.4	61000 J
19.	UNKNOWN HYDROCARBON		24.3	15000 J
20.	UNKNOWN		24.5	270000 J
21.	UNKNOWN		25.8	200000 J
22. 10544500	MOLECULAR SULFUR		26.0	25000 J
23.	UNKNOWN HYDROCARBON		26.6	20000 J
24.	UNKNOWN HYDROCARBON		27.2	54000 J
25.	UNKNOWN HYDROCARBON		28.4	86000 J
26.	~~UNKNOWN~~		~~30.8~~	
27. 3268879	OCTACHLORODIBENZO[B,E][1,4]DIOXIN		37.4	130,000 J
28.				
29.				
30.				

* carryover peak from previous analysis. Incorrect retention time.

Laboratory Name ecology and environment, inc.

Case No 11-11171

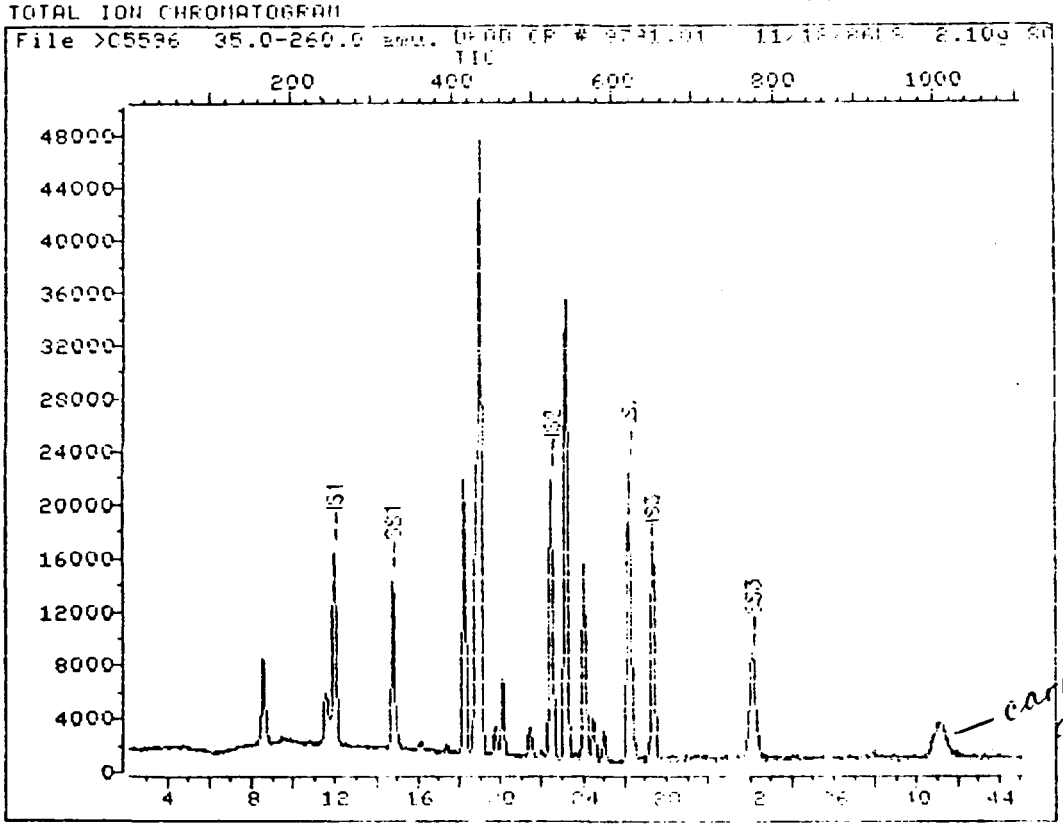
Sample Number DC-SS-25-RE

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	(RT) or Scan Number min.	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	18.0	250 J
2.	Hexene isomer		18.8	640 J
3.	Hexene isomer		19.6	16 J
4.	Hexene isomer		20.0	69 J
5.	Unknown alcohol		23.8	53 J
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



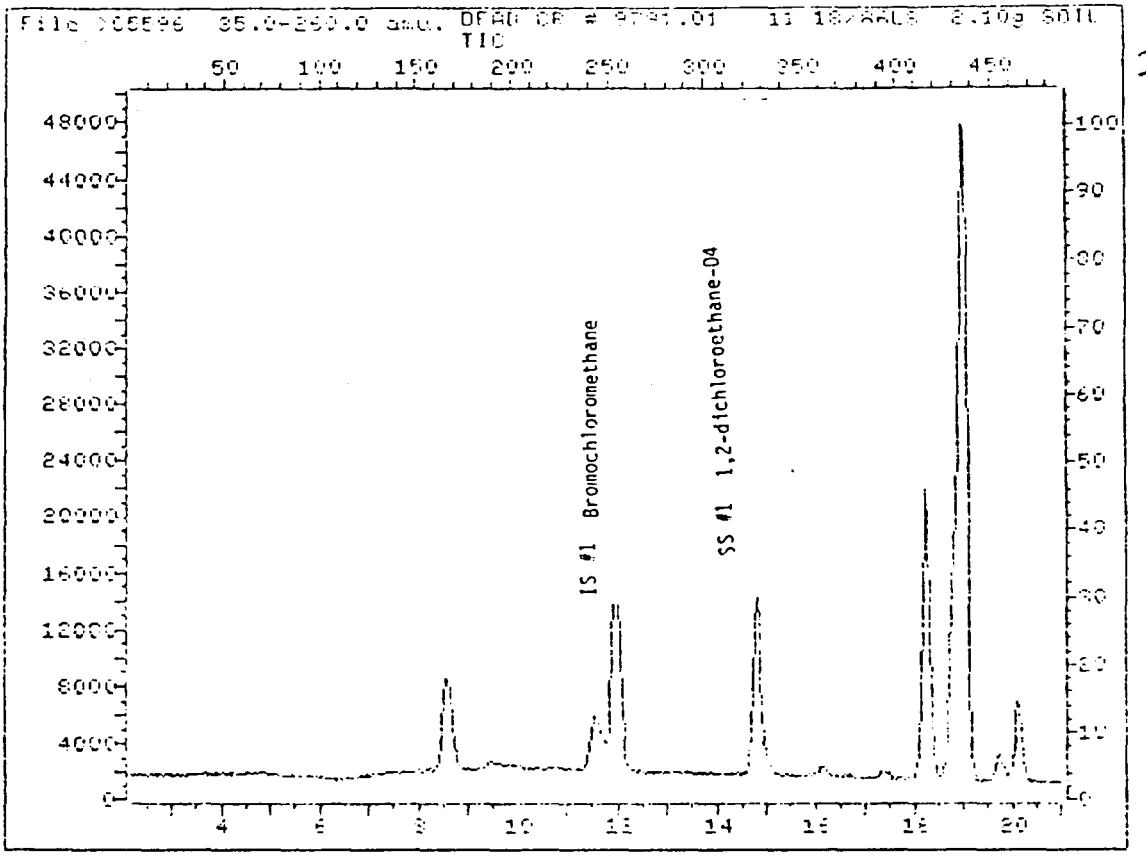
carryover from previous analysis (RT off for dichlorobenzene)

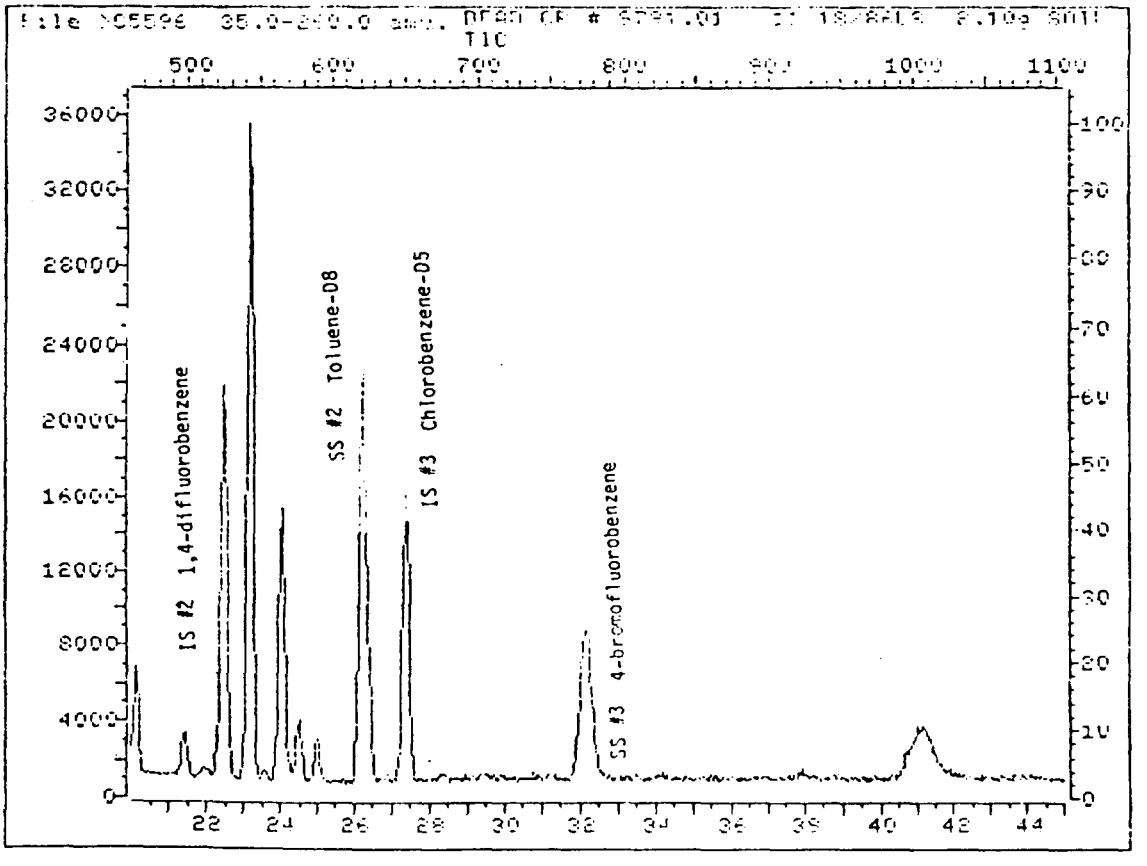
Data File: >C5596::D3
Name: DEAD CR # 9291.01 DC SS-25
Misc: 11/18/86LS 2.10g SOIL IN 500 DI + 100L IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5996 (LIMIT. CAL.)
Last Calibration: 861118 22:56

Operator ID: USER8
Quant Time: 861119 08:41
Injected at: 861119 07:55

DC-SS-25


TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

U-4474

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861119 08:41
Output File: ^C5596::Q2 Injected at: 861119 07:55
Data File: >C5596::D3 Dilution Factor: 1.00
Name: DEAD CR # 9791.01 DC-SS-25
Misc: 11/18/86LS 2.10g SOIL IN 5ML DI + 10UL IS/SS

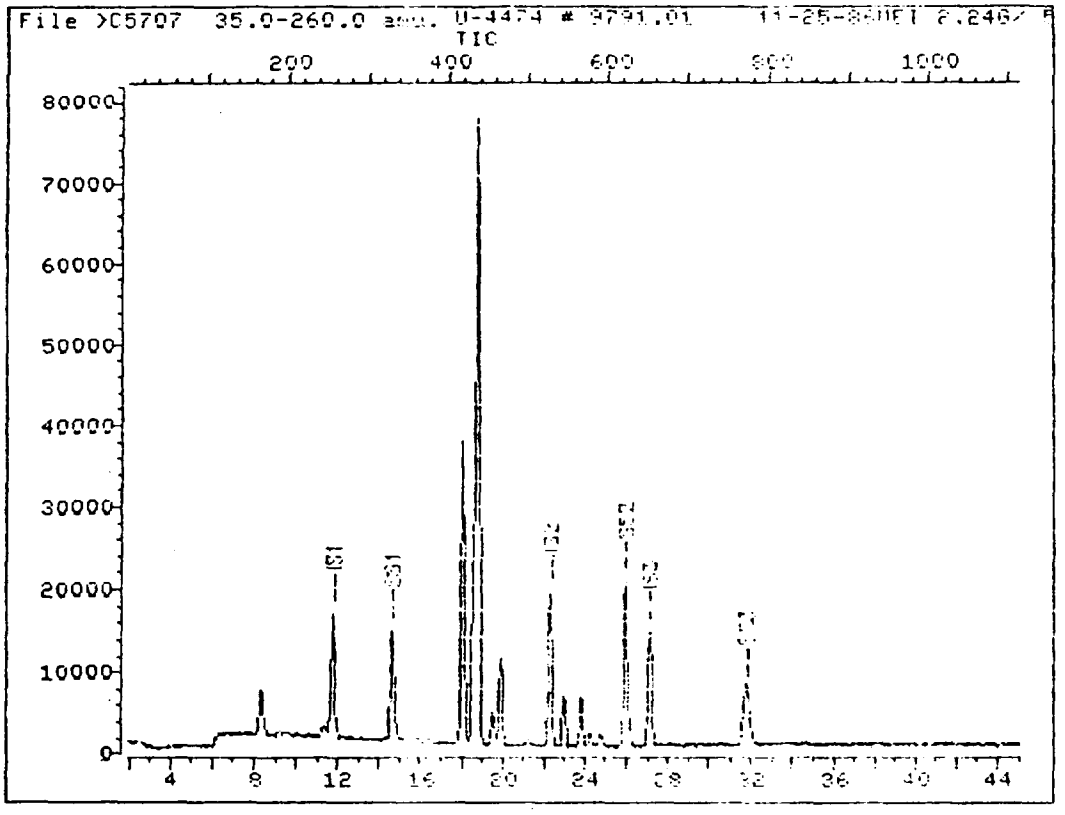
ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861118 22:56

	Compound		m/e	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.97	254	20416	250.00	NGS	100
6)	METHYLENE CHLORIDE		84	8.60	167	16986	114.97	NGS	100
7)	ACETONE		43	9.53	191	5435	129.96	NGS	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.80	327	49105	243.19	NGS	88
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.49	525	90684	250.00	NGS	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.34	650	53465	250.00	NGS	100
32)	4-METHYL-2-PENTANONE		43	23.18	543	152207	884.38	NGS	93
~~32)~~	~~4-METHYL-2-PENTANONE~~		~~43~~	~~24.04~~	~~[illegible]~~	~~[illegible]~~	~~121.75~~	~~NGS~~	54
~~33)~~	~~2-HEXANONE~~		~~43~~	~~24.04~~	~~[illegible]~~	~~21834~~	~~[illegible]~~	~~NGS~~	100
~~34)~~	~~2-HEXANONE~~		~~43~~	~~24.50~~	~~[illegible]~~	~~[illegible]~~	~~62.72~~	~~NGS~~	100
~~35)~~	~~2-HEXANONE~~		~~43~~	~~25.01~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~NGS~~	100
36)	TOLUENE-D8	(SURR)	98	26.21	621	86680	271.68	NGS	96
37)	TOLUENE		92	26.37	625	13211	65.30	NGS	89
40)	4-BROMOFLUOROBENZENE	(SURR)	95	32.16	774	31390	163.69	NGS	100

NOCW

* Compound is ISTD

TOTAL ION CHROMATOGRAM

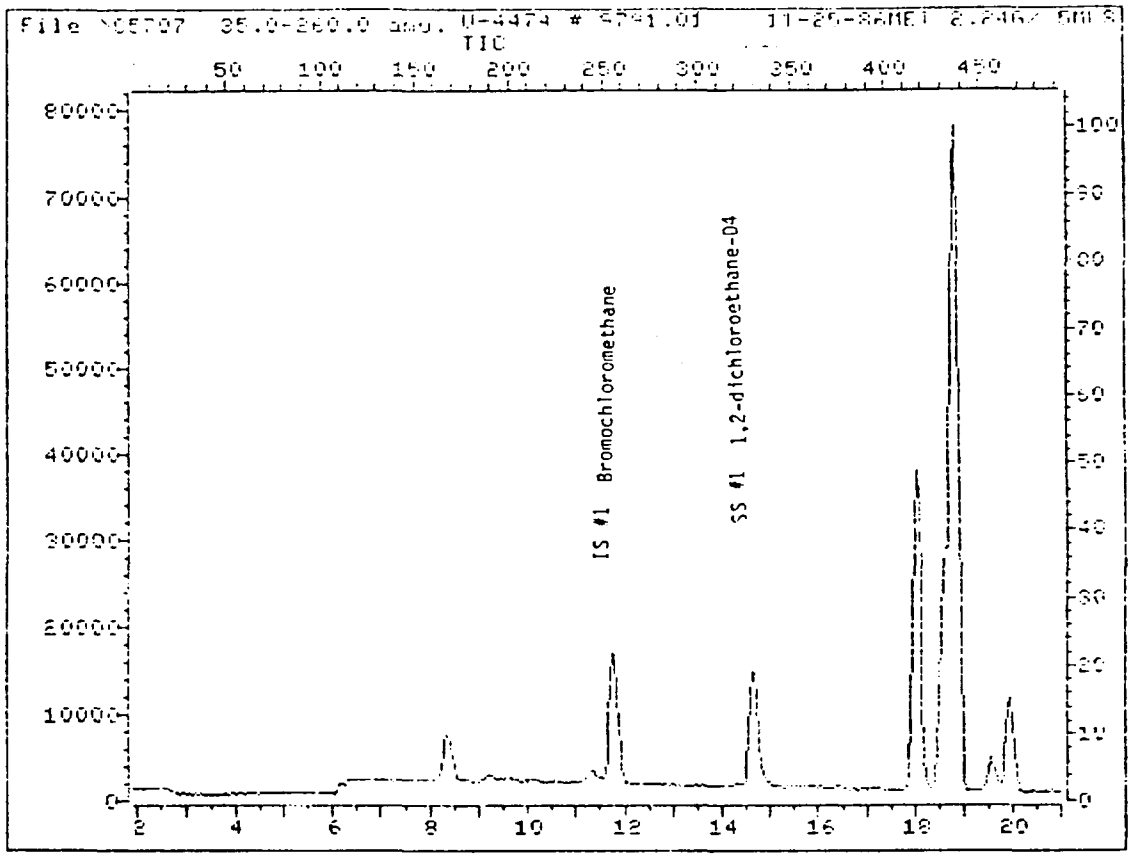


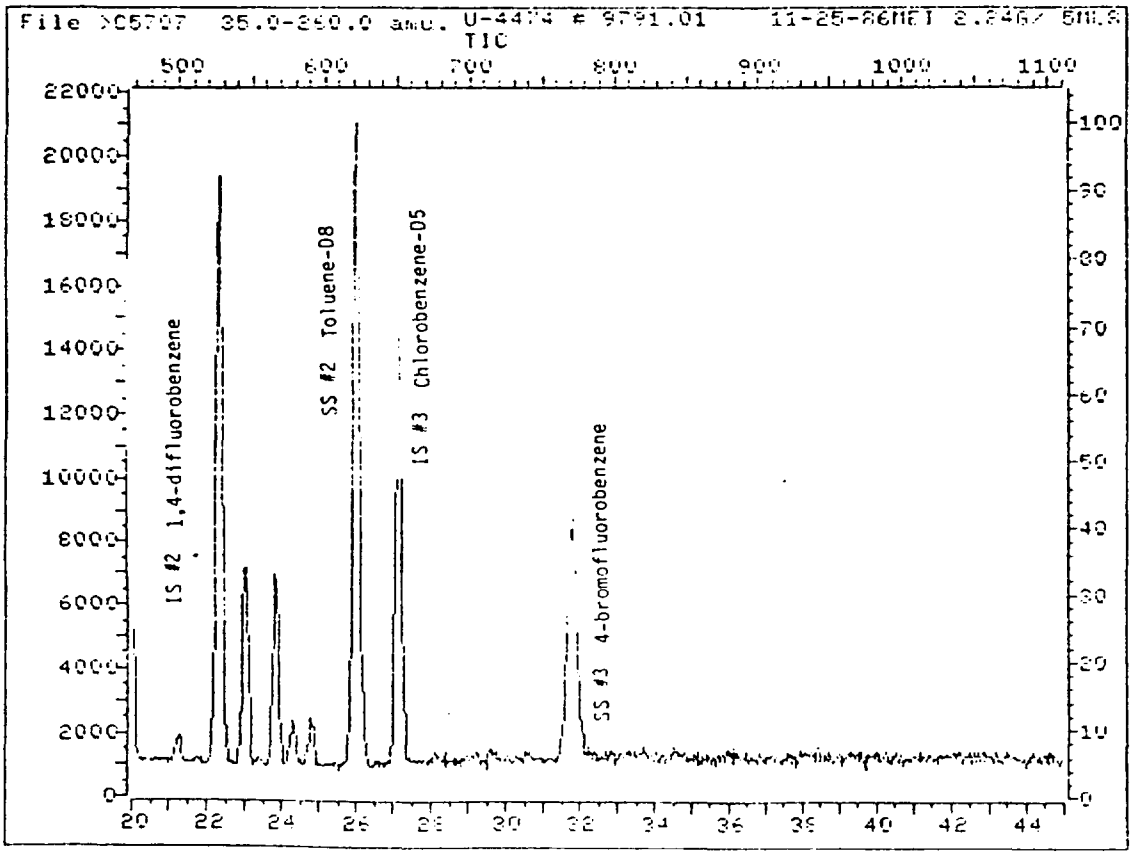
Data File: >C5707::U1
Name: U-4474 # 9791.01 DC-SS-25-RE
Misc: 11-25-86MEI 2.246/ 5MLS DI + 100UL 15/55

Id File: VOACRS::U2
Title: VOA ID FILL FOR HP-5995 (CONT. CAL.)
Last Calibration: 861125 10:50

Operator ID: USER6
Quant Time: 861125 20:36
Injected at: 861125 19:50

DC:SS-25-RE


File >C5707 35.0-260.0 amu. U-4474 # 9791.01 11-25-86MET 2.24G/ 5MLS
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File >C5707 35.0-260.0 amu. U-4474 # 9791.01 11-25-86MET 2.24G/ 5MLS
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

QUANT REPORT

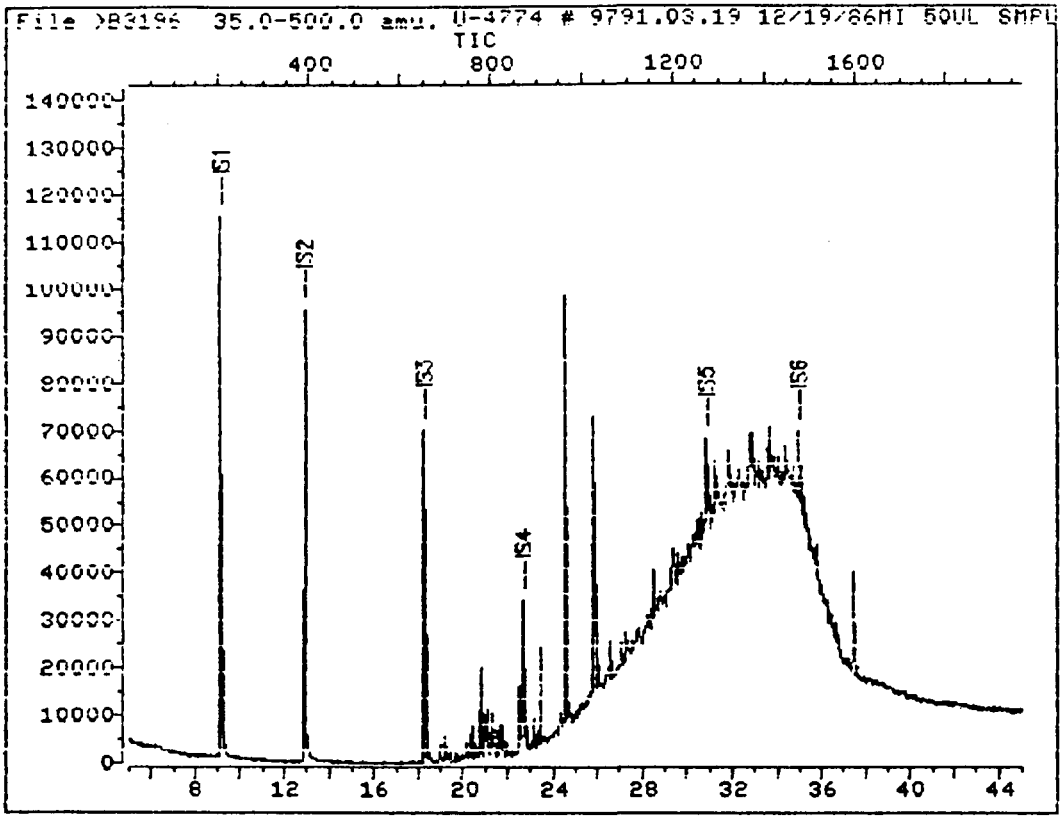
Operator ID: USER6 Quant Rev: 4 Quant Time: 861125 20:36
Output File: ^C5707::Q2 Injected at: 861125 19:50
Data File: >C5707::D1 Dilution Factor: 1.00
Name: U-4474 # 9791.01 DC-SS-25-RE
Misc: 11-25-86MEI 2.24G/ 5MLS DI + 10UL IS/SS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861125 10:50

	Compound	M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE (IS)	128	11.76	255	23268	250.00	NGS	100
6)	METHYLENE CHLORIDE	84	8.34	167	15800	117.59	NGS	100
7)	ACETONE	43	9.24	190	6197	71.70	NGS	100
15)	1,2-DICHLOROETHANE-D4(SURR)	65	14.63	329	56745	242.64	NGS	87
16)	*1,4-DIFLUOROBENZENE (IS)	114	22.31	527	79262	250.00	NGS	100
17)	2-BUTANONE	72	14.79	333	2738	82.76	NGS	100
31)	*CHLOROBENZENE-D5 (IS)	117	27.13	651	45175	250.00	NGS	100
32)	4-METHYL-2-PENTANONE	43	22.97	544	26010	140.00	NGS	88
~~32)~~	~~4-METHYL-2-PENTANONE~~	~~43~~	~~23.83~~	~~566~~	~~8537~~	~~45.95~~	~~NGS~~ no cal	51
~~33)~~	~~2-HEXANONE~~	~~43~~	~~23.83~~	~~566~~	~~8537~~	~~56.89~~	~~NGS~~	100
33)	2-HEXANONE	43	24.29	578	4171	27.79	NGS	100
~~33)~~	~~2-HEXANONE~~	~~43~~	~~24.00~~	~~591~~	~~4586~~	~~30.56~~	~~NGS~~ no cal	100
36)	TOLUENE-D8 (SURR)	98	25.96	621	81253	315.34	NGS	96
40)	4-BROMOFLUOROBENZENE(SURR)	95	31.75	770	27266	187.28	NGS	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM

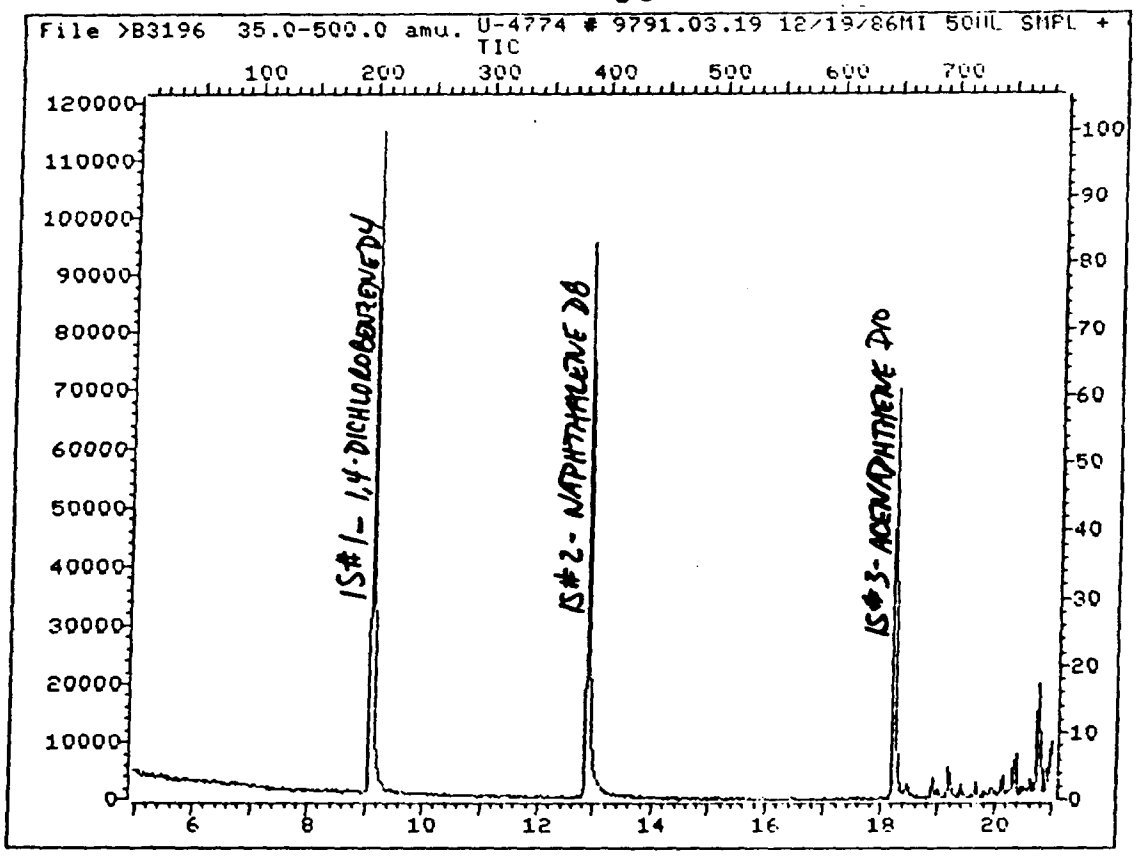


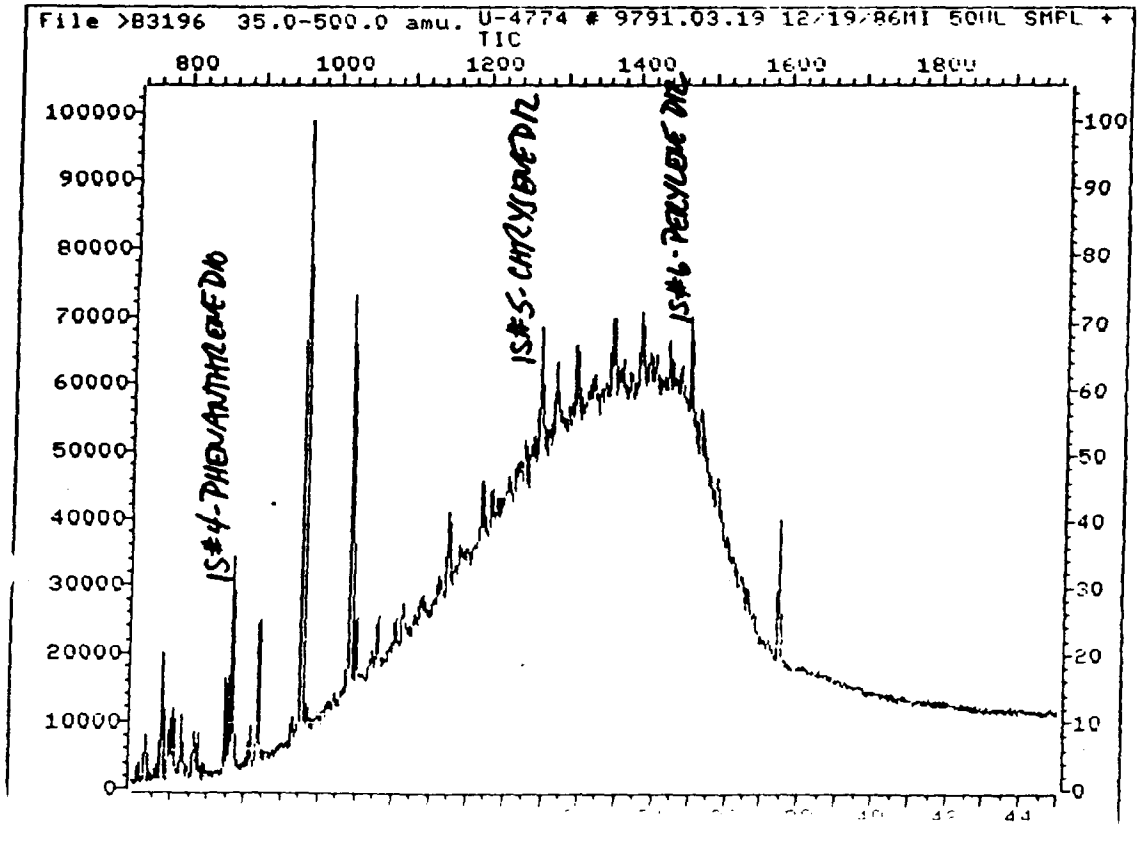
Data File: >B3196::D4
Name: U-4774 # 9791.03.19 DC-SS-25
Misc: 12/19/86MI 50UL SMPL + 450UL MECL2 + 5UL IS (10X)

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861219 16:50

Operator ID: USER8
Quant Time: 861220 00:04
Injected at: 861219 23:16

DC-SS-25


File >B3196 35.0-500.0 amu. U-4774 # 9791.03.19 12/19/86MI 50UL SMPL +
TIC
IS#1- 1,4-DICHLOROBENZENE D4
IS#2- NAPHTHALENE D8
IS#3- ACENAPHTHENE D10


File >B3196 35.0-500.0 amu. U-4774 # 9791.03.19 12/19/86MI 50UL SMPL +
TIC
IS#4- PHENANTHRENE D10
IS#5- CHRYSENE D12
IS#6- PERYLENE D12

QUANT REPORT

perator ID: USER8 Quant Rev: 4 Quant Time: 861220 00:04
utput File: ^B3196::D2 Injected at: 861219 23:16
ata File: >B3196::D4 Dilution Factor: 10.00
ame: U-4774 # 9791.03.19 DC-SS-25
isc: 12/19/86MI 50UL SMPL + 450UL MECL2 + 5UL IS (10X)

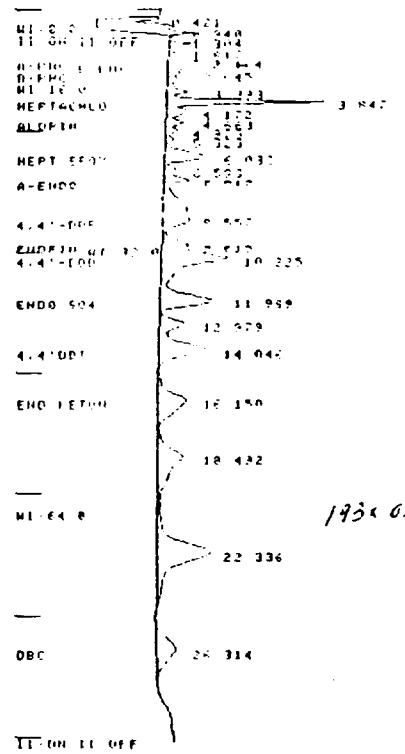
FINAL VOLUME - 5.0 ml

D File: BNABR::D2
itle: BNA ID FILE FOR THE HP 5970 (B)
ast Calibration: 861219 16:50

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.11	204	55663	40.00	UG/L	87
19)	*NAPHTHALENE-D8	(IS)	136	12.87	389	170107	40.00	UG/L	100
34)	*ACENAPHTHENE-D10	(IS)	162	18.22	652	52727	40.00	UG/L	97
1)	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.22~~	~~652~~	~~15209~~	~~80.72~~	~~UG/L~~	~~100~~
2)	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.22~~	~~652~~	~~6377~~	~~148.19~~	~~UG/L~~	~~100~~
									No Bfk
5)	*PHENANTHRENE-D10	(IS)	188	22.67	871	48586	40.00	UG/L	98
0)	PENTACHLOROPHENOL		266	22.63	869	1166	75.89	UG/L	100
4)	FLUORANTHENE		202	26.41	1055	3209	27.66	UG/L	95
5)	*CHRYSENE-D12	(IS)	240	30.84	1272	25626	40.00	UG/L	100
7)	PYRENE		202	27.03	1085	2995	37.50	UG/L	97
1)	BENZO(A)ANTHRACENE		228	30.80	1240	1396	21.31	UG/L	86
1)	~~BENZO(A)ANTHRACENE~~		~~228~~	~~30.92~~	~~1226~~	~~1758~~	~~26.84~~	~~UG/L~~	~~96~~
2)	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~31.35~~	~~1292~~	~~264~~	~~4.49~~	~~UG/L~~	~~97~~
2)	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~31.48~~	~~1313~~	~~270~~	~~4.59~~	~~UG/L~~	~~65~~
2)	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~31.78~~	~~1314~~	~~826~~	~~14.05~~	~~UG/L~~	~~78~~
2)	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~32.23~~	~~1340~~	~~170~~	~~2.89~~	~~UG/L~~	~~65~~
3)	~~CHRYSENE~~		~~228~~	~~30.80~~	~~1240~~	~~1396~~	~~24.92~~	~~UG/L~~	~~87~~
									No Bfk
3)	CHRYSENE		228	30.92	1276	1758	26.35	UG/L	95
4)	*PERYLENE-D12	(IS)	264	34.93	1472	26492	40.00	UG/L	100
5)	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.27~~	~~1391~~	~~250~~	~~2.14~~	~~UG/L~~	~~100~~
5)	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.50~~	~~1406~~	~~280~~	~~2.40~~	~~UG/L~~	~~100~~
5)	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.62~~	~~1408~~	~~342~~	~~2.93~~	~~UG/L~~	~~100~~
5)	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.84~~	~~1419~~	~~263~~	~~2.25~~	~~UG/L~~	~~100~~
5)	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.97~~	~~1425~~	~~501~~	~~4.29~~	~~UG/L~~	~~100~~
6)	~~BENZO(B)FLUORANTHENE~~		~~252~~	~~33.97~~	~~1425~~	~~2971~~	~~38.00~~	~~UG/L~~	~~100~~
									No Bfk
7)	BENZO(K)FLUORANTHENE		252	33.97	1425	2971	42.32	UG/L	100
8)	BENZO(A)PYRENE		252	34.64	1458	1256	18.59	UG/L	100
8)	~~BENZO(A)PYRENE~~		~~252~~	~~34.78~~	~~1465~~	~~1179~~	~~15.97~~	~~UG/L~~	~~100~~
9)	~~INDENO(1,2,3-CD)PYRENE~~		~~276~~	~~37.50~~	~~1680~~	~~879~~	~~14.29~~	~~UG/L~~	~~100~~
1)	~~BENZO(G,H,I)PERYLENE~~		~~276~~	~~38.13~~	~~1429~~	~~729~~	~~14.28~~	~~UG/L~~	~~100~~
									No Bfk

* Compound is ISTD

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



193 x 0.00131 x 1/1.5 x 500000 = 84,300 ug/kg wet 1360

122,000 ug/kg Dry J

RECALCULATE ON FILE: D.CREEK3540

CHANNEL: 1A - 1 TITLE: RUN# 17 5:26 9 DEC 86

DC-SS-25

SAMPLE: 9791.01.1941 METHOD: CERA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1	~~B-ENDO~~	125.5079	2.174	-0.055	30953	VV	? 10.05
2		0.0000	2.305		92299	VV	5.75
3		0.0000	3.393 ✓		39525	VV	8.55
4	~~HEPTACHLO~~	406.9499	3.947	-0.043	202953	VV	9.13
5		0.0000	4.172		45592	VV	? 19.19
6	~~ALDRIN~~	45.9093	4.553 ✓	-0.137	29951	VV	12.05
7	~~HEPT EPOX~~	199.9955	6.032 ✓	0.212	116591	VV	23.63
8		0.0000	6.593		21229	VV	? 14.44
9	~~A-ENDO~~	130.2269	7.019	-0.211	74613	VV	20.59
10	~~DIELDRIN~~	289.4129	8.557 ✓	0.137	152104	VV	? 54.25
11	~~B-ENDO~~	158.3343	9.615	0.035	95757	VV	? 27.75
12	~~4,4'-DDD~~	669.9094	10.225	-0.225	320566	VV	29.56
13	~~ENDO SO4~~	543.5454	11.939 ✓	-0.281	215304	VV	29.05
14		0.0000	12.979		95559	VV	27.75
15	~~4,4'DDT~~	739.9120	14.046 ✓ 1260	0.396 193	214992	VV	32.99
16	~~END KETON~~	341.9955	15.150	0.420	189209	VV	53.38
17		0.0000	19.492		214899	VV	59.38
18		0.0000	22.336		415029	VB	50.63
19	~~DBC~~	317.4195	26.314	-1.055	151232	BB	64.00

TOTALS: 3957.997 -0.809 2732236

DETECTED PKS: 33 REJECTED PKS: 14

DIVISOR: 1.50000 MULTIPLIER: 500000000

NOISE: 22.9 OFFSET: -27

RACK: [illegible] VIAL: 2 INJ: 1

NOTES:
NOTES: [illegible]259-52 ANALYST: RICHARD SAMSON
SECURE AREA: D [illegible]
INST: [illegible] 6000 [illegible]
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 0.60 ML/MIN
DET: [illegible] INJ: 220 C
200 C [illegible] THERMAL 4 UL INJECTION
AUTOSAMPLER
PEST [illegible] ANALYSIS

SAMPLE NUMBER DC-SS-26

481095

Sample Number
DC-SS-26

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474

Lab Sample ID No: 9792 QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: C Hojtowicz Date Sample Received: 11-14-86

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-19-86

Conc/Dil Factor: 3 pH 6.8

Percent Moisture: (Not Decanted) 21

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	68 B
67-64-1	Acetone	14 BJ
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	40 B
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	15u
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	15u
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	30u
591-78-6	2-Hexanone	30u
127-18-4	Tetrachloroethene	12 J
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	37
108-90-7	Chlorobenzene	15u
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

Data Reporting Qualifiers

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

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

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

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

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

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

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

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Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No. U-4474

Sample Number DC-SS-26

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 11-17-86

Date Analyzed: 12-4-86

Conc/Dil Factor: 50

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	10000	U
111-44-4	bis(-2-Chloroethyl)Ether	10000	U
95-57-8	2-Chlorophenol	10000	U
541-73-1	1 3-Dichlorobenzene	10000	U
106-46-7	1 4-Dichlorobenzene	10000	U
100-51-6	Benzyl Alcohol	10000	U
95-50-1	1 2-Dichlorobenzene	10000	U
95-48-7	2-Methylphenol	10000	U
39638-32-9	bis(2-chloroisopropyl)Ether	10000	U
106-44-5	4-Methylpheno	10000	U
621-64-7	N-Nitroso-Di-n-Propylamine	10000	U
67-72-1	Hexachloroethane	10000	U
98-95-3	Nitrobenzene	10000	U
78-59-1	Isophorone	10000	U
88-75-5	2-Nitrophenol	10000	U
105-67-9	2, 4-Dimethylphenol	10000	U
65-85-0	Benzoic Acid	51000	U
111-91-1	bis(-2-Chloroethoxyl)Methane	10000	U
120-83-2	2 4-Dichlorophenol	10000	U
120-82-1	1 2 4-Trichlorobenzene	10000	U
91-20-3	Naphthalene	10000	U
106-47-8	4-Chloroaniline	10000	U
87-68-3	Hexachlorobutadiene	10000	U
59-50-7	4-Chloro-3-Methylphenol	10000	U
91-57-6	2-Methylnaphthalene	10000	U
77-47-4	Hexachlorocyclopentadiene	10000	U
88-06-2	2 4 6-Trichlorophenol	10000	U
95-95-4	2 4 5-Trichlorophenol	51000	U
91-58-7	2-Chloronaphthalene	10000	U
88-74-4	2-Nitroaniline	51000	U
131-11-3	Dimethyl Phthalate	10000	U
208-96-8	Acenaphthylene	10000	U
99-09-2	3-Nitroaniline	51000	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	10000	U
51-28-5	2, 4-Dinitrophenol	51000	U
100-02-7	4-Nitrophenol	51000	U
132-64-9	Dibenzofuran	10000	U
121-14-2	2 4-Dinitrotoluene	10000	U
606-20-2	2 6-Dinitrotoluene	10000	U
84-66-2	Diethylphthalate	10000	U
7005-72-3	4-Chlorophenyl-phenylether	10000	U
86-73-7	Fluorene	10000	U
100-01-6	4-Nitroaniline	51000	U
534-52-1	4, 6-Dinitro-2-Methylphenol	51000	U
86-30-6	N-Nitrosodiphenylamine (1)	10000	U
101-55-3	4-Bromophenyl-phenylether	10000	U
118-74-1	Hexachlorobenzene	10000	U
87-86-5	Pentachlorophenol	51000	U
85-01-8	Phenanthrene	10000	U
120-12-7	Anthracene	10000	U
84-74-2	Di-n-Butylphthalate	10000	U
206-44-0	Fluoranthene	4800	J
129-00-0	Pyrene	10000	U
85-68-7	Butylbenzylphthalate	10000	U
91-94-1	3 3 -Dichlorobenzidine	21000	U
56-55-3	Benzo(a)Anthracene	10000	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10000	U
218-01-9	Chrysene	10000	U
117-84-0	Di-n-Octyl Phthalate	10000	U
205-99-2	Benzo(b)Fluoranthene	10000	U
207-08-9	Benzo(k)Fluoranthene	10000	U
50-32-8	Benzo(a)Pyrene	10000	U
193-39-5	Indeno(1 2, 3-cd)Pyrene	10000	U
53-70-3	Dibenz(a, h)Anthracene	10000	U
191-24-2	Benzo(g, h, i)Perylene	10000	U

(1) Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No V-4474

Sample Number
DC-SS-26

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed 12-9-86

Conc/Dil Factor: 100

Percent Moisture (decanted) 20.6

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	1600 u
319-85-7	Beta-BHC	1,600 u
319-86-8	Delta-BHC	1,600 u
58-89-9	Gamma-BHC (Lindane)	1,600 u
76-44-8	Heptachlor	1,600 u
309-00-2	Aldrin	1,600 u
1024-57-3	Heptachlor Epoxide	1,600 u
959-98-8	Endosulfan I	1,600 u
60-57-1	Dieldrin	3,200 u
72-55-9	4,4'-DDE	3,200 u
72-20-8	Endrin	3,200 u
33213-65-9	Endosulfan II	3,200 u
72-54-8	4,4'-DDD	3,200 u
1031-07-8	Endosulfan Sulfate	3,200 u
50-29-3	4,4'-DDT	3,200 u
72-43-5	Methoxychlor	16,000 u
53494-70-5	Endrin Ketone	3,200 u
57-74-9	Chlordane	16,000 u
8001-35-2	Toxaphene	32,000 u
12674-11-2	Aroclor-1016	16,000 u
11104-28-2	Aroclor-1221	16,000 u
11141-16-5	Aroclor-1232	16,000 u
53469-21-9	Aroclor-1242	16,000 u
12672-29-6	Aroclor-1248	16,000 u
11097-69-1	Aroclor-1254	32,000 u
11096-82-5	Aroclor-1260	120,000

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 30 V_t 1000 V_i 4

Laboratory Name ecology and environment, inc.

Case No 11-14174

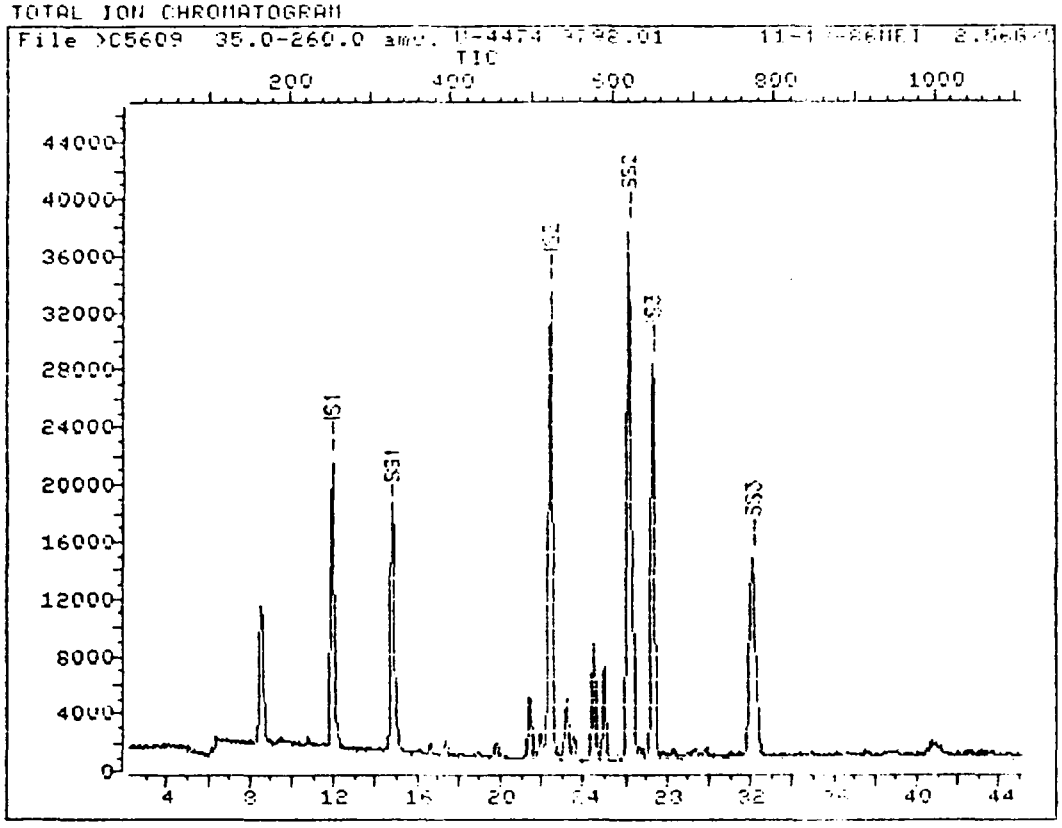
Sample Number DC-SS-26

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number min.	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.4	3 BJ
2.	Hexane isomer		21.4	9 BJ
3.	Unknown hydrocarbon		23.2	9 J
4.	Unknown hydrocarbon		24.5	19 J
5.				
6.	UNKNOWN AROMATIC	BNA	20.0	16000 J
7.	UNKNOWN AROMATIC		20.7	20000 J
8.	UNKNOWN AROMATIC		21.0	11000 J
9.	UNKNOWN AROMATIC		21.2	34000 J
10.	UNKNOWN AROMATIC		21.4	76000 J
11.	UNKNOWN AROMATIC		21.5	12000 J
12.	UNKNOWN AROMATIC		21.6	15000 J
13.	UNKNOWN AROMATIC		21.8	190,000 J
14.	UNKNOWN AROMATIC		22.0	100,000 J
15.	UNKNOWN AROMATIC		22.1	100,000 J
16.	UNKNOWN AROMATIC		22.2	13000 J
17.	UNKNOWN AROMATIC		22.3	160000 J
18.	UNKNOWN AROMATIC		22.5	18000 J
19.	DIMETHYL DECYL BENZENE		22.7	71000 J
20.	DIMETHYL DECYL BENZENE		22.8	77000 J
21.	DIMETHYL DECYL BENZENE		22.9	27000 J
22.	UNKNOWN		29.5	4700 J
23.	UNKNOWN		29.8	5300 J
24.				
25.				
26.				
27.				
28.				
29.				
30				

TOTAL ION CHROMATOGRAM

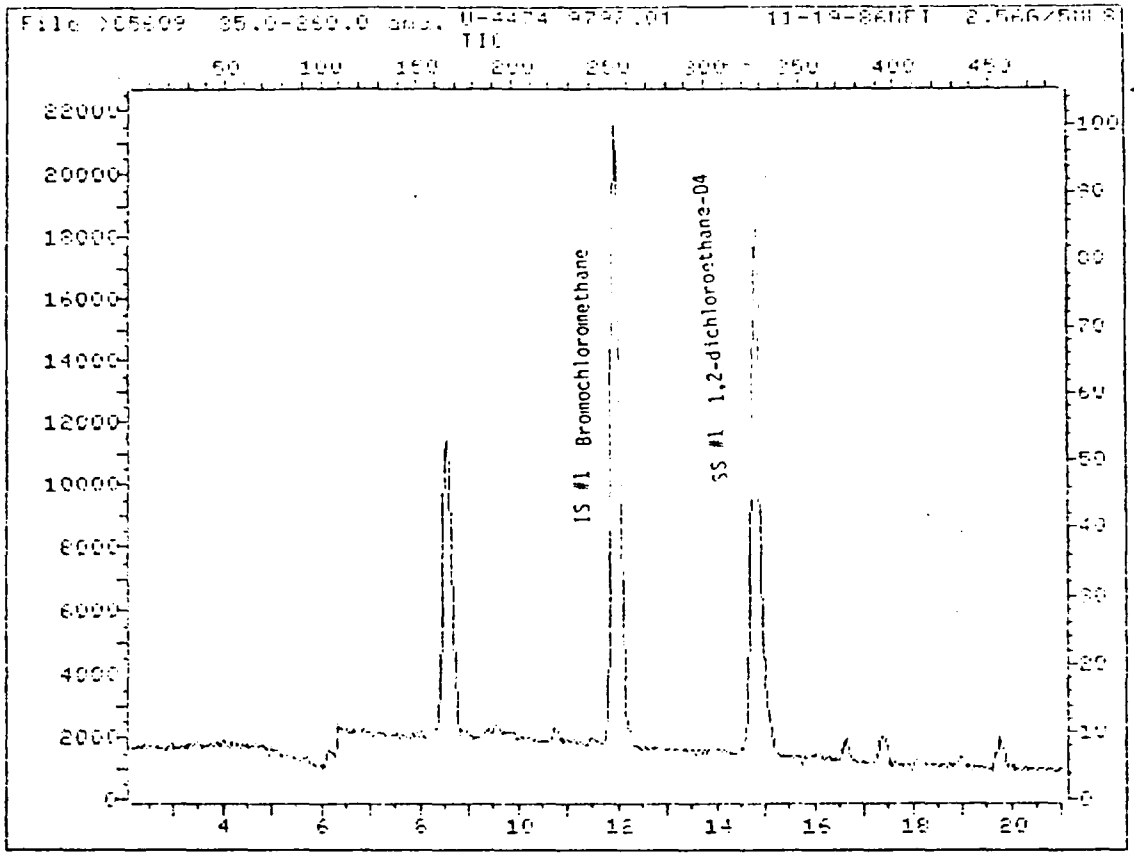


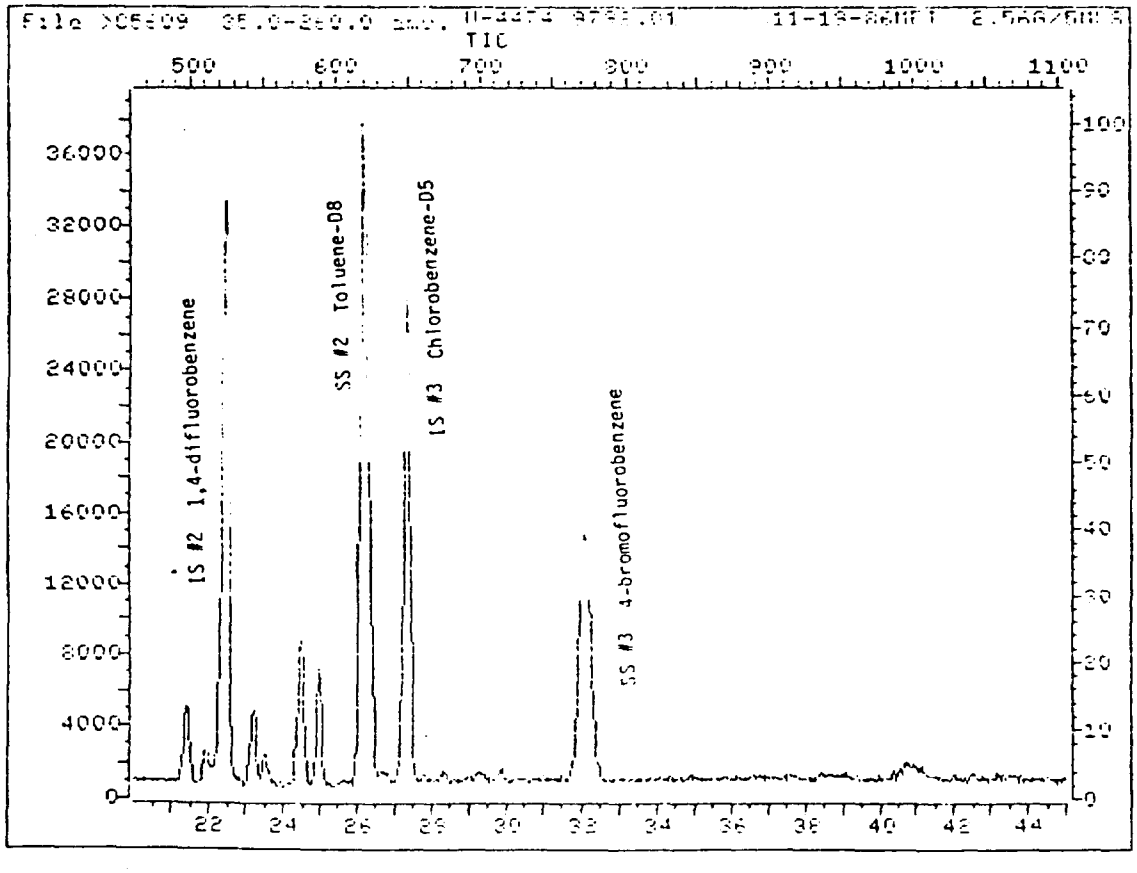
Data File: >C5609::01
Name: U-4474 9792.01 DC-SS-26
Misc: 11-19-86MEI 2.56G/5MLS DI + 10UL 15/SS

Id File: VOACRS::02
Title: VOA ID FILE FOR HP-5995 (CONT. TAP.)
Last Calibration: 861119 19:02

Operator ID: USER8
Quant Time: 861119 21:05
Injected at: 861119 20:19

DC-SS-26


TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

QUANT REPORT

perator ID: USER8 Quant Rev: 4 Quant Time: 861119 21:05
utput File: ^C5609::Q2 Injected at: 861119 20:19
ata File: >C5609::D1 Dilution Factor: 1.00
ame: U-4474 9792.01 DC-SS-26
isc: 11-19-86MEI 2.56G/5MLS DI + 10UL IS/SS

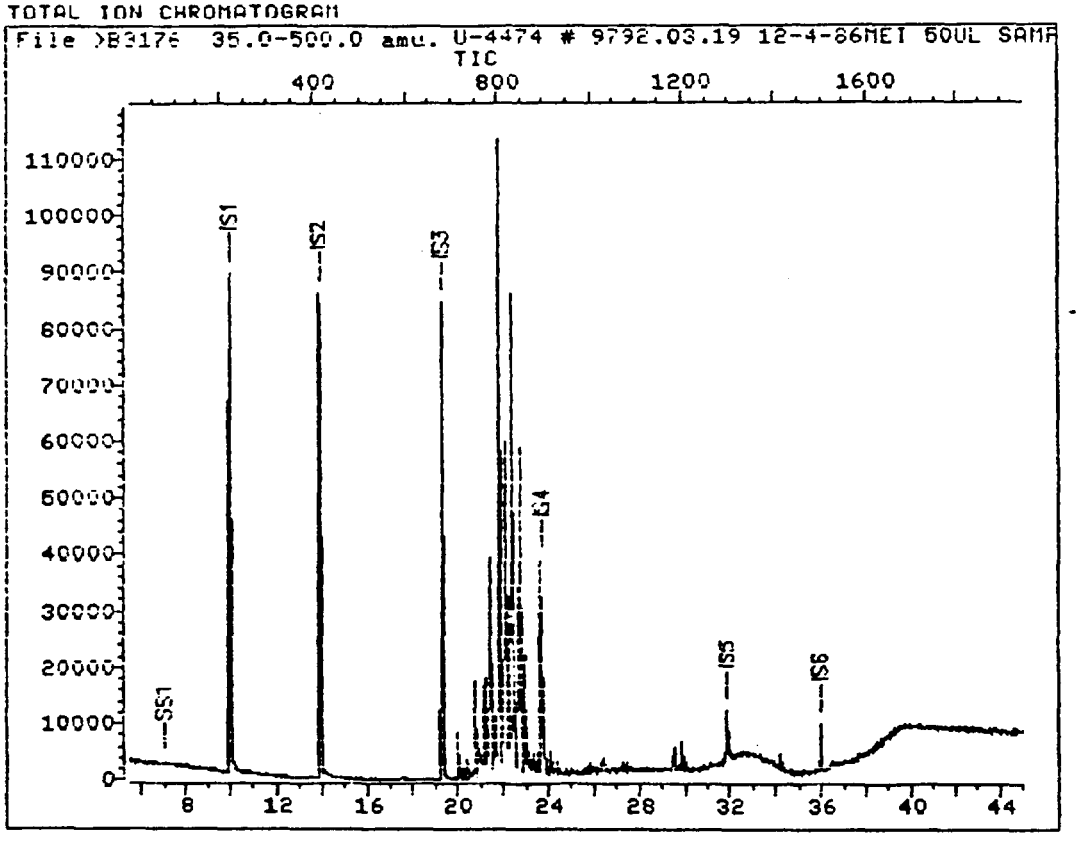
D File: VOACRS::D2
itle: VOA ID FILE FOR HP-5995 (CONT. CAL.)
ast Calibration: 861119 19:02

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.93	253	30876	250.00	NGS	100
6)	METHYLENE CHLORIDE		84	8.56	166	28549	136.84	NGS	100
7)	ACETONE		43	9.53	191	4262	27.57	NGS	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.77	326	73064	236.68	NGS	88
6)	*1,4-DIFLUOROBENZENE	(IS)	114	22.45	524	132241	250.00	NGS	100
7)	2-BUTANONE		72	14.92	330	3844	79.82	NGS	100
1)	*CHLOROBENZENE-D5	(IS)	117	27.31	649	87635	250.00	NGS	100
~~3)~~	~~2-HEXANONE~~		~~43~~	~~24.47~~	~~576~~	~~20040~~	~~80.91~~	~~NGS~~	100
~~3)~~	~~2-HEXANONE~~		~~43~~	~~24.93~~	~~588~~	~~12686~~	~~51.22~~	~~NGS~~	100
4)	TETRACHLOROETHENE		164	24.97	589	4259	24.87	NGS	95
6)	TOLUENE-D8	(SURR)	98	26.13	619	144445	287.15	NGS	94
7)	TOLUENE		92	26.33	624	26014	74.89	NGS	98
0)	4-BROMOFLUOROBENZENE	(SURR)	95	32.08	772	54983	218.36	NGS	100
~~3)~~	~~DICHLOROBENZENE ISOMER~~		~~146~~	~~40.77~~	~~996~~	~~5009~~	~~5009.00~~	~~NO CALIB~~	100

NO CAL

* Compound is ISTD

TOTAL ION CHROMATOGRAM

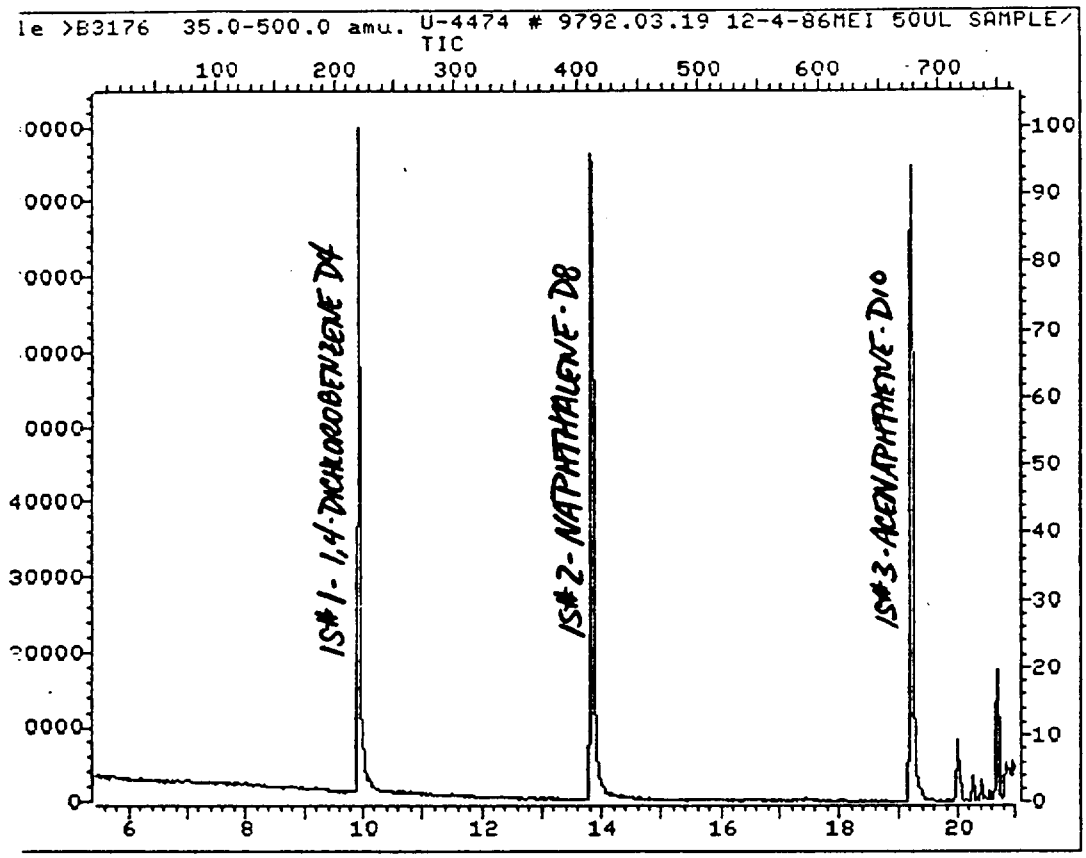


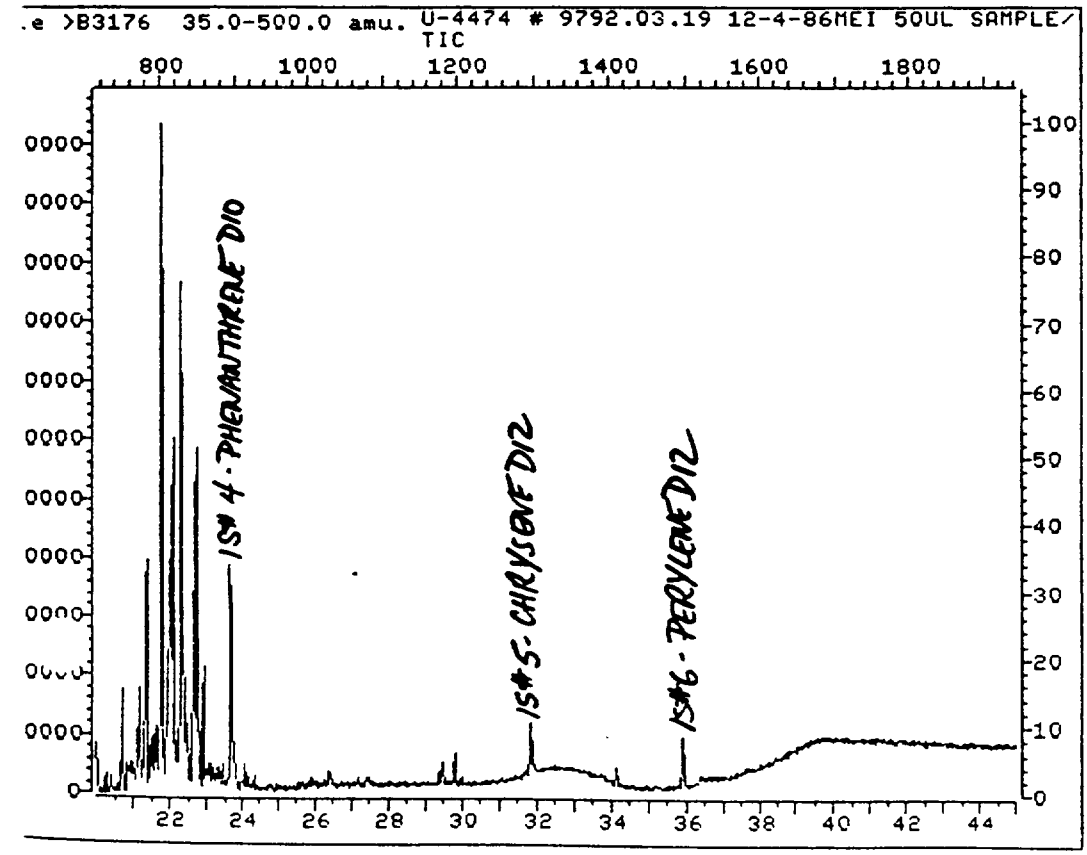
Data File: >B3176::D4
Name: U-4474 # 9792.03.19 DC-SS-26
Misc: 12-4-86MEI 50UL SAMPLE/ 450UL MECL2 + 5UL IS (10X)

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861204 15:13

Operator ID: USER6
Quant Time: 861204 20:07
Injected at: 861204 19:19

DC-SS-26


le >B3176 35.0-500.0 amu. U-4474 # 9792.03.19 12-4-86MEI 50UL SAMPLE/
TIC
IS#1- 1,4-DICHLOROBENZENE D4
IS#2- NAPHTHALENE-D8
IS#3-ACENAPHTHENE-D10


.e >B3176 35.0-500.0 amu. U-4474 # 9792.03.19 12-4-86MEI 50UL SAMPLE/
TIC
IS# 4-PHENANTHRENE D10
IS#5- CHRYSENE D12
IS#6- PERYLENE D12

QUANT REPORT

Operator ID: USER6 Quant Rev: 4 Quant Time: 861204 20:07
Output File: ^B3176::Q2 Injected at: 861204 19:19
Data File: >B3176::D4 Dilution Factor: 10.00
Name: U-4474 # 9792.03.19 DC-SS-26
Misc: 12-4-86MEI 50UL SAMPLE/ 450UL MECL2 + 5UL IS (10X)

FINAL VOLUME - 5.0ml

ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861204 15:13

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLORUBENZENE-D4	(IS)	152	9.94	221	48155	40.00	UG/L	83
5)	2-FLUOROPHENOL	(SURR)	112	6.96	74	302	2.44	UG/L	93
19)	*NAPHTHALENE-D8	(IS)	136	13.83	412	155606	40.00	UG/L	100
34)	*ACENAPHTHENE-D10	(IS)	162	19.23	678	63557	40.00	UG/L	98
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.23~~	~~678~~	~~18599~~	~~85.46~~	~~UG/L~~	100
~~42)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.23~~	~~678~~	~~7862~~	~~166.72~~	~~UG/L~~	100
55)	*PHENANTHRENE-D10	(IS)	188	23.67	896	58683	40.00	UG/L	93
~~60)~~	~~PENTACHLOROPHENOL~~		~~266~~	~~23.63~~	~~894~~	~~140~~	~~6.03~~	~~UG/L~~	100
~~60)~~	~~PENTACHLOROPHENOL~~		~~266~~	~~23.67~~	~~896~~	~~176~~	~~7.58~~	~~UG/L~~	100
64)	FLUORANTHENE		202	27.41	1080	2407	22.93	UG/L	93
65)	*CHRYSENE-D12	(IS)	240	31.84	1298	15526	40.00	UG/L	100
74)	*PERYLENE-D12	(IS)	264	35.91	1498	13246	40.00	UG/L	100
~~76)~~	~~BENZO(B)FLUORANTHENE~~		~~252~~	~~34.97~~	~~1452~~	~~746~~	~~21.53~~	~~UG/L~~	100
~~77)~~	~~BENZO(K)FLUORANTHENE~~		~~252~~	~~34.97~~	~~1452~~	~~746~~	~~17.35~~	~~UG/L~~	100
~~78)~~	~~BENZO(A)PYRENE~~		~~252~~	~~35.64~~	~~1485~~	~~281~~	~~8.15~~	~~UG/L~~	100
~~78)~~	~~BENZO(A)PYRENE~~		~~252~~	~~35.77~~	~~1491~~	~~262~~	~~7.60~~	~~UG/L~~	100

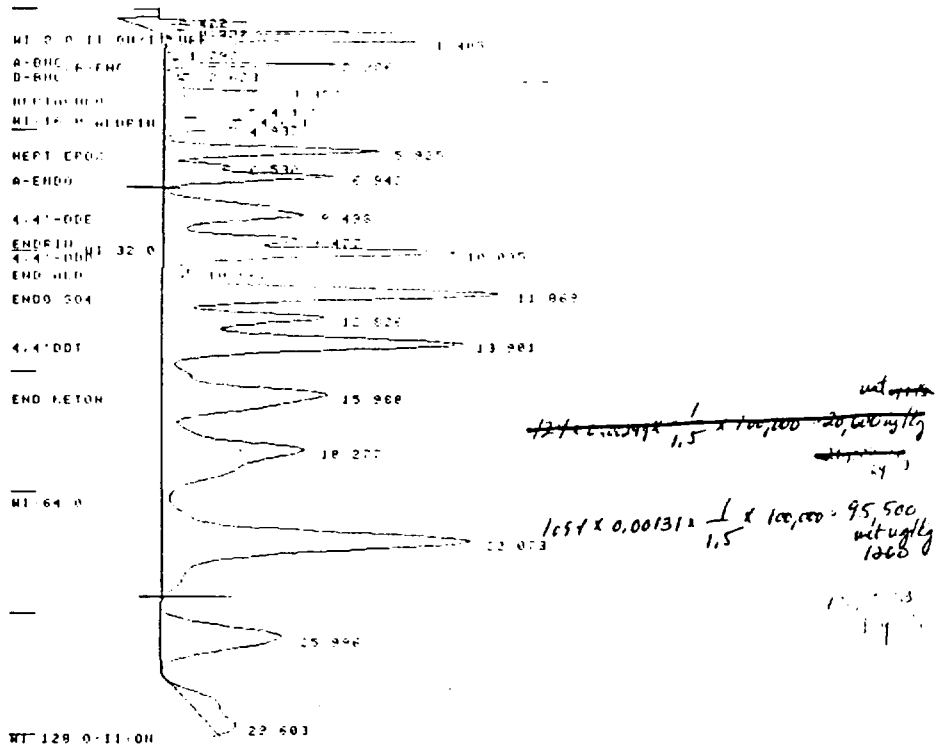
No BPM

No BPM

No BPM

* Compound is ISTD

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



DC-SS-26

CHANNEL: 1A - 1 TITLE: RUN# 31 18:50 9 DEC 86

SAMPLE: 9792.0$.19W1 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	1.405		110747	VV	3.25
2		1213.921	2.296	0.096	1[illegible]619	VV	5.19
3		81.7826	2.623	0.113	[illegible]782	VV	7.00
4		0.0000	2.893		[illegible]021	VV	? 7.44
5		0.0000	3.357		114568	VV	8.00
6		209.6641	3.673	-0.217	[illegible]045	VV	? 21.44
7		0.0000	4.125		216496	VV	19.75
8		0.0000	4.621		1[illegible]666	VV	13.13
9		379.9018	4.932	0.132	1[illegible]823	VV	12.38
10		1903.437	5.257	0.105	5[illegible]1204	VV	20.56
11		0.0000	6.530		1[illegible]3705	VV	? 16.81
12		1619.147	5.912	-0.259	4[illegible]942	VV	20.25
13		2513.256	8.498	0.078	7[illegible]0694	VV	? 42.31
14		1879.761	9.477	0.077	4[illegible]1632	VV	? 25.75
15		3970.696	10.095	-0.355	9[illegible]1452	VV	25.38
16		370.7646	10.862	0.322	[illegible]3941	VV	? 39.50
17		7226.707	11.868	-0.402	14[illegible]1287	VV	32.06
18		0.0000	12.826		6[illegible]6341	VV	32.19
19		10082.56	13.921	0.251	14[illegible]1111	VV	35.94
20		4645.786	15.988	0.258	12[illegible]5179	VV	59.44
21		0.0000	19.277		14[illegible]3245	VV	76.44
22		0.0000	22.023		24[illegible]9829	VB	52.06
23		4099.500	25.996	-1.[illegible]74	9[illegible]6557	BV	63.56
24		0.0000	29.603		300611	VB	?145.44

TOTALS: 40196.20 1.744 14[illegible]2484

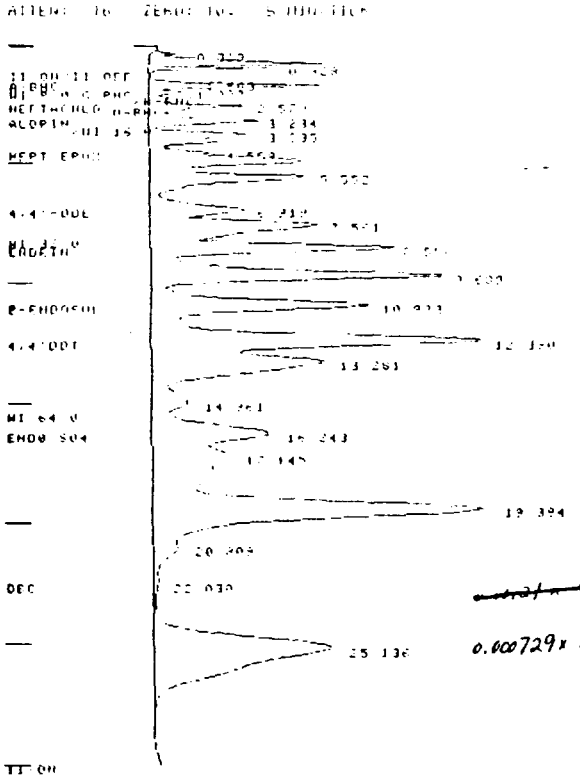
DETECTED PKS: 39 REJECTED PKS: 15

DIVISOR: 1.50000 MULTIPLIER: 100000.000

NOISE: 22.9 OFFSET: -11

RACK: 3 VIAL: 2 INJ: 1

NOTES:
NOTEBOOK:259-52 ANALYSTIFICHER SAMSON
SECURE METHOD:B JOB# D 4474
INST:VARIAN 6000#2 & ECD 10[illegible]
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
AUTOSAMPLER
PESTICIDE [illegible]



DC-SS-26

CHANNEL: 18 - 1 TITLE: RUN# 9 2:49 18 DEC 86

SAMPLE: 9792 METHOD: PEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT DG/LG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SLP CODE		WT.2 (SEC)
1		0.0000	1.563		2[illegible]298	VV	?	4.69
2	[illegible]	0.0000	1.635	-0.015	20[illegible]502	VV	?	6.13
3		0.0000	1.974		6[illegible]450	VV		6.38
4		0.0000	1.9[illegible]		[illegible]	VV	?	8.56
5	[illegible]	0.0000	2.[illegible]	0.033	[illegible]	VV	?	10.81
6	[illegible]	0.0000	2.279	0.031	[illegible]217	VV	?	10.19
7	[illegible]	0.0000	2.579	0.219	21[illegible]733	VV		6.94
8	[illegible]	0.0000	2.749	-0.021	9[illegible]862	VV	?	14.69
9	[illegible]	0.0000	3.234	0.114	41[illegible]784	VV		12.63
10		0.0000	3.835	408	31[illegible]429	VV	?	11.38
11		0.0000	4.089		2[illegible]332	VV	?	14.56
12	HEPT EPOX	0.0000	4.559	-0.121	1[illegible]227	VV	?	13.56
13		0.0000	4.913		8[illegible]946	VV		22.06
14	[illegible]	0.0000	5.552	-0.348	104[illegible]930	VV		23.31
15	[illegible]	0.0000	6.919	0.189	66[illegible]247	VV		27.81
16	[illegible]	0.0000	7.561	0.261	141[illegible]243	VV		34.69
17	[illegible]	0.0000	8.556	-0.124	14[illegible]361	VV		22.81
18	[illegible]	0.0000	9.689	-0.611	205[illegible]232	VV		23.94
19	[illegible]SUL	0.0000	10.923	0.343 1260 1933	17[illegible]486	VV		28.81
20	[illegible]	0.0000	12.390	-0.020	295[illegible]341	VV		32.88
21	[illegible] ALD.	0.0000	13.281	-0.649	204[illegible]313	VV	?	53.81
22		0.0000	14.961		4[illegible]878	VV	?	72.88
23	ENDO SO4	0.0000	16.243	-0.167	140[illegible]731	VV		52.00
24		0.0000	17.145		14[illegible]732	VV	?	98.19
25		0.0000	18.394		43[illegible]443	VV		47.13
26		0.0000	20.609		2[illegible]407	VV	?	97.44
27	[illegible]	0.0000	22.030	-0.080	6[illegible]441	VV	?	
28		0.0000	25.136		3643767	VB		83.50
TOTALS:		0.0000		-1.260	27962756			

DETECTED PKS: 26 REJECTED PKS: 6

DIVISOR: 1.50000 MULTIPLIER: 100000.000

NOISE: [illegible] OFFSET: 6

RACK: 1 VIAL: 3 INJ: 1

NOTES:
NOTEBOOK: [illegible]-59 [illegible] RICHARD SANSON
SECURE AREA: [illegible]
INST: VARIAN 6000 [illegible] ATT:16
COLUMN: 6' GLASS [illegible] SUPELCOPORT
PHASE: [illegible] SP2250 [illegible] SP2401
CARRIER GAS: N2 @ 60 PC MIN.
DET:300 C INJ:220 C
200 C ISOTHERMAL [illegible]

SAMPLE NUMBER DC-SS-27

481095

Sample Number
DC-SS-27

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474

Lab Sample ID No: 9793 QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: C Stoytowra Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-19-86

Conc./Dil Factor: 3 pH 7.2

Percent Moisture (Not Decanted) 22

CAS Number		ug/l or (ug/Kg) (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	636
67-64-1	Acetone	17BJ
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	46B
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or (ug/Kg) (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	15u
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	15u
10061-01-5	cis-1, 3 Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	30u
591-78-6	2-Hexanone	30u
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	15u
108-90-7	Chlorobenzene	15u
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

Data Reporting Qualifiers

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

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

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

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

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

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

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

Laboratory Name: ECOLOGY & ENVIRONMENT INC.

Case No: U-4474

Sample Number: DC-SS-27

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 11-17-86

Date Analyzed: 12-23-86

Conc/Dil Factor: 10

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	2100	U
111-44-4	bis(-2-Chloroethyl)Ether	2100	U
95-57-8	2-Chlorophenol	2100	U
541-73-1	1 3-Dichlorobenzene	2100	U
106-46-7	1. 4-Dichlorobenzene	2100	U
100-51-6	Benzyl Alcohol	2100	U
95-50-1	1. 2-Dichlorobenzene	2100	U
95-48-7	2-Methylphenol	2100	U
39638-32-9	bis(2-chloroisopropyl)Ether	2100	U
106-44-5	4-Methylphenol	2100	U
621-64-7	N-Nitroso-Di-n-Propylamine	2100	U
67-72-1	Hexachloroethane	2100	U
98-95-3	Nitrobenzene	2100	U
78-59-1	Isophorone	2100	U
88-75-5	2-Nitrophenol	2100	U
105-67-9	2. 4-Dimethylphenol	2100	U
65-85-0	Benzoic Acid	10000	U
111-91-1	bis(-2-Chloroethoxy)Methane	2100	U
120-83-2	2. 4-Dichlorophenol	2100	U
120-82-1	1. 2. 4-Trichlorobenzene	140	J
91-20-3	Naphthalene	2100	U
106-47-8	4-Chloroaniline	2100	U
87-68-3	Hexachlorobutadiene	2100	U
59-50-7	4-Chloro-3-Methylphenol	2100	U
91-57-6	2-Methylnaphthalene	2100	U
77-47-4	Hexachlorocyclopentadiene	2100	U
88-06-2	2 4 6-Trichlorophenol	2100	U
95-95-4	2. 4. 5-Trichlorophenol	10000	U
91-58-7	2-Chloronaphthalene	2100	U
88-74-4	2-Nitroaniline	10000	U
131-11-3	Dimethyl Phthalate	2100	U
208-96-8	Acenaphthylene	2100	U
99-09-2	3-Nitroaniline	10000	U

CAS Number		ug/l or (ug/Kg) (Circle One)	
83-32-9	Acenaphthene	2100	U
51-28-5	2. 4-Dinitrophenol	10000	U
100-02-7	4-Nitrophenol	10000	U
132-64-9	Dibenzofuran	2100	U
121-14-2	2 4-Dinitrotoluene	2100	U
606-20-2	2 6-Dinitrotoluene	2100	U
84-66-2	Diethylphthalate	2100	U
7005-72-3	4-Chlorophenyl-phenylether	2100	U
86-73-7	Fluorene	2100	U
100-01-6	4-Nitroaniline	10000	U
534-52-1	4. 6-Dinitro-2-Methylphenol	10000	U
86-30-6	N-Nitrosodiphenylamine (1)	2100	U
101-55-3	4-Bromophenyl-phenylether	2100	U
118-74-1	Hexachlorobenzene	2100	U
87-86-5	Pentachlorophenol	10000	U
85-01-8	Phenanthrene	180	J
120-12-7	Anthracene	2100	U
84-74-2	Di-n-Butylphthalate	330	J
206-44-0	Fluoranthene	2100	U
129-00-0	Pyrene	2100	U
85-68-7	Butylbenzylphthalate	2100	U
91-94-1	3 3 -Dichlorobenzidine	4200	U
56-55-3	Benzo(a)Anthracene	2100	U
117-81-7	bis(2-Ethylhexyl)Phthalate	2100	U
218-01-9	Chrysene	270	J
117-84-0	Di-n-Octyl Phthalate	2100	U
205-99-2	Benzo(b)Fluoranthene	2100	U
207-08-9	Benzo(k)Fluoranthene	2100	U
50-32-8	Benzo(a)Pyrene	2100	U
193-39-5	Indeno(1 2 3-cd)Pyrene	2100	U
53-70-3	Dibenzo(a h)Anthracene	2100	U
191-24-2	Benzo(g h i)Perylene	2100	U

(1) Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No U-4474

Sample Number DC-SS-27

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-7-86

Date Analyzed 12-10-86

Conc/Dil Factor: 1000

Percent Moisture (decanted) ~~11.9~~ 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	16,000 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	160,000 u
12672-29-6	Aroclor-1248	160,000 u
11097-69-1	Aroclor-1254	320,000 u
11096-82-5	Aroclor-1260	2,200,000 C

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 30 V_t 1,000 V_i 4

Sample Number
DC-SS-27-RE

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474

Lab Sample ID No: 9793 RE QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: C Slojtowicz Date Sample Received: 11-14-86

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-26-86

Conc/Dil Factor: 3 pH 7.2

Percent Moisture (Not Decanted) 22

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	38 B
67-64-1	Acetone	31 B
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	51 B
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	15u
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	15u
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	30u
591-78-6	2-Hexanone	30u
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	15u
108-90-7	Chlorobenzene	15u
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

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., 100U based on necessary concentration, dilution, action). (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

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

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

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

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

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Laboratory Name ecology and environment, inc.

Case No 11-1/4/74

Sample Number DC-SS-27

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number min.	Estimated Concentration (ug/l or ug/kg)
1.	Hexane isomer	VOA	21.4	5 BJ
2.				
3.	UNKNOWN AROMATIC	BNA	20.6	1200 J
4.	UNKNOWN AROMATIC		21.4	1600 J
5.	UNKNOWN AROMATIC		21.5	990 J
6.	UNKNOWN AROMATIC		21.6	1200 J
7.	UNKNOWN AROMATIC		23.0	1700 J
8.	UNKNOWN AROMATIC		23.3	950 J
9.	UNKNOWN AROMATIC		23.5	1400 J
10.	UNKNOWN AROMATIC		23.6	1200 J
11.	UNKNOWN AROMATIC		24.2	1500 J
12.	UNKNOWN AROMATIC		24.4	2700 J
13.	UNKNOWN AROMATIC		25.6	880 J
14.	UNKNOWN		26.3	740 J
15.	PCB		28.4-31.2	—
16. 3268879	OCTACHLORODIBENZO [B,E] [1,4] DIOXIN		37.2	2600 J
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30				

Laboratory Name ecology and environment, inc.

Case No 10-41171

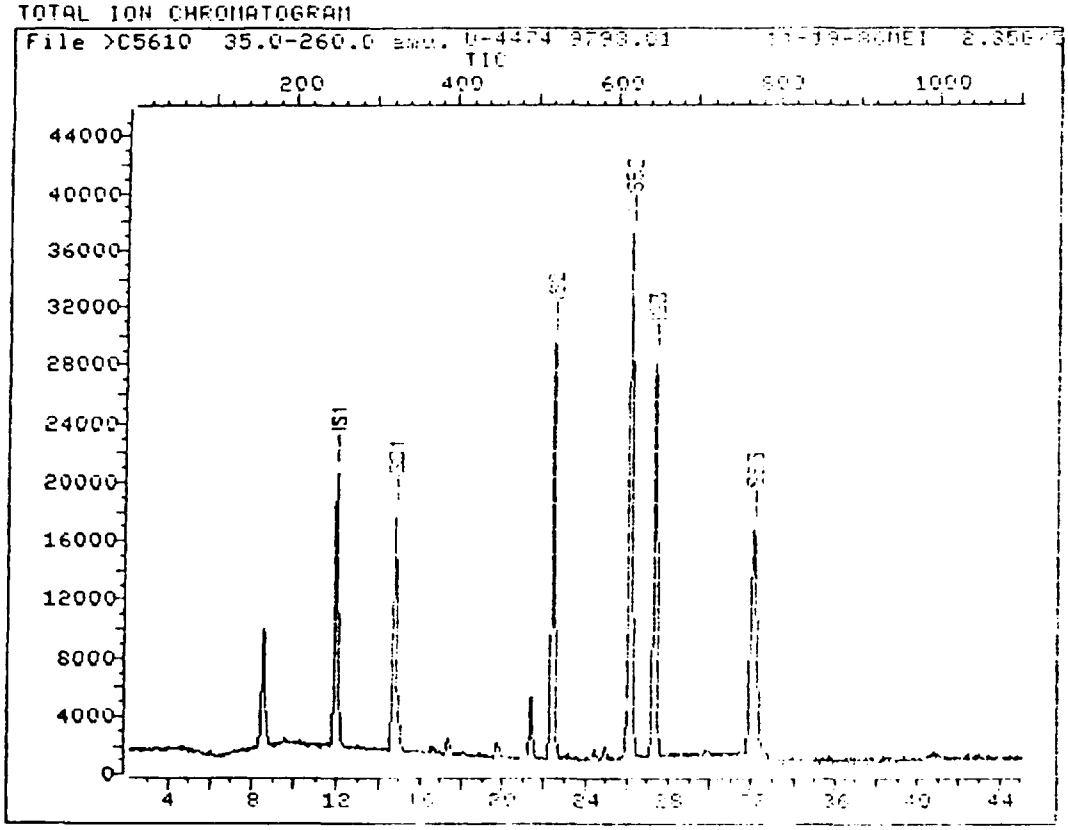
Sample Number
DC-SS-27-RE

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.	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.				
30				

TOTAL ION CHROMATOGRAM

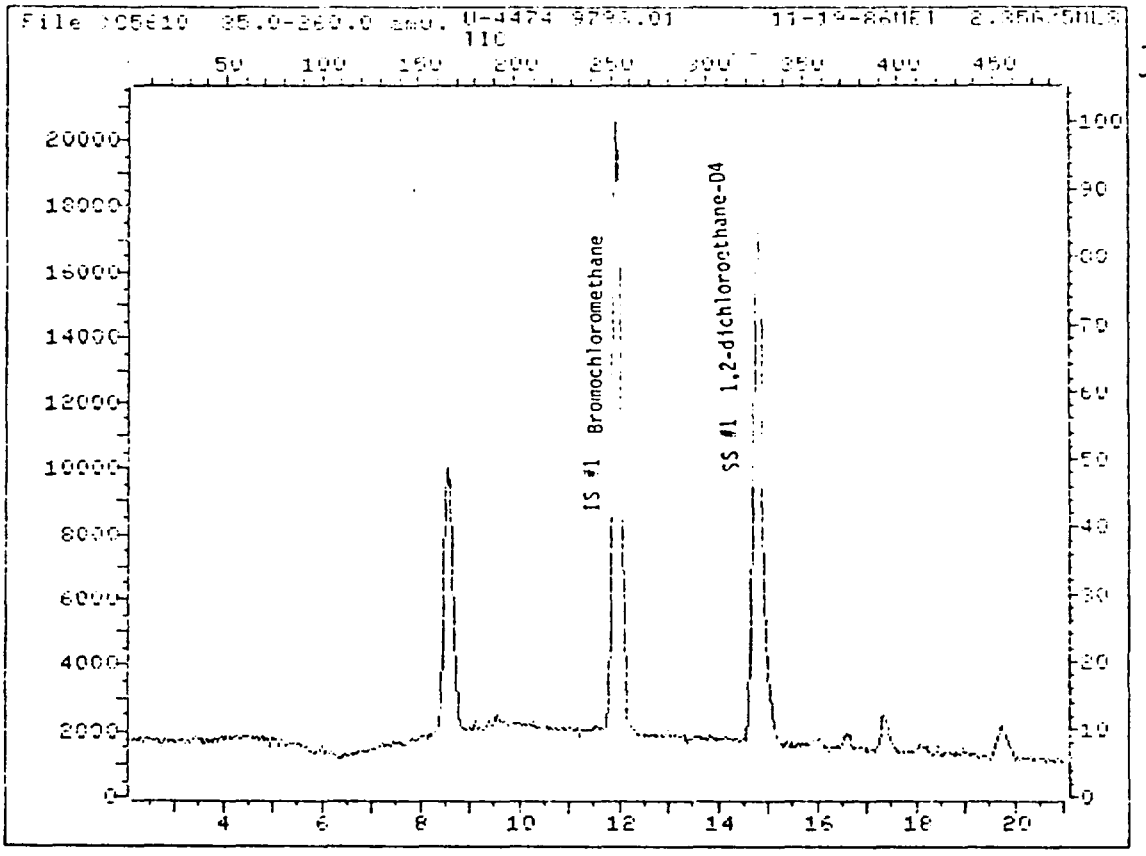


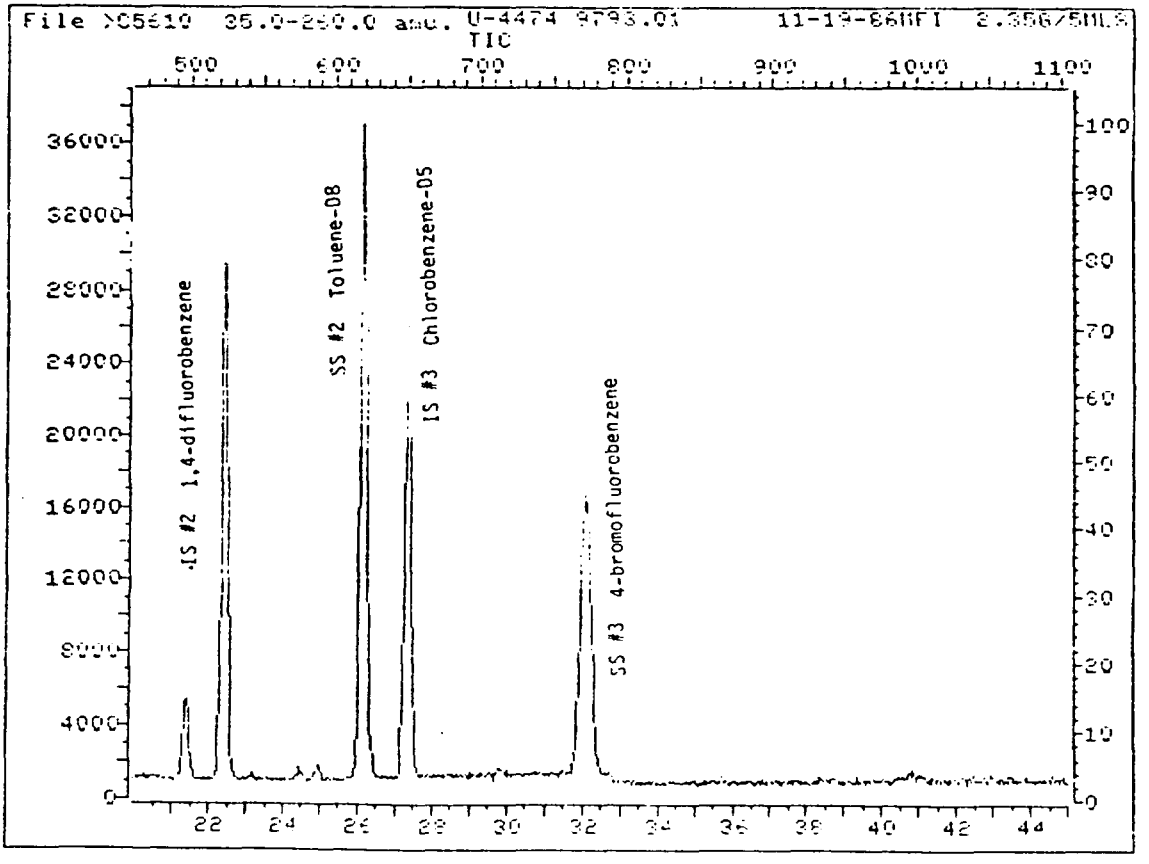
Data File: >C5610::03
Name: U-4474 9793.01 DC-SS-2
Misc: 11-19-86MEI 2.35G/5MLS 10 [illegible]

Id File: VOACRS::02
Title: VOA ID FILE FOR HP-5995 [illegible]
Last Calibration: 861119 19:02

Operator ID: USEPA
Quant Time: 861119 22:01
Injected at: 861119 21:15

DC-SS-27


File >C5610 35.0-260.0 amu. U-4474 9793.01 11-19-86HFI 2.356/5ML
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File >C5610 35.0-260.0 amu. U-4474 9793.01 11-19-86HFI 2.356/5ML
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861119 22:01
Output File: ^C5610::D2 Injected at: 861119 21:15
Data File: >C5610::D2 Dilution Factor: 1.00
Name: U-4474 9793.01 DC-SS-27
Misc: 11-19-86MEI 2.3[illegible]5MLS DI + 10UL [illegible]

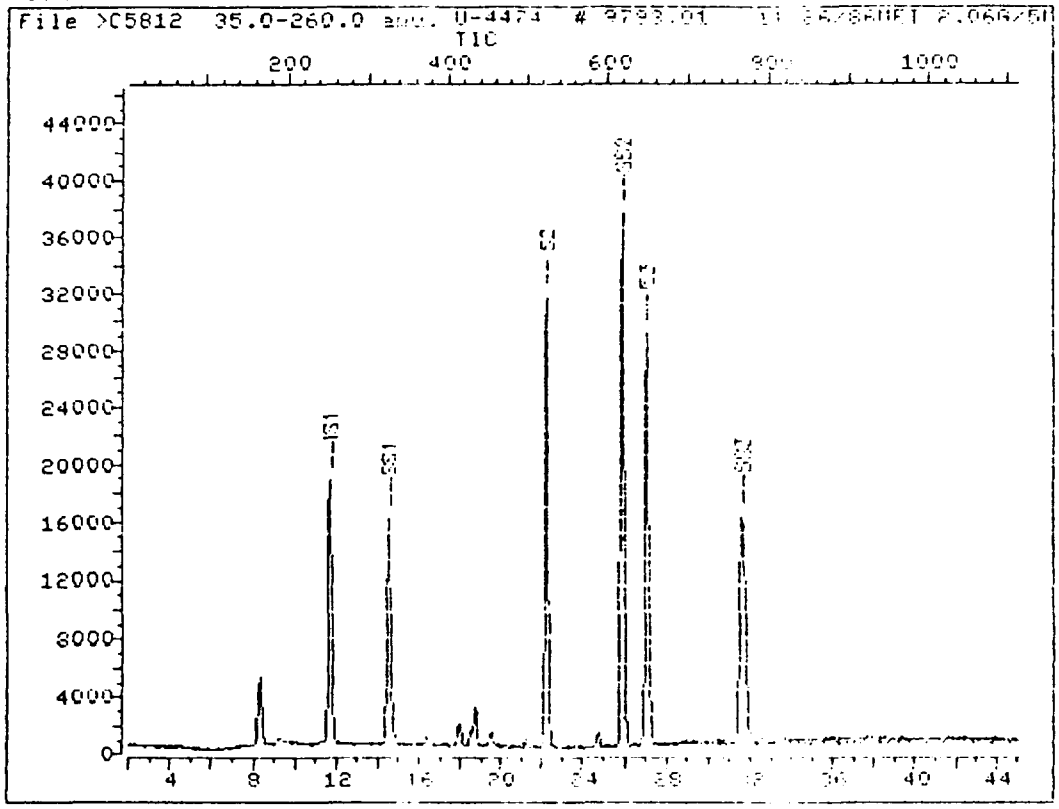
ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861119 19:02

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.97	253	26623	250.00	NGS	100
6)	METHYLENE CHLORIDE		84	8.56	166	20794	115.59	NGS	100
7)	ACETONE		43	9.57	192	4316	32.38	NGS	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.77	326	65008	244.22	NGS	87
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.41	523	123975	250.00	NGS	100
17)	2-BUTANONE		72	14.92	330	3851	85.29	NGS	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.32	649	84394	250.00	NGS	100
~~33)~~	~~2-HEXANONE~~		~~43~~	~~24.43~~	~~575~~	~~2837~~	~~11.89~~	~~NGS~~	100
~~33)~~	~~2-HEXANONE~~		~~43~~	~~24.89~~	~~587~~	~~2339~~	~~9.81~~	~~NGS~~	100
36)	TOLUENE-D8	(SURR)	98	26.13	619	143045	295.29	NGS	96
40)	4-BROMOFLUOROBENZENE	(SURR)	95	32.09	772	57134	235.62	NGS	100

* Compound is ISTD

OK

TOTAL ION CHROMATOGRAM

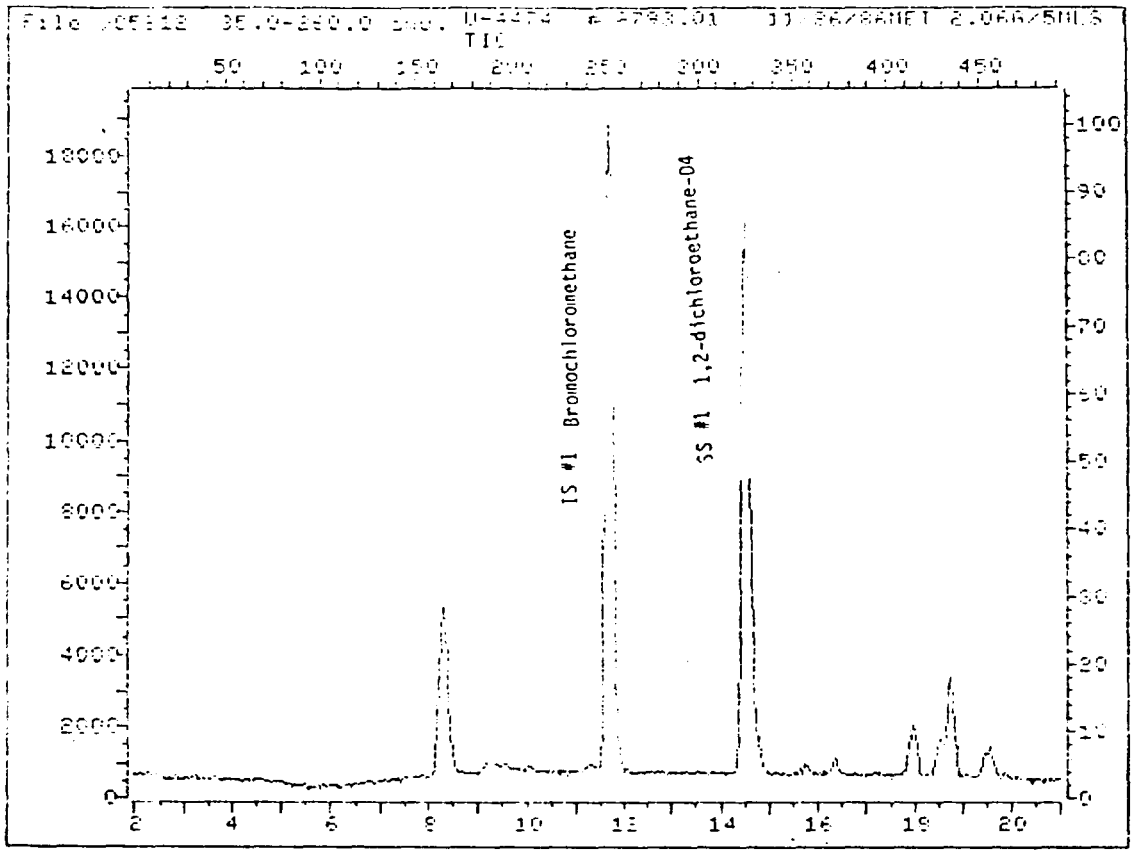


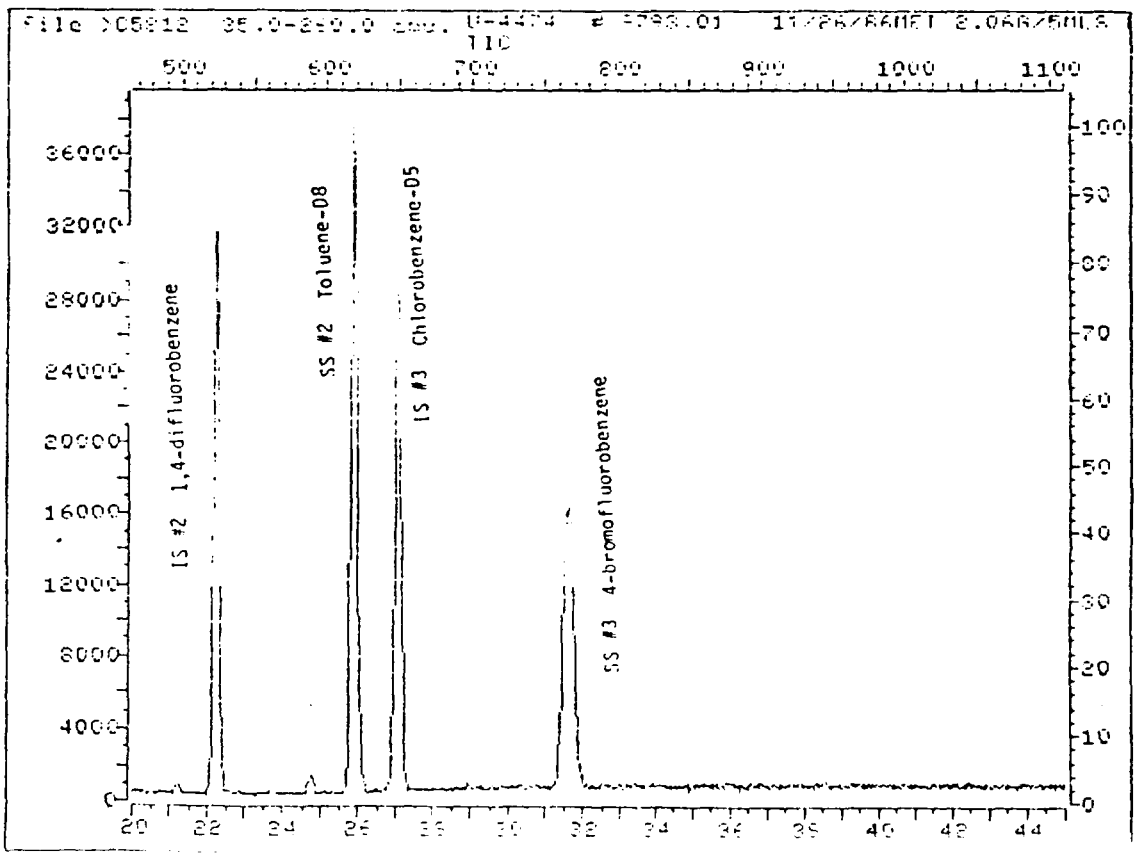
Data File: >C5812::D3
Name: U-4474 # 9793.01 DC-SS-27 RE
Misc: 11/26/86MEI 2.06G/5MLS DI + 10UL IS SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861126 21:46

Operator ID: USER6
Quant Time: 861126 23:56
Injected at: 861126 23:10

DC-SS-2
RE


TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

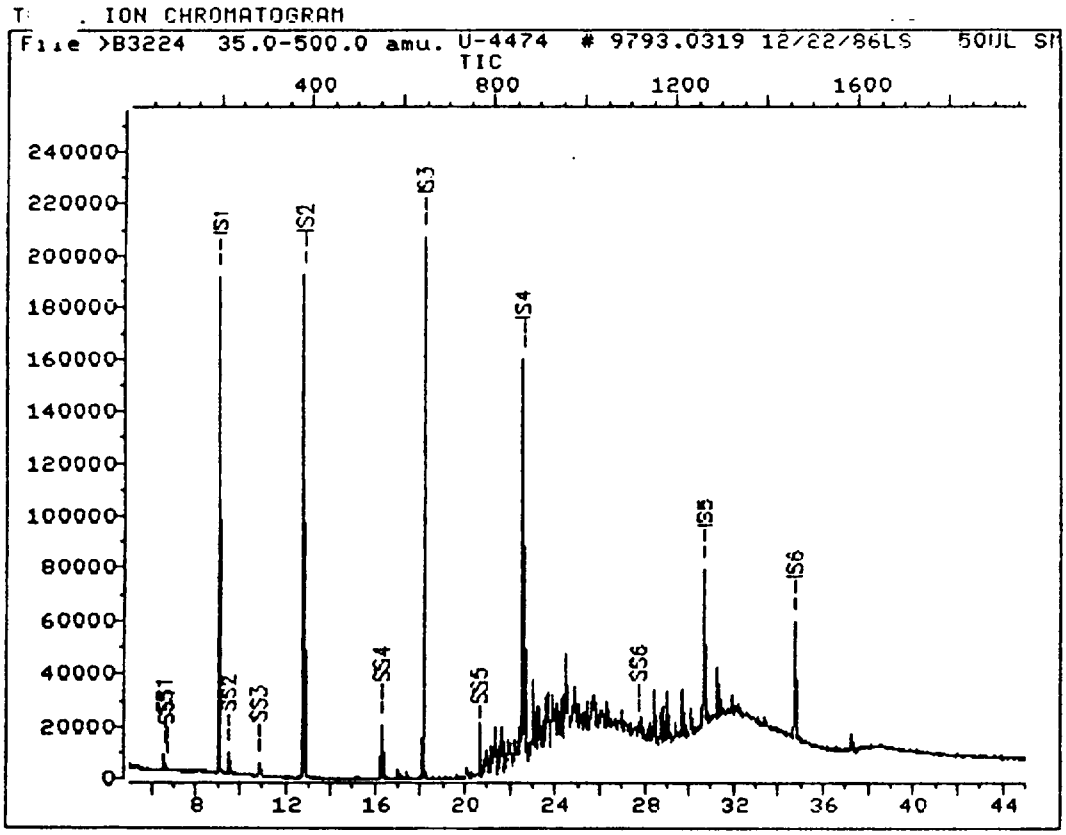
QUANT REPORT

perator ID: USER6 Quant Rev: 4 Quant Time: 861126 23:56
utput File: ^C5812::Q2 Injected at: 861126 23:10
ata File: >C5812::D3 Dilution Factor: 1.00
ame: U-4474 # 9793.01 DC-53-27-RE
isc: 11/26/86MEI 2.06G/5MLS D1 + 10UL IS/SS

D File: VOACRS::D2
itle: VOA ID FILE FOR HP-5995 (CONT. CAL.)
ast Calibration: 861126 21:46

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.68	252	25468	250.00	NGS	100
6)	METHYLENE CHLORIDE		84	8.31	165	12091	61.99	NGS	100
7)	ACETONE		43	9.24	189	4979	50.19	NGS	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.52	325	62347	201.32	NGS	87
6)	*1,4-DIFLUOROBENZENE	(IS)	114	22.24	524	130931	250.00	NGS	100
7)	2-BUTANONE		72	14.67	329	3106	82.13	NGS	100
1)	*CHLOROBENZENE-D5	(IS)	117	27.05	648	99286	250.00	NGS	100
5)	TOLUENE-D8	(SURR)	98	25.89	618	147211	298.41	NGS	94
0)	4-BROMOFLUOROBENZENE	(SURR)	95	31.64	766	55870	226.44	NGS	100

* Compound is ISTD

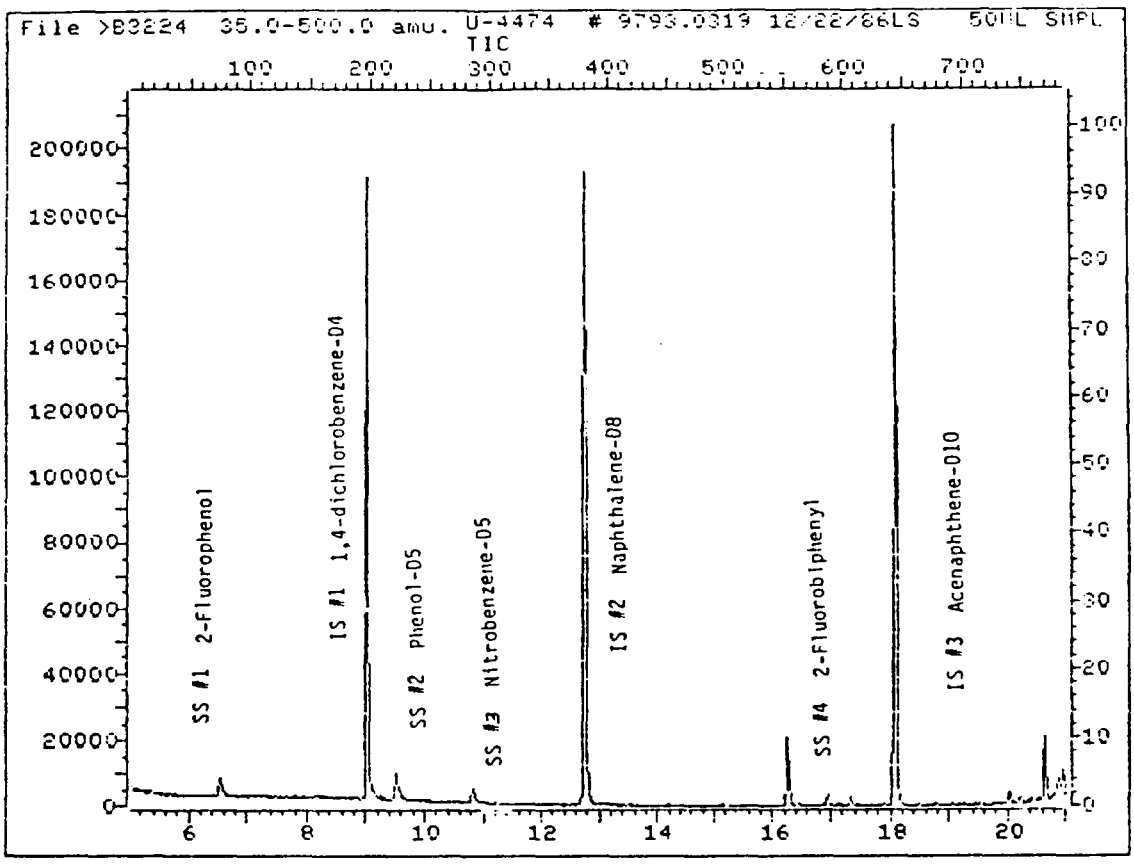


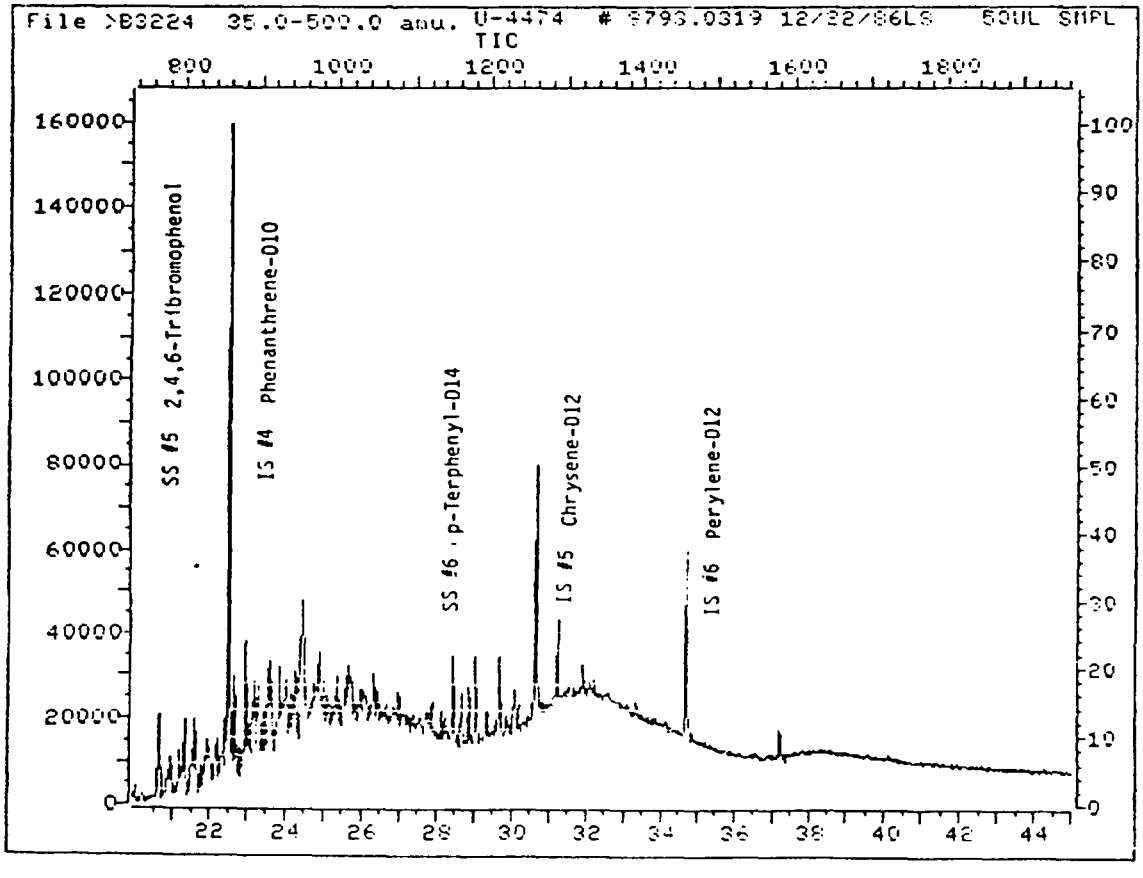
Data File: >B3224::D4
Name: U-4474 # 9793.0319 DC-SS-27
Misc: 12/22/86LS 50UL SMPL + 450UL MECL2 + 5UL IS (10X)

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861223 19:58

Operator ID: USER8
Quant Time: 861223 22:54
Injected at: 861223 22:07

DC-SS-27


File >B3224 35.0-500.0 amu. U-4474 # 9793.0319 12/22/86LS 50UL SMPL
TIC
SS #1 2-Fluorophenol
IS #1 1,4-dichlorobenzene-D4
SS #2 Phenol-D5
SS #3 Nitrobenzene-D5
IS #2 Naphthalene-D8
SS #4 2-Fluorobiphenyl
IS #3 Acenaphthene-D10


File >B3224 35.0-500.0 amu. U-4474 # 9793.0319 12/22/86LS 50UL SMPL
TIC
SS #5 2,4,6-Tribromophenol
IS #4 Phenanthrene-D10
SS #6 p-Terphenyl-D14
IS #5 Chrysene-D12
IS #6 Perylene-D12

QUANT REPORT

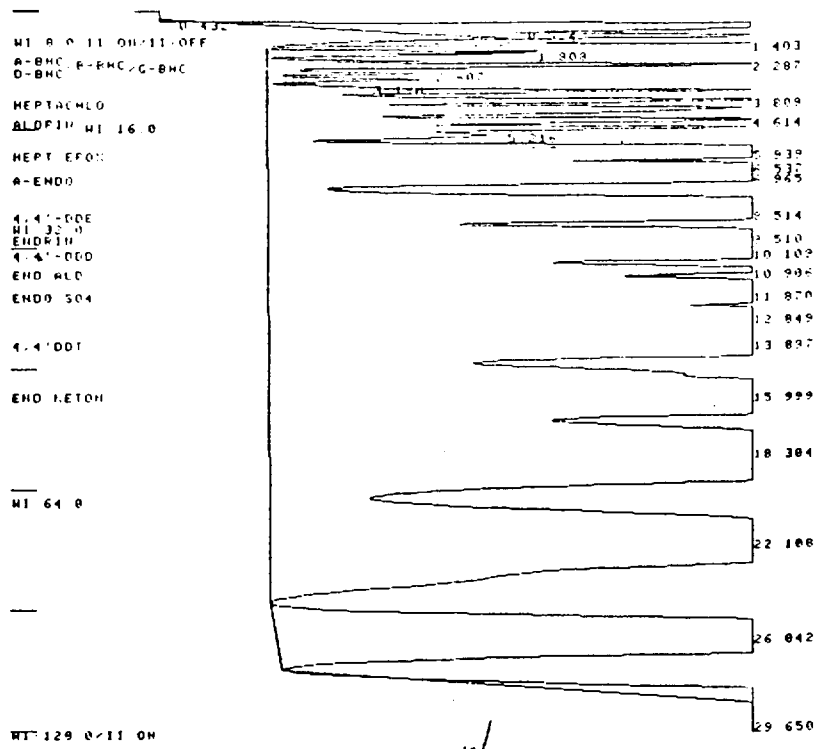
)perator ID: USER8 Quant Rev: 4 Quant Time: 861223 22:54
)utput File: ^B3224::Q2 Injected at: 861223 22:07
)ata File: >B3224::D4 Dilution Factor: 10.00
lame: U-4474 # 9793.0319 DC-SS-27
lisc: 12/22/86LS 50UL SMPL + 450UL MECL2 + 5UL IS (10X)

:D File: BNABR::D2
'itle: BNA ID FILE FOR THE HP 5970 (B)
.ast Calibration: 861223 19:58

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.01	196	71642	40.00 UG/L	90
2)	PHENOL-D5	(SURR)	99	9.49	220	12981	67.67 UG/L	90
5)	2-FLUOROPHENOL	(SURR)	112	6.53	74	6170	70.75 UG/L	87
5)	2-FLUOROPHENOL	(SURR)	112	6.63	79	1310	15.02 UG/L	97
~~17)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~10.82~~	~~285~~	~~681~~	~~3.45 UG/L~~ No Bgn	90
19)	*NAPHTHALENE-D8	(IS)	136	12.75	380	221370	40.00 UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	10.82	285	7409	40.53 UG/L	94
28)	1,2,4-TRICHLOROBENZENE		180	12.71	378	673	3.34 UG/L	100
~~29)~~	~~NAPHTHALENE~~		~~128~~	~~12.79~~	~~382~~	~~423~~	~~.80 UG/L~~ No Bgn	100
~~33)~~	~~2-METHYLNAPHTHALENE~~		~~142~~	~~15.25~~	~~503~~	~~345~~	~~.99 UG/L~~	93
34)	*ACENAPHTHENE-D10	(IS)	162	18.09	643	109972	40.00 UG/L	97
38)	2-FLUOROBIPHENYL	(SURR)	172	16.27	553	19331	44.54 UG/L	94
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.09~~	~~643~~	~~32653~~	~~77.34 UG/L~~ No Bgn	100
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.16~~	~~646~~	~~141~~	~~.33 UG/L~~	100
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.62	767	2382	42.39 UG/L	99
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.09~~	~~643~~	~~14074~~	~~138.13 UG/L~~ No Bgn	100
55)	*PHENANTHRENE-D10	(IS)	188	22.51	860	142852	40.00 UG/L	92
61)	PHENANTHRENE		178	22.57	863	1550	4.33 UG/L	91
~~62)~~	~~ANTHRACENE~~		~~178~~	~~22.57~~	~~863~~	~~1550~~	~~4.63 UG/L~~ No Bgn	91
63)	DI-N-BUTYLPHTHALATE		149	25.08	986	3055	7.82 UG/L	99
65)	*CHRYSENE-D12	(IS)	240	30.64	1259	60453	40.00 UG/L	100
~~66)~~	~~BENZIDINE~~		~~184~~	~~26.99~~	~~1088~~	~~545~~	~~545.00 NO CALIB~~ No Bgn	
68)	TERPHENYL-D14	(SURR)	244	27.71	1115	5824	38.08 UG/L	100
~~70)~~	~~3,3'DICHLOROBENZIDINE~~		~~252~~	~~30.60~~	~~1257~~	~~550~~	~~22.14 UG/L~~	100
~~70)~~	~~3,3'DICHLOROBENZIDINE~~		~~252~~	~~31.23~~	~~1288~~	~~1300~~	~~51.58 UG/L~~ No Bgn	100
~~71)~~	~~BENZO(A)ANTHRACENE~~		~~228~~	~~30.72~~	~~1263~~	~~902~~	~~5.92 UG/L~~	87
~~72)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~31.64~~	~~1300~~	~~566~~	~~4.05 UG/L~~	92
73)	CHRYSENE		228	30.72	1263	902	6.29 UG/L	89
74)	*PERYLENE-D12	(IS)	264	34.70	1458	49326	40.00 UG/L	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.11~~	~~1380~~	~~200~~	~~.84 UG/L~~	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.46~~	~~1397~~	~~263~~	~~1.11 UG/L~~	100
~~76)~~	~~BENZO(B)FLUORANTHENE~~		~~252~~	~~33.76~~	~~1412~~	~~780~~	~~4.83 UG/L~~	100
~~77)~~	~~BENZO(K)FLUORANTHENE~~		~~252~~	~~33.76~~	~~1412~~	~~780~~	~~5.88 UG/L~~ No Bgn	100
~~78)~~	~~BENZO(A)PYRENE~~		~~252~~	~~34.43~~	~~1445~~	~~694~~	~~5.31 UG/L~~	100
~~78)~~	~~BENZO(A)PYRENE~~		~~252~~	~~34.56~~	~~1451~~	~~486~~	~~3.72 UG/L~~	100
~~81)~~	~~BENZO(G,H,I)PERYLENE~~		~~276~~	~~37.84~~	~~1612~~	~~571~~	~~4.90 UG/L~~	100

* ompound is ISTD

ATTEN: 6 ZERO: 10% 5 MIN/TICK



SEE REMAIN 47

DC-SS-27

CHANNEL: 1A - 1 TITLE: RUN# 33 20:11 9 DEC 86

SAMPLE: 9793.01.19A1 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	1.403		261117	BB	2.94
2		0.0000	1.682		205134	BV	4.13
3		0.0000	1.809		218938	VV	7.56
4	A-BHC	254.6223	2.111	0.021	89009	VV	4.81
5	B-BHC	11928.21	2.297	0.057	1470184	VV	5.19
6	D-BHC	392.2520	2.607	0.097	123650	VV	6.38
7		0.0000	2.989		157246	VV	6.69
8		0.0000	3.190		66345	VV	? 6.69
9		0.0000	3.359		603918	VV	7.94
10	HEPTACHLO	4070.832	3.809	-0.081	1015347	VV	9.63
11		0.0000	4.109		1099677	VV	19.56
12		0.0000	4.614		931541	VV	13.25
13	ALDRIN	2121.035	4.941	0.141	691318	VV	11.63
14		0.0000	5.216		417956	VV	? 18.63
15	HEPT EPOX	19600.58	5.939	0.119	6013761	VV	23.00
16		0.0000	6.537		1562698	VV	? 19.13
17	A-ENDO	16747.83	6.955	-0.265	4797801	VV	25.94
18	DIELDRIN	34262.60	8.514	0.034	10779338	VV	? 36.00
19	B-ENDO	20915.15	9.510	-0.070	5730079	VV	? 28.00
20	4,4'-DDD	52159.47	10.109	-0.241	12498370	VV	25.88
21	END.ALD.	8635.122	10.906	0.366	1861829	VV	? 29.75
22	ENDO SO4	93994.71	11.870	-0.400	18616142	VV	34.44
23		0.0000	12.849		8521339	VV	? 31.44
24	4,4'DDT	169542.7	13.897	0.247	24473722	VV	45.44
25	END KETON	66477.22	15.999	0.269	18389796	VV	57.81
26		0.0000	18.304		21681970	VV	79.88
27		0.0000	22.108		34762508	VV	55.25
28	DBC	60314.74	26.042	-1.328	14368239	VV	64.94
29		0.0000	29.650		4281309	VB	?151.06

TOTALS: 560417.1 -1.074 195680288

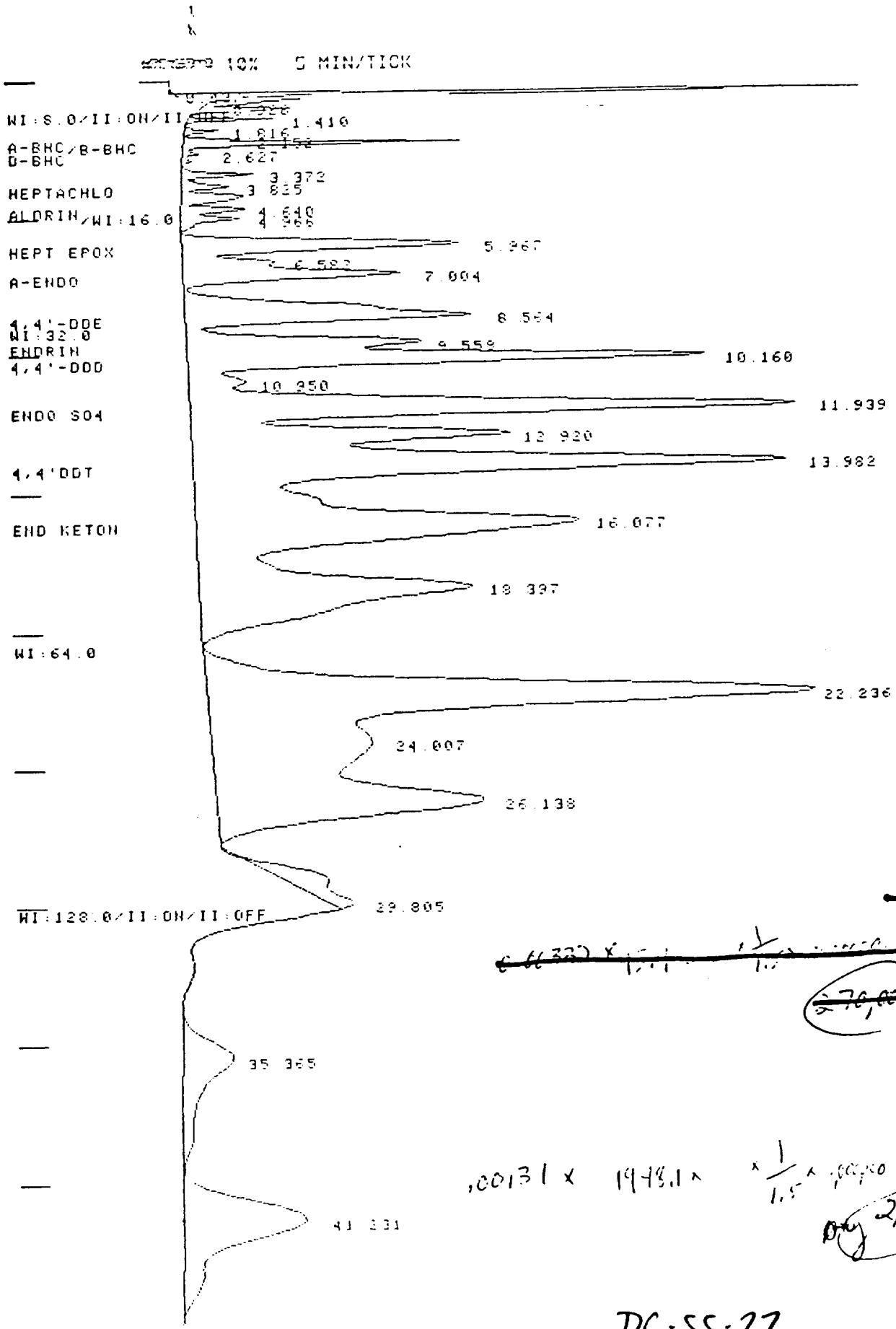
DETECTED PKS: 39 REJECTED PKS: 10

DIVISOR: 1.50000 MULTIPLIER: 100000.000

NOISE: 22.9 OFFSET: -1

RACK: 3 VIAL: 3 INJ: 1

NOTES:
NOTEBOOK:259-52 ANALYST:RICHARD SAMSON
SECURE AREA:D JOB# U-4474
INST:VARIAN 6000#2 A ECD 10X1
COLUMN: 5' 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 [illegible]



~~1240 wet~~
~~= 211,150~~
~~270,000 ug/kg Dry~~

1260
.00131 x 1948.1 x x 1/1.5 x .000000 = 1,700,000 wet
Dry 2,200,000 ug/kg

DC-SS-27
Run#47

CHANNEL: 1A - 1 TITLE: RUN# ~~46~~ 47 9:12 10 DEC 86

DC SS-27

SAMPLE: 9793.01.19A1 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	1.410		33856	BV	3.13
2		0.0000	1.816		25938	VV	7.38
3	~~A-BHC~~	994.7862	2.152	0.062	34775	VV	? 6.56
4	~~E-BHC~~	15235.54	2.297	0.057	187782	VV	5.38
5		0.0000	3.372		72440	VV	7.81
6	~~HEPTACHLO~~	2303.985	~~3.625~~	0.065	~~52456~~	VV	9.88
7		0.0000	~~4.130~~		~~122723~~	VV	18.69
8	~~ALDRIN~~	2783.568	4.640	-0.160	90726	VV	12.44
9		0.0000	4.966		96974	VV	10.94
10	~~HEPT EPOX~~	22946.66	5.967	0.147	704039	VV	22.88
11		0.0000	6.582		155984	VV	? 19.38
12	~~A-ENDO~~	20400.49	7.004	-0.226	584419	VV	24.63
13	~~DIELDRIN~~	36822.07	8.564	0.144	1153457	VV	? 35.25
14	~~B-ENDO~~	24888.58	9.558	-0.022	681867	VV	? 27.19
15	~~4,4'-DDD~~	61456.59	10.160	-0.290	1472613	VV	25.63
16	~~END.ALD.~~	7216.461	10.950	0.410	155595	VV	? 28.13
17	~~ENDO-SUL~~	118070.5	11.939	-0.331	2338449	VV	33.88
18		0.0000	12.920		1155366	VV	? 32.50
19	~~4,4'DDT~~	195428.7	13.982	0.332	2837778	VV	40.69
20	~~END KETON~~	111061.4	16.077	0.347	3072327	VV	65.25
21		0.0000	18.397		2351521	VV	76.69
22		0.0000	22.236		4259820	VV	58.00
23		0.0000	24.007		1633971	VV	?199.38
24	~~DDE~~	95795.16	26.138	-1.232	2282042	VV	? 94.38
25		0.0000	29.805		306744	VB	?150.69
26		0.0000	35.365		669881	BV	93.00
27		0.0000	41.231		1462128	VB	92.56
TOTALS:		715404.7		-0.817	28001694		

DETECTED PKS: 38 REJECTED PKS: 11

DIVISOR: 1.50000 MULTIPLIER: 1,000000.00

NOISE: 22.9 OFFSET: -64

RACK: 4 VIAL: 2 INJ: 1

NOTES:
NOTEBOOK:259-52 ANALYST:RICHARD SAMSON
SECURE AREA:D JOB# U-4474
INST:VARIAN 6000#2 A 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
AUTOSAMPLER
PEST/PCB ANALYSIS

POST RUN:
SAVE FILE: RAW D.CREEK3572

SAMPLE NUMBER DC-SS-28

481095

recycled paper

Sample Number
DC-SS-28

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No. U-4474

Lab Sample ID No: 9794 QC Report No:

Sample Matrix: Soil Contract No. IL-3140

Data Release Authorized By: [illegible] Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-19-86

Conc/Dil Factor: 3 pH 7.4

Percent Moisture: (Not Decanted) 16

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	63 B
67-64-1	Acetone	13 BJ
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	36 B
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	15u
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	15u
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	30u
591-78-6	2-Hexanone	30u
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	15u
108-90-7	Chlorobenzene	15u
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

Data Reporting Qualifiers

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

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

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

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

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

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

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

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Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No U-4474

Sample Number DC-SS-28

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed 12-4-86

Conc/Dil Factor: 50

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)	
108-95-2	Phenol	9800	U
111-44-4	bis(2-Chloroethyl)Ether	9800	U
95-57-8	2-Chlorophenol	9800	U
541-73-1	1 3-Dichlorobenzene	9800	U
106-46-7	1 4-Dichlorobenzene	9800	U
100-51-6	Benzyl Alcohol	9800	U
95-50-1	1 2-Dichlorobenzene	9800	U
95-48-7	2-Methylphenol	9800	U
39638-32-9	bis(2-chloroisopropyl)Ether	9800	U
106-44-5	4-Methylphenol	9800	U
621-64-7	N-Nitroso-Di-n-Propylamine	9800	U
67-72-1	Hexachloroethane	9800	U
98-95-3	Nitrobenzene	9800	U
78-59-1	Isophorone	9800	U
88-75-5	2-Nitrophenol	9800	U
105-67-9	2. 4-Dimethylphenol	9800	U
65-85-0	Benzoic Acid	48000	U
111-91-1	bis(2-Chloroethoxy)Methane	9800	U
120-83-2	2 4-Dichlorophenol	9800	U
120-82-1	1 2. 4-Trichlorobenzene	1800	J
91-20-3	Naphthalene	9800	U
106-47-8	4-Chloroaniline	9800	U
87-68-3	Hexachlorobutadiene	9800	U
59-50-7	4-Chloro-3-Methylphenol	9800	U
91-57-6	2-Methylnaphthalene	9800	U
77-47-4	Hexachlorocyclopentadiene	9800	U
88-06-2	2 4 6-Trichlorophenol	9800	U
95-95-4	2 4 5-Trichlorophenol	48000	U
91-58-7	2-Chloronaphthalene	9800	U
88-74-4	2-Nitroaniline	34000	J
131-11-3	Dimethyl Phthalate	9800	U
208-96-8	Acenaphthylene	9800	U
[illegible]-09-2	3-Nitroaniline	48000	U

CAS Number		ug/l or (ug/Kg) (Circle One)	
83-32-9	Acenaphthene	9800	U
51-28-5	2. 4-Dinitrophenol	48000	U
100-02-7	4-Nitrophenol	48000	U
132-64-9	Dibenzofuran	9800	U
121-14-2	2 4-Dinitrotoluene	9800	U
606-20-2	2 6-Dinitrotoluene	9800	U
84-66-2	Diethylphthalate	9800	U
7005-72-3	4-Chlorophenyl-phenylether	9800	U
86-73-7	Fluorene	9800	U
100-01-6	4-Nitroaniline	48000	U
534-52-1	4. 6-Dinitro-2-Methylphenol	48000	U
86-30-6	N-Nitrosodiphenylamine (1)	9800	U
101-55-3	4-Bromophenyl-phenylether	9800	U
118-74-1	Hexachlorobenzene	9800	U
87-86-5	Pentachlorophenol	23000	J
85-01-8	Phenanthrene	9800	U
120-12-7	Anthracene	9800	U
84-74-2	Di-n-Butylphthalate	9800	U
206-44-0	Fluoranthene	9800	U
129-00-0	Pyrene	9800	U
85-68-7	Butylbenzylphthalate	9800	U
91-94-1	3 3-Dichlorobenzidine	20000	U
56-55-3	Benzo(a)Anthracene	9800	U
117-81-7	bis(2-Ethylhexyl)Phthalate	9800	U
218-01-9	Chrysene	9800	U
117-84-0	Di-n-Octyl Phthalate	9800	U
205-99-2	Benzo(b)Fluoranthene	9800	U
207-08-9	Benzo(k)Fluoranthene	9800	U
50-32-8	Benzo(a)Pyrene	9800	U
193-39-5	Indeno(1 2 3-cd)Pyrene	9800	U
53-70-3	Dibenz(a h)Anthracene	9800	U
191-24-2	Benzo(g h i)Perylene	9800	U

(1)-Cannot be separated from diphenylamine

Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No U-4474

Sample Number DC-SS-28

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed 12-4-86

Conc/Dil Factor: 50

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)	
108-95-2	Phenol	9800	U
111-44-4	bis(-2-Chloroethyl)Ether	9800	U
95-57-8	2-Chlorophenol	9800	U
541-73-1	1 3-Dichlorobenzene	9800	U
106-46-7	1 4-Dichlorobenzene	9800	U
100-51-6	Benzyl Alcohol	9800	U
95-50-1	1 2-Dichlorobenzene	9800	U
95-48-7	2-Methylphenol	9800	U
39638-32-9	bis(2-chloroisopropyl)Ether	9800	U
106-44-5	4-Methylpheno	9800	U
621-64-7	N-Nitroso-Di-n-Propylamine	9800	U
67-72-1	Hexachloroethane	9800	U
98-95-3	Nitrobenzene	9800	U
78-59-1	Isophorone	9800	U
88-75-5	2-Nitrophenol	9800	U
105-67-9	2, 4-Dimethylphenol	9800	U
65-85-0	Benzoic Acid	48000	U
111-91-1	bis(-2-Chloroethoxyl)Methane	9800	U
120-83-2	2 4-Dichlorophenol	9800	U
120-82-1	1 2, 4-Trichlorobenzene	1800	J
91-20-3	Naphthalene	9800	U
106-47-8	4-Chloroaniline	9800	U
87-68-3	Hexachlorobutadiene	9800	U
59-50-7	4-Chloro-3-Methylphenol	9800	U
91-57-6	2-Methylnaphthalene	9800	U
77-47-4	Hexachlorocyclopentadiene	9800	U
88-06-2	2 4 6-Trichlorophenol	9800	U
95-95-4	2, 4, 5-Trichlorophenol	48000	U
91-58-7	2-Chloronaphthalene	9800	U
88-74-4	2-Nitroaniline	36000	J
131-11-3	Dimethyl Phthalate	9800	U
208-96-8	Acenaphthylene	9800	U
99-09-2	3-Nitroaniline	48000	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	9800	U
51-28-5	2, 4-Dinitrophenol	48000	U
100-02-7	4-Nitrophenol	48000	U
132-64-9	Dibenzofuran	9800	U
121-14-2	2 4-Dinitrotoluene	9800	U
606-20-2	2 6-Dinitrotoluene	9800	U
84-66-2	Diethylphthalate	9800	U
7005-72-3	4-Chlorophenyl-phenylether	9800	U
86-73-7	Fluorene	9800	U
100-01-6	4-Nitroaniline	48000	U
534-52-1	4, 6-Dinitro-2-Methylphenol	48000	U
86-30-6	N-Nitrosodiphenylamine (1)	9800	U
101-55-3	4-Bromophenyl-phenylether	9800	U
118-74-1	Hexachlorobenzene	9800	U
87-86-5	Pentachlorophenol	28000	J
85-01-8	Phenanthrene	9800	U
120-12-7	Anthracene	9800	U
84-74-2	Di-n-Butylphthalate	9800	U
206-44-0	Fluoranthene	9800	U
129-00-0	Pyrene	9800	U
85-68-7	Butylbenzylphthalate	9800	U
91-94-1	3, 3 -Dichlorobenzidine	20000	U
56-55-3	Benzo(a)Anthracene	9800	U
117-81-7	bis(2-Ethylhexyl)Phthalate	9800	U
218-01-9	Chrysene	9800	U
117-84-0	Di-n-Octyl Phthalate	9800	U
205-99-2	Benzo(b)Fluoranthene	9800	U
207-08-9	Benzo(k)Fluoranthene	9800	U
50-32-8	Benzo(a)Pyrene	9800	U
193-39-5	Indeno(1 2, 3-cd)Pyrene	9800	U
53-70-3	Dibenz(a h)Anthracene	9800	U
191-24-2	Benzo(g h i)Perylene	9800	U

(1)-Cannot be separated from diphenylamine

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Laboratory Name ecology and environment, inc.

Case No U-4474

Sample Number
DC-SS-28

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration Low Medium (Circle One)

Date Extracted/Prepared 11-19-86

Date Analyzed 12-9-86

Conc/Dil Factor 1000

Percent Moisture (decanted) 16.2

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	160,000 U
12672-29-6	Aroclor-1248	160,000 U
11097-69-1	Aroclor-1254	246,000 J
11096-82-5	Aroclor-1260	625,000

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 30 V_t 1,000 V_i 4

Laboratory Name ecology and environment, inc.

Case No 11-4474

Sample Number
DC-SS-28

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number min.	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.4	3 [illegible] J
2.	Hexene isomer		21.4	8 [illegible] J
3.	Unknown hydrocarbon		23.2	13
4.	Unknown hydrocarbon		24.5	27
5.	Unknown hydrocarbon		25.[illegible]	17
6.				
7.	UNKNOWN AROMATIC	BNA	21.3	58000 J
8.	UNKNOWN AROMATIC		21.8	110000 J
9.	UNKNOWN AROMATIC		21.9	39000 J
10.	UNKNOWN AROMATIC		22.0	56000 J
11.	UNKNOWN AROMATIC		22.1	83000 J
12.	UNKNOWN AROMATIC		22.3	160000 J
13.	UNKNOWN AROMATIC		22.5	43000 J
14.	UNKNOWN AROMATIC		22.6	120000 J
15.	PENTAMETHYL HEPTYL BENZENE		22.7	76000 J
16.	DIMETHYL DECYL BENZENE		22.9	48000 J
17.	UNKNOWN AROMATIC		23.0	23000 J
18.	UNKNOWN ~~HYDROCARBON~~ AROMATIC		23.1	32000 J
19.	UNKNOWN AROMATIC		23.3	32000 J
20.	UNKNOWN AROMATIC		23.4	36000 J
21.	UNKNOWN AROMATIC		23.8	58000 J
22.	UNKNOWN AROMATIC		24.1	29000 J
23.	UNKNOWN AROMATIC		24.2	50000 J
24.	UNKNOWN AROMATIC		24.3	58000 J
25.	UNKNOWN AROMATIC		24.4	36000 J
26.	UNKNOWN AROMATIC		25.3	45000 J
27. 3268879	OCTACHLORODIBENZO[B,E][1,4]DIOXIN		38.4	52000 J
28.				
29.				
30.				

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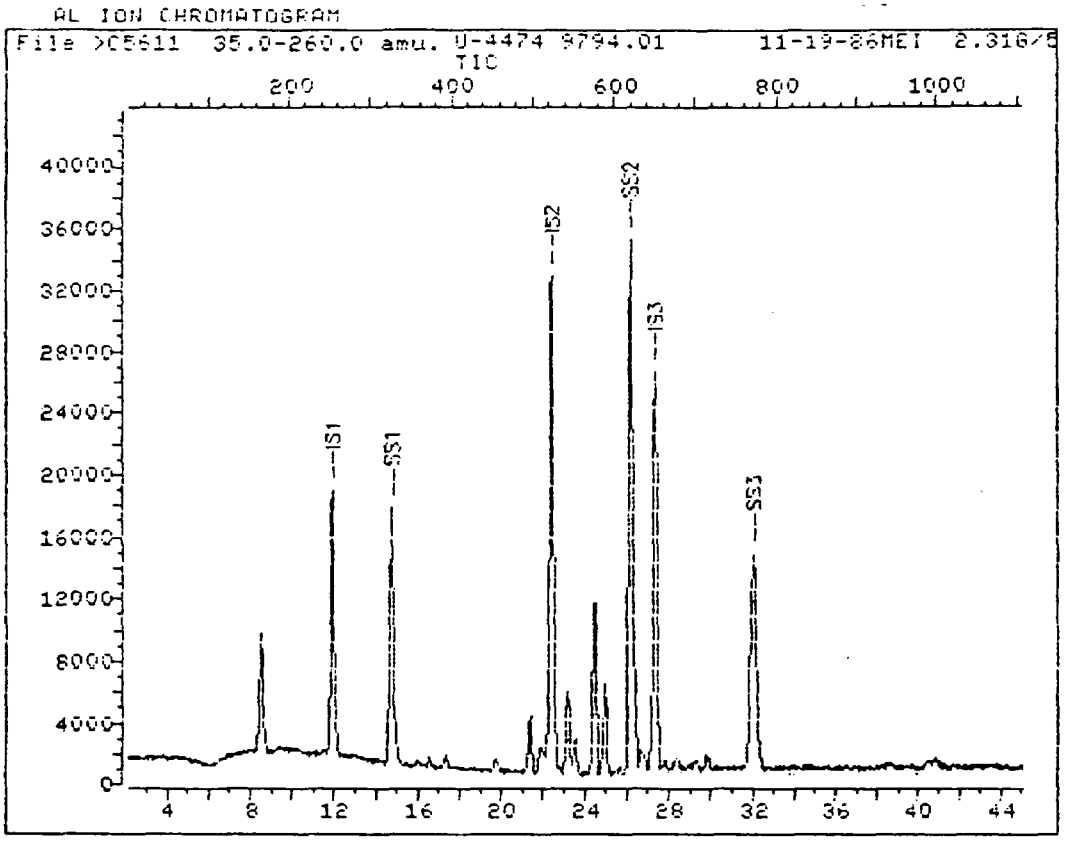
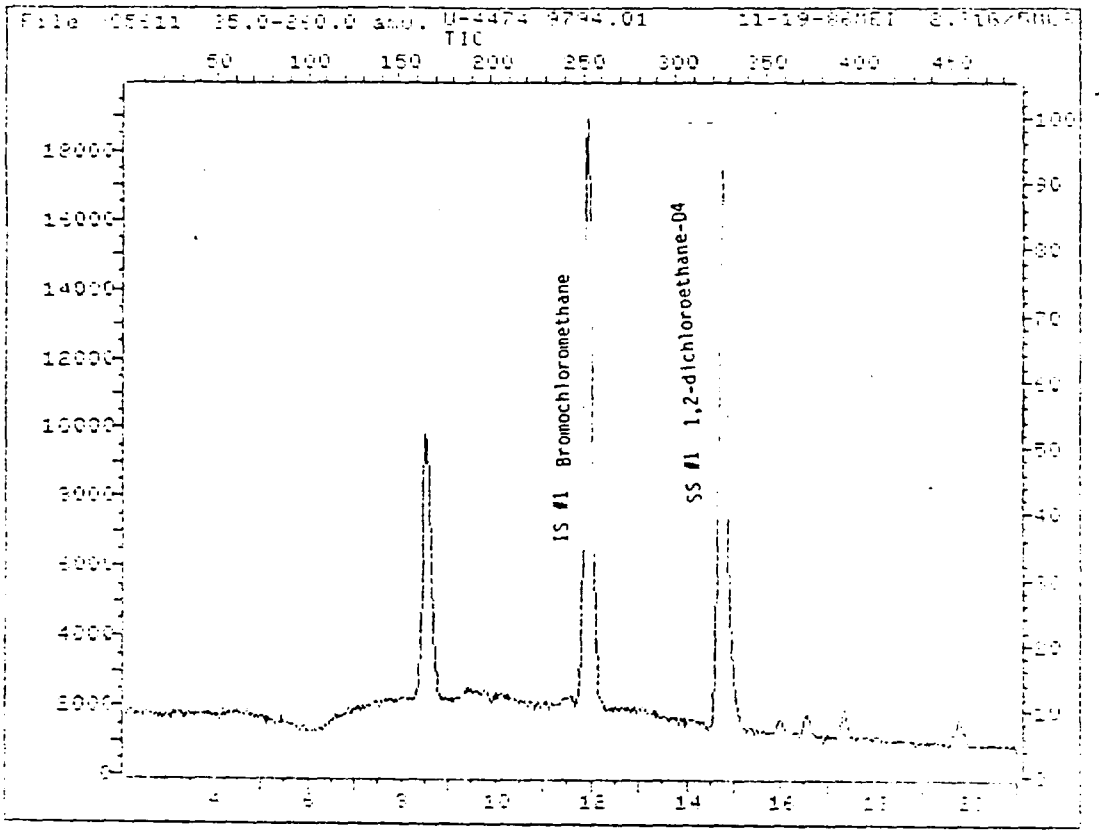


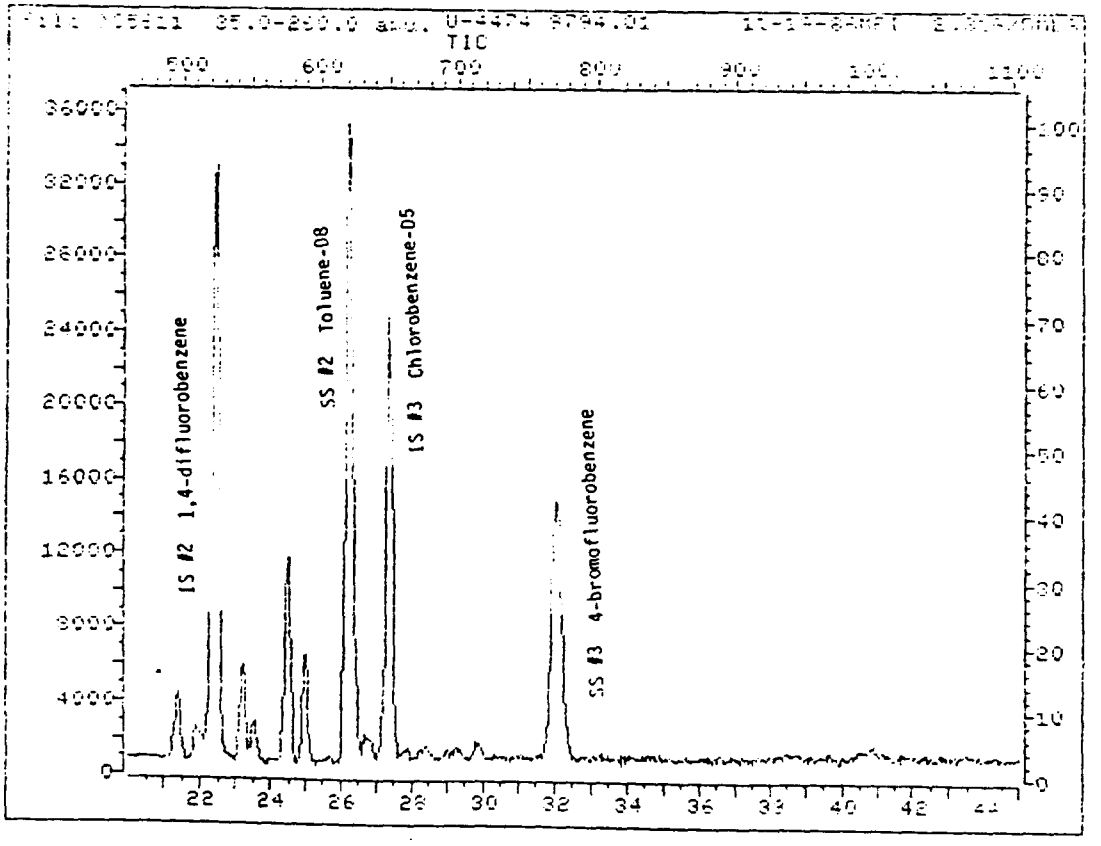
Data File: >C5611::D3
Name: U-4474 9794.01 JC-SS-28
Misc: 11-19-86MEI 2.31G/5MLS DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861119 19:02

Operator ID: USER8
Quant Time: 861119 22:56
Injected at: 861119 22:10

DC-SS-28





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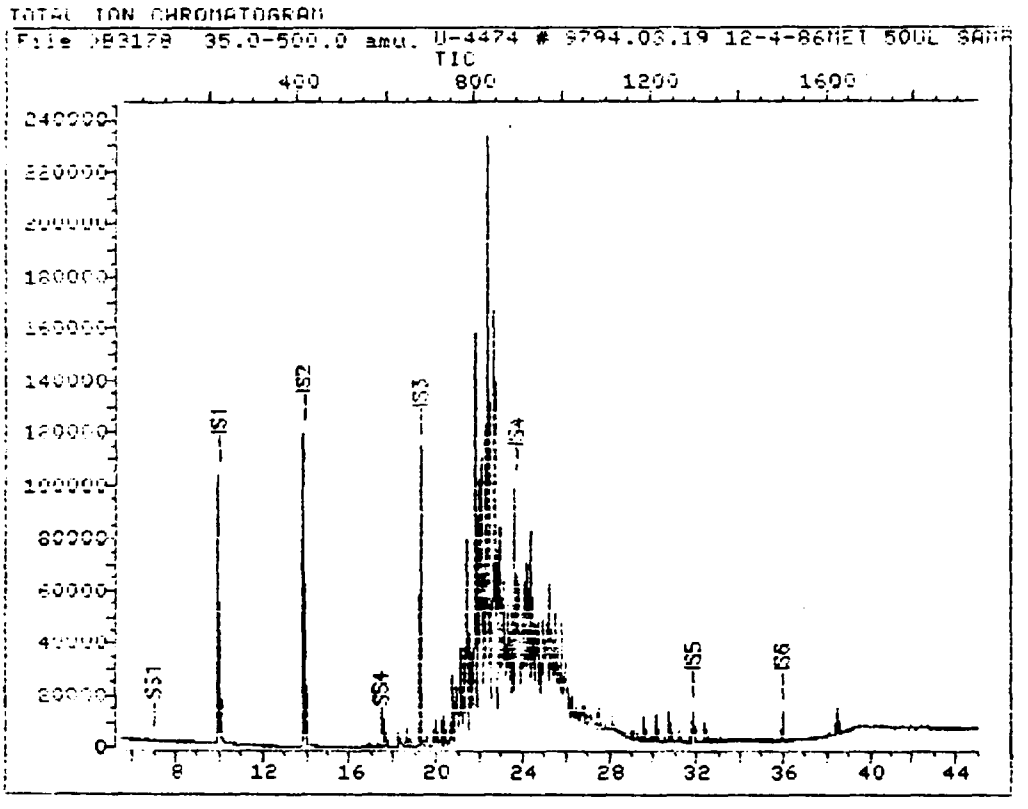
QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861119 22:56
Output File: ^C5611::Q2 Injected at: 861119 22:10
Data File: >C5611::D3 Dilution Factor: 1.00
Name: U-4474 9794.01 DC-SS-28
Misc: 11-19-86MEI 2.31G/5MLS DI + 10UL IS/SS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861119 19:02

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.93	253	24460	250.00	NGS	100
6)	METHYLENE CHLORIDE		84	8.52	165	20179	122.09	NGS	100
7)	ACETONE		43	9.45	189	3208	26.20	NGS	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.76	326	67312	275.24	NGS	86
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.45	524	126438	250.00	NGS	100
17)	2-BUTANONE		72	14.92	330	3171	68.86	NGS	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.34	650	82751	250.00	NGS	100
33)	~~2-HEXANONE~~		~~43~~	~~24.50~~	~~577~~	~~26637~~	~~117.99~~	~~NGS~~	100
33)	~~2-HEXANONE~~		~~43~~	~~24.97~~	~~589~~	~~16447~~	~~76.32~~	~~NGS~~	100
36)	TOLUENE-D8	(SURR)	98	26.17	620	135086	284.39	NGS	95
40)	4-BROMOFLUOROBENZENE	(SURR)	95	32.04	771	53025	223.02	NGS	100

* Compound is ISTD



Data File: >B3178::D4
Name: U-4474 # 9794.03.19 DC-SS-28
Misc: 12-4-86MEI 50UL SAMPLE/ 450UL MECL2 + 5UL IS (10X)

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861204 15:13

Operator ID: USER6
Quant Time: 861204 21:50
Injected at: 861204 21:02

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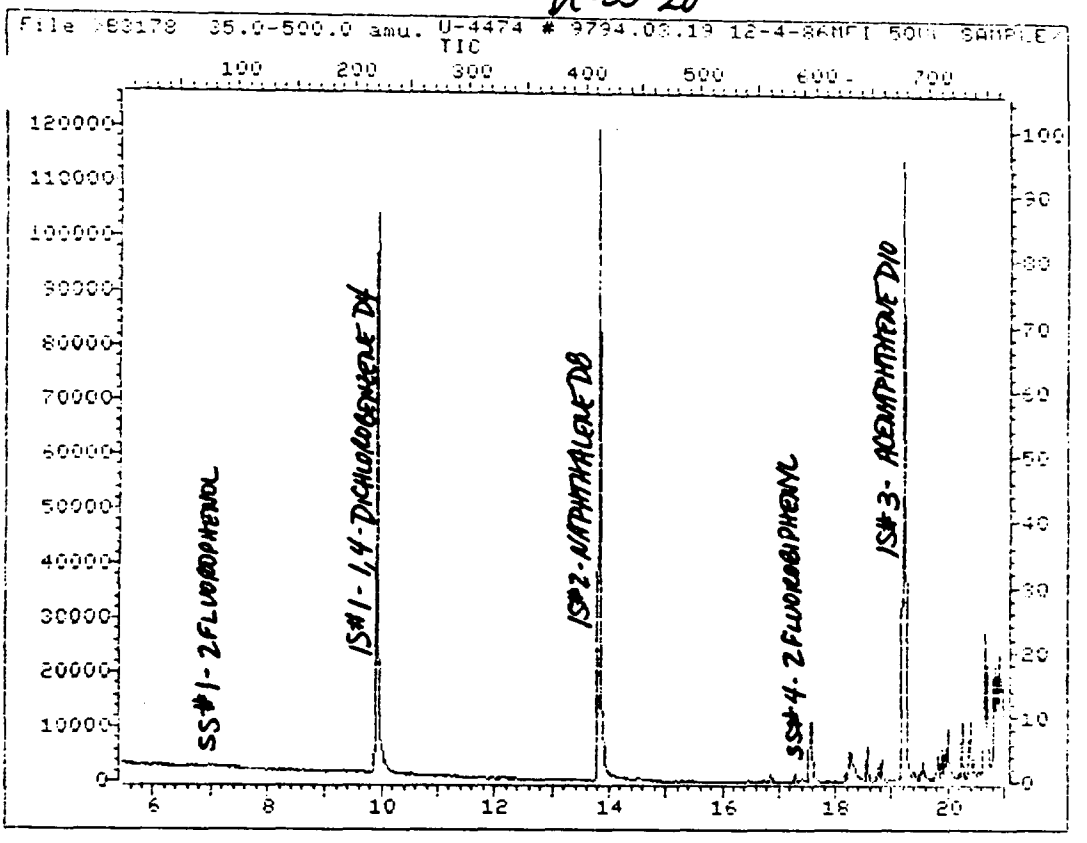
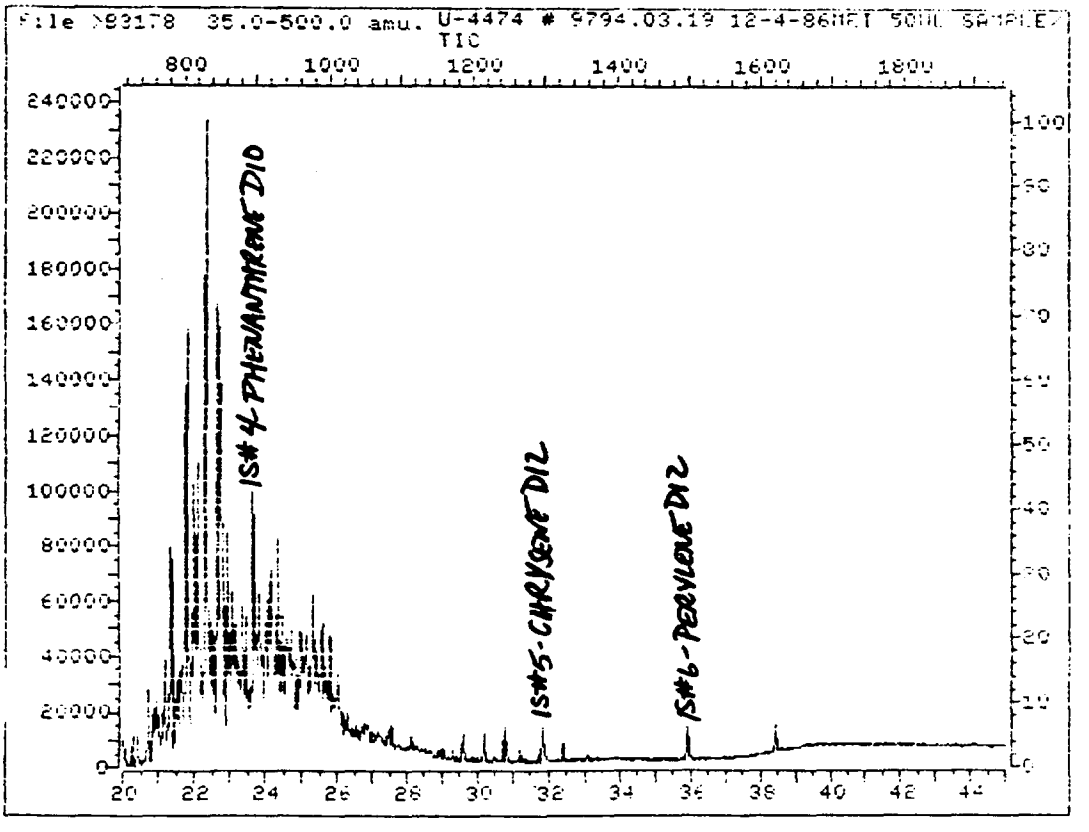
ecology and environment

DC-SS-2B





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QUANT REPORT

Operator ID: USER6 Quant Rev: 4 Quant Time: 861204 21:50
Output File: ^B:178::Q2 Injected at: 861204 21:02
Data File: :B3178::04 Dilution Factor: 10.00
Name: U-4474 # 9794.03.19 DC-SS-28
Misc: 12-4-86MEI 500UL SAMPLE/ 450UL MECL2 + 5UL IS (10X) FINAL VOLUME - 5 ml

ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861204 15:13

	Compound		m/z	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.93	220	53470	40.00	UG/L	85
2)	2-FLUOROPHENOL	(SURR)	112	6.96	74	342	2.49	UG/L	97
19)	*NAPHTHALENE-D8	(IS)	136	13.83	412	178312	40.00	UG/L	100
[illegible]	1,2,4-TRICHLOROBENZENE		180	13.79	410	1425	8.85	UG/L	100
34)	*ACENAPHTHENE-D10	(IS)	162	19.22	677	66766	40.00	UG/L	99
40)	2-FLUOROBIPHENYL	(SURR)	172	17.41	588	1891	6.71	UG/L	92
40)	2-NITROANILINE		65	18.26	630	10805	169.15	UG/L	95
~~[illegible]~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.72~~	~~677~~	~~19303~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~[illegible]~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.22~~	~~677~~	~~8461~~	~~[illegible]~~	~~UG/L~~	~~100~~
[illegible]	*PHENANTHRENE-D10	(IS)	188	23.66	895	59151	40.00	UG/L	90
60)	PENTACHLOROPHENOL		266	23.62	894	2690	114.88	UG/L	100
65)	*CHRYSENE-D12	(IS)	240	31.94	1297	22135	40.00	UG/L	100
~~[illegible]~~	~~BENZIDINE~~		~~184~~	~~28.14~~	~~1116~~	~~530~~	~~5[illegible].00~~	~~UG/L~~	~~100~~
[illegible]	~~3,3'-DICHLOROBENZIDINE~~		~~252~~	~~32.49~~	~~1424~~	~~616~~	~~63.17~~	~~UG/L~~	~~100~~
74)	*PERYLENE-D12	(IS)	264	35.91	1497	19889	40.00	UG/L	100

* Compound is INTD

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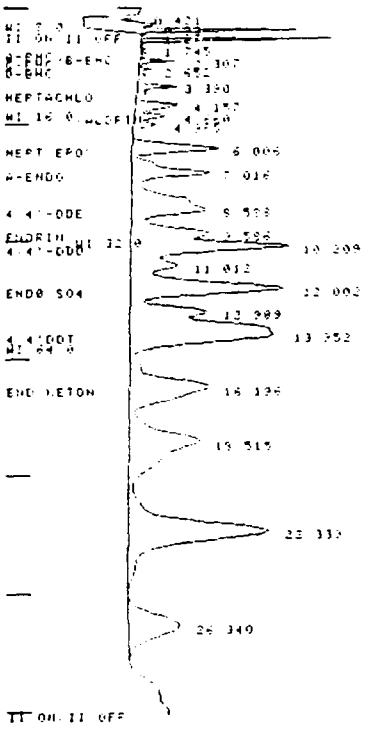
CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 10% 5 MIN/TICK



$67.9 \times 0.00456 \times \frac{1}{1.5} \times 1{,}000{,}000 = 206{,}400$ ug/kg wet (1254)
246,000 ug/kg

$600 \times 0.00131 \times \frac{1}{1.5} \times 1{,}000{,}000 = 524{,}000$ ug/kg wet 1260

625,000 ug/kg

RECALCULATE ON FILE: D.CREEK3541

DC-SS-28

CHANNEL: 1A - 1 TITLE: RUN# 18 6:02 9 DEC 86

SAMPLE: 9794.01.19A1 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	1.416		109940	VV	3.13
2	~~B-BHC~~	111.1417	2.307	0.077	27397	VV	5.06
3		0.0000	3.390		45334	BV	7.81
4	~~HEPTACHLO~~	175.9492	4.157	0.267	87770	VV	15.69
5	~~ALDRIN~~	76.2546	4.660	-0.140	49708	VV	11.05
6		0.0000	4.995		37749	VV	9.75
7	~~HEPT EPOX~~	378.1399	6.006 1st	0.186 67.9	232069	VV	19.56
8	~~A-ENDO~~	472.4145	7.016	-0.214	270668	VV	20.19
9	~~4,4'-DDE~~	744.0369	8.558	0.168	460162	VV	? 39.00
10	~~A-ENDO~~	546.9548	9.586	0.006	299696	VV	? 27.94
11	~~4,4'-DDD~~	1291.670	10.209	-0.241	613016	VV	27.69
12	~~END.ALD.~~	409.7329	11.012	0.472	176686	VV	? 38.00
13	~~ENDO SO4~~	1704.216	12.202 1st	-0.268	675058	VV	31.69
14		0.0000	12.999	600	285807	VV	? 30.44
15	~~4,4'-DDT~~	3588.970	13.552	0.302	1042293	VV	57.02
16	~~END KETON~~	1093.490	16.196	0.466	604991	VV	53.19
17		0.0000	18.515		693695	VV	57.75
18		0.0000	22.333		1140639	VB	50.35
19	~~DDE~~	887.3169	26.340	-1.030	422755	BB	63.69
TOTALS:		11460.33		0.051	7295432		

DETECTED PKS: 36 REJECTED PKS: 17

DIVISOR: 1.50000 MULTIPLIER: ~~50000.0000~~ 1000000

NOISE: 22.9 OFFSET: -52

RACK: 2 VIAL: 3 INJ: 1

NOTES:
NOTEBOOK:258-52 ANALYST:RICHARD SAMSON
SECURE AREA:C JOB# U-4474
INST:VARIAN 6000#2 A ECD 12X1
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
AUTOSAMPLER

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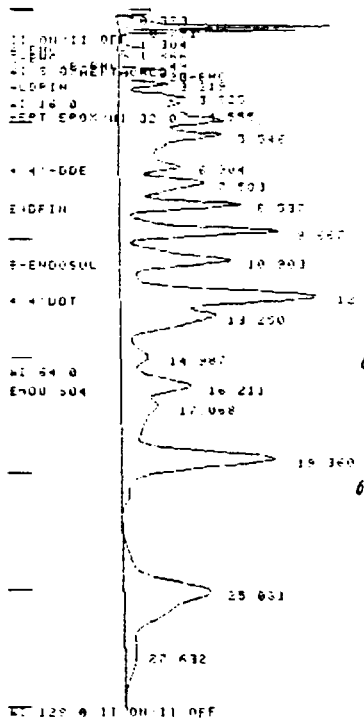
CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10% 5 MIN/TICK



$0.00173 \times 430 \times \frac{1}{1.26} \times 1{,}000{,}000 = 590{,}000$ ug/kg 1154

$0.000756 \times 1031 \times \frac{1}{1.26} \times 1{,}000{,}000 = 647{,}000$ ug/kg 1260

CHANNEL: 18 - 1 TITLE: RUN# 10 3:23 18 DEC 85

DC-SS-28

SAMPLE: 9794 METHOD: PEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	WT.% (SEC)
1		0.0000	1.554		55563	VV	3.94
2	[illegible]	0.0000	1.626	-0.024	26691	VB	4.69
3	[illegible]	0.0000	2.570	0.010	89208	VV	6.63
4	[illegible]	0.0000	2.823	0.053	26660	VV	11.28
5	[illegible]	0.0000	3.219	0.099	2[illegible]5026	VV	12.94
6		0.0000	3.825		3[illegible]3975	VV	16.56
7		0.0000	4.095		2[illegible]3534	VV	26.63
8	[illegible] EPOX	0.0000	~~4.555~~	-0.125	~~[illegible]~~	VV	27.19
9		0.0000	4.922	1254 430	7[illegible]5536	VV	40.31
10	[illegible]	0.0000	5.546	-0.354	10[illegible]5815	VV	21.25
11	[illegible]	0.0000	6.904	0.174	5[illegible]6358	VV	45.63
12	[illegible]	0.0000	7.563	0.363	6[illegible]9542	VV	40.75
13	[illegible]	0.0000	8.537	-0.143	7[illegible]5066	VV	22.99
14		0.0000	9.667	-	11[illegible]9503	VV	24.35
15	[illegible]	0.0000	10.903	0.323	11[illegible]1803	VV	24.00
16	[illegible]	0.0000	12.457	1260 0.047	21[illegible]5795	VV	40.06
17	[illegible]	0.0000	13.250	-0.660	11[illegible]2791	VV	62.69
18		0.0000	14.987	1037	3[illegible]5265	VV	73.[illegible]
19	[illegible] SO4	0.0000	16.211	-0.199	8[illegible]4861	VV	46.69
20		0.0000	17.068		6[illegible]4425	VV	67.56
21		0.0000	19.360		21[illegible]3523	VV	48.38
22		0.0000	25.081		2164454	VV	93.19
23		0.0000	27.632		298818	VB	189.56
TOTALS:		0.0000		-0.436	17336744		

DETECTED PKS: 39 REJECTED PKS: 16

DIVISOR: 1.50000 MULTIPLIER: 1000000.00

NOISE: 91.4 OFFSET: -15

RACK: 1 VIAL: 10 INJ: 1

NOTES:
NOTEBOOK:259-59 ANALYST:RICHARD SAMSON
SECURE AREA: D JOB#:U-4474
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: NC @ 60 ML/MIN.
DET:300 C INJ:220°C
220 C ISOTHERMAL 4 CC INJECTION
PESTICIDE/PCB CONFIRMATIONS
DEAD CREEK

RUN:

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SAMPLE NUMBER DC-SS-29

481095

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Sample Number
DC-SS-29

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-44474

Lab Sample ID No: 9795 QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: [signature] Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-20-86

Conc./Dil Factor: 3 pH 5.3

Percent Moisture: (Not Decanted) 43

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	80 B
67-64-1	Acetone	37 B
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	56 B
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	15u
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	15u
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	30u
591-78-6	2-Hexanone	30u
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	15u
108-90-7	Chlorobenzene	15u
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

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 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

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

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

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

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Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No U-4474

Sample Number DC-SS-29

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed 12-19-86

Conc/Dil Factor 50

Percent Moisture (Decanted) 44

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	15000	U
111-44-4	bis(-2-Chloroethyl)Ether	15000	U
95-57-8	2-Chlorophenol	15000	U
541-73-1	1 3-Dichlorobenzene	15000	U
106-46-7	1 4-Dichlorobenzene	15000	U
100-51-6	Benzyl Alcohol	15000	U
95-50-1	1 2-Dichlorobenzene	15000	U
95-48-7	2-Methylphenol	15000	U
39638-32-9	bis(2-chloroisopropyl)Ether	15000	U
106-44-5	4-Methylphenol	15000	U
621-64-7	N-Nitroso-Di-n-Propylamine	15000	U
67-72-1	Hexachloroethane	15000	U
98-95-3	Nitrobenzene	15000	U
78-59-1	Isophorone	15000	U
88-75-5	2-Nitrophenol	15000	U
105-67-9	2. 4-Dimethylphenol	15000	U
65-85-0	Benzoic Acid	71000	U
111-91-1	bis(-2-Chloroethoxy)Methane	15000	U
120-83-2	2 4-Dichlorophenol	15000	U
120-82-1	1 2. 4-Trichlorobenzene	15000	U
91-20-3	Naphthalene	15000	U
106-47-8	4-Chloroaniline	15000	U
87-68-3	Hexachlorobutadiene	15000	U
59-50-7	4-Chloro-3-Methylphenol	15000	U
91-57-6	2-Methylnaphthalene	15000	U
77-47-4	Hexachlorocyclopentadiene	15000	U
88-06-2	2 4 6-Trichlorophenol	15000	U
95-95-4	2 4 5-Trichlorophenol	71000	U
91-58-7	2-Chloronaphthalene	15000	U
88-74-4	2-Nitroaniline	71000	U
131-11-3	Dimethyl Phthalate	15000	U
208-96-8	Acenaphthylene	15000	U
99-09-2	3-Nitroaniline	71000	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	15000	U
51-28-5	2. 4-Dinitrophenol	71000	U
100-02-7	4-Nitrophenol	71000	U
132-64-9	Dibenzofuran	15000	U
121-14-2	2 4-Dinitrotoluene	15000	U
606-20-2	2 6-Dinitrotoluene	15000	U
84-66-2	Diethylphthalate	15000	U
7005-72-3	4-Chlorophenyl-phenylether	15000	U
86-73-7	Fluorene	15000	U
100-01-6	4-Nitroaniline	71000	U
534-52-1	4. 6-Dinitro-2-Methylphenol	71000	U
86-30-6	N-Nitrosodiphenylamine (1)	15000	U
101-55-3	4-Bromophenyl-phenylether	15000	U
118-74-1	Hexachlorobenzene	15000	U
87-86-5	Pentachlorophenol	71000	U
85-01-8	Phenanthrene	15000	U
120-12-7	Anthracene	15000	U
84-74-2	Di-n-Butylphthalate	15000	U
206-44-0	Fluoranthene	15000	U
129-00-0	Pyrene	15000	U
85-68-7	Butylbenzylphthalate	15000	U
91-94-1	3 3 -Dichlorobenzidine	29000	U
56-55-3	Benzo(a)Anthracene	15000	U
117-81-7	bis(2-Ethylhexyl)Phthalate	2900	J
218-01-9	Chrysene	15000	U
117-84-0	Di-n-Octyl Phthalate	15000	U
205-99-2	Benzo(b)Fluoranthene	15000	U
207-08-9	Benzo(k)Fluoranthene	15000	U
50-32-8	Benzo(a)Pyrene	15000	U
193-39-5	Indeno(1 2 3-cd)Pyrene	15000	U
53-70-3	Dibenz(a h)Anthracene	15000	U
191-24-2	Benzo(g h i)Perylene	15000	U

(1)-Cannot be separated from diphenylamine

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ecology and environment

Laboratory Name ecology and environment, inc.

Case No U-4474

Sample Number DC-SS-29

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed 12-10-86

Conc/Dil Factor 50

Percent Moisture (decanted) 43.5

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	1600 u
72-55-9	4,4'-DDE	1600 u
72-20-8	Endrin	1600 u
33213-65-9	Endosulfan II	1600 u
72-54-8	4,4'-DDD	1600 u
1031-07-8	Endosulfan Sulfate	1600 u
50-29-3	4,4'-DDT	1600 u
72-43-5	Methoxychlor	8,000 u
53494-70-5	Endrin Ketone	1600 u
57-74-9	Chlordane	8,000 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	8,000 u
12672-29-6	Aroclor-1248	21,000
11097-69-1	Aroclor-1254	16,000 u
11096-82-5	Aroclor-1260	23,000

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 30 V_t 1000 V_i 4

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ecology and environment

Laboratory Name ecology and environment, inc.

Case No 11-4174

Sample Number DC-SS-29

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number min.	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.4	6 BJ
2.	Hexene isomer	VOA	21.4	16 BJ
3.	Unknown ketone	VOA	19.6	16 J
4.				
5.	UNKNOWN AROMATIC	BNA	19.9	120000 J
6.	UNKNOWN AROMATIC		20.4	200,000 J
7.	UNKNOWN AROMATIC		20.6	120000 J
8.	UNKNOWN AROMATIC		20.8	470000 J
9.	UNKNOWN AROMATIC		20.9	260000 J
10.	UNKNOWN AROMATIC		21.0	380000 J
11.	UNKNOWN AROMATIC		21.1	400000 J
12.	UNKNOWN AROMATIC		21.4	600000 J
13.	UNKNOWN AROMATIC		21.5	190000 J
14.	UNKNOWN AROMATIC		21.7	490000 J
15.	UNKNOWN AROMATIC		21.8	280000 J
16.	DIMETHYL DECYL BENZENE		21.9	220000 J
17.	UNKNOWN AROMATIC		22.0	83000 J
18.	UNKNOWN AROMATIC		22.2	140000 J
19.	UNKNOWN AROMATIC		22.3	99000 J
20.	UNKNOWN AROMATIC		22.8	120000 J
21.	UNKNOWN AROMATIC		23.0	77000 J
22.	UNKNOWN AROMATIC		23.2	75000 J
23.	UNKNOWN AROMATIC		24.1	63000 J
24.	UNKNOWN AROMATIC		24.3	65000 J
25.				
26.				
27.				
28.				
29.				
30				

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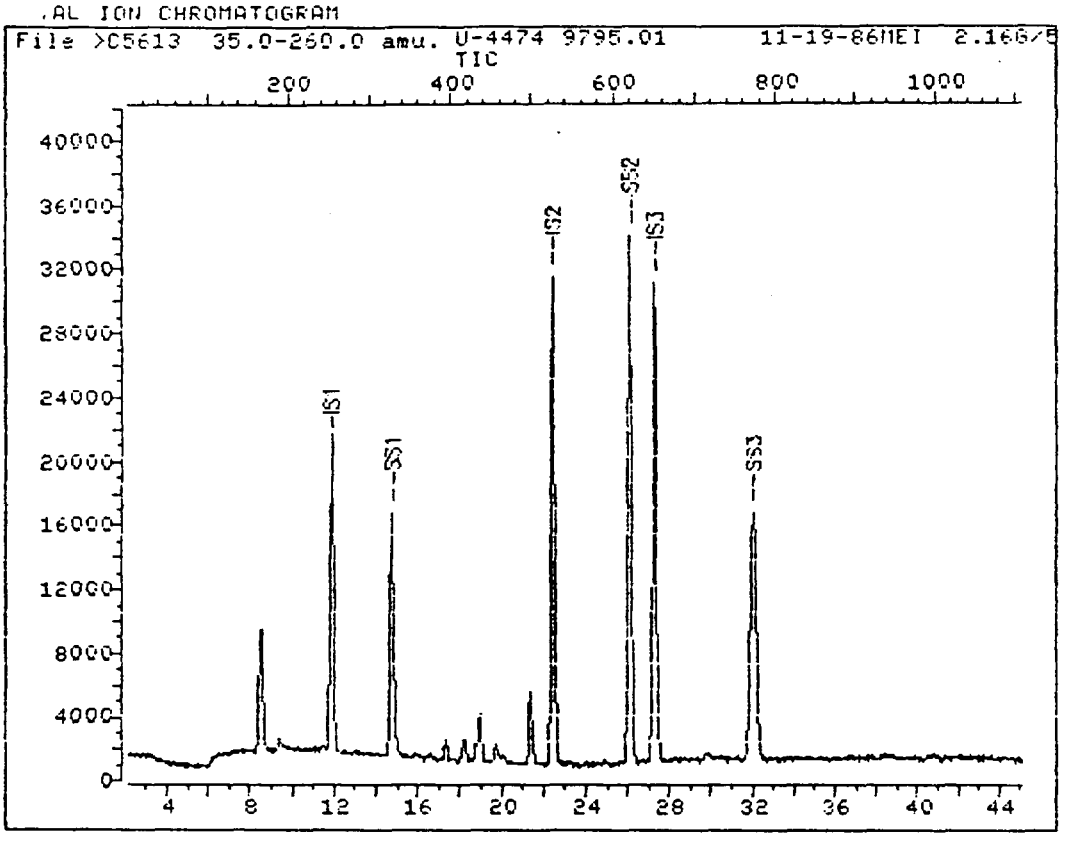
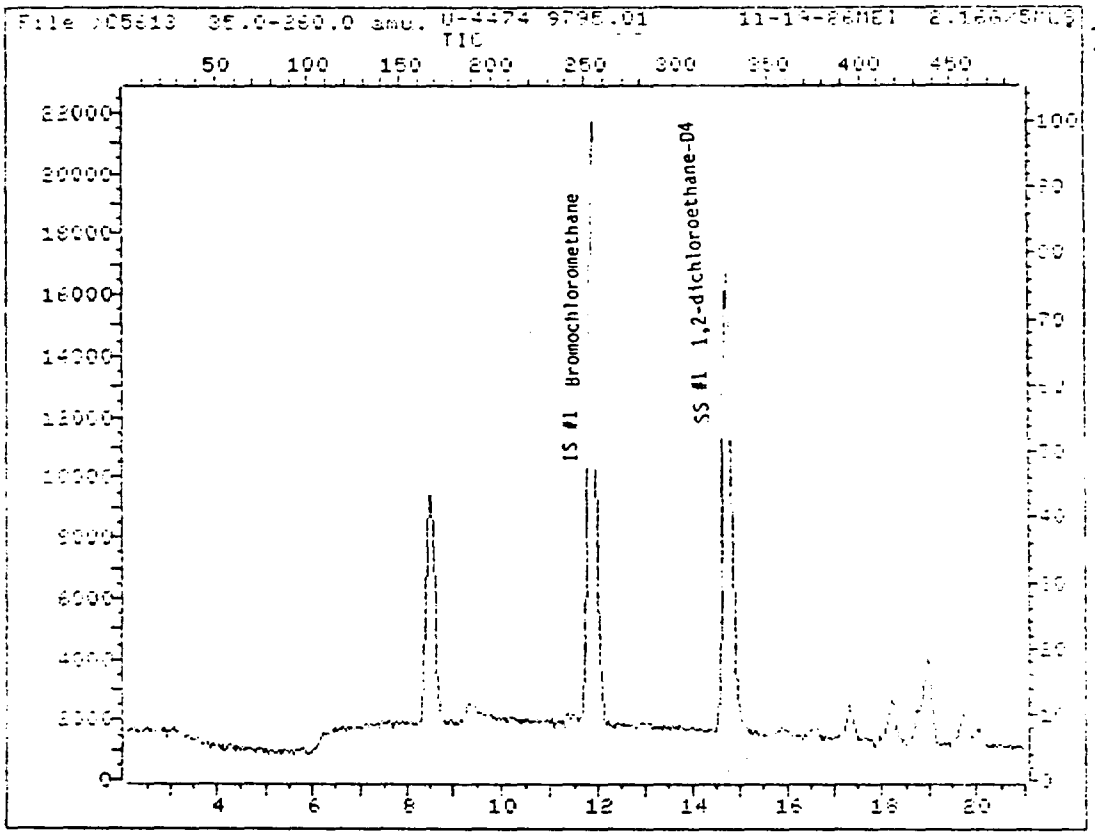


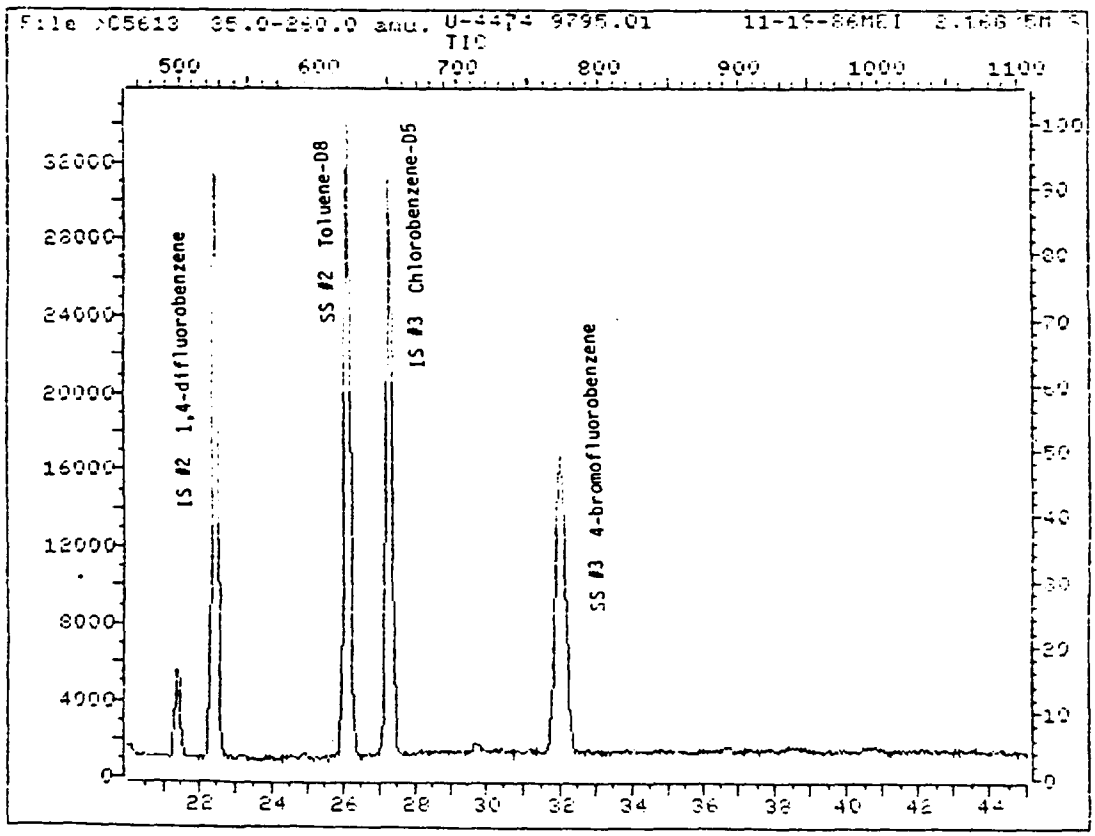
Data File: >C5613::D3
Name: U-4474 9795.01 DC-SS-29
Misc: 11-19-86MEI 2.16G/5MLS DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861119 19:02

Operator ID: USER8
Quant Time: 861120 00:59
Injected at: 861120 00:13

DC-SS-29





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QUANT REPORT

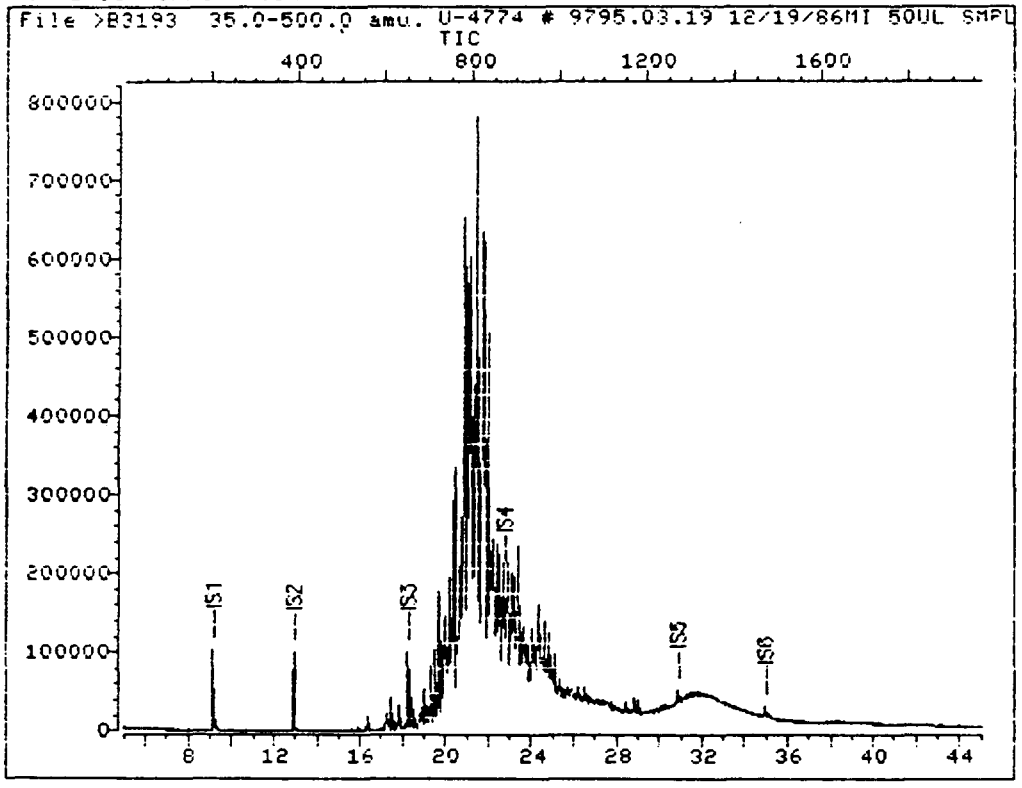
Operator ID: USER8 Quant Rev: 4 Quant Time: 861120 00:59
Output File: ^C5613::Q2 Injected at: 861120 00:13
Data File: >C5613::D3 Dilution Factor: 1.00
Name: U-4474 9795.01 DC-SS-29
Misc: 11-19-86MEI 2.16G/5MLS DI + 10UL IS/SS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861119 19:02

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.86	253	28547	250.00	NGS	100
6)	METHYLENE CHLORIDE		84	8.53	167	19136	99.20	NGS	100
7)	ACETONE		43	9.38	189	6509	45.54	NGS	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.73	327	59565	208.69	NGS	87
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.42	525	131180	250.00	NGS	100
17)	2-BUTANONE		72	14.85	330	3313	69.35	NGS	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.27	650	93693	250.00	NGS	100
36)	TOLUENE-D8	(SURR)	98	26.10	620	128994	239.85	NGS	94
40)	4-BROMOFLUOROBENZENE	(SURR)	95	32.01	772	57423	213.31	NGS	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >B3193::D4
Name: U-4774 # 9795.03.19 DC-SS-29
Misc: 12/19/86MI 50UL SMPL + 450UL MECL2 + 5UL IS (10X)

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861224 12:42

Operator ID: USER8
Quant Time: 861226 09:21
Injected at: 861219 20:42

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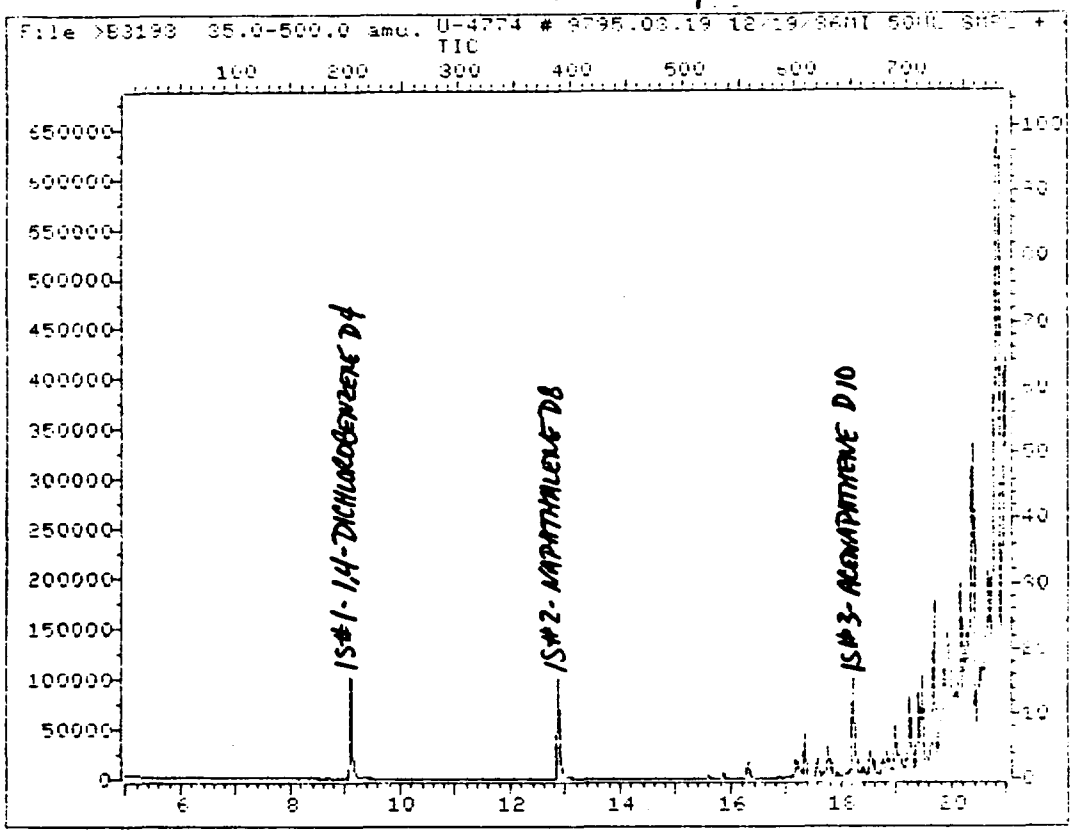
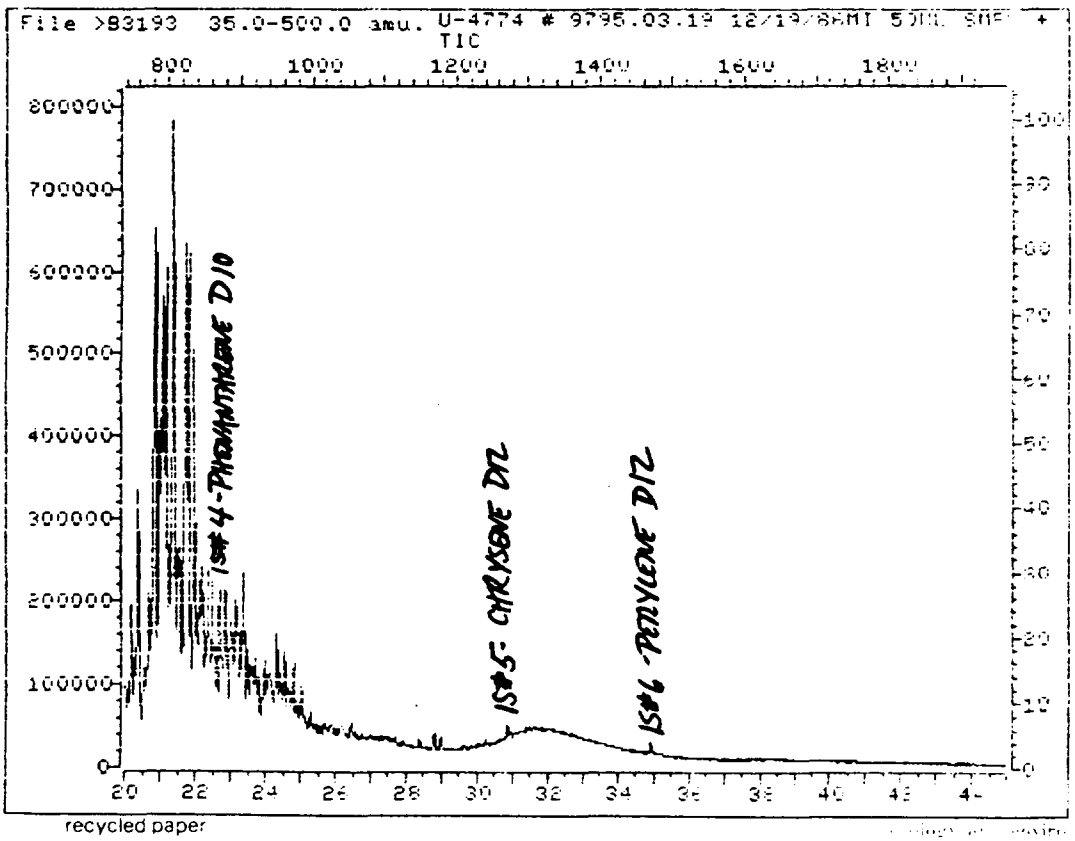
DC-SS-29





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QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861226 09:21
Output File: ^B3193::Q2 Injected at: 861219 20:42
Data File: >B3193::D4 Dilution Factor: 10.00
Name: U-4774 # 9795.03.19 DC-SS-29
Misc: 12/19/86MI 50UL SMPL + 450UL MECL2 + 5UL IS (10X) FINAL VOLUME - 5.0ml

ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861224 12:42

	Compound		m/z	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.10	203	60858	40.00	UG/L	89
19)	*NAPHTHALENE-D8	(IS)	136	12.88	389	169563	40.00	UG/L	100
34)	*ACENAPHTHENE-D10	(IS)	162	18.22	652	52181	40.00	UG/L	99
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.22~~	~~652~~	~~14623~~	~~78.42~~	~~UG/L~~	100
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.37~~	~~659~~	~~147~~	~~.79~~	~~UG/L~~	100
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.22~~	~~652~~	~~6292~~	~~147.74~~	~~UG/L~~	100
55)	*PHENANTHRENE-D10	(IS)	188	22.69	871	46665	40.00	UG/L	99
65)	*CHRYSENE-D12	(IS)	240	30.85	1271	24686	40.00	UG/L	100
72)	BIS(2-ETHYLHEXYL)PHTHALATE		149	31.79	1317	557	9.84	UG/L	89
74)	*PERYLENE-D12	(IS)	264	34.93	1471	24788	40.00	UG/L	100

* Compound is ISTD

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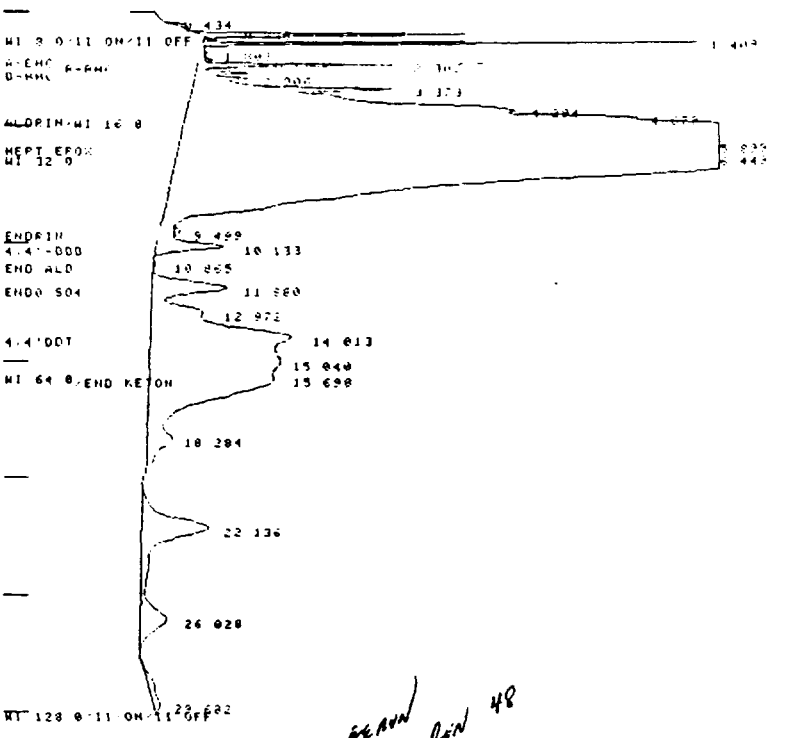
CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 10% 5 MIN/TICK



BEAUN SEE RUN 48

CHANNEL: 1A - 1 TITLE: RUN# 34 21:11 9 DEC 86

DC-SS-29

SAMPLE: 9795.01.19A1 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	1.409		220610	VV	3.13
2	B-BHC	614.6402	2.302	0.072	151512	VV	5.19
3	D-BHC	95.9741	2.635	0.125	60445	VV	7.06
4		0.0000	2.906		72476	VV	? 8.56
5		0.0000	3.373		357995	VV	11.44
6		0.0000	4.294		1475108	VV	? 18.38
7	ALDRIN	1539.780	4.679	-0.121	1003734	VV	? 18.63
8		0.0000	4.995		1249930	VV	? 29.50
9	HEPT EPOX	11187.94	5.899	0.079	6865265	VV	? 37.94
10		0.0000	6.449		6178013	VV	? 90.25
11	4,4'-DDD	434.7955	10.133	-0.317	208370	VV	18.38
12	ENDO SO4	838.6121	11.860	-0.390	332163	VV	33.19
13		0.0000	12.972		207524	VV	? 43.63
14	4,4'DDT	3641.436	14.013	0.363	1057530	VV	? 63.81
15		0.0000	15.040		1081875	VV	?191.88
16	END KETON	1990.590	15.698	-0.032	1101326	VV	? 85.85
17		0.0000	18.284		187643	VB	? 46.99
18		0.0000	22.136		608692	BV	51.94
19	DBC	477.3698	26.028	-1.342	227439	VV	60.25
20		0.0000	29.682		67450	VB	?149.68

TOTALS: 20821.03 -1.563 22723124

DETECTED PKS: 35 REJECTED PKS: 15

DIVISOR: 1.50000 MULTIPLIER: 50000.0000

NOISE: 22.9 OFFSET: 96

RACK: 3 VIAL: 4 INJ: 1

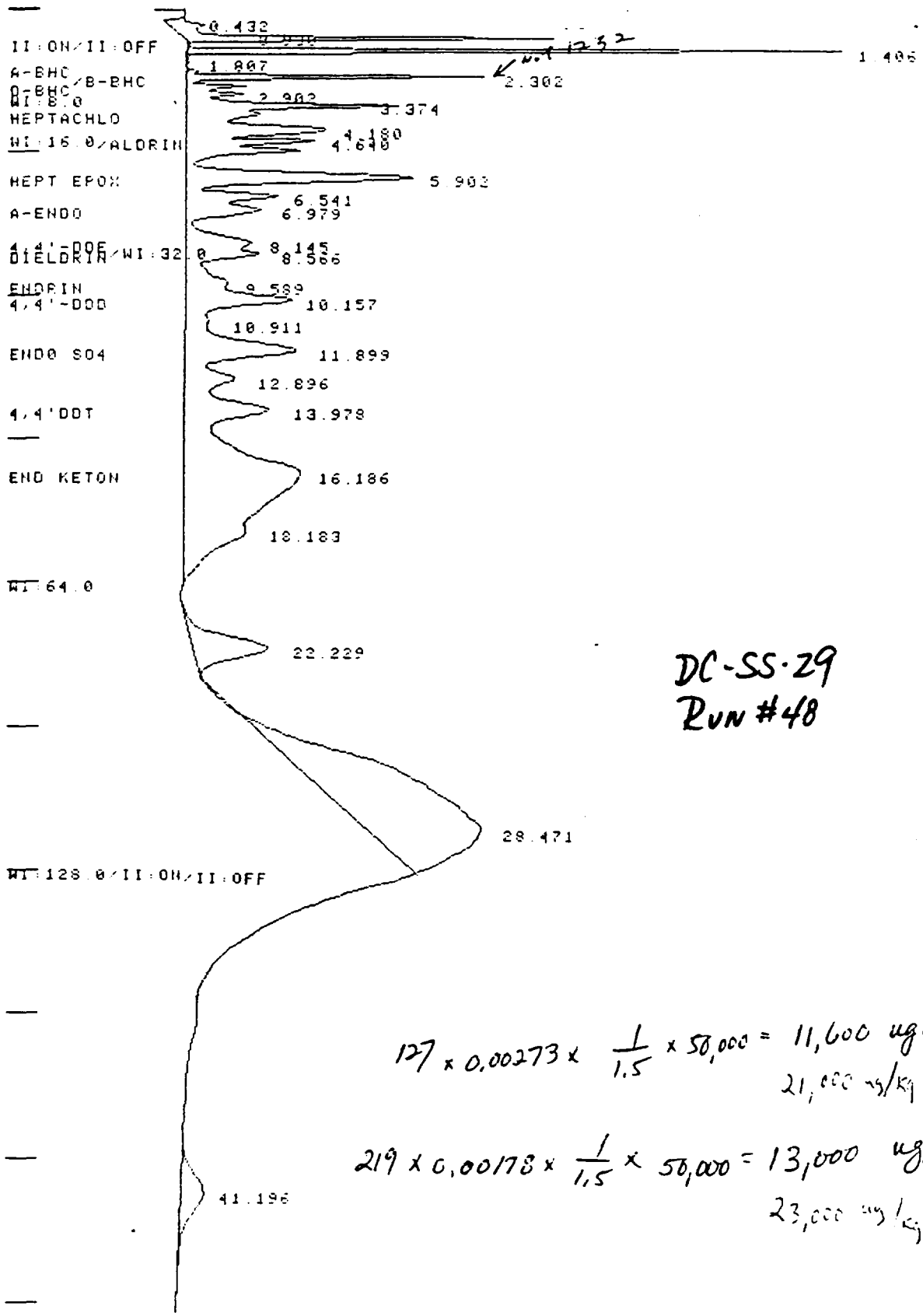
NOTES:
NOTEBOOK:259-52 ANALYST:RICHARD SAMSON
SECURE AREA:D JOB# U-4474
INST:VARIAN 6000#2 A ECD 10-1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE:3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN.
DET:300 C INJ:220 C
200 C ISOTHERMAL 4 UL INJECTION
AUTOSAMPLER
PEST/PCB ANALYSIS

POST RUN:
SAVE FILE: RAW [illegible]

137

recycled paper

ATTEN: 8 ZERO: 10% 5 MIN/TICK



DC-SS-29
RUN #48

127 x 0.00273 x $\frac{1}{1.5}$ x 50,000 = 11,600 ug/kg 1248
21,000 ug/kg DRY

219 x 0.00178 x $\frac{1}{1.5}$ x 50,000 = 13,000 ug/kg 1260
23,000 ug/kg DRY

recycled paper

CHANNEL: 1A - 1 TITLE: RUN# 48 10:02 10 DEC 85

DC-SS-29

SAMPLE: 9795.03.19A1 METHOD: CEPA CALCULATION: ES - ANAL:S

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.406		229025	VV	3.13
2	~~a-BHC~~	715.0438	2.302	0.072	176262	VV	5.25
3	~~g-BHC~~	95.3095	2.632	0.122	80089	VV	7.31
4		0.0000	2.902		80259	VV	8.84
5		0.0000	3.374		254384	VV	9.22
6		0.0000	3.596		49735	VV	? 8.53
7	~~HEPTACHLO~~	216.8972	~~3.692~~	-0.198	~~120187~~	VV	? 19.44
8		0.0000	4.180		317596	VV	? 21.81
9		0.0000	4.640		190726	VV	14.81
10	~~ALDRIN~~	280.0995	4.956	0.158	182588	VV	13.31
11	~~HEPT.EPOX~~	839.1087	5.902	0.082	514903	VV	20.31
12		0.0000	6.541		189658	VV	18.31
13	~~a-ENDO~~	332.0488	6.979	-0.251	190246	VV	? 28.18
14	~~4,4'-DDE~~	387.8694	8.145	-0.185	213705	VV	? 35.28
15	~~DIELDRIN~~	273.7474	8.566	0.146	172247	VV	? 29.26
16	~~b-ENDO~~	269.2597	9.589	0.009	147537	VV	? 47.13
17	~~4,4'-DDD~~	720.9797	10.157	-0.293	345520	VV	27.75
18	~~ENDRIN.ALD.~~	147.0401	10.911	0.371	83407	VV	? 22.44
19	~~ENDO SO4~~	1227.571	11.899	-0.371	496254	VV	37.94
20		0.0000	12.896		192220	VV	42.81
21	~~4,4'-DDT~~	1355.261	13.978	0.328	393589	VV	40.69
22	~~ENDRIN KETON~~	2852.763	~~16.186~~	0.456	~~1578337~~	VV	?143.31
23		0.0000	~~16.183~~		~~208275~~	VB	? 90.44
24		0.0000	22.229		386898	BV	54.56
25	~~DDE~~	4986.886	28.471	1.101	2375962	VB	194.13
26		0.0000	41.196		233447	BB	84.94

TOTALS: 14699.88 1.547 9480866

DETECTED PKS: 40 REJECTED PKS: 14

DIVISOR: 1.50000 MULTIPLIER: 50,000.0000

NOISE: 22.9 OFFSET: -21

RACK: 4 VIAL: 3 INJ: 1

NOTES:
NOTEBOOK:259-52 ANALYST:RICHARD SAMSON
SECURE AREA:D JOB# U-4474
INST:VARIAN 6000#2 A 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
AUTOSAMPLER
PEST/PCB ANALYSIS

POST RUN:
SAVE FILE: RAW D.CREEK3573

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SAMPLE NUMBER DC-SS-30

481095

200

recycled paper

Sample Number
DC-SS-30

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474

Lab Sample ID No: 9796 QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: [signature] Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-25-86

Conc./Dil Factor: 3 pH 6.7

Percent Moisture: (Not Decanted) 31

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	62 B
67-64-1	Acetone	16 BJ
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	30u
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	15u
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	15u
10061-01-5	cis-1, 3 Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	47
591-78-6	2-Hexanone	30u
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	15u
108-90-7	Chlorobenzene	15u
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

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, etc. (This is not necessarily the instrument detection limit.) The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

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

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

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

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

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Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No U-4474

Sample Number DC-SS-30

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed 12-19-86

Conc./Dil Factor: 100

Percent Moisture (Decanted) 31

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	24000	U
111-44-4	bis(-2-Chloroethyl)Ether	24000	U
95-57-8	2-Chlorophenol	24000	U
541-73-1	1 3-Dichlorobenzene	24000	U
106-46-7	1 4-Dichlorobenzene	24000	U
100-51-6	Benzyl Alcohol	24000	U
95-50-1	1 2-Dichlorobenzene	24000	U
95-48-7	2-Methylphenol	24000	U
39638-32-9	bis(2-chloroisopropyl)Ether	24000	U
106-44-5	4-Methylphenol	24000	U
621-64-7	N-Nitroso-Di-n-Propylamine	24000	U
67-72-1	Hexachloroethane	24000	U
98-95-3	Nitrobenzene	24000	U
78-59-1	Isophorone	24000	U
88-75-5	2-Nitrophenol	24000	U
105-67-9	2. 4-Dimethylphenol	24000	U
65-85-0	Benzoic Acid	120000	U
111-91-1	bis(-2-Chloroethoxyl)Methane	24000	U
120-83-2	2 4-Dichlorophenol	24000	U
120-82-1	1 2. 4-Trichlorobenzene	24000	U
91-20-3	Naphthalene	24000	U
106-47-8	4-Chloroaniline	24000	U
87-68-3	Hexachlorobutadiene	24000	U
59-50-7	4-Chloro-3-Methylphenol	24000	U
91-57-6	2-Methylnaphthalene	24000	U
77-47-4	Hexachlorocyclopentadiene	24000	U
88-06-2	2 4 6-Trichlorophenol	24000	U
95-95-4	2. 4 5-Trichlorophenol	120000	U
91-58-7	2-Chloronaphthalene	24000	U
88-74-4	2-Nitroaniline	120000	U
131-11-3	Dimethyl Phthalate	24000	U
208-96-8	Acenaphthylene	24000	U
99-09-2	3-Nitroaniline	120000	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	24000	U
51-28-5	2. 4-Dinitrophenol	120000	U
100-02-7	4-Nitrophenol	120000	U
132-64-9	Dibenzofuran	24000	U
121-14-2	2 4-Dinitrotoluene	24000	U
606-20-2	2 6-Dinitrotoluene	24000	U
84-66-2	Diethylphthalate	24000	U
7005-72-3	4-Chlorophenyl-phenylether	24000	U
86-73-7	Fluorene	24000	U
100-01-6	4-Nitroaniline	120000	U
534-52-1	4. 6-Dinitro-2-Methylphenol	120000	U
86-30-6	N-Nitrosodiphenylamine (1)	24000	U
101-55-3	4-Bromophenyl-phenylether	24000	U
118-74-1	Hexachlorobenzene	24000	U
87-86-5	Pentachlorophenol	120000	U
85-01-8	Phenanthrene	24000	U
120-12-7	Anthracene	24000	U
84-74-2	Di-n-Butylphthalate	24000	U
206-44-0	Fluoranthene	24000	U
129-00-0	Pyrene	24000	U
85-68-7	Butylbenzylphthalate	24000	U
91-94-1	3. 3 -Dichlorobenzidine	48000	U
56-55-3	Benzo(a)Anthracene	24000	U
117-81-7	bis(2-Ethylhexyl)Phthalate	24000	U
218-01-9	Chrysene	24000	U
117-84-0	Di-n-Octyl Phthalate	24000	U
205-99-2	Benzo(b)Fluoranthene	24000	U
207-08-9	Benzo(k)Fluoranthene	24000	U
50-32-8	Benzo(a)Pyrene	24000	U
193-39-5	Indeno(1 2. 3-cd)Pyrene	24000	U
53-70-3	Dibenz(a h)Anthracene	24000	U
191-24-2	Benzo(g h i)Perylene	24000	U

(1)-Cannot be separated from diphenylamine

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Laboratory Name ecology and environment, inc.

Case No V-4474

Sample Number DC-SS-30

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed 12-9-86

Conc/Dil Factor 100

Percent Moisture (decanted) 30.7

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	1600 u
319-85-7	Beta-BHC	1,600 u
319-86-8	Delta-BHC	1,600 u
58-89-9	Gamma-BHC (Lindane)	1,600 u
76-44-8	Heptachlor	1,600 u
309-00-2	Aldrin	1,600 u
1024-57-3	Heptachlor Epoxide	1,600 u
959-98-8	Endosulfan I	1,600 u
60-57-1	Dieldrin	3,200 u
72-55-9	4,4'-DDE	3,200 u
72-20-8	Endrin	3,200 u
33213-65-9	Endosulfan II	3,200 u
72-54-8	4,4'-DDD	3,200 u
1031-07-8	Endosulfan Sulfate	3,200 u
50-29-3	4,4'-DDT	3,200 u
72-43-5	Methoxychlor	16,000 u
53494-70-5	Endrin Ketone	3,200 u
57-74-9	Chlordane	16,000 u
8001-35-2	Toxaphene	32,000 u
12674-11-2	Aroclor-1016	16,000 u
11104-28-2	Aroclor-1221	16,000 u
11141-16-5	Aroclor-1232	16,000 u
53469-21-9	Aroclor-1242	16,000 u
12672-29-6	Aroclor-1248	30,300
11097-69-1	Aroclor-1254	32,000 u
11096-82-5	Aroclor-1260	35,600

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 30 V_t 1000 V_i 4

Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No U-4474

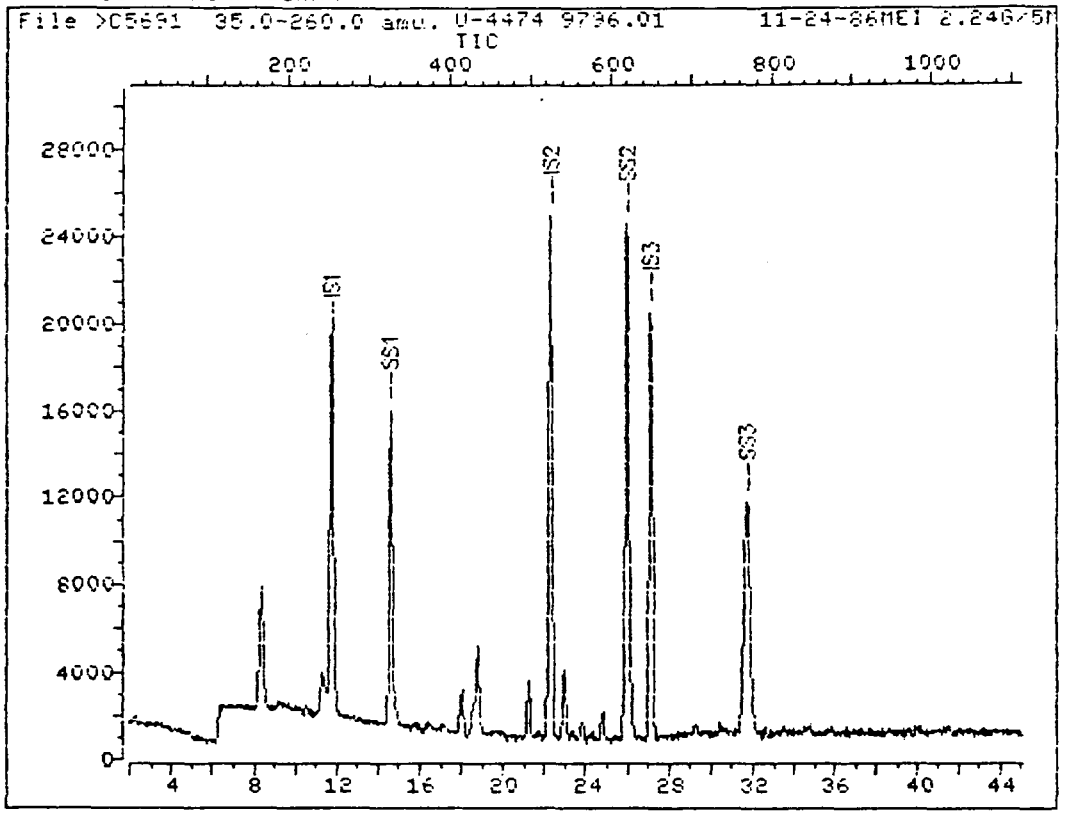
Sample Number DC-SS-30

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.	79209	ACETIC ACID, METHYL ESTER	VOA	11.3	150 J
2.		UNKNOWN KETONE		18.1	10 J
3.		HEXENE ISOMER		18.8	29 J
4.		HEXANE ISOMER		21.2	9 BJ
5.					
6.		UNKNOWN	BNA	23.4	250000 J
7.		UNKNOWN		24.5	290000 J
8.		UNKNOWN		25.4	16000 J
9.		UNKNOWN		25.8	220000 J
10.		UNKNOWN HYDROCARBON		26.9	43000 J
11.		UNKNOWN HYDROCARBON		28.2	16000 J
12.		UNKNOWN HYDROCARBON		28.4	65000 J
13.		UNKNOWN HYDROCARBON		29.3	52000 J
14.		UNKNOWN HYDROCARBON		29.6	30000 J
15.		UNKNOWN HYDROCARBON		30.0	18000 J
16.		UNKNOWN		30.1	18000 J
17.		UNKNOWN HYDROCARBON		30.2	19000 J
18.		UNKNOWN HYDROCARBON		30.6	27000 J
19.		UNKNOWN HYDROCARBON		31.3	44000 J
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30					

TOTAL ION CHROMATOGRAM



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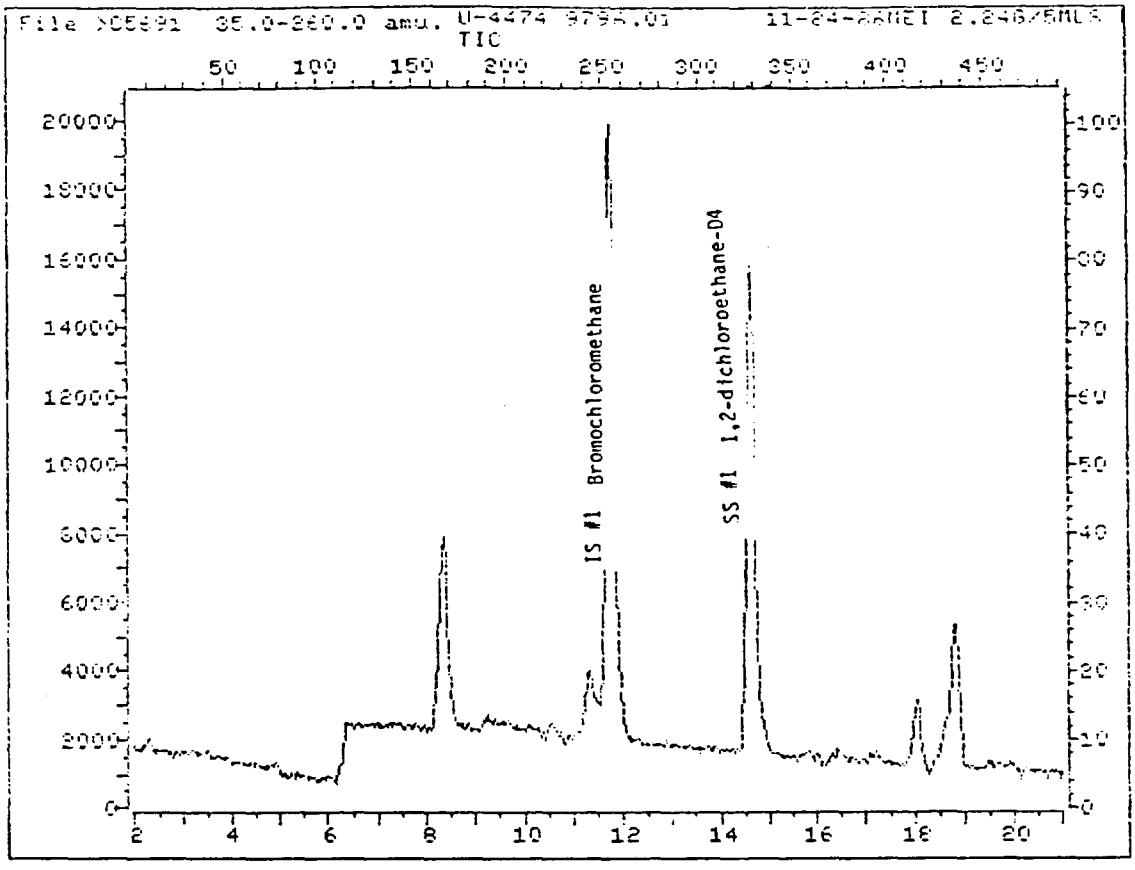
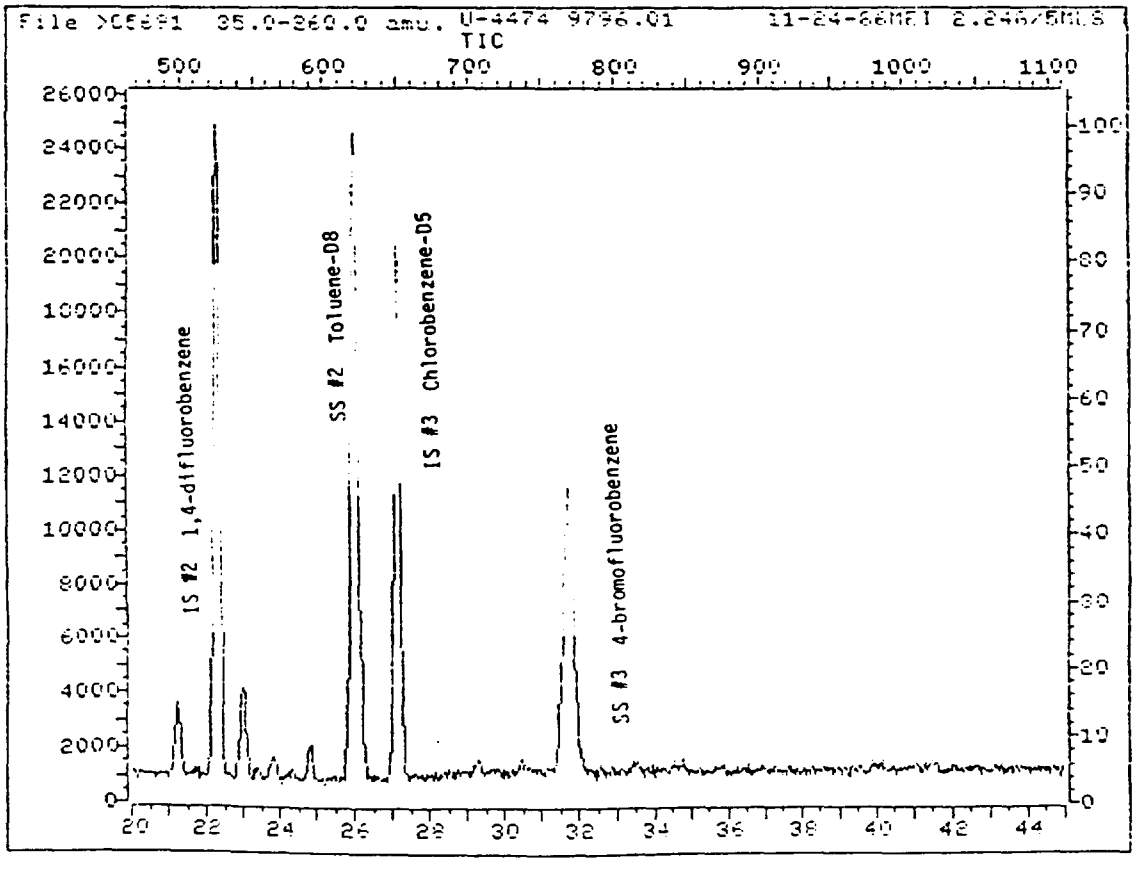
Name: U-4474 9796.01 DC-SS-30
Misc: 11-24-86MEI 2.24G/5MLS DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861124 23:52

Operator ID: USER6
Quant Time: 861125 05:12
Injected at: 861125 04:26

DC-SS-30


File >C5691 35.0-260.0 amu. U-4474 9796.01 11-24-88MEI 2.246/5MLS
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File >C5691 35.0-260.0 amu. U-4474 9796.01 11-24-88MEI 2.246/5MLS
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

QUANT REPORT

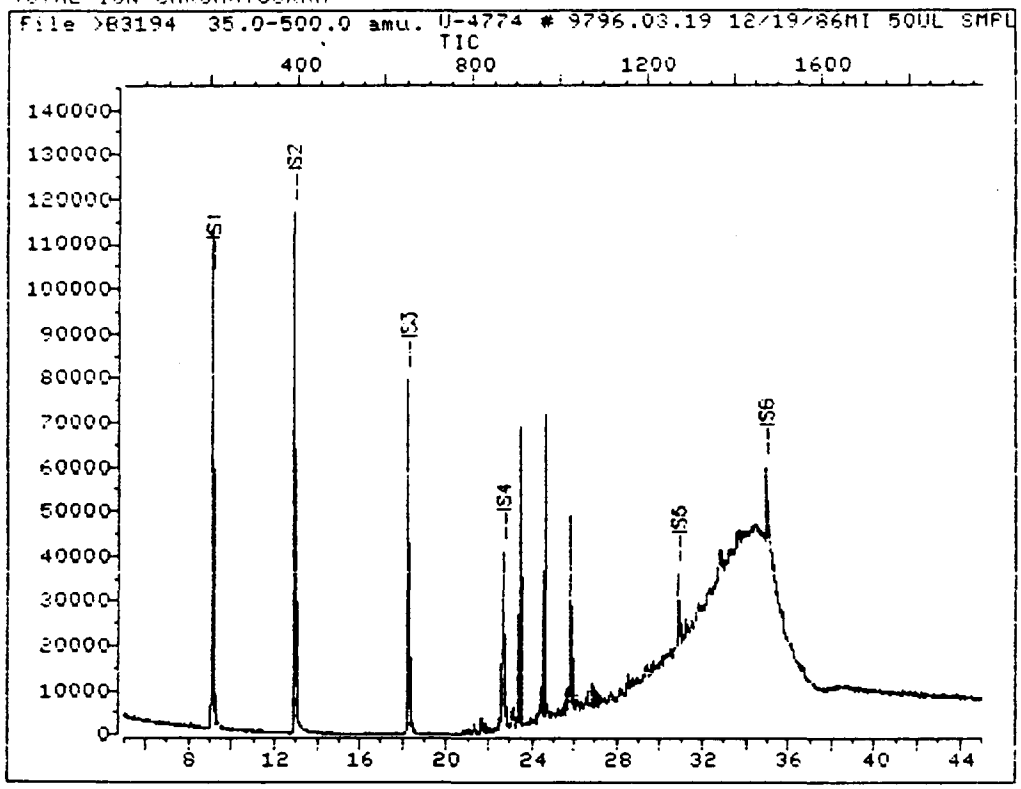
Operator ID: USER6 Quant Rev: 4 Quant Time: 861125 09:12
Output File: ^C5691::Q2 Injected at: 861125 04:26
Data File: >C5691::D3 Dilution Factor: 1.00
Name: U-4474 9796.01 DC-55-30
Misc: 11-24-86MEI 2.24G/5MLS DI + 10UL IS/SS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861124 23:52

	Compound	M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE (IS)	128	11.72	253	27377	250.00	NGS	100
6)	METHYLENE CHLORIDE	84	8.35	166	16356	95.54	NGS	100
7)	ACETONE	43	9.24	189	3904	25.43	NGS	100
15)	1,2-DICHLOROETHANE-D4(SURR)	65	14.60	327	61163	215.85	NGS	90
16)	*1,4-DIFLUOROBENZENE (IS)	114	22.28	525	100850	250.00	NGS	100
31)	*CHLOROBENZENE-D5 (IS)	117	27.13	650	63957	250.00	NGS	100
32)	4-METHYL-2-PENTANONE	43	22.98	543	14341	72.43	NGS	87
36)	TOLUENE-D8 (SURR)	98	25.96	620	95776	263.52	NGS	95
40)	4-BROMOFLUOROBENZENE(SURR)	95	31.71	768	37849	210.40	NGS	100

* Compound is ISTD

DC-SS-30



Data File: >B3194::D4
Name: U-4774 # 9796.03.19
Misc: 12/19/86MI 50UL SMPL + 450UL MECL2 + 5UL IS (10X)

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861224 12:42

Operator ID: USER8
Quant Time: 861226 09:24
Injected at: 861219 21:34

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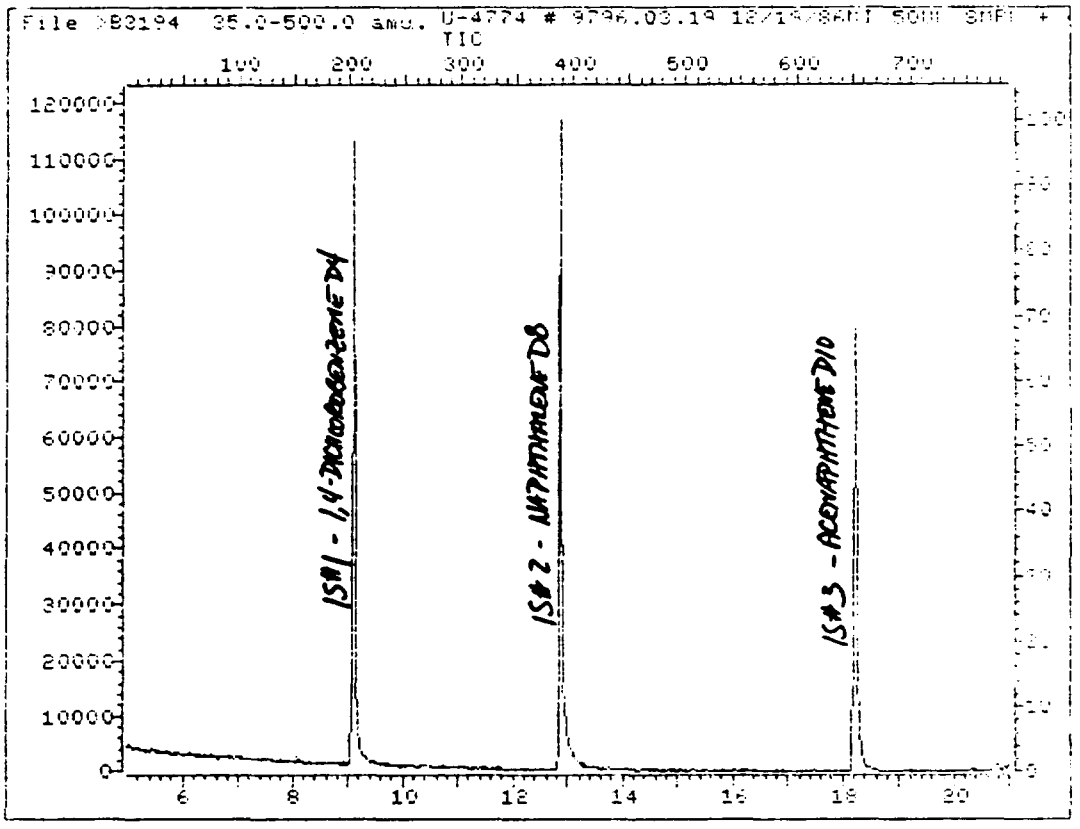
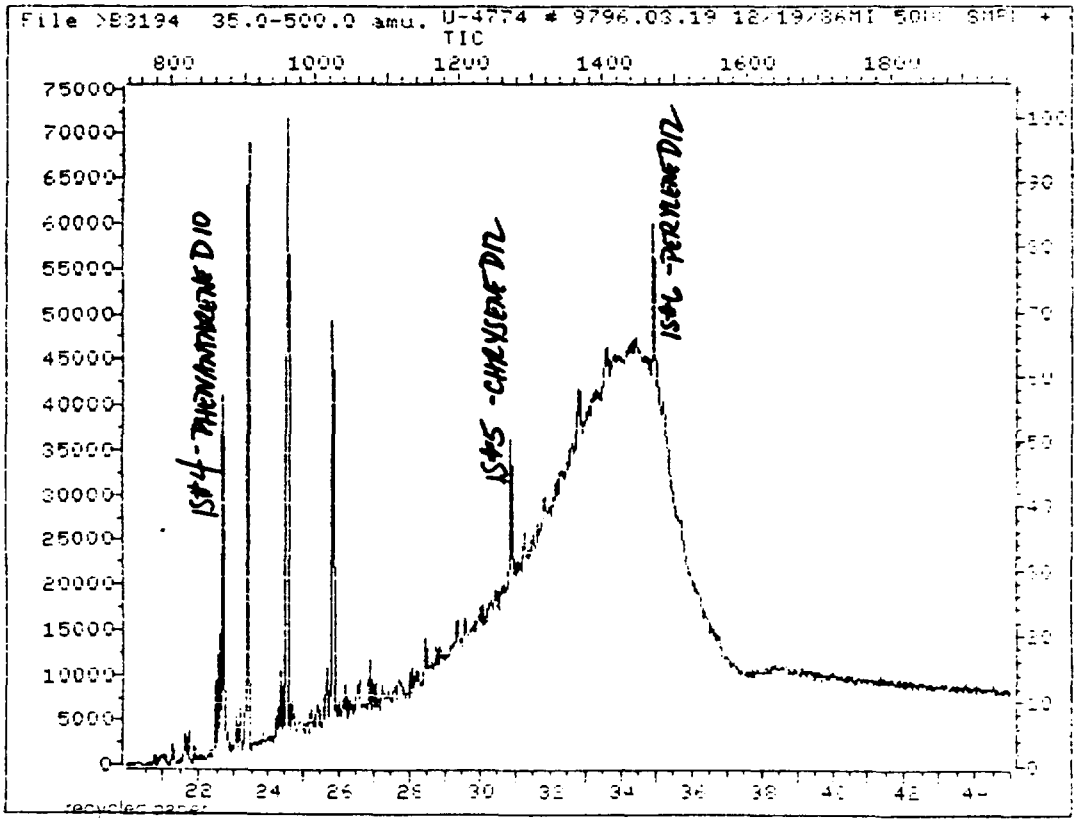
DC-SS-30


File >B3194 35.0-500.0 amu. U-4774 # 9796.03.19 12/19/86MI 50M SMPI +
TIC
IS#1 - 1,4-DICHLOROBENZENE D4
IS#2 - NAPHTHALENE D8
IS#3 - ACENAPHTHENE D10


File >B3194 35.0-500.0 amu. U-4774 # 9796.03.19 12/19/86MI 50M SMPI +
TIC
IS#4 - PHENANTHRENE D10
IS#5 - CHRYSENE D12
IS#6 - PERYLENE D12

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861226 09:24
Output File: ^B3194::Q2 Injected at: 861219 21:34
Data File: >B3194::D4 Dilution Factor: 10.00
Name: U-4774 # 9796.03.19 DC-SS-30
Misc: 12/19/86MI 50UL SMPL + 450UL MECL2 + 5UL IS (10X)

FINAL VOLUME = 10.0ml

ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861224 12:42

	Compound		m/e	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.09	202	66444	40.00	UG/L	90
19)	*NAPHTHALENE-D8	(IS)	136	12.87	388	206741	40.00	UG/L	100
34)	*ACENAPHTHENE-D10	(IS)	162	18.22	651	68096	40.00	UG/L	98
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~10.24~~	~~652~~	~~19460~~	~~79.97~~	~~UG/L~~	100
~~52)~~	~~2,6 DINITROTOLUENE~~		~~165~~	~~18.22~~	~~651~~	~~8498~~	~~151.29~~	~~UG/L~~	100
55)	*PHENANTHRENE-D10	(IS)	188	22.67	870	67140	40.00	UG/L	96
65)	*CHRYSENE-D12	(IS)	240	30.85	1272	30757	40.00	UG/L	100
74)	*PERYLENE-D12	(IS)	264	34.92	1472	28932	40.00	UG/L	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.54~~	~~1404~~	~~344~~	~~2.70~~	~~UG/L~~	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.62~~	~~1408~~	~~244~~	~~1.91~~	~~UG/L~~	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.84~~	~~1419~~	~~457~~	~~3.59~~	~~UG/L~~	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.98~~	~~1422~~	~~273~~	~~2.14~~	~~UG/L~~	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.95~~	~~1424~~	~~253~~	~~1.99~~	~~UG/L~~	100

* Compound is ISTD

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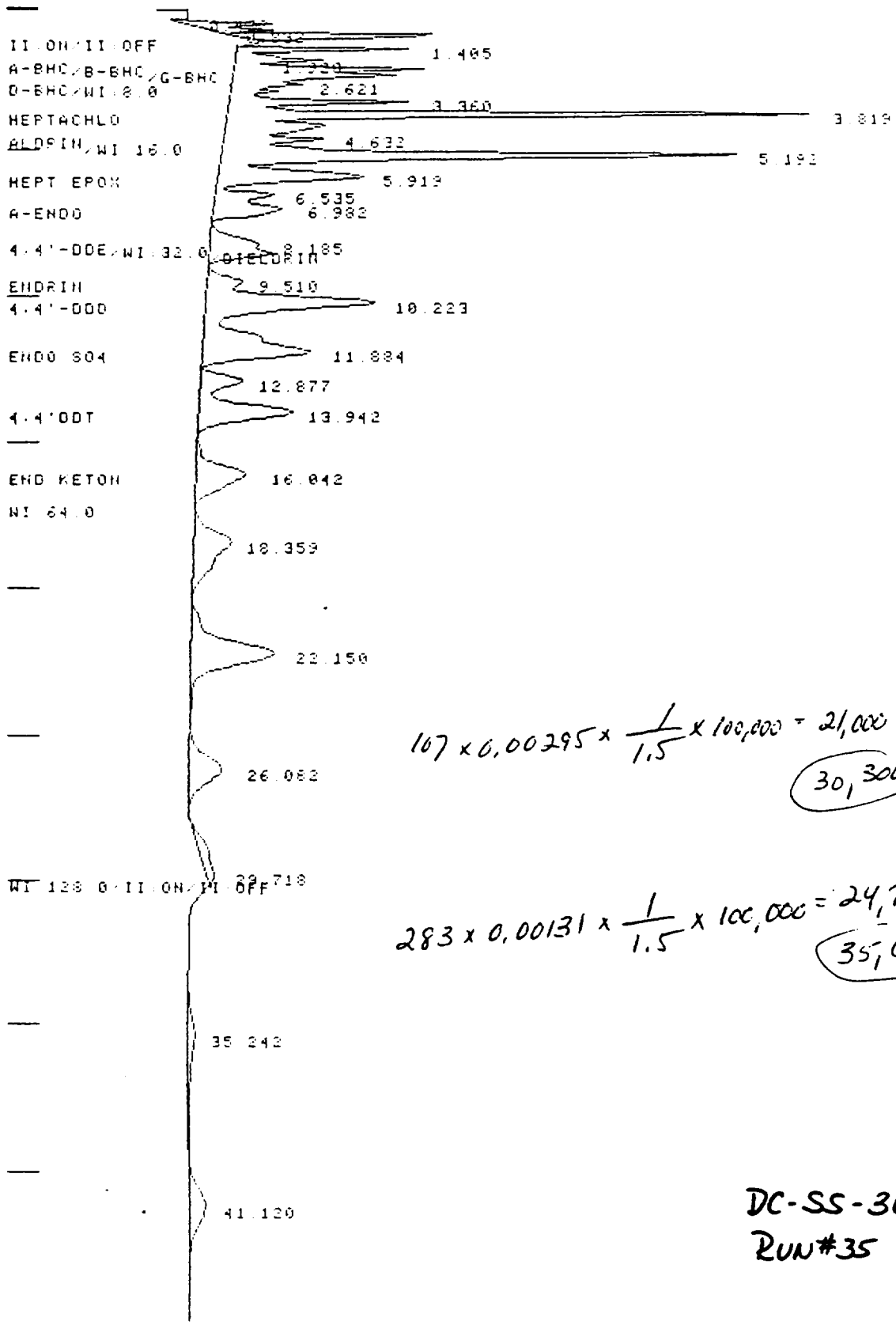
????CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 10% 5 MIN/TICK



$107 \times 0.00295 \times \frac{1}{1.5} \times 100{,}000 = 21{,}000$ ug/kg 1248 Dry

30,300 ug/kg 1248

$283 \times 0.00131 \times \frac{1}{1.5} \times 100{,}000 = 24{,}700$ ug/kg 1260 Dry

35,600 ug/kg 1260

DC-SS-30
RUN#35

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CHANNEL: 1A - 1 TITLE: RUN# 35 23:14 9 DEC 86

DC-SS-30

SAMPLE: 9796.01.19A1 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	1.405		86271	BV	3.25
2		0.0000	1.640		34636	VV	? 5.06
3		0.0000	1.778		75005	VV	6.31
4	[redacted]	516.4335	2.068	-0.022	180531	VV	5.44
5	[redacted]	1607.523	2.299	0.069	222782	VV	? 12.31
6	[redacted]	234.9832	2.621	0.111	74074	VV	? 10.00
7		0.0000	2.922		92918	VV	12.98
8		0.0000	3.360		193200	VV	8.25
9	[redacted]	2590.822	~~3.818~~	-0.071	~~671145~~	VV	9.31
10		0.0000	4.143		217069	VV	22.75
11	[redacted]	463.2990	4.632	-0.168	151005	VV	13.75
12		0.0000	~~5.132~~		~~[illegible]~~	VV	12.06
13	[redacted]EPOX	1154.384	5.919	0.099	354183	VV	20.56
14		0.0000	6.535		102150	VV	16.13
15	[redacted]	642.3119	6.982	-0.248	184005	VV	24.88
16	[redacted]	488.5588	8.185	-0.145	134591	VV	? 33.88
17	[redacted]RIN	434.9616	8.539	0.119	136843	VV	? 26.94
18	[redacted]	339.3756	9.510	-0.070	92978	VV	? 24.63
19	[redacted]	2370.719	10.223	-0.227	568068	VV	29.06
20	[redacted]	2497.914	11.884	-0.386	494725	VV	47.06
21		0.0000	12.877		123466	VV	27.56
22	[redacted] DDT	2397.770	13.942	0.292	348175	VV	32.31
23	[redacted] RETON	969.2227	16.042	0.312	268119	VB	50.19
24		0.0000	18.359		282576	BV	61.25
25		0.0000	22.150		508103	VB	50.00
26	[redacted]	899.3246	26.082	-1.288	214238	BV	60.94
27		0.0000	29.718		64608	VB	?147.75
28		0.0000	35.242		76956	BV	91.19
29		0.0000	41.120		165661	VB	91.44

TOTALS: 17907.60 -1.623 5932003

DETECTED PKS: 41 REJECTED PKS: 12

DIVISOR: 1.50000 MULTIPLIER: 100000.000

NOISE: 22.9 OFFSET: 4

RACK: 3 VIAL: 5 INJ: 1

NOTES:
NOTEBOOK:259-52 ANALYST:RICHARD SAMSON
SECURE AREA:D JOB# U-4474
INST:VARIAN 6000#2 A 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
AUTOSAMPLER
PEST/PCB ANALYSIS

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POST RUN:
SAVE FILE: RAW D.CREEK3560

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SAMPLE NUMBER DC-SS-31

481095

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Sample Number
DC-SS-31

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-44474

Lab Sample ID No: 9797 QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: [illegible] Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-20-86

Conc./Dil Factor: 3 pH 6.3

Percent Moisture: (Not Decanted) 36

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	71B
67-64-1	Acetone	21B
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	30u
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	15u
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	15u
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	79
591-78-6	2-Hexanone	30u
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	15u
108-90-7	Chlorobenzene	15u
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

Data Reporting Qualifiers

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

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

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

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

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

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

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

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Sample Number
DC-SS-31-RE

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474

Lab Sample ID No: 9797 QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: [illegible] Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-27-86

Conc/Dil Factor: 3 pH 6.3

Percent Moisture: (Not Decanted) 36

CAS Number		ug/l or (ug/Kg) (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	90B
67-64-1	Acetone	36B
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	30u
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or (ug/Kg) (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	15u
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	15u
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	190
591-78-6	2-Hexanone	16BJ
127-18-4	Tetrachloroethene	21
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	15u
108-90-7	Chlorobenzene	15u
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

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, etc. (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/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.

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Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No U-4474

Sample Number DC-SS-31

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed: 12-4-86

Conc/Dil Factor: 50

Percent Moisture (Decanted) 36

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	13000	U
111-44-4	bis(-2-Chloroethyl)Ether	13000	U
95-57-8	2-Chlorophenol	13000	U
541-73-1	1 3-Dichlorobenzene	13000	U
106-46-7	1 4-Dichlorobenzene	13000	U
100-51-6	Benzyl Alconol	13000	U
95-50-1	1 2-Dichlorobenzene	13000	U
95-48-7	2-Methylphenol	13000	U
39638-32-9	bis(2-chloroisopropyl)Ether	13000	U
106-44-5	4-Methylpheno	13000	U
621-64-7	N-Nitroso-Di-n-Propylamine	13000	U
67-72-1	Hexachloroethane	13000	U
98-95-3	Nitrobenzene	13000	U
78-59-1	Isophorone	13000	U
88-75-5	2-Nitrophenol	13000	U
105-67-9	2, 4-Dimethylphenol	13000	U
65-85-0	Benzoic Acid	62000	U
111-91-1	bis(-2-Chloroethoxyl)Methane	13000	U
120-83-2	2 4-Dichlorophenol	13000	U
120-82-1	1 2, 4-Trichlorobenzene	13000	U
91-20-3	Naphthalene	13000	U
106-47-8	4-Chloroaniline	13000	U
87-68-3	Hexachlorobutadiene	13000	U
59-50-7	4-Chloro-3-Methylphenol	13000	U
91-57-6	2-Methylnaphthalene	13000	U
77-47-4	Hexachlorocyclopentadiene	13000	U
88-06-2	2 4 6-Trichlorophenol	13000	U
95-95-4	2 4 5-Trichlorophenol	62000	U
91-58-7	2-Chloronaphthalene	13000	U
88-74-4	2-Nitroaniline	62000	U
131-11-3	Dimethyl Phthalate	13000	U
208-96-8	Acenaphthylene	13000	U
99-09-2	3-Nitroaniline	62000	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	13000	U
51-28-5	2, 4-Dinitrophenol	62000	U
100-02-7	4-Nitrophenol	62000	U
132-64-9	Dibenzofuran	13000	U
121-14-2	2 4-Dinitrotoluene	13000	U
606-20-2	2 6-Dinitrotoluene	13000	U
84-66-2	Diethylphthalate	13000	U
7005-72-3	4-Chlorophenyl-phenylether	13000	U
86-73-7	Fluorene	13000	U
100-01-6	4-Nitroaniline	62000	U
534-52-1	4, 6-Dinitro-2-Methylphenol	62000	U
86-30-6	N-Nitrosodiphenylamine (1)	13000	U
101-55-3	4-Bromophenyl-phenylether	13000	U
118-74-1	Hexachlorobenzene	13000	U
87-86-5	Pentachlorophenol	62000	U
85-01-8	Phenanthrene	13000	U
120-12-7	Anthracene	13000	U
84-74-2	Di-n-Butylphthalate	13000	U
206-44-0	Fluoranthene	13000	U
129-00-0	Pyrene	13000	U
85-68-7	Butylbenzylphthalate	13000	U
91-94-1	3, 3-Dichlorobenzidine	26000	U
56-55-3	Benzo(a)Anthracene	13000	U
117-81-7	bis(2-Ethylhexyl)Phthalate	13000	U
218-01-9	Chrysene	13000	U
117-84-0	Di-n-Octyl Phthalate	13000	U
205-99-2	Benzo(b)Fluoranthene	13000	U
207-08-9	Benzo(k)Fluoranthene	13000	U
50-32-8	Benzo(a)Pyrene	13000	U
193-39-5	Indeno(1 2 3-cd)Pyrene	13000	U
53-70-3	Dibenzo(a h)Anthracene	13000	U
191-24-2	Benzo(g h i)Perylene	13000	U

(1)-Cannot be separated from diphenylamine

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Laboratory Name ecology and environment, inc.

Case No V-4474

Sample Number DC-SS-31

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed 12-10-86

Conc/Dil Factor: 100

Percent Moisture (decanted) 36

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	1600 u
319-85-7	Beta-BHC	1,600 u
319-86-8	Delta-BHC	1,600 u
58-89-9	Gamma-BHC (Lindane)	1,600 u
76-44-8	Heptachlor	1,600 u
309-00-2	Aldrin	1,600 u
1024-57-3	Heptachlor Epoxide	1,600 u
959-98-8	Endosulfan I	1,600 u
60-57-1	Dieldrin	3,200 u
72-55-9	4,4'-DDE	3,200 u
72-20-8	Endrin	3,200 u
33213-65-9	Endosulfan II	3,200 u
72-54-8	4,4'-DDD	3,200 u
1031-07-8	Endosulfan Sulfate	3,200 u
50-29-3	4,4'-DDT	3,200 u
72-43-5	Methoxychlor	16,000 u
53494-70-5	Endrin Ketone	3,200 u
57-74-9	Chlordane	16,000 u
8001-35-2	Toxaphene	32,000 u
12674-11-2	Aroclor-1016	16,000 u
11104-28-2	Aroclor-1221	16,000 u
11141-16-5	Aroclor-1232	16,000 u
53469-21-9	Aroclor-1242	16,000 u
12672-29-6	Aroclor-1248	16,000 u
11097-69-1	Aroclor-1254	32,000 u
11096-82-5	Aroclor-1260	32,000 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)

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V_s _____ or W_s 30 V_t 1000 V_i 4

Laboratory Name ecology and environment, inc.

Case No 11-4474

Sample Number DC-SS-31

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. 79209	Acetic acid, methyl ester	VOA	11.4	29 J
2.	Hexene isomer		18.1	25 J
3.	Hexene isomer		18.9	55 J
4.	Hexene isomer		19.7	12 BJ
5.	Unknown Ketone		20.0	26 BJ
6.	Hexane isomer		21.3	24 BJ
7.	Unknown alcohol		24.0	44 J
8.	Unknown hydrocarbon		24.9	53 J
9.				
10.				
11.	UNKNOWN	BNA	24.4	180000 J
12.	UNKNOWN		25.6	430000 J
13.	UNKNOWN		26.8	160000 J
14.	UNKNOWN HYDROCARBON		27.2	9000 J
15.	UNKNOWN HYDROCARBON		27.6	31000 J
16.	UNKNOWN HYDROCARBON		27.9	43000 J
17.	UNKNOWN HYDROCARBON		29.5	59000 J
18.	UNKNOWN HYDROCARBON		30.4	56000 J
19.	UNKNOWN HYDROCARBON		30.6	54000 J
20.	UNKNOWN		33.7	72000 J
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

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Laboratory Name ecology and environment, inc.

Case No 11-4474

Sample Number DC-SS-31-RE

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	(RT) or Scan Number min.	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	18.1	730 J
2.	Hexene isomer	VOA	18.8	2500 J
3.	Hexene isomer	VOA	19.5	110 J
4.	Hexene isomer	VOA	19.9	360 J
5.	Unknown alcohol	VOA	23.4	64 J
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
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23.				
24.				
25.				
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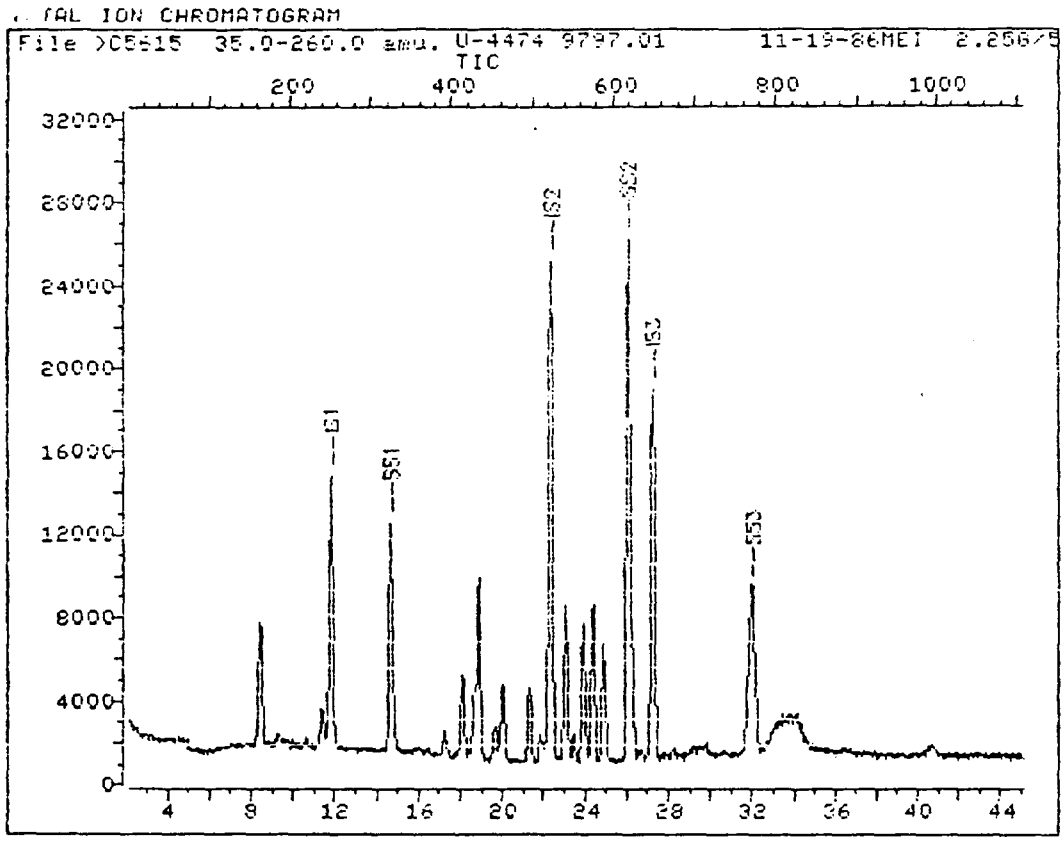
28.				
29.				
30.				

219

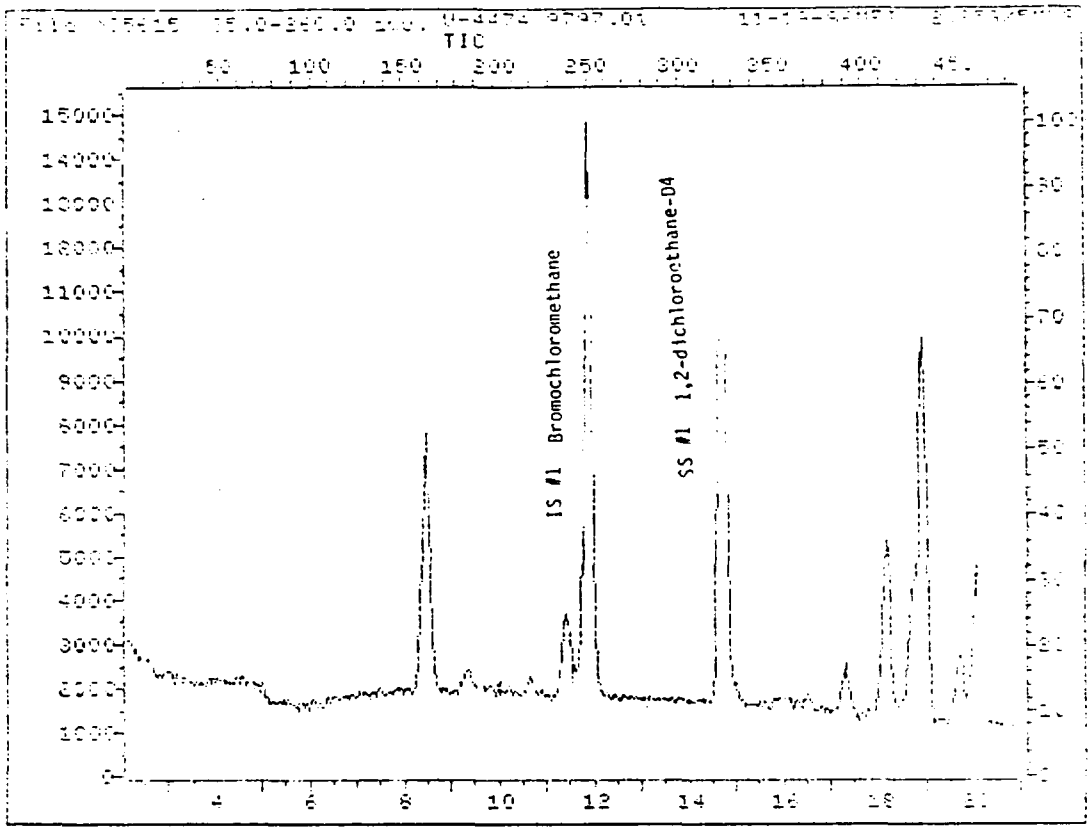


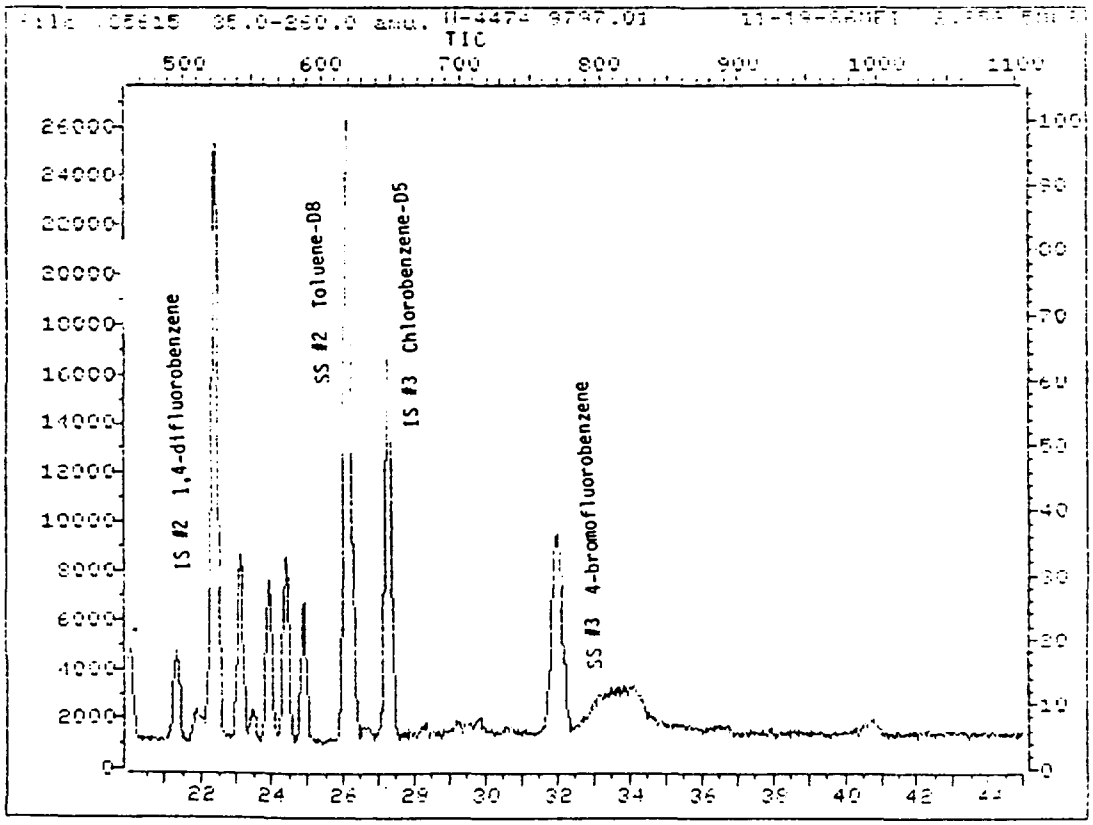
Data File: >C5615::D3
Name: U-4474 9797.01 DC-SS-31
Misc: 11-19-86MEI 2.25G/5MLS DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861119 19:02

Operator ID: USER8
Quant Time: 861120 02:50
Injected at: 861120 02:04

DC-SS-31





recycled paper

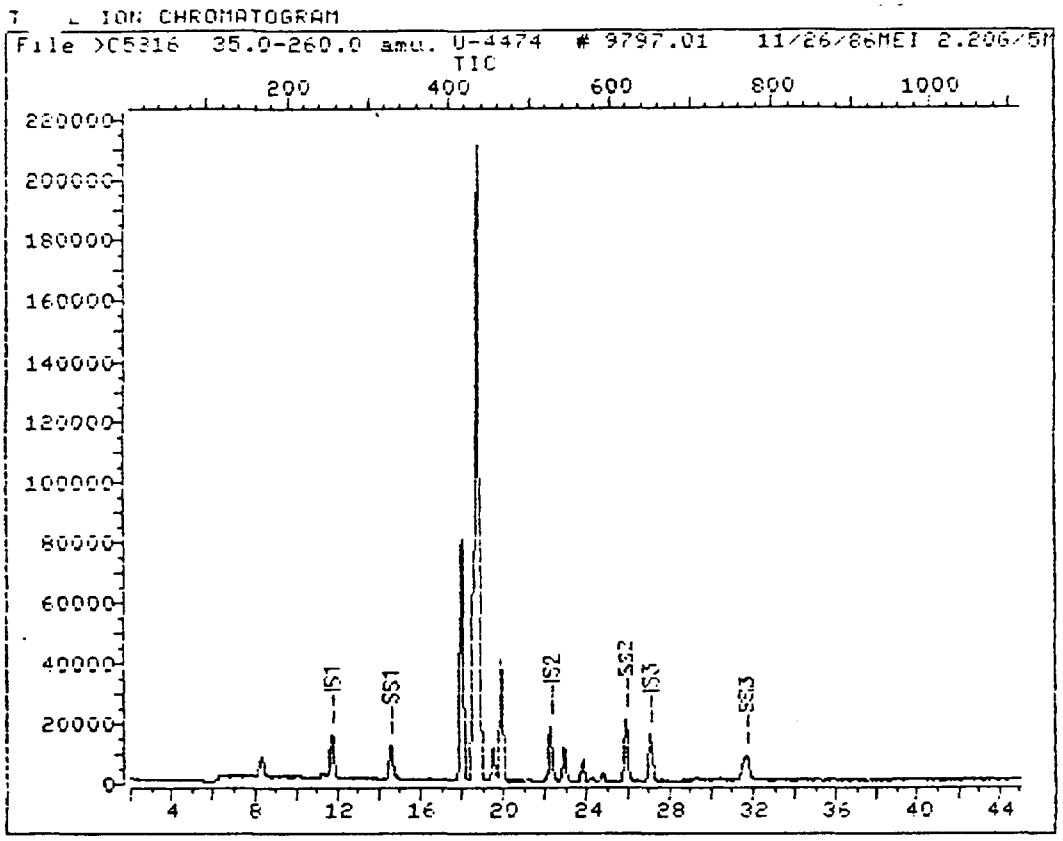
QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861120 02:50
Output File: ^C5615::Q2 Injected at: 861120 02:04
Data File: >C5615::D3 Dilution Factor: 1.00
Name: U-4474 9797.01 DC-SS-31
Misc: 11-19-86MEI 2.25G/5MLS DI + 10UL IS/SS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861119 19:02

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.85	251	18217	250.00	NGS	100
6)	METHYLENE CHLORIDE		84	8.44	163	14596	118.57	NGS	100
7)	ACETONE		43	9.33	186	3235	35.47	NGS	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.69	324	45520	249.92	NGS	89
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.41	523	98602	250.00	NGS	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.26	648	58435	250.00	NGS	100
32)	4-METHYL-2-PENTANONE		43	23.11	541	28085	130.99	NGS	79
~~32)~~	~~4-METHYL-2-PENTANONE~~		~~43~~	~~23.96~~	~~563~~	~~12276~~	~~57.26~~	~~NGS~~	59
~~33)~~	~~2-HEXANONE~~		~~43~~	~~23.96~~	~~563~~	~~12276~~	~~74.33~~	~~NGS~~ ND	100
~~33)~~	~~2-HEXANONE~~		~~43~~	~~24.42~~	~~575~~	~~21950~~	~~132.90~~	~~NGS~~	100
33)	~~2-HEXANONE~~		~~43~~	~~24.89~~	~~587~~	~~17474~~	~~105.80~~	~~NGS~~	100
36)	TOLUENE-D8	(SURR)	98	26.09	618	96500	287.70	NGS	98
40)	4-BROMOFLUOROBENZENE	(SURR)	95	32.04	771	29383	175.01	NGS	100

* Compound is ISTD

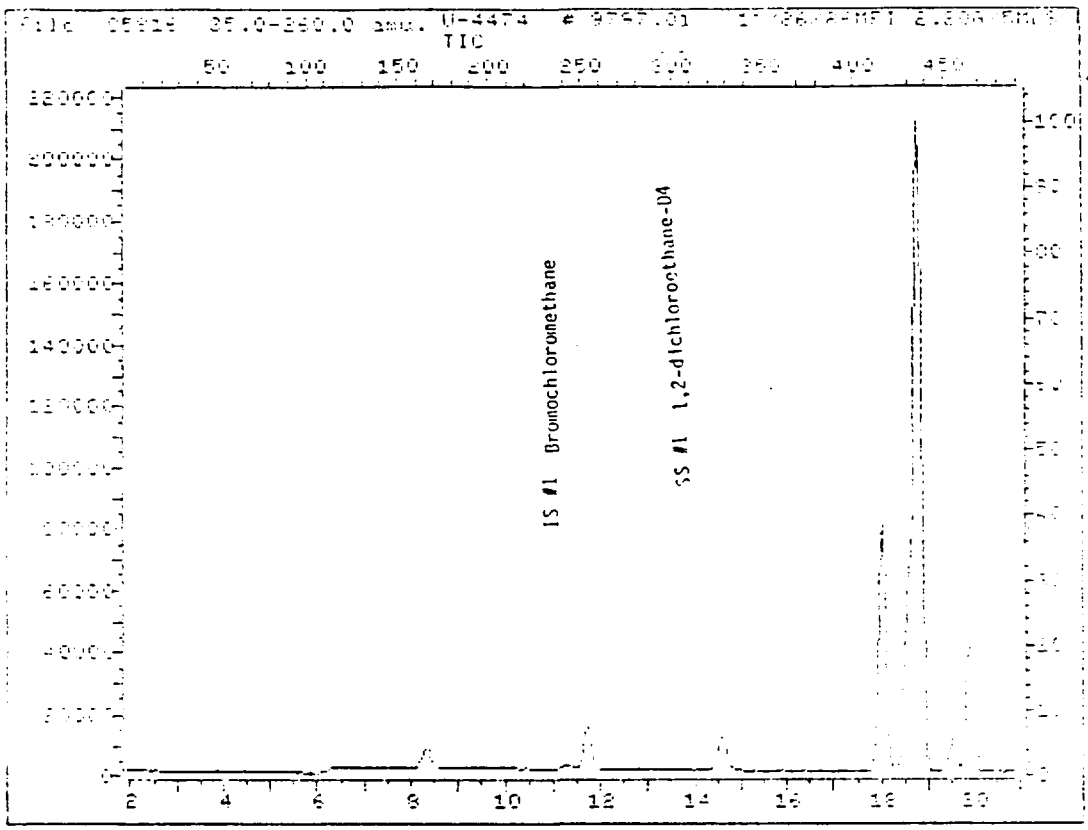


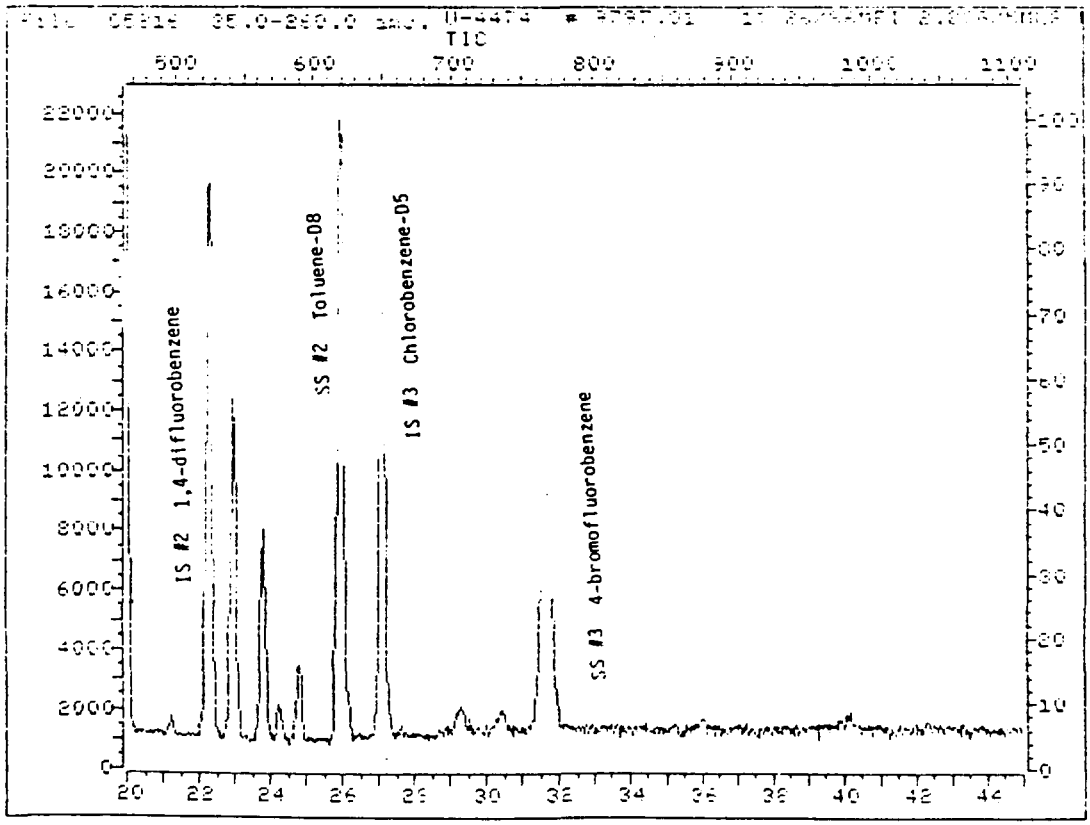
Data File: >C5816::D3
Name: U-4474 # 9797.01 DC-SS-31-RE
Misc: 11/26/86MEI 2.20G/5MLS DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861126 21:46

Operator ID: USER6
Quant Time: 861127 03:36
Injected at: 861127 02:50

DC-SS-31-RE





recycled paper

QUANT REPORT

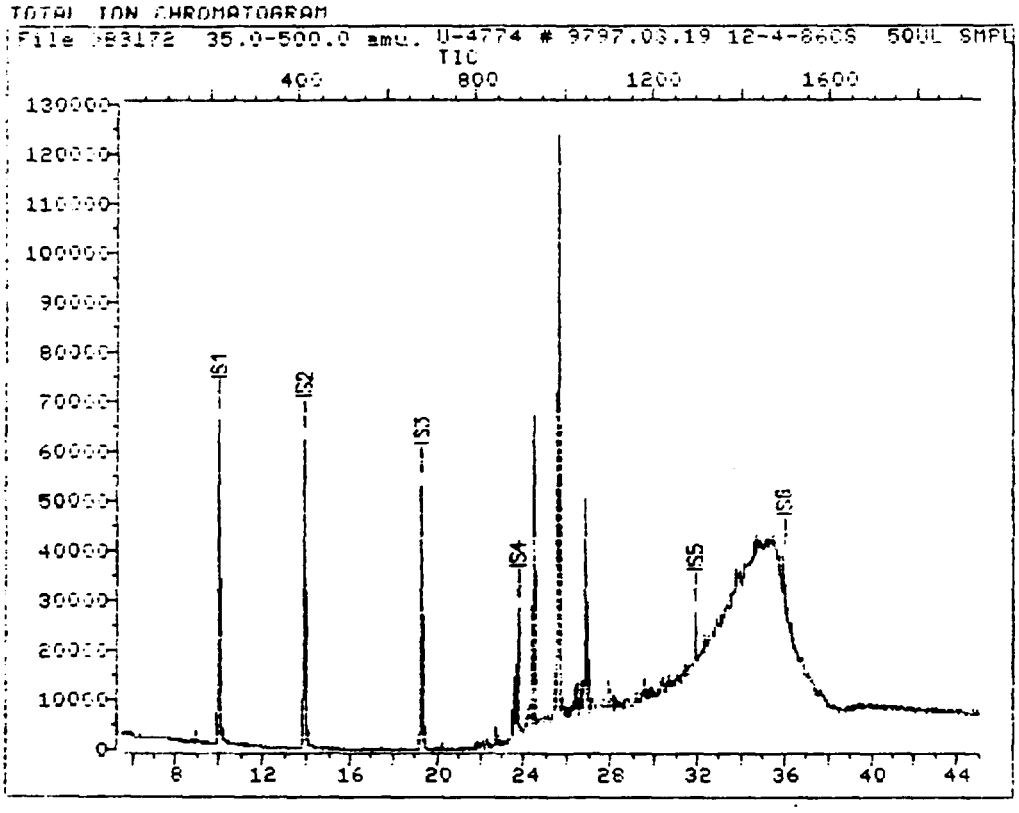
perator ID: USER6 Quant Rev: 4 Quant Time: 861127 03:36
utput File: ^C5816::Q2 Injected at: 861127 02:50
ata File: >C5816::D3 Dilution Factor: 1.00
ame: U-4474 # 9797.01 DC-SS-31-RE
sc: 11/26/86MEI 2.20G/5MLS DI + 10UL IS/SS

) File: VOACRS::D2
itle: VOA ID FILE FOR HP-5995 (CONT. CAL.)
ast Calibration: 861126 21:46

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.72	253	22255	250.00	NGS	100
6)	METHYLENE CHLORIDE		84	8.35	166	21682	127.21	NGS	100
7)	ACETONE		43	9.28	190	4381	50.54	NGS	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.56	326	48837	180.46	NGS	87
3)	*1,4-DIFLUOROBENZENE	(IS)	114	22.28	525	82107	250.00	NGS	100
1)	*CHLOROBENZENE-D5	(IS)	117	27.09	649	50792	250.00	NGS	100
2)	4-METHYL-2-PENTANONE		43	22.94	542	50329	260.64	NGS	88
~~3)~~	~~2-HEXANONE~~		~~43~~	~~23.79~~	~~564~~	~~10378~~	~~70.20~~	~~NGS~~	100
~~3)~~	~~2-HEXANONE~~		~~43~~	~~24.26~~	~~576~~	~~3510~~	~~23.74~~	~~NGS~~	100
3)	2-HEXANONE		43	24.80	590	3226	21.82	NGS	100
4)	TETRACHLOROETHENE		164	24.76	589	3145	30.45	NGS	91
5)	TOLUENE-D8	(SURR)	98	25.92	619	85432	314.65	NGS	97
1)	4-BROMOFLUOROBENZENE	(SURR)	95	31.68	767	27958	205.88	NGS	100
~~3)~~	~~1,3-DICHLOROBENZENE~~		~~146~~	~~40.09~~	~~984~~	~~3482~~	~~3482.00~~	~~NO CALIB~~	~~100~~
~~4)~~	~~1,2-DICHLOROBENZENE~~			~~40.09~~	~~984~~	~~3482~~	~~3482.00~~	~~NO CALIB~~	~~100~~
~~5)~~	~~1,4-DICHLOROBENZENE~~		~~146~~	~~40.09~~	~~984~~	~~3482~~	~~3482.00~~	~~NO CALIB~~	~~100~~

no cal

* Compound is ISTD



Data File: >B3172::D4
Name: U-4774 # 9797.03.19 DC-SS-31
Misc: 12-4-86CS 50UL SMPL + 450UL MEOL2 + 50UL IS (10X)

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861204 15:13

Operator ID: USER6
Quant Time: 861204 17:00
Injected at: 861204 15:47

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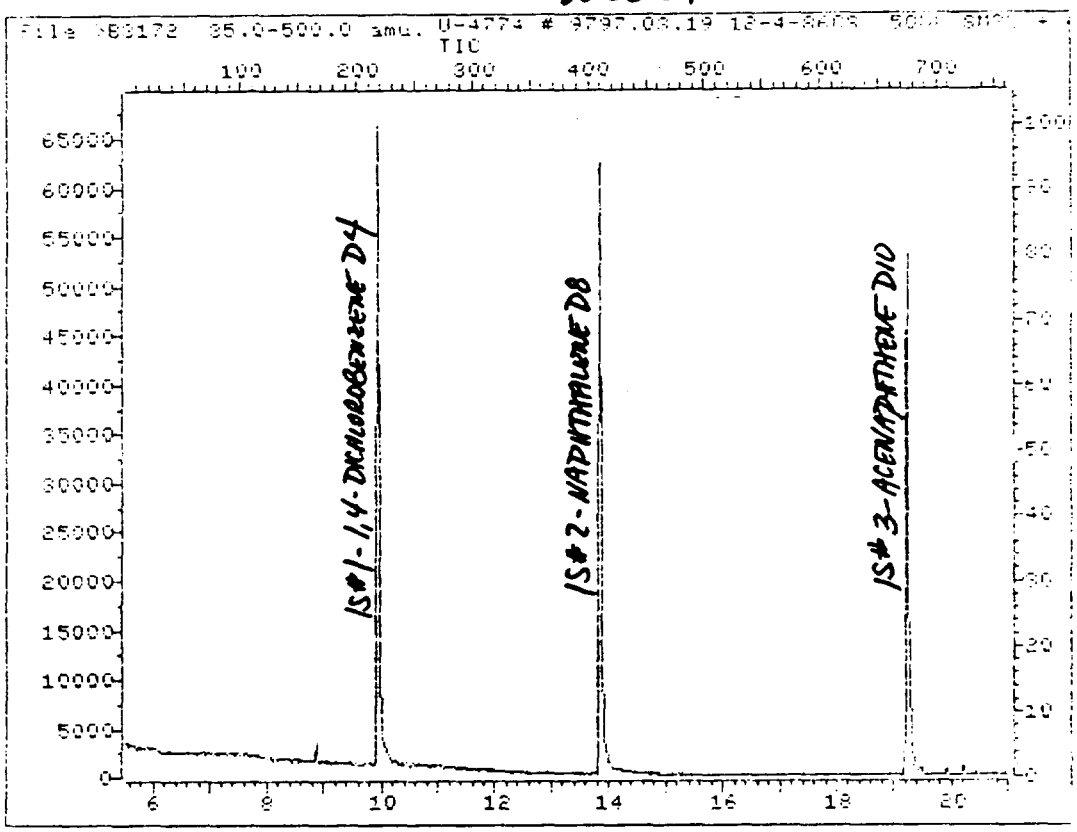
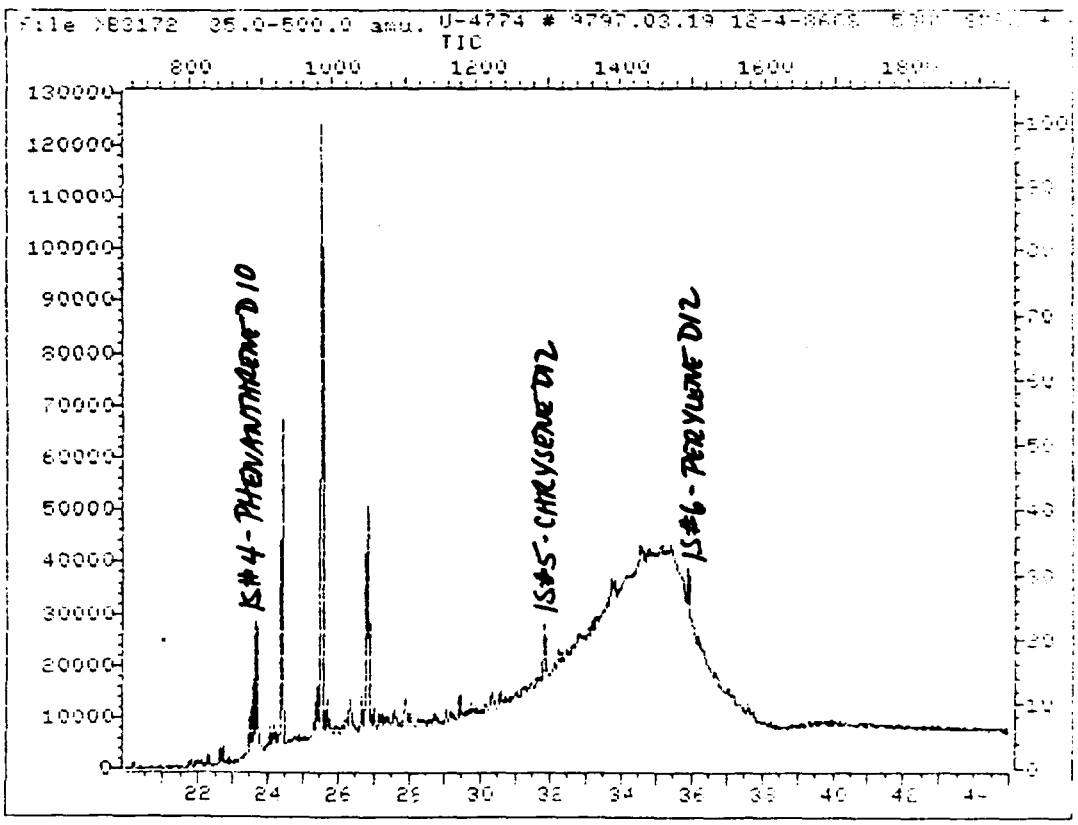
ecology and environment

DC-SS-31


File X83172 35.0-500.0 amu. U-4774 # 9797.03.19 12-4-8605
TIC
IS#1-1,4-DICHLOROBENZENE D4
IS#2-NAPHTHALENE D8
IS#3-ACENAPHTHENE D10


File X83172 35.0-500.0 amu. U-4774 # 9797.03.19 12-4-8605
TIC
IS#4-PHENANTHRENE D10
IS#5-CHRYSENE D12
IS#6-PERYLENE D12

QUANT REPORT

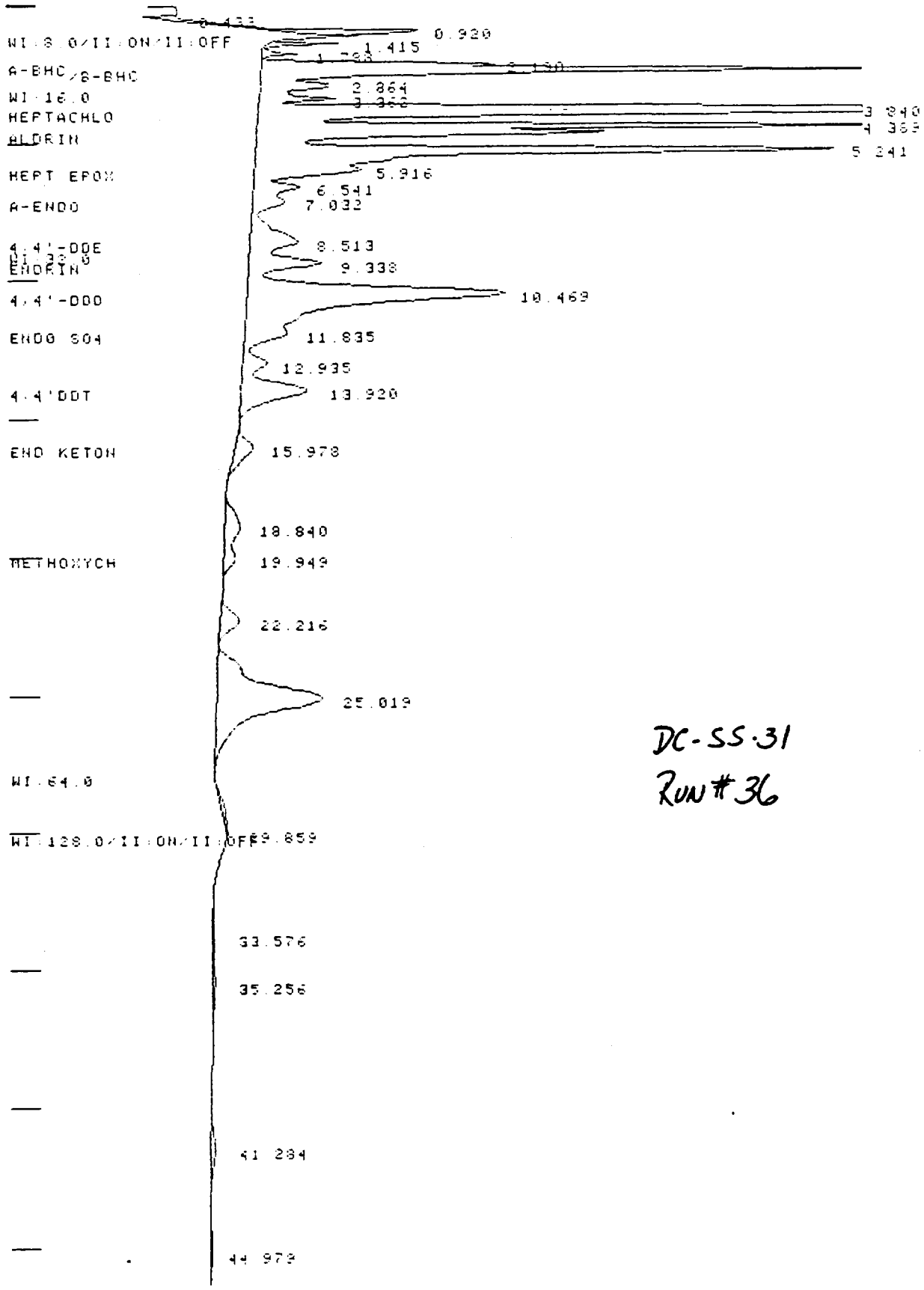
Operator ID: USER6 Quant Rev: 4 Quant Time: 861204 17:00
Output File: ^B3172::Q2 Injected at: 861204 15:47
Data File: >B3172::D4 Dilution Factor: 10.00
Name: U-4774 # 9797.03.19 DC-SS-31
Misc: 12-4-86CS 50UL SMPL + 450UL MECL2 + 5UL IS (10X) FINAL VOLUME - 5.0ml

ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861204 15:13

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.93	217	40035	40.00	UG/L	91
19)	*NAPHTHALENE-D8	(IS)	136	13.83	409	114520	40.00	UG/L	100
34)	*ACENAPHTHENE-D10	(IS)	162	19.24	675	39125	40.00	UG/L	99
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.24~~	~~675~~	~~11306~~	~~84.39~~	~~UG/L~~ No eqn	100
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.24~~	~~675~~	~~4480~~	~~154.60~~	~~UG/L~~	100
55)	*PHENANTHRENE-D10	(IS)	188	23.67	893	39109	40.00	UG/L	93
65)	*CHRYSENE-D12	(IS)	240	31.85	1295	15010	40.00	UG/L	100
74)	*PERYLENE-D12	(IS)	264	35.92	1495	14640	40.00	UG/L	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~34.60~~	~~1430~~	~~249~~	~~3.81~~	~~UG/L~~ No eqn	100

* Compound is ISTD

ATTEN: 8 ZERO: 10% 5 MIN/TICK



DC-SS-31
Run #36

229

CHANNEL: 1A - 1 TITLE: RUN# 36 8:04 10 DEC 88

SAMPLE: 8787.03.19A1 METHOD: CEPA CALCULATION: ES - ANALYS

DC-SS-31

	PEAK NO	PEAK NAME	RESULT UG/KG WET	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
	1		0.0000	1.415		27133	BV	3.31
	2		0.0000	1.788		28365	VV	5.56
CONF.	3	6-BHC	1928.754	2.188	-0.042	237724	VV	? 10.50
	4	~~6-BHC~~	3131.207	2.377	-0.063	1019488	VV	6.05
	5		0.0000	2.864		61940	VV	? 12.81
	6		0.0000	2.966		55496	VV	? 12.81
	7		0.0000	3.362		103141	VV	10.44
~~CONF.~~	8	~~[illegible]~~	39558.56	3.840	-0.052	8869193	VV	9.31
	9		0.0000	4.389		815731	VV	10.50
	10	~~ALDRIN~~	1446.893	4.636	-0.164	471592	VV	? 13.50
	11		0.0000	5.241		1271182	VV	15.25
	12	~~[illegible]~~	745.3830	5.916	0.096	228695	VV	? 25.88
	13		0.0000	6.541		108131	VV	17.75
	14	~~[illegible]~~	335.0578	7.032	-0.198	95965	VV	? 26.63
	15	~~[illegible]~~ 1173 <	751.2903	8.513	0.093	238363	VV	? 36.81
~~CONF.~~	16	~~[illegible]~~ <	812.3885	9.338	-0.062	220696	VV	22.69
CONF.	17	4,4'-DDD	5345.265	10.469	0.019	1280824	VV	35.50
	18	~~[illegible]~~	741.9295	11.835	-0.435	146943	VV	? 32.25
	19		0.0000	12.935		84968	VV	27.31
	20	~~4,4'-DDT~~	2158.623	13.920	0.270	313449	VB	36.63
	21	~~[illegible]~~ <	362.1947	15.978	0.248	100195	BB	38.00
	22		0.0000	18.840		103431	BV	? 65.50
	23	~~METHOXYCH~~ <	561.3665	19.949	-0.121	52915	VB	? 42.81
	24		0.0000	22.216		90320	BV	41.19
	25		0.0000	25.019		911891	VB	60.56
	26		0.0000	35.256		39097	VB	57.31
	27		0.0000	41.284		34035	BV	74.56

TOTALS: 57988.92 -0.409 18007928

DETECTED PKS: 39 REJECTED PKS: 12

DIVISOR: 1.50000 MULTIPLIER: 100000.000

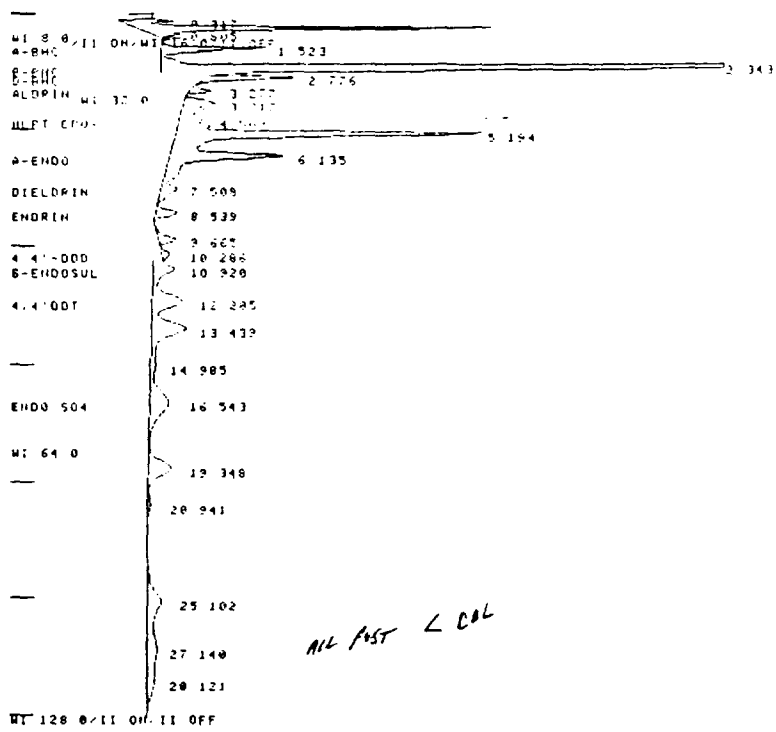
NOISE: 22.9 OFFSET: -2

RACK: 3 VIAL: 6 INJ: 1

NOTES:
NOTEBOOK:259-52 ANALYST:RICHARD SAMSON
SECURE AREA:D JOB# U-4474
INST:VARIAN 6000#2 A 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
AUTOSAMPLER
PEST/PCB ANALYSIS

POST RUN:
SAVE FILE: RAW D.CREEK3561

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



All fast < col

Run # 11

DC-SS-31

RECALCULATE ON FILE: D.C.#3758

CHANNEL: 1B - 1 TITLE: RUN# 11 3:57 18 DEC 86

SAMPLE: 9797 METHOD: PEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.523		197406	BV	5.13
2	A-BHC	123.6701	1.637	-0.043	64403	VV	? 7.69
~~3~~	~~B-BHC~~	120499.9	2.343	-0.077	22213073	VV	7.06
4	D-BHC	563.6229	2.776	-0.044	209710	T	10.63
5	ALDRIN	107.3163	3.277	0.137	50493	T	? 25.38
6		0.0000	3.819		140523	T	? 30.13
7		0.0000	4.083		125083	T	? 36.31
8		0.0000	4.569		86155	T	? 22.31
9	HEPT EPOX	263.8047	4.649	0.139	111987	T	? 19.94
10		0.0000	5.194		1279435	T	13.06
11	A-ENDO	1772.446	6.135	0.205	709703	T	17.94
12	DIELDRIN	256.9279	7.508	0.268	110802	T	22.44
13	ENDRIN	401.7476	8.539	-0.261	106186	T	18.94
14		0.0000	9.665		91386	T	22.13
~~15~~	~~4,4'-DDD~~ ratio	131.5620	10.286	-0.164	39475	T	? 30.81
16	B-ENDOSUL	469.1567	10.920	0.260	186103	VV	? 31.44
17	4,4'DDT	1123.704	12.285	-0.265	309742	VV	38.63
18	END. ALD.	1301.943	13.439	-0.581	400110	VV	37.13
19		0.0000	14.985		63279	VV	? 33.06
20	ENDO SO4	3779.972	16.543	-0.427	363780	VV	58.25
21		0.0000	19.348		278644	VV	41.94
22		0.0000	20.941		36940	VB	31.44
23	METHOXYCH	3190.491	25.102	1.082	304989	BV	64.25
24		0.0000	27.140		237786	VV	? 82.86
25		0.0000	28.121		114949	VB	?120.31

TOTALS: 133986.2 0.249 27832156

DETECTED PKS: 34 REJECTED PKS: 9

DIVISOR: 1.50000 MULTIPLIER: 100000.000

NOISE: 57.1 OFFSET: 2

RACK: 1 VIAL: 11 INJ: 1

NOTES:
NOTEBOOK:259-59 ANALYST:RICHARD SAMSON
SECURE AREA: D JOB#:U-4474
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
PESTICIDE/PCB CONFIRMATIONS
[illegible]

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SAMPLE NUMBER DC-SS-32

481095

ecology and environment

Sample Number
DC-SS-32

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474

Lab Sample ID No: 9798 QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: [illegible] Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-20-86

Conc/Dil Factor: 3 pH 6.0

Percent Moisture: (Not Decanted) 25

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	35 B
67-64-1	Acetone	30 B
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	43 B
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	15u
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	15u
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	29 J
591-78-6	2-Hexanone	30u
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	15u
108-90-7	Chlorobenzene	15u
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

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, etc. (This is not necessarily the instrument detection limit.) The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

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

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

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

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

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ecology and environment

Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No U-4474

Sample Number DC-SS-32

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed 12-4-86

Conc/Dil Factor: 50

Percent Moisture (Decanted) 25

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	11000	U
111-44-4	bis(-2-Chloroethyl)Ether	11000	U
95-57-8	2-Chlorophenol	11000	U
541-73-1	1 3-Dichlorobenzene	11000	U
106-46-7	1 4-Dichlorobenzene	11000	U
100-51-6	Benzyl Alcohol	11000	U
95-50-1	1 2-Dichlorobenzene	11000	U
95-48-7	2-Methylphenol	11000	U
39638-32-9	bis(2-chloroisopropyl)Ether	11000	U
106-44-5	4-Methylphenol	11000	U
621-64-7	N-Nitroso-Di-n-Propylamine	11000	U
67-72-1	Hexachloroethane	11000	U
98-95-3	Nitrobenzene	11000	U
78-59-1	Isophorone	11000	U
88-75-5	2-Nitrophenol	11000	U
105-67-9	2, 4-Dimethylphenol	11000	U
65-85-0	Benzoic Acid	53000	U
111-91-1	bis(-2-Chloroethoxy)Methane	11000	U
120-83-2	2, 4-Dichlorophenol	11000	U
120-82-1	1 2, 4-Trichlorobenzene	11000	U
91-20-3	Naphthalene	11000	U
106-47-8	4-Chloroaniline	11000	U
87-68-3	Hexachlorobutadiene	11000	U
59-50-7	4-Chloro-3-Methylphenol	11000	U
91-57-6	2-Methylnaphthalene	11000	U
77-47-4	Hexachlorocyclopentadiene	11000	U
88-06-2	2 4 6-Trichlorophenol	11000	U
95-95-4	2, 4, 5-Trichlorophenol	53000	U
91-58-7	2-Chloronaphthalene	11000	U
88-74-4	2-Nitroaniline	53000	U
131-11-3	Dimethyl Phthalate	11000	U
208-96-8	Acenaphthylene	11000	U
99-09-2	3-Nitroaniline	53000	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	11000	U
51-28-5	2, 4-Dinitrophenol	53000	U
100-02-7	4-Nitrophenol	53000	U
132-64-9	Dibenzofuran	11000	U
121-14-2	2 4-Dinitrotoluene	11000	U
606-20-2	2 6-Dinitrotoluene	11000	U
84-66-2	Diethylphthalate	11000	U
7005-72-3	4-Chlorophenyl-phenylether	11000	U
86-73-7	Fluorene	11000	U
100-01-6	4-Nitroaniline	53000	U
534-52-1	4, 6-Dinitro-2-Methylphenol	53000	U
86-30-6	N-Nitrosodiphenylamine (1)	11000	U
101-55-3	4-Bromophenyl-phenylether	11000	U
118-74-1	Hexachlorobenzene	11000	U
87-86-5	Pentachlorophenol	53000	U
85-01-8	Phenanthrene	11000	U
120-12-7	Anthracene	11000	U
84-74-2	Di-n-Butylphthalate	11000	U
206-44-0	Fluoranthene	11000	U
129-00-0	Pyrene	11000	U
85-68-7	Butylbenzylphthalate	11000	U
91-94-1	3, 3 -Dichlorobenzidine	22000	U
56-55-3	Benzo(a)Anthracene	11000	U
117-81-7	bis(2-Ethylhexyl)Phthalate	11000	U
218-01-9	Chrysene	11000	U
117-84-0	Di-n-Octyl Phthalate	11000	U
205-99-2	Benzo(b)Fluoranthene	11000	U
207-08-9	Benzo(k)Fluoranthene	11000	U
50-32-8	Benzo(a)Pyrene	11000	U
193-39-5	Indeno(1 2 3-cd)Pyrene	11000	U
53-70-3	Dibenz(a h)Anthracene	11000	U
191-24-2	Benzo(g h i)Perylene	11000	U

(1)-Cannot be separated from diphenylamine

ecology and environment

Laboratory Name ecology and environment, inc.

Case No U-4474

Sample Number DC-SS-32

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed 12-10-86

Conc/Dil Factor 50

Percent Moisture (decanted) 25.1

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	1600 U
72-55-9	4,4'-DDE	1600 U
72-20-8	Endrin	1600 U
33213-65-9	Endosulfan II	1600 U
72-54-8	4,4'-DDD	1600 U
1031-07-8	Endosulfan Sulfate	1600 U
50-29-3	4,4'-DDT	1600 U
72-43-5	Methoxychlor	8,000 U
53494-70-5	Endrin Ketone	1,600 U
57-74-9	Chlordane	8,000 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	8,000 U
12672-29-6	Aroclor-1248	8,000 U
11097-69-1	Aroclor-1254	16,000 U
11096-82-5	Aroclor-1260	12,600 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 30 V_t 1000 V_i 4

Form 1

7 85
491095

ecology and environment

Laboratory Name ecology and environment, inc.

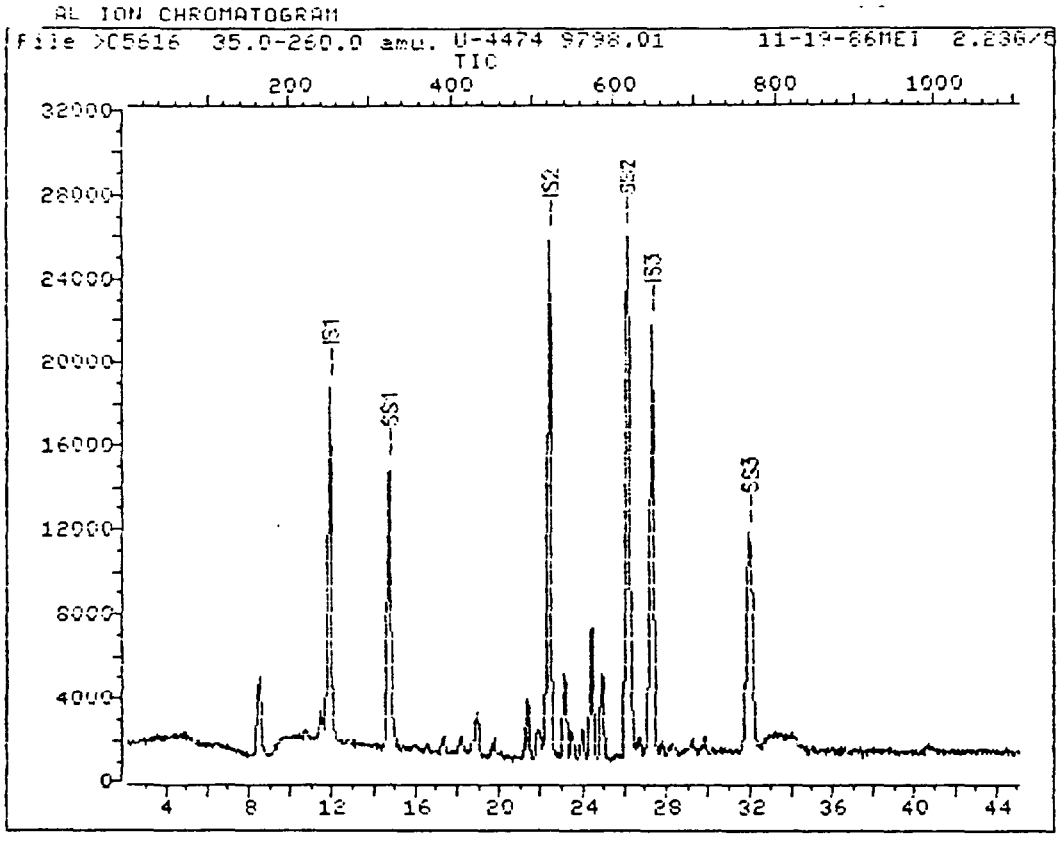
Case No 11-11174

Sample Number DC-SS-32

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number min.	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	18.2	7 J
2.	Unknown Ketone	VOA	18.7	15 J
3.	Hexane isomer	VOA	21.4	11 J
4.	Unknown hydrocarbon	VOA	23.1	17 J
5.	Unknown hydrocarbon	VOA	24.4	27 J
6.	Unknown hydrocarbon	VOA	24.7	17 J
7.				
8.	UNKNOWN AROMATIC	BNA	21.3	84000 J
9.	UNKNOWN AROMATIC		21.8	230000 J
10.	UNKNOWN AROMATIC		21.9	92000 J
11.	UNKNOWN AROMATIC		22.0	170000 J
12.	UNKNOWN AROMATIC		22.1	170000 J
13.	UNKNOWN AROMATIC		22.3	290000 J
14.	UNKNOWN AROMATIC		22.7	240000 J
15.	DIMETHYLDECYLBENZENE		22.8	140000 J
16.	UNKNOWN AROMATIC		22.9	120000 J
17.	UNKNOWN AROMATIC		23.0	46000 J
18.	UNKNOWN AROMATIC		23.3	58000 J
19.	UNKNOWN AROMATIC		23.5	64000 J
20.	UNKNOWN AROMATIC		23.8	100000 J
21.	UNKNOWN AROMATIC		24.0	80000 J
22.	UNKNOWN AROMATIC		24.1	52000 J
23.	UNKNOWN AROMATIC		24.2	94000 J
24.	UNKNOWN AROMATIC		24.4	55000 J
25.	UNKNOWN AROMATIC		25.3	120000 J
26.	UNKNOWN AROMATIC		25.6	92000 J
27.	UNKNOWN AROMATIC		25.8	78000 J
28.				
29.				
30				

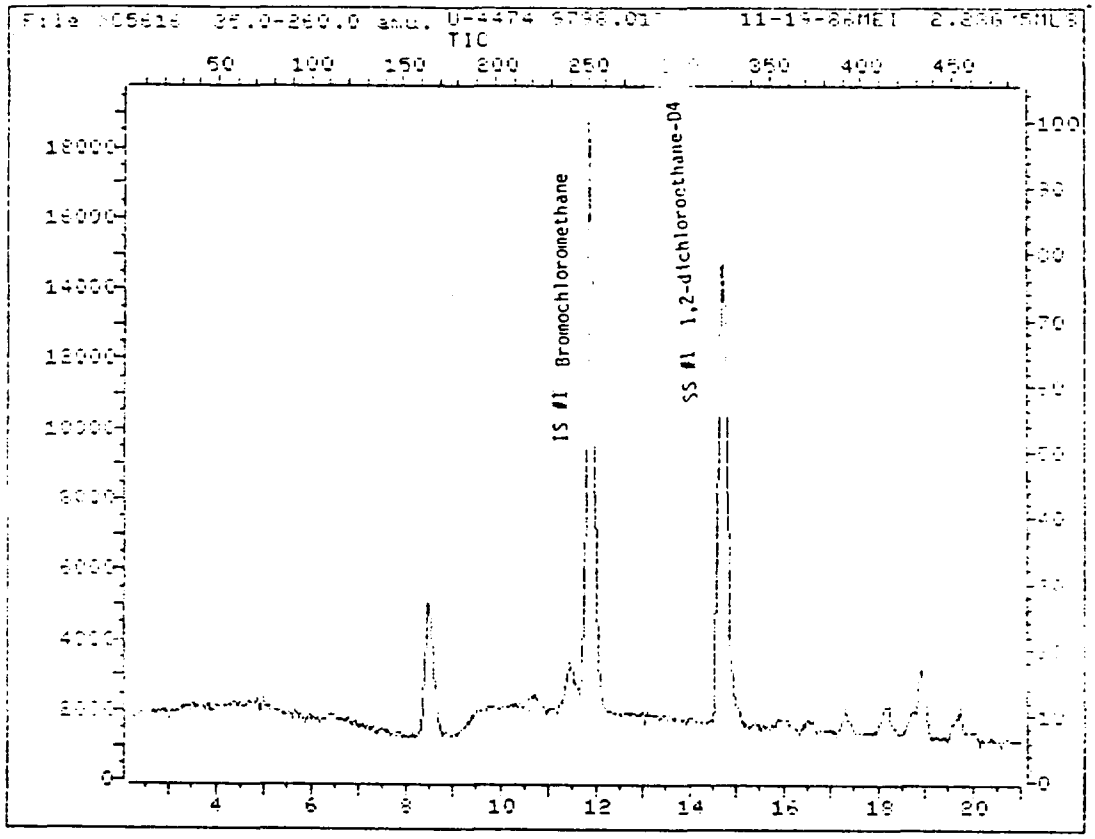


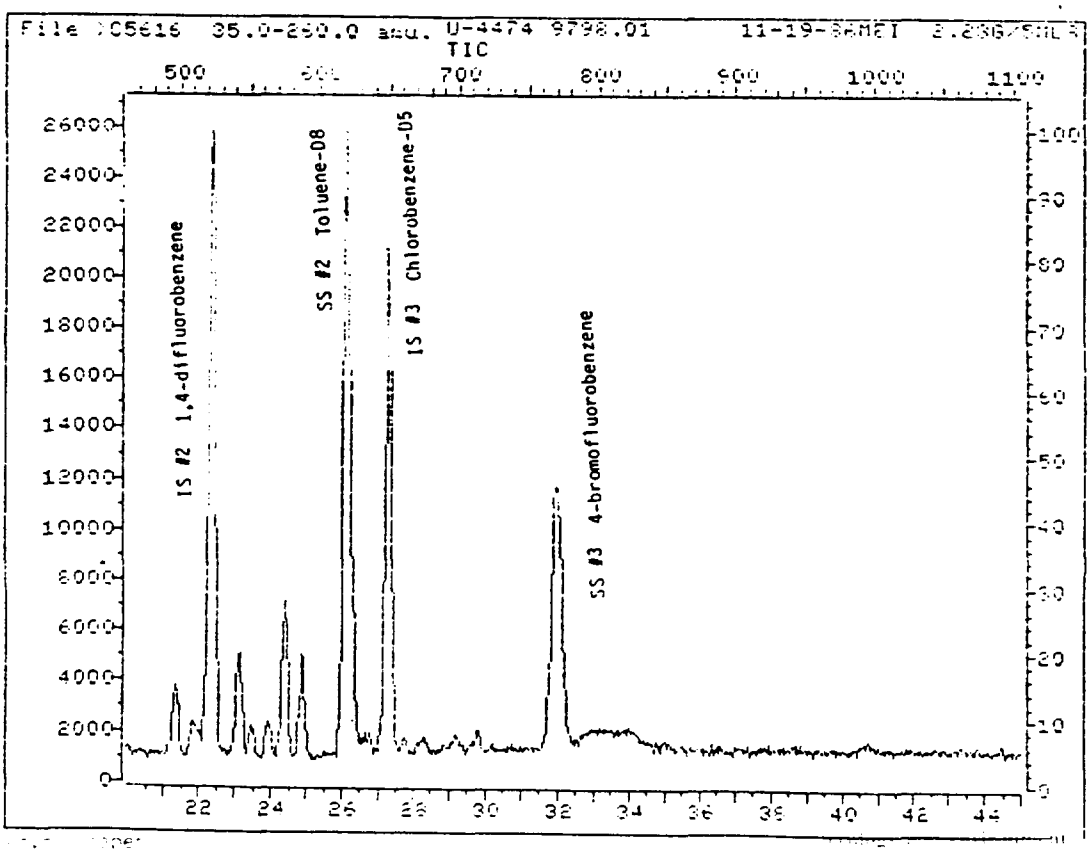
Data File: >C5616::D3
Name: U-4474 9798.01 DC-SS-32
Misc: 11-19-86MEI 2.23G/5MLS DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861119 19:02

Operator ID: USER8
Quant Time: 861120 03:46
Injected at: 861120 03:00

DC-SS-32


TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

QUANT REPORT

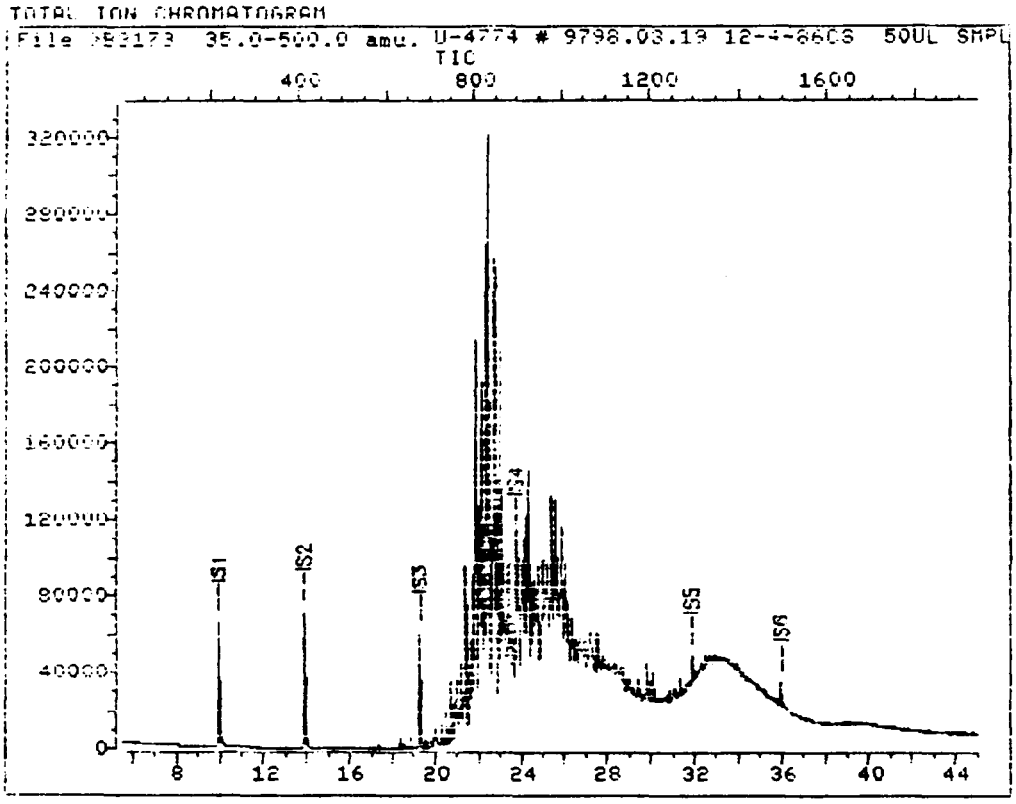
Operator ID: USER8 Quant Rev: 4 Quant Time: 861120 03:46
Output File: ^C5616::Q2 Injected at: 861120 03:00
Data File: >C5616::D3 Dilution Factor: 1.00
Name: U-4474 9798.01 DC-SS-32
Misc: 11-19-86MEI 2.23G/5MLS DI + 10UL IS/SS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861119 19:02

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.85	251	24018	250.00	NGS	100
6)	METHYLENE CHLORIDE		84	8.48	164	9561	58.91	NGS	100
7)	ACETONE		43	9.56	192	6038	50.22	NGS	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.73	325	54761	228.04	NGS	86
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.41	523	98814	250.00	NGS	100
17)	2-BUTANONE		72	14.88	329	2575	71.55	NGS	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.27	648	64802	250.00	NGS	100
32)	4-METHYL-2-PENTANONE		43	23.11	541	11565	48.64	NGS	69
~~33)~~	~~2-HEXANONE~~		~~43~~	~~23.96~~	~~563~~	~~3496~~	~~19.09~~	~~NGS~~	100
~~33)~~	~~2-HEXANONE~~		~~43~~	~~24.43~~	~~575~~	~~17740~~	~~96.70~~	~~NGS~~	100
~~33)~~	~~2-HEXANONE~~		~~43~~	~~24.89~~	~~587~~	~~12833~~	~~70.06~~	~~NGS~~	100
36)	TOLUENE-D8	(SURR)	98	26.09	618	95637	257.11	NGS	92
40)	4-BROMOFLUOROBENZENE	(SURR)	95	32.00	770	38907	208.96	NGS	100

6 no CW

* Compound is ISTD

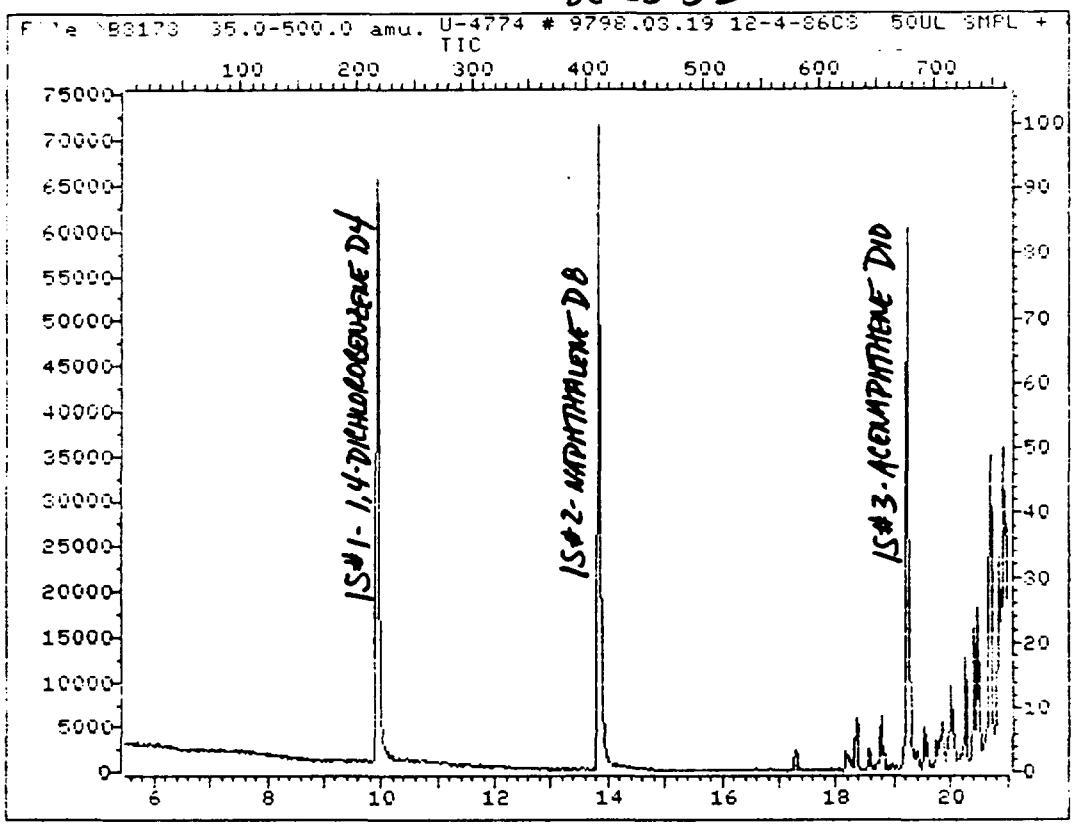


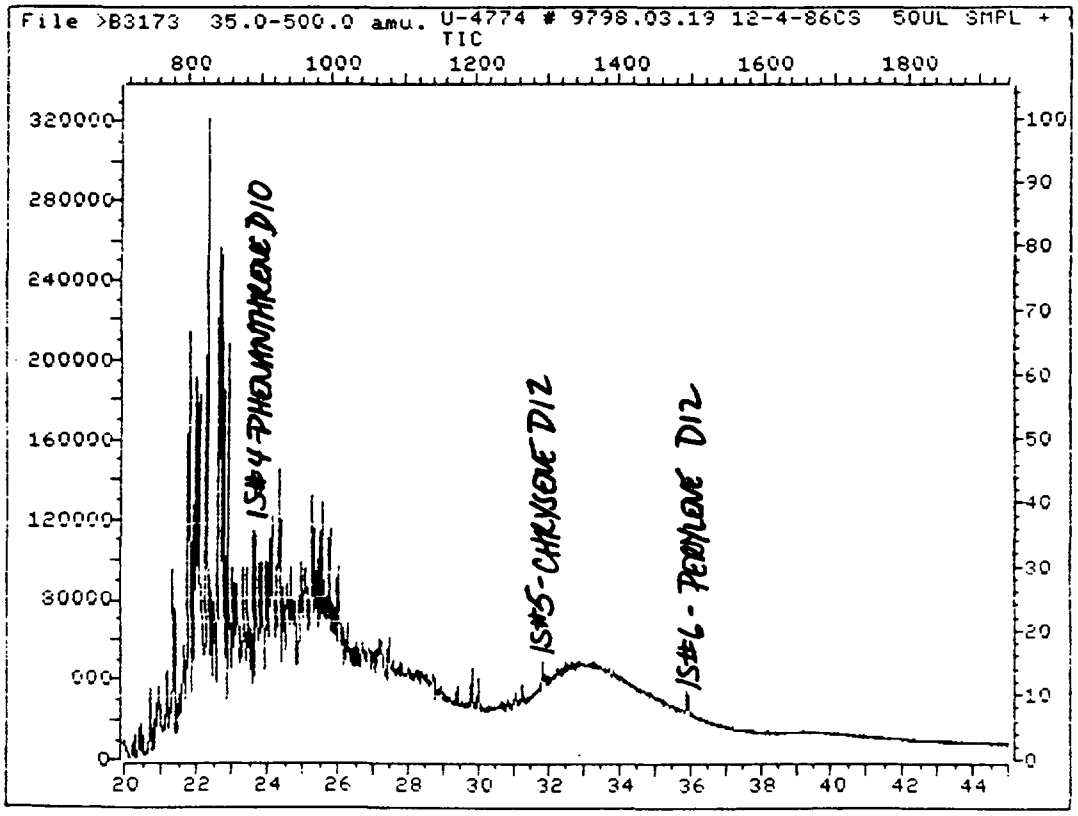
Data File: >B3173::D4
Name: U-4774 # 9798.03.19 DC-SS-32
Misc: 12-4-86CS 50UL SMPL + 450UL MEOL2 + 5UL IS (10X)

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861204 15:13

Operator ID: USER6
Quant Time: 861204 17:26
Injected at: 861204 16:38

DC-SS-32


File >B3173 35.0-500.0 amu. U-4774 # 9798.03.19 12-4-86CS 50UL SMPL +
TIC
IS#1- 1,4-DICHLOROBENZENE D4
IS#2- NAPHTHALENE D8
IS#3- ACENAPHTHENE D10


File >B3173 35.0-500.0 amu. U-4774 # 9798.03.19 12-4-86CS 50UL SMPL +
TIC
IS#4-PHENANTHRENE D10
IS#5-CHRYSENE D12
IS#6- PERYLENE D12

QUANT REPORT

Operator ID: USER6 Quant Rev: 4 Quant Time: 861204 17:26
Output File: ^B6173::Q2 Injected at: 861204 16:38
Data File: ^B6173::D4 Dilution Factor: 10.00
Name: U-4774 # 9798.03.19 DC-SS-32
Misc: 12-4-86 S 5UL SMPL + 45UL MECL2 + 5UL IS (10X)

FINAL VOLUME - 5.0 ml

ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861204 15:13

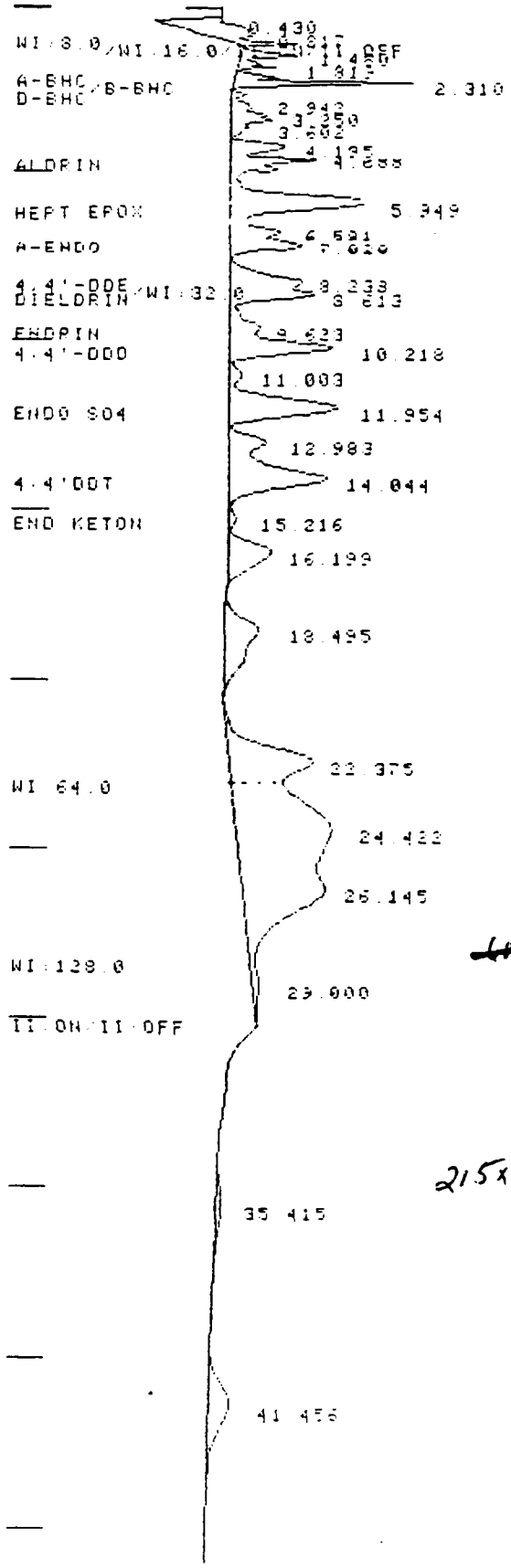
	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
33)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.92	218	38941	40.00	UG/L	91
39)	*NAPHTHALENE-D8	(IS)	136	13.84	411	109952	40.00	UG/L	100
34)	*ACENAPHTHENE-D10	(IS)	162	19.22	676	38885	40.00	UG/L	97
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.22~~	~~676~~	~~10946~~	~~82.14~~	~~UG/L~~	~~100~~
~~42)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.22~~	~~676~~	~~4546~~	~~15.67~~	~~UG/L~~	~~100~~
55)	*PHENANTHRENE-D10	(IS)	188	23.68	895	39824	40.00	UG/L	99
65)	*CHRYSENE-D12	(IS)	240	31.84	1295	21482	40.00	UG/L	100
74)	*PERYLENE-D12	(IS)	264	35.92	1495	19783	40.00	UG/L	100

Negative

* Compound is ISTD

ecology and environment

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



DC-SS-32
RUN # 38

~~60.3 x 0.00299 x 1/1.5 x 50,000 = 5,000 ug/kg wet 1240~~

~~1,700 J ug/kg 1240~~

$215 \times 0.00131 \times \frac{1}{1.5} \times 50{,}000 = 9{,}400$ ug/kg wet 1260

12,600 J ug/kg Dry 1260

CHANNEL: 1A - 1 TITLE: RUN# 38 1:44 10 DEC 85

DC-SS-32

SAMPLE: 9798.01.19A1 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	1.480		40753	BV	7.44
2		0.0000	1.819		20384	VV	4.81
3	[illegible]	45.1408	2.142	0.052	31560	VV	6.44
4	[illegible]	397.0180	2.310	0.080	97867	VV	5.58
5		0.0000	3.250		24739	VV	? 9.19
6		0.0000	3.390		35399	VV	? 10.38
7	[illegible]	47.2697	3.602	-0.288	23580	VV	? 30.53
8		0.0000	4.195		88998	VV	18.88
9	[illegible]	181.2252	4.688	-0.112 60.3	118135	VV	15.06
10		0.0000	4.988		57898	VV	? 13.75
11	[illegible]	454.2760	5.949	0.129	278759	VV	20.88
12		0.0000	6.591		60629	VV	? 17.44
13	[illegible]	267.5627	7.028	-0.202	150299	VV	? 25.69
14	[illegible]	323.1764	8.238	-0.092	178061	VV	? 33.25
15	[illegible]	253.6971	8.613	0.193	158831	VV	? 26.56
16	[illegible]	138.6093	9.623	0.043	76949	VV	? 29.81
17	[illegible]	498.8035	10.218	-0.232	238045	VV	24.06
18	[illegible]	67.0628	11.003	0.463	28919	VV	25.00
19	[illegible]	839.5195	11.954	-0.316	332542	VV	33.13
20		0.0000	12.983		100464	VV	? 29.44
21	[illegible]	1240.618	14.044	0.394	380295	VV	36.75
22	[illegible]	331.4789	16.199	0.469	182396	VB	47.69
23		0.0000	18.495		235512	BV	81.13
24		0.0000	22.375		436478	VV	? 55.19
25		0.0000	24.422		1040574	VV	?149.19
26	[illegible]	1394.325	26.145	-1.225	664315	VV	?168.63
27		0.0000	29.000		34897	VB	? 74.50
28		0.0000	35.415		42952	BB	61.13
29		0.0000	41.456		181067	EB	87.81
TOTALS:		6479.795		-0.644	5350997		

DETECTED PKS: 44 REJECTED PKS: 15

DIVISOR: 1.50000 MULTIPLIER: 50000.0000

NOISE: 22.9 OFFSET: -11

RACK: 3 VIAL: 8 INJ: 1

NOTES:
NOTEBOOK:259-52 ANALYST:RICHARD SAMSON
SECURE AREA:D JOB# U-4474
INST:VARIAN 6000#2 A 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
AUTOSAMPLER
PEST/PCB ANALYSIS

POST RUN:
SAVE FILE: PAW D.CREEK3583

ecology and environment

SAMPLE NUMBER DC-SS-33

481095

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Sample Number
DC-SS-33

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474

Lab Sample ID No: 9799 QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: [signature] Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-27-86

Conc./Dil Factor: 10 pH 5.0

Percent Moisture: (Not Decanted) 32

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	230B
67-64-1	Acetone	170B
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	100u
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	2000
591-78-6	2-Hexanone	89B
127-18-4	Tetrachloroethene	50u
79-34-5	1,1,2,2-Tetrachloroethane	50u
108-88-3	Toluene	50u
108-90-7	Chlorobenzene	50u
100-41-4	Ethylbenzene	50u
100-42-5	Styrene	50u
	Total Xylenes	50u

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. 100U) based on necessary concentration, dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

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

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

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

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

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recycled paper ecology and environment

Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No U-4474

Sample Number DC-SS-33

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed 12-4-86

Conc/Dil Factor 50

Percent Moisture (Decanted) 32

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	12000	U
111-44-4	bis(-2-Chloroethyl)Ether	12000	U
95-57-8	2-Chlorophenol	12000	U
541-73-1	1 3-Dichlorobenzene	12000	U
106-46-7	1 4-Dichlorobenzene	12000	U
100-51-6	Benzyl Alcohol	12000	U
95-50-1	1 2-Dichlorobenzene	12000	U
95-48-7	2-Methylphenol	12000	U
39638-32-9	bis(2-chloroisopropyl)Ether	12000	U
106-44-5	4-Methylpheno	12000	U
621-64-7	N-Nitroso-Di-n-Propylamine	12000	U
67-72-1	Hexachloroethane	12000	U
98-95-3	Nitrobenzene	12000	U
78-59-1	Isophorone	12000	U
88-75-5	2-Nitrophenol	12000	U
105-67-9	2, 4-Dimethylphenol	12000	U
65-85-0	Benzoic Acid	59000	U
111-91-1	bis(-2-Chloroethoxy)Methane	12000	U
120-83-2	2 4-Dichlorophenol	12000	U
120-82-1	1 2, 4-Trichlorobenzene	12000	U
91-20-3	Naphthalene	12000	U
106-47-8	4-Chloroaniline	12000	U
87-68-3	Hexachlorobutadiene	12000	U
59-50-7	4-Chloro-3-Methylphenol	12000	U
91-57-6	2-Methylnaphthalene	12000	U
77-47-4	Hexachlorocyclopentadiene	12000	U
88-06-2	2 4 6-Trichlorophenol	12000	U
95-95-4	2 4, 5-Trichlorophenol	59000	U
91-58-7	2-Chloronaphthalene	12000	U
88-74-4	2-Nitroaniline	59000	U
131-11-3	Dimethyl Phthalate	12000	U
208-96-8	Acenaphthylene	12000	U
99-09-2	3-Nitroaniline	59000	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	12000	U
51-28-5	2, 4-Dinitrophenol	59000	U
100-02-7	4-Nitrophenol	59000	U
132-64-9	Dibenzofuran	12000	U
121-14-2	2 4-Dinitrotoluene	12000	U
606-20-2	2 6-Dinitrotoluene	12000	U
84-66-2	Diethylphthalate	12000	U
7005-72-3	4-Chlorophenyl-phenylether	12000	U
86-73-7	Fluorene	12000	U
100-01-6	4-Nitroaniline	59000	U
534-52-1	4, 6-Dinitro-2-Methylphenol	59000	U
86-30-6	N-Nitrosodiphenylamine (1)	12000	U
101-55-3	4-Bromophenyl-phenylether	12000	U
118-74-1	Hexachlorobenzene	12000	U
87-86-5	Pentachlorophenol	59000	U
85-01-8	Phenanthrene	12000	U
120-12-7	Anthracene	12000	U
84-74-2	Di-n-Butylphthalate	12000	U
206-44-0	Fluoranthene	12000	U
129-00-0	Pyrene	12000	U
85-68-7	Butylbenzylphthalate	12000	U
91-94-1	3 3-Dichlorobenzidine	24000	U
56-55-3	Benzo(a)Anthracene	12000	U
117-81-7	bis(2-Ethylhexyl)Phthalate	1400	J
218-01-9	Chrysene	12000	U
117-84-0	Di-n-Octyl Phthalate	2000	J
205-99-2	Benzo(b)Fluoranthene	12000	U
207-08-9	Benzo(k)Fluoranthene	12000	U
50-32-8	Benzo(a)Pyrene	12000	U
193-39-5	Indeno(1 2, 3-cd)Pyrene	12000	U
53-70-3	Dibenzo(a h)Anthracene	12000	U
191-24-2	Benzo(g h i)Perylene	12000	U

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No V-4474

Sample Number DC-SS-33

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed 12-10-86

Conc/Dil Factor: 100

Percent Moisture (decanted) ~~29.8~~ 32

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	1600 U
319-85-7	Beta-BHC	1,600 U
319-86-8	Delta-BHC	1,600 U
58-89-9	Gamma-BHC (Lindane)	1,600 U
76-44-8	Heptachlor	1,600 U
309-00-2	Aldrin	1,600 U
1024-57-3	Heptachlor Epoxide	1,600 U
959-98-8	Endosulfan I	1,600 U
60-57-1	Dieldrin	3,200 U
72-55-9	4,4'-DDE	3,200 U
72-20-8	Endrin	3,200 U
33213-65-9	Endosulfan II	3,200 U
72-54-8	4,4'-DDD	3,200 U
1031-07-8	Endosulfan Sulfate	3,200 U
50-29-3	4,4'-DDT	3,200 U
72-43-5	Methoxychlor	16,000 U
53494-70-5	Endrin Ketone	3,200 U
57-74-9	Chlordane	16,000 U
8001-35-2	Toxaphene	32,000 U
12674-11-2	Aroclor-1016	16,000 U
11104-28-2	Aroclor-1221	16,000 U
11141-16-5	Aroclor-1232	16,000 U
53469-21-9	Aroclor-1242	16,000 U
12672-29-6	Aroclor-1248	16,000 U
11097-69-1	Aroclor-1254	32,000 U
11096-82-5	Aroclor-1260	25,600 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 30 V_t 1000 V_i 4

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Laboratory Name ecology and environment, inc.

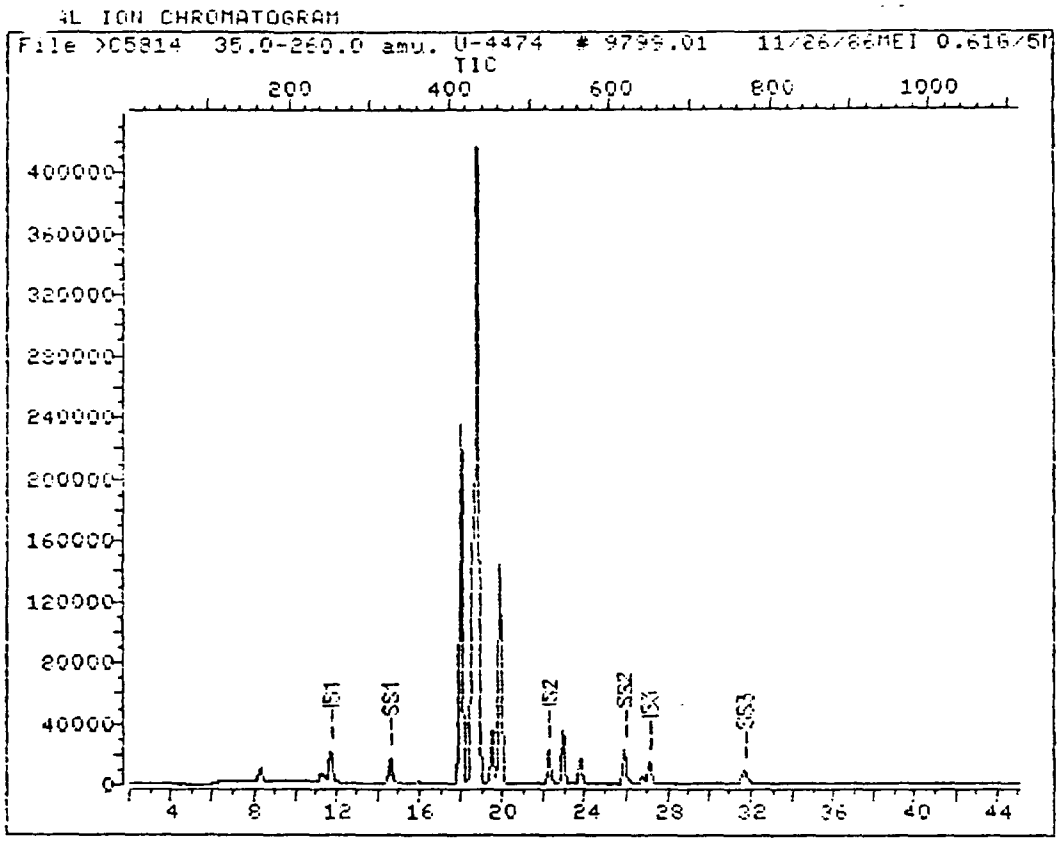
Case No 11-4474

Sample Number DC-SS-33

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. 79209	Acetic acid, methyl ester	VOA	11.3	240 J
2.	Hexene isomer		18.0	5800 J
3.	Hexene isomer		18.8	15000 J
4.	Hexene isomer		19.5	910 J
5.	Hexene isomer		19.9	3600 J
6.	Unknown alcohol		23.8	430 J
7.	Unknown hydrocarbon		26.8	230 J
8.				
9.	UNKNOWN AROMATIC	BNA	20.4	39000 J
10.	UNKNOWN AROMATIC	BNA	20.7	68000 J
11.	UNKNOWN AROMATIC		21.2	47000 J
12.	UNKNOWN AROMATIC		21.4	230000 J
13.	DIMETHYL DECYL BENZENE		21.6	100000 J
14.	DIMETHYL DECYL BENZENE		21.8	610000 J
15.	UNKNOWN AROMATIC		21.9	290000 J
16.	UNKNOWN AROMATIC		22.0	370000 J
17.	UNKNOWN AROMATIC		22.1	470000 J
18.	UNKNOWN AROMATIC		22.3	650000 J
19.	UNKNOWN AROMATIC		22.5	120000 J
20.	DIMETHYL DECYL BENZENE		22.7	400000 J
21.	UNKNOWN AROMATIC		22.8	260000 J
22.	UNKNOWN AROMATIC		22.9	180000 J
23.	UNKNOWN		23.5	65000 J
24.	UNKNOWN		23.6	74000 J
25.	UNKNOWN		25.5	60000 J
26.	UNKNOWN		26.8	420000 J
27 10544500	MOLECULAR SULFUR		27.0	220000 J
28.	UNKNOWN AROMATIC		29.8	51000 J
29.				
30				

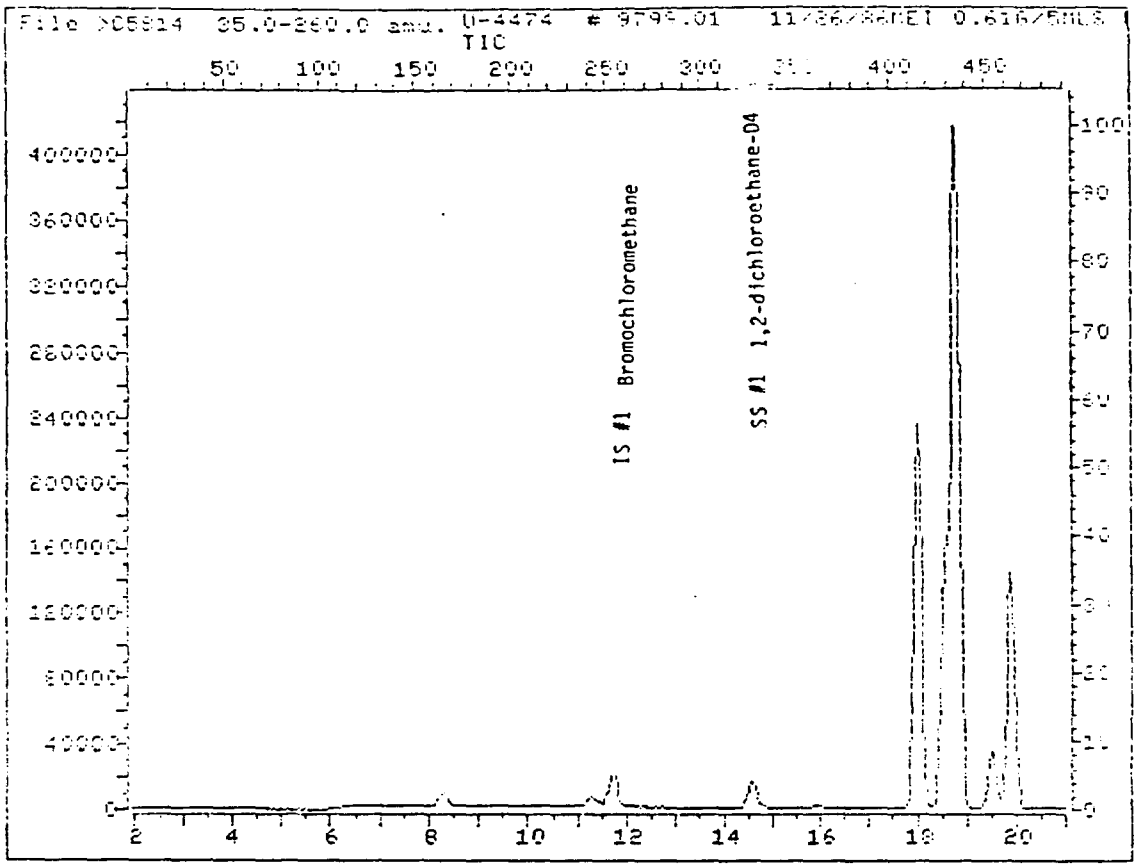


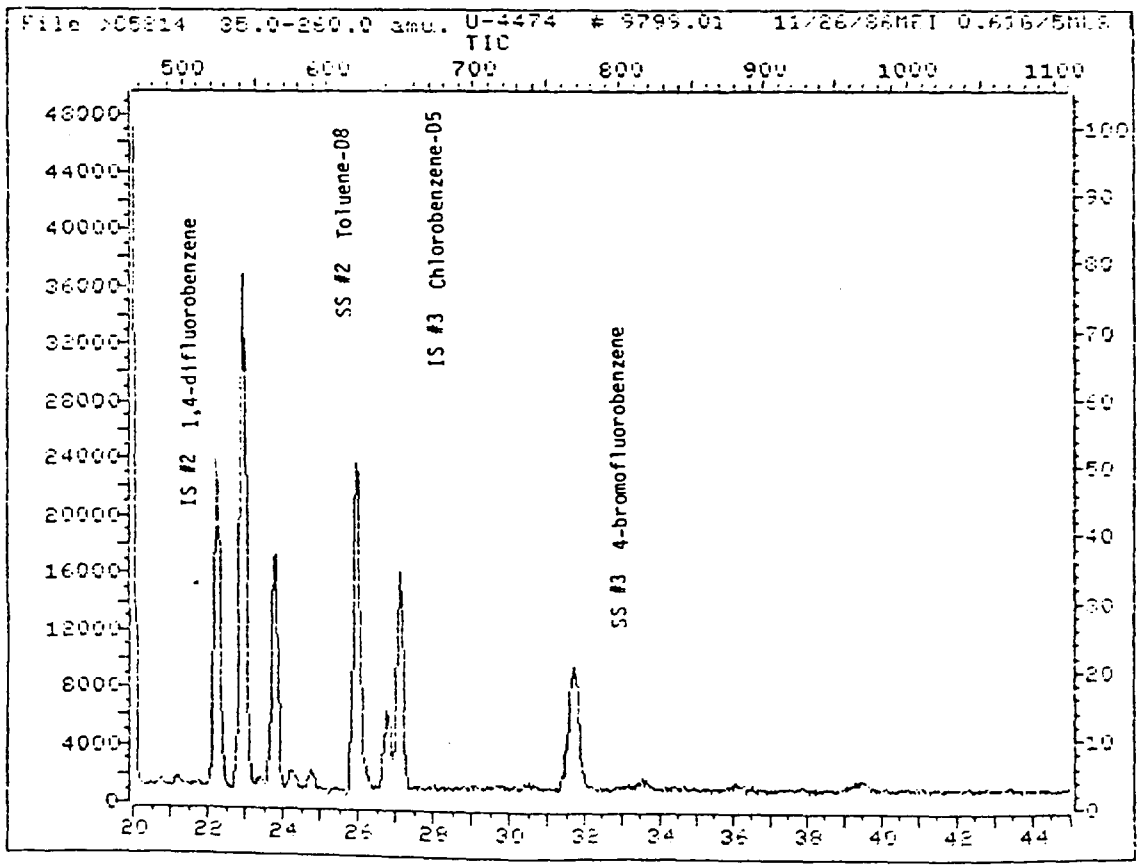
Data File: >C5814::D3
Name: U-4474 # 9799.01 DC-SS-33
Misc: 11/26/86MEI 0.61G/5MLS DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861126 21:46

Operator ID: USER6
Quant Time: 861127 11:57
Injected at: 861127 01:00

DC-SS-33


File >05814 35.0-260.0 amu. U-4474 # 9795.01 11/26/86MFI 0.616/5MLS
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File >05814 35.0-260.0 amu. U-4474 # 9795.01 11/26/86MFI 0.616/5MLS
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

QUANT REPORT

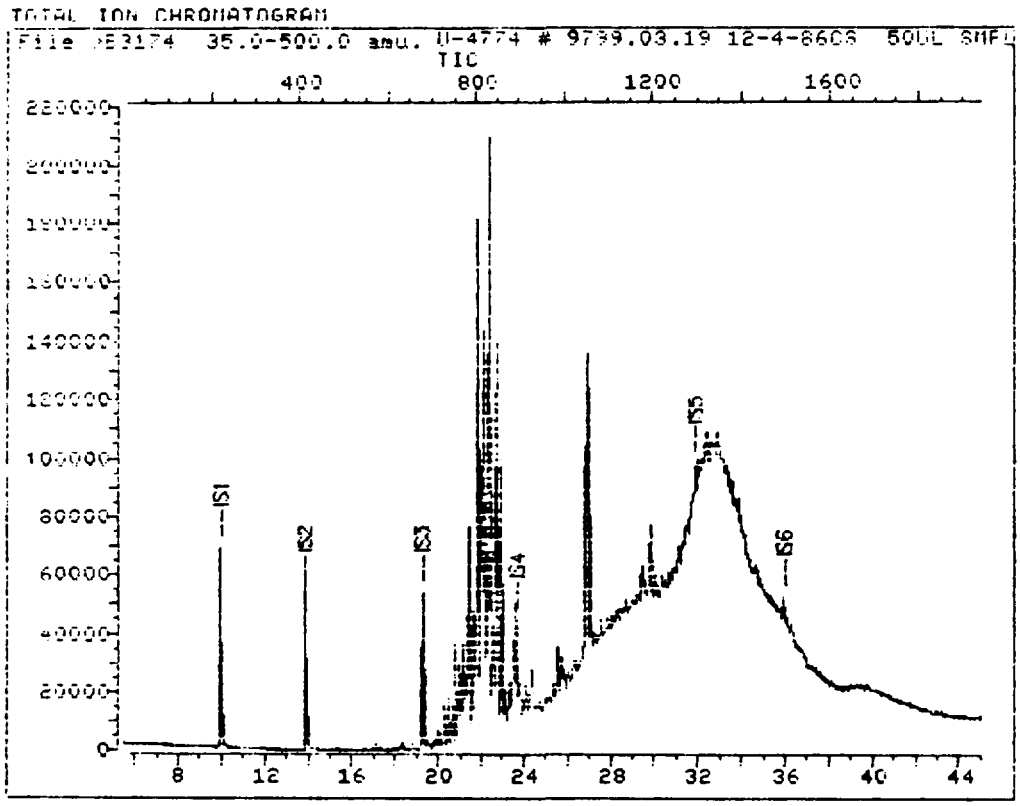
perator ID: USER6 Quant Rev: 4 Quant Time: 861127 11:57
utput File: ^C5814::Q2 Injected at: 861127 01:00
ata File: >C5814::D3 Dilution Factor: 1.00
ame: U-4474 # 9799.01 DC-SS-33
isc: 11/26/86MEI 0.61G/5MLS DI + 10UL IS/SS

D File: VOACRS::D2
itle: VOA ID FILE FOR HP-5995 (CONT. CAL.)
ast Calibration: 861126 21:46

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.72	253	31021	250.00	NGS	100
6)	METHYLENE CHLORIDE		84	8.31	165	22260	93.69	NGS	100
7)	ACETONE		43	9.20	188	8359	69.17	NGS	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.60	327	67096	177.87	NGS	88
6)	*1,4-DIFLUOROBENZENE	(IS)	114	22.24	524	100816	250.00	NGS	100
1)	*CHLOROBENZENE-D5	(IS)	117	27.09	649	51150	250.00	NGS	100
2)	4-METHYL-2-PENTANONE		43	22.94	542	161716	831.62	NGS	88
2)	~~4-METHYL-2-PENTANONE~~		~~43~~	~~23.79~~	~~564~~	~~24871~~	~~127.90~~	~~NGS~~	50
~~3)~~	~~2-HEXANONE~~		~~43~~	~~23.79~~	~~564~~	~~24871~~	~~167.05~~	~~NGS~~	100
3)	~~2-HEXANONE~~		~~43~~	~~24.26~~	~~576~~	~~4991~~	~~33.52~~	~~NGS~~	100
3)	2-HEXANONE		43	24.76	589	5531	37.15	NGS	100
6)	TOLUENE-D8	(SURR)	98	25.93	619	58953	215.61	NGS	88
0)	4-BROMOFLUOROBENZENE	(SURR)	95	31.72	768	27539	201.38	NGS	100
3)	~~1,3-DICHLOROBENZENE~~		~~146~~	~~39.32~~	~~964~~	~~3224~~	~~3224.00~~	~~NO CAL~~	IB100
4)	~~1,2-DICHLOROBENZENE~~			~~39.32~~	~~964~~	~~3224~~	~~3224.00~~	~~NO CAL~~	IB100
5)	~~1,4-DICHLOROBENZENE~~		~~146~~	~~39.32~~	~~964~~	~~3224~~	~~3224.00~~	~~NO CAL~~	IB100

no cal

* Compound is ISTD

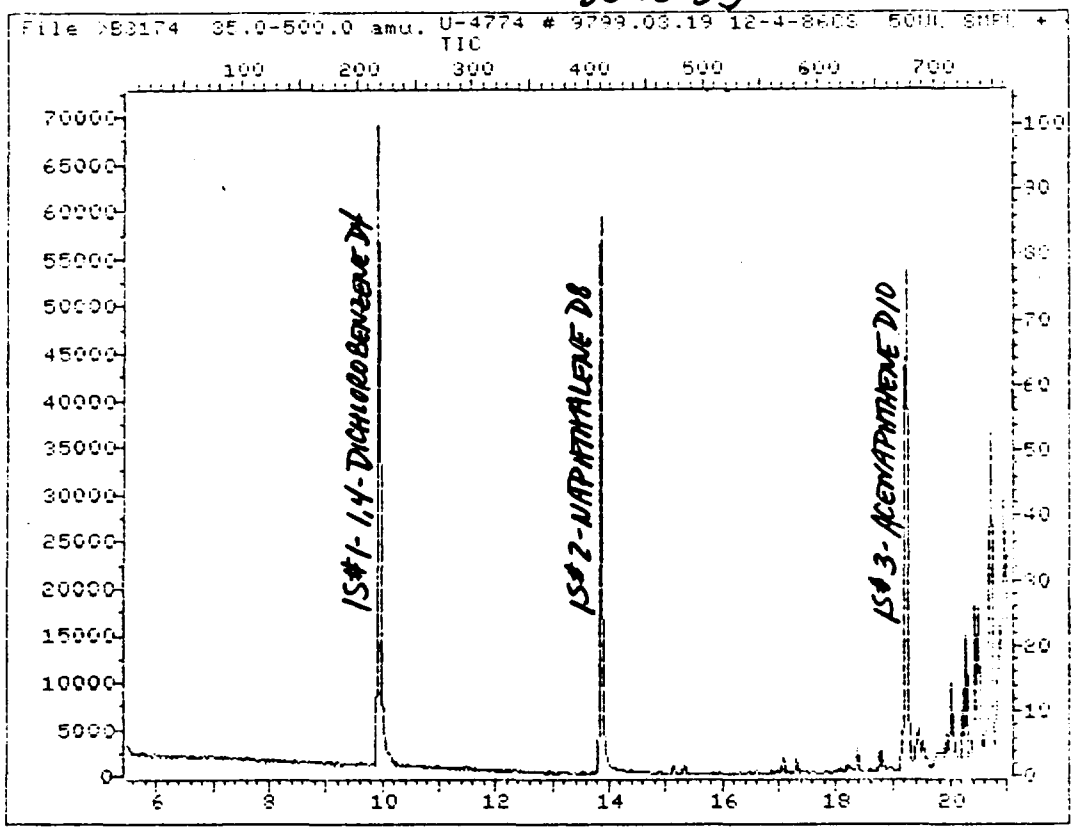


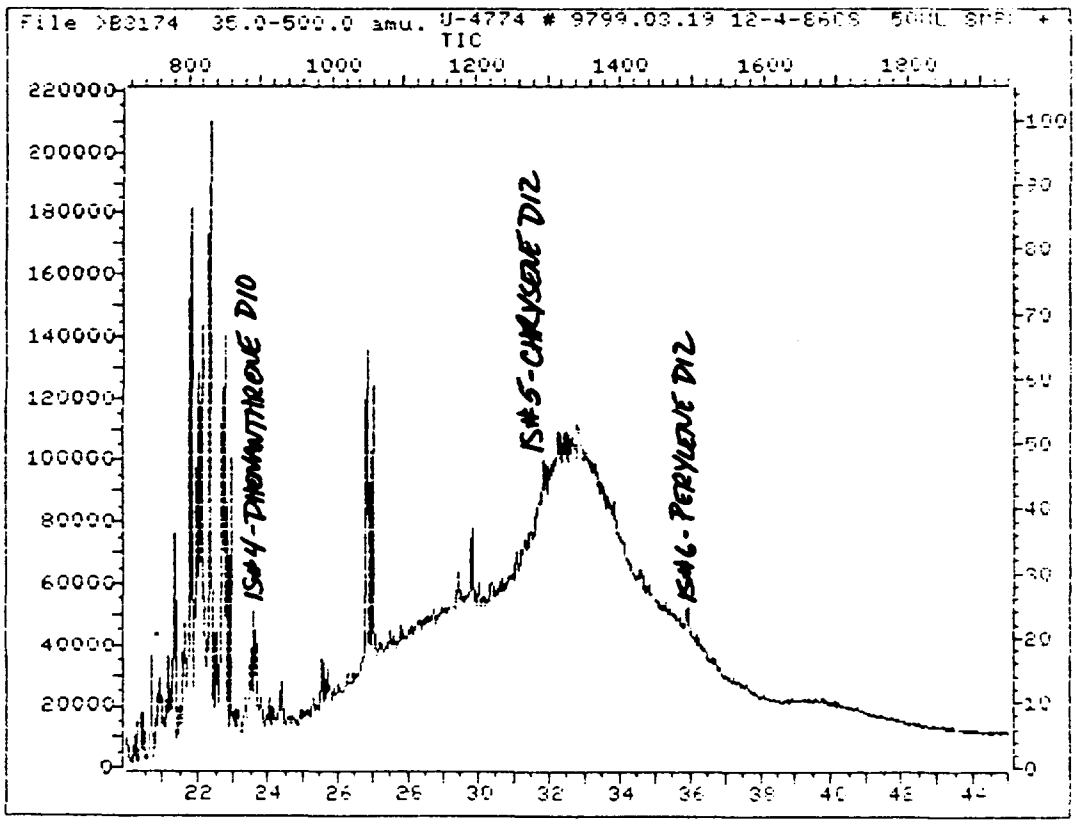
Data File: >B3174::D4
Name: U-4774 # 9799.03.19 DC-SS-33
Misc: 12-4-86CS 50UL SMPL + 450UL MECL2 + 5UL IS (10X)

ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861204 15:13

Operator ID: USER6
Quant Time: 861204 18:17
Injected at: 861204 17:29

DC-SS-33


File >B3174 35.0-500.0 amu. U-4774 # 9799.03.19 12-4-86CS 50NL SMPL +
TIC
IS#1- 1,4-DICHLOROBENZENE D4
IS#2-NAPHTHALENE D8
IS#3-ACENAPHTHENE D10


File >B3174 35.0-500.0 amu. U-4774 # 9799.03.19 12-4-86CS 50NL SMPL +
TIC
IS#4-PHENANTHRENE D10
IS#5-CHRYSENE D12
IS#6-PERYLENE D12

QUANT REPORT

Operator ID: USER6 Quant Rev: 4 Quant Time: 861204 18:17
Output File: ^B3174::Q2 Injected at: 861204 17:29
Data File: >B3174::D4 Dilution Factor: 10.00
Name: U-4774 # 9799.03.19 DC-SS-33
Misc: 12-4-86CS 50UL SMPL + 450UL MECL2 + 5UL IS (10X)

FINAL VOLUME - 5.0 ml

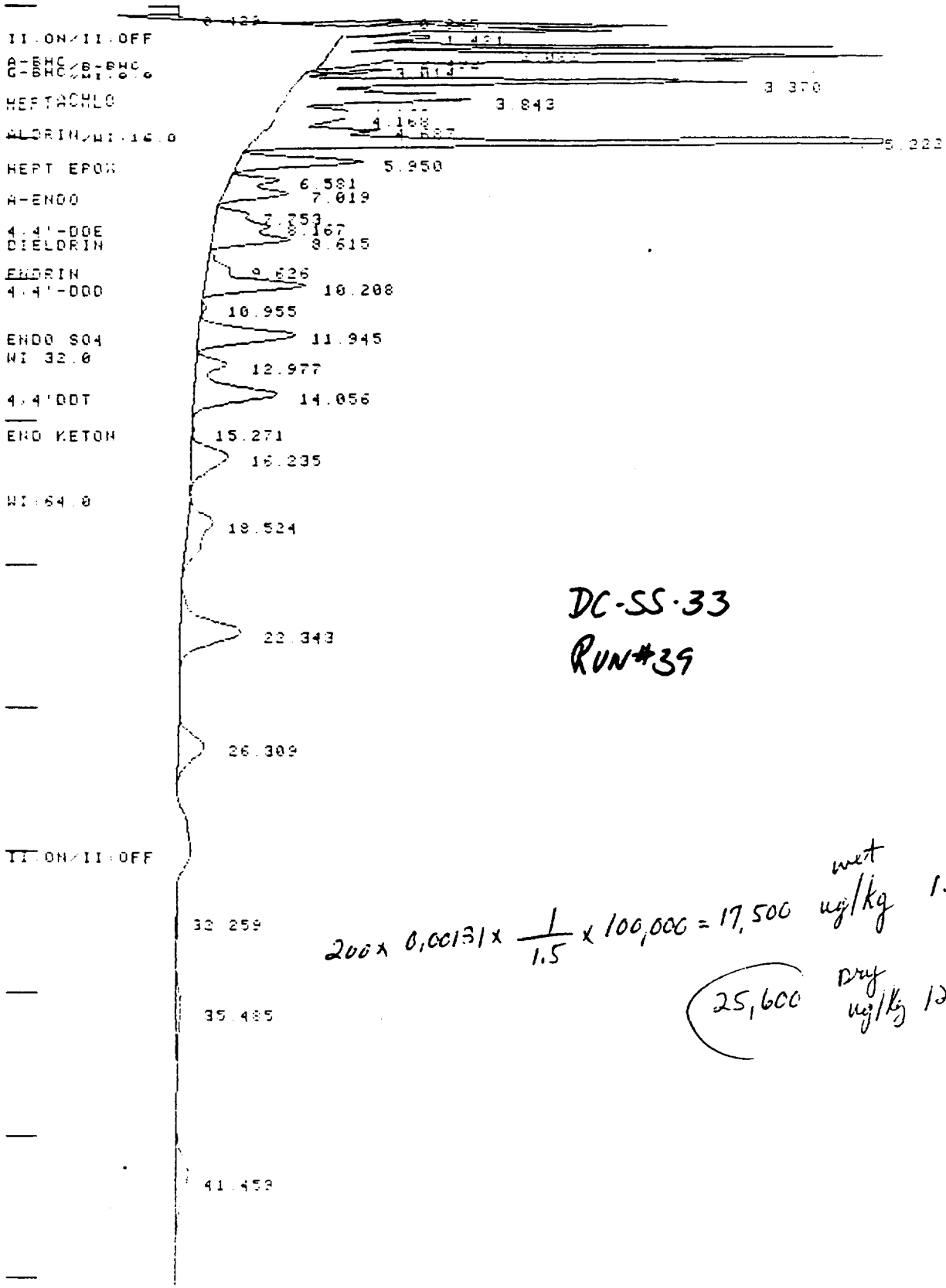
ID File: BNABR::D2
Title: UNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861204 15:13

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.92	219	39096	40.00	UG/L	90
19)	*NAPHTHALENE-D8	(IS)	136	13.82	411	100542	40.00	UG/L	100
34)	*ACENAPHTHENE-D10	(IS)	162	19.23	677	33343	40.00	UG/L	92
41)	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.23~~	~~677~~	~~9295~~	~~81.42~~	~~UG/L~~	No BJ
52)	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.23~~	~~677~~	~~3859~~	~~15[illegible].83~~	~~UG/L~~	100
55)	*PHENANTHRENE-D10	(IS)	188	23.67	895	31510	40.00	UG/L	93
65)	*CHRYSENE-D12	(IS)	240	31.85	1296	15288	40.00	UG/L	100
72)	BIS(2-ETHYLHEXYL)PHTHALATE		149	32.48	1327	187	5.59	UG/L	82
74)	*PERYLENE-D12	(IS)	264	35.94	1496	15909	40.00	UG/L	100
75)	DI-N-OCTYL PHTHALATE		149	34.61	1431	582	8.20	UG/L	100
~~76)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~35.04~~	~~1452~~	~~123~~	~~1.73~~	~~UG/L~~	No BJ

* Compound is ISTD

recycled paper ology and environment

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



DC-SS-33
RUN#39

$200 \times 0.00131 \times \frac{1}{1.5} \times 100{,}000 = 17{,}500$ wet ug/kg 1260

25,600 dry ug/kg 1260

cycled paper

ecology and environment

CHANNEL: TM - 1 TITLE: RUN# 2 / 2:34 10 DEC 88

DC SS-33

SAMPLE: 9799.01.19A1 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	1.421		42425	BV	? 3.50
2		0.0000	1.504		43807	VV	? 5.31
3		0.0000	1.655		55596	VV	? 4.25
4		0.0000	1.797		335335	VV	5.63
Conf 5	A-BHC ✓	4529.062	2.082	-0.008	1583236	VV	4.63
CONF 6	B-BHC ✓	4077.130	2.245	0.015	502517	VV	? 10.13
~~Conf~~ 7	~~[illegible]~~	175.6617	2.492	-0.018	55374	VB	? 9.88
8		0.0000	3.014		67221	BV	8.63
9		0.0000	3.370		411090	VV	7.69
10		0.0000	3.661		66601	VV	? 9.31
11	~~[illegible]~~	812.5090	3.843	-0.047	202656	VV	9.00
12		0.0000	4.168		148497	VV	14.94
13	~~[illegible]~~	646.5569	4.687	-0.113	210735	VV	? 12.94
14		0.0000	~~5.222~~		~~[illegible]~~	VV	11.44
15	~~[illegible]~~	877.4951	5.950	0.130	269229	VV	20.00
16		0.0000	6.581		85278	VV	? 13.63
17	~~[illegible]~~	530.7411	7.019	-0.211	152043	VV	20.44
18		0.0000	7.753		52289	VV	? 18.69
19	~~[illegible]~~	543.2512	8.167	-0.163	149658	VV	? 32.06
20	~~[illegible]~~	545.1617	8.615	0.195	171513	VV	? 23.44
21	~~[illegible]~~	190.3509	9.626	0.046	52150	VV	? 25.50
22	~~[illegible]~~	1161.188	10.208	-0.242	278242	VV	22.88
23	~~[illegible]~~	1695.567	11.945	-0.325	335816	VB	32.05
24		0.0000	12.977	1260 200	83636	BV	23.00
25	~~[illegible]~~	2254.637	14.056	0.406	327391	VV	32.13
26	~~[illegible]~~	698.9802	16.235	0.505	153361	VB	48.53
27		0.0000	18.524		156439	BV	49.31
28		0.0000	22.343		360379	VB	53.44
29	~~[illegible]~~	710.5629	26.309	-1.061	188271	BB	57.31
30		0.0000	35.485		45715	BB	88.00
31		0.0000	41.459		140596	BB	90.13

TOTALS: 19448.85 -0.891 8539457

DETECTED PKS: 44 REJECTED PKS: 13

DIVISOR: 1.50000 MULTIPLIER: 100,000.000

NOISE: 22.9 OFFSET: -17

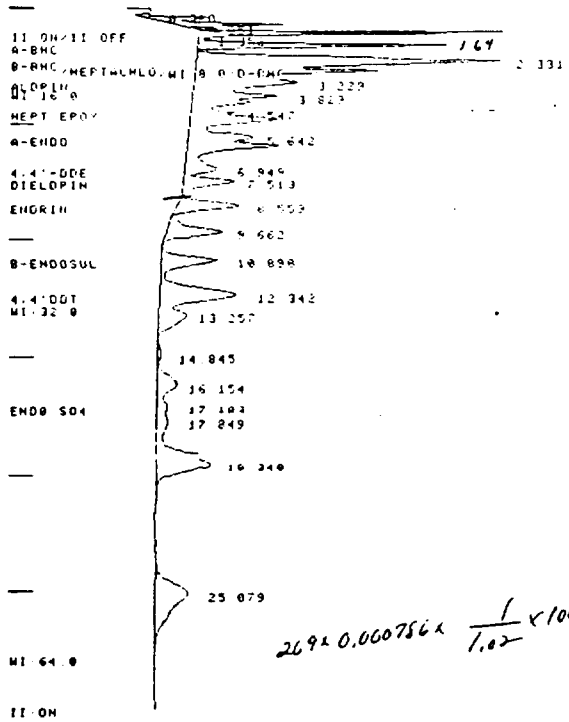
RACK: 3 VIAL: 9 INJ: 1

NOTES:
NOTEBOOK:259-52 ANALYST:RICHARD SAMSON
SECURE AREA:D JOB# U-4474
INST:VARIAN 6000#2 A 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
AUTOSAMPLER
PEST/PCB ANALYSIS

POST RUN:
SAVE FILE: RAW D.CREEF3564

ecology and environment

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



$269 \times 0.000786 \times \frac{1}{1.02} \times 100{,}000 = 20{,}726$ ug/kg DCC

J

RECALCULATE ON FILE: D.C.#3759

CHANNEL: 1B - 1 TITLE: RUN# 12 4:31 18 DEC 86

DC-SS-33

SAMPLE: 9799 METHOD: FEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		WI/2 (SEC)
1		0.0000	1.352		23285	BV		3.69
2		0.0000	1.511		92937	VV	?	7.38
3	~~A-BHC~~	1209.427	1.641	-0.039	629827	VB		4.31
4	~~B-BHC~~	7758.556	2.331	-0.089	1430220	BV	?	11.50
5	~~HEPTACHLO~~	644.1849	2.566	-0.034	256375	VV	?	14.25
6	D-BHC	1696.636	2.777	-0.043	631276	VV		13.06
7	ALDRIN	1486.694	3.229	0.089	699499	VV	?	27.19
8		0.0000	3.829		362884	VV		16.44
9		0.0000	4.089		224763	VV	?	16.50
10		0.0000	4.547		145766	VV	?	14.00
11	HEPT EPOX	1059.477	4.835	0.125	449756	VV		18.44
12		0.0000	5.642		384854	VV	?	23.94
13	A-ENDO	1211.898	5.969	0.039	485255	VV		16.50
14	4,4'-DDE	604.7574	6.949	0.119	231491	VV		17.00
15	DIELDRIN	627.8504	7.513	0.273	270765	VB		16.69
16	ENDRIN	1334.848	8.559	-0.241	359814	BV		20.25
17		0.0000	9.662		370577	VB		21.56
18	B-ENDOSUL	999.9658	10.898	0.258	395662	BV		25.00
19	4,4'DDT	2654.533	12.342	-0.208	731705	VV		33.63
20	END. ALD.	1034.805	13.257	-0.763	318014	VV		40.81
21		0.0000	14.845		338580	VV		42.44
22		0.0000	16.154		212098	VV		45.89
23	ENDO SO4	960.2053	17.103	0.133	92409	VV	?	40.94
24		0.0000	~~17.849~~		195682	VV	?	71.00
25		0.0000	19.340		605627	VB		44.31
26	METHOXYCH	6978.022	25.079	1.059	607051	BB		70.38
TOTALS:		30261.86		0.678	10340172			

DETECTED PKS: 35 REJECTED PKS: 9

DIVISOR: 1.50000 MULTIPLIER: 100000.000

NOISE: 57.1 OFFSET: 7

RACK: 1 VIAL: 12 INJ: 1

NOTES:
NOTEBOOK:259-59 ANALYST:RICHARD SAMSON
SECURE AREA: D JOB#:U-4474
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

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SAMPLE NUMBER DC-SS-34

481095

ecology and environment

Sample Number
DC-SS-34

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No. U-4474
Lab Sample ID No: 9800 QC Report No:
Sample Matrix: Soil Contract No: IL-3140
Data Release Authorized By: [signature] Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared:
Date Analyzed: 11-25-86
Conc./Dil Factor: 3 pH 6.2
Percent Moisture. (Not Decanted) 24

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	46B
67-64-1	Acetone	19BJ
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	37B
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	15u
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	15u
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	6B
591-78-6	2-Hexanone	30u
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	32
108-90-7	Chlorobenzene	18
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

Data Reporting Qualifiers

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

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

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

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

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

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

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

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Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No U-4474

Sample Number DC-SS-34

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed 12-4-86

Conc/Dil Factor: 50

Percent Moisture (Decanted) 24

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	11000	U
111-44-4	bis(-2-Chloroethyl)Ether	11000	U
95-57-8	2-Chlorophenol	11000	U
541-73-1	1 3-Dichlorobenzene	11000	U
106-46-7	1 4-Dichlorobenzene	11000	U
100-51-6	Benzyl Alcohol	11000	U
95-50-1	1 2-Dichlorobenzene	11000	U
95-48-7	2-Methylphenol	11000	U
39638-32-9	bis(2-chloroisopropyl)Ether	11000	U
106-44-5	4-Methylphenol	11000	U
621-64-7	N-Nitroso-Di-n-Propylamine	11000	U
67-72-1	Hexachloroethane	11000	U
98-95-3	Nitrobenzene	11000	U
78-59-1	Isophorone	11000	U
88-75-5	2-Nitrophenol	11000	U
105-67-9	2. 4-Dimethylphenol	11000	U
65-85-0	Benzoic Acid	53000	U
111-91-1	bis(-2-Chloroethoxy)Methane	11000	U
120-83-2	2. 4-Dichlorophenol	11000	U
120-82-1	1. 2. 4-Trichlorobenzene	35000	
91-20-3	Naphthalene	11000	U
106-47-8	4-Chloroaniline	11000	U
87-68-3	Hexachlorobutadiene	11000	U
59-50-7	4-Chloro-3-Methylphenol	11000	U
91-57-6	2-Methylnaphthalene	11000	U
77-47-4	Hexachlorocyclopentadiene	11000	U
88-06-2	2 4 6-Trichlorophenol	11000	U
95-95-4	2. 4. 5-Trichlorophenol	53000	U
91-58-7	2-Chloronaphthalene	11000	U
88-74-4	2-Nitroaniline	53000	U
131-11-3	Dimethyl Phthalate	11000	U
208-96-8	Acenaphthylene	11000	U
99-09-2	3-Nitroaniline	53000	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	11000	U
51-28-5	2. 4-Dinitrophenol	53000	U
100-02-7	4-Nitrophenol	53000	U
132-64-9	Dibenzofuran	11000	U
121-14-2	2 4-Dinitrotoluene	11000	U
606-20-2	2 6-Dinitrotoluene	11000	U
84-66-2	Diethylphthalate	11000	U
7005-72-3	4-Chlorophenyl-phenylether	11000	U
86-73-7	Fluorene	11000	U
100-01-6	4-Nitroaniline	53000	U
534-52-1	4. 6-Dinitro-2-Methylphenol	53000	U
86-30-6	N-Nitrosodiphenylamine (1)	11000	U
101-55-3	4-Bromophenyl-phenylether	11000	U
118-74-1	Hexachlorobenzene	11000	U
87-86-5	Pentachlorophenol	9900	J
85-01-8	Phenanthrene	11000	U
120-12-7	Anthracene	11000	U
84-74-2	Di-n-Butylphthalate	11000	U
206-44-0	Fluoranthene	11000	U
129-00-0	Pyrene	11000	U
85-68-7	Butylbenzylphthalate	11000	U
91-94-1	3. 3 -Dichlorobenzidine	22000	U
56-55-3	Benzo(a)Anthracene	11000	U
117-81-7	bis(2-Ethylhexyl)Phthalate	11000	U
218-01-9	Chrysene	11000	U
117-84-0	Di-n-Octyl Phthalate	11000	U
205-99-2	Benzo(b)Fluoranthene	11000	U
207-08-9	Benzo(k)Fluoranthene	11000	U
50-32-8	Benzo(a)Pyrene	11000	U
193-39-5	Indeno(1 2. 3-cd)Pyrene	11000	U
53-70-3	Dibenzo(a h)Anthracene	11000	U
191-24-2	Benzo(g h i)Perylene	11000	U

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No V-4474

Sample Number DC-SS-34

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-17

Date Analyzed 12-9-86

Conc/Dil Factor 10,000

Percent Moisture (decanted) 23.8

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	160,000 u
319-85-7	Beta-BHC	160,000 u
319-86-8	Delta-BHC	160,000 u
58-89-9	Gamma-BHC (Lindane)	160,000 u
76-44-8	Heptachlor	160,000 u
309-00-2	Aldrin	160,000 u
1024-57-3	Heptachlor Epoxide	160,000 u
959-98-8	Endosulfan I	160,000 u
60-57-1	Dieldrin	320,000 u
72-55-9	4,4'-DDE	320,000 u
72-20-8	Endrin	320,000 u
33213-65-9	Endosulfan II	320,000 u
72-54-8	4,4'-DDD	320,000 u
1031-07-8	Endosulfan Sulfate	320,000 u
50-29-3	4,4'-DDT	320,000 u
72-43-5	Methoxychlor	1,600,000 u
53494-70-5	Endrin Ketone	320,000 u
57-74-9	Chlordane	1,600,000 u
8001-35-2	Toxaphene	3,200,000 u
12674-11-2	Aroclor-1016	1,600,000 u
11104-28-2	Aroclor-1221	1,600,000 u
11141-16-5	Aroclor-1232	1,600,000 u
53469-21-9	Aroclor-1242	1,600,000 u
12672-29-6	Aroclor-1248	1,600,000 u
11097-69-1	Aroclor-1254	3,200,000 u
11096-82-5	Aroclor-1260	5,250,000 C

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 30 V_t 1,000 V_i 4

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Laboratory Name ecology and environment, inc.

Case No IC-4474

Sample Number DC-SS-34

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number min.	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	18-0	14
2.	Hexene isomer		18-7	39
3.	Hexane isomer		19.5	6
4.	Hexane isomer		21.2	7
5.	Unknown hydrocarbon		30.4	32
6.	Dichlorobenzene isomer		39.3	73
7.	Dichlorobenzene isomer		40.0	110
8.				
9.	PCB	BNA	27.6	—
10.	UNKNOWN HYDROCARBON		29.4	130000 J
11.	PCB		29.6-31.4	—
12.	UNKNOWN HYDROCARBON		32.3	120000 J
13.	PCB		32.4	—
14.	UNKNOWN HYDROCARBON		32.6	54000 J
15.	UNKNOWN HYDROCARBON		32.8	86000 J
16.	PCB		33.1	—
17.	UNKNOWN HYDROCARBON		33.3	100000 J
18.	UNKNOWN HYDROCARBON		33.8	84000 J
19.	UNKNOWN HYDROCARBON		34.2	97000 J
20.	UNKNOWN HYDROCARBON		34.6	170000 J
21.	UNKNOWN HYDROCARBON		35.2	56000 J
22.	UNKNOWN HYDROCARBON		36.1	60000 J
23.	UNKNOWN HYDROCARBON		36.3	74000 J
24.	UNKNOWN HYDROCARBON		37.0	53000 J
25.				
26.				
27.				
28.				
29.				
30.				

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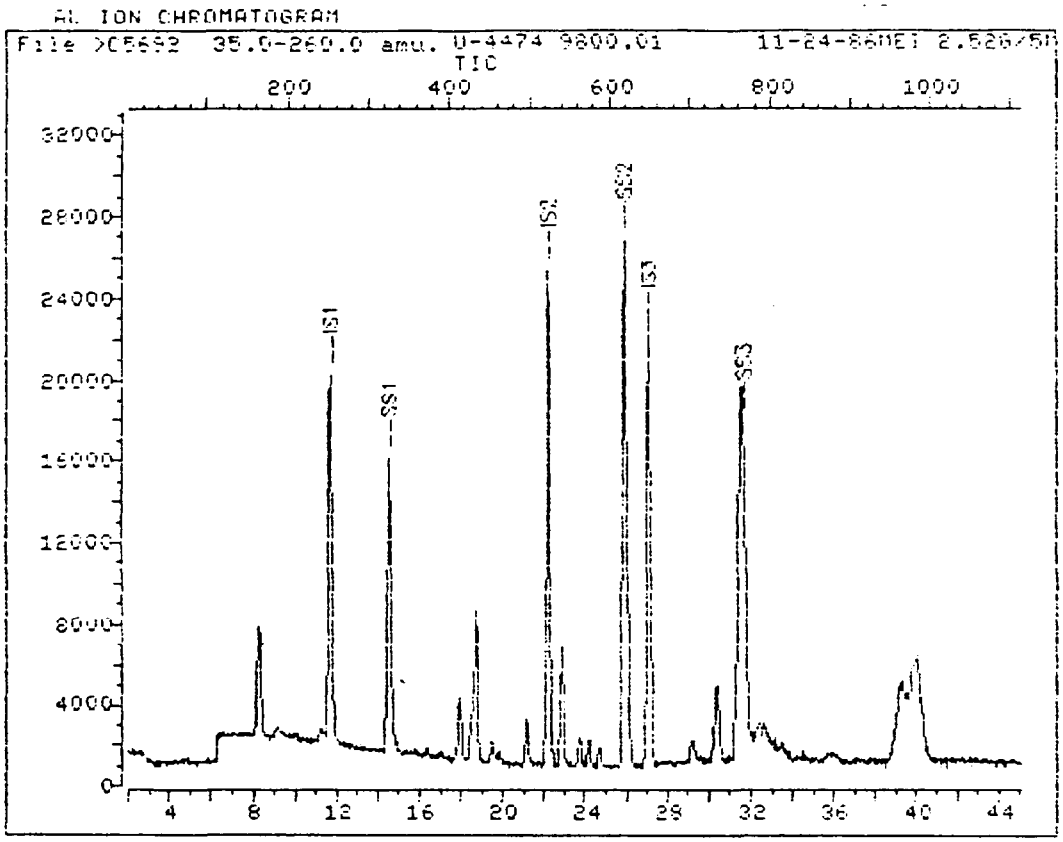
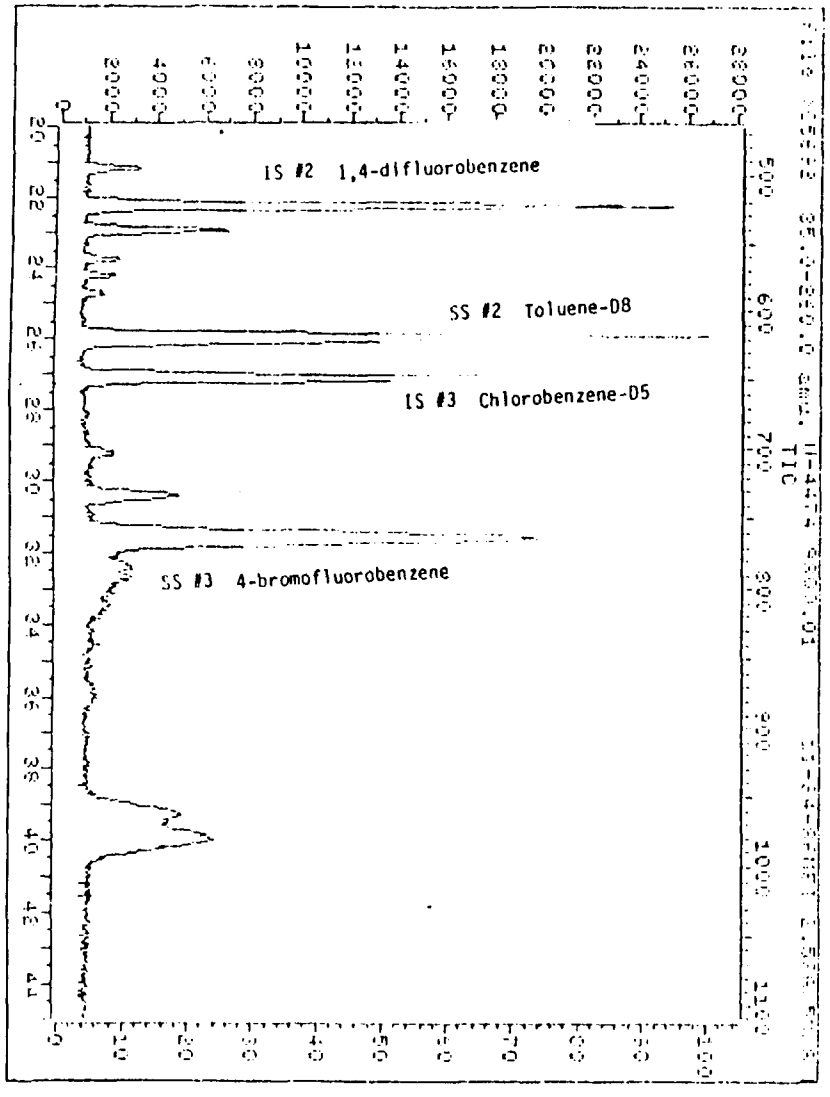
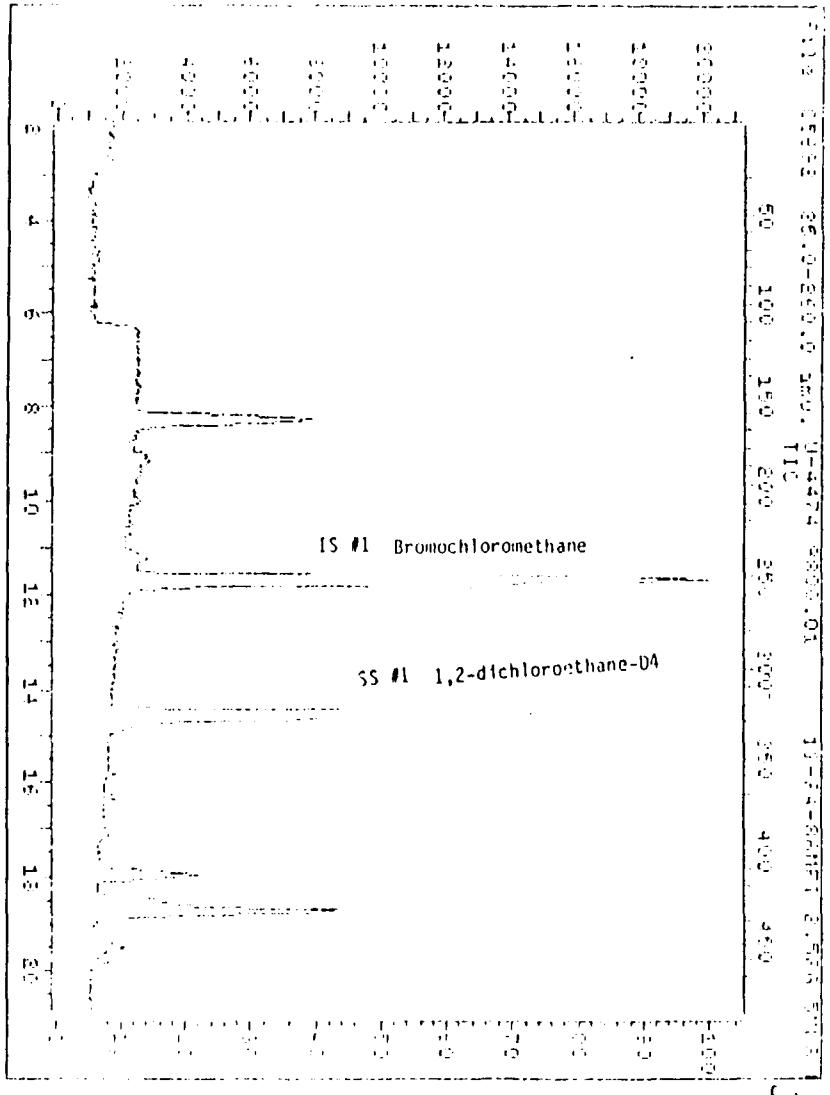


Data File: >C5692::D3
Name: U-4474 9800.01 DC-SS-34
Misc: 11-24-86MEI 2.52G/5MLS DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861124 23:52

Operator ID: USER6
Quant Time: 861125 06:07
Injected at: 861125 05:21


IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene
TIC


IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4
TIC

DC-SS-34

QUANT REPORT

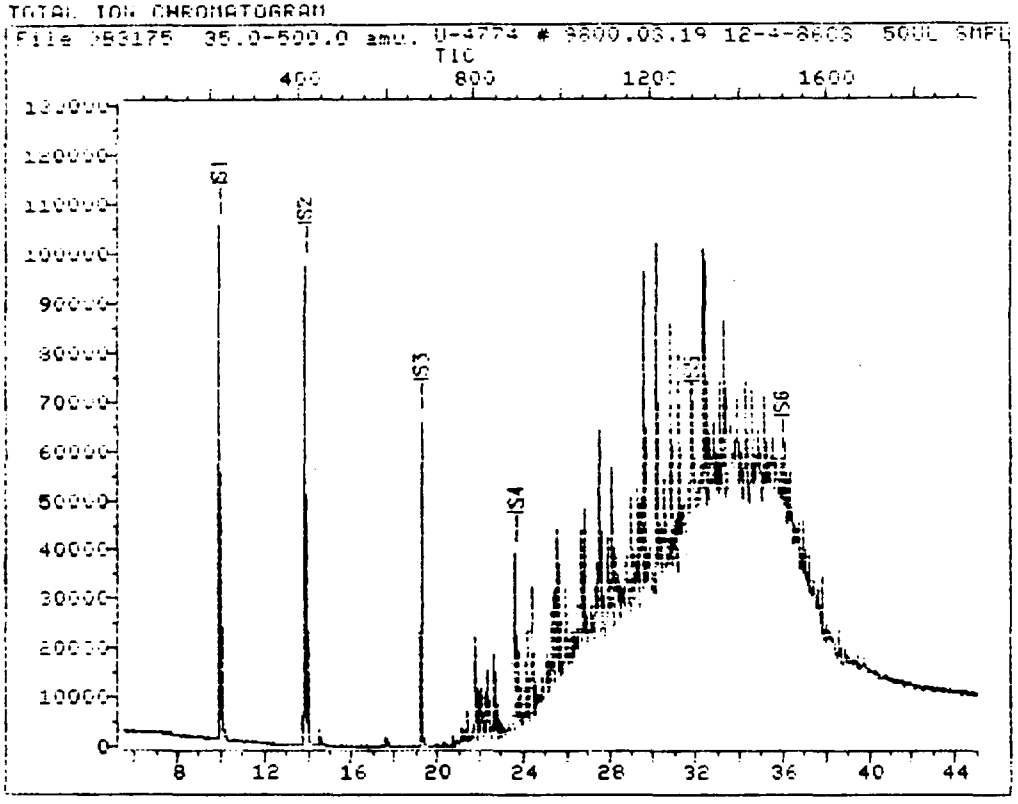
Operator ID: USER6 Quant Rev: 4 Quant Time: 861125 06:07
Output File: ^C5692::Q2 Injected at: 861125 05:21
Data File: >C5692::D3 Dilution Factor: 1.00
Name: U-4474 9800.01 DC-SS-34
Misc: 11-24-86MEI 2.52G/5MLS DI + 10UL IS/SS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861124 23:52

	Compound	M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE (IS)	128	11.69	252	28158	250.00	NGS	100
6)	METHYLENE CHLORIDE	84	8.27	164	15588	88.53	NGS	100
7)	ACETONE	43	9.09	185	5889	37.29	NGS	100
15)	1,2-DICHLOROETHANE-D4(SURR)	65	14.52	325	61824	212.13	NGS	89
16)	*1,4-DIFLUOROBENZENE (IS)	114	22.20	523	103641	250.00	NGS	100
17)	2-BUTANONE	72	14.67	329	2759	71.43	NGS	100
31)	*CHLOROBENZENE-D5 (IS)	117	27.05	648	68871	250.00	NGS	100
32)	4-METHYL-2-PENTANONE	43	22.90	541	27807	130.41	NGS	89
33)	~~2-HEXANONE~~	~~43~~	~~23.75~~	~~563~~	~~2972~~	~~16.41~~	~~NGS~~	100
33)	~~2-HEXANONE~~	~~43~~	~~24.22~~	~~575~~	~~3559~~	~~19.65~~	~~NGS~~	100
33)	~~2-HEXANONE~~	~~43~~	~~24.62~~	~~587~~	~~3368~~	~~18.59~~	~~NGS~~	100
36)	TOLUENE-D8 (SURR)	98	25.89	618	102683	262.37	NGS	93
37)	TOLUENE	92	26.04	622	18967	61.36	NGS	97
38)	CHLOROBENZENE	112	27.17	651	10660	35.36	NGS	95
40)	4-BROMOFLUOROBENZENE(SURR)	95	31.64	766	40980	211.55	NGS	100
43)	DICHLOROBENZENE ISOMER	146	39.20	961	22733	22733.00	NO CALIB	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



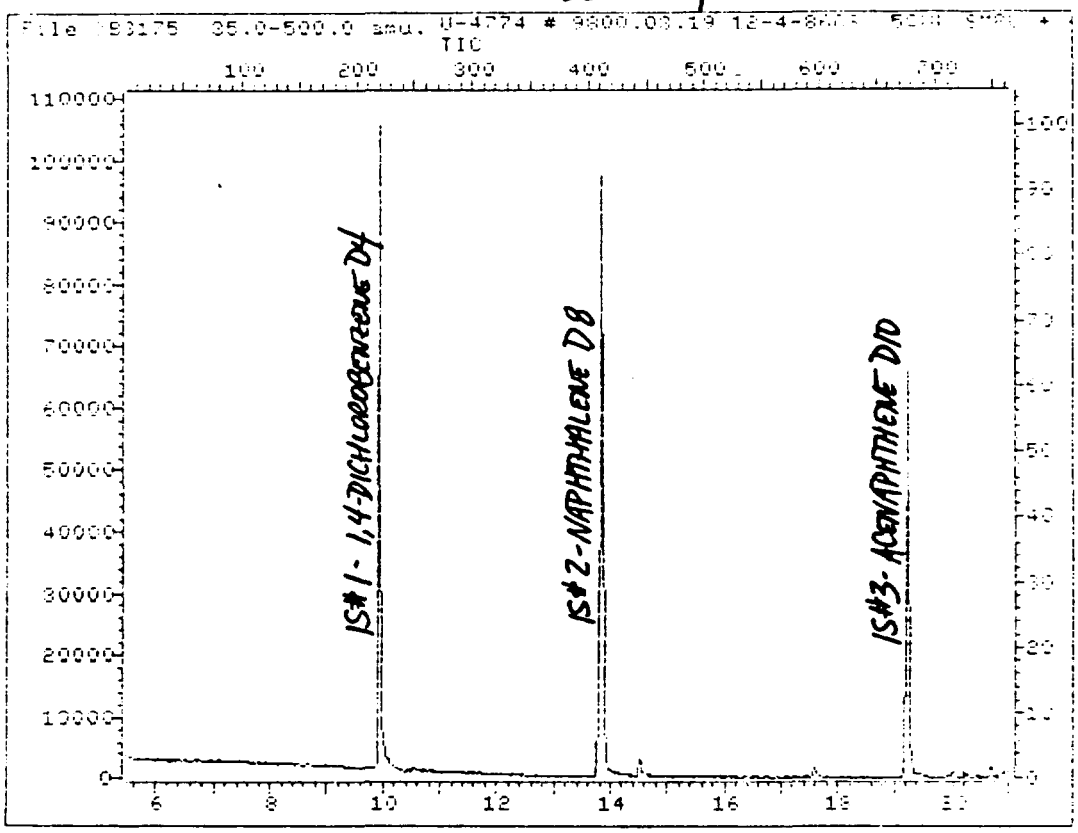
Data File: >B3175::D4
Name: U-4774 # 9800.03.19 DC-SS-34
Misc: 12-4-86CS 50UL SMPL + 450UL METL2 + 5UL IS (10X)

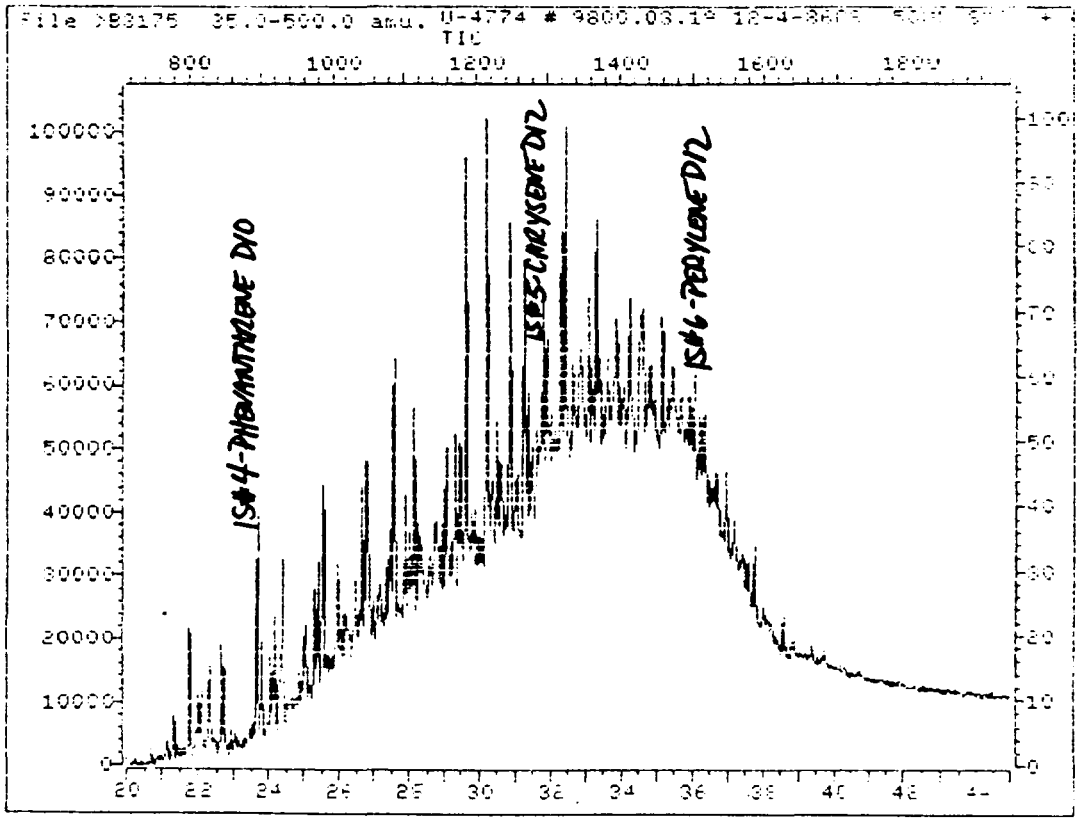
Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861204 15:13

Operator ID: USER6
Quant Time: 861204 19:08
Injected at: 861204 18:21

ecology and environment

DC-SS-34


File 93175 35.0-500.0 amu. U-4774 # 9800.03.19 12-4-86
TIC
IS#1- 1,4-DICHLOROBENZENE D4
IS#2-NAPHTHALENE D8
IS#3- ACENAPHTHENE D10


File 93175 35.0-500.0 amu. U-4774 # 9800.03.19 12-4-86
TIC
IS#4-PHENANTHRENE D10
IS#5-CHRYSENE D12
IS#6-PERYLENE D12

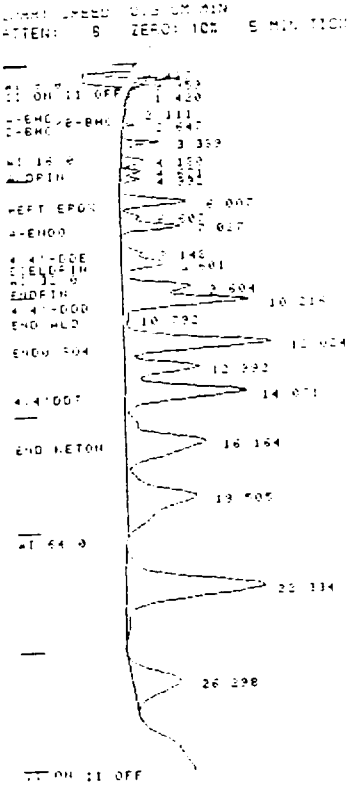
QUANT REPORT

Operator ID: [illegible] Quant Rev: 4 Quant Time: 861204 19:08
Output File: ^B4175::02 Injected at: 861204 18:21
Data File: B4175::04 Dilution Factor: 10.00
Name: U-4724 # 9808.03.19 DC-SS-34
Note: 12-4-86 S 500UL SMPL + 450UL MEOL2 + 5UL IS (10X) FINAL VOLUME - 5.0 ml

ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861204 15:13

	Compound		m/z	R.T.	Scan#	Area	Conc	Units	q
13	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.93	2[illegible]	44459	40.00	UG/L	86
~~[illegible]~~	~~1,2-DICHLOROBENZENE~~		~~146~~	~~10.56~~	~~251~~	~~[illegible]~~	~~1.93~~	~~UG/L~~	
19	*NAPHTHALENE-D8	(IS)	136	13.83	412	12[illegible]496	40.00	UG/L	100
[illegible]	1,2,4-TRICHLOROBENZENE		180	13.[illegible]9	410	17[illegible]72	160.22	UG/L	100
~~[illegible]~~	~~1,2,4-TRICHLOROBENZENE~~		~~180~~	~~14.10~~	~~42[illegible]~~	~~373~~	~~3.37~~	~~UG/L~~	100
~~[illegible]~~	~~1,2,4-TRICHLOROBENZENE~~		~~180~~	~~14.16~~	~~428~~	~~109~~	~~1.17~~	~~UG/L~~	100
14	*ACENAPHTHENE-D10	(IS)	162	19.22	677	44820	40.00	UG/L	99
~~[illegible]~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.22~~	~~677~~	~~12[illegible]0~~	~~82.23~~	~~UG/L~~	100
~~5[illegible]~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.22~~	~~67[illegible]~~	~~5430~~	~~16[illegible].29~~	~~UG/L~~	100
5[illegible]	*PHENANTHRENE-D10	(IS)	188	23.67	896	43[illegible]81	40.00	UG/L	97
40	PENTACHLOROPHENOL		266	23.61	893	771	4[illegible].00	UG/L	100
3[illegible]	*CHRYSENE-D12	(IS)	240	31.85	1297	2[illegible]67	40.00	UG/L	100
~~6[illegible]~~	~~BENZIDINE~~		~~184~~	~~27.97~~	~~1104~~	~~664~~	~~6[illegible].00~~	~~NO CAL LEVEL~~	~~100~~
~~6[illegible]~~	~~BENZIDINE~~		~~184~~	~~28.13~~	~~1115~~	~~2[illegible]43~~	~~2[illegible].00~~	~~NO CAL LEVEL~~	~~100~~
~~66~~	~~BENZIDINE~~		~~184~~	~~28.26~~	~~1121~~	~~290~~	~~2[illegible].00~~	~~NO CAL LEVEL~~	~~100~~
~~[illegible]~~	~~4,4'-DIAMINODIPHENYLBENZIDINE~~		~~262~~	~~31.77~~	~~1263~~	~~[illegible]41~~	~~292.[illegible]2~~	~~UG/L~~	100
~~2[illegible]~~	~~3,3'-DICHLOROBENZIDINE~~		~~252~~	~~31.89~~	~~12[illegible]~~	~~968~~	~~12[illegible].30~~	~~UG/L~~	100
~~[illegible]~~	~~4,4'-DICHLOROBENZIDINE~~		~~252~~	~~31.99~~	~~1304~~	~~[illegible]34~~	~~92.97~~	~~UG/L~~	100
~~2[illegible]~~	~~3,3'-DICHLOROBENZIDINE~~		~~252~~	~~32.42~~	~~1325~~	~~42[illegible]5~~	~~5[illegible].14~~	~~UG/L~~	100
~~2[illegible]~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~32.71~~	~~1339~~	~~164~~	~~3.62~~	~~UG/L~~	40
24	*PERYLENE-D12	(IS)	264	35.93	1497	18688	40.00	UG/L	100
~~[illegible]~~	~~DI-N-BUTYL PHTHALATE~~		~~149~~	~~34.40~~	~~1417~~	~~[illegible]33~~	~~5.20~~	~~UG/L~~	100
~~26~~	~~DI-N-BUTYL PHTHALATE~~		~~149~~	~~34.42~~	~~1423~~	~~189~~	~~2.26~~	~~UG/L~~	100
~~[illegible]~~	~~DI-N-BUTYL PHTHALATE~~		~~149~~	~~34.65~~	~~1434~~	~~721~~	~~8.65~~	~~UG/L~~	100
~~26~~	~~DI-N-BUTYL PHTHALATE~~		~~149~~	~~34.75~~	~~1439~~	~~487~~	~~5.84~~	~~UG/L~~	100
~~[illegible]~~	~~DI-N-BUTYL PHTHALATE~~		~~149~~	~~34.95~~	~~1449~~	~~[illegible]45~~	~~5.46~~	~~UG/L~~	100

* Compound is ISTD



$$\frac{N^2}{\cancel{2N}} \times \cancel{0.00131} \times \frac{1}{1.5} \times \cancel{10,000,000} \cancel{\text{ug/kg}}$$

$$458 \times 0.00131 \times \frac{1}{1.5} \times 10,000,000 = 4,000,000 \text{ ug/kg}$$

1200

5,255,000 ug/kg

RECALCULATE ON FILE: D.CREEK2543

7:06 9 DEC 88

CHANNEL: 1A - 1 TITLE: RUN: 20

DC-SS-34

SAMPLE: 9800.01.19A1 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	DEP CODE	W1/2 (SEC)
1		0.0000	3.389		41656	VV	7.89
2	[illegible]	44.6516	3.605	-0.265	[illegible]274	VB	? 14.69
3		0.0000	4.120		4[illegible]062	BV	17.28
4	[illegible]	~~[illegible].6347~~	4.671	-0.129	[illegible]659	VV	11.63
5		0.0000	4.992		[illegible]130	VV	10.39
6	[illegible]	295.4545	5.007	0.187	18[illegible]300	VV	19.38
7		0.0000	6.602		[illegible]150	VV	? 15.63
8	[illegible]	~~254~~.4193	7.027	-0.203	15[illegible]495	VB	17.75
9	[illegible]	~~122~~.1695	8.115	-0.182	[illegible]130	BV	? 25.19
10	[illegible]	222.0754	9.601	0.181	[illegible]734	VV	24.25
11	[illegible]	426.8823	9.604	0.024	[illegible]904	VV	? 25.20
12	[illegible]	923.6394	10.216	-0.234	44[illegible]642	VV	25.13
13	[illegible]	1595.696	12.024	-0.246	[illegible]072	VV	30.63
14		0.0000	12.992		[illegible]269	VV	30.19
15	[illegible]	1979.928	14.071	0.421	575002	VV	33.91
16	END KETON	1085.356	16.164	0.434	600491	VV	55.55
17		0.0000	16.505		605083	VB	55.63
18		0.0000	[illegible]		1052420	BV	51.05
19	[illegible]	787.3676	26.298	-1.072	375135	VB	66.19
TOTALS:		7777.274		-1.104	5565731		

DETECTED PKS: 33 REJECTED PKS: 14

DIVISOR: 1.50000 MULTIPLIER: ~~[illegible]~~ AS 16,000,000

NOISE: 22.3 OFFSET: -112

RACK: 2 VIAL: 5 INJ: 1

NOTES:
NOTES004:259-52 ANALYST:RICHARD SAMSON
SECURE AREA:D JOB: U-4474
INST:VARIAN 3300#2 A ECD [illegible]
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE:5% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
DET:300 C INJ:220 C
200 C ISOTHERMAL .4 UL INJECTION
AUTOSAMPLER
PEST/PCB ANALYSIS

SAMPLE NUMBER DC-SS-35

481095

ecology and environment

Sample Number
DC-SS-35

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474

Lab Sample ID No: 9801 QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: [signature] Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-26-86

Conc./Dil Factor: 3 pH 6.6

Percent Moisture: (Not Decanted) 13

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

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	15u
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	15u
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	100
591-78-6	2 Hexanone	30u
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	15u
108-90-7	Chlorobenzene	15u
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

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, etc. (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.

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ecology and environment

Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No U-4474

Sample Number DC-SS-35

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed: 12-19-86

Conc/Dil Factor: 50

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)	
108-95-2	Phenol	9500	U
111-44-4	bis(2-Chloroethyl)Ether	9500	U
95-57-8	2-Chlorophenol	9500	U
541-73-1	1,3-Dichlorobenzene	9500	U
106-46-7	1,4-Dichlorobenzene	9500	U
100-51-6	Benzyl Alcohol	9500	U
95-50-1	1,2-Dichlorobenzene	9500	U
95-48-7	2-Methylphenol	9500	U
39638-32-9	bis(2-chloroisopropyl)Ether	9500	U
106-44-5	4-Methylphenol	9500	U
621-64-7	N-Nitroso-Di-n-Propylamine	9500	U
67-72-1	Hexachloroethane	9500	U
98-95-3	Nitrobenzene	9500	U
78-59-1	Isophorone	9500	U
88-75-5	2-Nitrophenol	9500	U
105-67-9	2,4-Dimethylphenol	9500	U
65-85-0	Benzoic Acid	46000	U
111-91-1	bis(2-Chloroethoxy)Methane	9500	U
120-83-2	2,4-Dichlorophenol	9500	U
120-82-1	1,2,4-Trichlorobenzene	9500	U
91-20-3	Naphthalene	9500	U
106-47-8	4-Chloroaniline	9500	U
87-68-3	Hexachlorobutadiene	9500	U
59-50-7	4-Chloro-3-Methylphenol	9500	U
91-57-6	2-Methylnaphthalene	9500	U
77-47-4	Hexachlorocyclopentadiene	9500	U
88-06-2	2,4,6-Trichlorophenol	9500	U
95-95-4	2,4,5-Trichlorophenol	46000	U
91-58-7	2-Chloronaphthalene	9500	U
88-74-4	2-Nitroaniline	46000	U
131-11-3	Dimethyl Phthalate	9500	U
208-96-8	Acenaphthylene	9500	U
99-09-2	3-Nitroaniline	46000	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	9500	U
51-28-5	2,4-Dinitrophenol	46000	U
100-02-7	4-Nitrophenol	46000	U
132-64-9	Dibenzofuran	9500	U
121-14-2	2,4-Dinitrotoluene	9500	U
606-20-2	2,6-Dinitrotoluene	9500	U
84-66-2	Diethylphthalate	9500	U
7005-72-3	4-Chlorophenyl-phenylether	9500	U
86-73-7	Fluorene	9500	U
100-01-6	4-Nitroaniline	46000	U
534-52-1	4,6-Dinitro-2-Methylphenol	46000	U
86-30-6	N-Nitrosodiphenylamine (1)	9500	U
101-55-3	4-Bromophenyl-phenylether	9500	U
118-74-1	Hexachlorobenzene	9500	U
87-86-5	Pentachlorophenol	46000	U
85-01-8	Phenanthrene	9500	U
120-12-7	Anthracene	9500	U
84-74-2	Di-n-Butylphthalate	9500	U
206-44-0	Fluoranthene	9500	U
129-00-0	Pyrene	9500	U
85-68-7	Butylbenzylphthalate	9500	U
91-94-1	3,3'-Dichlorobenzidine	19000	U
56-55-3	Benzo(a)Anthracene	9500	U
117-81-7	bis(2-Ethylhexyl)Phthalate	9500	U
218-01-9	Chrysene	9500	U
117-84-0	Di-n-Octyl Phthalate	9500	U
205-99-2	Benzo(b)Fluoranthene	9500	U
207-08-9	Benzo(k)Fluoranthene	9500	U
50-32-8	Benzo(a)Pyrene	9500	U
193-39-5	Indeno(1,2,3-cd)Pyrene	9500	U
53-70-3	Dibenz(a,h)Anthracene	9500	U
191-24-2	Benzo(g,h,i)Perylene	9500	U

(1)-Cannot be separated from diphenylamine

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ecology and environment

Laboratory Name ecology and environment, inc.

Case No U-4474

Sample Number DC-SS-35

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared: 11-17-86

Date Analyzed: 12-18-86

Conc/Dil Factor: 100

Percent Moisture (decanted) 13.2

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	1600 u
319-85-7	Beta-BHC	1600 u
319-86-8	Delta-BHC	1600 u
58-89-9	Gamma-BHC (Lindane)	1600 u
76-44-8	Heptachlor	1600 u
309-00-2	Aldrin	1600 u
1024-57-3	Heptachlor Epoxide	1600 u
959-98-8	Endosulfan I	1600 u
60-57-1	Dieldrin	3200 u
72-55-9	4,4'-DDE	3200 u
72-20-8	Endrin	3200 u
33213-65-9	Endosulfan II	3200 u
72-54-8	4,4'-DDD	3200 u
1031-07-8	Endosulfan Sulfate	3200 u
50-29-3	4,4'-DDT	3200 u
72-43-5	Methoxychlor	16,000 u
53494-70-5	Endrin Ketone	3,200 u
57-74-9	Chlordane	16,000 u
8001-35-2	Toxaphene	32,000 u
12674-11-2	Aroclor-1016	16,000 u
11104-28-2	Aroclor-1221	16,000 u
11141-16-5	Aroclor-1232	16,000 u
53469-21-9	Aroclor-1242	16,000 u
12672-29-6	Aroclor-1248	16,000 u
11097-69-1	Aroclor-1254	32,000 u
11096-82-5	Aroclor-1260	96,000

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 30 V_t 1000 V_i 4

Laboratory Name ecology and environment, inc.

Case No 11-4474

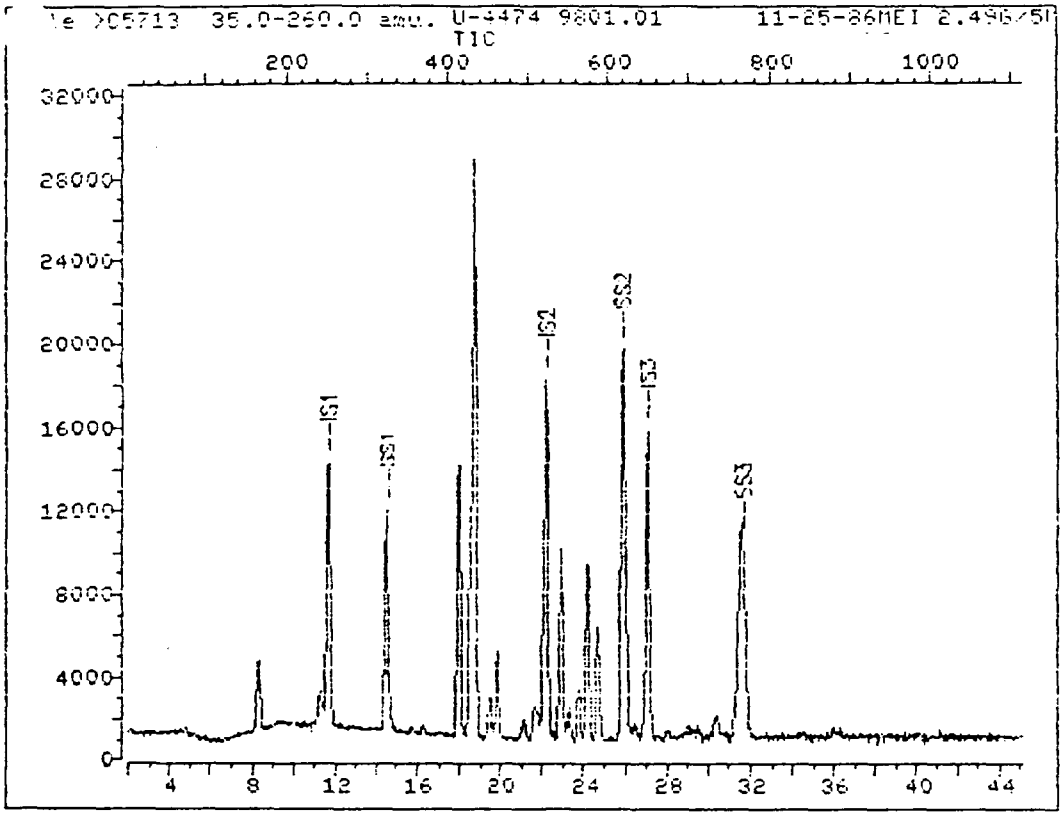
Sample Number DC-SS-35

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. 79209	Acetic acid, methyl ester	VOA	11.3	130 J
2.	Hexene isomer		18.0	51 J
3.	Hexene isomer		18.7	210 J
4.	Hexene isomer		19.4	5 J
5.	Hexene isomer		19.8	24 J
6.	Hexane isomer		21.7	25 J
7.	Unknown hydrocarbon		23.3	11 J
8.	Unknown alcohol		23.8	19 J
9.	Unknown hydrocarbon		24.2	59 J
10.	Unknown hydrocarbon		34.7	47 J
11.				
12.	UNKNOWN AROMATIC	BNA	23.4	80000 J
13.	UNKNOWN HYDROCARBON		24.4	43000 J
14.	UNKNOWN		24.5	79000 J
15.	UNKNOWN HYDROCARBON		24.9	18000 J
16.	UNKNOWN HYDROCARBON		25.2	20000 J
17.	UNKNOWN HYDROCARBON		25.7	33000 J
18.	UNKNOWN		25.8	150000 J
19. 10544500	MOLECULAR SULFUR		26.0	12000 J
20.	UNKNOWN HYDROCARBON		26.6	23000 J
21.	UNKNOWN HYDROCARBON		26.9	64000 J
22.	UNKNOWN HYDROCARBON		27.0	36000 J
23.	UNKNOWN HYDROCARBON		27.2	68000 J
24.	UNKNOWN HYDROCARBON		27.7	63000 J
25.	UNKNOWN HYDROCARBON		28.0	45000 J
26.	UNKNOWN HYDROCARBON		28.4	110000 J
27.	UNKNOWN HYDROCARBON		29.3	100000 J
28.	UNKNOWN HYDROCARBON		29.6	67000 J
29.	UNKNOWN HYDROCARBON		30.6	46000 J
30	UNKNOWN HYDROCARBON		31.3	80000 J
	UNKNOWN HYDROCARBON		31.8	100000 J

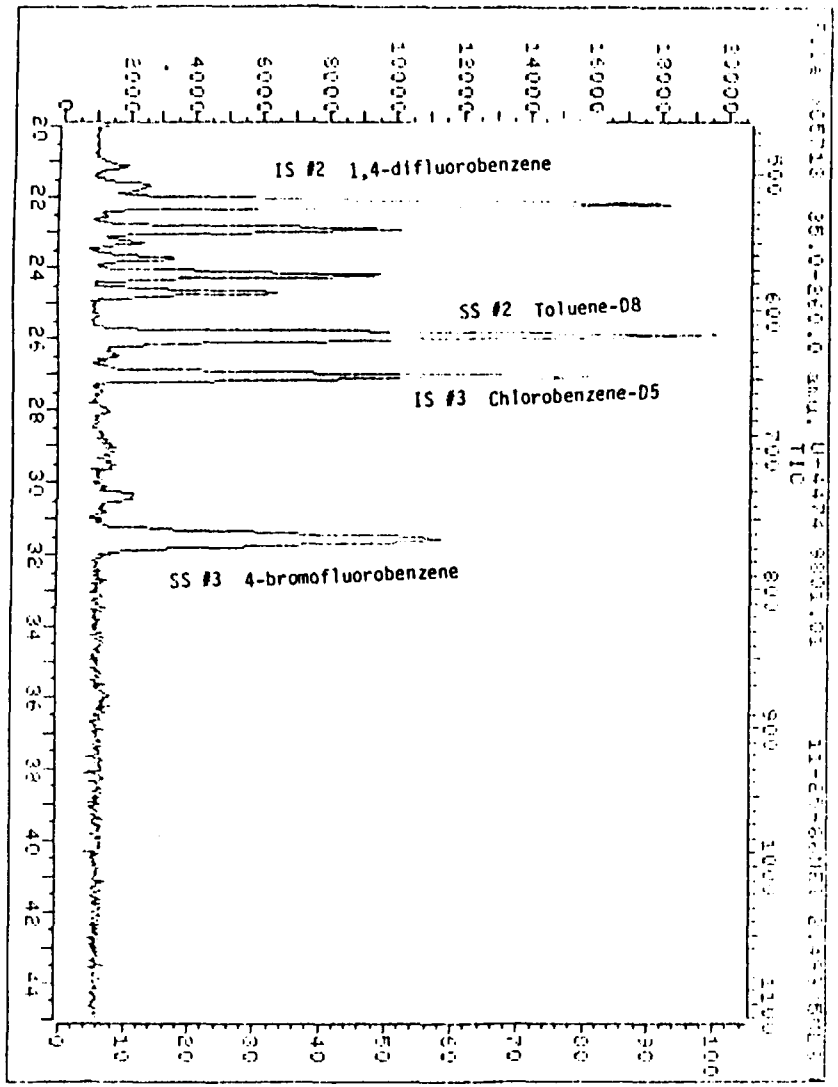
TOTAL ION CHROMATOGRAM

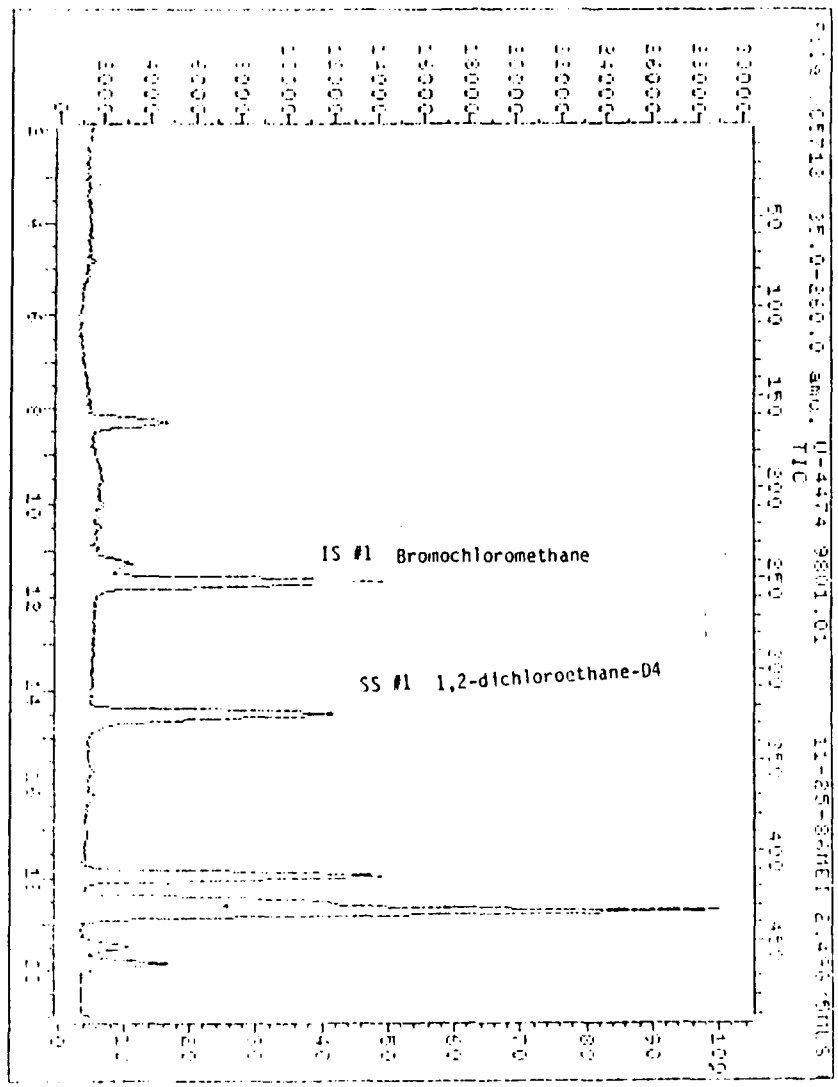


Data File: >C5713::D1
Name: U-4474 9801.01 DC-SS-35
Misc: 11-25-86MEI 2.49G/5MLS DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861125 22:54

Operator ID: USER6
Quant Time: 861126 01:43
Injected at: 861126 00:57


IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene


IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4

DC-SS-35

QUANT REPORT

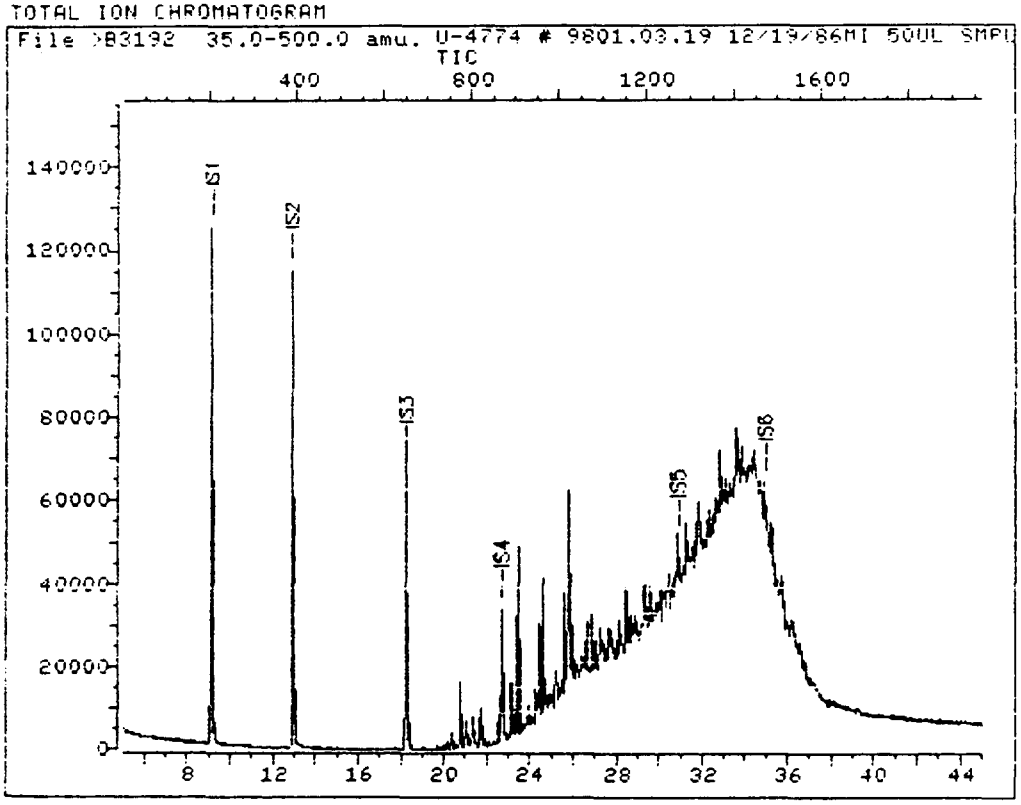
Operator ID: USER6 Quant Rev: 4 Quant Time: 861126 01:43
Output File: ^C5713::Q2 Injected at: 861126 00:57
Data File: >C5713::D1 Dilution Factor: 1.00
Name: U-4474 9801.01 DC-SS-35
Misc: 11-25-86MEI 2.49G/5MLS DI + 10UL IS/SS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861125 22:54

	Compound	M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE (IS)	128	11.65	251	18212	250.00	NGS	100
6)	METHYLENE CHLORIDE	84	8.27	164	8018	50.48	NGS	100
15)	1,2-DICHLOROETHANE-D4(SURR)	65	14.52	325	44795	263.88	NGS	83
16)	*1,4-DIFLUOROBENZENE (IS)	114	22.20	523	67016	250.00	NGS	100
~~22)~~	~~1,2-DICHLOROPROPANE~~	~~63~~	~~18.71~~	~~433~~	~~1066~~	~~9.09~~	~~NGS~~ No BJM	1
31)	*CHLOROBENZENE-D5 (IS)	117	27.05	648	48417	250.00	NGS	100
32)	4-METHYL-2-PENTANONE	43	22.90	541	34789	215.52	NGS	74
~~33)~~	~~2-HEXANONE~~	~~43~~	~~23.75~~	~~563~~	~~4672~~	~~35.85~~	~~NGS~~	100
~~33)~~	~~2-HEXANONE~~	~~43~~	~~24.22~~	~~575~~	~~24852~~	~~190.67~~	~~NGS~~	100
~~33)~~	~~2-HEXANONE~~	~~43~~	~~24.68~~	~~587~~	~~19719~~	~~151.29~~	~~NGS~~	100
36)	TOLUENE-D8 (SURR)	98	25.89	618	69259	241.03	NGS	96
40)	4-BROMOFLUOROBENZENE(SURR)	95	31.64	766	30654	214.29	NGS	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



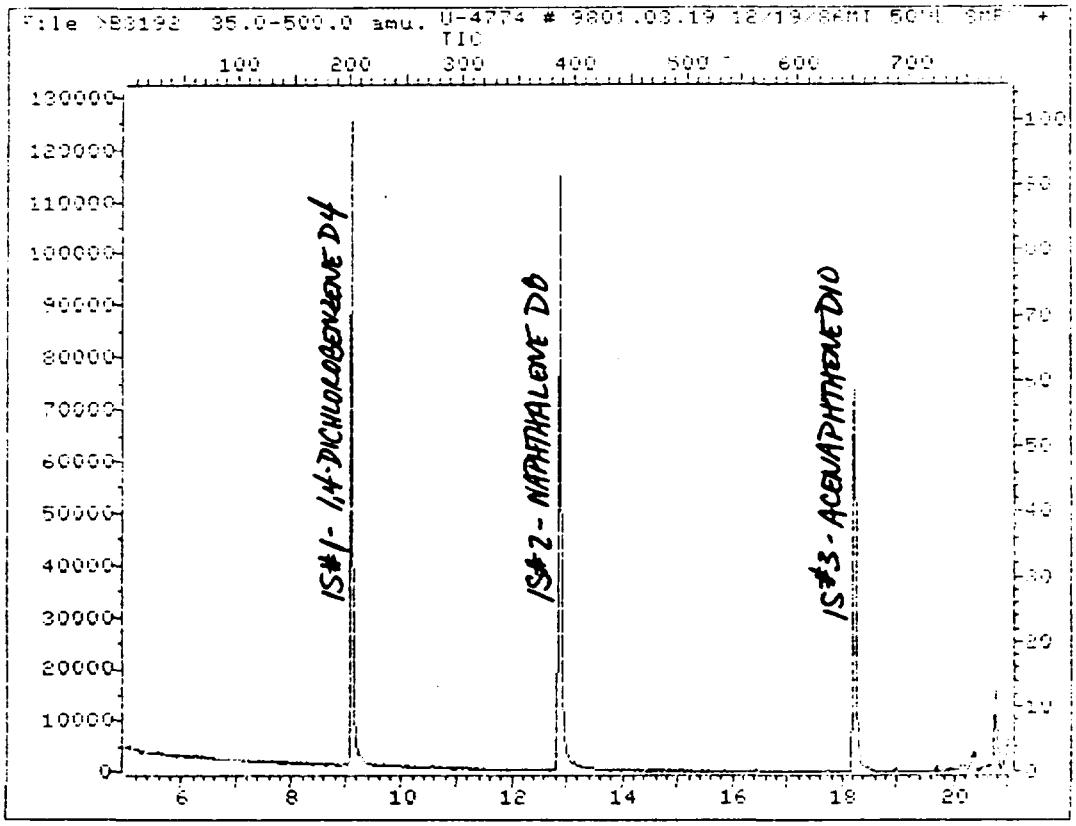
Data File: >B3192::D4
Name: U-4774 # 9801.03.19 DC-SS-35
Misc: 12/19/86MI 50UL SMPL + 450UL MECL2 + 5UL IS (10X)

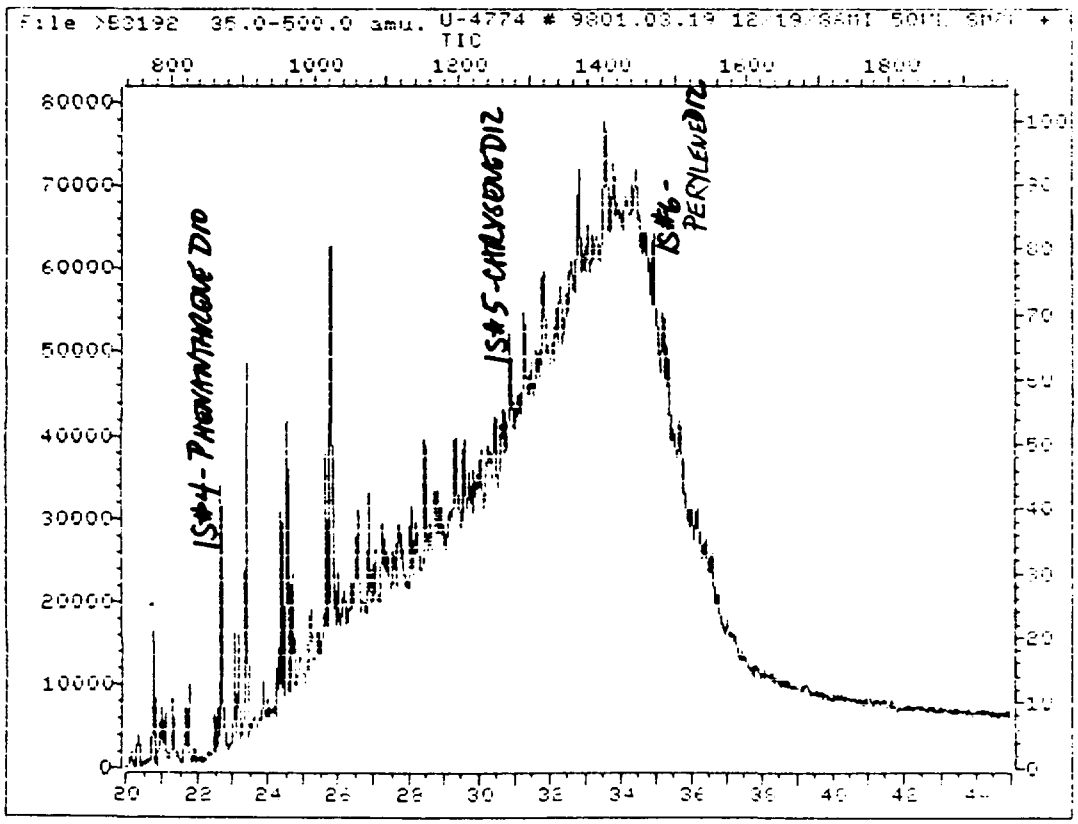
Ic File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861224 12:42

Operator ID: USER8
Quant Time: 861226 09:13
Injected at: 861219 19:51

ecology and environment

DC-SS-35


File >B3192 35.0-500.0 amu. U-4774 # 9801.03.19 12/19/SAMI 50ML SMP +
TIC
IS#1- 1,4-DICHLOROBENZENE D4
IS#2- NAPHTHALENE D8
IS#3- ACENAPHTHENE D10


File >B3192 35.0-500.0 amu. U-4774 # 9801.03.19 12/19/SAMI 50ML SMP +
TIC
IS#4- PHENANTHRENE D10
IS#5-CHRYSENE D12
IS#6- PERYLENE D12

QUANT REPORT

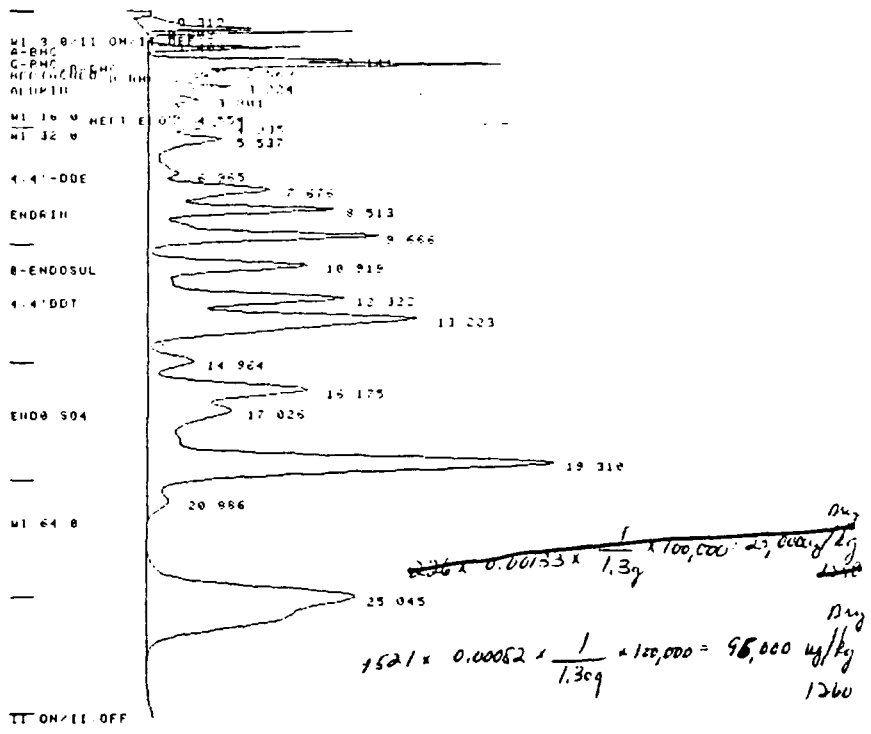
Operator ID: USER8 Quant Rev: 4 Quant Time: 861226 09:13
Output File: ^B3192::Q2 Injected at: 861219 19:51
Data File: >B3192::D4 Dilution Factor: 10.00
Name: U-4774 # 9801.03.19 DC-SS-35
Misc: 12/19/86MI 50UL SMPL + 450UL MECL2 + 5UL IS (10X) FINAL VOLUME - 5.0ml

ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861224 12:42

	Compound		m/e	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.10	202	60854	40.00	UG/L	84
19)	*NAPHTHALENE-D8	(IS)	136	12.87	387	180089	40.00	UG/L	100
34)	*ACENAPHTHENE-D10	(IS)	162	18.21	650	59482	40.00	UG/L	96
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.23~~	~~651~~	~~17258~~	~~81.12~~	~~UG/L~~	~~100~~
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.21~~	~~650~~	~~7333~~	~~151.05~~	~~UG/L~~	~~100~~
55)	*PHENANTHRENE-D10	(IS)	188	22.66	869	53782	40.00	UG/L	97
65)	*CHRYSENE-D12	(IS)	240	30.85	1271	21952	40.00	UG/L	100
~~72)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~31.44~~	~~1300~~	~~844~~	~~16.76~~	~~UG/L~~	61
~~72)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~31.79~~	~~1317~~	~~476~~	~~9.45~~	~~UG/L~~	54
~~72)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~32.05~~	~~1330~~	~~674~~	~~13.39~~	~~UG/L~~	64
74)	*PERYLENE-D12	(IS)	264	34.93	1471	22526	40.00	UG/L	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.26~~	~~1389~~	~~220~~	~~2.22~~	~~UG/L~~	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.50~~	~~1401~~	~~182~~	~~1.83~~	~~UG/L~~	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.59~~	~~1405~~	~~300~~	~~3.02~~	~~UG/L~~	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.63~~	~~1407~~	~~220~~	~~2.22~~	~~UG/L~~	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.93~~	~~1422~~	~~242~~	~~2.44~~	~~UG/L~~	100

* Compound is ISTD

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



~~226 x 0.00133 x 1/1.3g x 100,000 = 23,000 ug/kg~~ Dry

1521 x 0.00082 x 1/1.3g x 100,000 = 96,000 ug/kg Dry 1260

RECALCULATE ON FILE: D.C.#3760

CHANNEL: 18 - 1 TITLE: RUN#13 5:05 18 DEC 86

DC-SS-35

SAMPLE: 9801 METHOD: PEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.409		20203	BV	? 4.31
2	~~A-BHC~~	537.1313	1.563	-0.117	279713	VV	7.75
3	~~G-BHC~~	1142.319	2.141	0.031	530564	VV	? 9.44
4	~~B-BHC~~	4346.678	2.336	-0.084	801271	VV	7.19
5	~~HEPTACHLO~~	429.0579	2.569	-0.031	170758	VV	? 10.94
6	~~D-BHC~~	715.5842	2.781	-0.039	266251	VV	? 18.50
7	~~ALDRIN~~	628.0300	3.224	0.064	295492	VV	11.44
8		0.0000	3.801		242057	VV	? 20.25
9		0.0000	4.087		130094	VV	? 20.06
10	~~HEPT EPOX~~	261.9626	4.554	-0.156	111205	VV	? 24.63
11		0.0000	4.935		422840	VV	24.75
12	~~A-ENDO~~	1539.316	5.537	-0.393	616356	VV	27.75
13	~~4,4'-DDE~~	721.2960	6.965	0.135	276100	VV	? 47.68
14	~~DIELDRIN~~	2488.837	7.676	0.436	1013329	VV	34.05
15	~~ENDRIN~~	4205.036	8.513	-0.287	1111434	VV	21.25
16		0.0000	9.666		1682535	VV	23.39
17	~~B-ENDOSUL~~	3195.530	10.919	0.279	1267589	VV	28.44
18	~~4,4'DDT~~	6401.059	12.322	-0.228	1764411	VV	31.38
19		0.0000	~~13.223~~		~~3002364~~	VV	42.56
20		0.0000	14.964		426600	VV	34.05
21		0.0000	16.175		1663811	VV	40.19
22	~~ENDO SO4~~	11316.81	17.026	0.056	1083117	VV	? 65.63
23		0.0000	19.310		514483	VV	43.19
24		0.0000	20.886		237535	VB	? 52.44
25	~~METHOXYCH~~	55294.42	25.045	1.025	5285767	BB	103.44

TOTALS: 93223.08 0.711 27906008

DETECTED PKS: 34 REJECTED PKS: 9

DIVISOR: 1.50000 MULTIPLIER: 100000.000

NOISE: 57.1 OFFSET: 19

PACK: 1 VIAL: 13 INJ: 1

NOTES:
NOTEBOOK:259-59 ANALYST:RICHARD SAMSON
SECURE AREA: D JOB#:U-4474
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
PESTICIDE PCB CONFIRMATIONS
READ CREEK

232

SAMPLE NUMBER DC-SS-36

481095

293

Sample Number
DC-SS-36

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474

Lab Sample ID No: 9802 QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: [signature] Date Sample Received: 11-14-86

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-21-86

Conc/Dil Factor: 3 pH 7.2

Percent Moisture: (Not Decanted) 27

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	55 B
67-64-1	Acetone	25 B
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloromethane	15u
78-93-3	2-Butanone	48 B
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	11 J
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	15u
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	30u
591-78-6	2-Hexanone	30u
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	15u
108-90-7	Chlorobenzene	15u
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

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, etc. (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.

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ecology and environment

Laboratory Name Ecology & Environment Inc.

Case No U-4474

Sample Number DC-SS-36

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed 12-22-86

Conc/Dil Factor 4

Percent Moisture (Decanted) 27

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	900	U
111-44-4	bis(2-Chloroethyl)Ether	900	U
95-57-8	2-Chlorophenol	900	U
541-73-1	1,3-Dichlorobenzene	900	U
106-46-7	1,4-Dichlorobenzene	240	J
100-51-6	Benzyl Alcohol	900	U
95-50-1	1,2-Dichlorobenzene	900	U
95-48-7	2-Methylphenol	900	U
39638-32-9	bis(2-chloroisopropyl)Ether	900	U
106-44-5	4-Methylphenol	900	U
621-64-7	N-Nitroso-Di-n-Propylamine	900	U
67-72-1	Hexachloroethane	900	U
98-95-3	Nitrobenzene	900	U
78-59-1	Isophorone	900	U
88-75-5	2-Nitrophenol	900	U
105-67-9	2,4-Dimethylphenol	900	U
65-85-0	Benzoic Acid	4400	U
111-91-1	bis(2-Chloroethoxy)Methane	900	U
120-83-2	2,4-Dichlorophenol	900	U
120-82-1	1,2,4-Trichlorobenzene	65	J
91-20-3	Naphthalene	71	J
106-47-8	4-Chloroaniline	900	U
87-68-3	Hexachlorobutadiene	900	U
59-50-7	4-Chloro-3-Methylphenol	900	U
91-57-6	2-Methylnaphthalene	50	J
77-47-4	Hexachlorocyclopentadiene	900	U
88-06-2	2,4,6-Trichlorophenol	900	U
95-95-4	2,4,5-Trichlorophenol	4400	U
91-58-7	2-Chloronaphthalene	900	U
88-74-4	2-Nitroaniline	1100	J
131-11-3	Dimethyl Phthalate	900	U
208-96-8	Acenaphthylene	900	U
99-09-2	3-Nitroaniline	4400	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	200	J
51-28-5	2,4-Dinitrophenol	4400	U
100-02-7	4-Nitrophenol	4400	U
132-64-9	Dibenzofuran	95	J
121-14-2	2,4-Dinitrotoluene	900	U
606-20-2	2,6-Dinitrotoluene	900	U
84-66-2	Diethylphthalate	900	U
7005-72-3	4-Chlorophenyl-phenylether	900	U
86-73-7	Fluorene	900	U
100-01-6	4-Nitroaniline	4400	U
534-52-1	4,6-Dinitro-2-Methylphenol	4400	U
86-30-6	N-Nitrosodiphenylamine (1)	900	U
101-55-3	4-Bromophenyl-phenylether	900	U
118-74-1	Hexachlorobenzene	900	U
87-86-5	Pentachlorophenol	1600	J
85-01-8	Phenanthrene	2800	
120-12-7	Anthracene	600	
84-74-2	Di-n-Butylphthalate	900	U
206-44-0	Fluoranthene	4600	
129-00-0	Pyrene	3100	
85-68-7	Butylbenzylphthalate	900	U
91-94-1	3,3'-Dichlorobenzidine	1800	U
56-55-3	Benzo(a)Anthracene	2100	
117-81-7	bis(2-Ethylhexyl)Phthalate	900	U
218-01-9	Chrysene	2700	
117-84-0	Di-n-Octyl Phthalate	900	U
205-99-2	Benzo(b)Fluoranthene	4800	
207-08-9	Benzo(k)Fluoranthene	900	U
50-32-8	Benzo(a)Pyrene	1900	
193-39-5	Indeno(1,2,3-cd)Pyrene	1700	
53-70-3	Dibenz(a,h)Anthracene	550	J
191-24-2	Benzo(g,h,i)Perylene	1500	

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No V-4474

Sample Number DC-SS-36

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed 12-9-86

Conc/Dil Factor 250

Percent Moisture (decanted) 27.4

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	4,000 u
319-85-7	Beta-BHC	4,000 u
319-86-8	Delta-BHC	4,000 u
58-89-9	Gamma-BHC (Lindane)	4,000 u
76-44-8	Heptachlor	4,000 u
309-00-2	Aldrin	4,000 u
1024-57-3	Heptachlor Epoxide	4,000 u
959-98-8	Endosulfan I	4,000 u
60-57-1	Dieldrin	8,000 u
72-55-9	4,4'-DDE	8,000 u
72-20-8	Endrin	8,000 u
33213-65-9	Endosulfan II	8,000 u
72-54-8	4,4'-DDD	8,000 u
1031-07-8	Endosulfan Sulfate	8,000 u
50-29-3	4,4'-DDT	8,000 u
72-43-5	Methoxychlor	40,000 u
53494-70-5	Endrin Ketone	8,000 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	144,000 C

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 30g V_t 1,000 V_i 4 µl

Laboratory Name ecology and environment, inc.

Case No 11-4-174

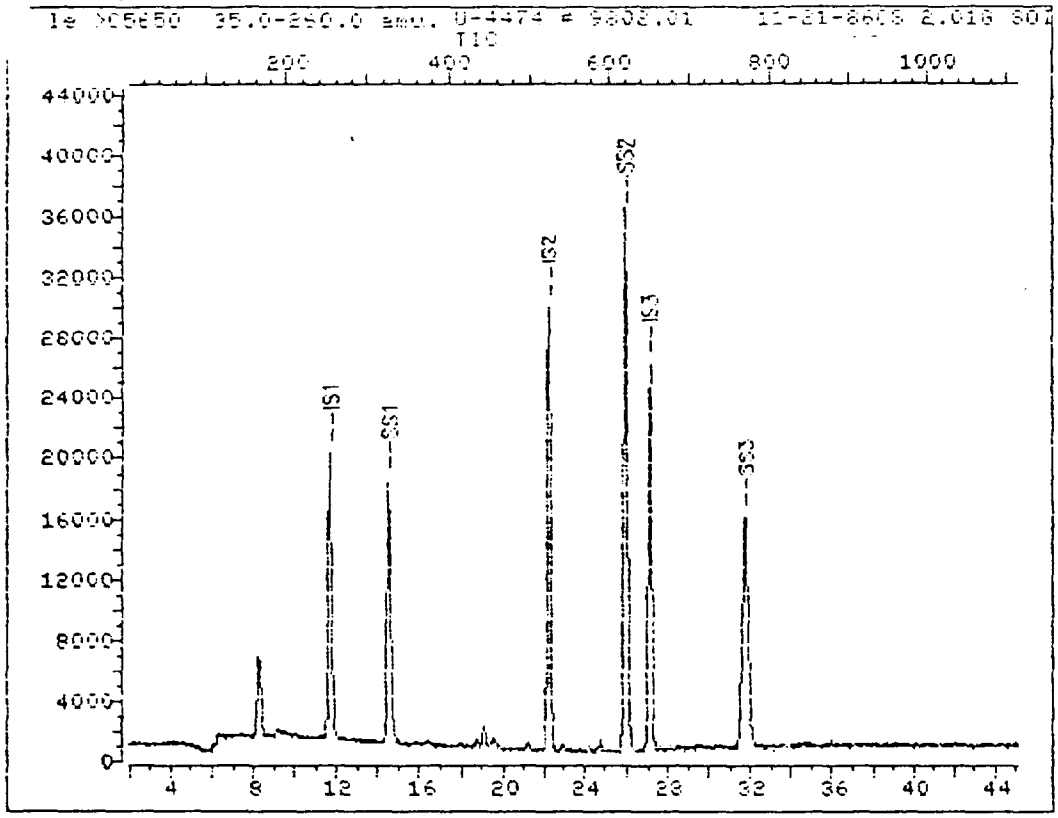
Sample Number DC-SS-36

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.		No TIC's in VOA fraction				
2.						
3.		UNKNOWN AROMATIC	BNA	20.3	3500	J
4.		PENTA METHYL HEPTYL BENZENE		20.9	7200	J
5.		UNKNOWN AROMATIC		21.0	4300	J
6.		UNKNOWN AROMATIC		21.2	6100	J
7.		PENTA METHYL HEPTYL BENZENE		21.7	3800	J
8.		UNKNOWN		25.7	2900	J
9.		PCB		28.5-32.0	—	
10.	198550	PERYLENE		34.5	2200	J
11.	3268879	OCTACHLORODIBENZO [B,E] [1,4] DIOXIN		37.3	7300	J
12.						
13.						
14.						
15.						
16.						
17.						
18.						
19.						
20.						
21.						
22.						
23.						
24.						
25.						
26.						
27.						
28.						
29.						
30						

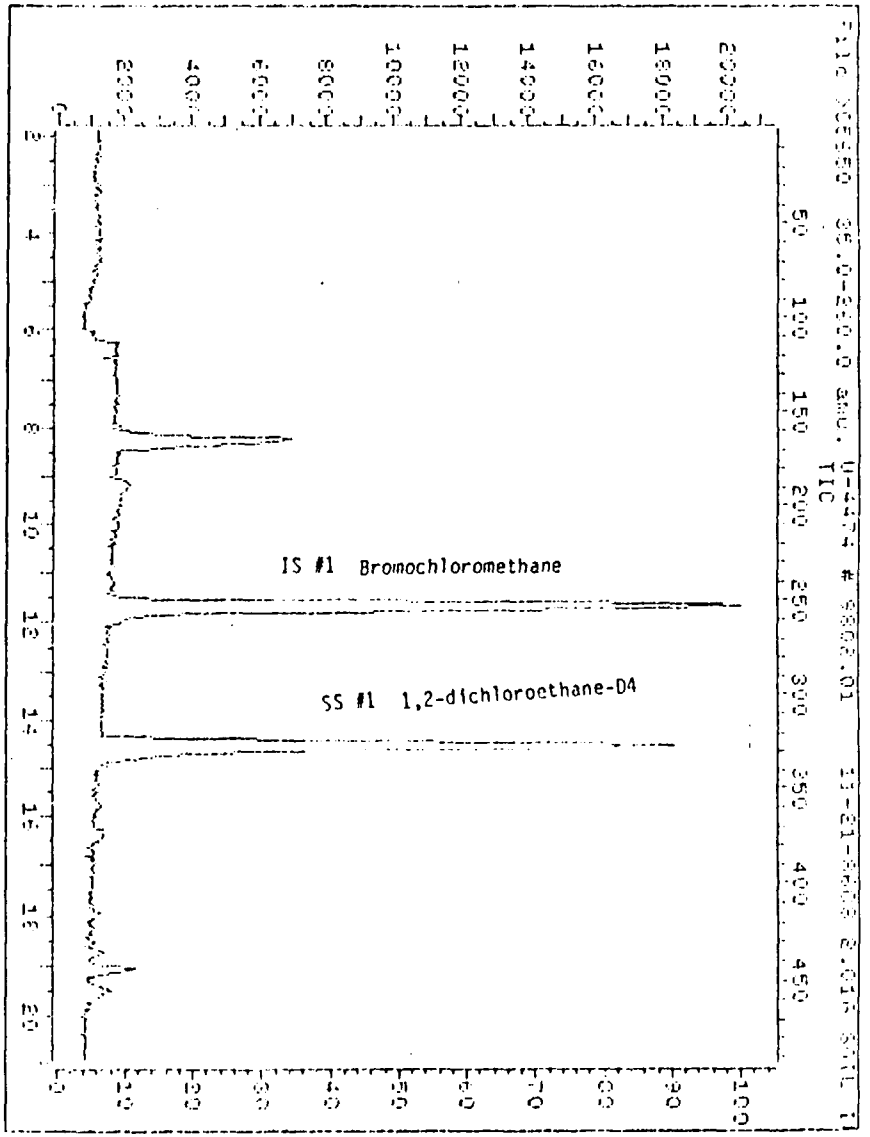
TOTAL ION CHROMATOGRAM

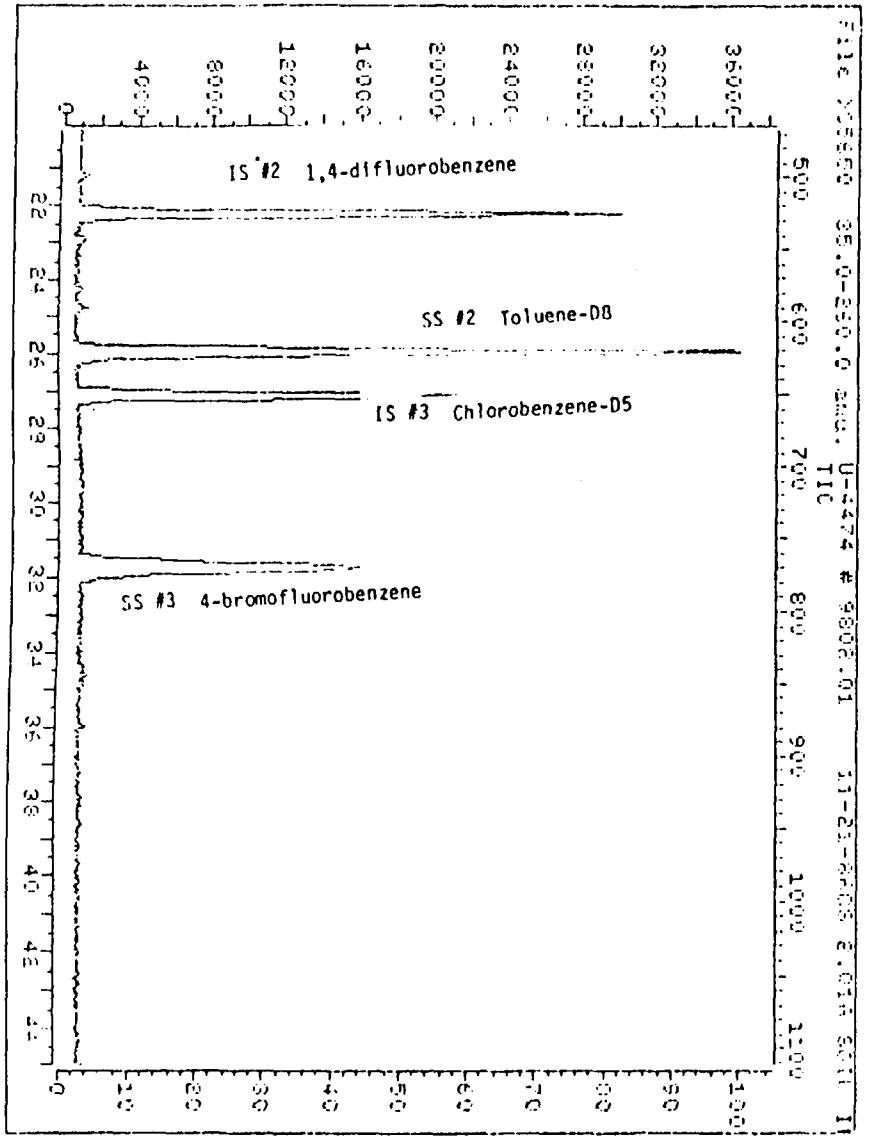


Data File: >C5650::D3
Name: U-4474 # 9802.01 DC-SS-36
Misc: 11-21-86CS 2.01G SOIL IN 5ML DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861126 11:44

Operator ID: USER8
Quant Time: 861126 11:46
Injected at: 861121 12:24


IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

DC-SS-36

QUANT REPORT

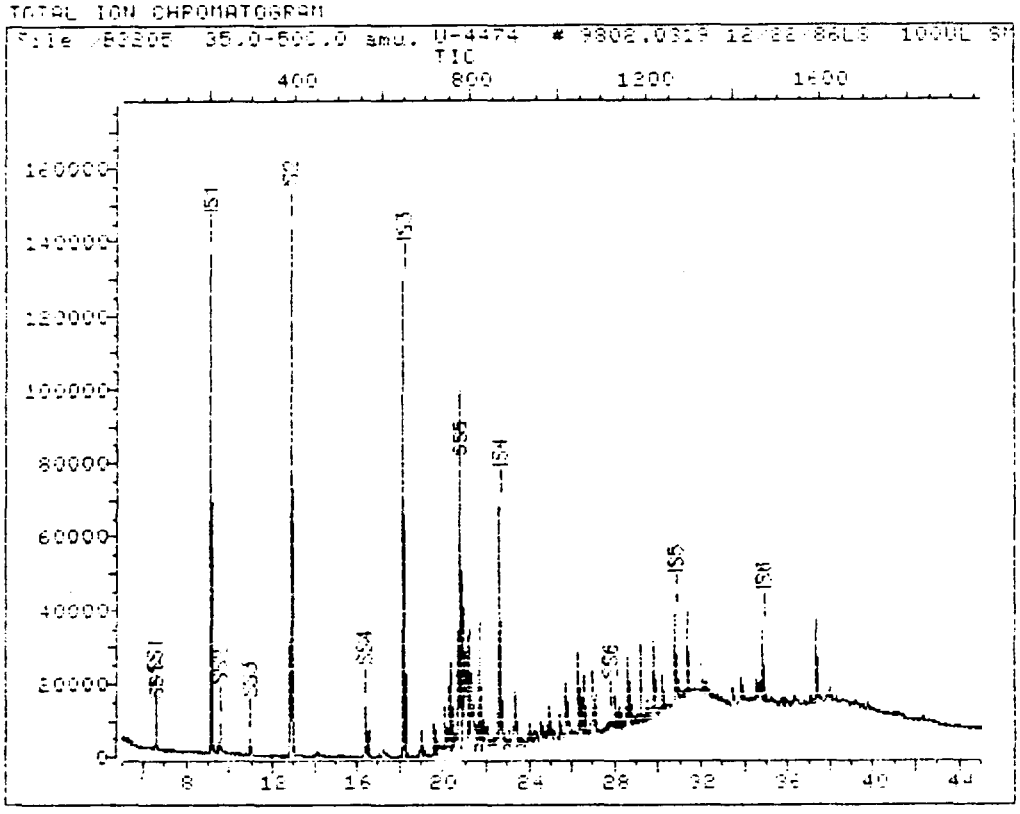
Operator ID: USER8 Quant Rev: 4 Quant Time: 861126 11:46
Output File: ^C5650::Q2 Injected at: 861121 12:24
Data File: >C5650::D3 Dilution Factor: 1.00
Name: U-4474 # 9802.01 DC-SS-36
Misc: 11-21-86CS 2.01G SOIL IN 5ML DI + 10UL IS/SS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861126 11:44

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.66	293	29284	250.00	NGS	100
6)	METHYLENE CHLORIDE		84	8.25	165	15802	80.53	NGS	100
7)	ACETONE		43	9.18	189	3511	36.04	NGS	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.53	327	75608	260.20	NGS	84
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.22	525	122343	250.00	NGS	100
17)	2-BUTANONE		72	14.69	331	3003	70.67	NGS	100
24)	TRICHLOROETHENE		130	19.07	444	2670	15.64	NGS	76
31)	*CHLOROBENZENE-D5	(IS)	117	27.11	651	79242	250.00	NGS	100
36)	TOLUENE-D8	(SURR)	98	25.90	620	94083	207.90	NGS	99
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.73	770	57051	243.24	NGS	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM

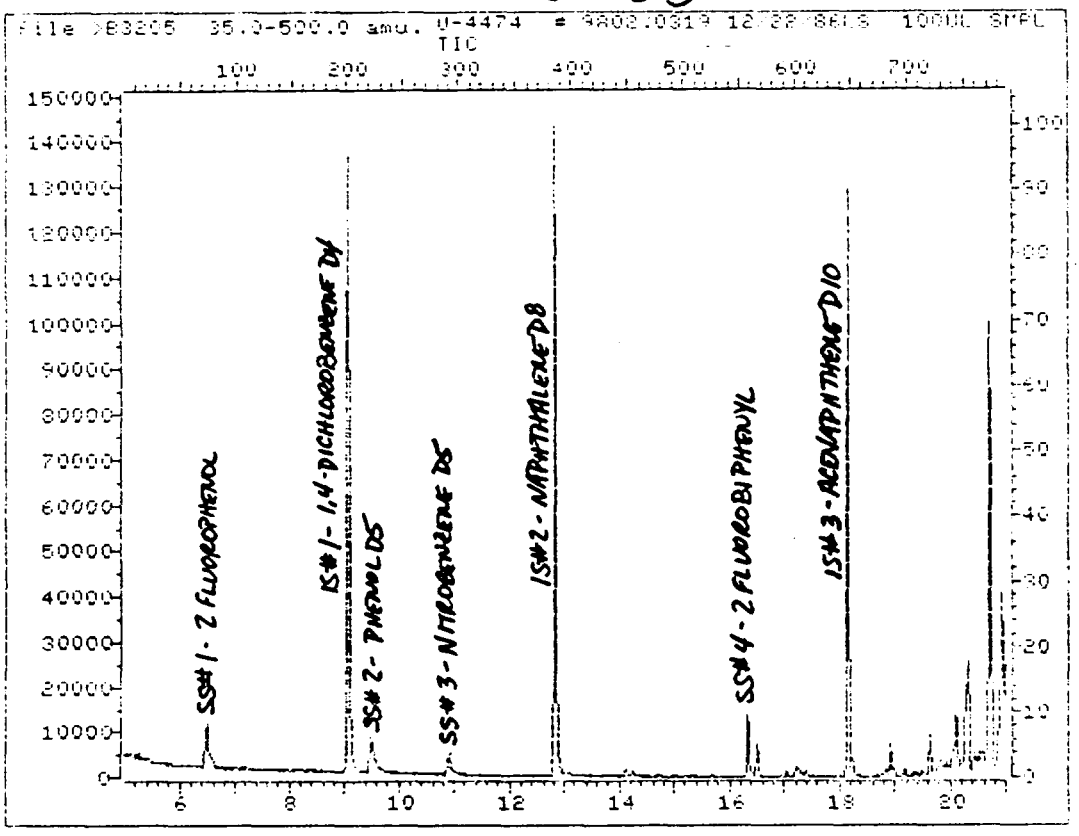


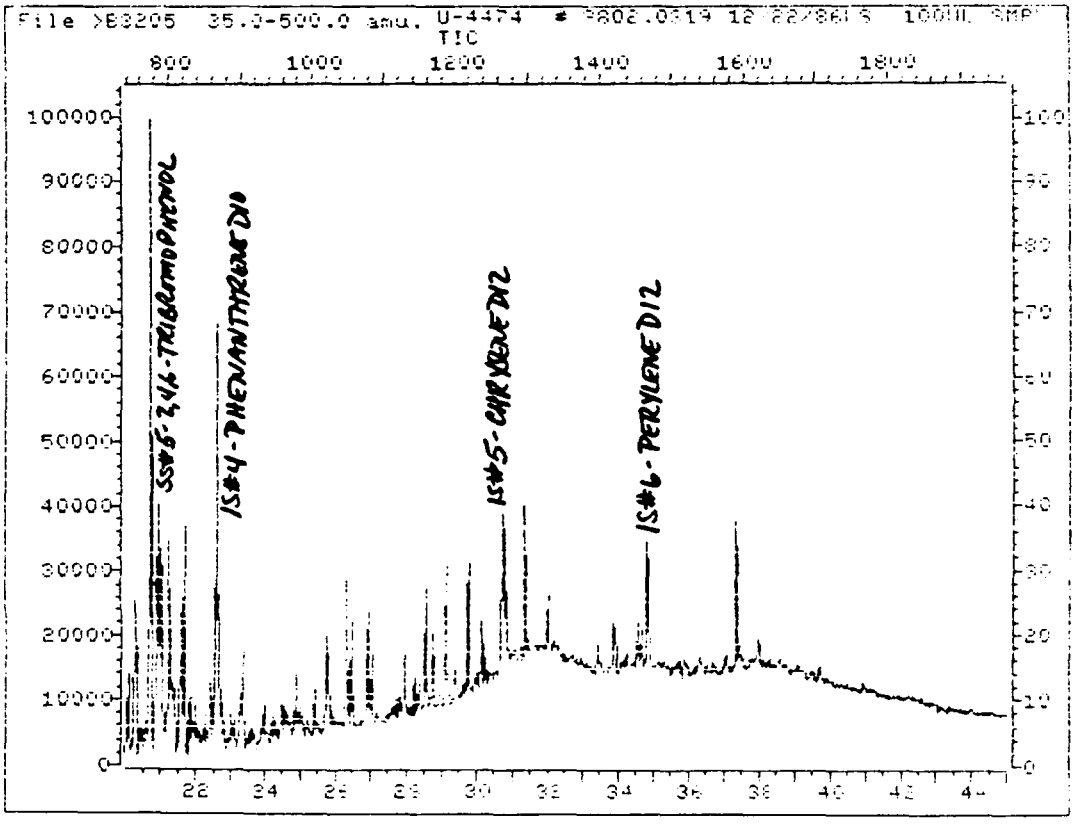
Data File: >87205::D4
Name: U-4474 # 9802.0319 DC-SS-36
Misc: 12/22/86LS 100UL SMPL + 300UL MEOL2 + 40UL IS

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861222 16:20

Operator ID: USER8
Quant Time: 861222 19:15
Injected at: 861222 18:28

DC-SS-36


File >B3205 35.0-500.0 amu. U-4474 # 9802.0319 12/22/86 15 100UL SMPL
TIC
SS# 1 - 2 FLUOROPHENOL
IS# 1 - 1,4-DICHLOROBENZENE D4
SS# 2 - PHENOL D5
SS# 3 - NITROBENZENE D5
IS# 2 - NAPHTHALENE D8
SS# 4 - 2 FLUOROBIPHENYL
IS# 3 - ACENAPHTHENE D10


File >B3205 35.0-500.0 amu. U-4474 # 9802.0319 12/22/86 15 100UL SMPL
TIC
SS# 5 - 2,4,6-TRIBROMOPHENOL
IS# 4 - PHENANTHRENE D10
IS# 5 - CHRYSENE D12
IS# 6 - PERYLENE D12

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861222 19:15
Output File: ^B3205::Q2 Injected at: 861222 18:28
ata File: >B3205::D4 Dilution Factor: 4.00
Name: U-4474 # 9802.0319 DC-SS-36
Misc: 12/22/86LS 100UL SMPL + 300UL MECL2 + 4UL IS

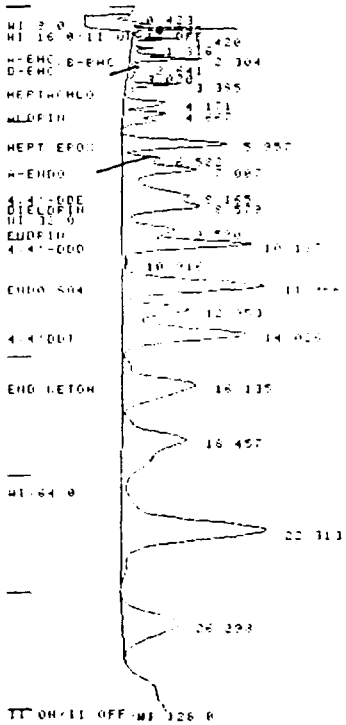
ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861222 16:20

	Compound		m/z	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.07	201	60502	40.00	UG/L	87
2)	PHENOL-D5	(SURR)	99	9.50	222	17839	42.98	UG/L	92
5)	2-FLUOROPHENOL	(SURR)	112	6.49	74	8569	24.84	UG/L	96
5)	2-FLUOROPHENOL	(SURR)	112	6.55	77	3653	10.59	UG/L	87
~~9)~~	~~1,3-DICHLOROBENZENE~~		~~146~~	~~9.11~~	~~203~~	~~2652~~	~~5.45~~	~~UG/L~~	~~95~~
10)	1,4-DICHLOROBENZENE		146	9.11	203	2652	5.26	UG/L	96
~~17)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~10.90~~	~~291~~	~~832~~	~~2.22~~	~~UG/L~~	~~88~~
19)	*NAPHTHALENE-D8	(IS)	136	12.81	385	186557	40.00	UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	10.90	291	7770	18.85	UG/L	96
28)	1,2,4-TRICHLOROBENZENE		180	12.77	383	572	1.43	UG/L	100
29)	NAPHTHALENE		128	12.87	388	1710	1.56	UG/L	100
33)	2-METHYLNAPHTHALENE		142	15.03	494	724	1.09	UG/L	84
~~33)~~	~~2-METHYLNAPHTHALENE~~		~~142~~	~~15.31~~	~~503~~	~~699~~	~~1.04~~	~~UG/L~~	~~95~~
34)	*ACENAPHTHENE-D10	(IS)	162	18.16	648	61716	40.00	UG/L	98
38)	2-FLUOROBIPHENYL	(SURR)	172	16.33	558	16278	25.90	UG/L	92
40)	2-NITROANILINE		65	17.22	602	3859	25.08	UG/L	88
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.16~~	~~648~~	~~10135~~	~~31.90~~	~~UG/L~~	~~100~~
43)	DIBENZOFURAN		168	18.79	679	1336	2.09	UG/L	100
47)	ACENAPHTHENE		153	18.24	652	2216	4.37	UG/L	92
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.72	774	1565	19.65	UG/L	95
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.16~~	~~648~~	~~7383~~	~~64.42~~	~~UG/L~~	~~100~~
55)	*PHENANTHRENE-D10	(IS)	188	22.59	866	60285	40.00	UG/L	98
60)	PENTACHLOROPHENOL		266	22.55	864	1862	34.99	UG/L	100
61)	PHENANTHRENE		178	22.65	869	22411	60.64	UG/L	99
~~61)~~	~~PHENANTHRENE~~		~~178~~	~~22.82~~	~~877~~	~~4763~~	~~12.87~~	~~UG/L~~	~~96~~
~~62)~~	~~ANTHRACENE~~		~~178~~	~~22.65~~	~~869~~	~~22411~~	~~62.14~~	~~UG/L~~	~~99~~
62)	ANTHRACENE		178	22.82	877	4763	13.21	UG/L	96
64)	FLUORANTHENE		202	26.30	1048	23350	99.75	UG/L	98
65)	*CHRYSENE-D12	(IS)	240	30.73	1266	25446	40.00	UG/L	100
~~66)~~	~~BENZIDINE~~		~~184~~	~~27.07~~	~~1086~~	~~931~~	~~831.00~~	~~NO CALIB~~	~~100~~
67)	PYRENE		202	26.93	1079	18467	67.00	UG/L	87
68)	TERPHENYL-D14	(SURR)	244	27.78	1121	2796	19.47	UG/L	100
~~70)~~	~~3,3'DICHLOROBENZIDINE~~		~~252~~	~~30.67~~	~~1263~~	~~556~~	~~16.99~~	~~UG/L~~	~~100~~
~~70)~~	~~3,3'DICHLOROBENZIDINE~~		~~252~~	~~30.80~~	~~1269~~	~~317~~	~~9.69~~	~~UG/L~~	~~100~~
~~70)~~	~~3,3'DICHLOROBENZIDINE~~		~~252~~	~~31.33~~	~~1295~~	~~1456~~	~~44.45~~	~~UG/L~~	~~100~~
71)	BENZO(A)ANTHRACENE		228	30.69	1264	7413	46.22	UG/L	94
~~71)~~	~~BENZO(A)ANTHRACENE~~		~~228~~	~~30.82~~	~~1270~~	~~9921~~	~~61.85~~	~~UG/L~~	~~97~~
~~73)~~	~~CHRYSENE~~		~~228~~	~~30.69~~	~~1264~~	~~7413~~	~~44.03~~	~~UG/L~~	~~93~~
73)	CHRYSENE		228	30.82	1270	9921	58.93	UG/L	98
74)	*PERYLENE-D12	(IS)	264	34.81	1466	23581	40.00	UG/L	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.08~~	~~1381~~	~~492~~	~~1.79~~	~~UG/L~~	~~100~~
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.53~~	~~1403~~	~~912~~	~~3.29~~	~~UG/L~~	~~100~~
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.61~~	~~1407~~	~~327~~	~~1.18~~	~~UG/L~~	~~100~~
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.71~~	~~1412~~	~~487~~	~~1.75~~	~~UG/L~~	~~100~~
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.91~~	~~1417~~	~~659~~	~~2.32~~	~~UG/L~~	~~100~~
76)	BENZO(B)FLUORANTHENE		252	33.85	1419	16228	104.88	UG/L	100

	Compound	m/z	R.T.	Scan#	Area	Conc	Units	Q
[illegible]	BENZO(B)FLUORANTHENE	252	[illegible]	1433	[illegible]	[illegible]	[illegible]	[illegible]
77)	BENZO(K)FLUORANTHENE	252	33.05	1415	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	BENZO(K)FLUORANTHENE	252	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
78)	BENZO(A)PYRENE	252	34.52	1482	6362	[illegible]	[illegible]	[illegible]
78)	BENZO(A)PYRENE	252	34.67	1489	6542	[illegible]	[illegible]	[illegible]
78)	BENZO(A)PYRENE	252	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
79)	INDENO(1,2,3-CD)PYRENE	276	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
79)	INDENO(1,2,3-CD)PYRENE	276	37.44	1595	5339	37.44	[illegible]	[illegible]
[illegible]	DIBENZ(A,H)ANTHRACENE	278	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
80)	DIBENZ(A,H)ANTHRACENE	278	37.92	1599	1688	[illegible]	[illegible]	[illegible]
[illegible]	DIBENZ(A,H)ANTHRACENE	278	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	DIBENZ(A,H)ANTHRACENE	278	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
81)	BENZO(G,H,I)PERYLENE	276	37.97	1621	5199	32.31	[illegible]	[illegible]
81)	BENZO(G,H,I)PERYLENE	276	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

* Compound is ISTD

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



1260 478 x 0.00131 x 1/1.5 x 250,000 = 104,400 ug/kg
144,000 ug/kg
Ony

~~478 x 0.00131 x 1/1.5 x 250,000 = 104,400 ug/kg 1260~~

RECALCULATE ON FILE: D.CREEK2544

CHANNEL: 1A - 1 TITLE: RUN# 21 7:29 9 DEC 86

DC-SS-36

SAMPLE: 9802.01.19A1 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	1.420		[illegible]463	BV	3.31
2		0.0000	1.816		[illegible]720	VV	4.94
3	[illegible]	45.1490	2.136	0.046	[illegible]565	VV	6.31
4	[illegible]	286.0264	2.304	0.014	[illegible]50[illegible]	VV	5.44
5		0.0000	3.385		[illegible]612	VV	7.36
6	HEPTACHLO	191.0953	4.171	0.281	[illegible]321	VV	17.56
7	ALDRIN	123.9115	4.667	-0.133	50,9 [illegible]774	VV	14.94
8		0.0000	4.968		[illegible]799	VE	? 13.05
9	[illegible]	476.5210	5.957	0.137	[illegible]408	BV	20.25
10		0.0000	6.592		[illegible]951	VV	? 15.75
11	[illegible]	433.1002	7.007	-0.223	[illegible]143	VV	23.95
12	[illegible]	545.8176	8.165	-0.165	[illegible]	VV	? 36.65
13	[illegible]IN	400.8606	8.579	0.159	[illegible]229	VV	? 31.56
14	[illegible]	361.7286	9.580	0.000	[illegible]204	VV	? 27.38
15	[illegible]	929.4362	10.187	-0.263	[illegible]420	VV	24.25
16	[illegible]	1611.929	11.966	0.304	[illegible]502	VV	31.89
17		0.0000	12.953		[illegible]307	VV	30.13
18	[illegible]	2148.514	14.026	0.376	[illegible]962	VV	35.00
19	END KETON	998.0406	16.135	0.405	[illegible]182	VV	54.56
20		0.0000	18.457		[illegible]642	VV	63.81
21		0.0000	22.313		[illegible]655	VE	52.25
22	[illegible]	1015.450	26.298	-1.072	[illegible]803	BB	65.25

1260 478

TOTALS: 9567.570 -0.682 [illegible]

DETECTED PKS: 35 REJECTED PKS: 13

DIVISOR: 1.50000 MULTIPLIER: ~~[illegible]~~ 250,000

NOISE: 22.9 OFFSET: -177

RACK: 2 VIAL: 6 INJ: 1

NOTES:
NOTEBOOK:259-52 ANALYST:RICHARD SAMSON
SECURE AREA:D JOB# U-4474
INST:VARIAN 6000#2 A 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
AUTOSAMPLER
PEST/PCB ANALYSIS

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SAMPLE NUMBER DC-SS-37

481095

Sample Number
DC-SS-37

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474

Lab Sample ID No: 9803 QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: [illegible] Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-20-86

Conc./Dil Factor: 3 pH 6.2

Percent Moisture: (Not Decanted) 27

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	69 B
67-64-1	Acetone	48 B
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	34 B
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	15u
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	2 J
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	30u
591-78-6	2-Hexanone	30u
127-18-4	Tetrachloroethene	12 J
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	15u
108-90-7	Chlorobenzene	15u
100-41-4	Ethylbenzene	55
100-42-5	Styrene	15u
	Total Xylenes	150

Data Reporting Qualifiers

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

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

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

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

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

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

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

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recycled paper ecology and environment, inc.

Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No U-4474

Sample Number DC-SS-37

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed 12-22-86

Conc/Dil Factor: 50

Percent Moisture (Decanted) 27

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	11000	U
111-44-4	bis(-2-Chloroethyl)Ether	11000	U
95-57-8	2-Chlorophenol	11000	U
541-73-1	1 3-Dichlorobenzene	11000	U
106-46-7	1 4-Dichlorobenzene	11000	U
100-51-6	Benzyl Alcohol	11000	U
95-50-1	1 2-Dichlorobenzene	11000	U
95-48-7	2-Methylphenol	11000	U
39638-32-9	bis(2-chloroisopropyl)Ether	11000	U
106-44-5	4-Methylphenol	11000	U
621-64-7	N-Nitroso-Di-n-Propylamine	11000	U
67-72-1	Hexachloroethane	11000	U
98-95-3	Nitrobenzene	11000	U
78-59-1	Isophorone	11000	U
88-75-5	2-Nitrophenol	11000	U
105-67-9	2, 4-Dimethylphenol	11000	U
65-85-0	Benzoic Acid	55000	U
111-91-1	bis(-2-Chloroethoxy)Methane	11000	U
120-83-2	2, 4-Dichlorophenol	11000	U
120-82-1	1, 2, 4-Trichlorobenzene	5300	J
91-20-3	Naphthalene	26000	
106-47-8	4-Chloroaniline	11000	U
87-68-3	Hexachlorobutadiene	11000	U
59-50-7	4-Chloro-3-Methylphenol	11000	U
91-57-6	2-Methylnaphthalene	11000	U
77-47-4	Hexachlorocyclopentadiene	11000	U
88-06-2	2 4 6-Trichlorophenol	11000	U
95-95-4	2, 4, 5-Trichlorophenol	55000	U
91-58-7	2-Chloronaphthalene	11000	U
88-74-4	2-Nitroaniline	220000	
131-11-3	Dimethyl Phthalate	11000	U
208-96-8	Acenaphthylene	11000	U
99-09-2	3-Nitroaniline	55000	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	11000	U
51-28-5	2, 4-Dinitrophenol	55000	U
100-02-7	4-Nitrophenol	55000	U
132-64-9	Dibenzofuran	11000	U
121-14-2	2 4-Dinitrotoluene	11000	U
606-20-2	2 6-Dinitrotoluene	11000	U
84-66-2	Diethylphthalate	11000	U
7005-72-3	4-Chlorophenyl-phenylether	11000	U
86-73-7	Fluorene	11000	U
100-01-6	4-Nitroaniline	55000	U
534-52-1	4, 6-Dinitro-2-Methylphenol	55000	U
86-30-6	N-Nitrosodiphenylamine (1)	11000	U
101-55-3	4-Bromophenyl-phenylether	11000	U
118-74-1	Hexachlorobenzene	11000	U
87-86-5	Pentachlorophenol	55000	U
85-01-8	Phenanthrene	4900	J
120-12-7	Anthracene	11000	U
84-74-2	Di-n-Butylphthalate	11000	U
206-44-0	Fluoranthene	11000	U
129-00-0	Pyrene	11000	U
85-68-7	Butylbenzylphthalate	11000	U
91-94-1	3, 3'-Dichlorobenzidine	23000	U
56-55-3	Benzo(a)Anthracene	11000	U
117-81-7	bis(2-Ethylhexyl)Phthalate	11000	U
218-01-9	Chrysene	11000	U
117-84-0	Di-n-Octyl Phthalate	11000	U
205-99-2	Benzo(b)Fluoranthene	11000	U
207-08-9	Benzo(k)Fluoranthene	11000	U
50-32-8	Benzo(a)Pyrene	11000	U
193-39-5	Indeno(1 2, 3-cd)Pyrene	11000	U
53-70-3	Dibenz(a h)Anthracene	11000	U
191-24-2	Benzo(g h i)Perylene	11000	U

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No V-4474

Sample Number DC-SS-37

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed 12-9-86

Conc/Dil Factor 500

Percent Moisture (decanted) 27.3

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	8,000 U
319-85-7	Beta-BHC	8,000 U
319-86-8	Delta-BHC	8,000 U
58-89-9	Gamma-BHC (Lindane)	8,000 U
76-44-8	Heptachlor	8,000 U
309-00-2	Aldrin	8,000 U
1024-57-3	Heptachlor Epoxide	8,000 U
959-98-8	Endosulfan I	8,000 U
60-57-1	Dieldrin	16,000 U
72-55-9	4,4'-DDE	16,000 U
72-20-8	Endrin	16,000 U
33213-65-9	Endosulfan II	16,000 U
72-54-8	4,4'-DDD	16,000 U
1031-07-8	Endosulfan Sulfate	16,000 U
50-29-3	4,4'-DDT	16,000 U
72-43-5	Methoxychlor	80,000 U
53494-70-5	Endrin Ketone	16,000 U
57-74-9	Chlordane	80,000 U
8001-35-2	Toxaphene	160,000 U
12674-11-2	Aroclor-1016	80,000 U
11104-28-2	Aroclor-1221	80,000 U
11141-16-5	Aroclor-1232	80,000 U
53469-21-9	Aroclor-1242	80,000 U
12672-29-6	Aroclor-1248	80,000 U
11097-69-1	Aroclor-1254	160,000 U
11096-82-5	Aroclor-1260	151,000 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 30 V_t 1000 V_i 4

Sample Number
DC-SS 37-RE

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474

Lab Sample ID No: 9803 QC Report No:

Sample Matrix: Soil Contract No: EL-3140

Data Release Authorized By: [signature] Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-21-86

Conc./Dil Factor: 3 pH 6.2

Percent Moisture: (Not Decanted) 27

CAS Number		ug/l or (ug/Kg) (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	46B
67-64-1	Acetone	30u
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	30u
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or (ug/Kg) (Circle One)
78-87-5	1, 2 Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	15u
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	15u
10061-01-5	cis-1, 3 Dichloropropene	15u
110-75-8	2 Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl 2-Pentanone	30u
591-78-6	2-Hexanone	30u
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2 Tetrachloroethane	15u
108-88-3	Toluene	15u
108-90-7	Chlorobenzene	15u
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

Data Reporting Qualifiers

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

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

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

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

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

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

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

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Laboratory Name ecology and environment, inc.

Case No 11-44474

Sample Number DC-SS-37

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.	No TICs in VOA fraction			
2.				
3.	TETRACHLOROBENZENE ISOMER	BNA	16.5	7800 J
4. 99092	3-NITROBENZENAMINE		17.1	99000 J
5.	UNKNOWN AROMATIC		18.9	8100 J
6.	UNKNOWN AROMATIC		19.6	11000 J
7.	UNKNOWN AROMATIC		20.1	16000 J
8.	UNKNOWN AROMATIC		20.3	30000 J
9.	UNKNOWN AROMATIC		20.6	15000 J
10.	UNKNOWN AROMATIC		20.7	180000 J
11.	UNKNOWN AROMATIC		20.8	35000 J
12.	UNKNOWN AROMATIC		20.9	79000 J
13.	UNKNOWN AROMATIC		21.0	99000 J
14.	UNKNOWN AROMATIC		21.2	130000 J
15.	UNKNOWN AROMATIC		21.4	28000 J
16.	UNKNOWN AROMATIC		21.6	70000 J
17.	DIMETHYLDECYL BENZENE		21.7	50000 J
18.	UNKNOWN AROMATIC		21.8	24000 J
19.	UNKNOWN AROMATIC		22.0	10000 J
20.	UNKNOWN AROMATIC		22.8	12000 J
21.	UNKNOWN AROMATIC		23.3	10000 J
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30				

Laboratory Name ecology and environment, inc.

Case No 11-1-171

Sample Number
DC-SS-37-RE

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.	No TIC's in VOA fraction			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
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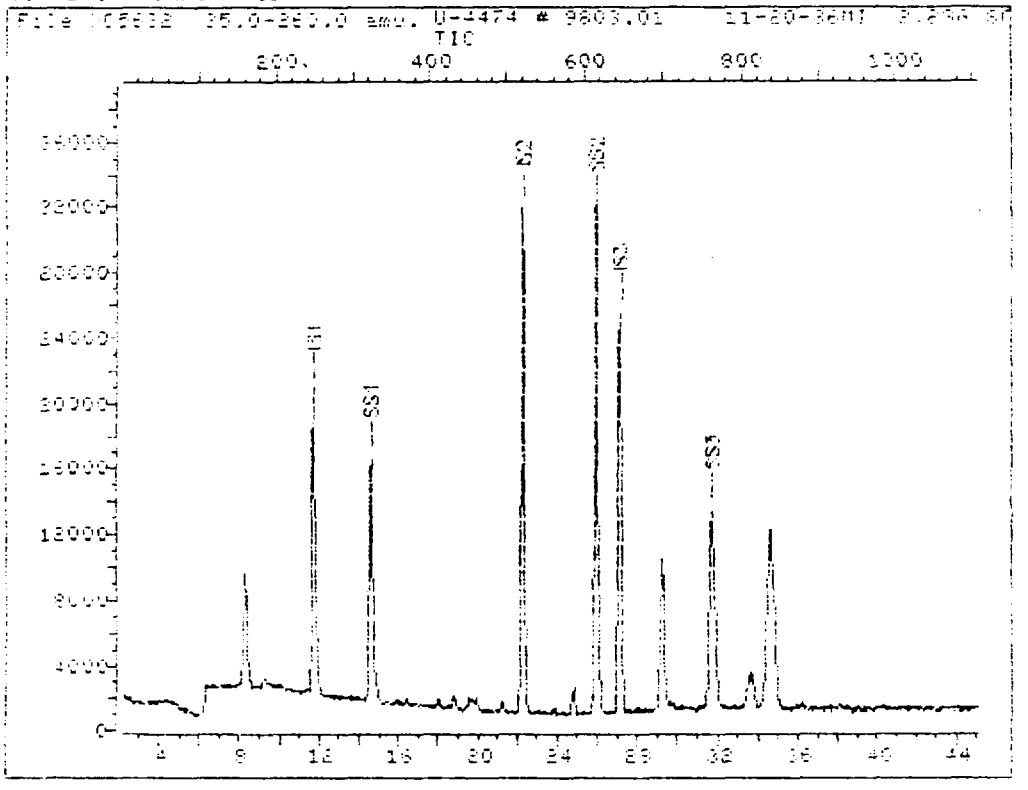
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30				

TOTAL ION CHROMATOGRAM



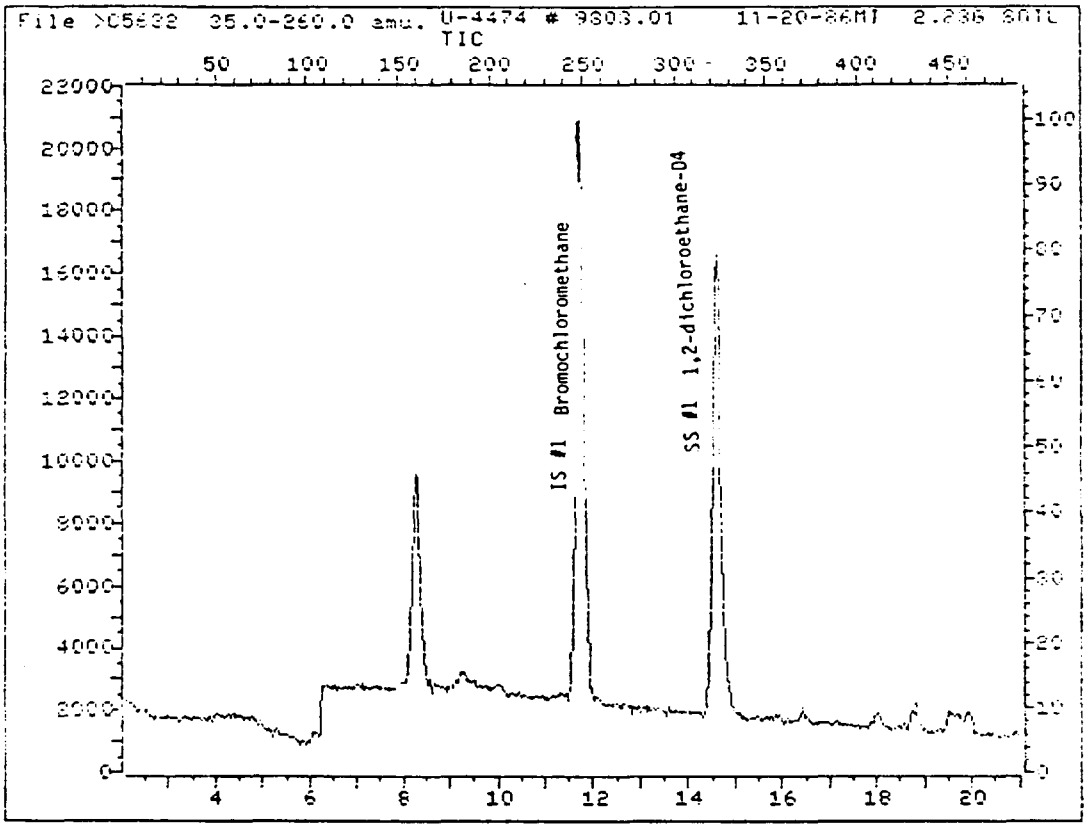
Data File: >C5632::D3
Name: U-4474 # 9803.01
Misc: 11-20-86MI 2.23G SOIL IN 5ML DI + 10UL IS/SS

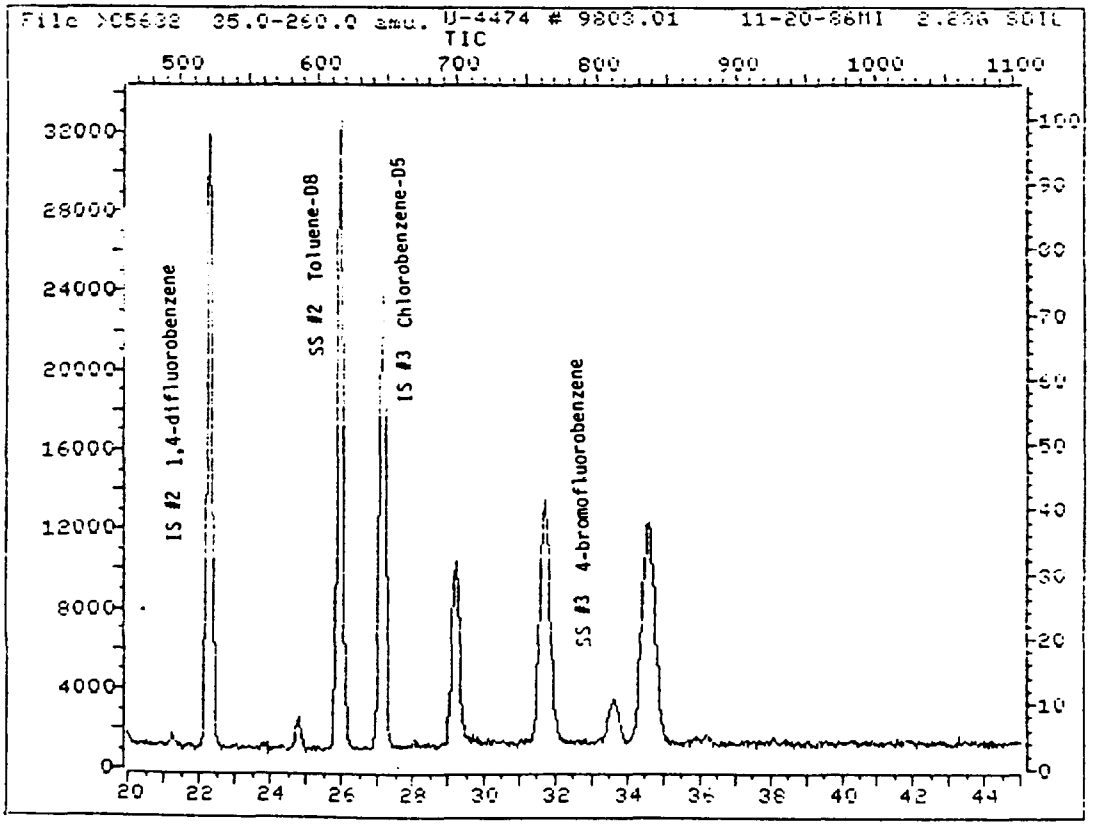
Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861120 13:16

Operator ID: USER8
Quant Time: 861120 19:40
Injected at: 861120 18:54

recycled paper

DC-SS-37





recycled paper

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861120 19:40
Output File: VC5632::02 Injected at: 861120 18:54
Data File: VC5632::03 Dilution Factor: 1.00
Name: U-4474 # 9803.01 DC-SS-37
Misc: 11-20-86MI 2.236 SOIL IN 5ML DI + 10UL IS/SS

ID File: VOACRS::02
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861120 13:16

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	Q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.68	248	29910	[illegible]	NGS	[illegible]
6)	METHYLENE CHLORIDE		84	8.27	160	19992	112.33	NGS	100
7)	ACETONE		43	9.27	186	5242	78.31	NGS	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.59	323	63362	214.68	NGS	[illegible]
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.27	521	129342	200.00	NGS	100
17)	2-BUTANONE		72	14.71	326	2987	59.0[illegible]	NGS	100
27)	BENZENE		78	19.71	455	2340	[illegible]	NGS	[illegible]
31)	*CHLOROBENZENE-D5	(IS)	117	27.12	646	80256	200.00	NGS	[illegible]
34)	TETRACHLOROETHENE		164	24.80	586	2344	14.92	NGS	[illegible]
36)	TOLUENE-D8	(SURR)	98	25.92	615	129998	304.94	NGS	[illegible]
39)	ETHYLBENZENE		91	29.21	699	55911	87.67	NGS	[illegible]
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.70	763	44449	199.40	NGS	[illegible]
42)	TOTAL XYLENES		91	33.60	812	21004	[illegible]	NGS	[illegible]
43)	TOTAL XYLENES		91	34.61	838	101[illegible]3	198.88	NGS	[illegible]

* Compound is ISTD

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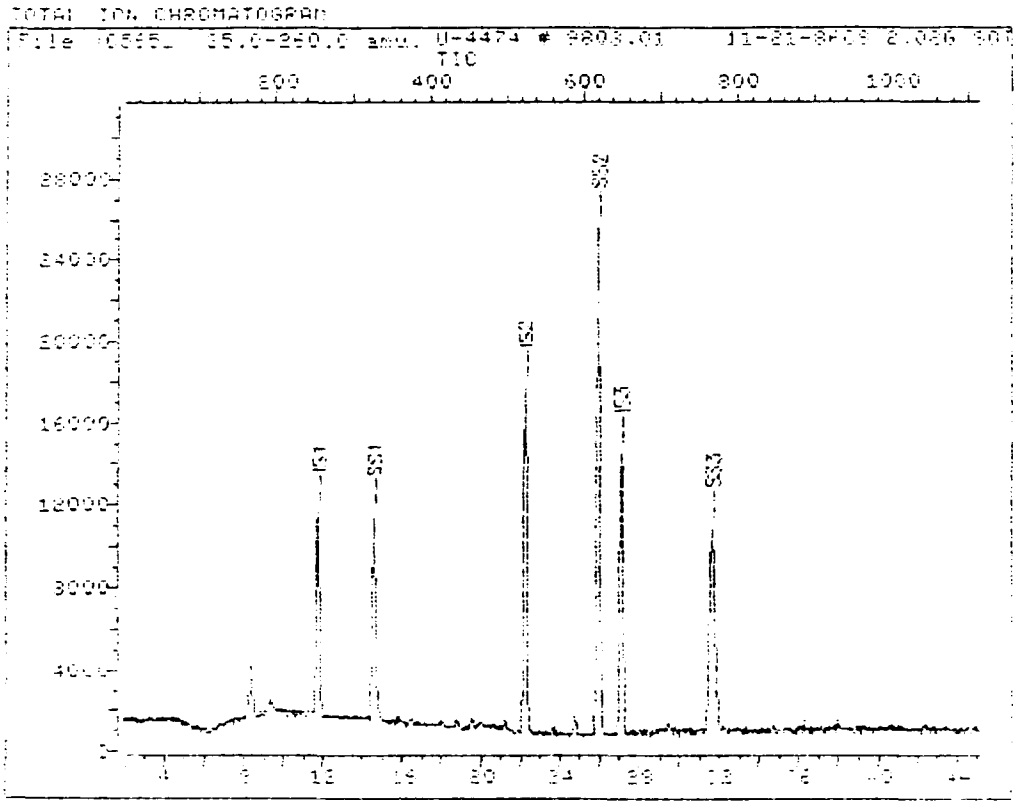
TOTAL ION CHROMATOGRAM



Data File: C5651::D3
Name: U-4474 # 9803.01 DC-SS-37-RE
Misc: 11-21-86US 2.02G SOIL IN 5ML DI - 1ML [illegible]

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.
Last Calibration: 861121 11:51

Operator ID: UC/PD
Quant Time: 861121 14:05
Injected at: 861121 13:19

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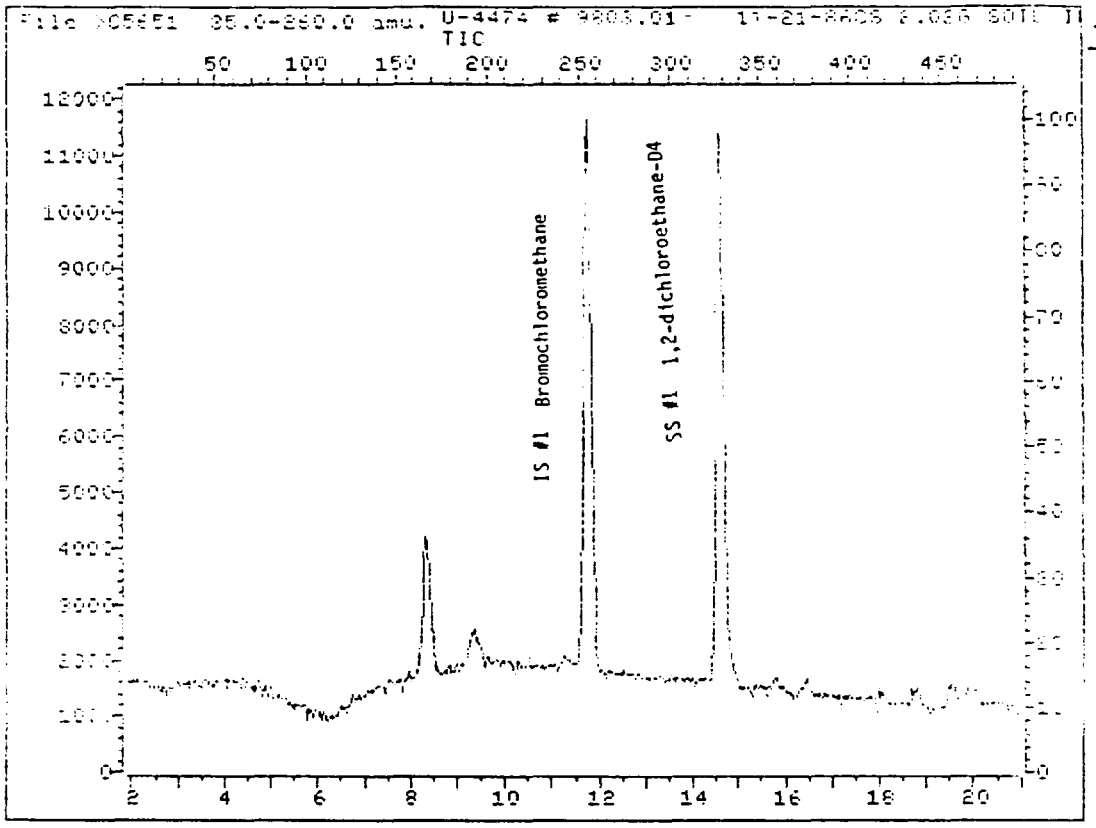
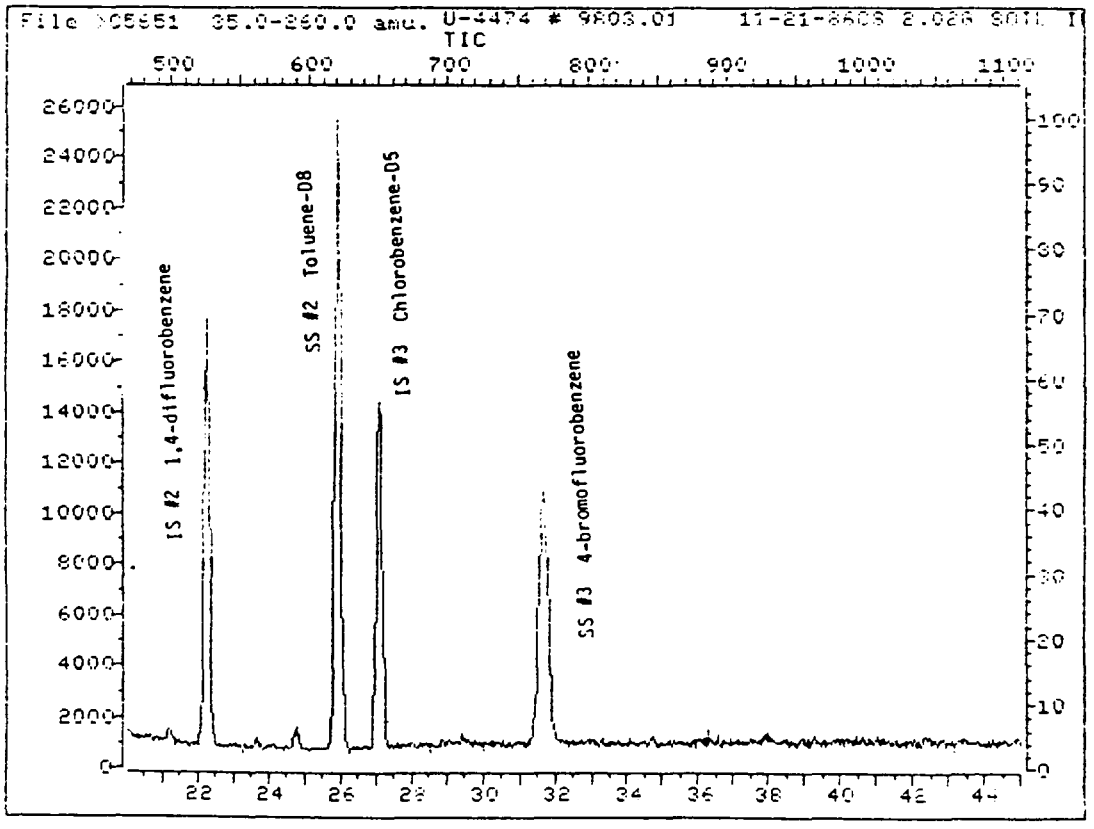
DC-SS-37-RE


TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

QUANT REPORT

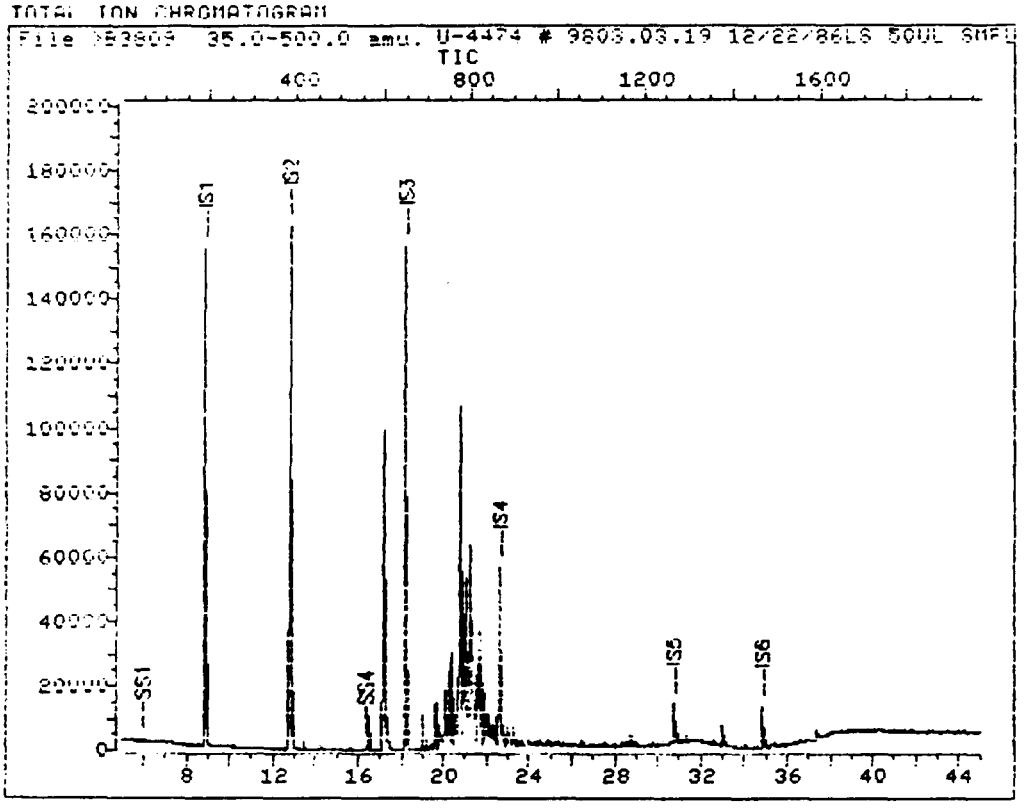
Operator ID: USEH8 Quant Rev: 4 Quant Time: [illegible]
Output File: ^C5651::Q2 Injected at: [illegible]
Data File: >C5651::D3 Dilution Factor: [illegible]
Name: U-4474 # 9803.01 DC-SS-37-RE
Misc: 11-21-86CS 2.02G SOIL IN 5ML DI + 10UL IS/SS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861121 11:51

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	Q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.75	255	13997	[illegible]	[illegible]	[illegible]
5)	METHYLENE CHLORIDE		84	8.34	167	6339	[illegible]	[illegible]	[illegible]
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.59	328	40840	[illegible]	[illegible]	[illegible]
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.23	525	69519	[illegible]	[illegible]	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.08	650	44597	[illegible]	[illegible]	
36)	TOLUENE-D8	(SURR)	98	25.92	620	97213	[illegible]	[illegible]	
[illegible]	4-BROMOFLUOROBENZENE	(SURR)	95	31.67	760	[illegible]	[illegible]	[illegible]	[illegible]

153 High

* Compound is IS/D

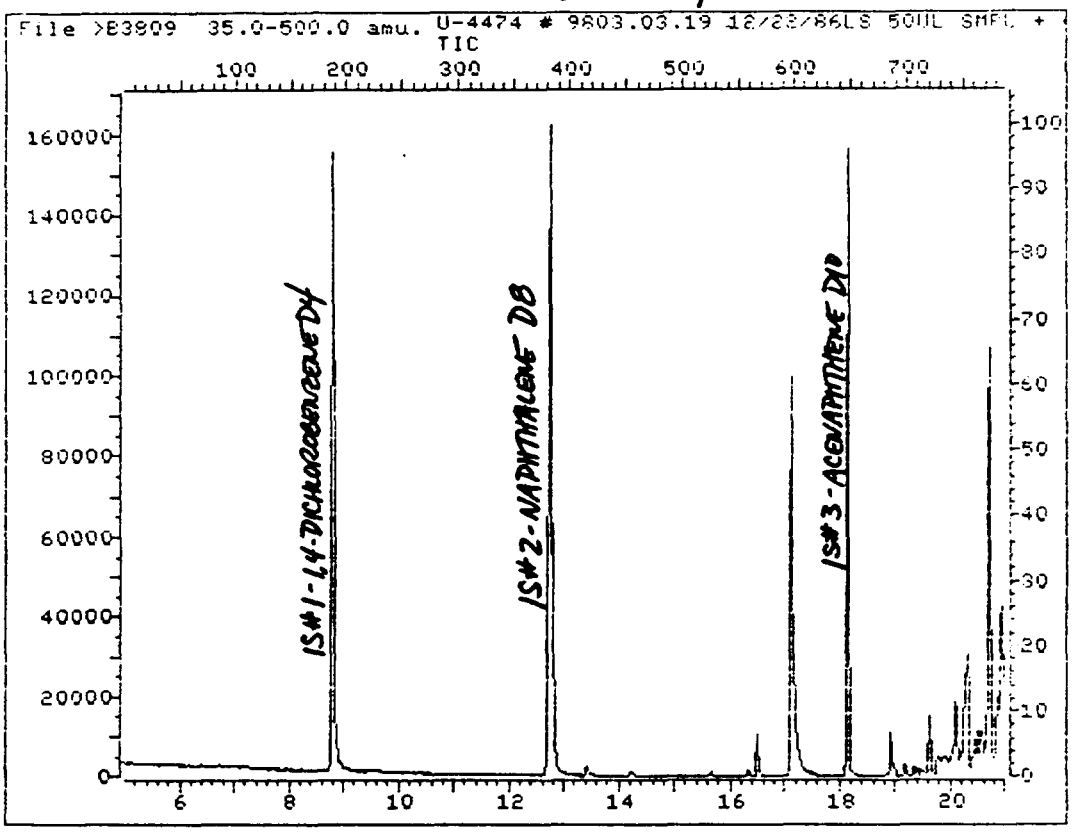


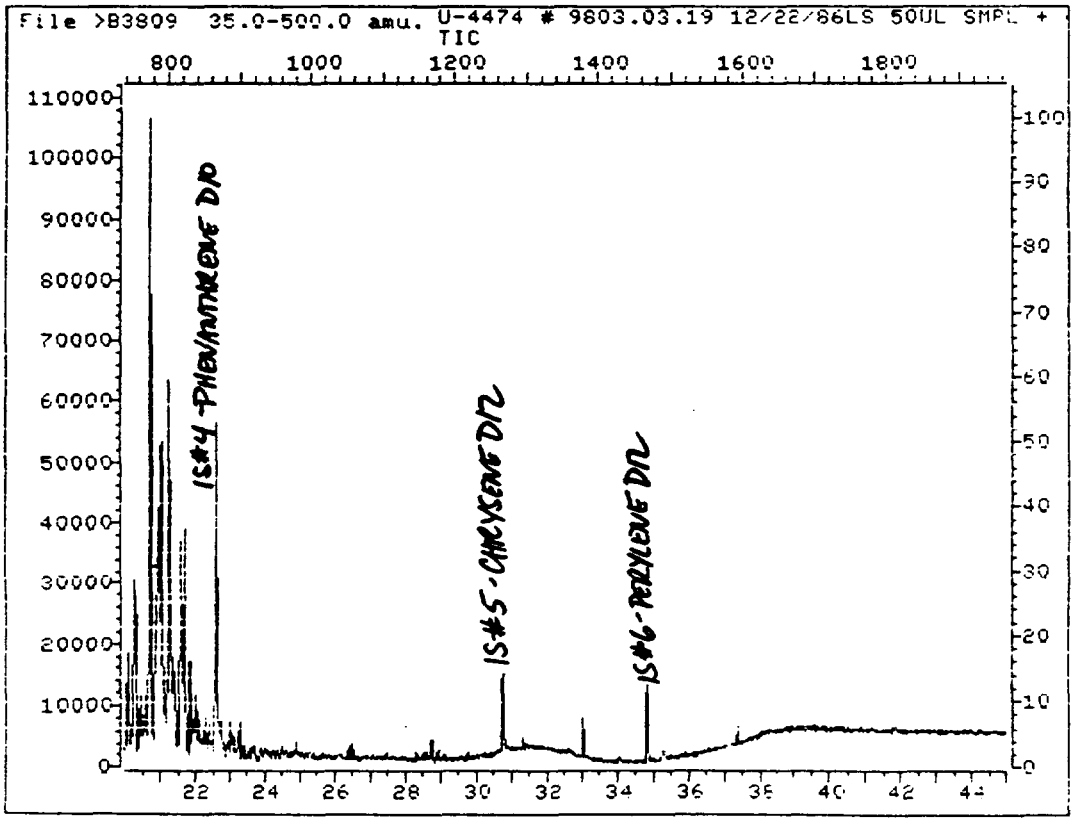
Data File: >B3809::D4
Name: U-4474 # 9803.03.19 DC-SS-37
Misc: 12/22/86LS 50UL SMPL + 450UL MECL2 + 5UL IS (10X)

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861222 16:20

Operator ID: USER8
Quant Time: 861222 22:46
Injected at: 861222 21:58

DC-SS-37


File >B3809 35.0-500.0 amu. U-4474 # 9803.03.19 12/22/86LS 50UL SMPL +
TIC
IS#1-1,4-DICHLOROBENZENE D4
IS#2-NAPHTHALENE D8
IS#3-ACENAPHTHENE D10


File >B3809 35.0-500.0 amu. U-4474 # 9803.03.19 12/22/86LS 50UL SMPL +
TIC
IS#4-PHENANTHRENE D10
IS#5-CHRYSENE D12
IS#6-PERYLENE D12

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861222 22:46
Output File: ^B3809::Q2 Injected at: 861222 21:58
Data File: >B3809::D4 Dilution Factor: 10.00
Name: U-4474 # 9803.03.19 DC-SS-37
Misc: 12/22/86LS 50UL SMPL + 450UL MECL2 + 5UL IS (10X)

FINAL VOLUME - 5.0 ml

ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861222 16:20

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	8.81	188	58172	40.00	UG/L	87
5)	2-FLUOROPHENOL	(SURR)	112	5.96	48	603	4.54	UG/L	92
19)	*NAPHTHALENE-D8	(IS)	136	12.75	382	213241	40.00	UG/L	100
28)	1,2,4-TRICHLOROBENZENE		180	12.71	380	4222	23.04	UG/L	100
29)	NAPHTHALENE		128	12.79	384	57858	115.41	UG/L	100
34)	*ACENAPHTHENE-D10	(IS)	162	18.16	648	74952	40.00	UG/L	98
38)	2-FLUOROBIPHENYL	(SURR)	172	16.33	558	2336	7.65	UG/L	94
40)	2-NITROANILINE		65	17.14	598	70927	949.05	UG/L	88
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.16~~	~~648~~	~~22003~~	~~79.96~~	~~UG/L~~	100
~~42)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.22~~	~~651~~	~~152~~	~~.55~~	~~UG/L~~	100
~~43)~~	~~DIBENZOFURAN~~		~~168~~	~~18.81~~	~~680~~	~~514~~	~~1.66~~	~~UG/L~~	100
~~[illegible]~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.16~~	~~648~~	~~9548~~	~~162.59~~	~~UG/L~~	100
55)	*PHENANTHRENE-D10	(IS)	188	22.59	866	63222	40.00	UG/L	93
61)	PHENANTHRENE		178	22.65	869	3360	21.67	UG/L	98
~~62)~~	~~ANTHRACENE~~		~~178~~	~~22.65~~	~~869~~	~~3360~~	~~22.21~~	~~UG/L~~	98
65)	*CHRYSENE-D12	(IS)	240	30.75	1267	19571	40.00	UG/L	100
74)	*PERYLENE-D12	(IS)	264	34.83	1468	17539	40.00	UG/L	100

Nappa

Nappa

* Compound is ISTD

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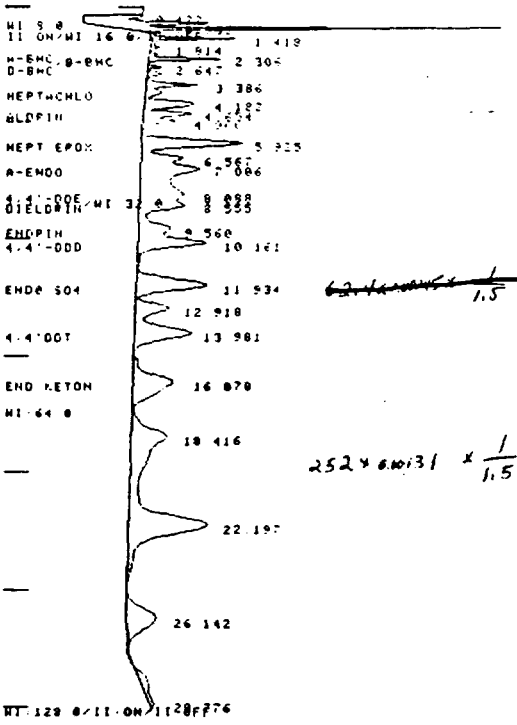
CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 10% 5 MIN/TICK



$252 \times 0.00131 \times \frac{1}{1.5} \times 500{,}000 = 110{,}040$ ng/kg

RECALCULATE ON FILE: O.CREEK3547

DC-SS-37

CHANNEL: 1A - 1 TITLE: RUN# 24 9:20 9 DEC 86

SAMPLE: 9803.01.19A1 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	1.418		45779	BV	3.25
2	~~B-BHC~~	261.1385	2.306	0.076	64372	VV	5.13
3		0.0000	3.386		63339	VV	7.75
4	~~HEPTACHLO~~	79.3401	3.739	-0.151	39578	VV	? 19.38
5		0.0000	4.182		131510	VV	18.44
6	~~ALDRIN~~	129.0076	4.654	-0.146	84096	VV	12.31
7		0.0000	4.966		57381	VB	11.31
8	~~HEPT EPOX~~	425.7837	5.925	0.105	261274	BV	19.19
9		0.0000	6.567		99047	VV	? 16.35
10	~~A-ENDO~~	431.9919	7.006	-0.224	247508	VV	? 42.06
11	~~4,4'-DDE~~	449.7328	8.088	-0.242	247790	VV	? 37.13
12	~~DIELDRIN~~	231.0039	8.555	0.135	145352	VV	? 32.75
13	~~B-ENDO~~	225.0520	9.560	-0.020	133314	VV	? 27.81
14	~~4,4'-DDD~~	504.6420	10.161	-0.289	241843	VV	24.00
15	~~ENDO SO4~~	758.8264	11.934	-0.336	300579	VV	31.13
16		0.0000	12.918		137766	VV	28.31
17	~~4,4'-DDT~~	907.3342	13.981	0.331	283504	VV	32.61
18	~~END KETON~~	518.5823	16.070	0.340	286914	VV	52.81
19		0.0000	18.416		399551	VV	63.75
20		0.0000	22.197		687308	VV	49.81
21	~~[illegible]~~	498.9254	26.142	-1.228	237709	VV	61.19
22		0.0000	29.776		62149	VB	?149.63
TOTALS:		5421.360		-1.649	4183663		

DETECTED PKS: 33 REJECTED PKS: 11

DIVISOR: 1.50000 MULTIPLIER: ~~50000.0000~~ 500,000

NOISE: 22.9 OFFSET: -59

RACK: 2 VIAL: 9 INJ: 1

NOTES:
NOTEBOOK:259-52 ANALYST:RICHARD SAMSON
SECURE AREA:D JOB# U-4474
INST:VARIAN 6000#2 A ECD 10x1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE:3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN.
DET:320 C INJ:220 C
200 C ISOTHERMAL 4 UL INJECTION
AUTOSAMPLER
PEST/PCB ANALYSIS

SAMPLE NUMBER DC-SS-38

481095

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Sample Number
DC-SS-38

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474

Lab Sample ID No: 9804 QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: [signature] Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-26-86

Conc./Dil Factor: 3 pH 6.3

Percent Moisture: (Not Decanted) 27

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	40B
67-64-1	Acetone	43B
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	35B
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	19
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	80
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	140
591-78-6	2-Hexanone	30u
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	1400
108-90-7	Chlorobenzene	40
100-41-4	Ethylbenzene	140
100-42-5	Styrene	15u
	Total Xylenes	170

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, etc. (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.

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Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No U-4474

Sample Number DC-SS-38

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed 12-19-86

Conc/Dil Factor: 50

Percent Moisture (Decanted) 27

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	11000 U
111-44-4	bis(-2-Chloroethyl)Ether	11000 U
95-57-8	2-Chlorophenol	11000 U
541-73-1	1 3-Dichlorobenzene	11000 U
106-46-7	1 4-Dichlorobenzene	2600 J
100-51-6	Benzyl Alcohol	11000 U
95-50-1	1 2-Dichlorobenzene	11000 U
95-48-7	2-Methylphenol	11000 U
39638-32-9	bis(2-chloroisopropyl)Ether	11000 U
106-44-5	4-Methylpheno	11000 U
621-64-7	N-Nitroso-Di-n-Propylamine	11000 U
67-72-1	Hexachloroethane	11000 U
98-95-3	Nitrobenzene	11000 U
78-59-1	Isophorone	11000 U
88-75-5	2-Nitrophenol	11000 U
105-67-9	2. 4-Dimethylphenol	11000 U
65-85-0	Benzoic Acid	55000 U
111-91-1	bis(-2-Chloroethoxy)Methane	11000 U
120-83-2	2. 4-Dichlorophenol	11000 U
120-82-1	1. 2. 4-Trichlorobenzene	11000 U
91-20-3	Naphthalene	110,000
106-47-8	4-Chloroaniline	11000 U
87-68-3	Hexachlorobutadiene	11000 U
59-50-7	4-Chloro-3-Methylphenol	11000 U
91-57-6	2-Methylnaphthalene	850 J
77-47-4	Hexachlorocyclopentadiene	11000 U
88-06-2	2 4 6-Trichlorophenol	11000 U
95-95-4	2. 4. 5-Trichlorophenol	55000 U
91-58-7	2-Chloronaphthalene	11000 U
88-74-4	2-Nitroaniline	55000 U
131-11-3	Dimethyl Phthalate	11000 U
208-96-8	Acenaphthylene	11000 U
99-09-2	3-Nitroaniline	55000 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	11000 U
51-28-5	2. 4-Dinitrophenol	55000 U
100-02-7	4-Nitrophenol	55000 U
132-64-9	Dibenzofuran	11000 U
121-14-2	2 4-Dinitrotoluene	11000 U
606-20-2	2 6-Dinitrotoluene	11000 U
84-66-2	Diethylphthalate	11000 U
7005-72-3	4-Chlorophenyl-phenylether	11000 U
86-73-7	Fluorene	11000 U
100-01-6	4-Nitroaniline	55000 U
534-52-1	4. 6-Dinitro-2-Methylphenol	55000 U
86-30-6	N-Nitrosodiphenylamine (1)	11000 U
101-55-3	4-Bromophenyl-phenylether	11000 U
118-74-1	Hexachlorobenzene	11000 U
87-86-5	Pentachlorophenol	55000 U
85-01-8	Phenanthrene	11000 U
120-12-7	Anthracene	11000 U
84-74-2	Di-n-Butylphthalate	11000 U
206-44-0	Fluoranthene	11000 U
129-00-0	Pyrene	5800 J
85-68-7	Butylbenzylphthalate	11000 U
91-94-1	3. 3 -Dichlorobenzidine	23000 U
56-55-3	Benzo(a)Anthracene	11000 U
117-81-7	bis(2-Ethylhexyl)Phthalate	11000 U
218-01-9	Chrysene	8400 J
117-84-0	Di-n-Octyl Phthalate	11000 U
205-99-2	Benzo(b)Fluoranthene	11000 U
207-08-9	Benzo(k)Fluoranthene	11000 U
50-32-8	Benzo(a)Pyrene	1900 J
193-39-5	Indeno(1 2. 3-cd)Pyrene	11000 U
53-70-3	Dibenz(a h)Anthracene	11000 U
191-24-2	Benzo(g h i)Perylene	11000 U

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No V-4474

Sample Number DC-SS-38

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration Low Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed 12-10-86

Conc/Dil Factor 10x

Percent Moisture (decanted) 26.9

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	1,600 u
53494-70-5	Endrin Ketone	320 u
57-74-9	Chlordane	1,600 u
8001-35-2	Toxaphene	3,200 u
12674-11-2	Aroclor-1016	1,600 u
11104-28-2	Aroclor-1221	1,600 u
11141-16-5	Aroclor-1232	1,600 u
53469-21-9	Aroclor-1242	1,600 u
12672-29-6	Aroclor-1248	1,600 u
11097-69-1	Aroclor-1254	3,200 u
11096-82-5	Aroclor-1260	8,700

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 30 V_t 1,000 V_i 4

316

Laboratory Name ecology and environment, inc.

Case No 11-4474

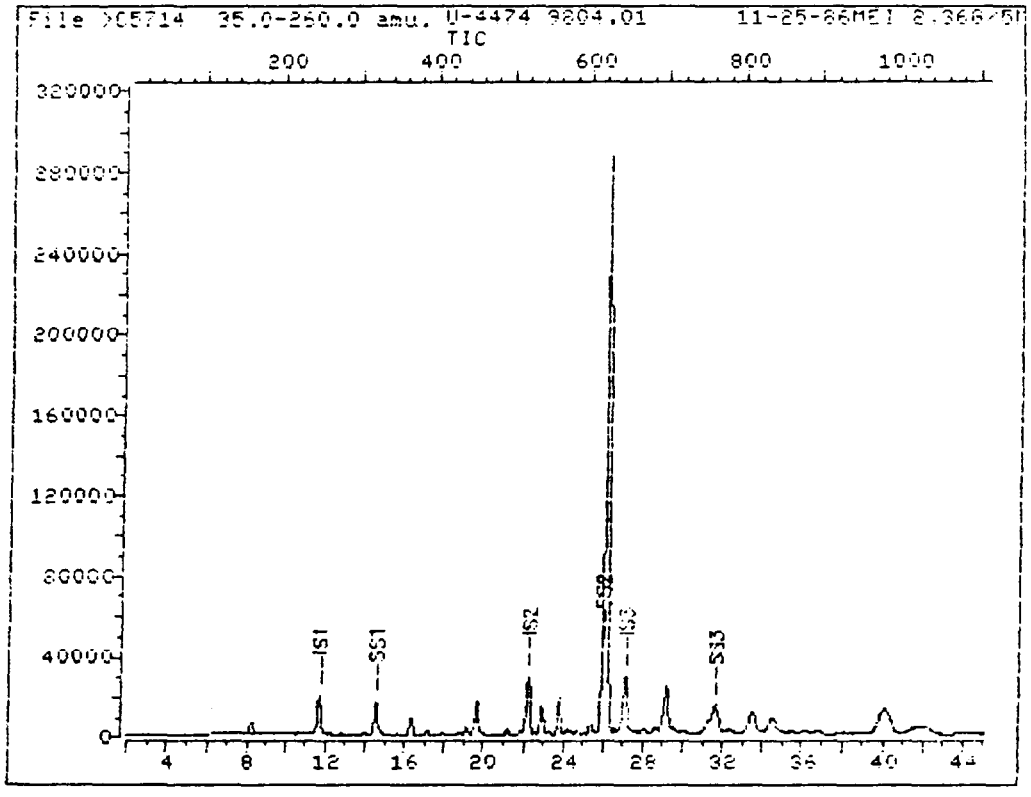
Sample Number DC-SS-38

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. 110827	Cyclohexane	VOA	16.3	24 J
2. 96377	Methyl cyclopentane		17.2	8 J
3.	Hexene isomer		21.2	10 J
4.	Unknown alcohol		23.8	67 J
5.	Unknown hydrocarbon		25.4	44 J
6.	Unknown hydrocarbon		28.1	8 J
7.	Unknown hydrocarbon		28.6	15 J
8.	Unknown hydrocarbon		29.5	18 J
9. 98828	Benzene, (1-methylethyl)-		42.1	66 J
10.				
11. 100005	1-CHLORO-4-NITROBENZENE	BNA	14.5	4,000,000 J
12.	UNKNOWN HYDROCARBON		29.2	120000 J
13.	UNKNOWN HYDROCARBON		30.2	140000 J
14.	UNKNOWN HYDROCARBON		30.5	52000 J
15.	UNKNOWN HYDROCARBON		31.3	180000 J
16.	UNKNOWN HYDROCARBON		31.6	61000 J
17.	UNKNOWN HYDROCARBON		32.3	180000 J
18.	UNKNOWN HYDROCARBON		32.6	50000 J
19.	UNKNOWN HYDROCARBON		32.8	75000 J
20.	UNKNOWN HYDROCARBON		33.2	270000 J
21.	UNKNOWN HYDROCARBON		33.5	210000 J
22.	UNKNOWN HYDROCARBON		33.9	52000 J
23.	UNKNOWN HYDROCARBON		34.2	200000 J
24.	UNKNOWN HYDROCARBON		34.4	48000 J
25.	UNKNOWN HYDROCARBON		35.0	180000 J
26.	UNKNOWN HYDROCARBON		35.3	80000 J
27.	UNKNOWN HYDROCARBON		35.7	70000 J
28.	UNKNOWN HYDROCARBON		35.9	140000 J
29.	UNKNOWN HYDROCARBON		36.2	50000 J
30	UNKNOWN HYDROCARBON		36.8	140000 J
	UNKNOWN		37.0	120000 J

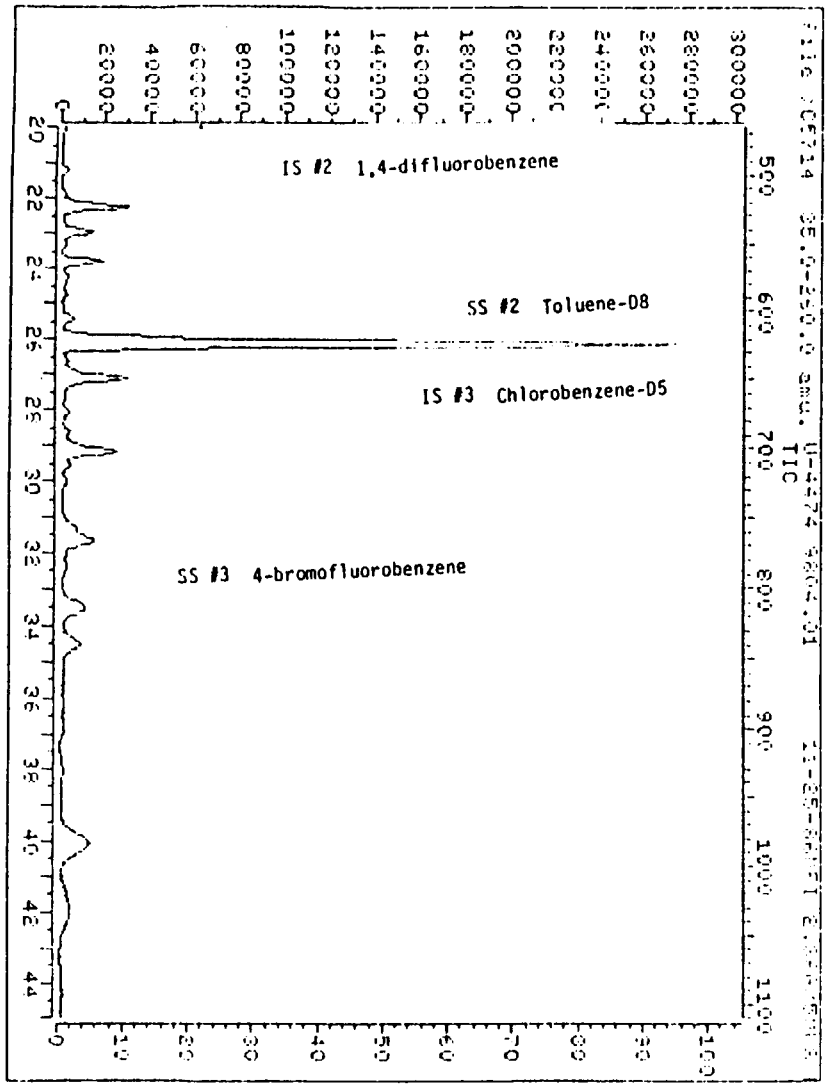
TOTAL ION CHROMATOGRAM

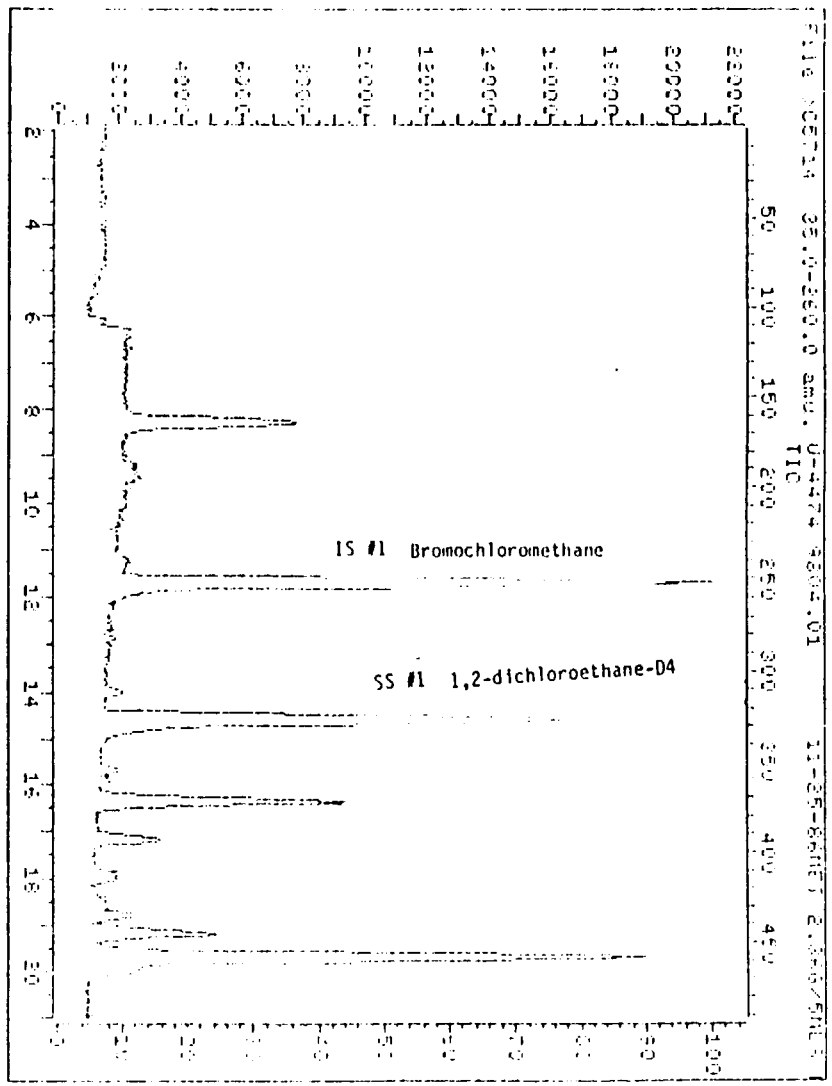


Data File: >C5714::D1
Name: U-4474 9804.01 DC-SS-38
Misc: 11-25-86MEI 2.36G/5MLS DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861125 22:54

Operator ID: USER6
Quant Time: 861126 02:38
Injected at: 861126 01:52


IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

DC-SS-38

QUANT REPORT

Operator ID: USER6 Quant Rev: 4 Quant Time: 861126 02:38
Output File: ^C5714::Q2 Injected at: 861126 01:52
Data File: >C5714::D1 Dilution Factor: 1.000
Name: U-4474 9804.01 DC-SS 38
Misc: 11-25-86MEI 2.36G/5MLS DI + 10UL IS/SS

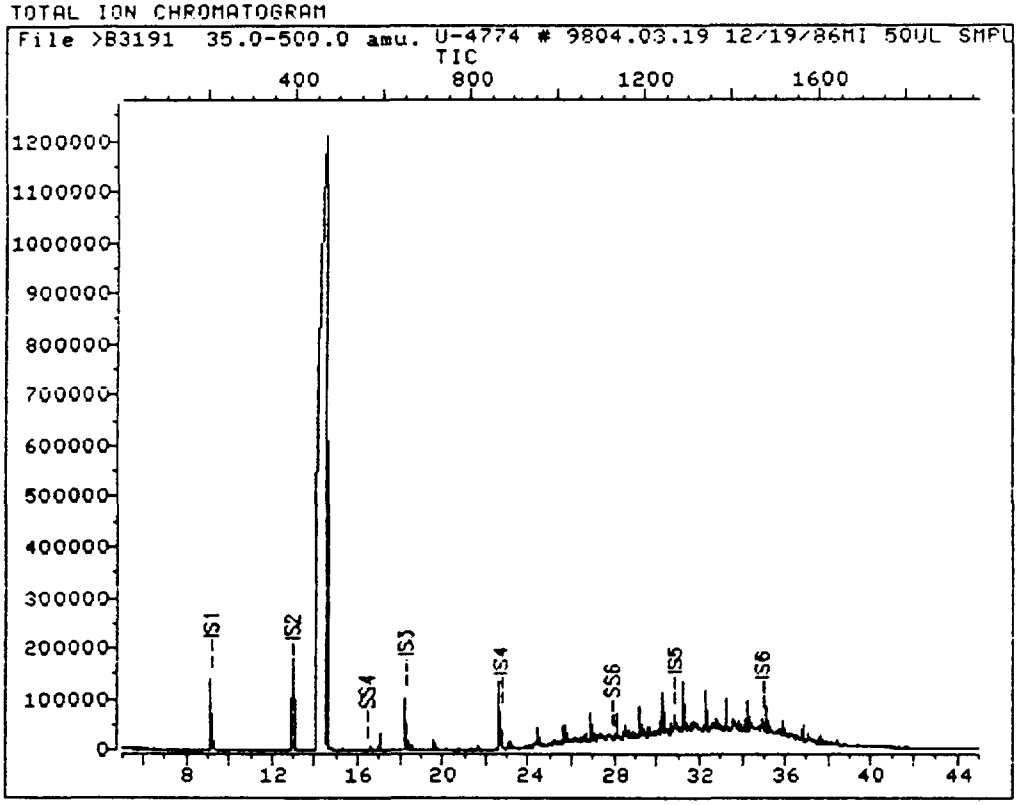
ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861125 22:54

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.69	252	29449	250.00	NGS	100
6)	METHYLENE CHLORIDE		84	8.27	164	17832	69.43	NGS	100
7)	ACETONE		43	9.28	190	4623	74.46	NGS	100
7)	~~ACETONE~~		~~43~~	~~9.47~~	~~195~~	~~4660~~	~~75.05~~	~~NGS~~	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.56	326	67506	245.92	NGS	87
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.24	524	116358	250.00	NGS	100
17)	2-BUTANONE		72	14.75	331	2721	60.89	NGS	100
24)	TRICHLOROETHENE		130	19.13	444	5925	32.42	NGS	91
27)	BENZENE		78	19.68	458	76877	137.94	NGS	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.09	649	77931	250.00	NGS	100
32)	4-METHYL-2-PENTANONE		43	22.94	542	64572	248.53	NGS	97
32)	~~4-METHYL-2-PENTANONE~~		~~43~~	~~23.79~~	~~564~~	~~25032~~	~~96.35~~	~~NGS~~	49
33)	~~2-HEXANONE~~		~~43~~	~~23.79~~	~~564~~	~~25032~~	~~119.32~~	~~NGS~~	100
33)	~~2-HEXANONE~~		~~43~~	~~24.26~~	~~576~~	~~7929~~	~~37.80~~	~~NGS~~	100
33)	~~2-HEXANONE~~		~~43~~	~~24.76~~	~~589~~	~~9675~~	~~46.12~~	~~NGS~~	100
36)	TOLUENE-D8	(SURR)	98	25.93	619	120301	260.11	NGS	94
37)	TOLUENE		92	26.12	624	691849	2346.44	NGS	93
38)	CHLOROBENZENE		112	27.21	652	24347	69.09	NGS	95
39)	ETHYLBENZENE		91	29.19	703	142460	233.76	NGS	94
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.64	766	51427	223.36	NGS	100
42)	TOTAL XYLENES		91	33.50	814	73135	148.20	NGS	100
42)	TOTAL XYLENES		91	34.51	840	70230	142.32	NGS	100
43)	DICHLOROBENZENE ISOMER		146	40.02	982	69404	69404.00	NO CAL	(B100

* Compound is ISTD

recycled paper

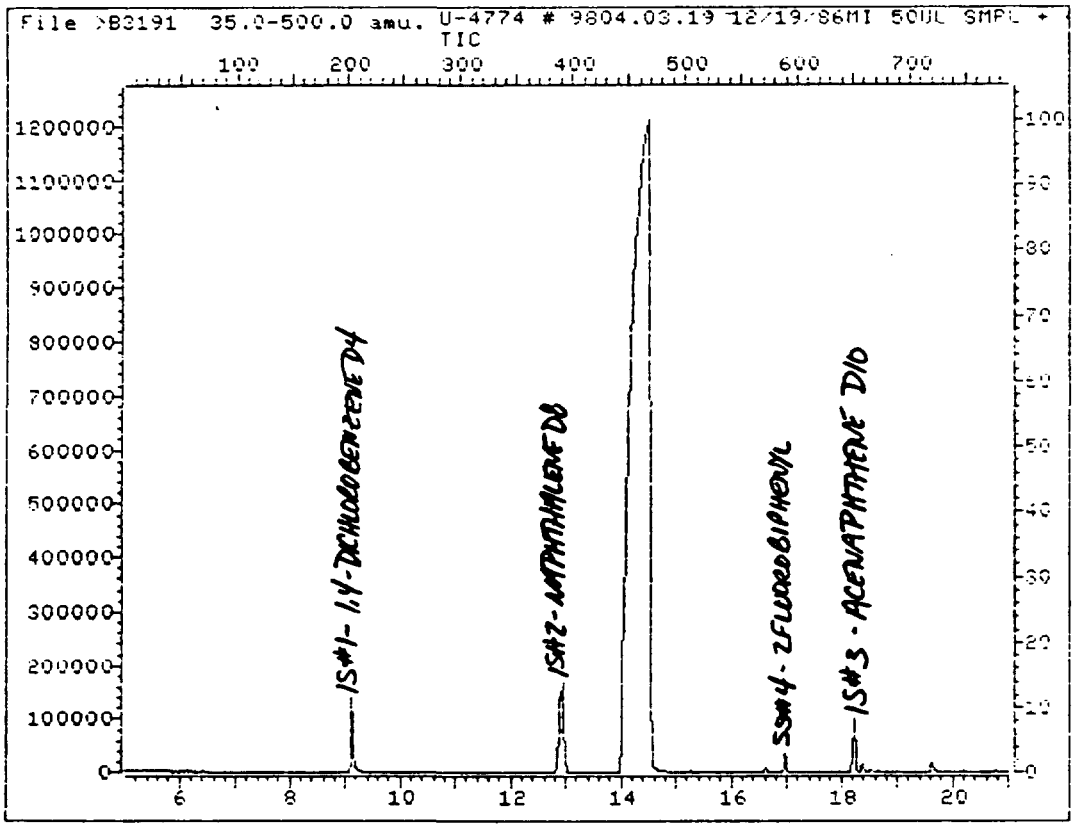
TOTAL ION CHROMATOGRAM

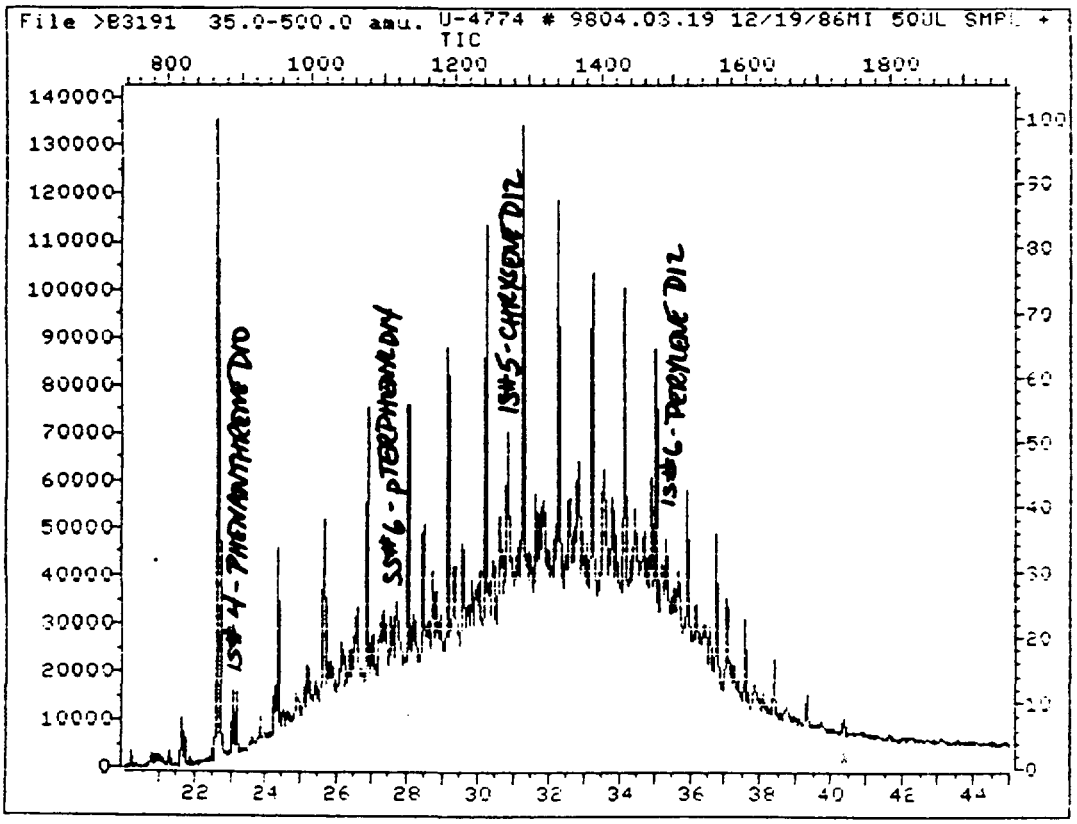


Data File: >B3191::D4
Name: U-4774 # 9804.03.19 DC-SS-38
Misc: 12/19/86MI 50UL SMPL + 450UL MECL2 + 5UL IS (10X)

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861224 12:42

Operator ID: USER8
Quant Time: 861226 09:10
Injected at: 861219 18:59


File >B3191 35.0-500.0 amu. U-4774 # 9804.03.19 12/19/86MI 50UL SMPL +
TIC
IS#1-1,4-DICHLOROBENZENE D4
IS#2-NAPHTHALENE D8
SS#4-2FLUOROBIPHENYL
IS#3-ACENAPHTHENE D10


File >B3191 35.0-500.0 amu. U-4774 # 9804.03.19 12/19/86MI 50UL SMPL +
TIC
IS#4-PHENANTHRENE D10
SS#6-p TERPHENYL D14
IS#5-CHRYSENE D12
IS#7-PERYLENE D12

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861226 09:10
Output File: ^B3191::Q2 Injected at: 861219 18:59
Data File: >B3191::D4 Dilution Factor: 10.00
Name: U-4774 # 9804.03.19 DC-SS-38
Misc: 12/19/86MI 50UL SMPL + 450UL MECL2 + 5UL IS (10X)

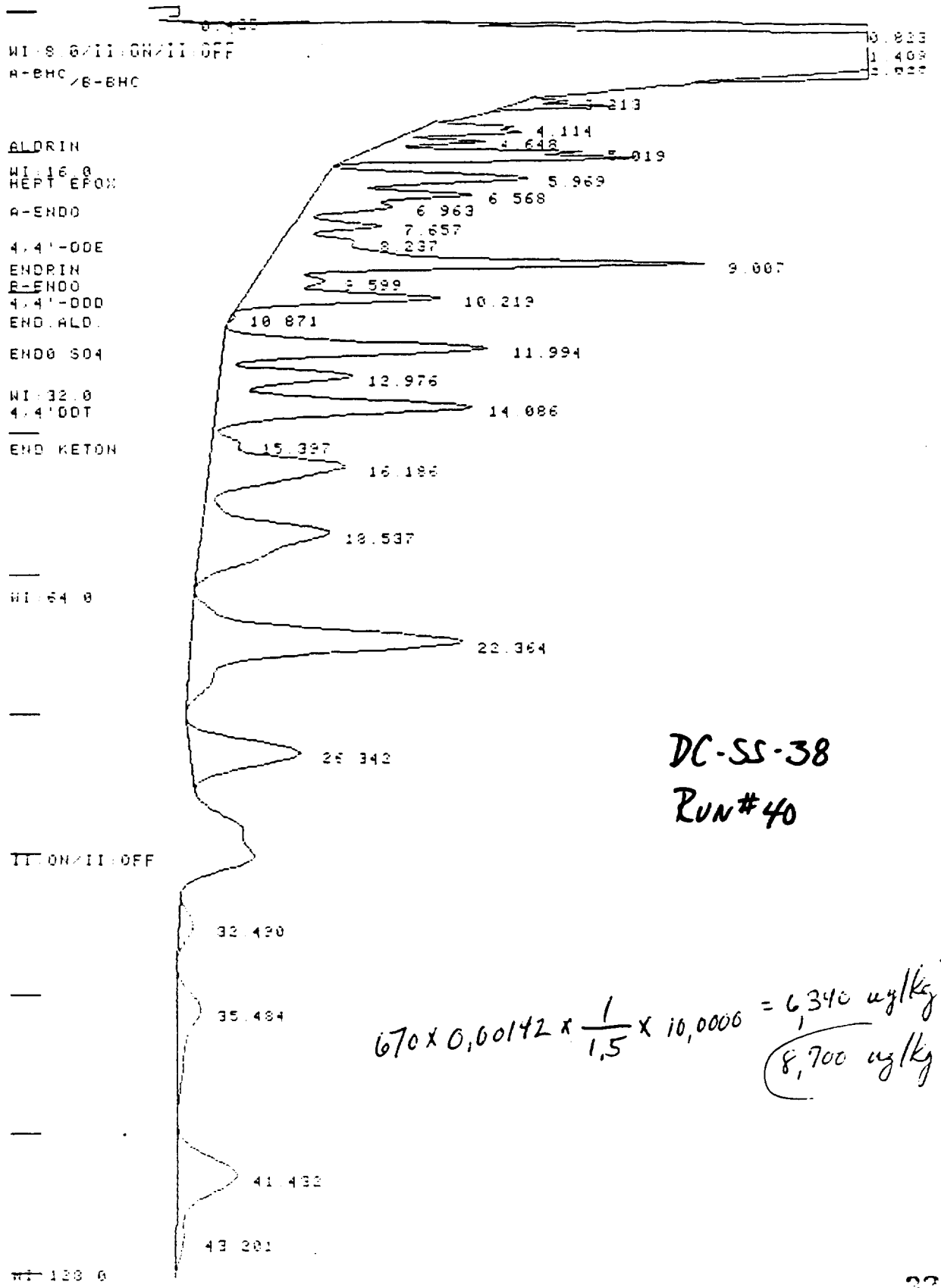
FINAL VOLUME - 5.0 ml

ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861224 12:42

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.11	203	67746	40.00	UG/L	89
~~9)~~	~~1,3-DICHLOROBENZENE~~		~~146~~	~~9.17~~	~~206~~	~~2572~~	~~11.73~~	~~UG/L~~	~~95~~
10)	1,4-DICHLOROBENZENE		146	9.17	206	2572	11.40	UG/L	98
19)	*NAPHTHALENE-D8	(IS)	136	12.89	389	217851	40.00	UG/L	100
29)	NAPHTHALENE		128	12.95	392	244988	479.08	UG/L	100
~~29)~~	~~NAPHTHALENE~~		~~128~~	~~13.24~~	~~406~~	~~1336~~	~~2.61~~	~~UG/L~~	100
33)	2-METHYLNAPHTHALENE		142	15.13	499	1184	3.72	UG/L	93
~~33)~~	~~2-METHYLNAPHTHALENE~~		~~142~~	~~15.42~~	~~513~~	~~684~~	~~2.15~~	~~UG/L~~	88
34)	*ACENAPHTHENE-D10	(IS)	162	18.22	651	69858	40.00	UG/L	96
38)	2-FLUOROBIPHENYL	(SURR)	172	16.41	562	1524	5.62	UG/L	90
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.24~~	~~652~~	~~20592~~	~~82.49~~	~~UG/L~~	100
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.38~~	~~659~~	~~468~~	~~1.87~~	~~UG/L~~	100
~~43)~~	~~DIBENZOFURAN~~		~~168~~	~~18.38~~	~~659~~	~~12576~~	~~43.68~~	~~UG/L~~	100
~~43)~~	~~DIBENZOFURAN~~		~~168~~	~~18.53~~	~~666~~	~~6877~~	~~23.89~~	~~UG/L~~	100
~~47)~~	~~ACENAPHTHENE~~		~~153~~	~~18.38~~	~~659~~	~~2898~~	~~9.68~~	~~UG/L~~	1
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.22~~	~~651~~	~~8592~~	~~150.70~~	~~UG/L~~	100
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.38~~	~~659~~	~~3545~~	~~62.18~~	~~UG/L~~	100
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.53~~	~~666~~	~~2164~~	~~37.96~~	~~UG/L~~	100
55)	*PHENANTHRENE-D10	(IS)	188	22.67	870	68760	40.00	UG/L	95
65)	*CHRYSENE-D12	(IS)	240	30.82	1270	38068	40.00	UG/L	100
67)	PYRENE		202	27.03	1084	3030	25.54	UG/L	89
68)	TERPHENYL-D14	(SURR)	244	27.87	1125	398	5.56	UG/L	100
~~71)~~	~~BENZO(A)ANTHRACENE~~		~~228~~	~~30.91~~	~~1274~~	~~3658~~	~~36.91~~	~~UG/L~~	91
~~72)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~31.60~~	~~1308~~	~~779~~	~~8.92~~	~~UG/L~~	54
~~72)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~31.70~~	~~1313~~	~~484~~	~~4.63~~	~~UG/L~~	62
73)	CHRYSENE		228	30.91	1274	3658	36.91	UG/L	93
74)	*PERYLENE-D12	(IS)	264	34.91	1470	37178	40.00	UG/L	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.27~~	~~1390~~	~~195~~	~~1.19~~	~~UG/L~~	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.58~~	~~1405~~	~~333~~	~~2.03~~	~~UG/L~~	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.62~~	~~1407~~	~~215~~	~~1.31~~	~~UG/L~~	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.85~~	~~1418~~	~~230~~	~~1.40~~	~~UG/L~~	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.97~~	~~1424~~	~~449~~	~~2.74~~	~~UG/L~~	100
~~76)~~	~~BENZO(B)FLUORANTHENE~~		~~252~~	~~33.97~~	~~1424~~	~~837~~	~~7.63~~	~~UG/L~~	80
~~77)~~	~~BENZO(K)FLUORANTHENE~~		~~252~~	~~33.97~~	~~1424~~	~~837~~	~~8.50~~	~~UG/L~~	100
~~78)~~	~~BENZO(A)PYRENE~~		~~252~~	~~34.64~~	~~1457~~	~~1742~~	~~18.37~~	~~UG/L~~	100
78)	BENZO(A)PYRENE		252	34.76	1463	793	8.36	UG/L	100
~~81)~~	~~BENZO(G,H,I)PERYLENE~~		~~276~~	~~38.11~~	~~1627~~	~~619~~	~~6.22~~	~~UG/L~~	100

* Compound is ISTD

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



DC-SS-38
RUN #40

$670 \times 0.00142 \times \frac{1}{1.5} \times 10{,}0000 = 6{,}340$ ug/kg wet 1360

8,700 ug/kg dry 1360

CHANNEL: 1A - 1 TITLE: RUN# 40 3:23 10 DEC 85

SAMPLE: 8804.04.19A1 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	1.409		111995	BB	1.94
2	[redacted]	9.9178	2.028	-0.062	34670	BV	2.88
3	[redacted]	1348.599	2.333	0.103	1662171	VB	5.50
4		0.0000	3.396		90503	VB	6.06
5	[redacted]	33.7547	4.114	0.224	84191	BV	? 9.98
6		0.0000	4.289		117637	VV	? 11.69
7	[redacted]	37.0305	4.648	-0.152	120695	VV	10.19
8		0.0000	5.019		245204	VV	? 10.88
9		0.0000	5.229		378143	VB	? 12.63
10	[redacted]	164.9572	5.969	0.149	506114	BV	22.38
11		0.0000	6.568		332288	VV	17.25
12	[redacted]	65.5667	6.963	-0.267	197831	VV	? 21.19
13		0.0000	7.657		197915	VV	15.13
[redacted]	[redacted]	[redacted]	8.237	-0.093	167596	VV	? 21.56
15	[redacted]	526.0740	9.007	-0.393	1272511	VV	20.13
[redacted]	[redacted]	[redacted]	9.599	0.019	173764	VV	14.75
17	[redacted]	218.2875	10.219	-0.231	533057	VV	18.38
18	[redacted]	474.1309	11.994	-0.276	939041	VV	32.00
19		0.0000	12.976		439849	VV	28.55
20	[redacted]	709.0020	14.086	0.436	1038074	VV	33.75
21	[redacted]	25.0820	15.397	-0.333	69385	VV	? 29.44
22		0.0000	16.186		819278	VV	51.31
23		0.0000	18.537		1064209	VV	62.38
24		0.0000	22.364		1830903	VV	51.44
25	[redacted]	308.9975	26.342	-1.028	736073	VB	62.31
26		0.0000	32.490		101998	BV	59.06
27		0.0000	35.484		315032	VV	88.13
28		0.0000	41.432		612129	VV	89.44
29		0.0000	43.201		95997	VB	?137.50
TOTALS:		4044.641		-1.904	14198253		

1260 670

DETECTED PKS: 37 REJECTED PKS: 8

DIVISOR: 1.50000 MULTIPLIER: 10000.0000

NOISE: 22.9 OFFSET: -13

RACK: 3 VIAL: 10 INJ: 1

NOTES:
NOTEBOOK:259-52 ANALYST:RICHARD SAMSON
SECURE AREA:D JOB# U-4474
INST:VARIAN 6000#2 A ECD 10X1
COLUMN: 5' 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
AUTOSAMPLER
PEST/PCB ANALYSIS

DC-SS-38

POST RUN:
SAVE FILE: RAW D.CREEK3565

SAMPLE NUMBER DC-SS-39

481095

Sample Number
DC-SS-39

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-44474

Lab Sample ID No: 9805 QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: [signature] Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-21-86

Conc./Dil Factor: 3 pH 6.9

Percent Moisture: (Not Decanted) 23

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	30µ
74-83-9	Bromomethane	30µ
75-01-4	Vinyl Chloride	30µ
75-00-3	Chloroethane	30µ
75-09-2	Methylene Chloride	63 B
67-64-1	Acetone	66 B
75-15-0	Carbon Disulfide	15µ
75-35-4	1, 1-Dichloroethene	15µ
75-34-3	1, 1-Dichloroethane	15µ
156-60-5	Trans-1, 2-Dichloroethene	15µ
67-66-3	Chloroform	15µ
107-06-2	1, 2-Dichloroethane	15µ
78-93-3	2-Butanone	59 B
71-55-6	1, 1, 1-Trichloroethane	15µ
56-23-5	Carbon Tetrachloride	15µ
108-05-4	Vinyl Acetate	30µ
75-27-4	Bromodichloromethane	15µ

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	15µ
10061-02-6	Trans-1, 3-Dichloropropene	15µ
79-01-6	Trichloroethene	15µ
124-48-1	Dibromochloromethane	15µ
79-00-5	1, 1, 2-Trichloroethane	15µ
71-43-2	Benzene	15µ
10061-01-5	cis-1, 3-Dichloropropene	15µ
110-75-8	2-Chloroethylvinylether	30µ
75-25-2	Bromoform	15µ
108-10-1	4-Methyl-2-Pentanone	12 J
591-78-6	2-Hexanone	30µ
127-18-4	Tetrachloroethene	15µ
79-34-5	1, 1, 2, 2-Tetrachloroethane	15µ
108-88-3	Toluene	15µ
108-90-7	Chlorobenzene	15µ
100-41-4	Ethylbenzene	15µ
100-42-5	Styrene	15µ
	Total Xylenes	15µ

Data Reporting Qualifiers

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

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

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

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

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

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

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

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RECYCLED PAPER ecology and environment

Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No U-4474

Sample Number DC-SS-39

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared 11-18-86

Date Analyzed 12-23-86

Conc/Dil Factor 100

Percent Moisture (Decanted) 23

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	21000	U
111-44-4	bis(-2-Chloroethyl)Ether	21,000	U
95-57-8	2-Chlorophenol	21000	U
541-73-1	1 3-Dichlorobenzene	21000	U
106-46-7	1 4-Dichlorobenzene	21000	U
100-51-6	Benzyl Alcohol	21000	U
95-50-1	1 2-Dichlorobenzene	21000	U
95-48-7	2-Methylphenol	21000	U
39638-32-9	bis(2-chloroisopropyl)Ether	21000	U
106-44-5	4-Methylpheno	21000	U
621-64-7	N-Nitroso-Di-n-Propylamine	21000	U
67-72-1	Hexachloroethane	21000	U
98-95-3	Nitrobenzene	21000	U
78-59-1	Isophorone	21000	U
88-75-5	2-Nitrophenol	21000	U
105-67-9	2, 4-Dimethylphenol	21000	U
65-85-0	Benzoic Acid	100,000	U
111-91-1	bis(-2-Chloroethoxy)Methane	21000	U
120-83-2	2 4-Dichlorophenol	21000	U
120-82-1	1, 2, 4-Trichlorobenzene	1800	J
91-20-3	Naphthalene	21000	U
106-47-8	4-Chloroaniline	21000	U
87-68-3	Hexachlorobutadiene	21000	U
59-50-7	4-Chloro-3-Methylphenol	21000	U
91-57-6	2-Methylnaphthalene	21000	U
77-47-4	Hexachlorocyclopentadiene	21000	U
88-06-2	2 4 6-Trichlorophenol	21000	U
95-95-4	2, 4, 5-Trichlorophenol	100,000	U
91-58-7	2-Chloronaphthalene	21000	U
88-74-4	2-Nitroaniline	100,000	U
131-11-3	Dimethyl Phthalate	21000	U
208-96-8	Acenaphthylene	21000	U
99-09-2	3-Nitroaniline	100,000	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	21000	U
51-28-5	2, 4-Dinitrophenol	100,000	U
100-02-7	4-Nitrophenol	100,000	U
132-64-9	Dibenzofuran	21000	U
121-14-2	2 4-Dinitrotoluene	21000	U
606-20-2	2 6-Dinitrotoluene	21000	U
84-66-2	Diethylphthalate	21000	U
7005-72-3	4-Chlorophenyl-phenylether	21000	U
86-73-7	Fluorene	21000	U
100-01-6	4-Nitroaniline	100,000	U
534-52-1	4, 6-Dinitro-2-Methylphenol	100,000	U
86-30-6	N-Nitrosodiphenylamine (1)	21000	U
101-55-3	4-Bromophenyl-phenylether	21000	U
118-74-1	Hexachlorobenzene	21000	U
87-86-5	Pentachlorophenol	21,000,000	
85-01-8	Phenanthrene	21000	U
120-12-7	Anthracene	21000	U
84-74-2	Di-n-Butylphthalate	21000	U
206-44-0	Fluoranthene	21000	U
129-00-0	Pyrene	21000	U
85-68-7	Butylbenzylphthalate	21000	U
91-94-1	3, 3'-Dichlorobenzidine	43000	U
56-55-3	Benzo(a)Anthracene	21000	U
117-81-7	bis(2-Ethylhexyl)Phthalate	21000	U
218-01-9	Chrysene	21000	U
117-84-0	Di-n-Octyl Phthalate	21000	U
205-99-2	Benzo(b)Fluoranthene	21000	U
207-08-9	Benzo(k)Fluoranthene	21000	U
50-32-8	Benzo(a)Pyrene	3900	J
193-39-5	Indeno(1 2, 3-cd)Pyrene	21000	U
53-70-3	Dibenzo(a h)Anthracene	21000	U
191-24-2	Benzo(g h, i)Perylene	21000	U

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No U-4474

Sample Number DC-SS-39

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-18-86

Date Analyzed 12-10-86

Conc/Dil Factor 1000

Percent Moisture (decanted) 23

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	160,000 u
12672-29-6	Aroclor-1248	160,000 u
11097-69-1	Aroclor-1254	320,000 u
11096-82-5	Aroclor-1260	544,000

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 30 V_t 1,000 V_i 4

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Sample Number
DC-SS-39-RE

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474

Lab Sample ID No: 9805 RE QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: C Slotowicz Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-26-86

Conc./Dil Factor: 3 pH 6.9

Percent Moisture: (Not Decanted) 23

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	30 B
67-64-1	Acetone	14 BJ
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	30u
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	15u
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	15u
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	30u
591-78-6	2-Hexanone	30u
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	15u
108-90-7	Chlorobenzene	15u
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

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.

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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.

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Laboratory Name ecology and environment, inc.

Case No U-4474

Sample Number DC-SS-39

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.	No TIC's in VOA fraction			
2.				
3.	UNKNOWN AROMATIC	BNA	23.2	92000 J
4.	UNKNOWN AROMATIC		23.3	41000 J
5.	UNKNOWN AROMATIC		23.5	60000 J
6.	UNKNOWN AROMATIC		23.6	60000 J
7.	UNKNOWN AROMATIC		23.8	32000 J
8.	UNKNOWN AROMATIC		23.9	82000 J
9.	UNKNOWN AROMATIC		24.0	91000 J
10.	UNKNOWN AROMATIC		24.2	120000 J
11.	UNKNOWN AROMATIC		24.3	82000 J
12.	UNKNOWN AROMATIC		24.4	110000 J
13.	UNKNOWN AROMATIC		24.50	100000 J
14.	UNKNOWN AROMATIC		24.7	120000 J
15.	UNKNOWN AROMATIC		24.8	83000 J
16.	UNKNOWN AROMATIC		24.9	86000 J
17.	UNKNOWN AROMATIC		25.6	49000 J
18.	UNKNOWN AROMATIC		25.8	31000 J
19.	UNKNOWN AROMATIC		26.0	44000 J
20.	UNKNOWN AROMATIC		26.3	29000 J
21.	UNKNOWN AROMATIC		26.4	14000 J
22.	UNKNOWN AROMATIC		26.6	7500 J
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30				

Laboratory Name ecology and environment, inc.

Case No 11-111171

Sample Number
DC-SS-39-RE

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.	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.				
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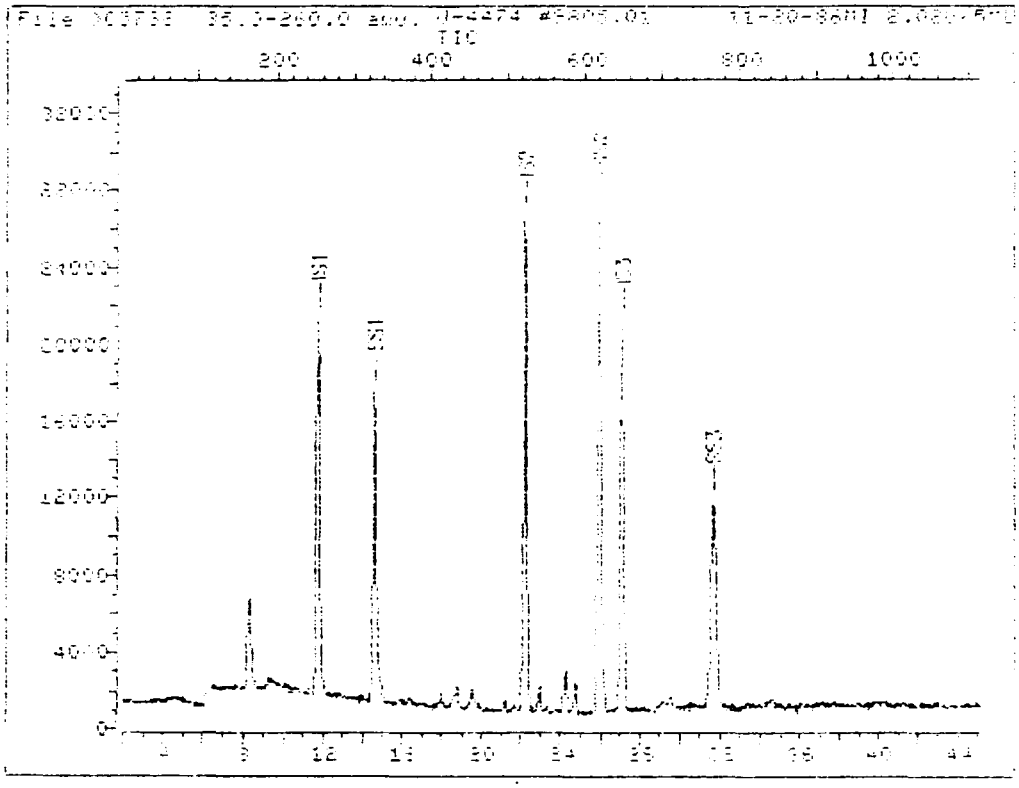
25.				
26.				
27.				
28.				
29.				
30				

TOTAL ION CHROMATOGRAM



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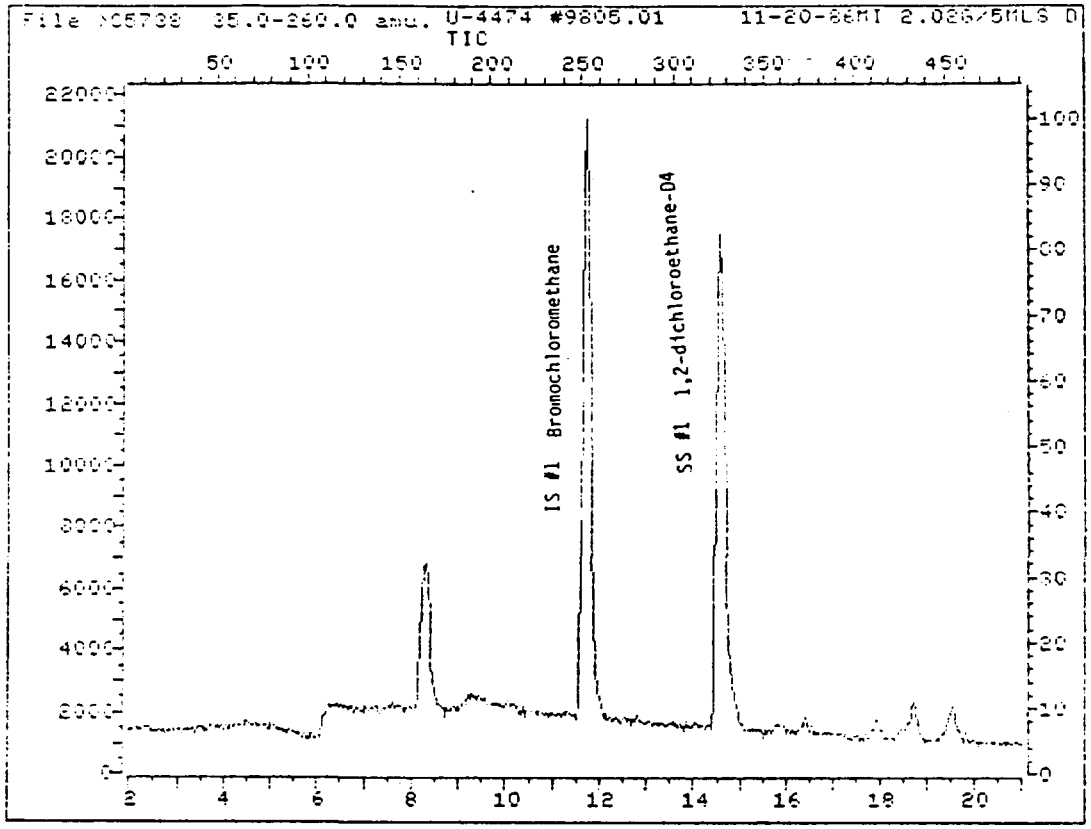
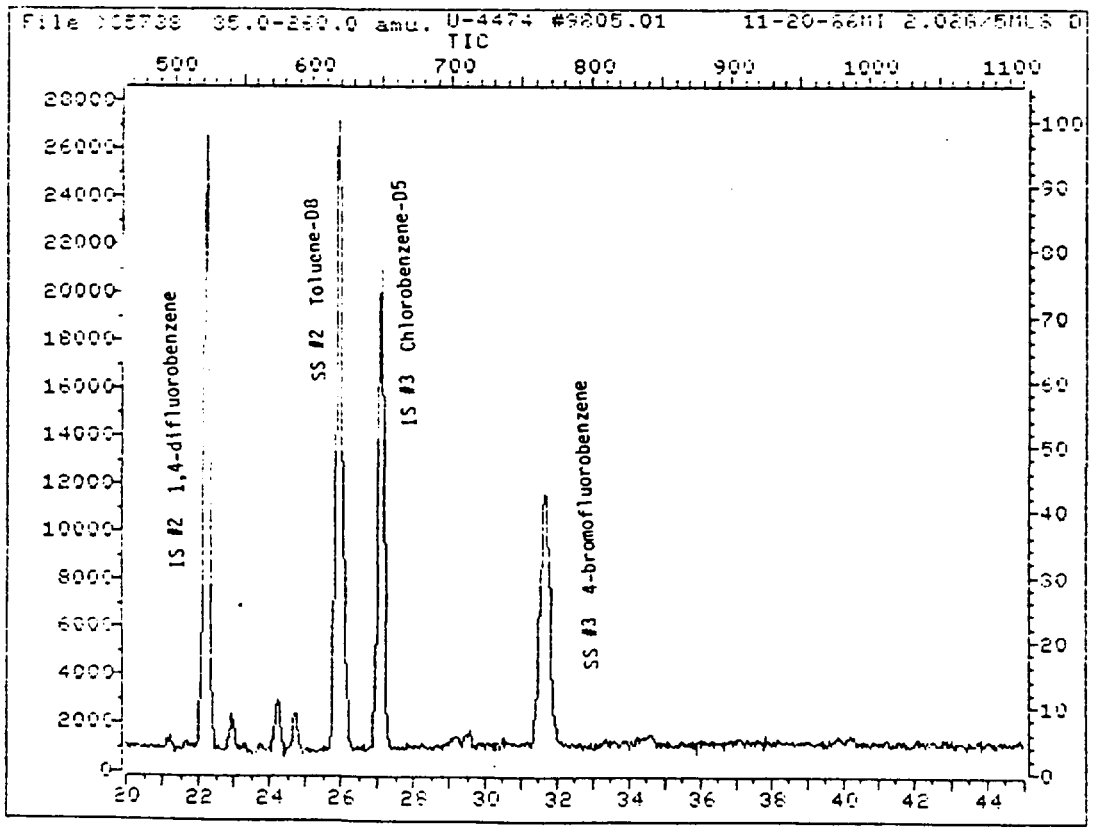
Misc: 11-20-86MI 2.02G/5MLS DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.
Last Calibration: 861120 23:54

Operator ID: USER8
Quant Time: 861121 11:40
Injected at: 861121 00:58

DC-SS-39


File X05738 35.0-260.0 amu. U-4474 #9805.01 11-20-86MI 2.026/5MLS D
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File X05738 35.0-260.0 amu. U-4474 #9805.01 11-20-86MI 2.026/5MLS D
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861121 11:40
Output File: *C5738::D2 Injected at: 16.12 00:38
Data File: *C5738::D3 Dilution Factor: 1.00
Name: U-4474 #9805.01 DC-SS-39
Misc: 11-20-86MI 2.02G/5MLS DI - 10UL IS/SS

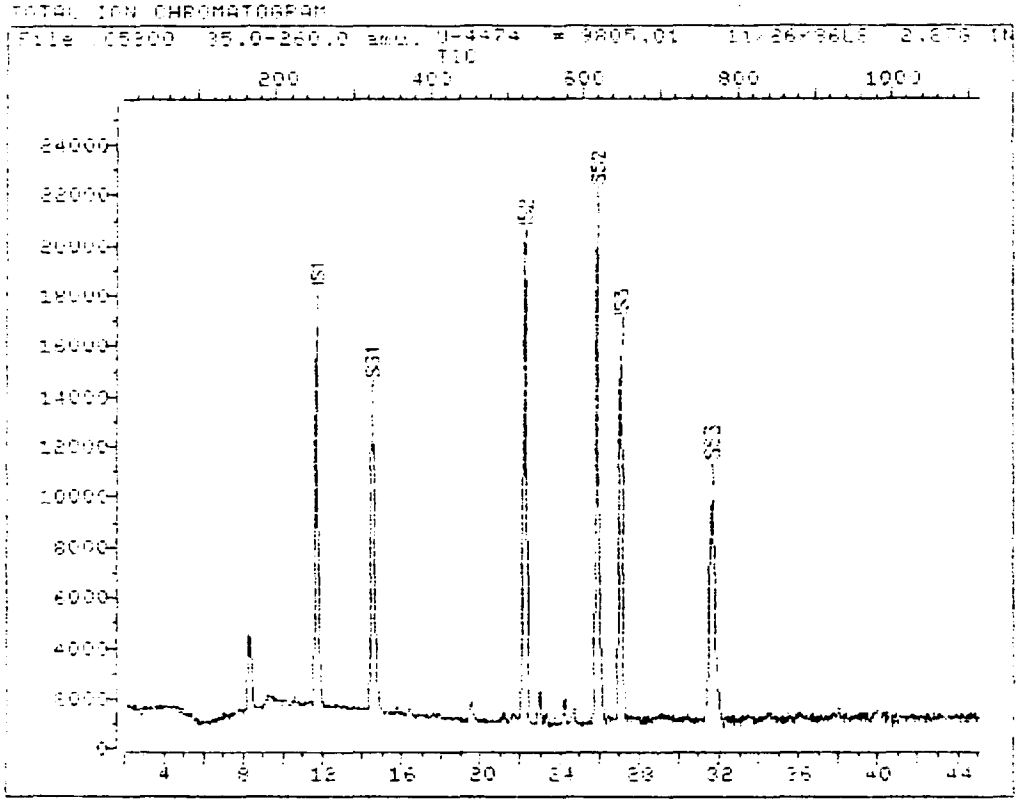
ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861120 23:54

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	Q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.73	253	29562	250.00	NGS	10
6)	METHYLENE CHLORIDE		84	8.32	165	15015	98.28	NGS	100
7)	ACETONE		43	9.36	192	7240	100.51	NGS	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.56	326	68321	231.12	NGS	[illegible]
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.21	523	110288	250.00	NGS	100
[illegible]	2-BUTANONE		72	14.72	330	4[illegible]93	[illegible]	[illegible]	[illegible]
31)	*CHLOROBENZENE-D5	(IS)	117	27.09	649	66492	[illegible]	[illegible]	[illegible]
32)	4-METHYL-2-PENTANONE		43	22.94	542	4568	18.2[illegible]	NGS	[illegible]
~~33)~~	~~2-HEXANONE~~		~~43~~	~~24.12~~	~~5[illegible]~~	~~5[illegible]~~	~~[illegible]~~	~~NGS~~	~~100~~
~~34)~~	~~2-HEXANONE~~		~~43~~	~~24.73~~	~~5[illegible]~~	~~5[illegible]~~	~~[illegible]~~	~~NGS~~	~~100~~
36)	TOLUENE-D8	(SURR)	98	25.93	619	103744	[illegible]	NGS	[illegible]
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.64	766	39715	17[illegible]	NGS	[illegible]

no cw

* Compound is ISTD

TOTAL ION CHROMATOGRAM



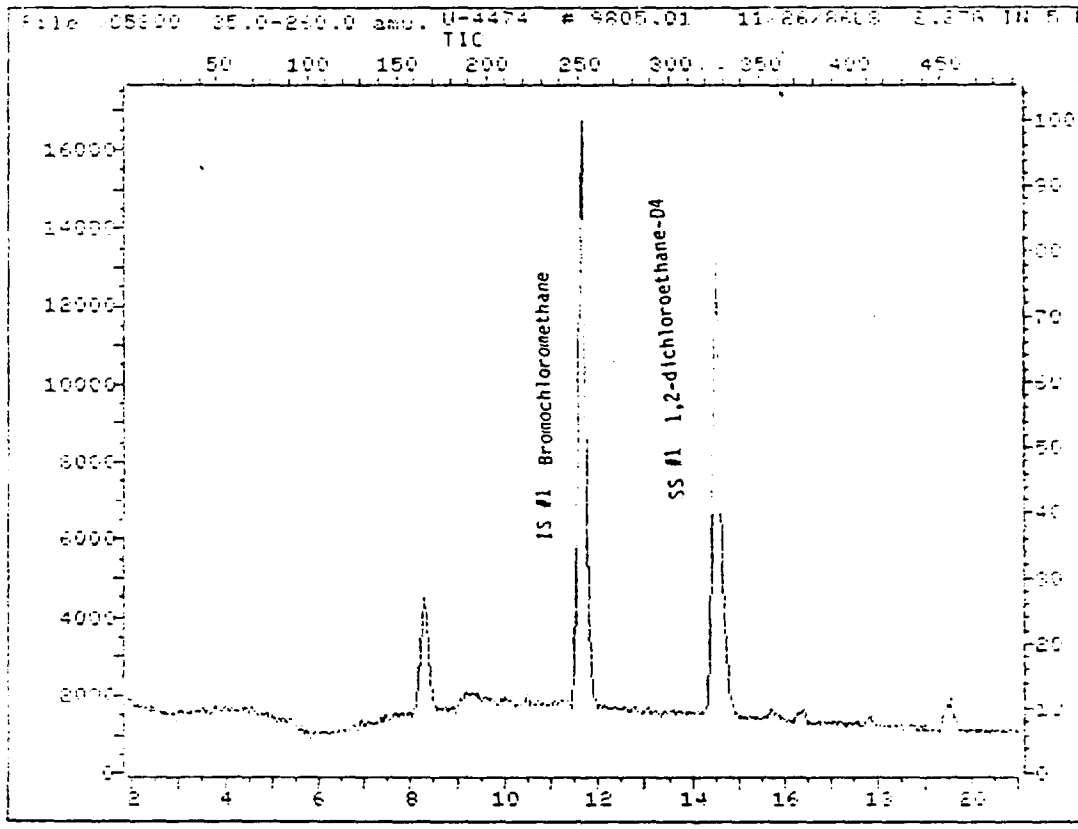
Data File: 05800::D3
Name: U-4474 # 9805.01 DC-SS-39-RE
Misc: 11/26/86LS 2.2%G IN 5 MLS DI + 10 ULS 13/55

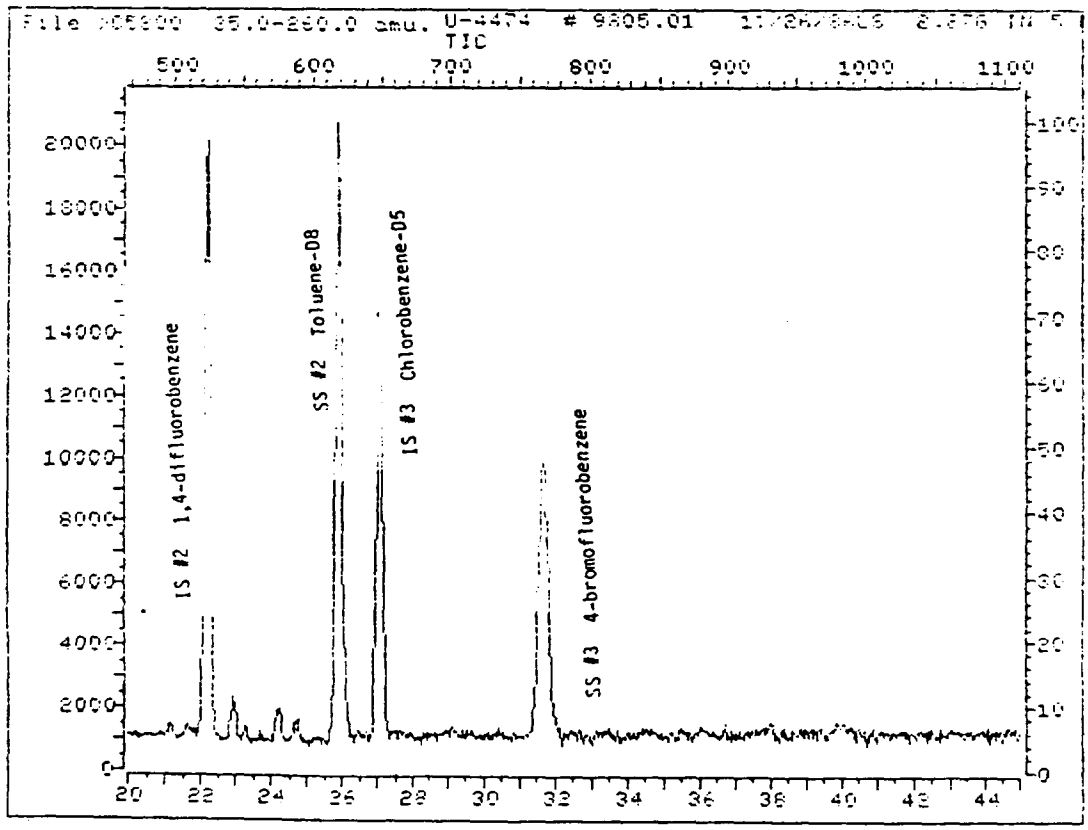
Id File: VOACPS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861126 11:52

Operator ID: USER6
Quant Time: 861126 12:54
Injected at: 861126 12:08

recycled paper

DC-SS-39-RE


TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

QUANT REPORT

Operator ID: USE96 Quant Rev: 4 Quant Time: 861126 12:54
Output File: ^C5800::D2 Injected at: 861126 12:[illegible]
Data File: ^C5800::D3 Dilution Factor: 1.0[illegible]
Name: U-4474 # 9805.01 DC-SS-39-RE
Misc: 11/26/86LS 2.[illegible]G IN 5 MLS DI + 10 ULS IS/SS

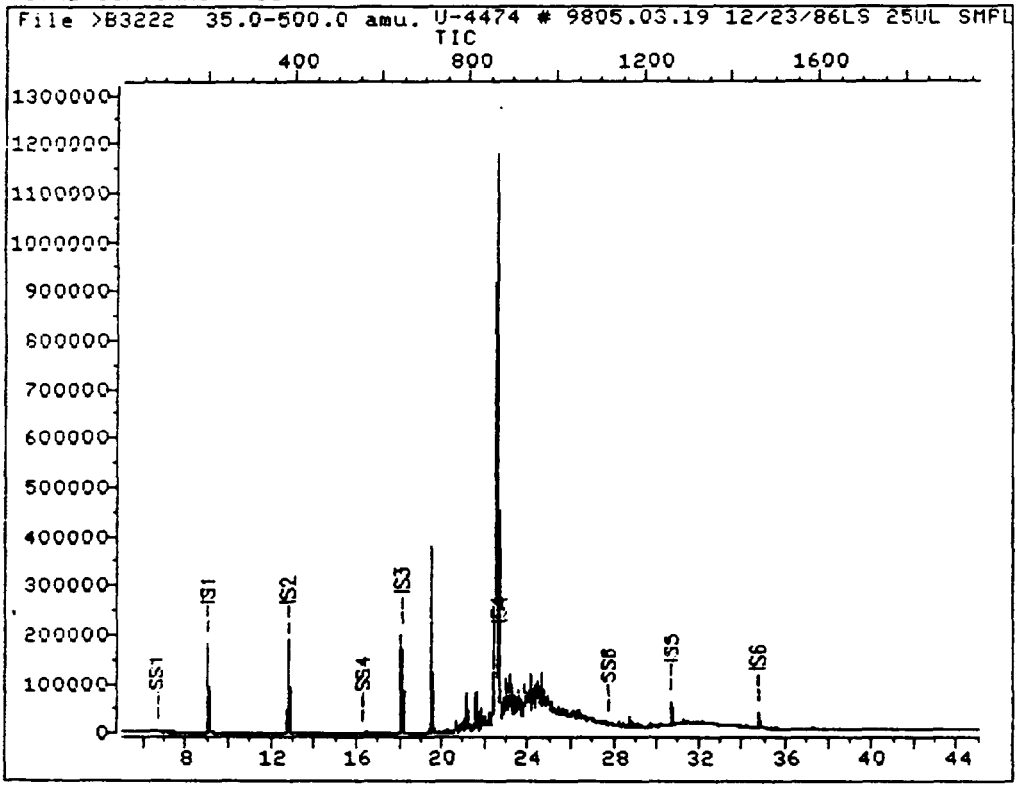
ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861126 11:52

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	Q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.66	252	21367	[illegible]	NGS	[illegible]
6)	METHYLENE CHLORIDE		84	8.32	166	7[illegible]	51.75	NGS	[illegible]
7)	ACETONE		43	9.25	190	3240	24.38	NGS	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.49	325	49848	170.31	NGS	8[illegible]
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.17	523	80359	25[illegible].00	NGS	1[illegible]
31)	*CHLOROBENZENE-D5	(IS)	117	27.06	649	46078	250.00	NGS	100
~~33)~~	~~2-HEXANONE~~		~~43~~	~~24.23~~	~~576~~	~~3[illegible]~~	~~2[illegible].24~~	~~NGS~~	~~100~~
~~33)~~	~~2-HEXANONE~~		~~43~~	~~24.[illegible]~~	~~588~~	~~2[illegible]~~	~~[illegible]~~	~~NGS~~	~~100~~
36)	TOLUENE-D8	(SURR)	98	25.90	619	76[illegible]	[illegible]	NGS	[illegible]
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.65	767	31[illegible]	24[illegible]	NGS	[illegible]

no CW

* Compound is ISTD

TOTAL ION CHROMATOGRAM

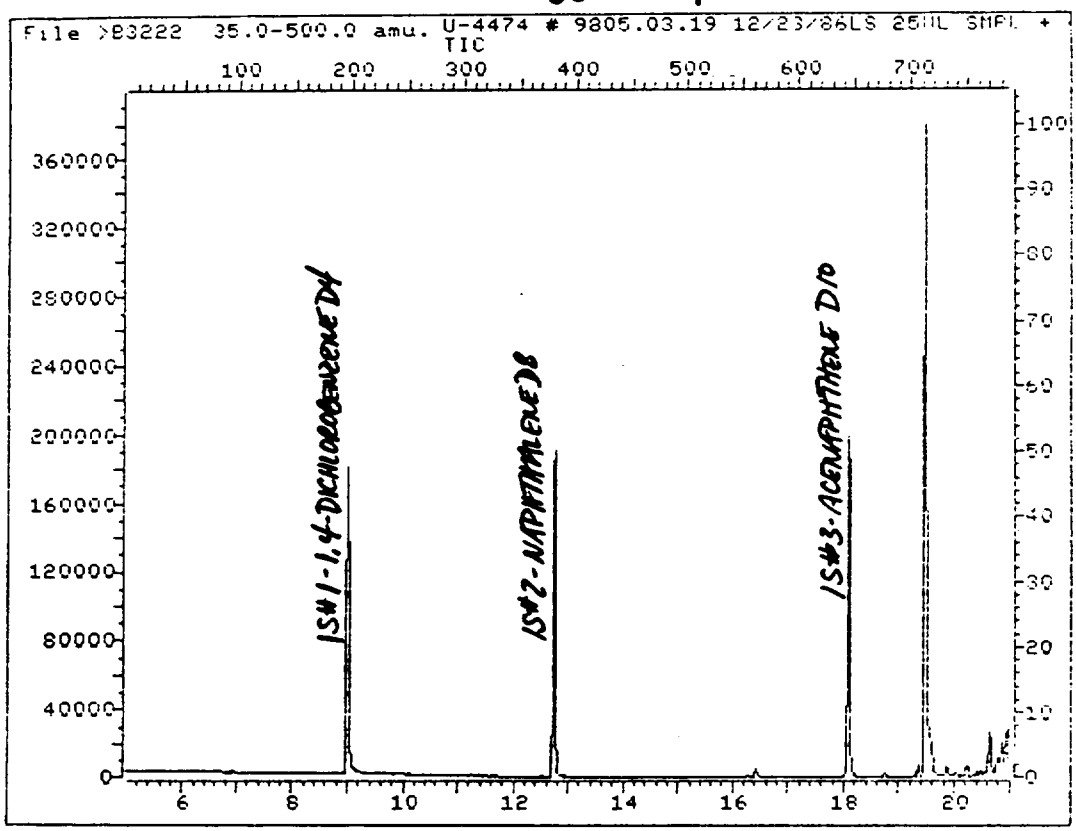


Data File: >B3222::D4
Name: U-4474 # 9805.03.19 DC-SS-39
Misc: 12/23/86LS 25UL SMPL + 475UL MECL2 + 5UL IS (20X)

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861223 19:58

Operator ID: USER8
Quant Time: 861223 21:06
Injected at: 861223 20:18

DC-SS-39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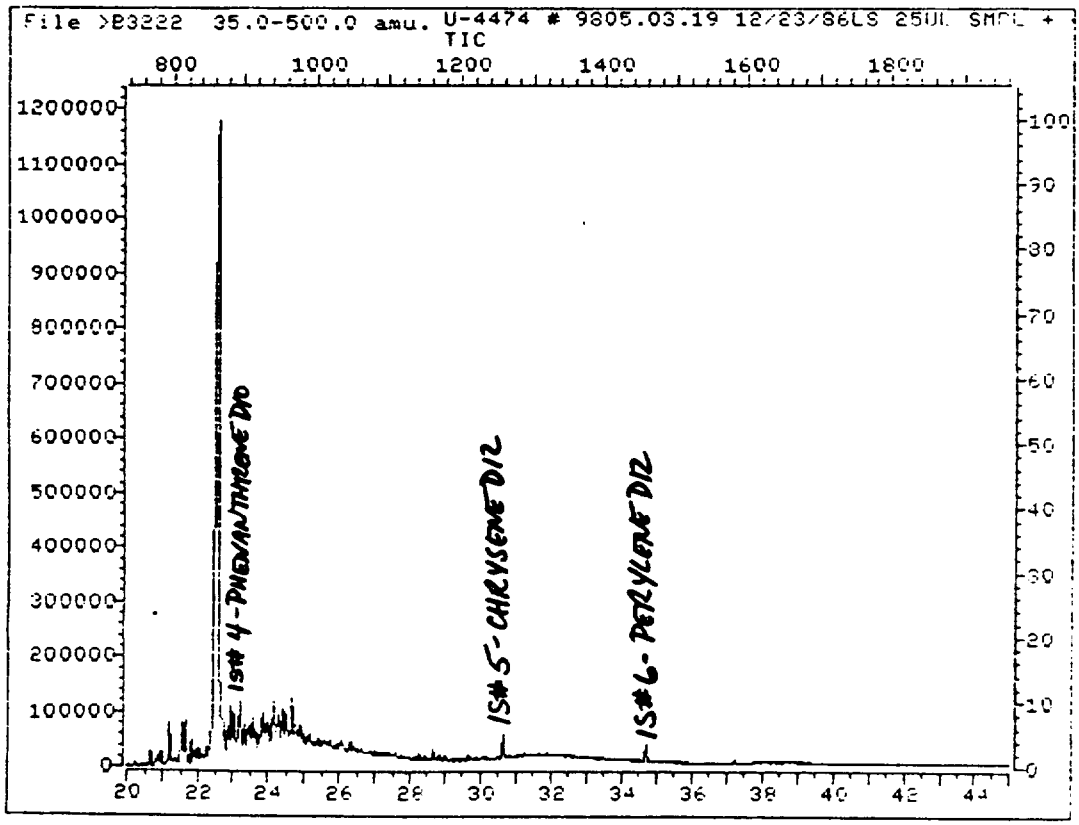
TIC
IS#1-1,4-DICHLOROBENZENE D4
IS#2-NAPHTHALENE D8
IS#3-ACENAPHTHENE D10


File >B3222 35.0-500.0 amu. U-4474 # 9805.03.19 12/23/86LS 25UL SMPL +
TIC
IS# 4-PHENANTHRENE D10
IS# 5-CHRYSENE D12
IS#6-PERYLENE D12

QUANT REPORT

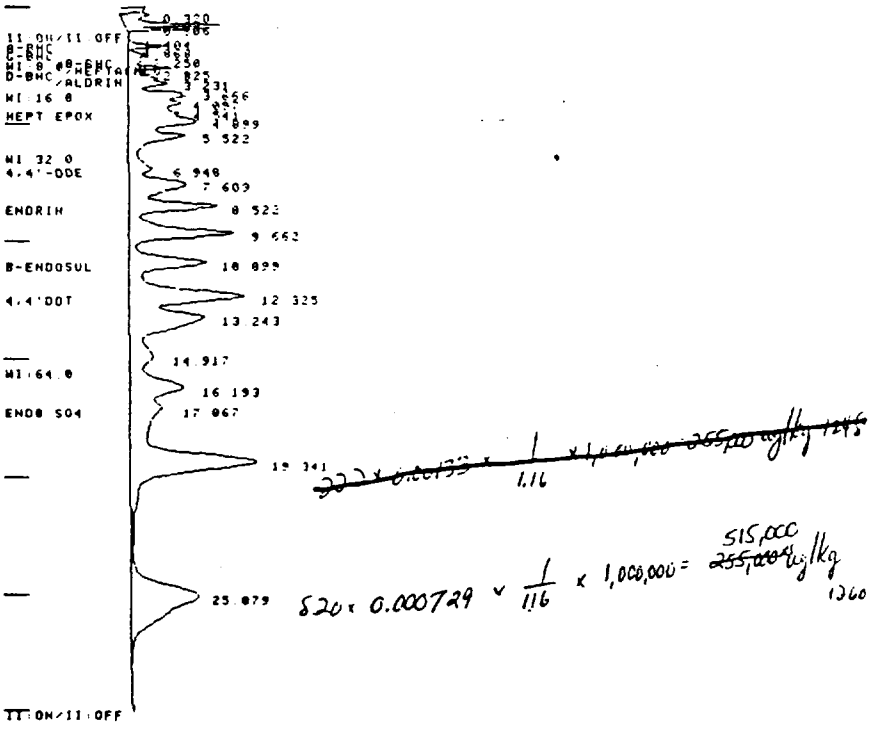
Operator ID: USER8 Quant Rev: 4 Quant Time: 861223 21:06
Output File: ^B3222::Q2 Injected at: 861223 20:18
Data File: >B3222::D4 Dilution Factor: 20.00
Name: U-4474 # 9805.03.19 DC-SS-39
Misc: 12/23/86LS 25UL SMPL + 475UL MECL2 + 5UL IS (20X) FINAL VOLUME - 5.0ml

ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861223 19:58

	Compound	M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4(IS)	152	9.00	197	76754	40.00	UG/L	88
5)	2-FLUOROPHENOL (SURR)	112	6.58	78	669	14.32	UG/L	84
19)	*NAPHTHALENE-D8 (IS)	136	12.74	381	265415	40.00	UG/L	100
28)	1,2,4-TRICHLOROBENZENE	180	12.70	379	1035	8.57	UG/L	100
~~29)~~	~~NAPHTHALENE~~	~~128~~	~~12.80~~	~~384~~	~~386~~	~~1.21~~	~~UG/L~~ No 6/K	100
34)	*ACENAPHTHENE-D10 (IS)	162	18.09	644	127159	40.00	UG/L	97
38)	2-FLUOROBIPHENYL (SURR)	172	16.28	555	1711	6.82	UG/L	94
~~41)~~	~~DIMETHYL PHTHALATE~~	~~163~~	~~18.11~~	~~645~~	~~37991~~	~~155.65~~	~~UG/L~~	100
~~41)~~	~~DIMETHYL PHTHALATE~~	~~163~~	~~18.15~~	~~647~~	~~766~~	~~3.14~~	~~UG/L~~ No 6/K	100
~~52)~~	~~2,6-DINITROTOLUENE~~	~~165~~	~~18.09~~	~~644~~	~~16166~~	~~274.44~~	~~UG/L~~	100
~~52)~~	~~2,6-DINITROTOLUENE~~	~~165~~	~~18.15~~	~~647~~	~~131~~	~~2.22~~	~~UG/L~~	100
55)	*PHENANTHRENE-D10 (IS)	188	22.62	867	82315	40.00	UG/L	98
60)	PENTACHLOROPHENOL	266	22.56	864	1387942	97734.97	UG/L	100
~~60)~~	~~PENTACHLOROPHENOL~~	~~266~~	~~22.62~~	~~867~~	~~18704~~	~~1317.08~~	~~UG/L~~ No 6/K	100
65)	*CHRYSENE-D12 (IS)	240	30.64	1260	49591	40.00	UG/L	100
~~66)~~	~~BENZIDINE~~	~~184~~	~~26.99~~	~~1081~~	~~298~~	~~298.00~~	~~NO CALIB~~	~~100~~ No 6/K
68)	TERPHENYL-D14 (SURR)	244	27.72	1117	349	5.56	UG/L	100
~~70)~~	~~3,3'DICHLOROBENZIDINE~~	~~252~~	~~31.25~~	~~1290~~	~~446~~	~~43.14~~	~~UG/L~~ No 6/K	100
74)	*PERYLENE-D12 (IS)	264	34.69	1459	38795	40.00	UG/L	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~	~~149~~	~~33.43~~	~~1397~~	~~138~~	~~1.48~~	~~UG/L~~	100
~~76)~~	~~BENZO(B)FLUORANTHENE~~	~~252~~	~~33.76~~	~~1413~~	~~357~~	~~5.62~~	~~UG/L~~ No 6/K	100
~~77)~~	~~BENZO(K)FLUORANTHENE~~	~~252~~	~~33.76~~	~~1413~~	~~357~~	~~6.84~~	~~UG/L~~	100
78)	BENZO(A)PYRENE	252	34.43	1446	921	17.94	UG/L	100
~~78)~~	~~BENZO(A)PYRENE~~	~~252~~	~~34.55~~	~~1452~~	~~290~~	~~5.65~~	~~UG/L~~	100
~~81)~~	~~BENZO(G,H,I)PERYLENE~~	~~276~~	~~37.85~~	~~1614~~	~~502~~	~~10.96~~	~~UG/L~~ No 6/K	100

* Compound is ISTD

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



RECALCULATE ON FILE: D.C.#3762

CHANNEL: 18 - 1 TITLE: RUN# 15 6:13 18 DEC 86

DC-SS-39

SAMPLE: 9805 METHOD: PEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.560		43168	VV	? 4.69
2	A-BHC	1263.910	1.633	-0.047	65820	VV	? 6.38
3	G-BHC	1158.330	1.990	-0.120	52786	VV	10.44
4		0.0000	2.250		40041	VV	10.00
5	HEPTACHLO	2613.575	2.574	-0.026	104016	VV	7.19
6	D-BHC	1200.698	2.825	0.005	44675	VV	? 12.44
7		0.0000	3.041		69336	VV	? 10.44
8	ALDRIN	3299.297	3.231	0.091	155234	VV	? 17.94
9		0.0000	3.666		150725	VV	? 12.88
10		0.0000	3.817		200884	VV	? 22.88
11		0.0000	4.097		244372	VV	? 23.75
12	HEPT EPOX	5205.188	4.541	-0.169	220964	VV	? 23.44
13		0.0000	4.899		473217	VV	? 33.75
14		0.0000	5.522		447464	VV	? 28.44
15	4,4'-DDE	5722.665	6.948	0.118	218054	VV	? 48.31
16	DIELDRIN	13050.33	7.609	0.369	560805	VV	40.69
17	ENDRIN	21149.46	8.522	-0.278	559002	VV	22.63
18		0.0000	9.662		821724	VV	25.00
19	B-ENDOSUL	16616.82	10.899	0.259	659149	VV	30.13
20	4,4'DDT	40911.92	12.325	-0.225	1127711	VV	34.44
21		0.0000	13.243		976230	VV	53.38
22		0.0000	14.917		354785	VV	? 83.13
23		0.0000	16.193		665720	VV	52.56
24	ENDO SO4	62182.09	17.067	0.097	598433	VV	? 66.44
25		0.0000	19.341		1875028	VV	47.94
26	METHOXYCH	160097.0	25.079	1.059	1530418	VB	87.06

LDL YES

222

1260

820

TOTALS: 334471.4 1.133 12267761

DETECTED PKS: 36 REJECTED PKS: 10

DIVISOR: 1.50000 MULTIPLIER: 1000000.00

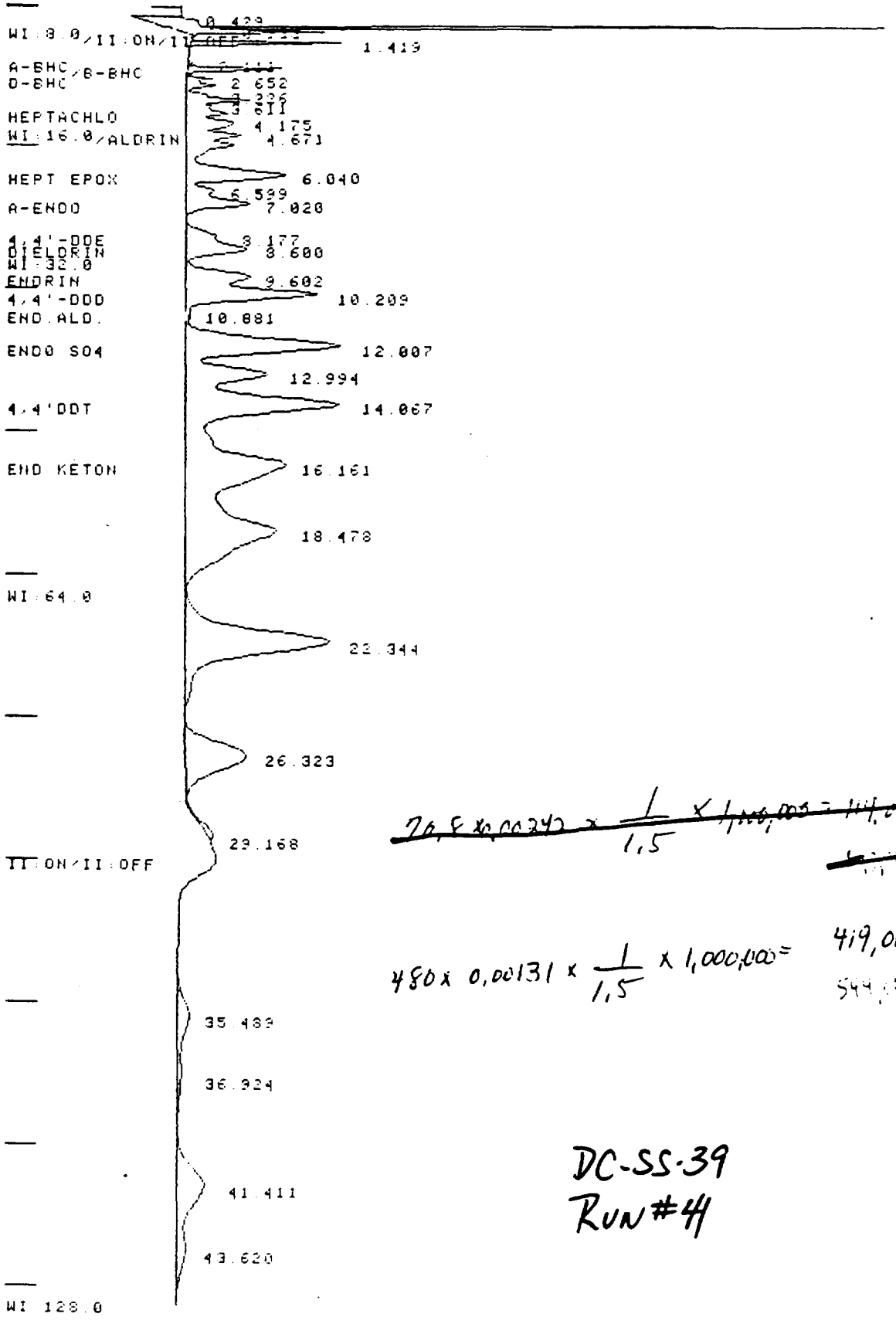
NOISE: 57.1 OFFSET: -9

RACK: 1 VIAL: 15 INJ: 1

NOTES:
NOTEBOOK:259-59 ANALYST:RICHARD SAMSON
SECURE AREA: D JOB#:U-4474
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
PESTICIDE/PCB CONFIRMATIONS

cycled paper

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



~~70,8 x 0,00242 x 1/1,5 x 1,000,000 = 114,000 ug/kg 124~~

480 x 0,00131 x 1/1,5 x 1,000,000 = 419,000 wet ug/kg 12

DC-SS-39
RUN #4

CHANNEL: 1A - 1 TITLE: RUN# 41 4:13 10 DEC 88

DC-SS-39

SAMPLE: 9305.01.19A1 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	1.417		77658	VB	3.19
2	[redacted]	5138.309	2.318	0.088	53331	VB	5.13
3		0.0000	2.918		22484	VV	6.94
4		0.0000	3.395		60420	VV	8.63
5		0.0000	3.611		21618	VV	? 8.88
[redacted] 6	HEPTACHLOR	2347.045	[redacted]	-0.013	[redacted]	VV	? 16.25
7		0.0000	4.175		104288	VV	22.94
8	[redacted]	2608.225	4.671	-0.129	85011	VV	17.13
9		0.0000	4.990		98319	VV	? 16.25
10	[redacted]	9382.499	6.040	0.220	257188	VV	22.88
11		0.0000	6.599		46454	VV	? 16.19
12	[redacted]	4920.882	7.020	-0.210	140970	VB	18.81
13	[redacted]	2293.983	8.177	-0.153	63186	BV	? 28.69
14	[redacted]	5090.915	8.600	0.180	160185	VV	25.31
15	[redacted]	6560.625	9.602	0.022	178740	VV	? 25.50
16	[redacted]	15377.86	10.209	-0.241	368482	VV	24.88
17	[redacted]	28586.57	12.007	-0.263	565172	VV	32.38
18		0.0000	12.994		291658	VV	33.44
19	[redacted]	46150.27	14.067	0.417	670138	VV	37.19
20	[redacted]	28678.96	16.161	0.431	798355	VV	66.94
21		0.0000	18.478		841088	VV	75.38
22		0.0000	22.344		931544	VB	51.50
23	[redacted]	17980.02	26.323	-1.047	428322	BV	65.94
24		0.0000	35.489		126084	BV	91.25
25		0.0000	36.924		41835	VV	?181.63
26		0.0000	41.411		286691	VV	94.38
27		0.0000	43.620		88519	VB	?111.44
TOTALS:		174116.2		-0.698	6873271		

DETECTED PKS: 43 REJECTED PKS: 16

DIVISOR: 1.50000 MULTIPLIER: 1000000.00

NOISE: 22.9 OFFSET: -17

RACK: 3 VIAL: 11 INJ: 1

NOTES:
NOTEBOOK:259-52 ANALYST:RICHARD SAMSON
SECURE AREA:D JOB# U-4474
INST:VARIAN 6000#2 A 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
AUTOSAMPLER
PEST/PCB ANALYSIS

POST RUN:
SAVE FILE: RAW D.CREEK3566

SAMPLE NUMBER DC-SS-40

481095

Sample Number
DC-SS-40

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474

Lab Sample ID No: 9806 QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: [signature] Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-21-86

Conc./Dil Factor: 3 pH 6.6

Percent Moisture: (Not Decanted) 17

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	40B
67-64-1	Acetone	150B
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	46B
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	15u
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	15u
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	31
591-78-6	2-Hexanone	30u
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	33
108-90-7	Chlorobenzene	15u
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

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.

Sample Number
DC-SS-40-RE

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474

Lab Sample ID No: 9806 RE QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: [signature] Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-26-86

Conc/Dil Factor: 3 pH 6.6

Percent Moisture: (Not Decanted) 17

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	44B
67-64-1	Acetone	30u
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	30u
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	15u
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	15u
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	30u
591-78-6	2-Hexanone	30u
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	15u
108-90-7	Chlorobenzene	15u
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

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, etc. (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.

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Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No U-4474

Sample Number DC-SS-40

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 11-18-86

Date Analyzed: 12-22-86

Conc/Dil Factor: 10

Percent Moisture (Decanted) 17

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	2000	U
111-44-4	bis(-2-Chloroethyl)Ether	2000	U
95-57-8	2-Chlorophenol	2000	U
541-73-1	1 3-Dichlorobenzene	2000	U
106-46-7	1 4-Dichlorobenzene	2000	U
100-51-6	Benzyl Alcohol	2000	U
95-50-1	1 2-Dichlorobenzene	2000	U
95-48-7	2-Methylphenol	2000	U
39638-32-9	bis(2-chloroisopropyl)Ether	2000	U
106-44-5	4-Methylphenol	2000	U
621-64-7	N-Nitroso-Di-n-Propylamine	2000	U
67-72-1	Hexachloroethane	2000	U
98-95-3	Nitrobenzene	2000	U
78-59-1	Isophorone	2000	U
88-75-5	2-Nitrophenol	2000	U
105-67-9	2, 4-Dimethylphenol	2000	U
65-85-0	Benzoic Acid	9600	U
111-91-1	bis(-2-Chloroethoxy)Methane	2000	U
120-83-2	2 4-Dichlorophenol	6200	
120-82-1	1 2, 4-Trichlorobenzene	2000	U
91-20-3	Naphthalene	140	J
106-47-8	4-Chloroaniline	2000	U
87-68-3	Hexachlorobutadiene	2000	U
59-50-7	4-Chloro-3-Methylphenol	2000	U
91-57-6	2-Methylnaphthalene	2000	U
77-47-4	Hexachlorocyclopentadiene	2000	U
88-06-2	2 4 6-Trichlorophenol	1500	J
95-95-4	2, 4, 5-Trichlorophenol	9600	U
91-58-7	2-Chloronaphthalene	2000	U
88-74-4	2-Nitroaniline	9600	U
131-11-3	Dimethyl Phthalate	2000	U
208-96-8	Acenaphthylene	2000	U
99-09-2	3-Nitroaniline	9600	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	2000	U
51-28-5	2, 4-Dinitrophenol	9600	U
100-02-7	4-Nitrophenol	1,000,000	
132-64-9	Dibenzofuran	2000	U
121-14-2	2 4-Dinitrotoluene	2000	U
606-20-2	2 6-Dinitrotoluene	2000	U
84-66-2	Diethylphthalate	2000	U
7005-72-3	4-Chlorophenyl-phenylether	2000	U
86-73-7	Fluorene	2000	U
100-01-6	4-Nitroaniline	9600	U
534-52-1	4, 6-Dinitro-2-Methylphenol	9600	U
86-30-6	N-Nitrosodiphenylamine (1)	2000	U
101-55-3	4-Bromophenyl-phenylether	2000	U
118-74-1	Hexachlorobenzene	2000	U
87-86-5	Pentachlorophenol	1100	J
85-01-8	Phenanthrene	920	J
120-12-7	Anthracene	810	J
84-74-2	Di-n-Butylphthalate	880	J
206-44-0	Fluoranthene	2600	
129-00-0	Pyrene	2400	
85-68-7	Butylbenzylphthalate	2000	U
91-94-1	3, 3 -Dichlorobenzidine	4000	U
56-55-3	Benzo(a)Anthracene	1400	J
117-81-7	bis(2-Ethylhexyl)Phthalate	2500	
218-01-9	Chrysene	2500	
117-84-0	Di-n-Octyl Phthalate	2000	U
205-99-2	Benzo(b)Fluoranthene	3600	
207-08-9	Benzo(k)Fluoranthene	2000	U
50-32-8	Benzo(a)Pyrene	1700	J
193-39-5	Indeno(1 2, 3-cd)Pyrene	2100	
53-70-3	Dibenz(a h)Anthracene	530	J
191-24-2	Benzo(g h, i)Perylene	2400	

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No U-4474

Sample Number DC-SS-40

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-18-86

Date Analyzed 12-10-86

Conc/Dil Factor 500

Percent Moisture (decanted) 16.9

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	8,000 U
319-85-7	Beta-BHC	8,000 U
319-86-8	Delta-BHC	8,000 U
58-89-9	Gamma-BHC (Lindane)	8,000 U
76-44-8	Heptachlor	8,000 U
309-00-2	Aldrin	8,000 U
1024-57-3	Heptachlor Epoxide	8,000 U
959-98-8	Endosulfan I	8,000 U
60-57-1	Dieldrin	16,000 U
72-55-9	4,4'-DDE	16,000 U
72-20-8	Endrin	16,000 U
33213-65-9	Endosulfan II	16,000 U
72-54-8	4,4'-DDD	16,000 U
1031-07-8	Endosulfan Sulfate	16,000 U
50-29-3	4,4'-DDT	16,000 U
72-43-5	Methoxychlor	80,000 U
53494-70-5	Endrin Ketone	16,000 U
57-74-9	Chlordane	80,000 U
8001-35-2	Toxaphene	160,000 U
12674-11-2	Aroclor-1016	80,000 U
11104-28-2	Aroclor-1221	80,000 U
11141-16-5	Aroclor-1232	80,000 U
53469-21-9	Aroclor-1242	80,000 U
12672-29-6	Aroclor-1248	80,000 U
11097-69-1	Aroclor-1254	119,000 J C
11096-82-5	Aroclor-1260	279,000 C

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 30 V_t 1000 V_i 4

Laboratory Name ecology and environment, inc.

Case No IC-11474

Sample Number DC-SS-40

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	(RT) or Scan Number min.	Estimated Concentration (ug/l or ug/kg)
1.	Hexane isomer	VOA	22.9	19 J
2.	Unknown hydrocarbon	VOA	24.2	13 J
3.				
4.	UNKNOWN AROMATIC	BNA	20.3	7300 J
5.	UNKNOWN AROMATIC		20.7	19000 J
6.	UNKNOWN AROMATIC		21.0	14000 J
7.	UNKNOWN AROMATIC		21.1	16000 J
8.	UNKNOWN AROMATIC		21.3	27000 J
9.	UNKNOWN AROMATIC		21.6	18000 J
10.	UNKNOWN AROMATIC		21.7	21000 J
11.	UNKNOWN AROMATIC		21.9	5700 J
12.	UNKNOWN AROMATIC		22.8	5200 J
13.	UNKNOWN AROMATIC		24.5	2900 J
14. 157698	2,7-DIMETHYLPHENANTHRENE		24.8	5200 J
15.	PCB		24.9-25.4	—
16.	UNKNOWN		25.8	7100 J
17.	PCB		26.4-28.2	—
18.	UNKNOWN AROMATIC		28.4	8300 J
19.	PCB		28.5-	—
20.	UNKNOWN AROMATIC		28.8	13000 J
21.	UNKNOWN AROMATIC		29.0	4900 J
22.	PCB		29.1-29.4	—
23.	UNKNOWN		29.6	3900 J
24.	PCB		29.8-31.3	—
25.				
26.				
27.				
28.				
29.				
30.				

Laboratory Name ecology and environment, inc.

Case No 11-1/1/71

Sample Number
DC-SS-40-RE

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.	No TIC's in VOA fraction			
2.				
3.				
4.				
5.				
6.				
7				
8.				
9.				
10.				
11.				
12.				
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14.				
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27.				
28.				
29.				
30				

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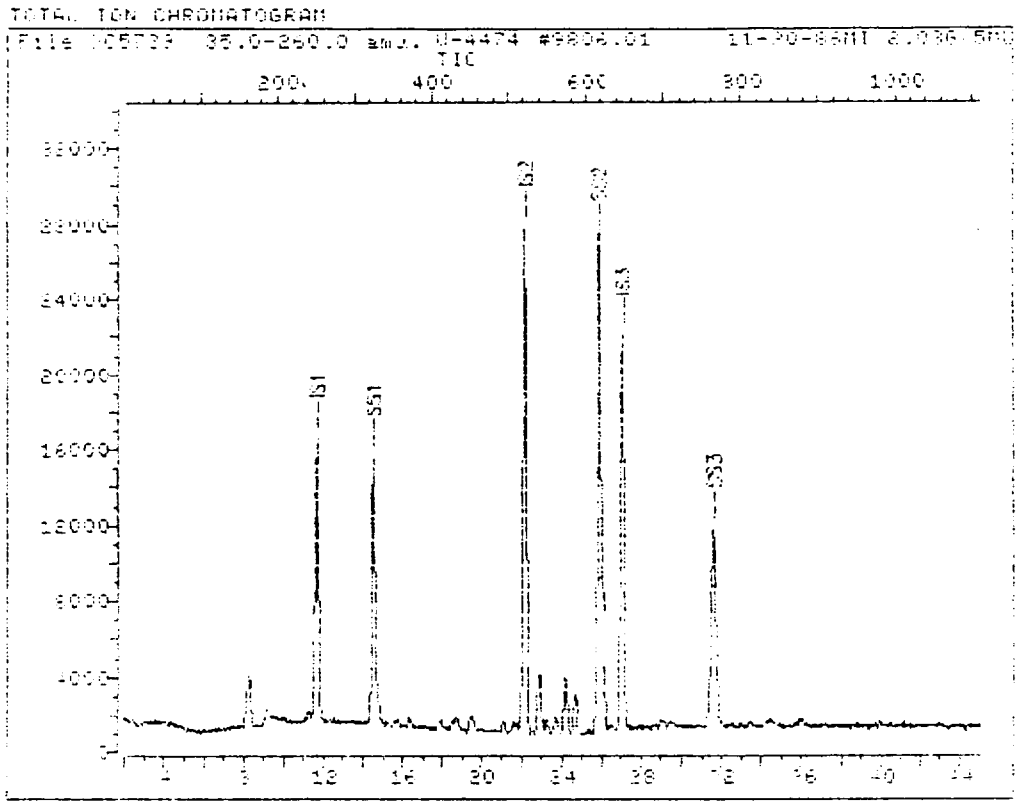
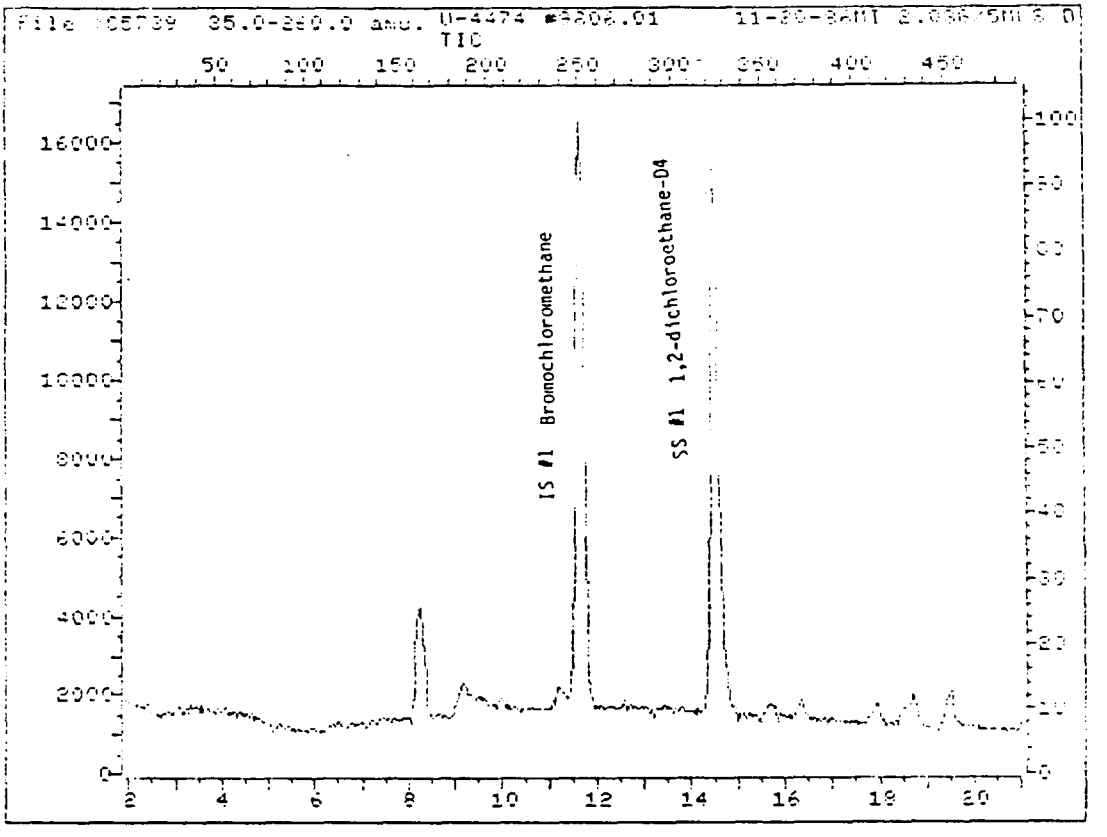


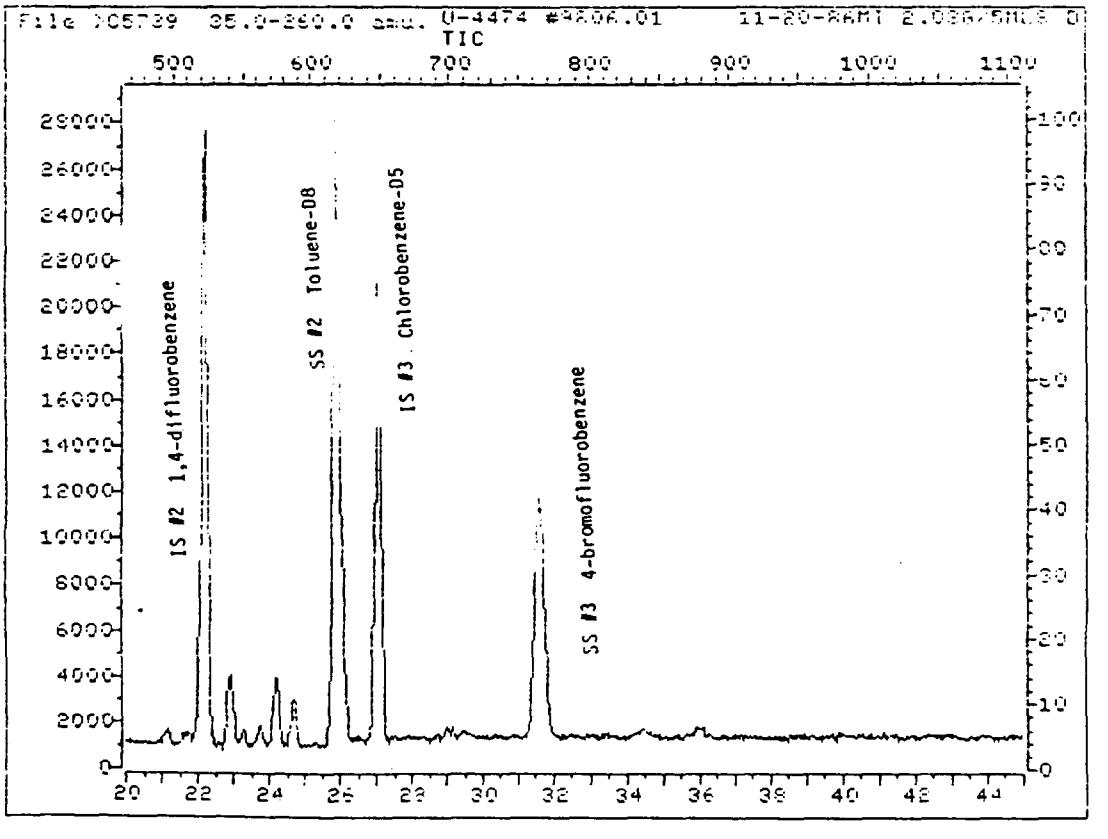
Data File: 105739::D2
Name: U-4474 #9806.01 DC-SS-40
Misc: 11-20-86MI 2.036/5MLS DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861120 23:54

Operator ID: USER8
Quant Time: 861121 11:41
Injected at: 861121 01:53

DC-SS-40


File 005739 35.0-260.0 amu. U-4474 #9206.01 11-20-86MT
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File 005739 35.0-260.0 amu. U-4474 #9206.01 11-20-86MT
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861121 11:41
Output File: >C5739::C2 Injected at: 8 .121 0.:[illegible]
Data File: >C5739::D3 Dilution Factor: 1.[illegible]
Name: U-4474 #9806.01 DC-SS-40
Misc: 11-20-86MI 2.03G/5MLS D1 + 10UL IS/SS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861120 23:54

	Compound	M/E	R.T.	Scan#	Area	Conc	Units	Q
1)	*BROMOCHLOROMETHANE (IS)	128	11.65	251	21218	250.00	NGS	100
6)	METHYLENE CHLORIDE	84	8.28	164	7309	66.66	NGS	100
7)	ACETONE	43	9.17	187	12554	247.65	NGS	100
15)	1,2-DICHLOROETHANE-D4(SURR)	65	14.48	324	55582	261.97	NGS	85
16)	*1,4-DIFLUOROBENZENE (IS)	114	22.21	523	105031	250.00	NGS	100
17)	2-BUTANONE	72	14.64	328	3155	76.92	NGS	100
31)	*CHLOROBENZENE-D5 (IS)	117	27.06	649	66281	250.00	NGS	[illegible]
32)	4-METHYL-2-PENTANONE	43	22.90	541	13355	53.64	NGS	72
~~33)~~	~~2-HEXANONE~~	~~43~~	~~24.18~~	~~574~~	~~9272~~	~~[illegible]~~	~~NGS~~	~~[illegible]~~
~~35)~~	~~2-HEXANONE~~	~~43~~	~~24.69~~	~~587~~	~~[illegible]~~	~~[illegible]~~	~~NGS~~	~~100~~
36)	TOLUENE-D8 (SURR)	98	25.85	617	104592	279.15	NGS	[illegible]
37)	TOLUENE	92	26.05	622	13219	54.68	NGS	94
40)	4-BROMOFLUOROBENZENE(SURR)	95	31.60	765	35630	16[illegible]	NGS	[illegible]

* Compound is ISTD

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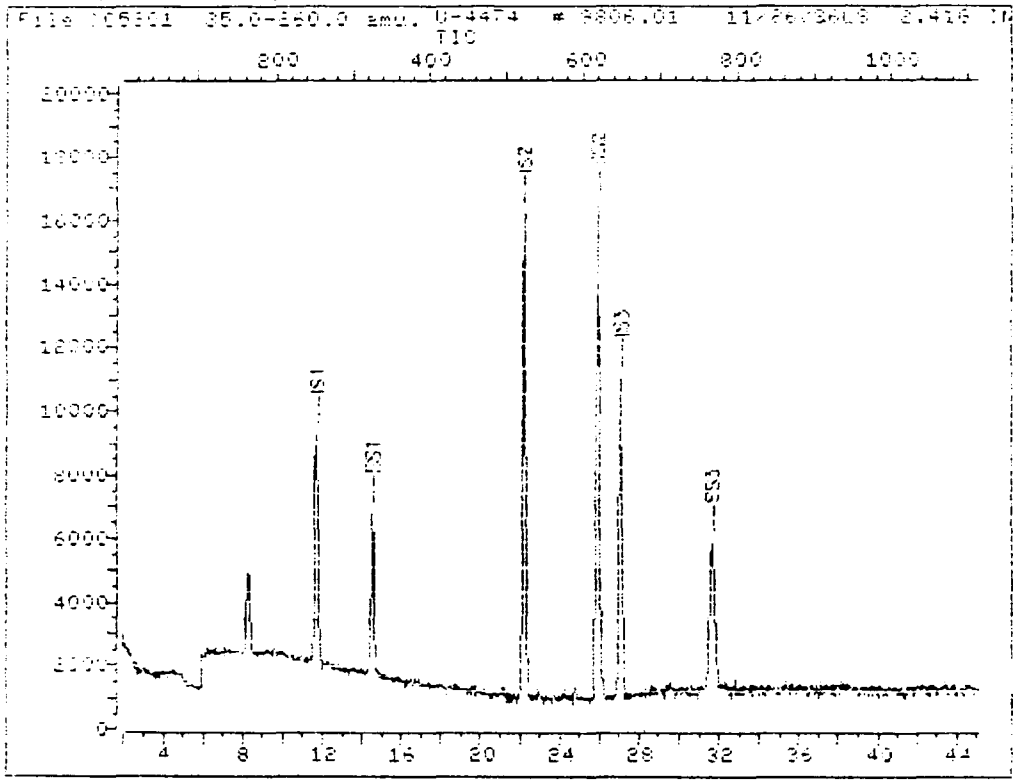

Data File: >C9801::D3
Name: U-4474 # 9806.01 DC-SS-40-RE
Misc: 11/26/86LS 2.41G IN 5 MLS DI + 10 ULS IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861126 11:52

Operator ID: USER6
Quant Time: 861126 13:49
Injected at: 861126 13:03

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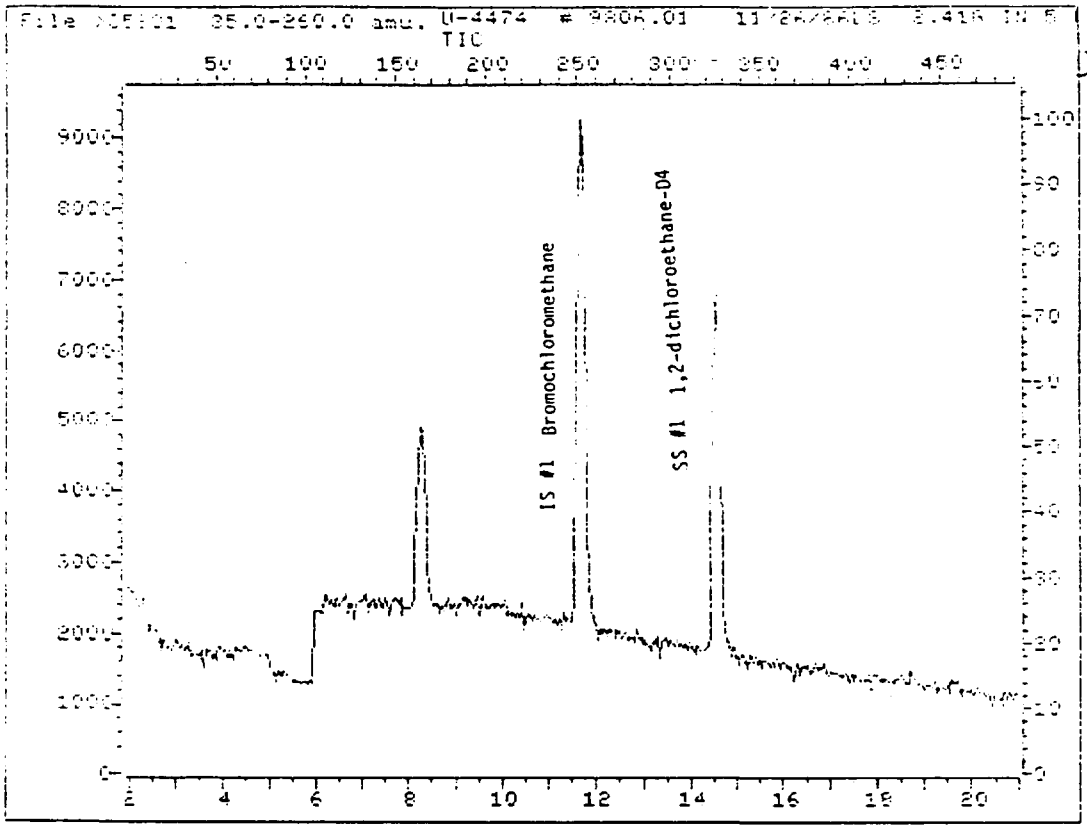
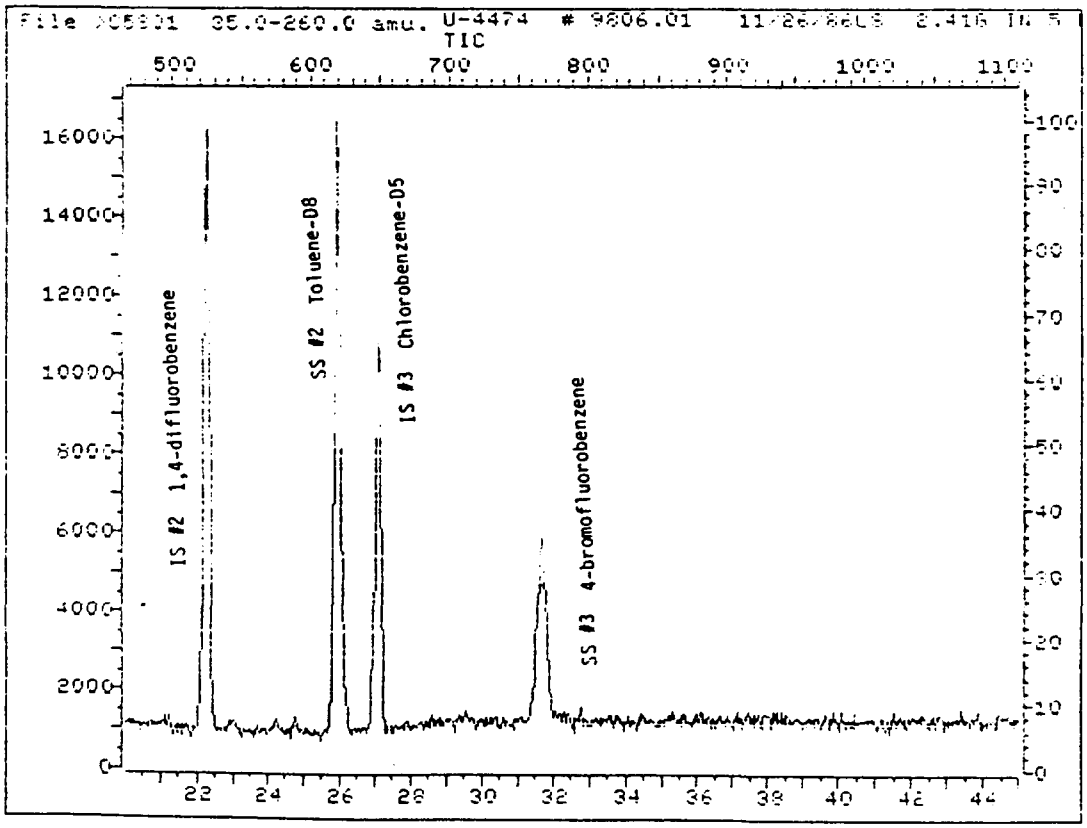


DC-SS-40-RE



recycled paper

QUANTREPORT

Operator ID: USER6 Quant Rev: 4 Quant Time: 861126 15:1[illegible]
Output File: [illegible]5801::02 Injected at: [illegible]
Data File: [illegible]5801::03 Dilution Factor: [illegible]
Name: U-4474 # 9806.01 DC-56-40-RE
Misc: 11 26/86LS 2.41G IN 5 MLS DI + 10 ULS IS/SS

ID File: VOACRS::02
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861126 11:52

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	[illegible]
1)	*BROMOCHLOROMETHANE	(IS)	128	11.67	252	11428	[illegible]	NGS	[illegible]
4)	METHYLENE CHLORIDE		84	8.30	165	7195	88.66	NGS	[illegible]
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.54	325	22312	[illegible]	NGS	[illegible]
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.22	524	67553	250.00	NGS	[illegible]
3[illegible])	*CHLOROBENZENE-D5	(IS)	117	27.08	649	33919	[illegible]	NGS	[illegible]
[illegible]	[illegible]NE-D8	(SURR)	98	25.91	619	40761	[illegible]	[illegible]	[illegible]
4[illegible])	4-BROMOFLUOROBENZENE	(SURR)	95	31.66	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

* Compound is ISID

[illegible] paper ecology and environment

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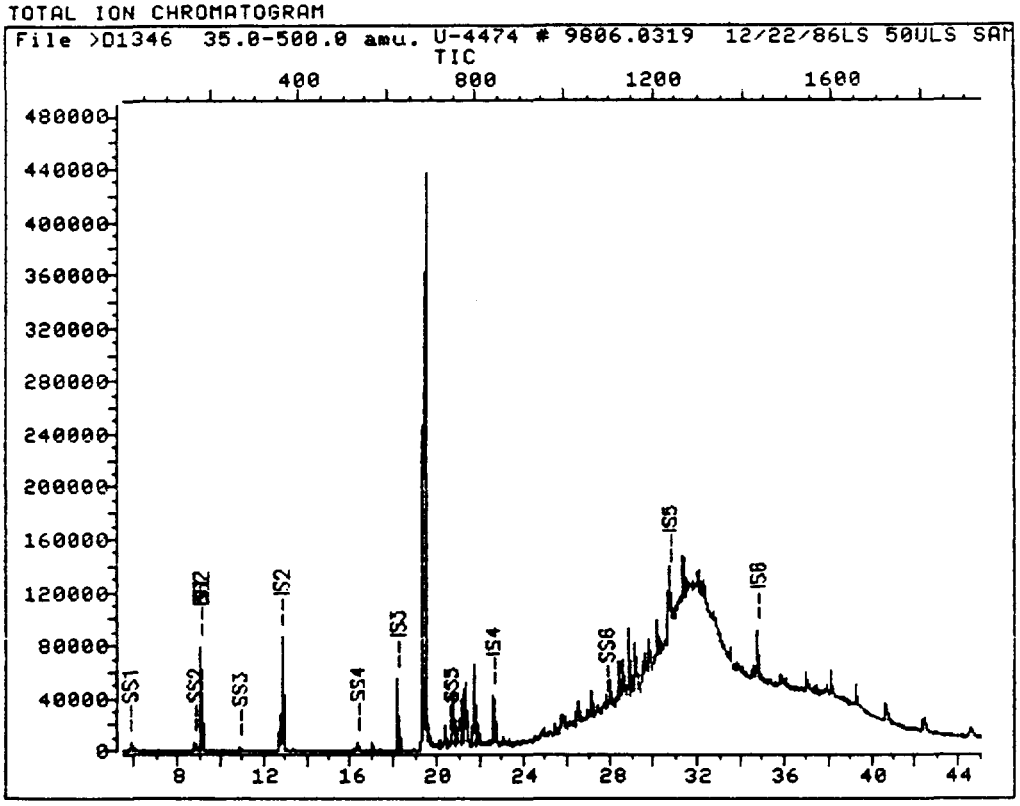
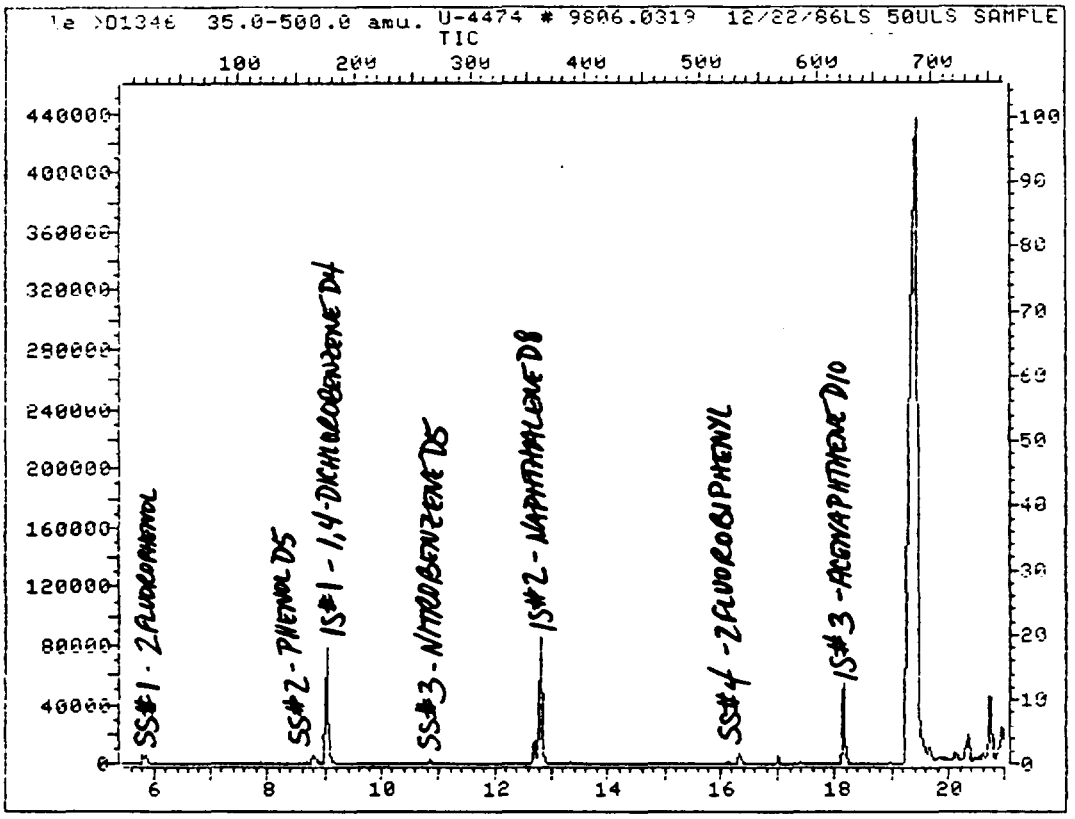


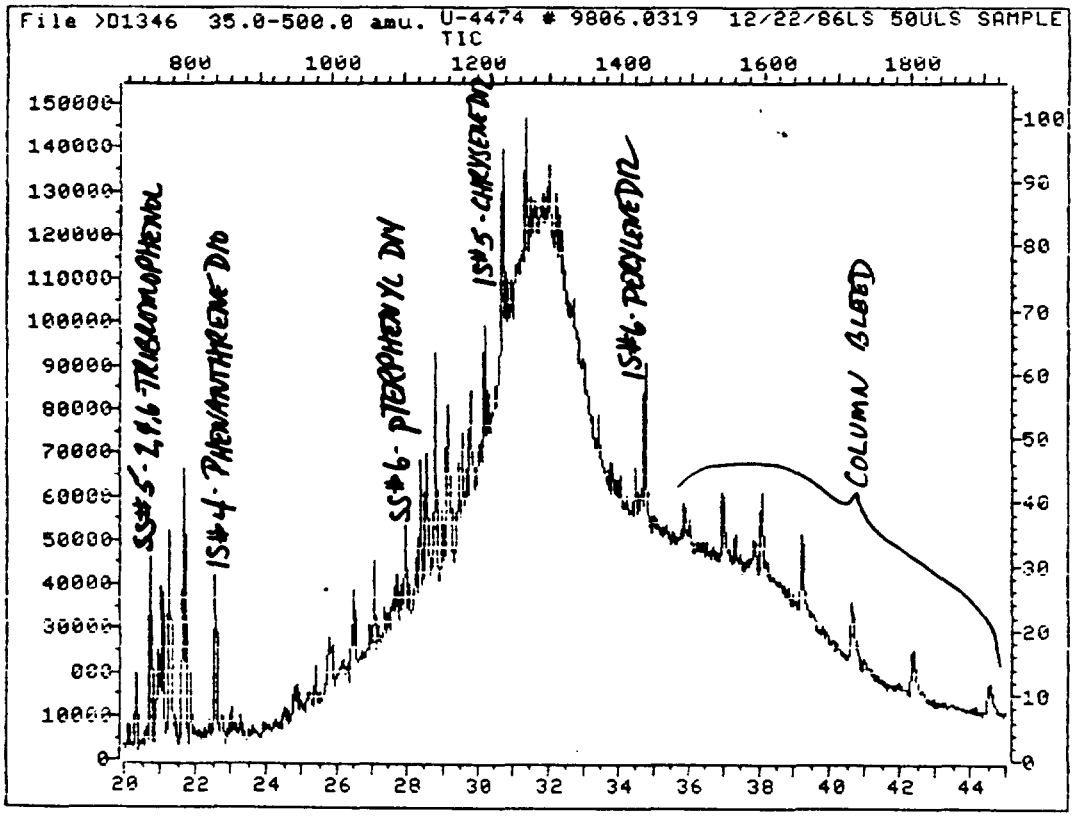
Data File: >D1346::D2 DC-SS-40
Name: U-4474 # 9806.0319
Misc: 12/22/86LS 50ULS SAMPLE + 450ULS MECL2 + 5ULS IS BTL# 4

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861222 15:30

Operator ID: USER6
Quant Time: 861222 22:02
Injected at: 861222 21:15

DC-SS-40





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QUANT REPORT

Operator ID: USER6 Quant Rev: 4 Quant Time: 861222 22:02
Output File: ^D1346::Q2 Injected at: 861222 21:15
Data File: >D1346::D2 Dilution Factor: 10.00
Name: U-4474 # 9806.0319 DC-SS-40
Misc: 12/22/86LS 50ULS SAMPLE + 450ULS MECL2 + 5ULS IS BTL# 4

ID File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861222 15:30

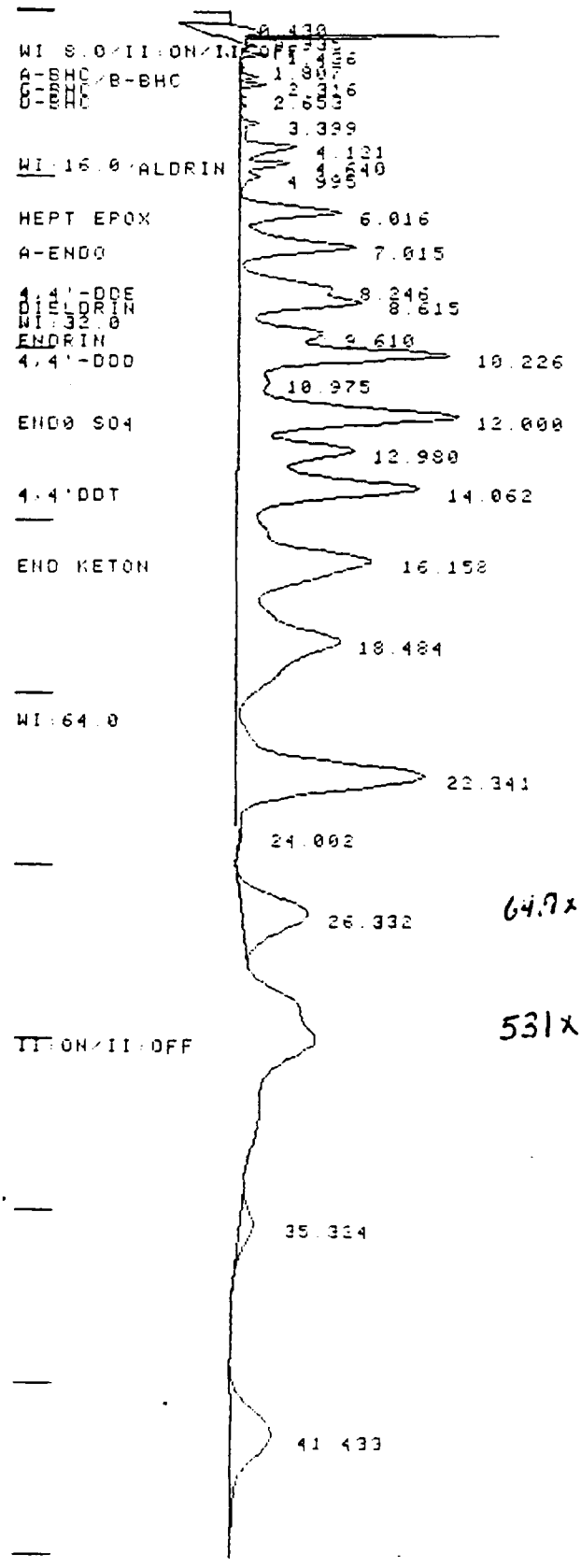
	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.04	176	38701	40.00	UG/L	87
2)	PHENOL-D5	(SURR)	99	8.79	164	8431	68.86	UG/L	97
~~2)~~	~~PHENOL-D5~~	~~(SURR)~~	~~99~~	~~9.84~~	~~176~~	~~655~~	~~5.35~~	~~UG/L~~ No Bgh	~~99~~
5)	2-FLUOROPHENOL	(SURR)	112	5.80	17	6559	73.90	UG/L	99
~~17)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~10.85~~	~~265~~	~~474~~	~~5.08~~	~~UG/L~~ No Bgh	~~84~~
19)	*NAPHTHALENE-D8	(IS)	136	12.81	361	121419	40.00	UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	10.85	265	3843	39.94	UG/L	95
27)	2,4-DICHLOROPHENOL		162	12.68	355	16817	154.96	UG/L	93
~~29)~~	~~NAPHTHALENE~~		~~128~~	~~12.68~~	~~355~~	~~494~~	~~1.85~~	~~UG/L~~ No Bgh	~~100~~
29)	NAPHTHALENE		128	12.87	364	968	3.63	UG/L	100
34)	*ACENAPHTHENE-D10	(IS)	162	18.16	624	35360	40.00	UG/L	97
36)	2,4,6-TRICHLOROPHENOL		196	16.13	524	1867	38.27	UG/L	99
~~37)~~	~~2,4,5-TRICHLOROPHENOL~~		~~196~~	~~16.13~~	~~524~~	~~1867~~	~~36.78~~	~~UG/L~~ No Bgh	~~97~~
38)	2-FLUOROBIPHENYL	(SURR)	172	16.33	534	9083	64.04	UG/L	92
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.16~~	~~624~~	~~11033~~	~~89.67~~	~~UG/L~~ No Bgh	~~100~~
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.63	745	2069	49.09	UG/L	93
50)	4-NITROPHENOL		139	19.45	687	599870	25681.33	UG/L	100
50)	4-NITROPHENOL		139	19.49	689	15414	659.90	UG/L	100
~~51)~~	~~2,4-DINITROTOLUENE~~		~~165~~	~~19.53~~	~~691~~	~~177~~	~~7.30~~	~~UG/L~~ No Bgh	~~100~~
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.16~~	~~624~~	~~4375~~	~~157.77~~	~~UG/L~~	~~100~~
55)	*PHENANTHRENE-D10	(IS)	188	22.57	840	45031	40.00	UG/L	90
60)	PENTACHLOROPHENOL		266	22.40	832	684	28.45	UG/L	100
61)	PHENANTHRENE		178	22.63	843	2453	23.03	UG/L	92
~~61)~~	~~PHENANTHRENE~~		~~178~~	~~22.77~~	~~850~~	~~2104~~	~~19.75~~	~~UG/L~~ No Bgh	~~91~~
~~62)~~	~~ANTHRACENE~~		~~178~~	~~22.63~~	~~843~~	~~2453~~	~~23.43~~	~~UG/L~~	~~92~~
62)	ANTHRACENE		178	22.77	850	2104	20.10	UG/L	91
63)	DI-N-BUTYLPHTHALATE		149	25.16	967	1998	21.94	UG/L	80
64)	FLUORANTHENE		202	26.28	1022	5141	63.53	UG/L	95
65)	*CHRYSENE-D12	(IS)	240	30.72	1238	44249	40.00	UG/L	100
~~66)~~	~~BENZIDINE~~		~~184~~	~~26.94~~	~~1054~~	~~234~~	~~234.00~~	~~NO CALIB~~	~~100~~
~~66)~~	~~BENZIDINE~~		~~184~~	~~27.00~~	~~1057~~	~~430~~	~~430.00~~	~~NO CALIB~~	~~100~~
~~66)~~	~~BENZIDINE~~		~~184~~	~~27.06~~	~~1060~~	~~1651~~	~~1651.00~~	~~NO CALIB~~ No Bgh	~~100~~
~~66)~~	~~BENZIDINE~~		~~184~~	~~27.19~~	~~1066~~	~~408~~	~~408.00~~	~~NO CALIB~~	~~100~~
~~66)~~	~~BENZIDINE~~		~~184~~	~~27.58~~	~~1085~~	~~433~~	~~433.00~~	~~NO CALIB~~	~~100~~
67)	PYRENE		202	26.90	1052	8785	60.06	UG/L	94
68)	TERPHENYL-D14	(SURR)	244	27.78	1095	3695	41.54	UG/L	100
~~69)~~	~~BUTYLBENZYLPHTHALATE~~		~~149~~	~~29.55~~	~~1181~~	~~1312~~	~~22.93~~	~~UG/L~~	~~50~~
~~70)~~	~~3,3'DICHLOROBENZIDINE~~		~~252~~	~~30.70~~	~~1237~~	~~1718~~	~~70.06~~	~~UG/L~~	~~100~~
~~70)~~	~~3,3'DICHLOROBENZIDINE~~		~~252~~	~~30.82~~	~~1243~~	~~776~~	~~31.65~~	~~UG/L~~ No Bgh	~~100~~
~~70)~~	~~3,3'DICHLOROBENZIDINE~~		~~252~~	~~30.93~~	~~1248~~	~~371~~	~~15.13~~	~~UG/L~~	~~100~~
~~70)~~	~~3,3'DICHLOROBENZIDINE~~		~~252~~	~~31.19~~	~~1261~~	~~379~~	~~15.46~~	~~UG/L~~	~~100~~
~~70)~~	~~3,3'DICHLOROBENZIDINE~~		~~252~~	~~31.34~~	~~1268~~	~~3587~~	~~146.28~~	~~UG/L~~	~~100~~
71)	BENZO(A)ANTHRACENE		228	30.68	1236	3575	33.30	UG/L	92
~~71)~~	~~BENZO(A)ANTHRACENE~~		~~228~~	~~30.78~~	~~1241~~	~~6833~~	~~63.65~~	~~UG/L~~ No Bgh	~~1~~
~~72)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~31.58~~	~~1280~~	~~193~~	~~2.36~~	~~UG/L~~	~~64~~

72) BIS(2-ETHYLHEXYL)PHTHALATE 149 31.79 1288 9097 61.78 UG/L 78

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
~~73)~~	~~CHRYSENE~~		~~228~~	~~30.68~~	~~1236~~	~~3575~~	~~33.08~~	~~UG/L~~	~~91~~
73)	CHRYSENE		228	30.78	1241	6833	63.23	UG/L	92
74)	*PERYLENE-D12	(IS)	264	34.77	1435	47494	40.00	UG/L	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.05~~	~~1351~~	~~158~~	~~.96~~	~~UG/L~~	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.27~~	~~1362~~	~~308~~	~~1.88~~	~~UG/L~~	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.52~~	~~1374~~	~~234~~	~~1.42~~	~~UG/L~~	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.83~~	~~1389~~	~~193~~	~~1.17~~	~~UG/L~~	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.99~~	~~1397~~	~~182~~	~~1.11~~	~~UG/L~~	100
~~76)~~	~~BENZO(B)FLUORANTHENE~~		~~252~~	~~33.44~~	~~1370~~	~~227~~	~~1.52~~	~~UG/L~~	100
76)	BENZO(B)FLUORANTHENE		252	33.81	1388	13343	89.56	UG/L	100
~~76)~~	~~BENZO(B)FLUORANTHENE~~		~~252~~	~~33.99~~	~~1397~~	~~196~~	~~1.32~~	~~UG/L~~	100
~~76)~~	~~BENZO(B)FLUORANTHENE~~		~~252~~	~~34.18~~	~~1402~~	~~1797~~	~~12.06~~	~~UG/L~~	100
~~76)~~	~~BENZO(B)FLUORANTHENE~~		~~252~~	~~34.24~~	~~1409~~	~~205~~	~~1.38~~	~~UG/L~~	100
~~77)~~	~~BENZO(K)FLUORANTHENE~~		~~252~~	~~33.44~~	~~1370~~	~~227~~	~~1.97~~	~~UG/L~~	100
~~77)~~	~~BENZO(K)FLUORANTHENE~~		~~252~~	~~33.81~~	~~1388~~	~~13343~~	~~115.77~~	~~UG/L~~	100
~~77)~~	~~BENZO(K)FLUORANTHENE~~		~~252~~	~~33.99~~	~~1397~~	~~196~~	~~1.70~~	~~UG/L~~	100
~~77)~~	~~BENZO(K)FLUORANTHENE~~		~~252~~	~~34.18~~	~~1402~~	~~1797~~	~~15.59~~	~~UG/L~~	100
~~77)~~	~~BENZO(K)FLUORANTHENE~~		~~252~~	~~34.24~~	~~1409~~	~~205~~	~~1.78~~	~~UG/L~~	100
~~78)~~	~~BENZO(A)PYRENE~~		~~252~~	~~34.24~~	~~1409~~	~~205~~	~~1.69~~	~~UG/L~~	100
~~78)~~	~~BENZO(A)PYRENE~~		~~252~~	~~34.49~~	~~1421~~	~~7656~~	~~63.14~~	~~UG/L~~	100
78)	BENZO(A)PYRENE		252	34.61	1427	5263	43.41	UG/L	100
~~78)~~	~~BENZO(A)PYRENE~~		~~252~~	~~34.75~~	~~1434~~	~~257~~	~~2.12~~	~~UG/L~~	100
~~78)~~	~~BENZO(A)PYRENE~~		~~252~~	~~34.84~~	~~1438~~	~~1420~~	~~11.71~~	~~UG/L~~	100
~~79)~~	~~INDENO(1,2,3-CD)PYRENE~~		~~276~~	~~36.97~~	~~1542~~	~~394~~	~~3.15~~	~~UG/L~~	100
~~79)~~	~~INDENO(1,2,3-CD)PYRENE~~		~~276~~	~~37.16~~	~~1551~~	~~1685~~	~~13.48~~	~~UG/L~~	100
79)	INDENO(1,2,3-CD)PYRENE		276	37.37	1561	6578	52.61	UG/L	100
~~79)~~	~~INDENO(1,2,3-CD)PYRENE~~		~~276~~	~~37.67~~	~~1576~~	~~458~~	~~3.68~~	~~UG/L~~	100
~~79)~~	~~INDENO(1,2,3-CD)PYRENE~~		~~276~~	~~37.76~~	~~1580~~	~~630~~	~~5.04~~	~~UG/L~~	100
~~80)~~	~~DIBENZ(A,H)ANTHRACENE~~		~~278~~	~~36.97~~	~~1542~~	~~468~~	~~3.96~~	~~UG/L~~	100
~~80)~~	~~DIBENZ(A,H)ANTHRACENE~~		~~278~~	~~37.18~~	~~1552~~	~~2438~~	~~20.91~~	~~UG/L~~	100
80)	DIBENZ(A,H)ANTHRACENE		278	37.47	1566	1542	13.27	UG/L	100
~~80)~~	~~DIBENZ(A,H)ANTHRACENE~~		~~278~~	~~37.69~~	~~1577~~	~~852~~	~~7.33~~	~~UG/L~~	100
~~80)~~	~~DIBENZ(A,H)ANTHRACENE~~		~~278~~	~~37.76~~	~~1580~~	~~1829~~	~~15.74~~	~~UG/L~~	100
~~81)~~	~~BENZO(G,H,I)PERYLENE~~		~~276~~	~~37.67~~	~~1576~~	~~458~~	~~3.45~~	~~UG/L~~	100
~~81)~~	~~BENZO(G,H,I)PERYLENE~~		~~276~~	~~37.76~~	~~1580~~	~~638~~	~~4.83~~	~~UG/L~~	100
81)	BENZO(G,H,I)PERYLENE		276	37.88	1586	7984	61.15	UG/L	100
~~81)~~	~~BENZO(G,H,I)PERYLENE~~		~~276~~	~~38.11~~	~~1597~~	~~346~~	~~2.65~~	~~UG/L~~	100
~~81)~~	~~BENZO(G,H,I)PERYLENE~~		~~276~~	~~38.21~~	~~1602~~	~~653~~	~~5.08~~	~~UG/L~~	100

* Compound is ISTD

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



$64.7 \times .00459 \times \frac{1}{1.5} \times 500{,}000 =$ 99,000 ug/kg 1254
119,000 dry

$531 \times 0.00131 \times \frac{1}{1.5} \times 500{,}000 =$ 232,000 ug/kg 1266
274,000 dry

DC-SS-40
RUN# 42

CHANNEL: 1A - 1 TITLE: RUN# 42 5:03 10 DEC 86

DC-SS-40

SAMPLE: 9505.01.19A1 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1	[redacted]	1733.662	4.121	0.231	96482	VV	14.39
2	[redacted]	968.9330	4.640	-0.160	56643	VV	12.13
3		0.0000	4.995	1259	37809	VV	13.19
4	[redacted]	3227.820	5.016	0.196 647	193069	VV	20.00
5	[redacted]	4952.342	7.015	-0.215	276013	VV	23.44
[redacted]	[redacted]	[redacted]	8.246	-0.084	220420	VV	? 35.44
7	[redacted]	4081.616	8.615	0.195	256623	VV	? 29.19
8	[redacted]	3978.168	9.610	0.030	217978	VV	? 28.38
9	[redacted]	10956.98	10.226	-0.224	526099	VV	26.44
10	[redacted]	1540.759	10.975	0.435	66441	VV	? 53.25
11	[redacted]	18320.80	12.000	-0.270	726706	VV	35.13
12		0.0000	12.980	1260	364603	VV	37.00
13	[redacted]	23096.93	14.062	0.412 531	670771	VV	38.25
14	[redacted]	13970.07	16.159	0.428	772917	VV	58.31
15		0.0000	18.494		742628	VV	66.50
16		0.0000	22.341		966438	VV	52.25
17	[redacted]	8005.507	26.332	-1.038	381416	VB	69.13
18		0.0000	35.324		91060	BB	55.91
19		0.0000	41.433		350862	BB	92.56

TOTALS: 98670.48 -0.064 6992178

DETECTED PKS: 39 REJECTED PKS: 20

DIVISOR: 1.50000 MULTIPLIER: 500000.000

NOISE: 22.9 OFFSET: -2

RACK: 3 VIAL: 12 INJ: 1

NOTES:
NOTEBOOK:259-52 ANALYST:RICHARD SAMSON
SECURE AREA:D JOB# U-4474
INST:VARIAN 6000#2 A 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
AUTOSAMPLER
PEST/PCB ANALYSIS

POST RUN:
SAVE FILE: RAW D.CREE-3567

SAMPLE NUMBER DC-SS-41

481095 364

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Sample Number
DC-SS-41

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474

Lab Sample ID No: 9807 QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: [signature] Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-21-86

Conc./Dil Factor: 3 pH 6.4

Percent Moisture: (Not Decanted) 34

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	37 B
67-64-1	Acetone	41 B
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	37 B
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	15u
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	15u
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	34
591-78-6	2-Hexanone	30u
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	15u
108-90-7	Chlorobenzene	15u
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

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, etc. (This is not necessarily the instrument detection limit.) The footnote should read: U Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

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

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

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

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

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Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No U-4474

Sample Number DC-SS-41

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared 11-18-86

Date Analyzed: 12-23-86

Conc/Dil Factor: 100

Percent Moisture (Decanted) 34

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	25000 U
111-44-4	bis(-2-Chloroethyl)Ether	25000 U
95-57-8	2-Chlorophenol	25000 U
541-73-1	1 3-Dichlorobenzene	25000 U
106-46-7	1 4-Dichlorobenzene	25000 U
100-51-6	Benzyl Alcohol	25000 U
95-50-1	1 2-Dichlorobenzene	25000 U
95-48-7	2-Methylphenol	25000 U
39638-32-9	bis(2-chloroisopropyl)Ether	25000 U
106-44-5	4-Methylpheno	25000 U
621-64-7	N-Nitroso-Di-n-Propylamine	25000 U
67-72-1	Hexachloroethane	25000 U
98-95-3	Nitrobenzene	25000 U
78-59-1	Isophorone	25000 U
88-75-5	2-Nitrophenol	25000 U
105-67-9	2, 4-Dimethylphenol	25000 U
65-85-0	Benzoic Acid	120000 U
111-91-1	bis(-2-Chloroethoxy)Methane	25000 U
120-83-2	2, 4-Dichlorophenol	25000 U
120-82-1	1 2, 4-Trichlorobenzene	25000 U
91-20-3	Naphthalene	25000 U
106-47-8	4-Chloroaniline	25000 U
87-68-3	Hexachlorobutadiene	25000 U
59-50-7	4-Chloro-3-Methylphenol	25000 U
91-57-6	2-Methylnaphthalene	25000 U
77-47-4	Hexachlorocyclopentadiene	25000 U
88-06-2	2 4 6-Trichlorophenol	25000 U
95-95-4	2, 4 5-Trichlorophenol	120000 U
91-58-7	2-Chloronaphthalene	25000 U
88-74-4	2-Nitroaniline	120000 U
131-11-3	Dimethyl Phthalate	25000 U
208-96-8	Acenaphthylene	25000 U
99-09-2	3-Nitroaniline	120000 U

CAS Number		ug/l or (ug/Kg) (Circle One)
83-32-9	Acenaphthene	25000 U
51-28-5	2, 4-Dinitrophenol	120000 U
100-02-7	4-Nitrophenol	120000 U
132-64-9	Dibenzofuran	25000 U
121-14-2	2 4-Dinitrotoluene	25000 U
606-20-2	2 6-Dinitrotoluene	25000 U
84-66-2	Diethylphthalate	25000 U
7005-72-3	4-Chlorophenyl-phenylether	25000 U
86-73-7	Fluorene	25000 U
100-01-6	4-Nitroaniline	120000 U
534-52-1	4, 6-Dinitro-2-Methylphenol	120000 U
86-30-6	N-Nitrosodiphenylamine (1)	25000 U
101-55-3	4-Bromophenyl-phenylether	25000 U
118-74-1	Hexachlorobenzene	25000 U
87-86-5	Pentachlorophenol	120000 U
85-01-8	Phenanthrene	25000 U
120-12-7	Anthracene	25000 U
84-74-2	Di-n-Butylphthalate	25000 U
206-44-0	Fluoranthene	25000 U
129-00-0	Pyrene	25000 U
85-68-7	Butylbenzylphthalate	25000 U
91-94-1	3, 3'-Dichlorobenzidine	50000 U
56-55-3	Benzo(a)Anthracene	25000 U
117-81-7	bis(2-Ethylhexyl)Phthalate	25000 U
218-01-9	Chrysene	25000 U
117-84-0	Di-n-Octyl Phthalate	25000 U
205-99-2	Benzo(b)Fluoranthene	25000 U
207-08-9	Benzo(k)Fluoranthene	25000 U
50-32-8	Benzo(a)Pyrene	25000 U
193-39-5	Indeno(1 2, 3-cd)Pyrene	25000 U
53-70-3	Dibenzo(a h)Anthracene	25000 U
191-24-2	Benzo(g h, i)Perylene	25000 U

(1)-Cannot be separated from diphenylamine

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Laboratory Name ecology and environment, inc.

Case No V-4474

Sample Number DC-SS-41

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-18-86

Date Analyzed 12-10-86

Conc/Dil Factor 200

Percent Moisture (decanted) 34.3

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	3,200U
319-85-7	Beta-BHC	3,200U
319-86-8	Delta-BHC	3,200U
58-89-9	Gamma-BHC (Lindane)	3,200U
76-44-8	Heptachlor	3,200U
309-00-2	Aldrin	3,200U
1024-57-3	Heptachlor Epoxide	3,200U
959-98-8	Endosulfan I	3,200U
60-57-1	Dieldrin	6,400U
72-55-9	4, 4'-DDE	6,400U
72-20-8	Endrin	6,400U
33213-65-9	Endosulfan II	6,400U
72-54-8	4, 4'-DDD	6,400U
1031-07-8	Endosulfan Sulfate	6,400U
50-29-3	4, 4'-DDT	6,400U
72-43-5	Methoxychlor	32,000U
53494-70-5	Endrin Ketone	6,400U
57-74-9	Chlordane	32,000U
8001-35-2	Toxaphene	64,000U
12674-11-2	Aroclor-1016	32,000U
11104-28-2	Aroclor-1221	32,000U
11141-16-5	Aroclor-1232	32,000U
53469-21-9	Aroclor-1242	32,000U
12672-29-6	Aroclor-1248	26,600J
11097-69-1	Aroclor-1254	64,000U
11096-82-5	Aroclor-1260	85,600

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 30 V_t 1,000 V_i 4

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Laboratory Name ecology and environment, inc.

Case No 11-4474

Sample Number DC-SS-41

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.	79209	Acetic acid, methyl ester	VOA	11.3	52 J
2.		Hexene isomer		18.0	67 J
3.		Hexene isomer		18.8	170 J
4.		Hexene isomer		19.5	7 J
5.		Unknown hydrocarbon		19.9	22 J
6.		Unknown alcohol		23.8	14 J
7.		Unknown hydrocarbon		24.3	13 J
8.		Unknown hydrocarbon		24.7	12 J
9.					
10.		UNKNOWN AROMATIC	BNA	19.8	52000 J
11.		UNKNOWN AROMATIC		20.0	69000 J
12.		UNKNOWN AROMATIC		20.1	54000 J
13.		UNKNOWN AROMATIC		20.2	210000 J
14.		UNKNOWN AROMATIC		20.4	50000 J
15.		UNKNOWN AROMATIC		20.5	100000 J
16.		UNKNOWN AROMATIC		20.7	610000 J
17.		UNKNOWN AROMATIC		20.8	230000 J
18.		UNKNOWN AROMATIC		20.9	390000 J
19.		UNKNOWN AROMATIC		21.0	470000 J
20.		UNKNOWN AROMATIC		21.2	720000 J
21.		UNKNOWN AROMATIC		21.3	150000 J
22.		DIMETHYL DECYL BENZENE		21.5	450000 J
23.		UNKNOWN AROMATIC		21.6	360000 J
24.		UNKNOWN AROMATIC		21.8	240000 J
25.		UNKNOWN AROMATIC		22.1	54000 J
26.		UNKNOWN		22.4	77000 J
27.		UNKNOWN AROMATIC		22.7	52000 J
28.		UNKNOWN		24.4	110000 J
29.		UNKNOWN		25.7	120000 J
30					

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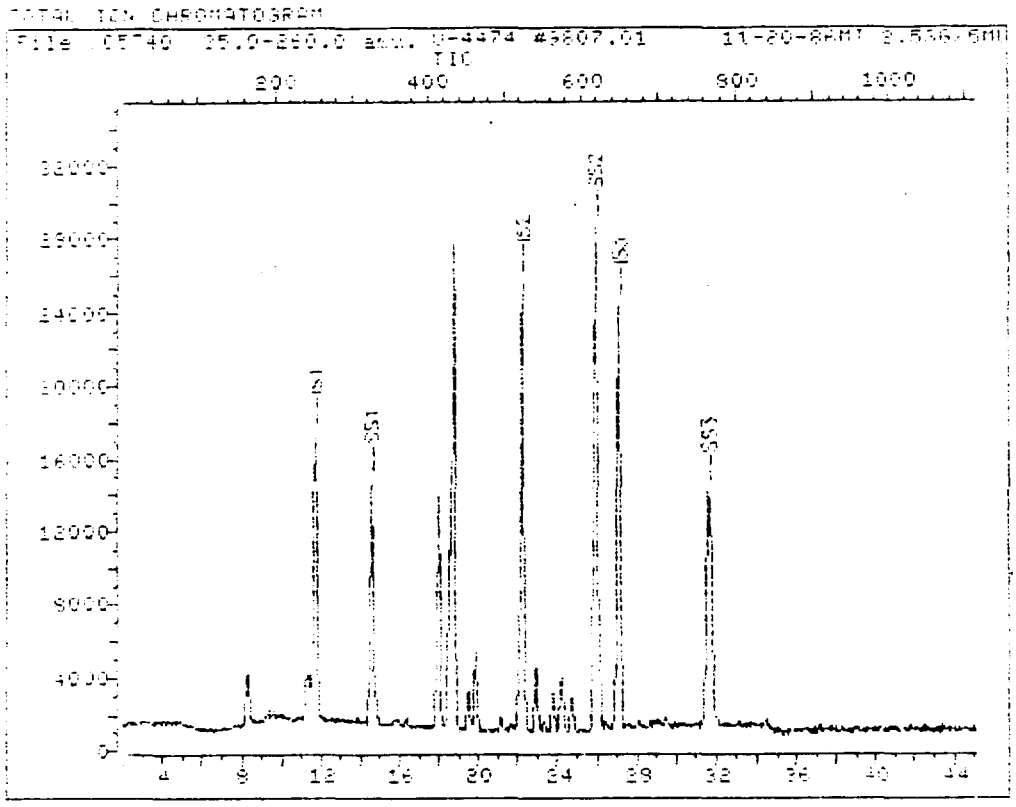

Data File: >C5740::03
Name: U-4-74 #9807.01 DC-SS-41
Misc: 11-20-86MT 2.536-5MLS DI + 10UL IS/SS

Id File: VOACPS::02
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861120 23:54

Operator ID: USER9
Quant Time: 861121 03:35
Injected at: 861121 02:49

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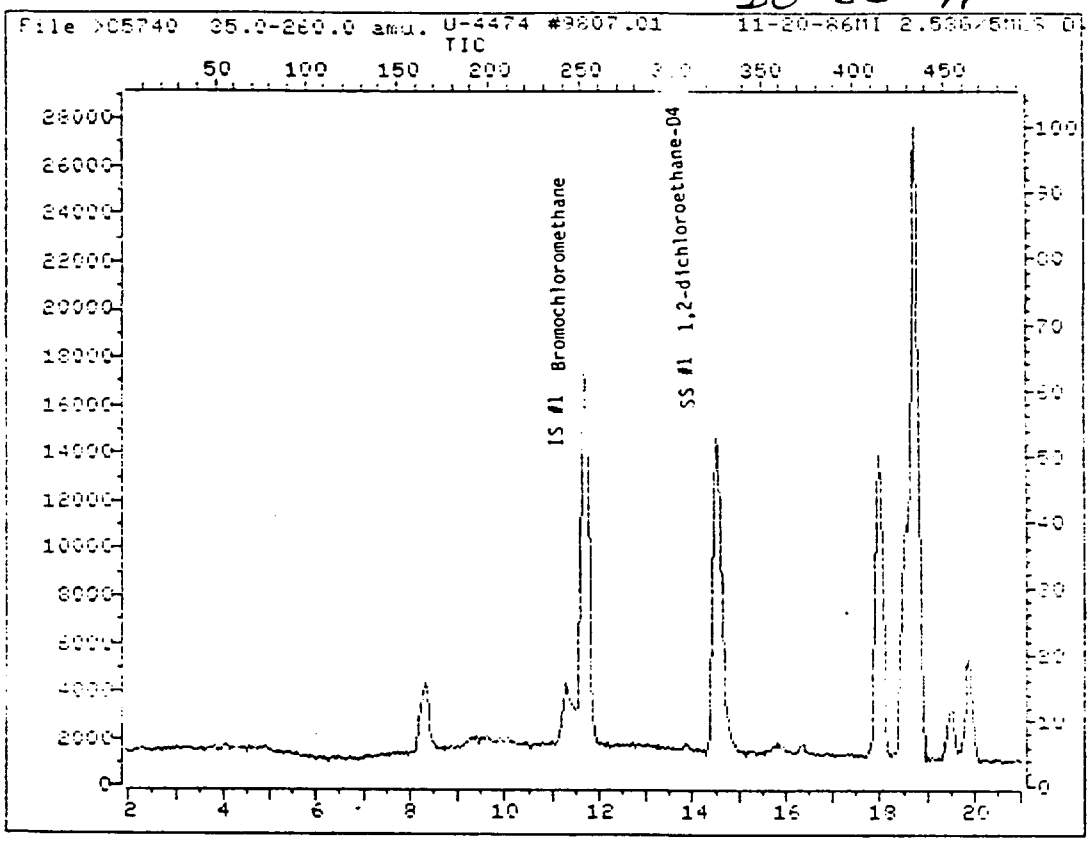
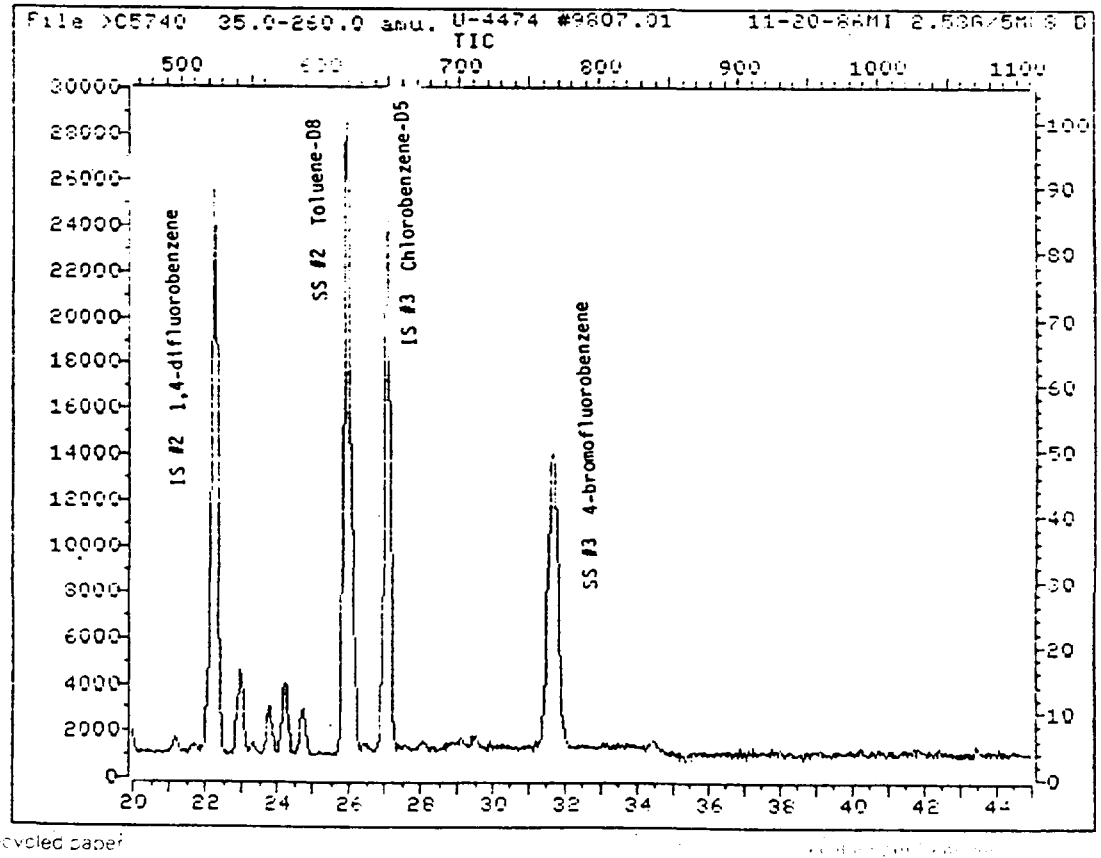
DC-SS
41

DC-SS-41





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QUANT REPORT

Operator ID: USERS Quant Rev: 4 Quant Time: 861121 [illegible]
Output File: ^C5740::Q2 Injected at: 861121 [illegible]
Data File: ^C5740::D3 Dilution Factor: 1.00
Name: U-4474 #9807.01 DC-SS-41
Misc: 11-20-86MI 2.53G/5MLS DI + 10UL IS/SS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861120 23:54

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	Q
1	*BROMOCHLOROMETHANE	(IS)	128	11.69	252	22107	[illegible]	NGS	100
6)	METHYLENE CHLORIDE		84	8.32	165	7077	61.95	NGS	100
7)	ACETONE		43	9.32	191	3650	69.11	NGS	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.52	325	53704	242.94	NGS	86
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.25	524	99822	250.00	NGS	100
17)	2-BUTANONE		72	14.72	330	2435	60.55	NGS	100
22)	1,2-DICHLOROPROPANE		63	18.75	434	1013	[illegible]	NGS	[illegible]
31)	*CHLOROBENZENE-D5	(IS)	117	27.10	649	72777	250.00	NGS	100
32)	4-METHYL-2-PENTANONE		43	22.94	542	15463	56.57	NGS	82
33)	~~2-HEXANONE~~		~~43~~	~~23.76~~	~~563~~	~~4500~~	~~20.[illegible]~~	~~NGS~~	~~100~~
~~33)~~	~~2-HEXANONE~~		~~43~~	~~24.26~~	~~576~~	~~8946~~	~~40.62~~	~~NGS~~	~~100~~
[illegible]	~~2-HEXANONE~~		~~43~~	~~24.73~~	~~500~~	~~8030~~	~~36.[illegible]~~	~~NGS~~	~~100~~
36)	TOLUENE-D8	(SURR)	98	25.93	619	103853	[illegible]	NGS	[illegible]
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.64	766	45687	186.2[illegible]	NGS	100

no CW

* Compound is ISTD

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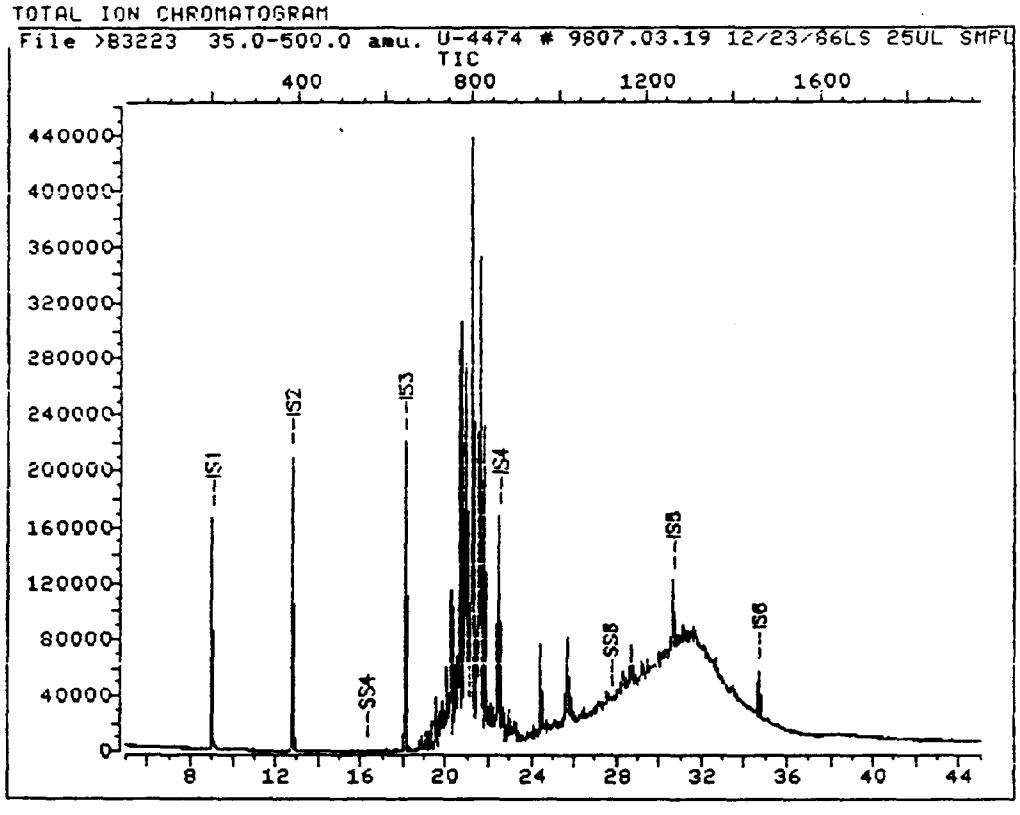

Data File: >B3223::D4
Name: U-4474 # 9807.03.19 DC-SS-41
Misc: 12/23/86LS 25UL SMPL + 475UL MECL2 + 5UL IS (20X)

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861223 19:58

Operator ID: USER8
Quant Time: 861223 21:57
Injected at: 861223 21:09

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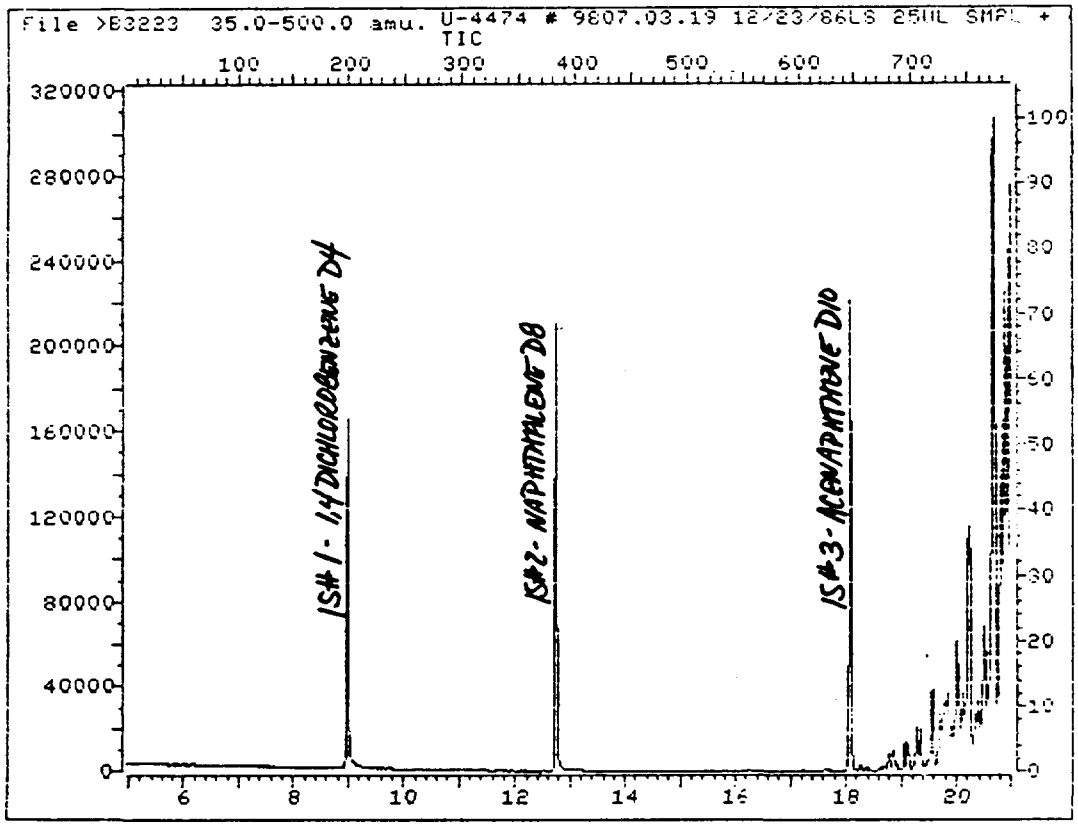
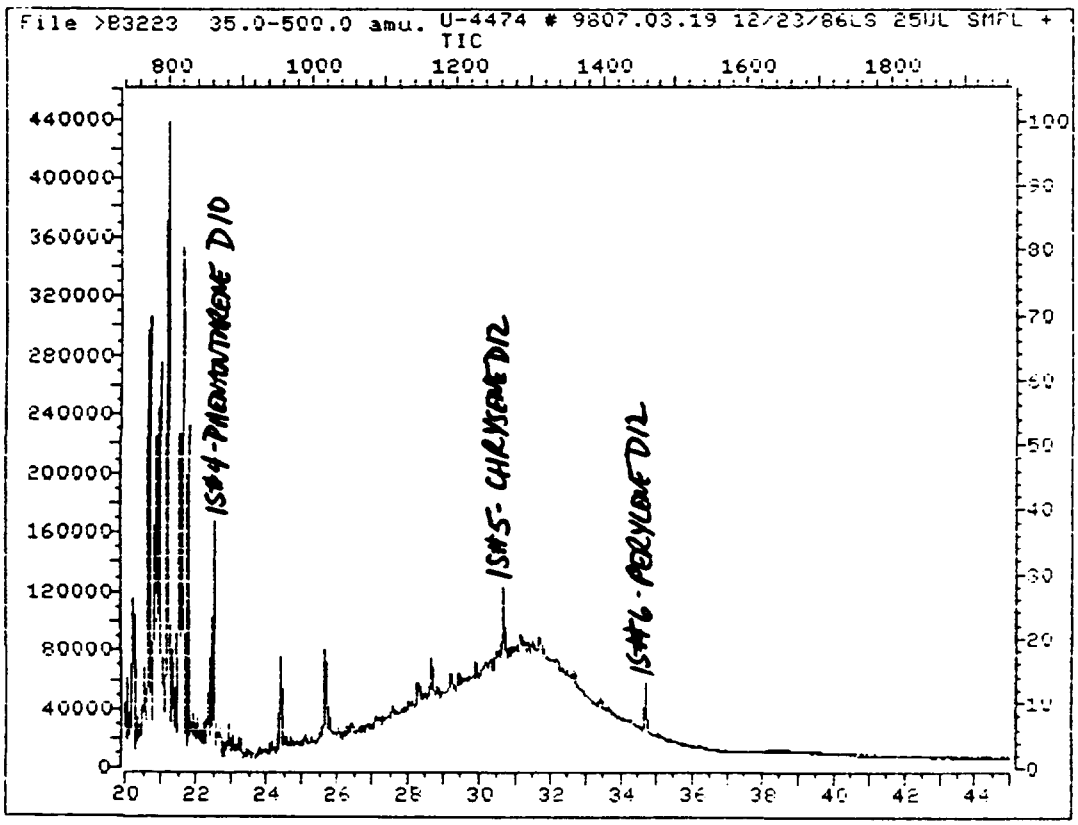
DC-SS-41


File >B3223 35.0-500.0 amu. U-4474 # 9807.03.19 12/23/86LS 250UL SMPL +
TIC
IS#1 - 1,4 DICHLOROBENZENE D4
IS#2 - NAPHTHALENE D8
IS#3 - ACENAPHTHENE D10


File >B3223 35.0-500.0 amu. U-4474 # 9807.03.19 12/23/86LS 250UL SMPL +
TIC
IS#4 - PHENANTHRENE D10
IS#5 - CHRYSENE D12
IS#6 - PERYLENE D12

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861223 21:57
Output File: ^B3223::Q2 Injected at: 861223 21:09
Data File: >B3223::D4 Dilution Factor: 20.00
Name: U-4474 # 9807.03.19 DC-SS-41
Misc: 12/23/86LS 25UL SMPL + 475UL MECL2 + 5UL IS (20X)

FINAL VOLUME - 5.0 ml

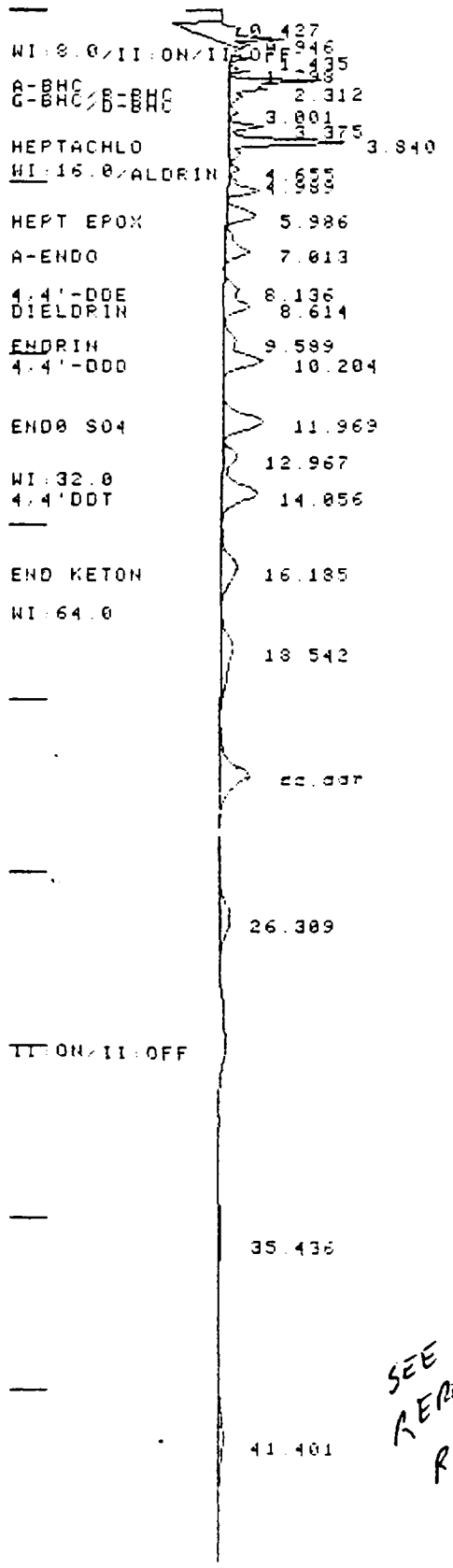
ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861223 19:58

	Compound		m/z	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.00	199	65623	40.00	UG/L	86
19)	*NAPHTHALENE-D8	(IS)	136	12.74	383	239937	40.00	UG/L	100
34)	*ACENAPHTHENE-D10	(IS)	162	18.08	646	111404	40.00	UG/L	96
38)	2-FLUOROBIPHENYL	(SURR)	172	16.28	557	1457	6.63	UG/L	90
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.08~~	~~646~~	~~33198~~	~~155.25~~	~~UG/L~~	~~100~~
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.15~~	~~649~~	~~192~~	~~.90~~	~~UG/L~~	~~100~~
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.08~~	~~646~~	~~14143~~	~~274.05~~	~~UG/L~~	~~100~~
55)	*PHENANTHRENE-D10	(IS)	188	22.52	864	136712	40.00	UG/L	96
65)	*CHRYSENE-D12	(IS)	240	30.65	1262	47328	40.00	UG/L	100
68)	TERPHENYL-D14	(SURR)	244	27.72	1119	295	4.93	UG/L	100
~~72)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~31.65~~	~~1311~~	~~266~~	~~4.86~~	~~UG/L~~	~~87~~
74)	*PERYLENE-D12	(IS)	264	34.71	1461	36565	40.00	UG/L	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.47~~	~~1400~~	~~232~~	~~2.64~~	~~UG/L~~	~~100~~
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.63~~	~~1408~~	~~1075~~	~~12.24~~	~~UG/L~~	~~100~~
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.77~~	~~1415~~	~~570~~	~~6.49~~	~~UG/L~~	~~100~~

* Compound is ISTD

recycled paper

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



DC-SS-4
RUN#44

SEE RERUN RUN52

70.9 x 0.00155 x $\frac{1}{1.5}$ x 1,000,000 = 73.300

recycled paper

$70.9 \times 0.00155 \times \frac{1}{1.5} \times 1{,}000{,}000 = 73{,}200$

CHANNEL: 1A - 1 TITLE: RUN# 44 6:41 10 DEC 95

DC-SS-41

SAMPLE: 9807.01.19A1 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	1728.539	2.082	-0.008	60425	VV		5.25
2	B-BHC	1724.913	2.312	0.082	21260	VV	?	8.00
3		0.0000	3.375		25025	VV		7.94
4	HEPTACHLO	4288.869	3.840	-0.050	106973	VV		9.00
5		0.0000	5.245		37616	VV		13.00
6	HEPT EPOX	1564.681	5.986	0.166	51075	VV		20.25
7	A-ENDO	1959.661	7.013	-0.217	56139	VB		20.63
8	4,4'-DDE	1136.065	8.136	-0.194	31297	BV	?	25.88
9	DIELDRIN	1498.016	8.614	0.194	47129	VV		22.81
10	B-ENDO	1033.771	9.589	0.009	28322	VV	?	26.50
11	4,4'-DDD	3387.093	10.204	-0.246	81161	VB		23.25
12	ENDO SO4	5739.510	11.969	-0.301	113674	BV		31.56
13		0.0000	12.967		38894	VV		28.94
14	4,4'DDT	7334.730	14.056	0.406	105506	VV		32.94
15	END KETON	2616.462	16.185	0.455	72380	VB		50.19
16		0.0000	18.542		81470	BB		62.13
17		0.0000	22.337		140362	BB		49.56
18	DBC	2589.696	26.309	-1.061	61692	BB		61.50
19		0.0000	41.401		45587	BB		93.31
TOTALS:		36702.01		-0.765	1206987			

70.9

DETECTED PKS: 38 REJECTED PKS: 19

DIVISOR: 1.50000 MULTIPLIER: 1000000.00

NOISE: 22.9 OFFSET: -5

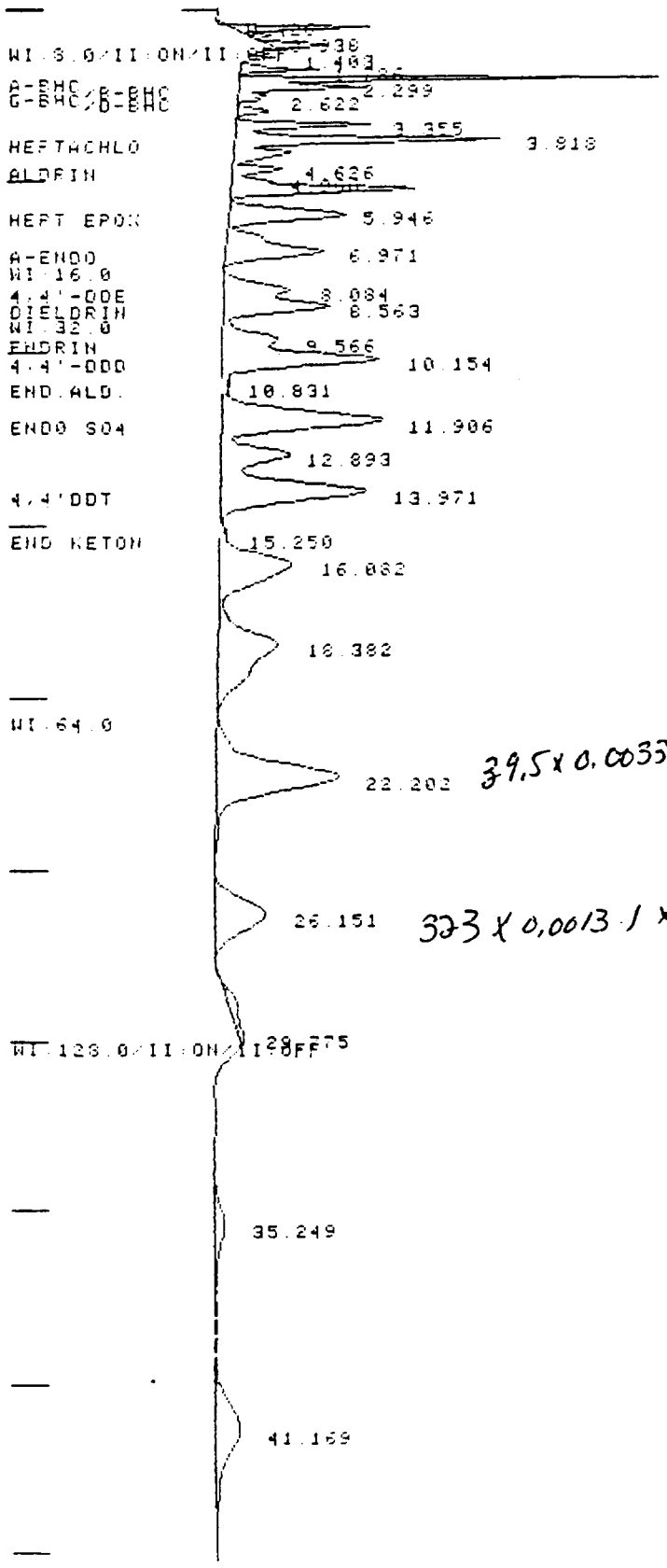
RACK: 3 VIAL: 14 INJ: 1

NOTES:
NOTEBOOK:259-52 ANALYST:RICHARD SAMSON
SECURE AREA:D JOB# U-4474
INST:VARIAN 6000#2 A 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
AUTOSAMPLER
PEST/PCB ANALYSIS

POST RUN:
SAVE FILE: RAW D.CREEK3569

recycled paper

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



$39.5 \times 0.00332 \times \frac{1}{1.6} \times 200{,}000 = 17{,}500$ ug/kg wet 1248
26,600. dry J

$323 \times 0.0013 \times \frac{1}{1.5} \times 200{,}000 = 56400$ ug/kg WET 1260
85,800. dry

DC-SS-41
RUN #52

recycled paper

CHANNEL: 1A - 1 TITLE: RUN# 52 17:40 10 DEC 85

DC-SS-41

SAMPLE: SE07.03.19A1 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	1.786		48599	VV	5.44
2	[redacted]	1109.360	2.067	-0.023	153901	VV	4.81
3	[redacted]	1470.038	2.299	0.069	90593	VV	5.69
4		0.0000	2.983		26177	VV	6.44
5		0.0000	3.355 ✓		100517	VV	7.94
6	[redacted]	1960.347	~~3.218~~	-0.072	~~244475~~	VV	9.13
7		0.0000	4.124		73245	VV	14.06
8		0.0000	4.626 ✓		51065	VV	10.94
9	[redacted]	166.4446	4.966 ✓ 1245	0.166	27125	VV	? 10.81
10		0.0000	~~5.135~~		~~222756~~	VB	11.50
11	[redacted]	1414.746	5.946 ✓	0.126	217033	BV	? 20.63
12	[redacted]	1714.297	6.971	-0.259	245550	VB	? 21.13
13	[redacted]	1045.099	8.084	-0.246	143955	BV	? 27.25
14	[redacted]	1302.281	8.563	0.143	204655	VV	24.00
15	[redacted]	902.9309	9.566	-0.014	123687	VV	? 27.81
16	[redacted]	3140.126	10.154	-0.296	376216	VV	24.75
17	[redacted]	4964.636	11.906 1248	-0.364 323	491636	VV	32.94
18		0.0000	12.893		185817	VV	29.56
19	[redacted]	6659.491	13.971	0.321	483505	VV	33.63
20	[redacted]	2438.949	16.082	0.352	337347	VV	51.56
21		0.0000	18.382		399529	VV	69.13
22		0.0000	22.202		532828	VB	51.63
23	[redacted]	2335.965	26.151	-1.219	278238	BV	62.25
24		0.0000	29.775		52181	VB	?149.00
25		0.0000	35.249		73048	BV	73.50
26		0.0000	41.169		243664	VB	99.81
TOTALS:		30624.71		-1.316	5553642		

DETECTED PKS: 41 REJECTED PKS: 15

DIVISOR: 1.50000 MULTIPLIER: 200000.000

NOISE: 148.6 OFFSET: -12

NOTES:
NOTEBOOK:259-52 ANALYST:RICHARD SAMSON
SECURE AREA:D JOB# U-4474
INST:VARIAN 6000#2 A 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
AUTOSAMPLER
PEST/PCB ANALYSIS

POST RUN:
SAVE FILE: RAW D.CREEK3577

SAMPLE NUMBER DC-SS-42

481095

379

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Sample Number
DC-SS-42

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474
Lab Sample ID No: 9808 QC Report No:
Sample Matrix: Soil Contract No: IL-3140
Data Release Authorized By: [signature] Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared:
Date Analyzed: 11-21-86
Conc./Dil Factor: 3 pH 7.2
Percent Moisture: (Not Decanted) 20

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	60 B
67-64-1	Acetone	58 B
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	39 B
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	15u
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	15u
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	30u
591-78-6	2-Hexanone	30u
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	15u
108-90-7	Chlorobenzene	15u
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

Data Reporting Qualifiers

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

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

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

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

Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No U-4474

Sample Number DC-SS-42

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 11-18-86

Date Analyzed 12-22-86

Conc/Dil Factor 10

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)	
108-95-2	Phenol	2100	U
111-44-4	bis(-2-Chloroethyl)Ether	2100	U
95-57-8	2-Chlorophenol	2100	U
541-73-1	1 3-Dichlorobenzene	2100	U
106-46-7	1 4-Dichlorobenzene	2100	U
100-51-6	Benzyl Alcohol	2100	U
95-50-1	1 2-Dichlorobenzene	2100	U
95-48-7	2-Methylphenol	2100	U
39638-32-9	bis(2-chloroisopropyl)Ether	2100	U
106-44-5	4-Methylphenol	2100	U
621-64-7	N-Nitroso-Di-n-Propylamine	2100	U
67-72-1	Hexachloroethane	2100	U
98-95-3	Nitrobenzene	2100	U
78-59-1	Isophorone	2100	U
88-75-5	2-Nitrophenol	2100	U
105-67-9	2, 4-Dimethylphenol	2100	U
65-85-0	Benzoic Acid	10000	U
111-91-1	bis(-2-Chloroethoxy)Methane	2100	U
120-83-2	2, 4-Dichlorophenol	2100	U
120-82-1	1, 2, 4-Trichlorobenzene	2100	U
91-20-3	Naphthalene	290	J
106-47-8	4-Chloroaniline	2100	U
87-68-3	Hexachlorobutadiene	2100	U
59-50-7	4-Chloro-3-Methylphenol	2100	U
91-57-6	2-Methylnaphthalene	2100	U
77-47-4	Hexachlorocyclopentadiene	2100	U
88-06-2	2 4 6-Trichlorophenol	2100	U
95-95-4	2, 4, 5-Trichlorophenol	10000	U
91-58-7	2-Chloronaphthalene	2100	U
88-74-4	2-Nitroaniline	10000	U
131-11-3	Dimethyl Phthalate	2100	U
208-96-8	Acenaphthylene	2100	U
99-09-2	3-Nitroaniline	10000	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	2100	U
51-28-5	2, 4-Dinitrophenol	10000	U
100-02-7	4-Nitrophenol	10000	U
132-64-9	Dibenzofuran	2100	U
121-14-2	2 4-Dinitrotoluene	2100	U
606-20-2	2 6-Dinitrotoluene	2100	U
84-66-2	Diethylphthalate	2100	U
7005-72-3	4-Chlorophenyl-phenylether	2100	U
86-73-7	Fluorene	2100	U
100-01-6	4-Nitroaniline	10000	U
534-52-1	4, 6-Dinitro-2-Methylphenol	10000	U
86-30-6	N-Nitrosodiphenylamine (1)	2100	U
101-55-3	4-Bromophenyl-phenylether	2100	U
118-74-1	Hexachlorobenzene	2100	U
87-86-5	Pentachlorophenol	20000	
85-01-8	Phenanthrene	2100	U
120-12-7	Anthracene	2100	U
84-74-2	Di-n-Butylphthalate	2100	U
206-44-0	Fluoranthene	2100	U
129-00-0	Pyrene	2100	U
85-68-7	Butylbenzylphthalate	2100	U
91-94-1	3, 3'-Dichlorobenzidine	4100	U
56-55-3	Benzo(a)Anthracene	2100	U
117-81-7	bis(2-Ethylhexyl)Phthalate	2100	U
218-01-9	Chrysene	2100	U
117-84-0	Di-n-Octyl Phthalate	2100	U
205-99-2	Benzo(b)Fluoranthene	2100	U
207-08-9	Benzo(k)Fluoranthene	750	J
50-32-8	Benzo(a)Pyrene	180	J
193-39-5	Indeno(1 2 3-cd)Pyrene	2100	U
53-70-3	Dibenz(a h)Anthracene	2100	U
191-24-2	Benzo(g h i)Perylene	2100	U

(1)-Cannot be separated from diphenylamine

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Laboratory Name ecology and environment, inc.

Case No U-4474

Sample Number DC-SS-42

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-18-86

Date Analyzed 12-10-86

Conc/Dil Factor: 100

Percent Moisture (decanted) 20.3

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	1600 u
319-85-7	Beta-BHC	1,600 u
319-86-8	Delta-BHC	1,600 u
58-89-9	Gamma-BHC (Lindane)	1,600 u
76-44-8	Heptachlor	1,600 u
309-00-2	Aldrin	1,600 u
1024-57-3	Heptachlor Epoxide	1,600 u
959-98-8	Endosulfan I	1,600 u
60-57-1	Dieldrin	3,200 u
72-55-9	4,4'-DDE	3,200 u
72-20-8	Endrin	3,200 u
33213-65-9	Endosulfan II	3,200 u
72-54-8	4,4'-DDD	3,200 u
1031-07-8	Endosulfan Sulfate	3,200 u
50-29-3	4,4'-DDT	3,200 u
72-43-5	Methoxychlor	16,000 u
53494-70-5	Endrin Ketone	3,200 u
57-74-9	Chlordane	16,000 u
8001-35-2	Toxaphene	32,000 u
12674-11-2	Aroclor-1016	16,000 u
11104-28-2	Aroclor-1221	16,000 u
11141-16-5	Aroclor-1232	16,000 u
53469-21-9	Aroclor-1242	16,000 u
12672-29-6	Aroclor-1248	16,000 u
11097-69-1	Aroclor-1254	32,000 u
11096-82-5	Aroclor-1260	52,800

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 30 V_t 1000 V_i 4

332

Laboratory Name ecology and environment, inc.

Case No U-4474

Sample Number DC-SS-4-2

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.	No TIC's in VOA fraction			
2.				
3.	UNKNOWN AROMATIC	BNA	19.7	35000 J
4.	UNKNOWN AROMATIC		19.9	31000 J
5.	UNKNOWN AROMATIC		20.0	52000 J
6.	UNKNOWN AROMATIC		20.2	57000 J
7.	UNKNOWN AROMATIC		20.4	71000 J
8.	UNKNOWN AROMATIC		20.5	24000 J
9.	UNKNOWN AROMATIC		20.8	220000 J
10.	UNKNOWN AROMATIC		20.9	57000 J
11.	UNKNOWN AROMATIC		21.0	62000 J
12.	UNKNOWN AROMATIC		21.1	96000 J
13.	UNKNOWN AROMATIC		21.4	140000 J
14.	UNKNOWN AROMATIC		21.5	40000 J
15.	UNKNOWN AROMATIC		21.7	93000 J
16.	DIMETHYL DECYL BENZENE		21.8	62000 J
17.	UNKNOWN AROMATIC		21.9	37000 J
18.	UNKNOWN AROMATIC		22.2	20000 J
19.	UNKNOWN AROMATIC		22.8	18000 J
20.	UNKNOWN AROMATIC		23.2	17000 J
21.	UNKNOWN AROMATIC		23.4	13000 J
22.	UNKNOWN AROMATIC		23.7	13000 J
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30				

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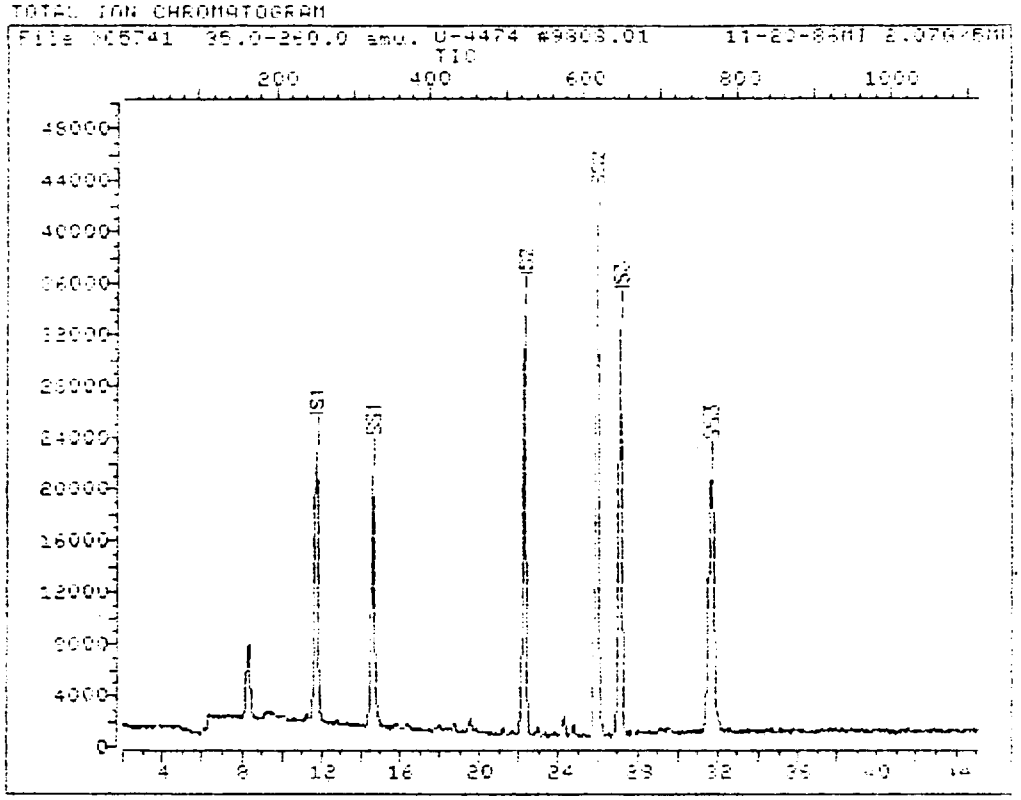
ecology and environment

TOTAL ION CHROMATOGRAM



Data File: DC5741::D3
Name: U-4474 #9808.01 DC-SS-42
Misc: 11-20-86MI 2.0%/5MLS DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861120 23:54

Operator ID: USER8
Quant Time: 861121 04:30
Injected at: 861121 03:44

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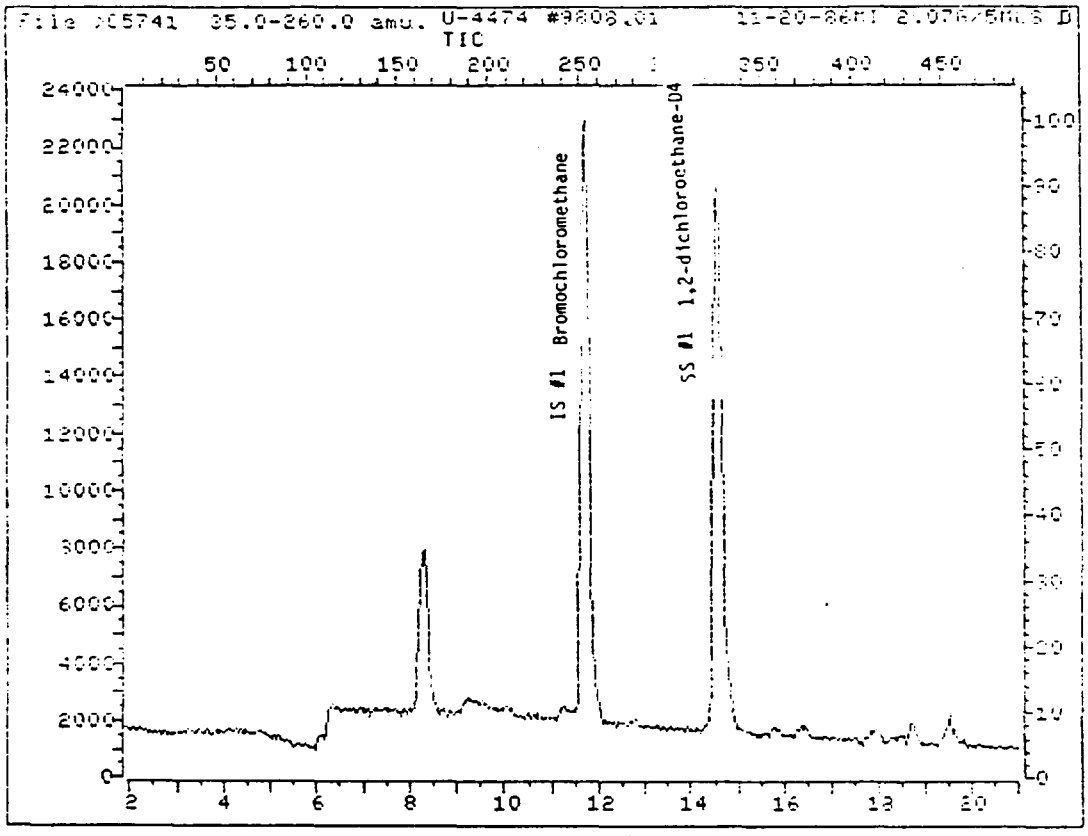
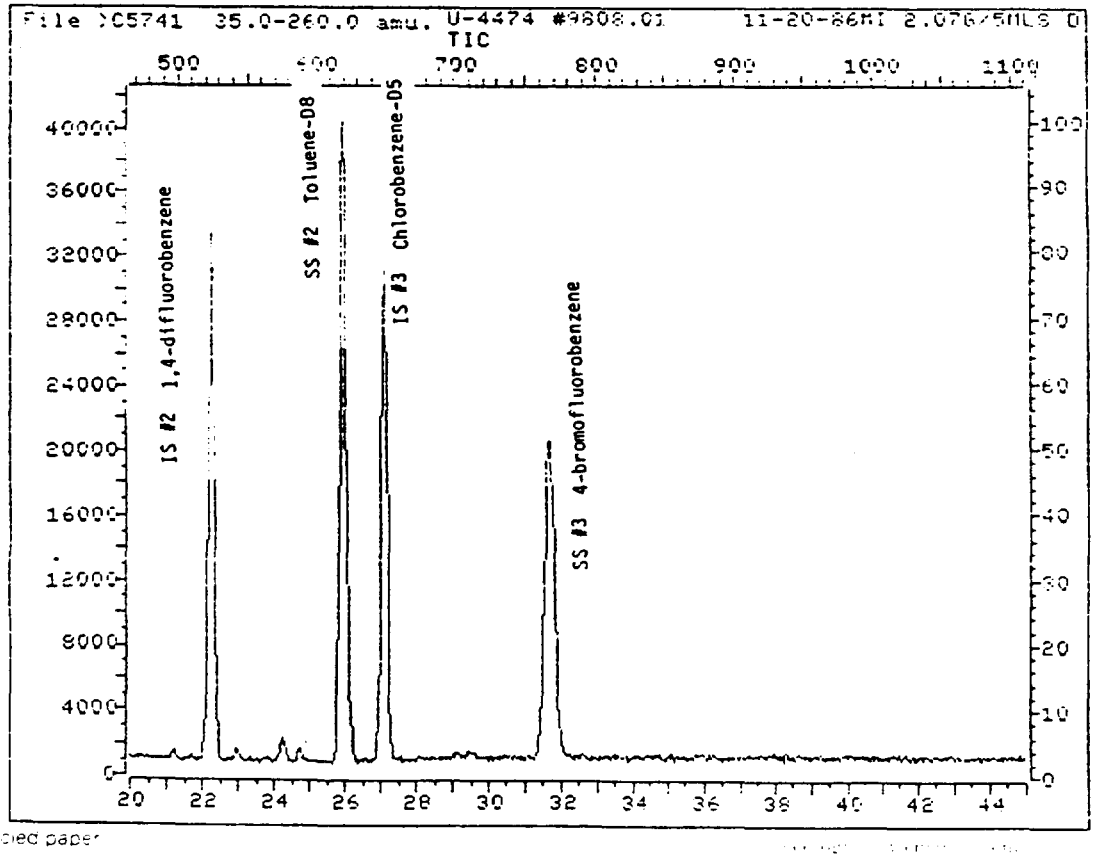
ecology and environment

DC-SS-42





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QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 86:121 [illegible]
Output File: [illegible]05741::02 Injected at: 86:121 [illegible]
Data File: [illegible]05741::03 Dilution Factor: [illegible]
Name: U-4474 #9808.01 DC-SS-42
Misc: 11-20-86MI 2.07G/5MLS DI + 10UL 15/95

ID File: VOACRS::02
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861120 23:54

	Compound		M/Z	R.T.	Scan#	Area	Conc	[illegible]	Q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.69	292	31784	[illegible]	[illegible]	[illegible]
6)	METHYLENE CHLORIDE		84	8.31	165	16876	[illegible]	[illegible]	100
7)	ACETONE		43	9.21	188	7498	[illegible]	[illegible]	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.56	326	81029	[illegible]	[illegible]	98
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.24	524	136321	[illegible]	[illegible]	100
17)	2-BUTANONE		72	14.76	331	3921	[illegible]	[illegible]	100
21)	*CHLOROBENZENE-D5	(IS)	117	27.09	629	[illegible]	[illegible]	[illegible]	[illegible]
[illegible])	~~2-PENTANONE~~		~~43~~	~~24.22~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~
33)	~~2-HEXANONE~~		~~43~~	~~24.77~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~
36)	TOLUENE-D8	(SURR)	98	25.93	619	158603	[illegible]	[illegible]	[illegible]
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.64	766	72669	[illegible]	[illegible]	[illegible]

* Compound is ISTD

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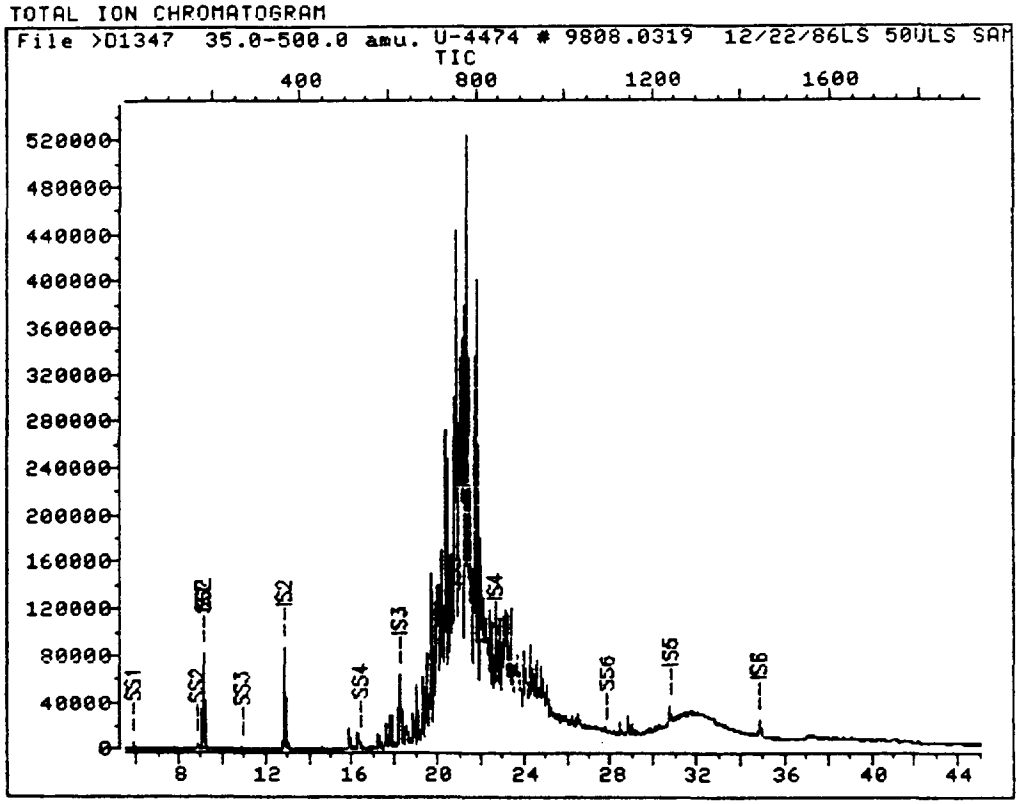
TOTAL ION CHROMATOGRAM

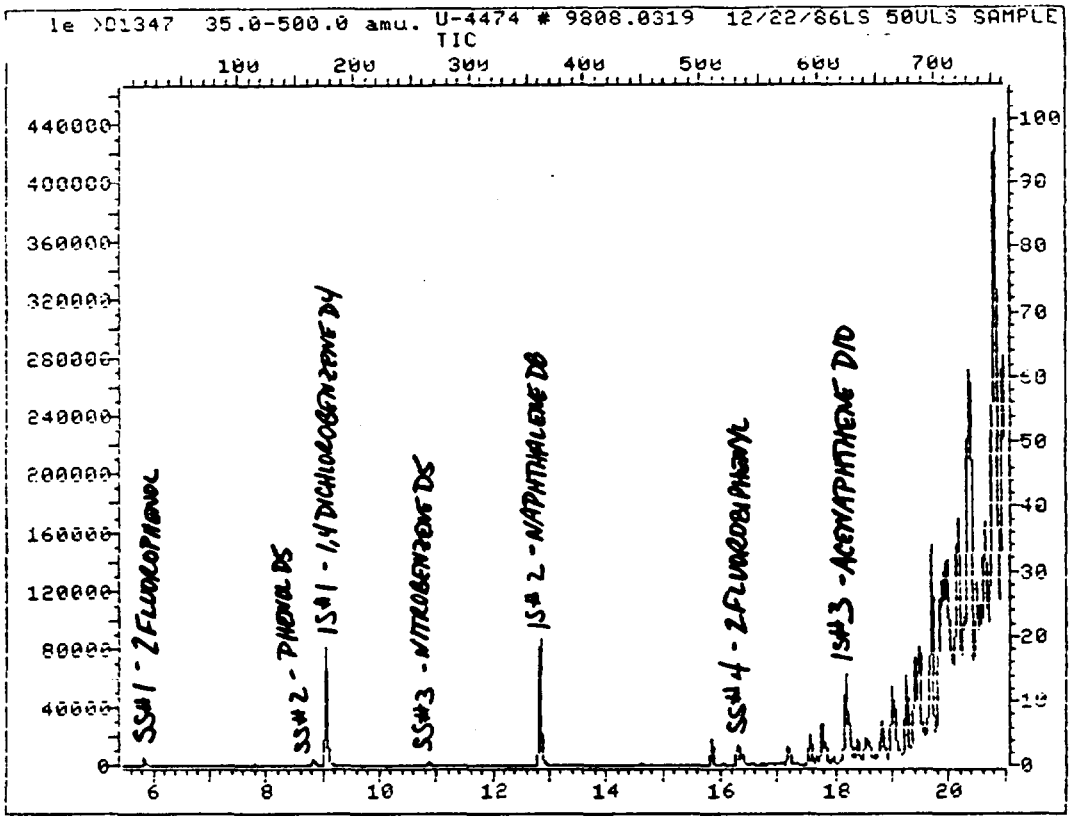


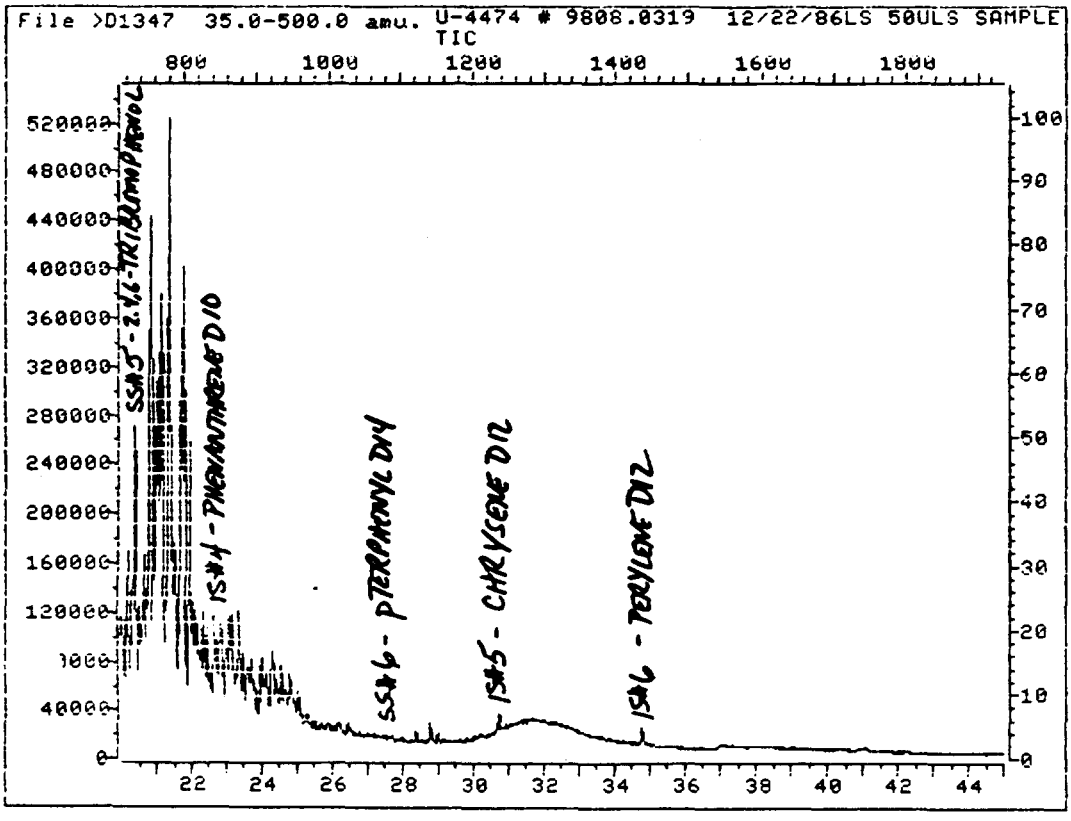
Data File: >D1347::D2
Name: U-4474 # 9808.0319 DC-SS-42
Misc: 12/22/86LS 50ULS SAMPLE + 450ULS MECL2 + 5ULS IS BTL# 5

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861222 15:30

Operator ID: USER6
Quant Time: 861222 22:55
Injected at: 861222 22:07

recycled paper





recycled paper

QUANT REPORT

Operator ID: USER6 Quant Rev: 4 Quant Time: 861222 22:55
Output File: ^D1347::Q2 Injected at: 861222 22:07
Data File: >D1347::D2 Dilution Factor: 10.00
Name: U-4474 # 9808.0319 DC-SS-42
Misc: 12/22/86LS 50ULS SAMPLE + 450ULS MECL2 + 5ULS IS BTL# 5

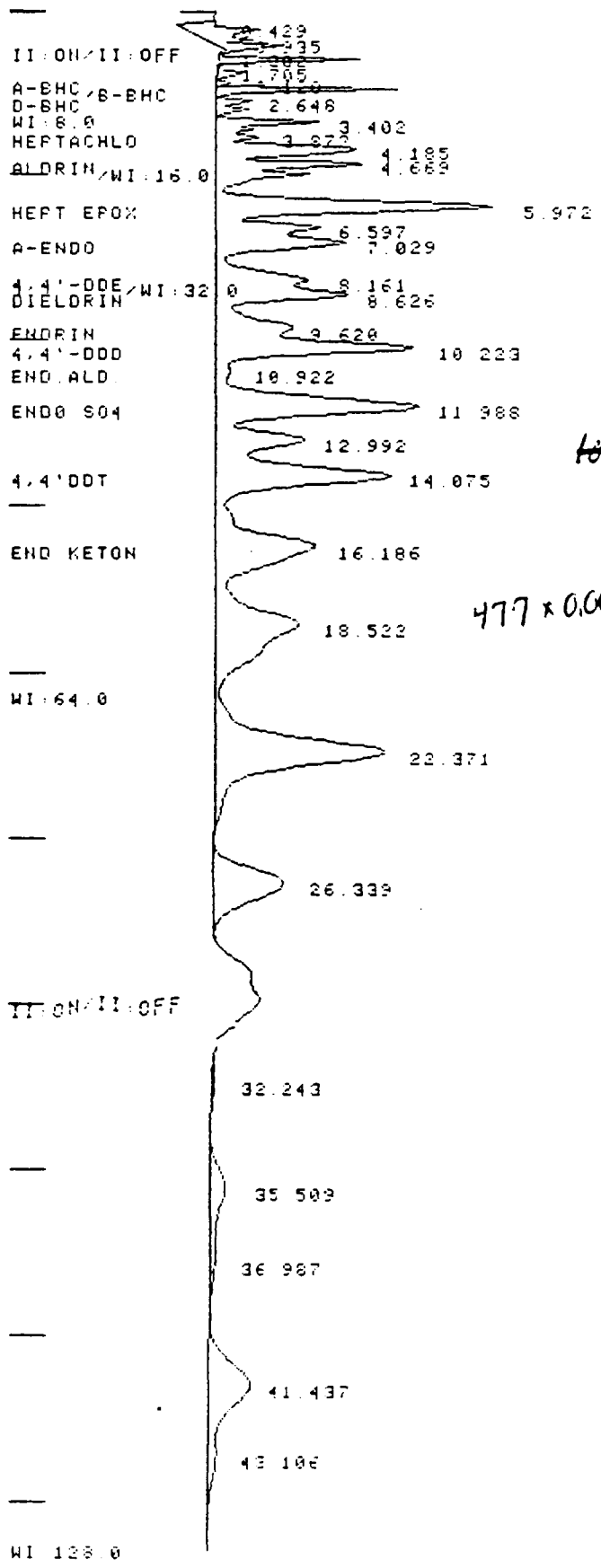
ID File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861222 15:30

	Compound		m/e	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.06	177	40854	40.00	UG/L	89
2)	PHENOL-D5	(SURR)	99	8.82	165	7013	54.26	UG/L	97
~~2)~~	~~PHENOL-D5~~	~~(SURR)~~	~~99~~	~~9.06~~	~~177~~	~~184~~	~~1.42~~	~~UG/L~~ No BM	83
5)	2-FLUOROPHENOL	(SURR)	112	5.84	19	5235	55.88	UG/L	86
~~17)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~10.88~~	~~266~~	~~167~~	~~1.70~~	~~UG/L~~ No BM	72
19)	*NAPHTHALENE-D8	(IS)	136	12.85	363	133795	40.00	UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	10.88	266	3453	32.56	UG/L	95
29)	NAPHTHALENE		128	12.89	365	2070	7.05	UG/L	100
~~30)~~	~~4-CHLOROANILINE~~		~~127~~	~~12.89~~	~~365~~	~~199~~	~~1.67~~	~~UG/L~~ No BM	1
34)	*ACENAPHTHENE-D10	(IS)	162	18.19	625	37807	40.00	UG/L	96
38)	2-FLUOROBIPHENYL	(SURR)	172	16.38	536	7832	51.65	UG/L	88
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~10.19~~	~~625~~	~~11750~~	~~88.30~~	~~UG/L~~ No BM	100
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.70	748	969	21.50	UG/L	97
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.19~~	~~625~~	~~4705~~	~~158.69~~	~~UG/L~~ No BM	100
55)	*PHENANTHRENE-D10	(IS)	188	22.63	842	36260	40.00	UG/L	89
60)	PENTACHLOROPHENOL		266	22.42	832	9115	470.81	UG/L	100
65)	*CHRYSENE-D12	(IS)	240	30.75	1239	23203	40.00	UG/L	100
68)	TERPHENYL-D14	(SURR)	244	27.82	1096	1634	35.03	UG/L	100
~~72)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~31.77~~	~~1289~~	~~257~~	~~5.98~~	~~UG/L~~ No BM	66
74)	*PERYLENE-D12	(IS)	264	34.80	1437	22235	40.00	UG/L	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.59~~	~~1370~~	~~143~~	~~1.86~~	~~UG/L~~	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.63~~	~~1380~~	~~144~~	~~1.87~~	~~UG/L~~ No BM	100
~~76)~~	~~BENZO(B)FLUORANTHENE~~		~~252~~	~~33.88~~	~~1392~~	~~976~~	~~13.99~~	~~UG/L~~	100
77)	BENZO(K)FLUORANTHENE		252	33.88	1392	976	18.09	UG/L	100
~~78)~~	~~BENZO(A)PYRENE~~		~~252~~	~~34.53~~	~~1424~~	~~653~~	~~11.50~~	~~UG/L~~ No BM	100
78)	BENZO(A)PYRENE		252	34.65	1430	240	4.23	UG/L	100
~~79)~~	~~INDENO(1,2,3-CD)PYRENE~~		~~276~~	~~37.41~~	~~1565~~	~~245~~	~~4.19~~	~~UG/L~~	100
~~81)~~	~~BENZO(G,H,I)PERYLENE~~		~~276~~	~~37.41~~	~~1565~~	~~245~~	~~4.01~~	~~UG/L~~ No BM	100
~~81)~~	~~BENZO(G,H,I)PERYLENE~~		~~276~~	~~37.94~~	~~1591~~	~~559~~	~~9.15~~	~~UG/L~~	100

* Compound is ISTD

recycled paper

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



~~106 × 0.00273 × 1/1.5 × 100,000 = 19,300 ug/kg~~ ~~1248~~

~~24,300 Dry wt~~

$477 \times 0.00131 \times \frac{1}{1.5} \times 100{,}000 = 41{,}700$ ug/kg 1260 wet

52,300 Dry wt

DC-SS-42
RUN #45

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CHANNEL: 1A - 1 TITLE: RUN# 45 7:29 10 DEC 86

DC-SS-42

SAMPLE: 9805.01.19A1 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	1.415		50377	VB	3.19
2	[redacted]	800.3563	2.320	0.090	98646	VB	5.13
3	[redacted]	120.3498	2.648✓	0.138	37958	BV	5.56
4		0.0000	2.922✓		14060	VV	5.75
5		0.0000	3.402✓		92254	VV	8.00
6		0.0000	3.610✓		34431	VV	? 11.56
7	[redacted] ←	153.0350	3.872	-0.018	38170	VV	12.63
8		0.0000	4.185	106	246104	VV	19.50
9	[redacted]	552.9705	4.669✓	-0.131	180232	VV	13.13
10		0.0000	4.995✓		135921	VV	13.63
11	[redacted]	1808.341	5.972✓	0.152	554827	VV	20.75
12		0.0000	6.597		185480	VV	? 16.13
13	[redacted]	1004.827	7.029	-0.201	287956	VV	? 23.19
14	[redacted]	843.7241	8.161	-0.169	232434	VV	? 31.50
15	[redacted]	911.5526	8.626	0.206	286783	VV	? 28.06
16	[redacted]	775.6532	9.620	0.040	212504	VV	? 30.31
17	[redacted]	2029.940	10.223	-0.227	486411	VV	25.44
18	[redacted]	141.9870	10.922	0.382	30614	VV	? 39.50
19	[redacted]	3355.397	11.988	-0.282	684554	VV	34.38
20		0.0000	12.992	1260	272052	VV	32.69
21	[redacted]	4344.642	14.075	0.425	630876	VV	38.00
22	[redacted]	2071.050	16.186	0.456	572921	VV	56.69
23		0.0000	18.522		646395	VV	80.69
24		0.0000	22.371		987644	VB	52.63
25	[redacted]	1737.596	26.339	-1.031	413932	BB	63.50
26		0.0000	35.509		130010	BV	87.06
27		0.0000	36.987		45050	VV	?164.00
28		0.0000	41.437		397587	VV	90.31
29		0.0000	43.106		58069	VB	?143.69
TOTALS:		20651.42		-0.170	7954142		

DETECTED PKS: 43 REJECTED PKS: 14

DIVISOR: 1.50000 MULTIPLIER: 100000.000

NOISE: 22.9 OFFSET: 0

RACK: 3 VIAL: 15 INJ: 1

NOTES:
NOTEBOOK:259-52 ANALYST:RICHARD SAMSON
SECURE AREA:D JOB# U-4474
INST:VARIAN 3000#2 A 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
AUTOSAMPLER
PEST/PCB ANALYSIS

POST RUN:
SAVE FILE: P4W D.CREEK3570

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SAMPLE NUMBER DC-SS-43

481095

332

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Sample Number
DC-SS-43

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474

Lab Sample ID No: 9809 QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: [signature] Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-26-86

Conc./Dil Factor: 3 pH 7.3

Percent Moisture: (Not Decanted) 22

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	29 B
67-64-1	Acetone	21 B J
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	40 B
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	15u
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	4 J
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	30u
591-78-6	2-Hexanone	30u
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	15u
108-90-7	Chlorobenzene	15u
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

Data Reporting Qualifiers

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

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

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

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

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

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

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

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Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No U-4474

Sample Number DC-SS-43

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 11-18-86

Date Analyzed 12-22-86

Conc/Dil Factor 10

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	2100	U
111-44-4	bis(-2-Chloroethyl)Ether	2100	U
95-57-8	2-Chlorophenol	2100	U
541-73-1	1 3-Dichlorobenzene	2100	U
106-46-7	1 4-Dichlorobenzene	210	J
100-51-6	Benzyl Alcohol	2100	U
95-50-1	1 2-Dichlorobenzene	2100	U
95-48-7	2-Methylphenol	2100	U
39638-32-9	bis(2-chloroisopropyl)Ether	2100	U
106-44-5	4-Methylphenol	2100	U
621-64-7	N-Nitroso-Di-n-Propylamine	2100	U
67-72-1	Hexachloroethane	2100	U
98-95-3	Nitrobenzene	2100	U
78-59-1	Isophorone	2100	U
88-75-5	2-Nitrophenol	2100	U
105-67-9	2 4-Dimethylphenol	2100	U
65-85-0	Benzoic Acid	10000	U
111-91-1	bis(-2-Chloroethoxy)Methane	2100	U
120-83-2	2 4-Dichlorophenol	2100	U
120-82-1	1 2 4-Trichlorobenzene	2100	U
91-20-3	Naphthalene	110	J
106-47-8	4-Chloroaniline	2100	U
87-68-3	Hexachlorobutadiene	2100	U
59-50-7	4-Chloro-3-Methylphenol	2100	U
91-57-6	2-Methylnaphthalene	2100	U
77-47-4	Hexachlorocyclopentadiene	2100	U
88-06-2	2 4 6-Trichlorophenol	2100	U
95-95-4	2 4 5-Trichlorophenol	10000	U
91-58-7	2-Chloronaphthalene	2100	U
88-74-4	2-Nitroaniline	10000	U
131-11-3	Dimethyl Phthalate	2100	U
208-96-8	Acenaphthylene	2100	U
99-09-2	3-Nitroaniline	10000	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	770	J
51-28-5	2 4-Dinitrophenol	10000	U
100-02-7	4-Nitrophenol	10000	U
132-64-9	Dibenzofuran	460	J
121-14-2	2 4-Dinitrotoluene	2100	U
606-20-2	2 6-Dinitrotoluene	2100	U
84-66-2	Diethylphthalate	2100	U
7005-72-3	4-Chlorophenyl-phenylether	2100	U
86-73-7	Fluorene	1500	J
100-01-6	4-Nitroaniline	10000	U
534-52-1	4 6-Dinitro-2-Methylphenol	10000	U
86-30-6	N-Nitrosodiphenylamine (1)	2100	U
101-55-3	4-Bromophenyl-phenylether	2100	U
118-74-1	Hexachlorobenzene	2100	U
87-86-5	Pentachlorophenol	25000	
85-01-8	Phenanthrene	15000	
120-12-7	Anthracene	4100	
84-74-2	Di-n-Butylphthalate	2100	U
206-44-0	Fluoranthene	20000	
129-00-0	Pyrene	19000	
85-68-7	Butylbenzylphthalate	2100	U
91-94-1	3 3'-Dichlorobenzidine	4200	U
56-55-3	Benzo(a)Anthracene	10000	
117-81-7	bis(2-Ethylhexyl)Phthalate	2100	U
218-01-9	Chrysene	10000	
117-84-0	Di-n-Octyl Phthalate	2100	U
205-99-2	Benzo(b)Fluoranthene	15000	
207-08-9	Benzo(k)Fluoranthene	2100	U
50-32-8	Benzo(a)Pyrene	7800	
193-39-5	Indeno(1 2 3-cd)Pyrene	5200	
53-70-3	Dibenz(a h)Anthracene	1500	J
191-24-2	Benzo(g h i)Perylene	5400	

(1)-Cannot be separated from diphenylamine

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Laboratory Name ecology and environment, inc.

Case No V-4474

Sample Number
DC-SS-43

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared: 11-18-86

Date Analyzed: 12-10-86

Conc/Dil Factor: 50

Percent Moisture (decanted) ~~[illegible]~~ 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	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	1600 u
72-55-9	4, 4'-DDE	1600 u
72-20-8	Endrin	1600 u
33213-65-9	Endosulfan II	1600 u
72-54-8	4, 4'-DDD	1600 u
1031-07-8	Endosulfan Sulfate	1600 u
50-29-3	4, 4'-DDT	1600 u
72-43-5	Methoxychlor	8,000 u
53494-70-5	Endrin Ketone	1,600 u
57-74-9	Chlordane	8,000 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	8,000 u
12672-29-6	Aroclor-1248	17,000
11097-69-1	Aroclor-1254	16,000 u
11096-82-5	Aroclor-1260	30,100

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 30 V_t 1000 V_i 4

Laboratory Name ecology and environment, inc.

Case No IL-111171

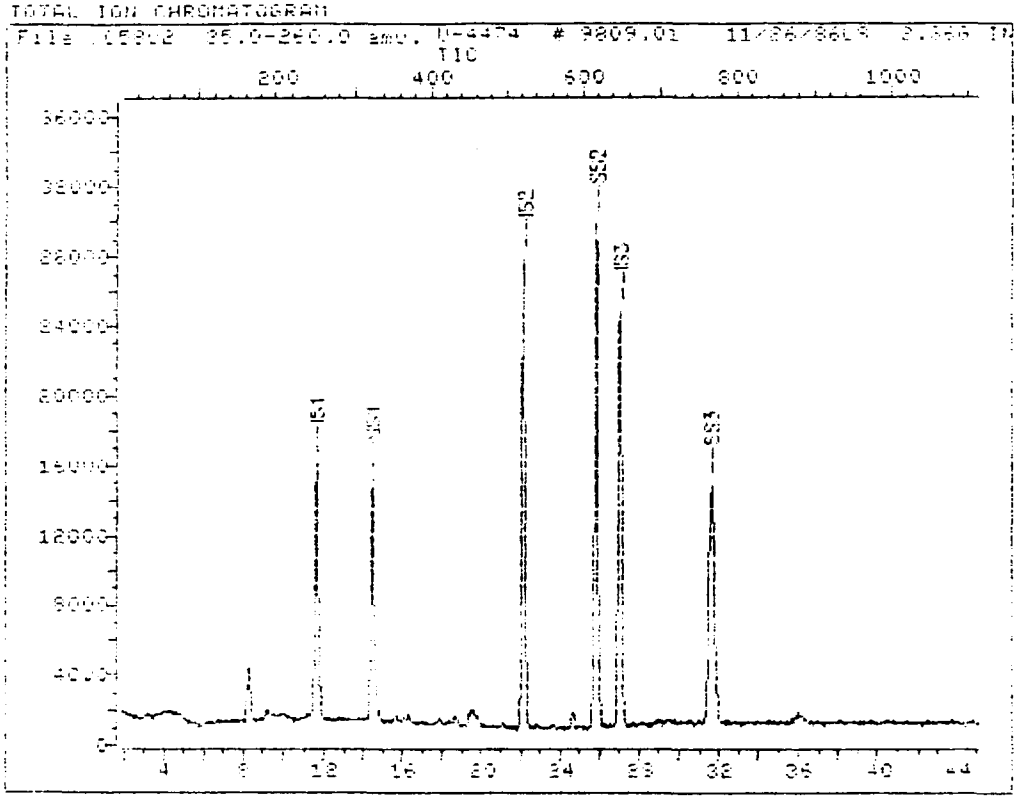
Sample Number DC-SS-43

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.	No TIC's in VOA fraction			
2.				
3. 100005	1-CHLORO-4-NITROBENZENE	BNA	14.2	4500 J
4.	UNKNOWN AROMATIC		20.7	1300 J
5.	UNKNOWN AROMATIC		21.6	1200 J
6. 832644	4-METHYLPHENANTHRENE		24.2	1400 J
7. 613127	2-METHYLANTHRACENE		24.3	1800 J
8.	UNKNOWN		24.5	2000 J
9.	UNKNOWN		27.0	3200 J
10. 2381217	1-METHYLPYRENE		28.1	2600 J
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: >C9802::D3
Name: U-4474 # 9809.01 DC-SS-43
Misc: 11/26/86LS 2.36G IN 5 MLS DI + 10 ULS IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861126 11:52

Operator ID: US896
Quant Time: 861126 14:44
Injected at: 861126 13:58

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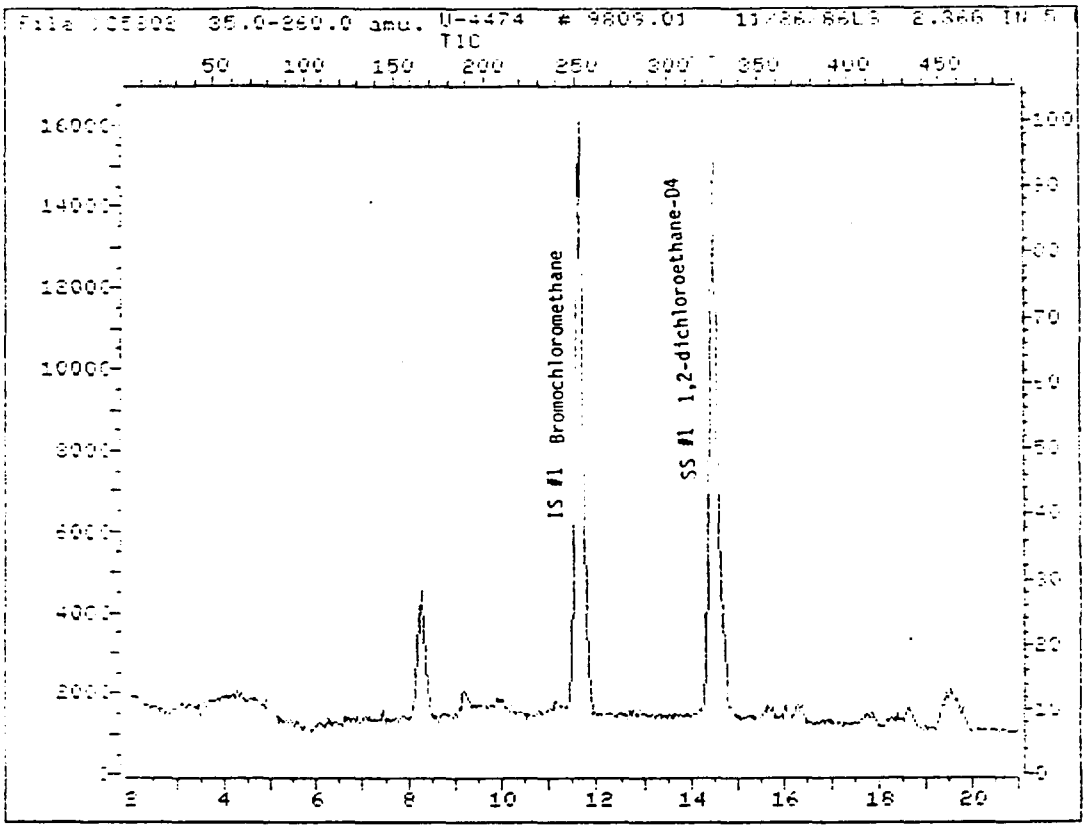
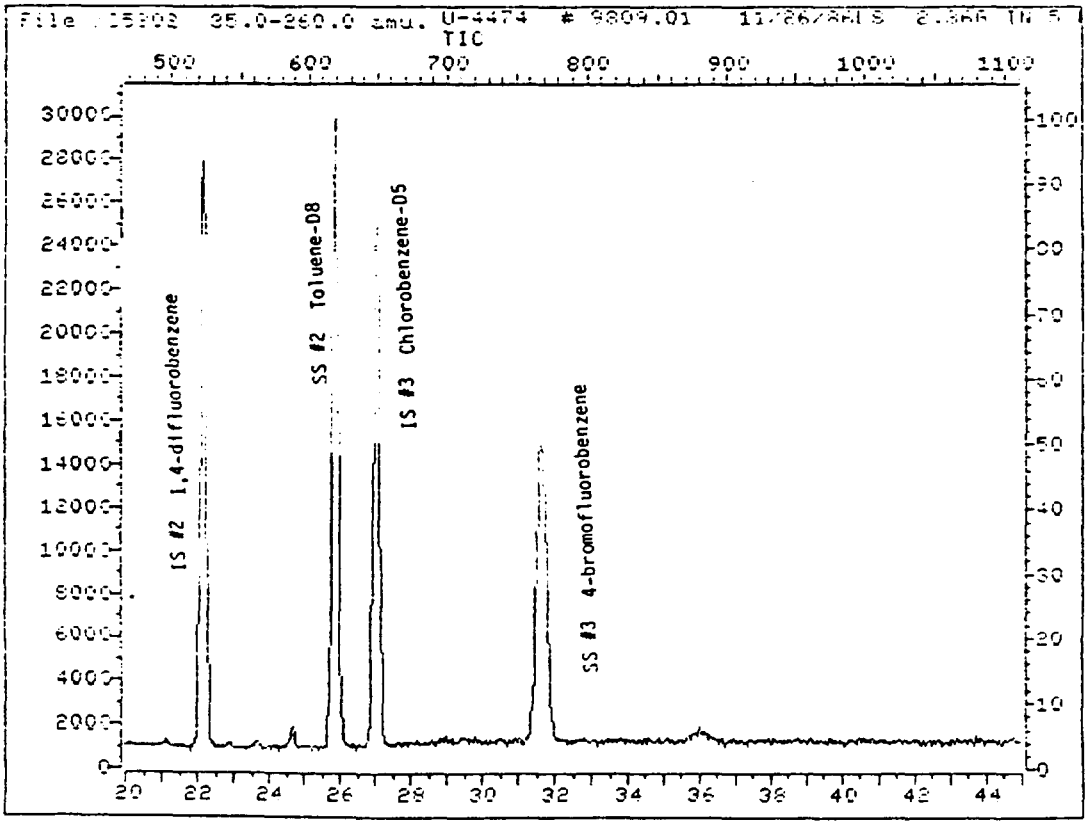
DC-SS-43





recycled paper

* Compound is ISTD

QUANT @PURT

Operator ID: USER6 Quant Rev: 4 Quant Time: 861126 14:44
Output File: ^C5802::02 Injected at: 861126 13:[illegible]
Data File: ^C5802::03 Dilution Factor: 1.00
Name: U-4474 # 9809.01 DC-SS-43
Misc: 11/26/86LS 2.36G IN 5 MLS DI + 10 ULS IS/SS

ID File: VOACRS::02
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861126 11:52

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	Q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.64	252	20869	250.00	NGS	100
6)	METHYLENE CHLORIDE		84	8.27	165	7997	53.97	NGS	100
7)	ACETONE		43	9.28	191	5114	39.40	NGS	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.48	325	56741	198.49	NGS	87
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.16	523	112621	250.00	NGS	100
[illegible]	2-BUTANONE		72	14.63	329	2619	[illegible]	[illegible]	[illegible]
[illegible]	BENZENE		78	19.60	457	3671	[illegible]	[illegible]	[illegible]
[illegible]	*CHLOROBENZENE-D5	(IS)	117	27.05	649	76749	250.00	NGS	100
36)	TOLUENE-D8	(SURR)	98	25.85	618	113328	268.42	NGS	96
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.63	767	48785	225.16	NGS	100

* Compound is ISTD

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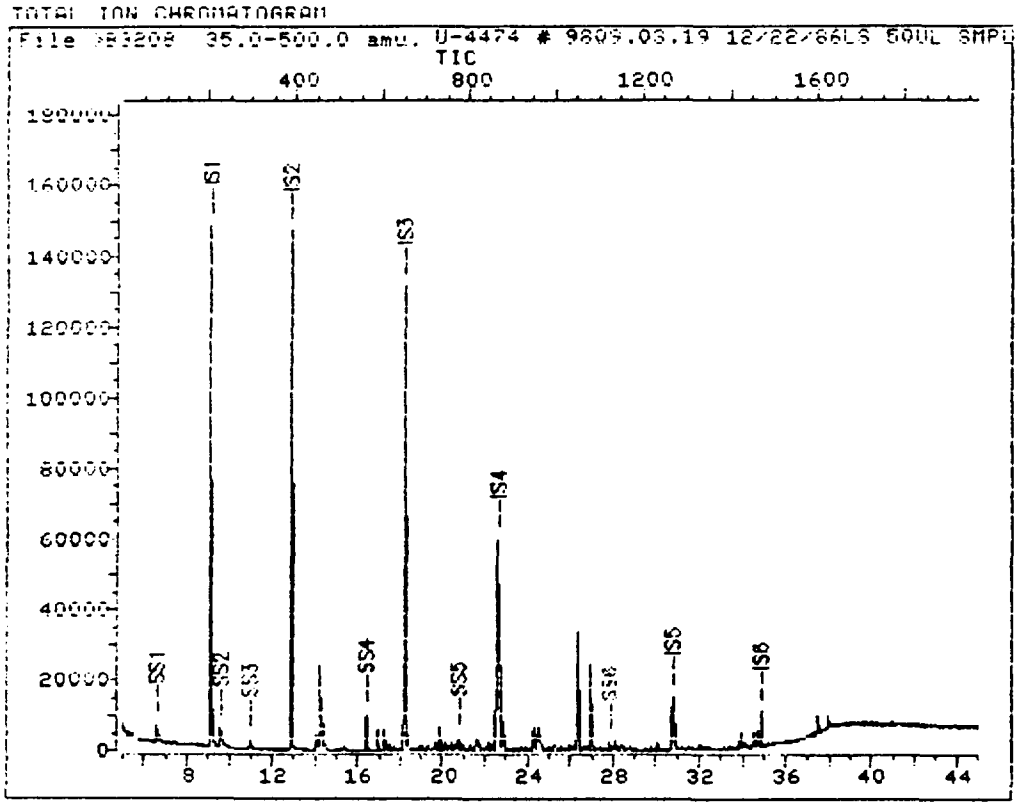


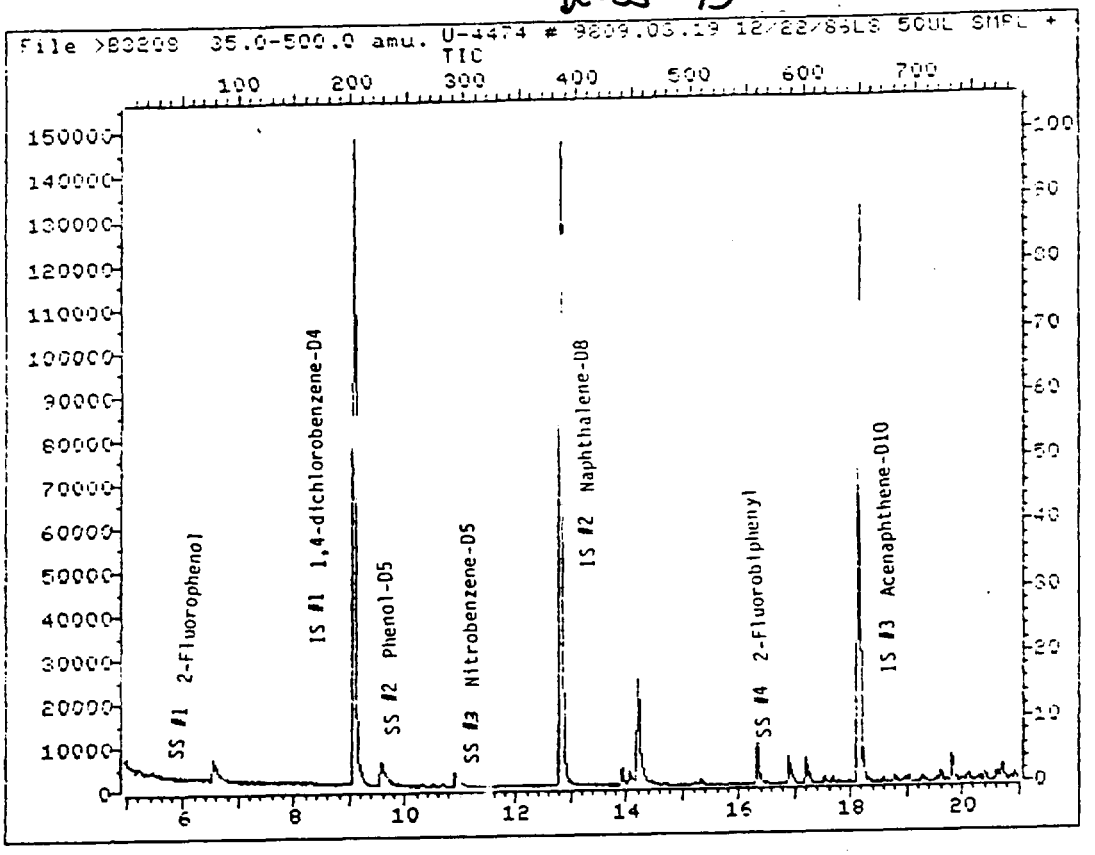
Data File: >B3208::D4
Name: U-4474 # 9809.03.19 DC-SS-43
Misc: 12/22/86LS 50UL SMPL + 450UL MECL2 + 5UL IS (10X)

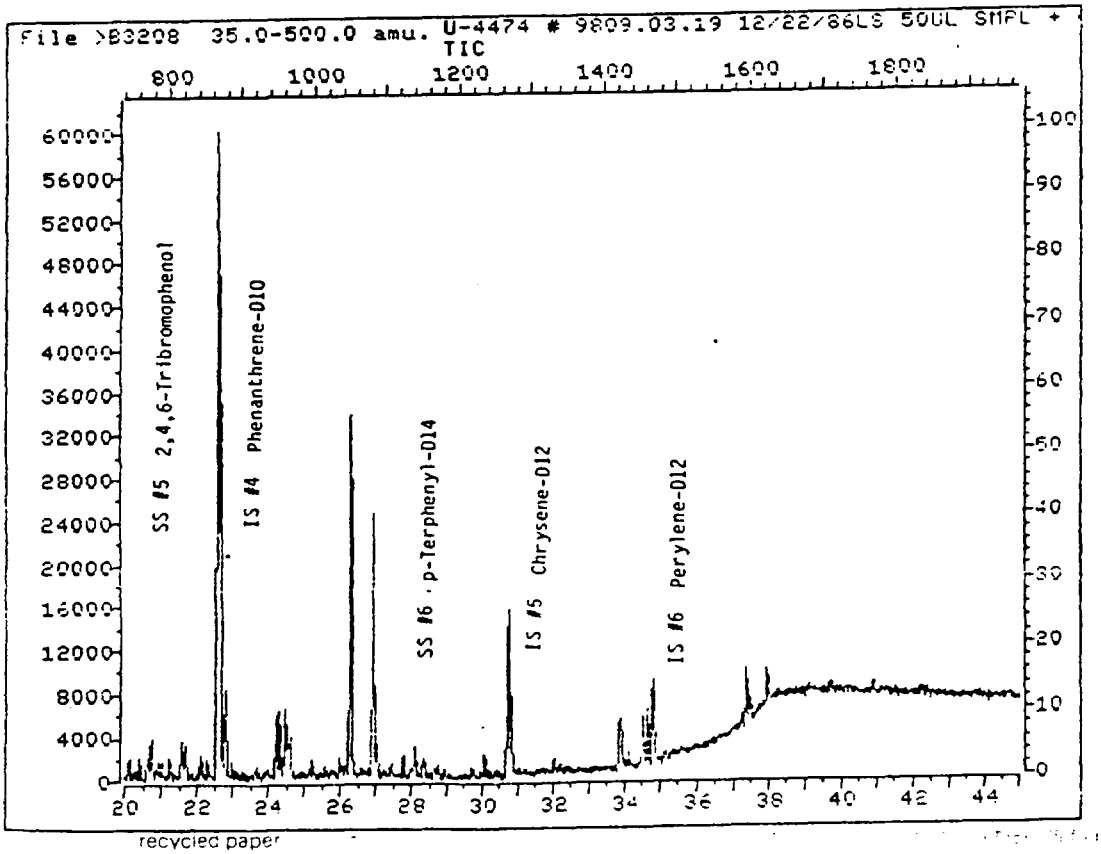
Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861222 16:20

Operator ID: USER8
Quant Time: 861222 21:55
Injected at: 861222 21:07

recycled paper

DC-SS-43





recycled paper

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861222 21:55
Output File: ^B3208::Q2 Injected at: 861222 21:07
Data File: >B3208::D4 Dilution Factor: 10.00
Name: U-4474 # 9809.03.19 DC-SS-43
Misc: 12/22/86LS 500UL SMPL + 450UL MEOL2 + 50UL IS (10X)

ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861222 16:20

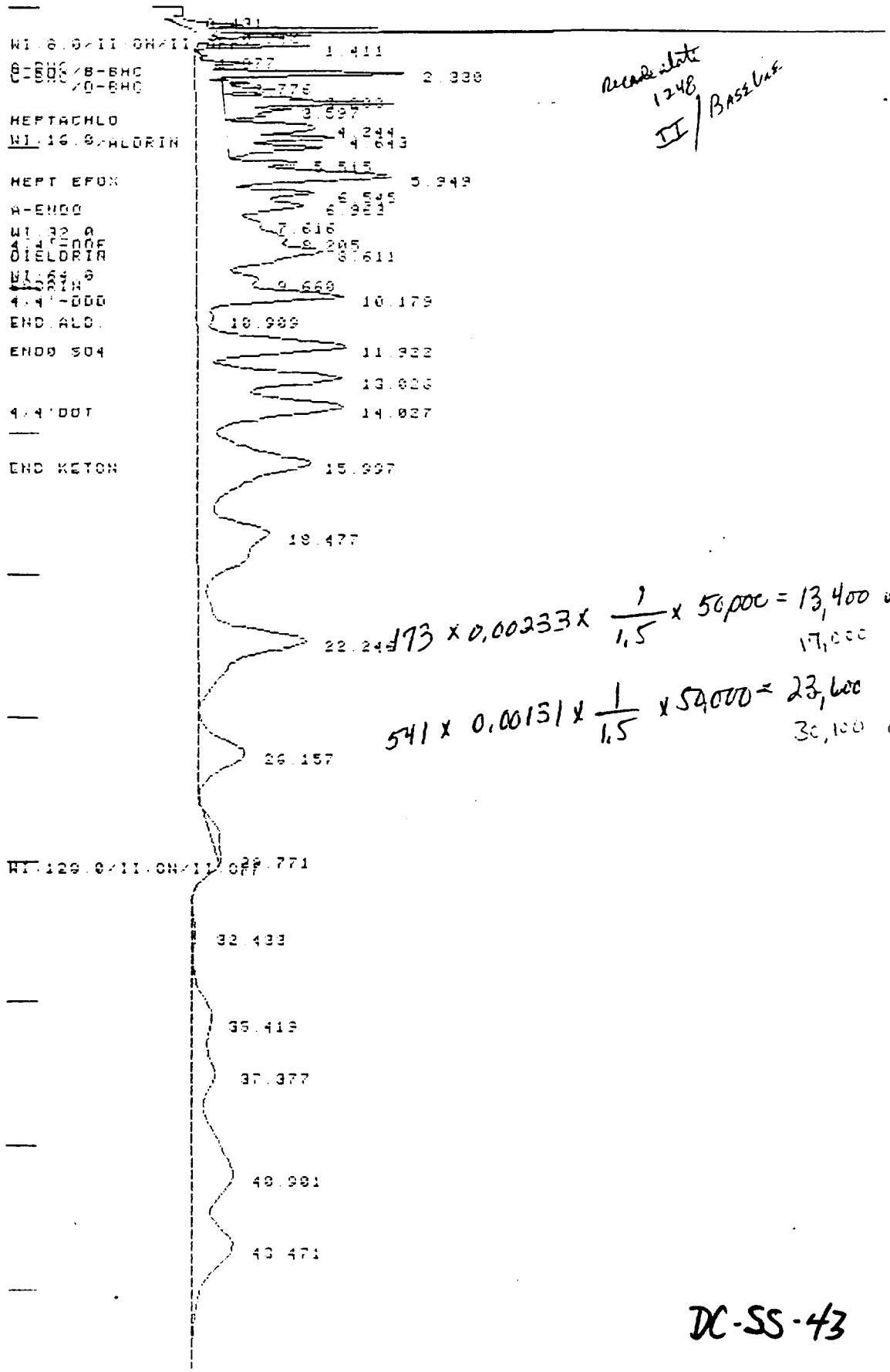
	Compound		M/E	R.I.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.08	203	62535	40.00	UG/L	82
2)	PHENOL-D5	(SURR)	99	9.59	228	14772	86.09	UG/L	82
5)	2-FLUOROPHENOL	(SURR)	112	6.56	79	10367	72.68	UG/L	95
9)	~~1,3-DICHLOROBENZENE~~		~~146~~	~~9.12~~	~~205~~	~~1031~~	~~5.13~~	~~UG/L~~ No Std	95
10)	1,4-DICHLOROBENZENE		146	9.12	205	1031	4.95	UG/L	95
19)	*NAPHTHALENE-D8	(IS)	136	12.82	387	203992	40.00	UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	10.93	294	6810	37.77	UG/L	93
22)	NAPHTHALENE		128	12.88	390	1221	2.55	UG/L	100
~~40)~~	~~4-CHLOROANILINE~~		~~127~~	~~14.22~~	~~456~~	~~4070~~	~~21.96~~ UG/L	No Std	~~92~~
~~44)~~	~~2-METHYLNAPHTHALENE~~		~~142~~	~~15.42~~	~~510~~	~~2433~~	~~7.82~~ UG/L		~~91~~
34)	*ACENAPHTHENE-D10	(IS)	162	18.17	650	69067	40.00	UG/L	98
38)	2-FLUOROBIPHENYL	(SURR)	172	16.36	561	14844	52.76	UG/L	92
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.17~~	~~650~~	~~24500~~	~~84.59~~ UG/L	No Std	~~100~~
~~43)~~	~~DIBENZOFURAN~~		~~168~~	~~18.45~~	~~659~~	~~900~~	~~4.08~~ UG/L		~~100~~
43)	DIBENZOFURAN		168	18.80	681	3090	10.81	UG/L	100
25)	FLUORENE		166	19.81	731	7001	34.98	UG/L	96
47)	ACENAPHTHENE		153	18.25	654	4098	18.06	UG/L	95
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.73	776	1327	37.22	UG/L	96
~~50)~~	~~4-NITROPHENOL~~		~~139~~	~~19.81~~	~~731~~	~~367~~	~~1.11~~ UG/L	No Std	~~100~~
~~52)~~	~~2,4-DINITROTOLUENE~~		~~165~~	~~18.17~~	~~650~~	~~8426~~	~~168.92~~ UG/L		~~100~~
55)	*PHENANTHRENE-D10	(IS)	188	22.60	868	55899	40.00	UG/L	99
58)	PENTACHLOROPHENOL		266	22.54	865	11595	587.43	UG/L	100
61)	PHENANTHRENE		178	22.66	871	49233	359.17	UG/L	99
~~63)~~	~~PHENANTHRENE~~		~~178~~	~~22.98~~	~~890~~	~~12412~~	~~94.47~~ UG/L	No Std	~~98~~
~~62)~~	~~ANTHRACENE~~		~~178~~	~~22.66~~	~~871~~	~~48033~~	~~365.03~~ UG/L		~~99~~
62)	ANTHRACENE		178	22.80	878	12812	95.77	UG/L	98
64)	FLUORANTHENE		202	26.30	1050	40241	463.48	UG/L	97
65)	*CHRYSENE-D12	(IS)	240	30.75	1269	16119	40.00	UG/L	100
67)	PYRENE		202	26.93	1081	30934	442.92	UG/L	94
68)	TERPHENYL-D14	(SURR)	244	27.90	1124	1638	45.01	UG/L	100
71)	BENZO(A)ANTHRACENE		228	30.71	1267	9805	241.26	UG/L	98
~~71)~~	~~BENZO(A)ANTHRACENE~~		~~228~~	~~30.81~~	~~1272~~	~~10142~~	~~249.55~~ UG/L	No Std	~~91~~
~~73)~~	~~CHRYSENE~~		~~228~~	~~30.71~~	~~1267~~	~~9805~~	~~224.07~~ UG/L		~~97~~
73)	CHRYSENE		228	30.81	1272	10142	237.77	UG/L	92
74)	*PERYLENE-D12	(IS)	264	34.82	1469	13144	40.00	UG/L	100
76)	BENZO(B)FLUORANTHENE		252	33.86	1422	11918	345.48	UG/L	100
~~76)~~	~~BENZO(B)FLUORANTHENE~~		~~252~~	~~34.13~~	~~1435~~	~~1660~~	~~48.35~~ UG/L	No Std	~~100~~
~~76)~~	~~BENZO(K)FLUORANTHENE~~		~~252~~	~~33.86~~	~~1422~~	~~11918~~	~~284.73~~ UG/L		~~100~~
~~76)~~	~~BENZO(K)FLUORANTHENE~~		~~252~~	~~34.13~~	~~1435~~	~~1660~~	~~34.85~~ UG/L		~~100~~
~~78)~~	~~BENZO(A)PYRENE~~		~~252~~	~~34.53~~	~~1455~~	~~4678~~	~~136.20~~ UG/L		~~100~~
78)	BENZO(A)PYRENE		252	34.68	1462	6241	181.70	UG/L	100
~~78)~~	~~BENZO(A)PYRENE~~		~~252~~	~~34.98~~	~~1473~~	~~1759~~	~~51.21~~ UG/L	No Std	~~100~~
~~79)~~	~~INDENO(1,2,3-CD)PYRENE~~		~~276~~	~~37.24~~	~~1568~~	~~616~~	~~17.38~~ UG/L		~~100~~
79)	INDENO(1,2,3-CD)PYRENE		276	37.44	1598	3855	121.26	UG/L	100
~~80)~~	~~DIBENZ(A,H)ANTHRACENE~~		~~278~~	~~37.24~~	~~1568~~	~~634~~	~~24.53~~ UG/L	No Std	~~100~~

32

	Compound	M/E	R.T.	Scan#	Area	Conc	Units	q
800	DIBENZ(A,H)ANTHRACENE	278	37.52	1602	1065	34.48	UG/L	100
~~801~~	~~DIBENZ(A,H)ANTHRACENE~~	~~278~~	~~37.25~~	~~1613~~	~~[illegible]~~	~~2[illegible].84~~	~~UG/L~~	~~[illegible]~~
~~802~~	~~DIBENZ(A,H)ANTHRACENE~~	~~278~~	~~37.87~~	~~1617~~	~~84[illegible]~~	~~2[illegible].26~~	~~UG/L~~	~~[illegible]~~
803	BENZO(G,H,I)PERYLENE	276	37.97	1624	4[illegible]88	116.72	UG/L	100
~~804~~	~~BENZO(G,H,I)PERYLENE~~	~~276~~	~~38.38~~	~~1648~~	~~71[illegible]~~	~~1[illegible].29~~	~~UG/L~~	~~[illegible]~~

* Compound is ISTD

ATTEN: 8 ZERO: 10% 5 MIN/TICK



$173 \times 0.00233 \times \frac{1}{1.5} \times 50{,}000 = 13{,}400$ ug/kg 1248
17,000 ug

$541 \times 0.00151 \times \frac{1}{1.5} \times 50{,}000 = 23{,}600$ ug/kg 1260
30,100 ug

DC-SS-43

recycled paper

SAMPLE: 9809.01.19A1 METHOD: CEPA CALCULATION: ES - ANALYS

DC-SS-43

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.411		42940	BV	3.31
2	~~[illegible]~~	0.0014	1.995	-0.095	33259	VV	4.75
3	~~[illegible]~~	0.0269	2.330	0.100	220853	VV	9.50
4	~~[illegible]~~	0.0022	2.636	0.126	46509	VV	? 7.00
5		0.0000	~~2.776~~		~~[illegible]~~	VV	? 5.19
6		0.0000	2.907		63074	VV	11.19
7		0.0000	~~3.200~~		~~[illegible]~~	VV	? 9.44
8		0.0000	3.368	1248	212045	VV	10.50
9		0.0000	3.597	173	128070	VV	? 9.69
10	~~[illegible]~~	~~0.0042~~	3.839	-0.051	~~[illegible]~~	VV	? 13.56
11		0.0000	4.244		298338	VV	? 34.56
12	~~[illegible]~~	0.0099	4.643	-0.157	216060	VV	15.25
13		0.0000	4.972		231402	VV	14.38
14		0.0000	~~5.515~~		~~[illegible]~~	VV	? 14.56
15	~~[illegible]~~	0.0250	5.949	0.129	511236	VV	25.00
16		0.0000	6.545		226117	VV	? 18.19
17	~~[illegible]~~	0.0153	6.963	-0.267	292044	VV	? 37.38
18		0.0000	7.616		138041	VV	? 30.06
19	~~[illegible]~~	0.0171	8.205	-0.125	313904	VV	? 56.69
20	~~[illegible]~~	0.0239	8.611	0.191	501553	VV	? 54.25
21	~~[illegible]~~	0.0091	9.660	0.080	166432	VV	? 47.25
22	~~[illegible]~~	0.0292	10.179	1260 -0.271	488839	VV	26.56
23	~~[illegible]~~	0.0024	10.909	0.369	35097	VV	?102.44
24	~~[illegible]~~	0.0442	11.922	-0.348	583742	VV	35.31
25		0.0000	13.026		548119	VV	36.31
26	~~[illegible]~~	0.0715	14.027	0.377	692491	VV	43.19
27	~~[illegible]~~	0.0475	15.997	0.267	875570	VV	62.75
28		0.0000	18.477		697865	VV	99.38
29		0.0000	22.246		843456	VV	56.56
30	~~[illegible]~~	0.0201	26.157	-1.213	315545	VV	68.88
31		0.0000	29.771		57247	VB	?148.63
32		0.0000	32.433		25048	BV	68.00
33		0.0000	35.419		211640	VV	?102.38
34		0.0000	37.377		244653	VV	?121.75
35		0.0000	40.901		635970	VV	160.31
36		0.0000	43.471		492454	VB	112.94
TOTALS:		0.3501		-0.888	10719641		

DETECTED PKS: 46 REJECTED PKS: 10

DIVISOR: ~~1.00000~~ 15 MULTIPLIER: ~~1.00000~~ 65 50,000

NOISE: 11.4 OFFSET: -11

RACK: 4 VIAL: 1 INJ: 1

NOTES:
NOTEBOOK:259-52 ANALYST:RICHARD SAMSON
SECURE AREA:D JOB# U-4474
INST:VARIAN 6000#2 A 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
AUTOSAMPLER
PEST/PCB ANALYSIS

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SAMPLE NUMBER DC-SS-44

481095

recycled paper

Sample Number
DC-SS-44

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474

Lab Sample ID No: 9810 QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: C Hojtowicz Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-21-86

Conc/Dil Factor: 3 pH 7.5

Percent Moisture: (Not Decanted) 23

CAS Number		ug/l or (ug/Kg) (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	52B
67-64-1	Acetone	18BJ
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	30u
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or (ug/Kg) (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	15u
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	15u
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	30u
591-78-6	2-Hexanone	30u
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	15u
108-90-7	Chlorobenzene	15u
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

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, etc. (This is not necessarily the instrument detection limit.) The footnote should read: U Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

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

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

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

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

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Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No U-4474

Sample Number DC-SS-44

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared 11-20-86

Date Analyzed 12-22-86

Conc/Dil Factor: 2

Percent Moisture (Decanted) 23

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	430	U
111-44-4	bis(-2-Chloroethyl)Ether	430	U
95-57-8	2-Chlorophenol	430	U
541-73-1	1 3-Dichlorobenzene	430	U
106-46-7	1 4-Dichlorobenzene	430	U
100-51-6	Benzyl Alcohol	430	U
95-50-1	1 2-Dichlorobenzene	430	U
95-48-7	2-Methylphenol	430	U
39638-32-9	bis(2-chloroisopropyl)Ether	430	U
106-44-5	4-Methylpheno	430	U
621-64-7	N-Nitroso-Di-n-Propylamine	430	U
67-72-1	Hexachloroethane	430	U
98-95-3	Nitrobenzene	430	U
78-59-1	Isophorone	430	U
88-75-5	2-Nitrophenol	430	U
105-67-9	2, 4-Dimethylphenol	430	U
65-85-0	Benzoic Acid	2100	U
111-91-1	bis(-2-Chloroethoxy)Methane	430	U
120-83-2	2 4-Dichlorobenol	430	U
120-82-1	1 2, 4-Trichlorobenzene	430	U
91-20-3	Naphthalene	430	U
106-47-8	4-Chloroaniline	430	U
87-68-3	Hexachlorobutadiene	430	U
59-50-7	4-Chloro-3-Methylphenol	430	U
91-57-6	2-Methylnaphthalene	430	U
77-47-4	Hexachlorocyclopentadiene	430	U
88-06-2	2 4 6-Trichlorophenol	430	U
95-95-4	2, 4, 5-Trichlorophenol	2100	U
91-58-7	2-Chloronaphthalene	430	U
88-74-4	2-Nitroaniline	2100	U
131-11-3	Dimethyl Phthalate	430	U
208-96-8	Acenaphthylene	430	U
99-09-2	3-Nitroaniline	2100	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	430	U
51-28-5	2, 4-Dinitrophenol	2100	U
100-02-7	4-Nitrophenol	2100	U
132-64-9	Dibenzofuran	430	U
121-14-2	2 4-Dinitrotoluene	430	U
606-20-2	2 6-Dinitrotoluene	430	U
84-66-2	Diethylphthalate	430	U
7005-72-3	4-Chlorophenyl-phenylether	430	U
86-73-7	Fluorene	430	U
100-01-6	4-Nitroaniline	2100	U
534-52-1	4, 6-Dinitro-2-Methylphenol	2100	U
86-30-6	N-Nitrosodiphenylamine (1)	430	U
101-55-3	4-Bromophenyl-phenylether	430	U
118-74-1	Hexachlorobenzene	430	U
87-86-5	Pentachlorophenol	2100	U
85-01-8	Phenanthrene	430	U
120-12-7	Anthracene	430	U
84-74-2	Di-n-Butylphthalate	150	J
206-44-0	Fluoranthene	430	U
129-00-0	Pyrene	430	U
85-68-7	Butylbenzylphthalate	430	U
91-94-1	3, 3'-Dichlorobenzidine	860	U
56-55-3	Benzo(a)Anthracene	430	U
117-81-7	bis(2-Ethylhexyl)Phthalate	430	U
218-01-9	Chrysene	430	U
117-84-0	Di-n-Octyl Phthalate	430	U
205-99-2	Benzo(b)Fluoranthene	81	J
207-08-9	Benzo(k)Fluoranthene	430	U
50-32-8	Benzo(a)Pyrene	430	U
193-39-5	Indeno(1 2, 3-cd)Pyrene	430	U
53-70-3	Dibenzo(a h)Anthracene	430	U
191-24-2	Benzo(g h, i)Perylene	430	U

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No U-4474

Sample Number DC-SS-44

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-18-86

Date Analyzed 12-9-86

Conc/Dil Factor: 1

Percent Moisture (decanted) 23.2

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 u
319-85-7	Beta-BHC	16 u
319-86-8	Delta-BHC	16 u
58-89-9	Gamma-BHC (Lindane)	16 u
76-44-8	Heptachlor	16 u
309-00-2	Aldrin	16 u
1024-57-3	Heptachlor Epoxide	16 u
959-98-8	Endosulfan I	16 u
60-57-1	Dieldrin	32 u
72-55-9	4,4'-DDE	32 u
72-20-8	Endrin	32 u
33213-65-9	Endosulfan II	32 u
72-54-8	4,4'-DDD	32 u
1031-07-8	Endosulfan Sulfate	32 u
50-29-3	4,4'-DDT	32 u
72-43-5	Methoxychlor	160 u
53494-70-5	Endrin Ketone	32 u
57-74-9	Chlordane	160 u
8001-35-2	Toxaphene	320 u
12674-11-2	Aroclor-1016	160 u
11104-28-2	Aroclor-1221	160 u
11141-16-5	Aroclor-1232	160 u
53469-21-9	Aroclor-1242	160 u
12672-29-6	Aroclor-1248	160 u
11097-69-1	Aroclor-1254	320 u
11096-82-5	Aroclor-1260	320 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 30 V_t 1,000 V_i 4

Laboratory Name ecology and environment, inc.

Case No 11-11171

Sample Number DC-SS-44

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.	No TIC's in VOA fraction			
2.				
3.	UNKNOWN	BNA	34.0	710 J
4.	UNKNOWN HYDROCARBON		35.0	330 J
5.	UNKNOWN HYDROCARBON		36.7	380 J
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				

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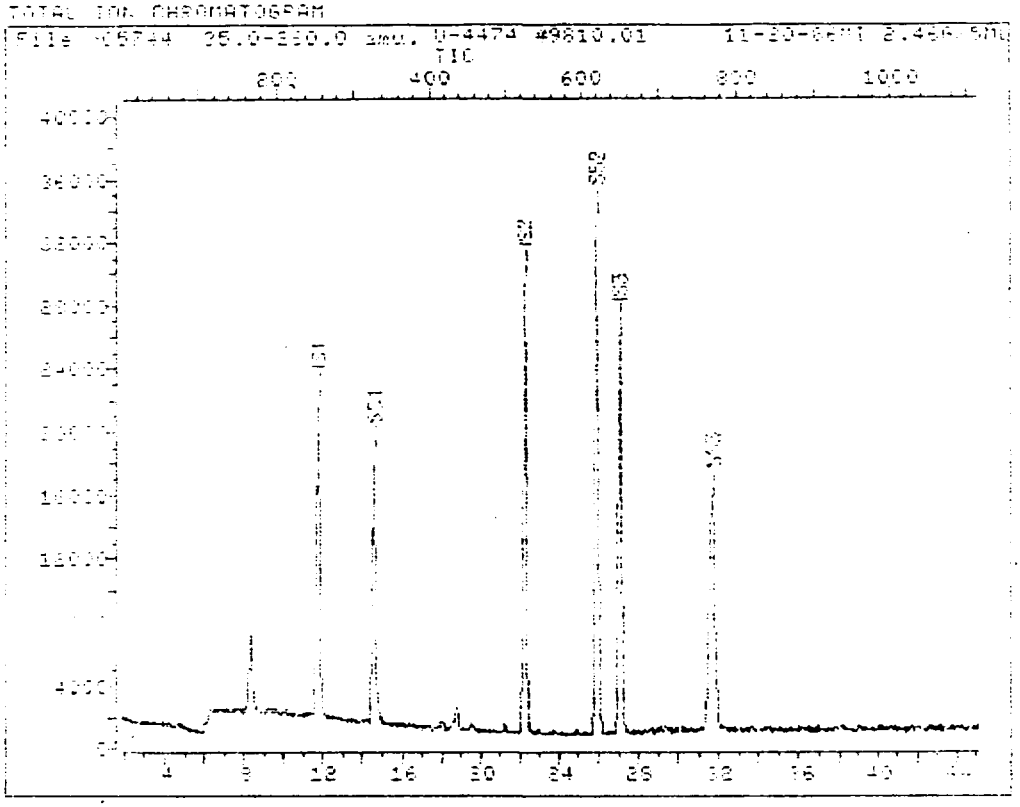
TOTAL ION CHROMATOGRAM



Data File: >C9744::D3
Name: U-4474 #9810.01 DC-SS-44
Misc: 11-20-86M1 2.46G/5MLS DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861120 23:54

Operator ID: USER8
Quant Time: 861121 07:16
Injected at: 861121 06:30

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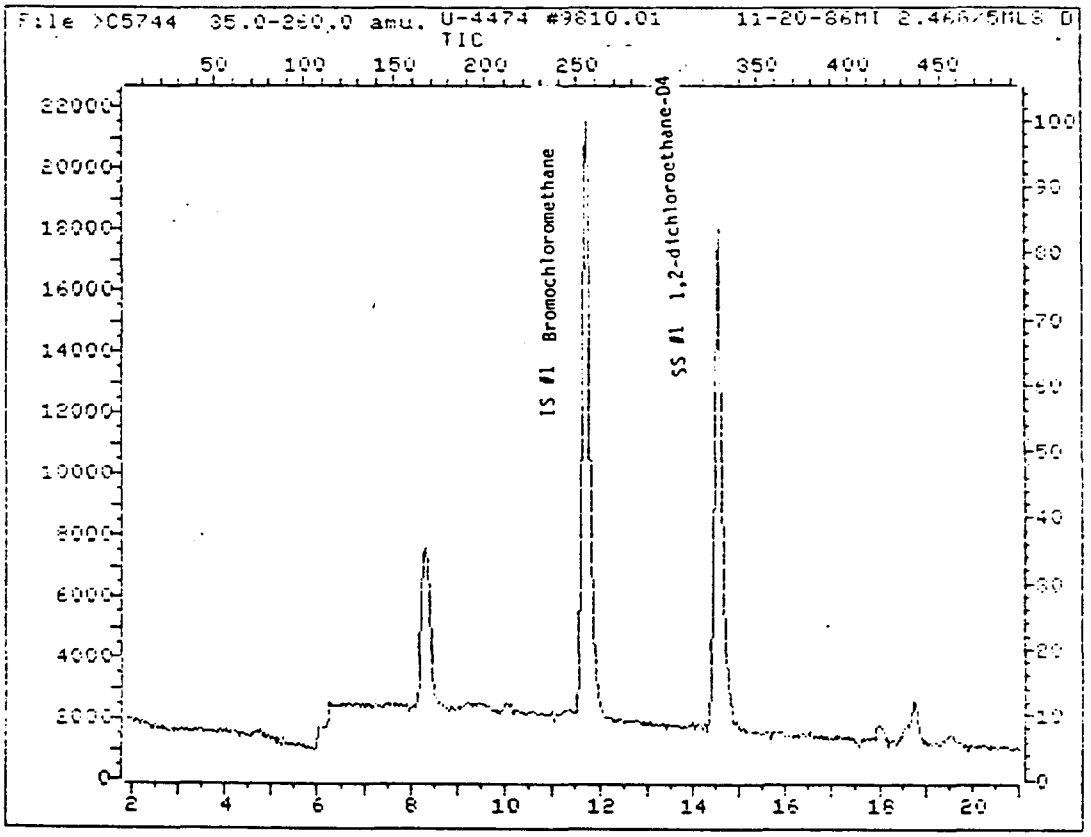
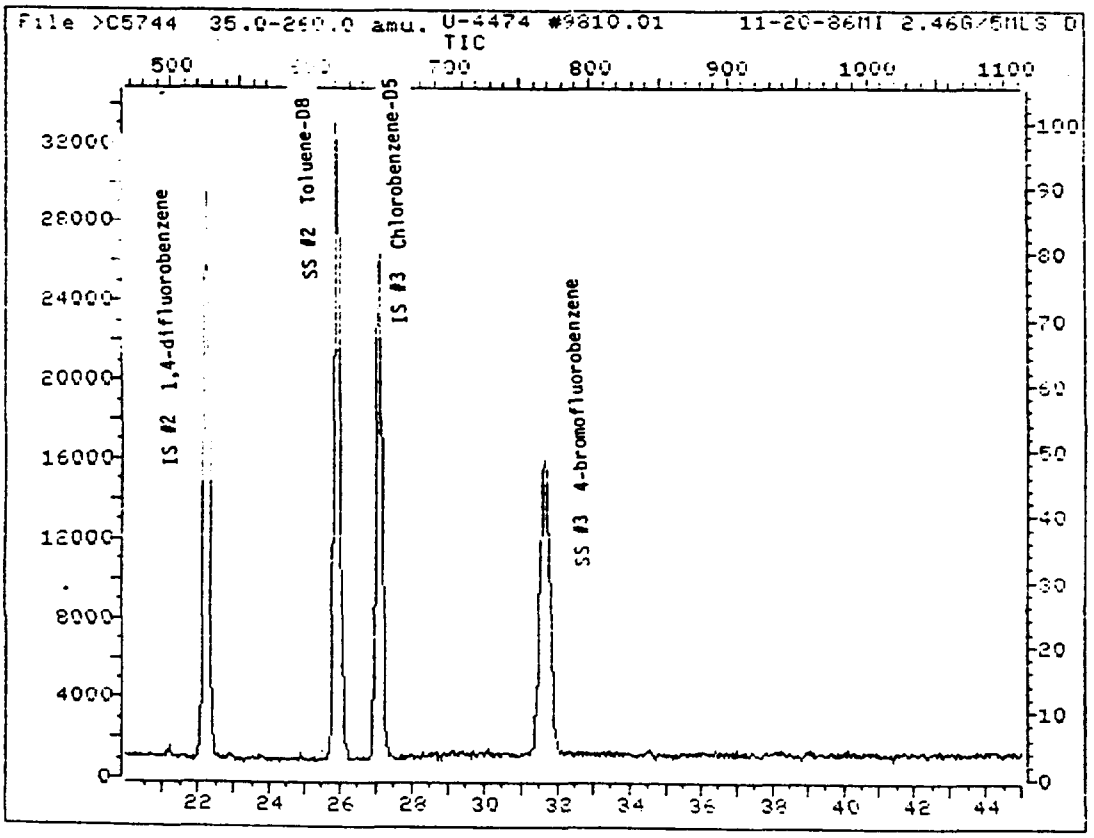
DC-SS-4


File >C5744 35.0-260.0 amu. U-4474 #9810.01 11-20-86MI 2.46G/5MLS D
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File >C5744 35.0-260.0 amu. U-4474 #9810.01 11-20-86MI 2.46G/5MLS D
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

412

QUANT REPORT

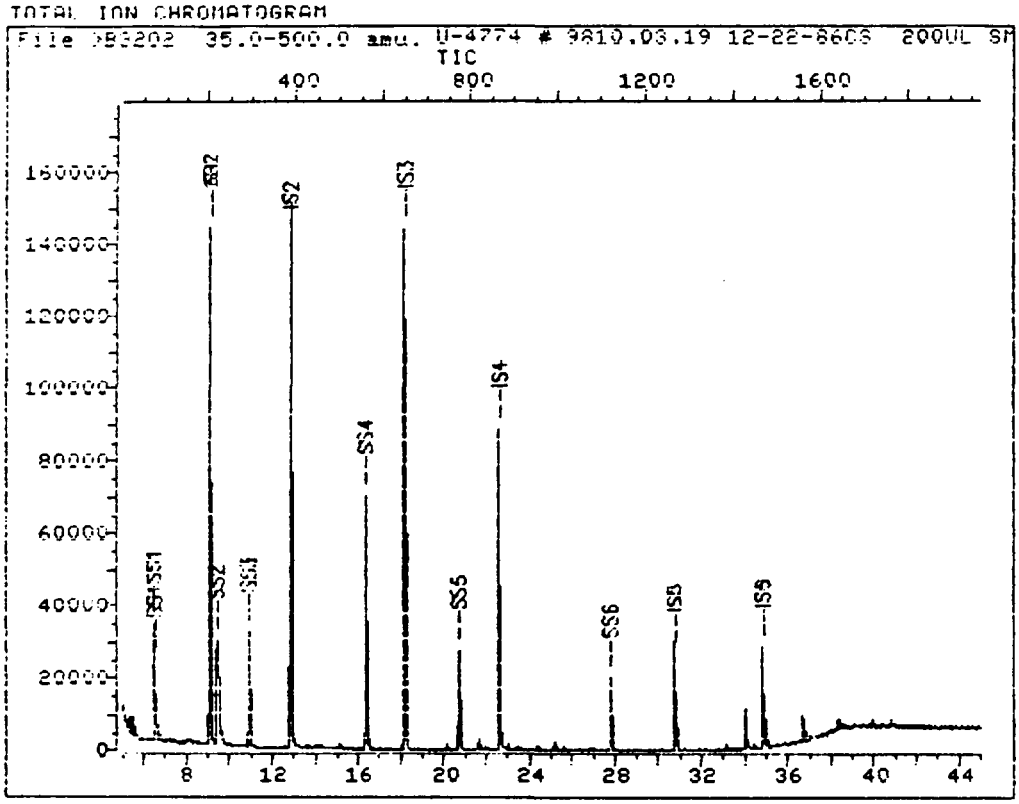
Operator ID: USER8 Quant Rev: 4 Quant Time: 861121 [illegible]
Output File: ^D5744::Q2 Injected at: 861121 [illegible]
Data File: ^D5744::D3 Dilution Factor: 1.00
Name: U-4474 #9X10.01 DC-SS-44
Misc: 11-20-86M1 2.46G/5MLS DI + 10UL IS/SS

ID File: VOAQRS::D2
Title: V04 ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861120 23:54

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	%
1)	*BROMOCHLOROMETHANE	(IS)	128	11.74	259	30181	[illegible]	[illegible]	[illegible]
6)	METHYLENE CHLORIDE		84	8.33	167	15462	99.20	[illegible]	[illegible]
7)	ACETONE		43	9.30	192	2430	37.99	[illegible]	[illegible]
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.57	328	69941	272.53	[illegible]	68
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.22	529	125732	250.00	[illegible]	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.07	650	84118	250.00	[illegible]	100
36)	TOLUENE-D8	(SURR)	98	28.90	620	132036	[illegible]	[illegible]	[illegible]
41)	4-BROMOFLUOROBENZENE	(SURR)	95	31.69	769	5[illegible]61	189.[illegible]	[illegible]	[illegible]

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >B3202::D4
Name: U-4774 # 9810.03.19 DC-SS-44
Misc: 12-22-86CS 200UL SMPL +200UL MECL2 + 4UL IS (2X)

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861222 16:20

Operator ID: USER8
Quant Time: 861222 16:41
Injected at: 861222 15:37

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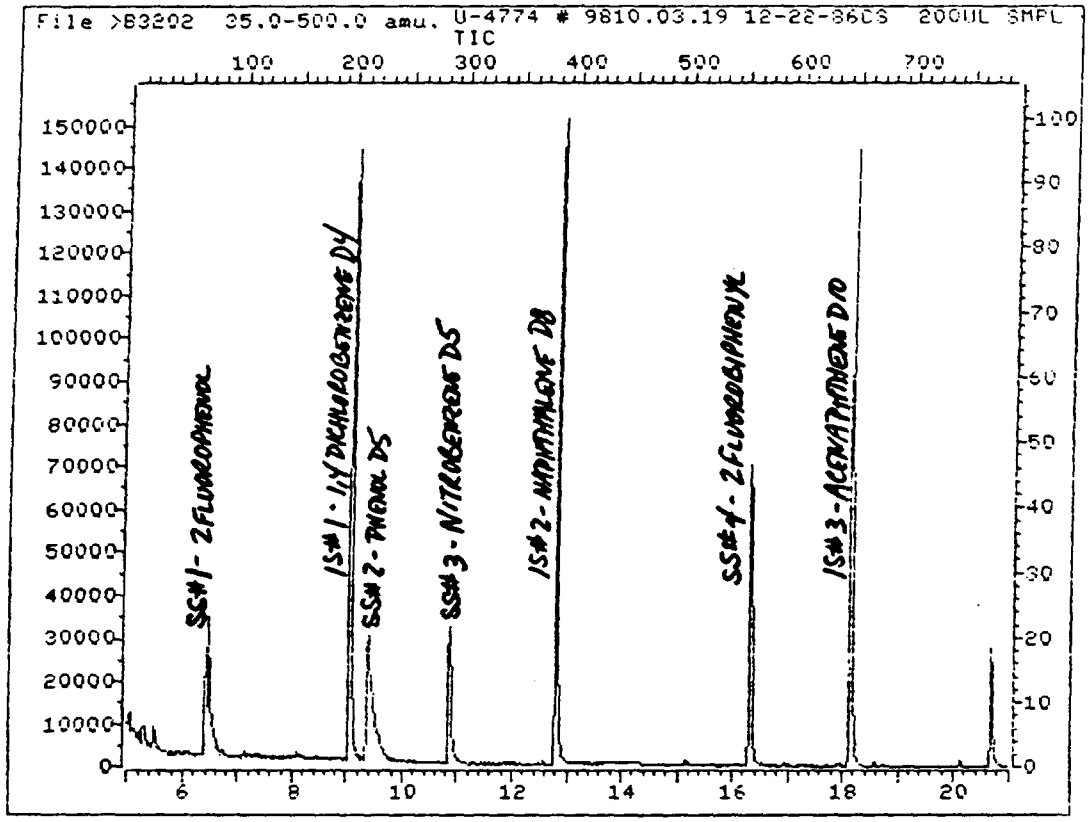
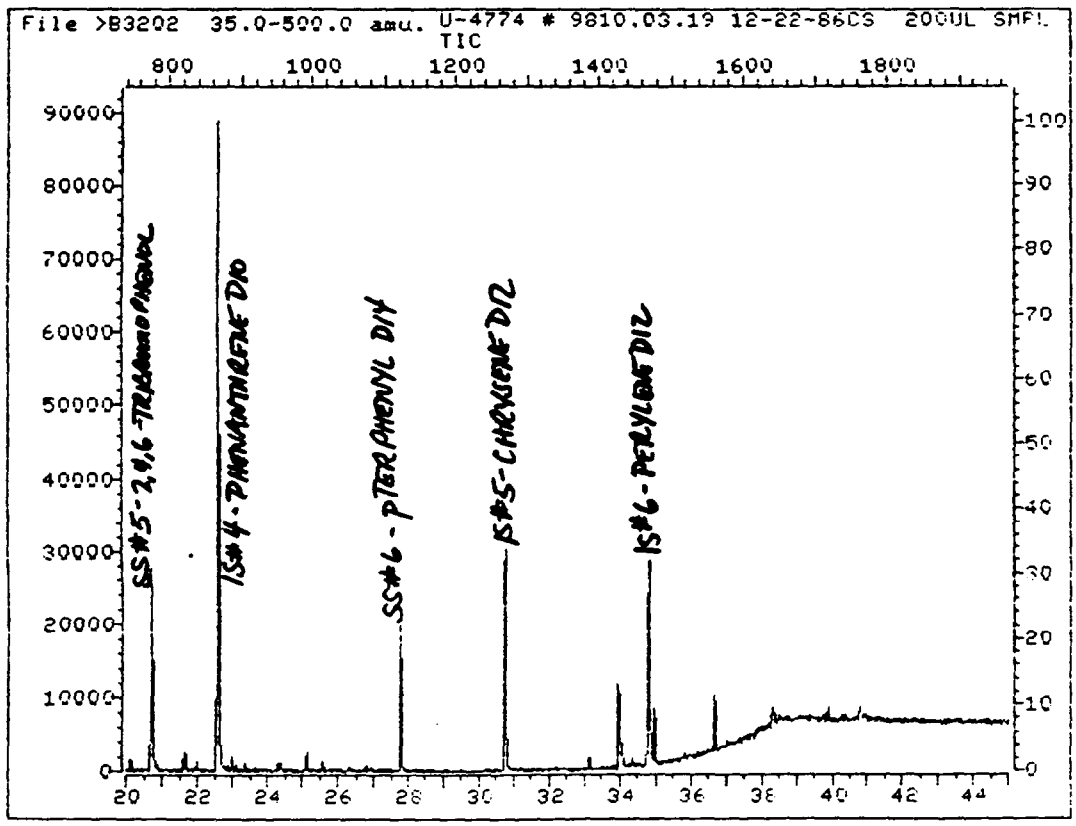
DC-SS-44





recycled paper

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861222 16:41
Output File: ^B3202::Q2 Injected at: 861222 15:37
Data File: >B3202::04 Dilution Factor: 2.00
Name: U-4774 # 9810.03.19 DC-SS-44
Misc: 12-22-86CS 200UL SMPL +200UL MECL2 + 4UL IS (2X)

ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861222 16:20

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.08	202	62611	40.00	UG/L	85
~~2)~~	~~PHENOL-D5~~	~~(SURR)~~	~~99~~	~~9.08~~	~~202~~	~~497~~	~~.58~~	~~UG/L~~	~~81~~
2)	PHENOL-D5	(SURR)	99	9.38	217	80081	93.22	UG/L	87
5)	2-FLUOROPHENOL	(SURR)	112	6.44	72	28851	40.40	UG/L	93
5)	2-FLUOROPHENOL	(SURR)	112	6.48	74	21823	30.56	UG/L	46
~~12)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~10.07~~	~~290~~	~~6492~~	~~4.56~~	~~UG/L~~	~~87~~
19)	*NAPHTHALENE-D8	(IS)	136	12.80	385	212245	40.00	UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	10.87	290	36208	38.60	UG/L	95
~~29)~~	~~NAPHTHALENE~~		~~128~~	~~12.86~~	~~344~~	~~634~~	~~.25~~	~~UG/L~~	~~100~~
~~30)~~	~~2-METHYLNAPHTHALENE~~		~~142~~	~~15.32~~	~~608~~	~~423~~	~~.15~~	~~UG/L~~	~~77~~
34)	*ACENAPHTHENE-D10	(IS)	162	18.15	648	85313	40.00	UG/L	92
38)	2-FLUOROBIPHENYL	(SURR)	172	16.32	558	71562	41.18	UG/L	93
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.17~~	~~648~~	~~26421~~	~~10.56~~	~~UG/L~~	~~100~~
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.69	773	11956	54.30	UG/L	96
~~50)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.15~~	~~648~~	~~10069~~	~~32.45~~	~~UG/L~~	~~100~~
~~51)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.21~~	~~651~~	~~136~~	~~.41~~	~~UG/L~~	~~100~~
55)	*PHENANTHRENE-D10	(IS)	188	22.58	866	110165	40.00	UG/L	94
63)	DI-N-BUTYLPHTHALATE		149	25.16	993	4432	3.43	UG/L	99
65)	*CHRYSENE-D12	(IS)	240	30.73	1267	43832	40.00	UG/L	100
68)	TERPHENYL-D14	(SURR)	244	27.78	1122	21499	43.45	UG/L	100
74)	*PERYLENE-D12	(IS)	264	34.81	1468	38288	40.00	UG/L	100
76)	BENZO(B)FLUORANTHENE		252	33.88	1422	944	1.88	UG/L	100
~~76)~~	~~BENZO(B)FLUORANTHENE~~		~~252~~	~~33.96~~	~~1426~~	~~165~~	~~.33~~	~~UG/L~~	~~100~~
~~77)~~	~~BENZO(K)FLUORANTHENE~~		~~252~~	~~33.88~~	~~1422~~	~~944~~	~~1.55~~	~~UG/L~~	~~100~~
~~77)~~	~~BENZO(K)FLUORANTHENE~~		~~252~~	~~33.96~~	~~1426~~	~~165~~	~~.27~~	~~UG/L~~	~~100~~
~~78)~~	~~BENZO(A)PYRENE~~		~~252~~	~~34.65~~	~~1455~~	~~461~~	~~.80~~	~~UG/L~~	~~100~~
~~78)~~	~~BENZO(A)PYRENE~~		~~252~~	~~34.67~~	~~1461~~	~~457~~	~~.91~~	~~UG/L~~	~~100~~

* Compound is ISTD

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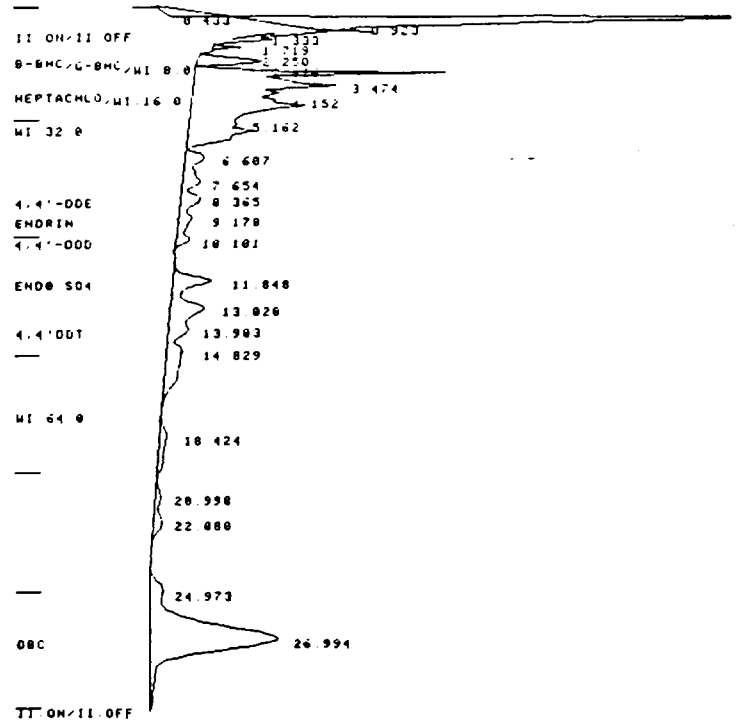
ATTEN: 0 ZERO: 10% 5 MIN/TICK



CHANNEL: 1A - 1 TITLE: RUN# 26 10:55 9 DEC 86

DC-SS-44

SAMPLE: 9810.03.19A1 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG WET	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	WI/2 (SEC)
Bank 1	~~B-BHC~~	6.4651	2.250	0.020	79684	BV	? 6.63
2	~~G-BHC~~	2.0167	2.362	-0.078	65660	VV	? 7.19
3		0.0000	2.826		62676	VV	? 9.88
4		0.0000	2.975		266752	VV	7.19
5		0.0000	3.474		441197	VV	? 31.50
6	~~HEPTACHLO~~	6.7067	3.812	-0.078	167279	VV	? 24.38
7		0.0000	4.152		144433	VV	? 18.81
8		0.0000	4.374		448930	VV	? 43.00
9		0.0000	5.162		87154	VV	? 37.13
10	~~HEPT. EPOX~~	8.9802	5.500	-0.320	275525	VV	? 52.75
11		0.0000	6.607		81071	VV	29.94
12	~~A-ENDO~~	3.3932	7.654	0.424	97205	VV	42.00
13	~~4,4'-DDE~~	3.3363	8.365	0.035	91909	VV	28.13
14	~~ENDRIN~~	3.0406	9.178	-0.222	73549	VV	17.69
15	~~4,4'-DDD~~	1.8218	10.101	-0.349	43653	VB	14.88
16	~~ENDO SO4~~	8.5483	11.848	-0.422	169303	BV	27.81
17		0.0000	13.028		200629	VV	41.00
18	~~4,4'DDT~~	6.2166	13.903	0.253	90270	VV	? 38.56
19		0.0000	14.829		203574	VB	66.06
20		0.0000	18.424		87093	BV	60.31
21	~~METHOXYCH~~	3.6657	20.998	0.928	34553	VV	38.75
22		0.0000	22.080		56287	VB	34.81
23		0.0000	24.973		81697	BV	? 53.13
24	DBC 87%	54.3438	26.994	-0.376	1294584	VB	70.00
TOTALS:		108.5348		-0.185	4644667		

DETECTED PKS: 36 REJECTED PKS: 12

DIVISOR: 1.50000 MULTIPLIER: 1000.00000

NOISE: 34.3 OFFSET: 12

NOTES:
NOTEBOOK:259-52 ANALYST:RICHARD SAMSON
SECURE AREA:D JOB# U-4474
INST:VARIAN 6000#2 A 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
AUTOSAMPLER
PEST/PCB ANALYSIS

POST RUN:
SAVE FILE: RAW D.CREEK3549

SAMPLE NUMBER DG-SS-45

450

481095

Sample Number
DC-SS-45

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc. Case No: U-4465

Lab Sample ID No: 9771 QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: [signature] Date Sample Received: 11-13-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-19-86

Conc./Dil Factor: 3 pH 7.6

Percent Moisture: (Not Decanted) 21

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	65 B
67-64-1	Acetone	28 J
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	30u
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	15u
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	15u
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	30u
591-78-6	2-Hexanone	30u
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	15u
108-90-7	Chlorobenzene	15u
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

Data Reporting Qualifiers

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

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

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

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

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

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

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

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Sample Number
DC-SS-45 RE

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4465

Lab Sample ID No: 9771-RE QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: C Stoytowicz Date Sample Received: 11-13-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-25-86

Conc./Dil Factor: 3 pH 7.6

Percent Moisture: (Not Decanted) 21

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	51 B
67-64-1	Acetone	17 BJ
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	30u
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	15u
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	15u
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	30u
591-78-6	2-Hexanone	30u
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	15u
108-90-7	Chlorobenzene	15u
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

Data Reporting Qualifiers

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

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

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

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

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

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

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

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Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No V-4465

Sample Number DC-SS-45

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 11-14-86

Date Analyzed 12-2-86

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	420	U
111-44-4	bis(-2-Chloroethyl)Ether	420	U
95-57-8	2-Chlorophenol	420	U
541-73-1	1 3-Dichlorobenzene	420	U
106-46-7	1 4-Dichlorobenzene	420	U
100-51-6	Benzyl Alcohol	420	U
95-50-1	1, 2-Dichlorobenzene	420	U
95-48-7	2-Methylphenol	420	U
39638-32-9	bis(2-chloroisopropyl)Ether	420	U
106-44-5	4-Methylphenol	420	U
621-64-7	N-Nitroso-Di-n-Propylamine	420	U
67-72-1	Hexachloroethane	420	U
98-95-3	Nitrobenzene	420	U
78-59-1	Isophorone	420	U
88-75-5	2-Nitrophenol	420	U
105-67-9	2, 4-Dimethylphenol	420	U
65-85-0	Benzoic Acid	2000	U
111-91-1	bis(-2-Chloroethoxy)Methane	420	U
120-83-2	2 4-Dichlorophenol	420	U
120-82-1	1, 2, 4-Trichlorobenzene	420	U
91-20-3	Naphthalene	420	U
106-47-8	4-Chloroaniline	420	U
87-68-3	Hexachlorobutadiene	420	U
59-50-7	4-Chloro-3-Methylphenol	420	U
91-57-6	2-Methylnaphthalene	420	U
77-47-4	Hexachlorocyclopentadiene	420	U
88-06-2	2 4 6-Trichlorophenol	420	U
95-95-4	2, 4, 5-Trichlorophenol	2000	U
91-58-7	2-Chloronaphthalene	420	U
88-74-4	2-Nitroaniline	2000	U
131-11-3	Dimethyl Phthalate	420	U
208-96-8	Acenaphthylene	420	U
99-09-2	3-Nitroaniline	2000	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	420	U
51-28-5	2, 4-Dinitrophenol	2000	U
100-02-7	4-Nitrophenol	2000	U
132-64-9	Dibenzofuran	420	U
121-14-2	2 4-Dinitrotoluene	420	U
606-20-2	2 6-Dinitrotoluene	420	U
84-66-2	Diethylphthalate	420	U
7005-72-3	4-Chlorophenyl-phenylether	420	U
86-73-7	Fluorene	420	U
100-01-6	4-Nitroaniline	2000	U
534-52-1	4, 6-Dinitro-2-Methylphenol	2000	U
86-30-6	N-Nitrosodiphenylamine (1)	420	U
101-55-3	4-Bromophenyl-phenylether	420	U
118-74-1	Hexachlorobenzene	420	U
87-86-5	Pentachlorophenol	2000	U
85-01-8	Phenanthrene	420	U
120-12-7	Anthracene	420	U
84-74-2	Di-n-Butylphthalate	1500	B
206-44-0	Fluoranthene	420	U
129-00-0	Pyrene	420	U
85-68-7	Butylbenzylphthalate	420	U
91-94-1	3, 3'-Dichlorobenzidine	840	U
56-55-3	Benzo(a)Anthracene	420	U
117-81-7	bis(2-Ethylhexyl)Phthalate	420	U
218-01-9	Chrysene	420	U
117-84-0	Di-n-Octyl Phthalate	79	BJ
205-99-2	Benzo(b)Fluoranthene	420	U
207-08-9	Benzo(k)Fluoranthene	420	U
50-32-8	Benzo(a)Pyrene	420	U
193-39-5	Indeno(1 2, 3-cd)Pyrene	420	U
53-70-3	Dibenz(a h)Anthracene	420	U
191-24-2	Benzo(g h i)Perylene	420	U

(1)-Cannot be separated from diphenylamine

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Laboratory Name ecology and environment, inc.

Case No U-4465

Sample Number DC-SS-45

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-14-86

Date Analyzed 11-25-86

Conc/Dil Factor 1

Percent Moisture (decanted) 20.9

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 u
319-85-7	Beta-BHC	16 u
319-86-8	Delta-BHC	16 u
58-89-9	Gamma-BHC (Lindane)	16 u
76-44-8	Heptachlor	16 u
309-00-2	Aldrin	16 u
1024-57-3	Heptachlor Epoxide	16 u
959-98-8	Endosulfan I	16 u
60-57-1	Dieldrin	32 u
72-55-9	4,4'-DDE	32 u
72-20-8	Endrin	32 u
33213-65-9	Endosulfan II	32 u
72-54-8	4,4'-DDD	32 u
1031-07-8	Endosulfan Sulfate	32 u
50-29-3	4,4'-DDT	32 u
72-43-5	Methoxychlor	160 u
53494-70-5	Endrin Ketone	32 u
57-74-9	Chlordane	160 u
8001-35-2	Toxaphene	320 u
12674-11-2	Aroclor-1016	160 u
11104-28-2	Aroclor-1221	160 u
11141-16-5	Aroclor-1232	160 u
53469-21-9	Aroclor-1242	160 u
12672-29-6	Aroclor-1248	160 u
11097-69-1	Aroclor-1254	320 u
11096-82-5	Aroclor-1260	320 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 30 V_t 1000 V_i 4

Laboratory Name ecology and environment, inc.

Case No U-4465

Sample Number DC-SS-45

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number min.	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.4	5 BJ
2.	Hexane isomer	VOA	21.5	15 BJ
3.				
4.	UNKNOWN	B/A	7.0	1400 BJ
5.	UNKNOWN	L	20.4	720 BJ
6.	UNKNOWN	L	343	510 BJ
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
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29.				
30				

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Laboratory Name ecology and environment, inc.

Case No U-4465

Sample Number DC-SS-45-RE

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.	No TIC is Volatile fraction			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
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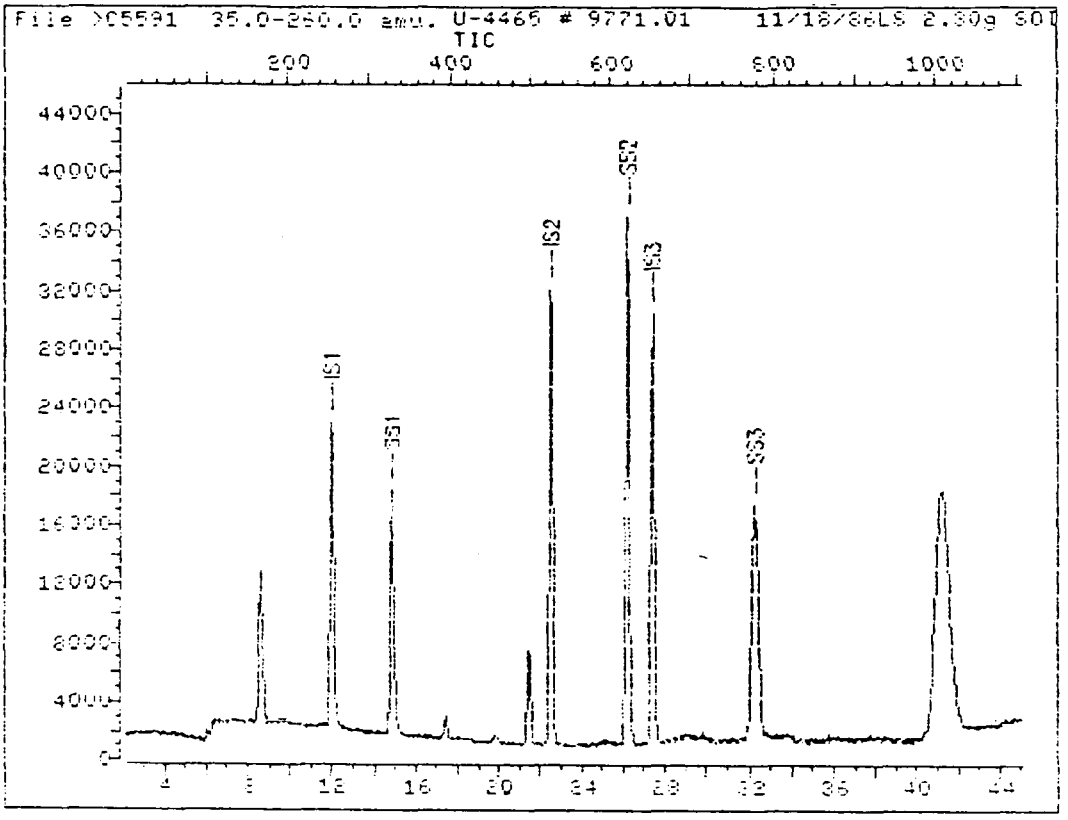
30				

TOTAL ION CHROMATOGRAM

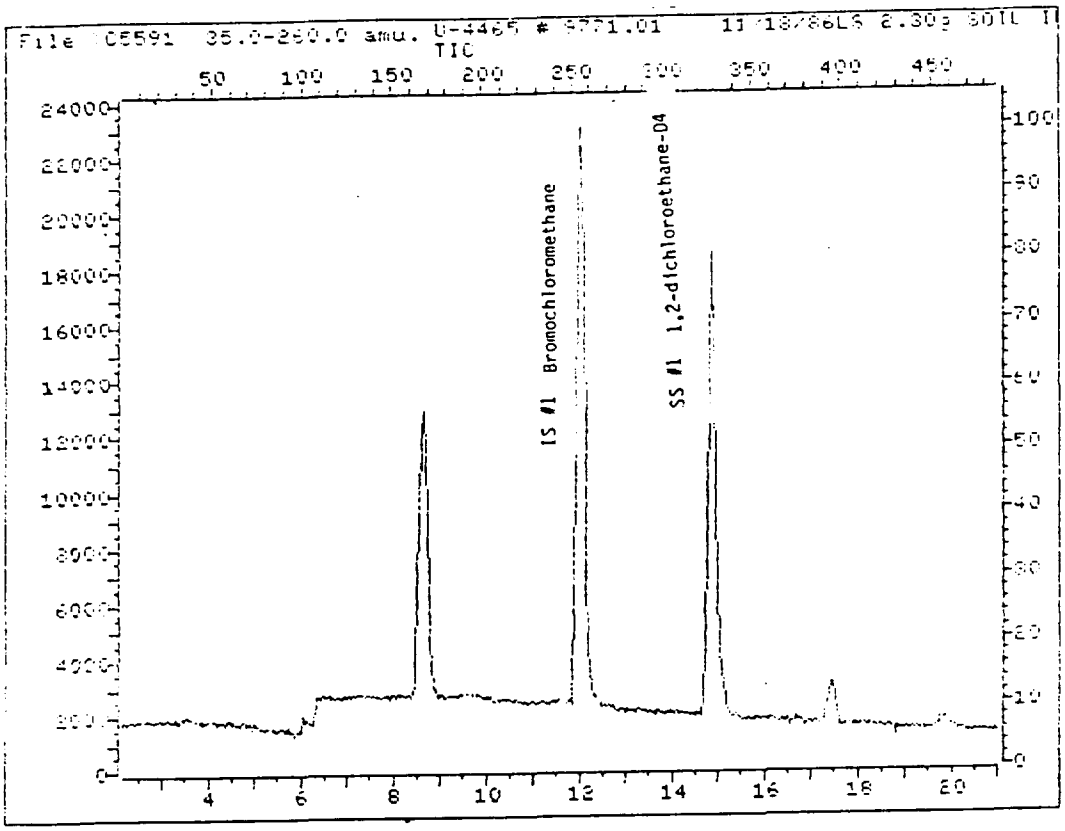


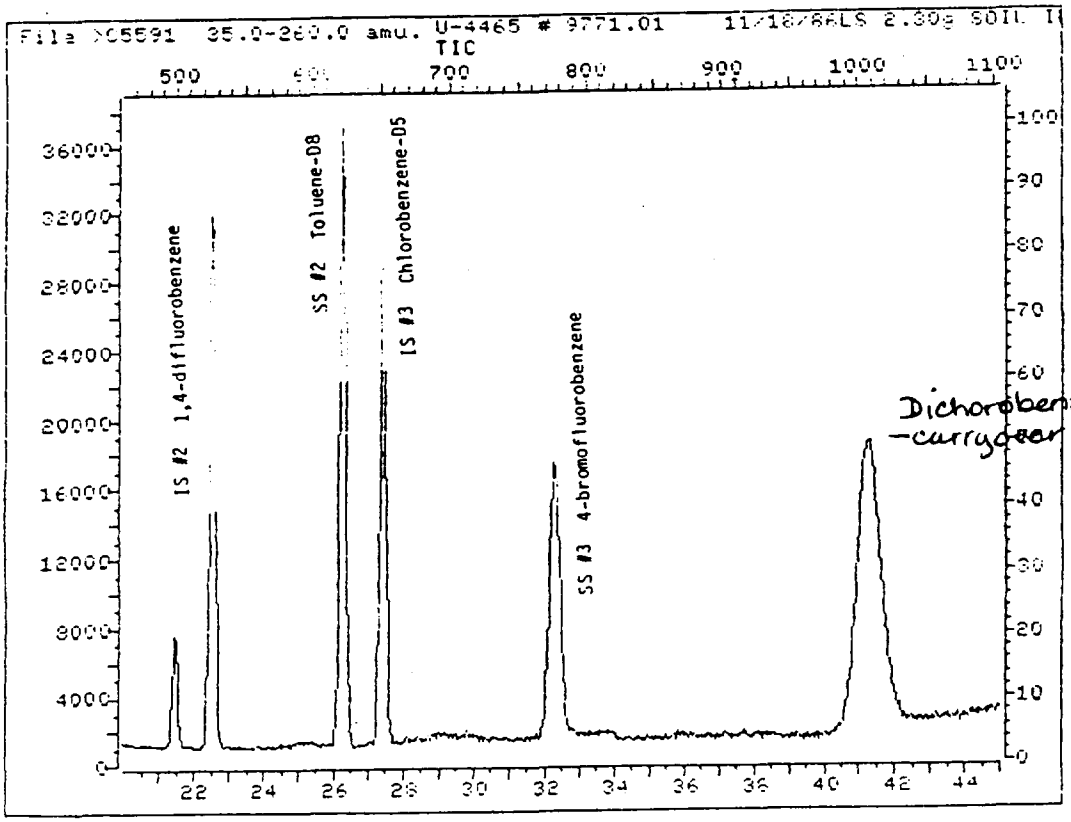
Data File: >C5591::D3
Name: U-4465 # 9771.01 DC-SS-45
Misc: 11/18/86LS 2.30g SOIL IN 5ML DI + 10UL IS/SS

Id File: VOAC45::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861118 22:56

Operator ID: USER8
Quant Time: 861119 04:02
Injected at: 861119 03:16

DC-SS-45





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QUANT REPORT

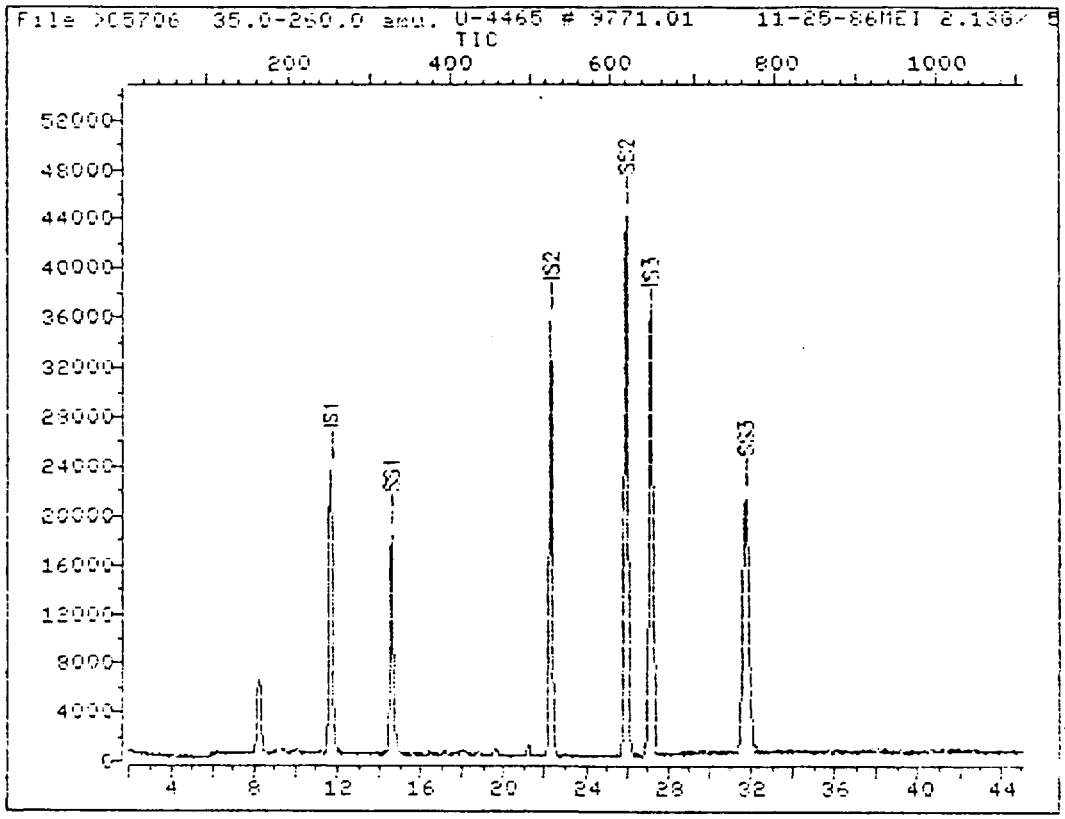
Operator ID: USER8 Quant Rev: 4 Quant Time: 861119 04:02
Output File: ^C5591::Q2 Injected at: 861119 03:16
Data File: >C5591::D3 Dilution Factor: 1.00
Name: U-4465 # 9771.01 DC-SS-45
Misc: 11/18/86LS 2.30g SOIL IN 5ML DI + 10UL IS/SS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861118 22:56

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	12.01	255	33421	250.00	NGS	100
6)	METHYLENE CHLORIDE		84	8.63	168	28525	117.94	NGS	100
7)	ACETONE		43	9.53	191	3417	49.91	NGS	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.84	328	71722	216.98	NGS	90
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.52	526	141613	250.00	NGS	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.42	652	100756	250.00	NGS	100
36)	TOLUENE-D8	(SURR)	98	26.25	622	146403	243.49	NGS	95
40)	4-BROMOFLUOROBENZENE	(SURR)	95	32.27	777	63771	176.46	NGS	100

* Compound is ISTD

.TAL ION CHROMATOGRAM

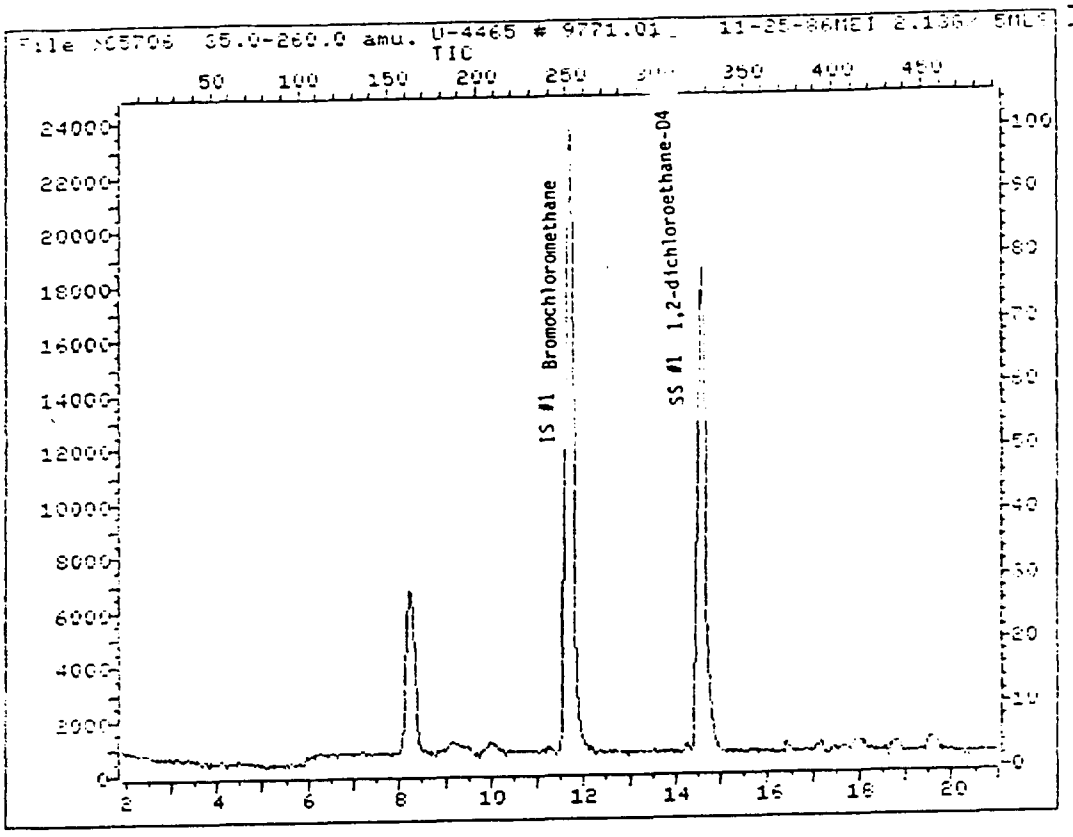


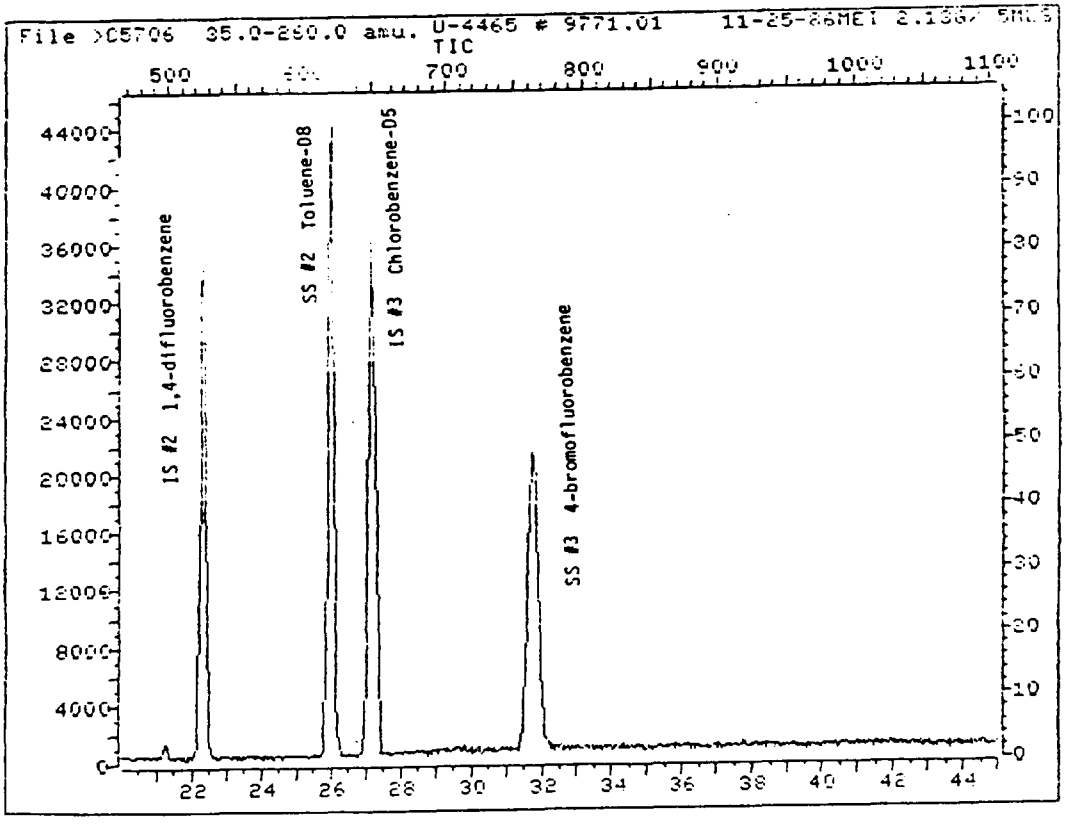
Data File: >C5706::D1
Name: U-4465 # 9771.01 DC-SS-45-RE
Misc: 11-25-86MEI 2.13G/ 5MLS DI + 10UL IS/SS

Id File: VOACRS::02
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861125 10:50

Operator ID: USER6
Quant Time: 861125 19:41
Injected at: 861125 18:55

DC-SS-45-RE





461

QUANT REPORT

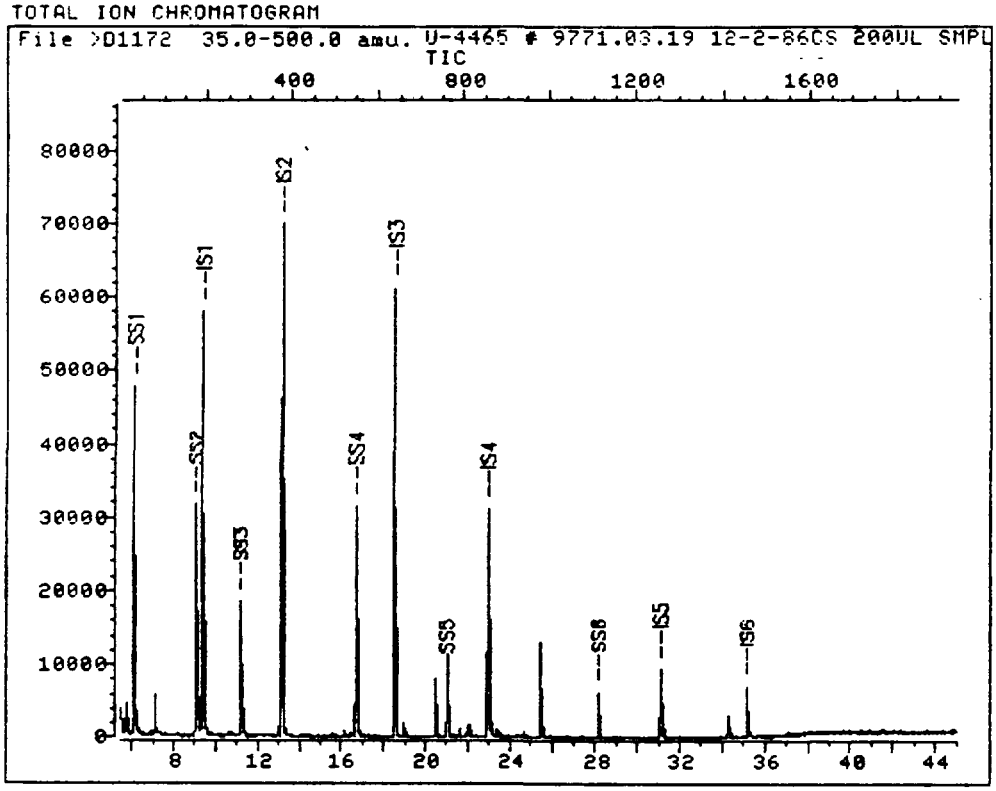
Operator ID: USER6 Quant Rev: 4 Quant Time: 861125 19:41
Output File: ^C5706::Q2 Injected at: 861125 18:55
Data File: >C5706::D1 Dilution Factor: 1.00
Name: U-4465 # 9771.01 DC-SS-45-RE
Misc: 11-25-86MEI 2.13G/ 5MLS DI + 10UL IS/SS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861125 10:50

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.67	252	34674	250.00	NGS	100
6)	METHYLENE CHLORIDE		84	8.22	163	17588	87.84	NGS	100
7)	ACETONE		43	9.23	189	3743	29.06	NGS	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.58	327	76536	219.61	NGS	88
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.30	526	150628	250.00	NGS	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.12	650	150102	250.00	NGS	100
36)	TOLUENE-D8	(SURR)	98	25.99	621	175846	205.39	NGS	94
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.75	764	75972	157.05	NGS	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >D1172::D3
Name: U-4465 # 9771.03.19 DC-SS-46
Misc: 12-2-86CS 200UL SMPL + 200UL MECL2 + 4UL IS (2X) BTL# 1

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861202 13:13

Operator ID: USER6
Quant Time: 861202 14:43
Injected at: 861202 13:56

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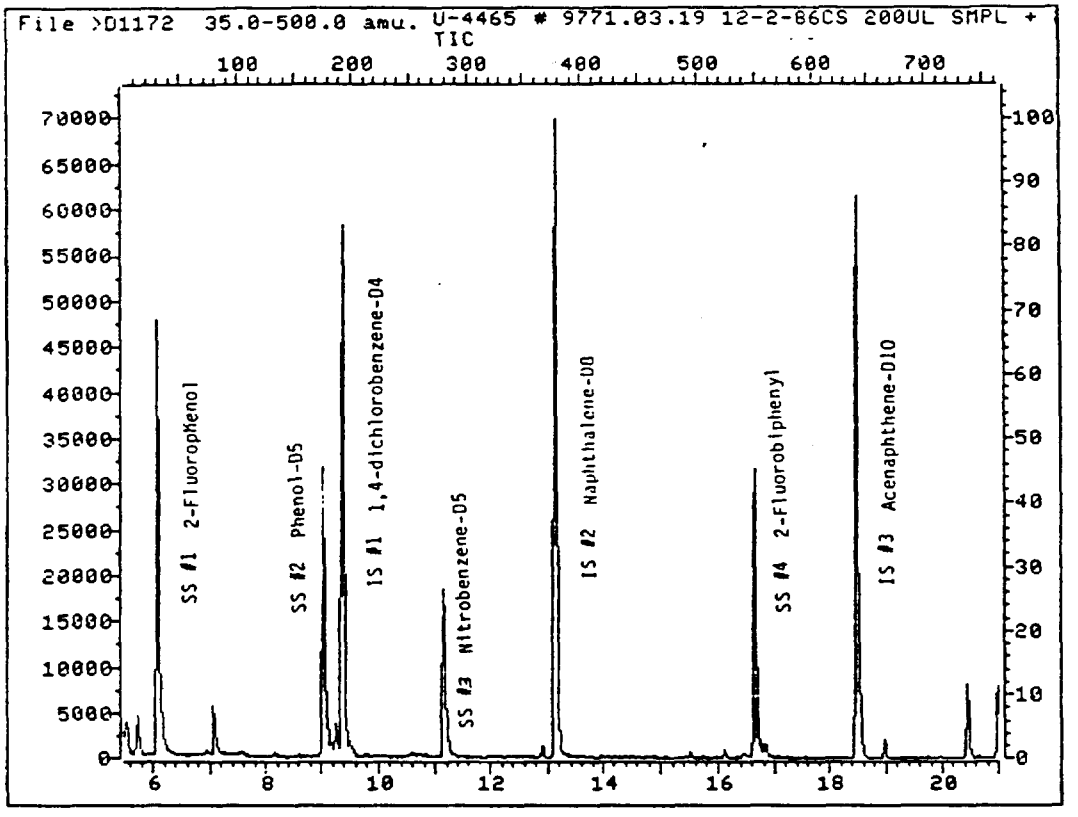
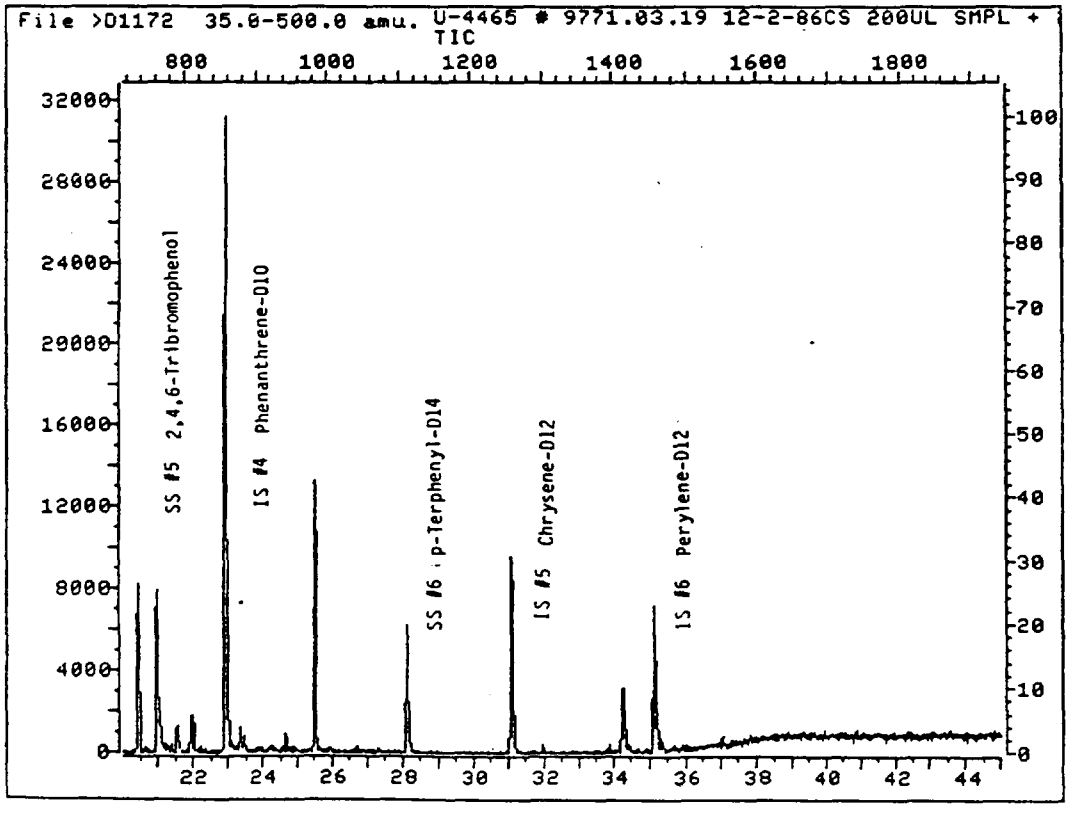
DC-SS-45





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QUANT REPORT

Operator ID: USER6 Quant Rev: 4 Quant Time: 861202 14:43
Output File: ^D1172::Q2 Injected at: 861202 13:56
ata File: >D1172::D3 Dilution Factor: 2:00
Name: U-4465 # 9771.03.19 DC-SS-45
Misc: 12-2-86CS 200UL SMPL + 200UL MECL2 + 4UL IS (2X) BTL# 1

ID File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861202 13:13

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.37	192	26558	40.00	UG/L	86
2)	PHENOL-D5	(SURR)	99	9.02	175	32701	65.02	UG/L	88
5)	2-FLUOROPHENOL	(SURR)	112	6.07	30	33382	90.65	UG/L	86
~~17)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.14~~	~~279~~	~~2898~~	~~6.51~~	~~UG/L~~	~~95~~
19)	*NAPHTHALENE-D8	(IS)	136	13.14	377	93337	40.00	UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	11.14	279	18801	42.44	UG/L	94
34)	*ACENAPHTHENE-D10	(IS)	162	18.50	640	39667	40.00	UG/L	98
38)	2-FLUOROBIPHENYL	(SURR)	172	16.66	550	37082	47.06	UG/L	91
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.50~~	~~640~~	~~12409~~	~~15.83~~	~~UG/L~~	100
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.96	761	6406	39.54	UG/L	99
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.50~~	~~640~~	~~5211~~	~~33.20~~	~~UG/L~~	100
55)	*PHENANTHRENE-D10	(IS)	188	22.92	857	48345	40.00	UG/L	98
63)	DI-N-BUTYLPHTHALATE		149	25.48	983	21777	36.37	UG/L	97
65)	*CHRYSENE-D12	(IS)	240	31.08	1258	19092	40.00	UG/L	100
68)	TERPHENYL-D14	(SURR)	244	28.13	1113	11086	36.88	UG/L	100
74)	*PERYLENE-D12	(IS)	264	35.14	1457	15325	40.00	UG/L	100
75)	DI-N-OCTYL PHTHALATE		149	33.87	1395	661	1.88	UG/L	100
~~76)~~	~~BENZO(B)FLUORANTHENE~~		~~252~~	~~34.22~~	~~1412~~	~~221~~	~~1.09~~	~~UG/L~~	100
~~76)~~	~~BENZO(B)FLUORANTHENE~~		~~252~~	~~34.26~~	~~1414~~	~~221~~	~~1.09~~	~~UG/L~~	100
~~77)~~	~~BENZO(K)FLUORANTHENE~~		~~252~~	~~34.22~~	~~1412~~	~~221~~	~~.76~~	~~UG/L~~	100
~~77)~~	~~BENZO(K)FLUORANTHENE~~		~~252~~	~~34.26~~	~~1414~~	~~221~~	~~.76~~	~~UG/L~~	100

* Compound is ISTD

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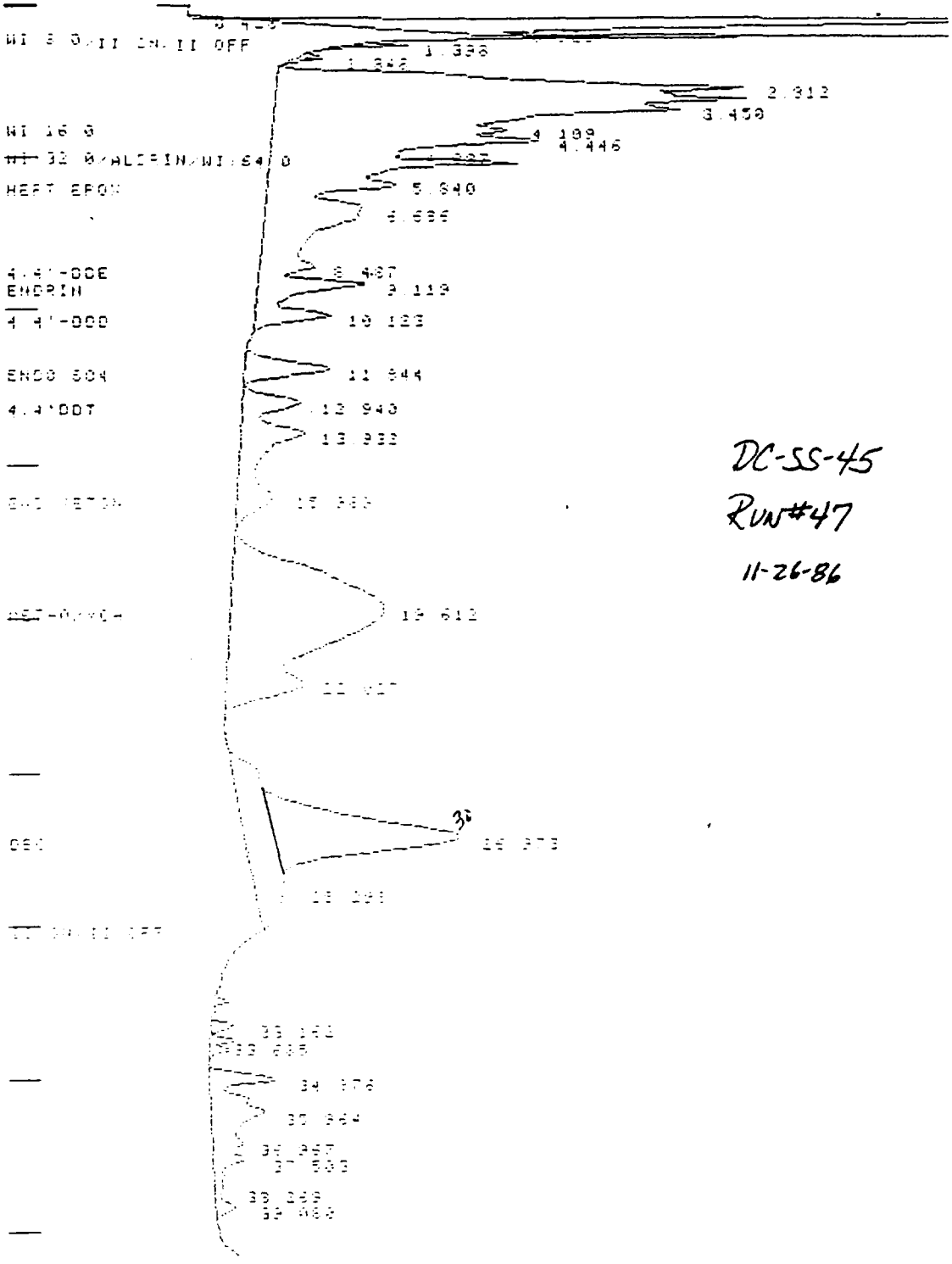
CHART SPEED 0.5 CM/MIN
ATTEN: 3 ZERO: 10% 5 MIN/TICK



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CHANNEL: 1A - 1 TITLE: RUN# ~~23~~ 47 22:54 25 NOV 88

SAMPLE: 9771 DF=1 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG WET	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.398		30982	BB	3.3[illegible]
2		0.0000	2.812		1211172	VV	? 18.05
3		0.0000	2.983		243136	VV	? 6.55
4		0.0000	3.135		597173	VV	? 21.19
5		0.0000	3.450		1160977	VV	?110.50
6	~~HEPTACHLO~~	14.2316	4.109	0.269	374171	VV	? 39.00
7		0.0000	4.446		664718	VV	? 39.63
8	~~ALDRIN~~	1.6347	4.887	0.147	51389	VV	?199.81
9		0.0000	5.179		591511	VV	18.55
10	~~HEPT EPOX~~	11.1584	5.856	0.096	326959	VV	? 30.63
11		0.0000	6.596		279935	VV	? 33.51
12	~~A-ENDO~~	15.5006	6.822	-0.328	428533	VV	? 63.88
13	~~DIELDRIN~~	5.0883	8.499	0.169	153573	VV	? 25.38
14	~~ENDRIN~~	14.3725	9.090	-0.190	305253	VV	19.94
15	~~[illegible]~~	7.6109	10.110	-0.220	194012	VB	19.06
16	~~[illegible]~~	11.9526	11.832	-0.278	247088	BV	29.56
17		0.0000	12.917		184642	VV	30.81
18	~~[illegible]~~	28.5453	13.913	0.443	342062	VV	34.63
19	~~[illegible]~~	6.3354	15.974	0.454	187387	VV	45.25
20	~~[illegible]~~	273.7792	19.595	-0.215	2307671	VV	?155.19
21		0.0000	22.022		406370	VB	? 59.[illegible]
22	DBC Base Line	34.2033	26.973	-0.057	1805052	BV	[illegible]
23		0.0000	28.298		214440	VB	?
24		0.0000	33.162		34894	BV	15.89
25		0.0000	33.685		53454	VV	? 16.00
26		0.0000	34.876		149708	VV	22.25
27		0.0000	35.964		282071	VV	59.[illegible]
28		0.0000	36.967		99515	VV	[illegible]
29		0.0000	37.503		93195	VV	[illegible]
30		0.0000	39.080		47550	VV	30.[illegible]

TOTALS: 477.4129 0.290 13155593

DETECTED PKS: 40 REJECTED PKS: 10

DIVISOR: 1.50000 MULTIPLIER: 1000.00000

NOISE: 59.8 OFFSET: -2

NOTES:
NOTEBOOK:259-41 ANALYST: K.JUREK/R.SAMSON
SECURE AREA: D JOB#:U-4465 DC-SS-45
INST:VARIAN 6000#2 A ECD 10X1
COLUMN: 8' 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
AUTOSAMPLER
PEST/PCB ANALYSIS

POST RUN: --
SAVE FILE: RA. SLY509

407

SAMPLE NUMBER DC-SS-46

481095

418

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Sample Number
DC-SS-46

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474
Lab Sample ID No: 9811 QC Report No:
Sample Matrix: Soil Contract No: IL-3140.
Data Release Authorized By: [signature] Date Sample Received: 11-14-86

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared:
Date Analyzed: 11-26-86
Conc/Dil Factor: 3 pH 9.0
Percent Moisture: (Not Decanted) 28

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	40 B
67-64-1	Acetone	18 BJ
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	54 B
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	15u
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	15u
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	30u
591-78-6	2-Hexanone	30u
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	15u
108-90-7	Chlorobenzene	15u
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

Data Reporting Qualifiers

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

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

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

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

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

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

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

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Laboratory Name Ecology & Environment Inc.

Case No V-4474

Sample Number DC-SS-46

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 1/2/87

Date Analyzed: 1/9/87

Conc/Dil Factor: 2

Percent Moisture (Decanted) 28

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	460	U
111-44-4	bis(-2-Chloroethyl)Ether	460	U
95-57-8	2-Chlorophenol	460	U
541-73-1	1 3-Dichlorobenzene	460	U
106-46-7	1. 4-Dichlorobenzene	460	U
100-51-6	Benzyl Alcohol	460	U
95-50-1	1. 2-Dichlorobenzene	460	U
95-48-7	2-Methylphenol	460	U
39638-32-9	bis(2-chloroisopropyl)Ether	460	U
106-44-5	4-Methylpheno	460	U
621-64-7	N-Nitroso-Di-n-Propylamine	460	U
67-72-1	Hexachloroethane	460	U
98-95-3	Nitrobenzene	460	U
78-59-1	Isophorone	460	U
88-75-5	2-Nitrophenol	460	U
105-67-9	2. 4-Dimethylphenol	460	U
65-85-0	Benzoic Acid	2200	U
111-91-1	bis(-2-Chloroethoxy)Methane	460	U
120-83-2	2. 4-Dichlorophenol	460	U
120-82-1	1. 2. 4-Trichlorobenzene	460	U
91-20-3	Naphthalene	460	U
106-47-8	4-Chloroaniline	460	U
87-68-3	Hexachlorobutadiene	460	U
59-50-7	4-Chloro-3-Methylphenol	460	U
91-57-6	2-Methylnaphthalene	460	U
77-47-4	Hexachlorocyclopentadiene	460	U
88-06-2	2 4. 6-Trichlorophenol	460	U
95-95-4	2. 4. 5-Trichlorophenol	2200	U
91-58-7	2-Chloronaphthalene	460	U
88-74-4	2-Nitroaniline	2200	U
131-11-3	Dimethyl Phthalate	460	U
208-96-8	Acenaphthylene	460	U
99-09-2	3-Nitroaniline	2200	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	460	U
51-28-5	2. 4-Dinitrophenol	2200	U
100-02-7	4-Nitrophenol	2200	U
132-64-9	Dibenzofuran	460	U
121-14-2	2 4-Dinitrotoluene	460	U
606-20-2	2. 6-Dinitrotoluene	460	U
84-66-2	Diethylphthalate	460	U
7005-72-3	4-Chlorophenyl-phenylether	460	U
86-73-7	Fluorene	460	U
100-01-6	4-Nitroaniline	2200	U
534-52-1	4. 6-Dinitro-2-Methylphenol	2200	U
86-30-6	N-Nitrosodiphenylamine (1)	460	U
101-55-3	4-Bromophenyl-phenylether	460	U
118-74-1	Hexachlorobenzene	460	U
87-86-5	Pentachlorophenol	2200	U
85-01-8	Phenanthrene	460	U
120-12-7	Anthracene	460	U
84-74-2	Di-n-Butylphthalate	1600	B
206-44-0	Fluoranthene	460	U
129-00-0	Pyrene	460	U
85-68-7	Butylbenzylphthalate	460	U
91-94-1	3. 3'-Dichlorobenzidine	920	U
56-55-3	Benzo(a)Anthracene	460	U
117-81-7	bis(2-Ethylhexyl)Phthalate	240	J
218-01-9	Chrysene	460	U
117-84-0	Di-n-Octyl Phthalate	460	U
205-99-2	Benzo(b)Fluoranthene	460	U
207-08-9	Benzo(k)Fluoranthene	460	U
50-32-8	Benzo(a)Pyrene	460	U
193-39-5	Indeno(1 2. 3-cd)Pyrene	460	U
53-70-3	Dibenzo(a h)Anthracene	460	U
191-24-2	Benzo(g h. i)Perylene	460	U

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No U-4474

Sample Number DC-SS-46

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration Low Medium (Circle One)

Date Extracted/Prepared 11-18-86

Date Analyzed 12-9-86

Conc/Dil Factor 1

Percent Moisture (decanted) 27.7

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 u
319-85-7	Beta-BHC	16 u
319-86-8	Delta-BHC	16 u
58-89-9	Gamma-BHC (Lindane)	16 u
76-44-8	Heptachlor	16 u
309-00-2	Aldrin	16 u
1024-57-3	Heptachlor Epoxide	16 u
959-98-8	Endosulfan I	16 u
60-57-1	Dieldrin	32 u
72-55-9	4,4'-DDE	32 u
72-20-8	Endrin	32 u
33213-65-9	Endosulfan II	32 u
72-54-8	4,4'-DDD	32 u
1031-07-8	Endosulfan Sulfate	32 u
50-29-3	4,4'-DDT	32 u
72-43-5	Methoxychlor	160 u
53494-70-5	Endrin Ketone	32 u
57-74-9	Chlordane	160 u
8001-35-2	Toxaphene	320 u
12674-11-2	Aroclor-1016	160 u
11104-28-2	Aroclor-1221	160 u
11141-16-5	Aroclor-1232	160 u
53469-21-9	Aroclor-1242	160 u
12672-29-6	Aroclor-1248	160 u
11097-69-1	Aroclor-1254	320 u
11096-82-5	Aroclor-1260	320 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 30 V_t 1,000 V_i 4

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Laboratory Name ecology and environment, inc.

Case No 11-1/1/71

Sample Number DC-SS-46

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.	No TIC's in VOA fraction			
2.				
3.	UNKNOWN HYDROCARBON	BNA	20.2	1200 BJ
4.	UNKNOWN HYDROCARBON	1	21.7	500 J
5.	UNKNOWN		34.0	30000 BJ
6.				
7.				
8.				
9.				
10.				
11.				
12.				
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16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30				

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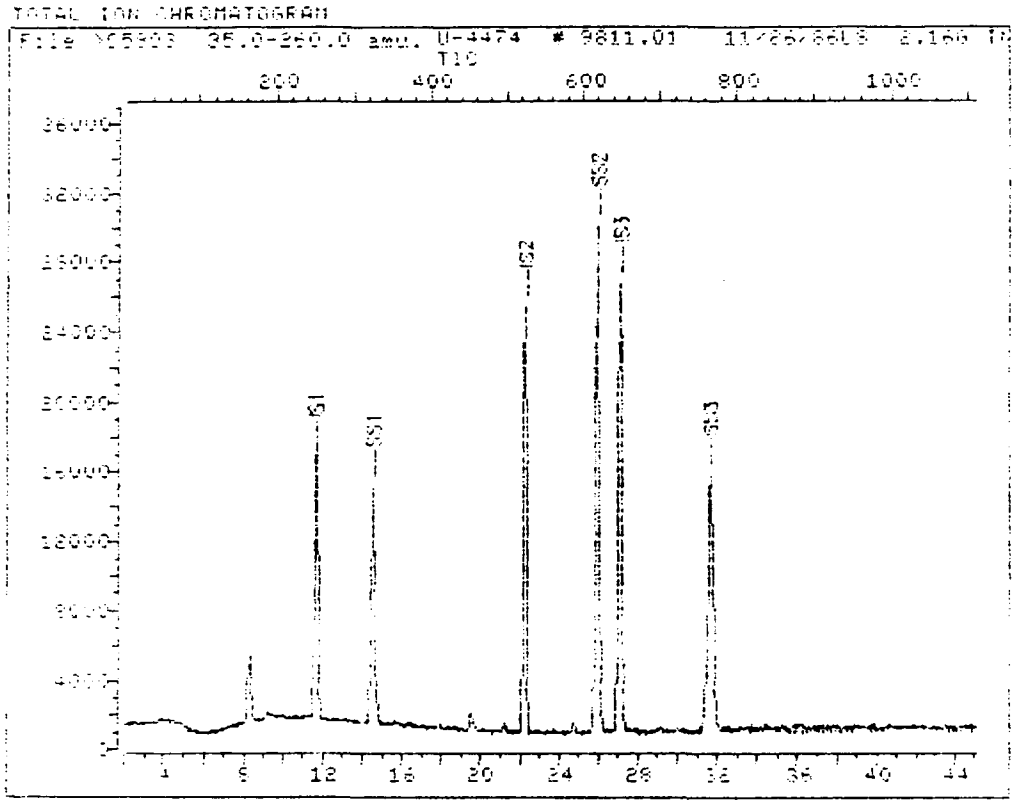

Data File: >C9803::03
Name: U-4474 # 9811.01 DC-SS-46
Misc: 11/26/86LS 2.16G IN 5 MLS DI + 10 ULS IS/SS

Id File: VOACRS::02
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861126 11:52

Operator ID: USER6
Quant Time: 861126 15:39
Injected at: 861126 14:53

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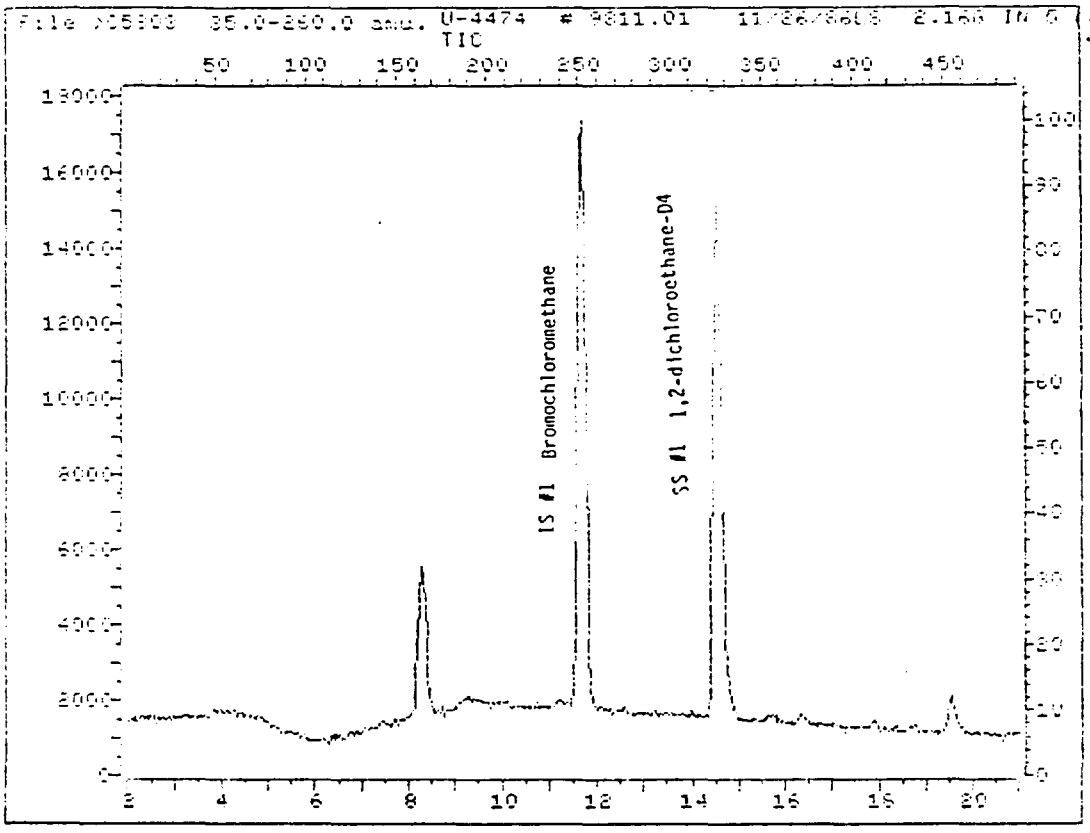
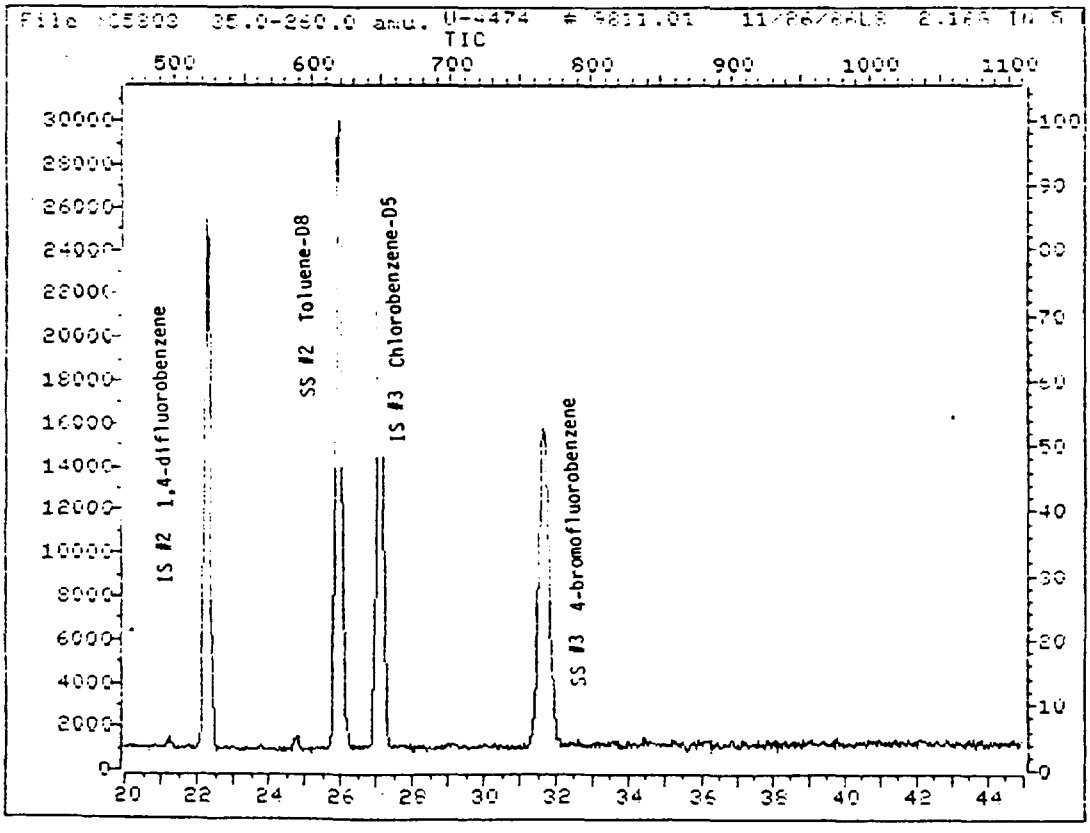
DC-SS-46





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QUANT REPORT

Operator ID: USER6 Quant Rev: 4 Quant Time: 861126 15:39
Output File: ^C5803::02 Injected at: 861126 14:5[illegible]
Data File: >C5803::03 Dilution Factor: 1.0[illegible]
Name: U-4474 # 9811.01 DC-SS-46
Misc: 11/26/86LS 2.16G IN 5 MLS DI + 10 ULS IS/SS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861126 11:52

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.65	251	22619	[illegible]	NGS	100
6)	METHYLENE CHLORIDE		84	8.27	164	9973	62.19	NGS	100
7)	ACETONE		43	9.28	190	3990	28.36	NGS	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.52	325	54453	175.75	NGS	84
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.24	524	103162	250.00	NGS	100
17)	2-BUTANONE		72	14.67	329	2714	83.66	NGS	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.09	649	[illegible]	[illegible]	NGS	100
36)	TOLUENE-D8	(SURR)	98	25.93	619	113531	[illegible]	NGS	[illegible]
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.64	766	52889	[illegible]	NGS	100

* Compound is ISTD

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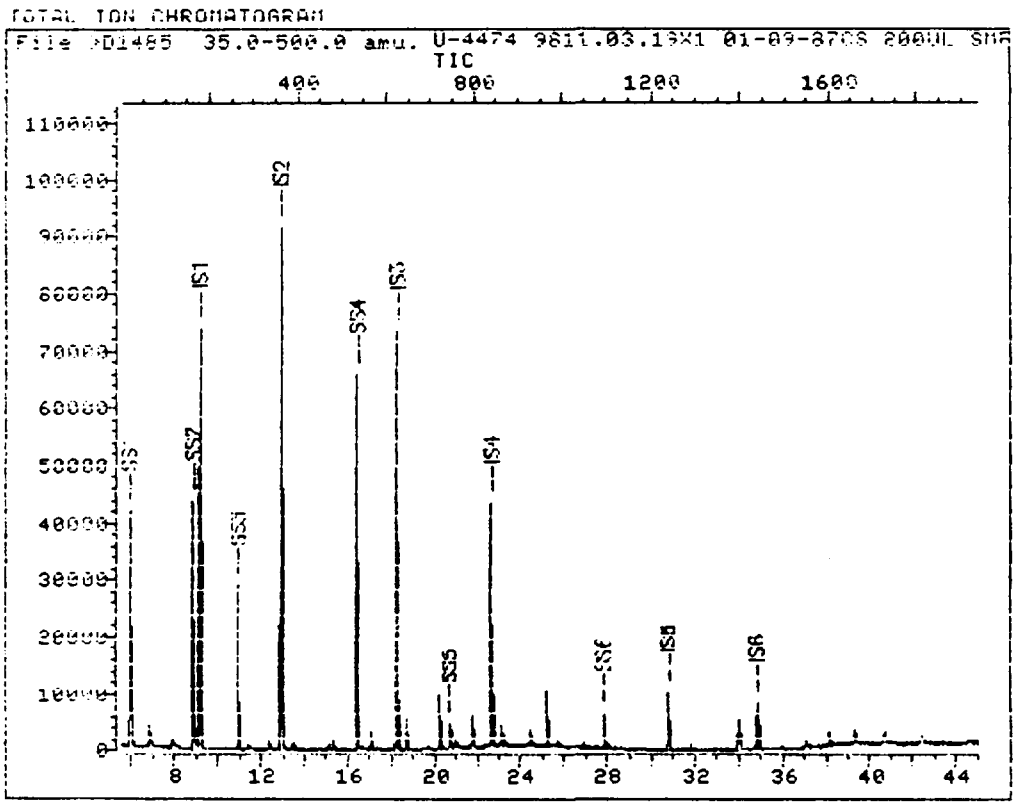

Data File: >D1485::D3
Name: U-4474 9811.03.19X1 DC-SS-46
Misc: 01-09-87CS 200UL SMPL + 200UL MECL2 + 4UL IS (2X) BTL# 1

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870109 14:56

Operator ID: USER6
Quant Time: 870109 16:15
Injected at: 870109 15:27

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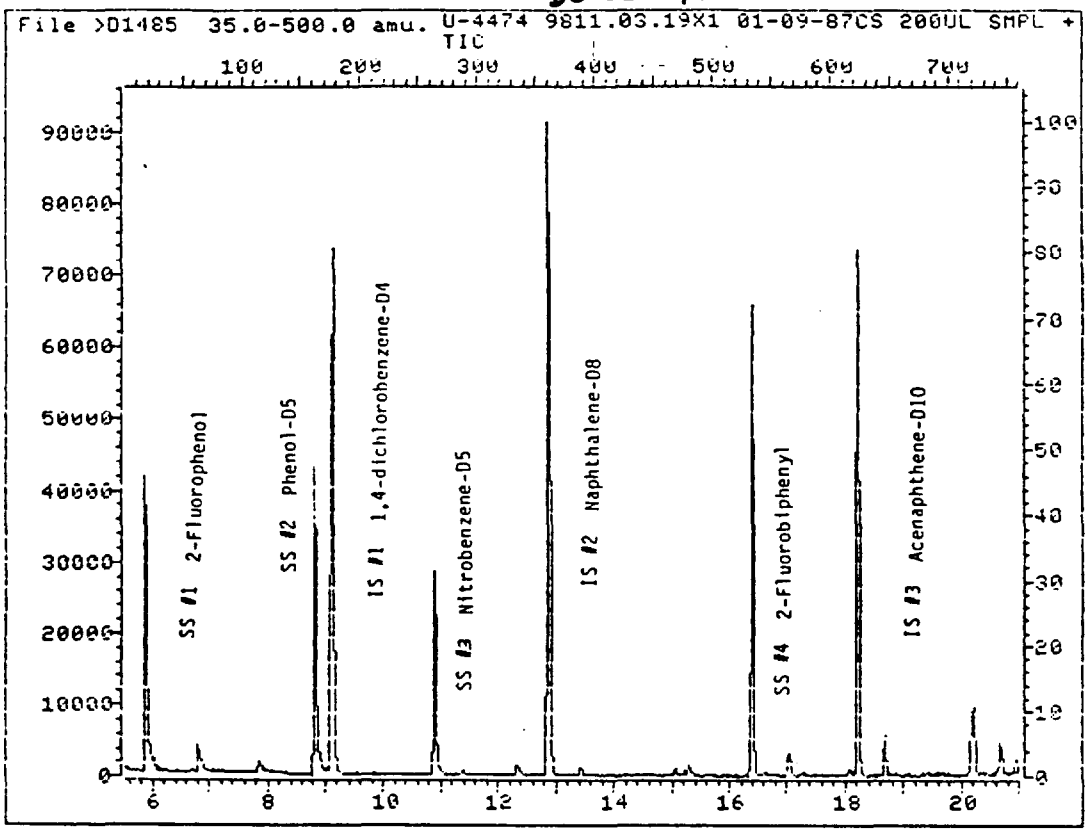
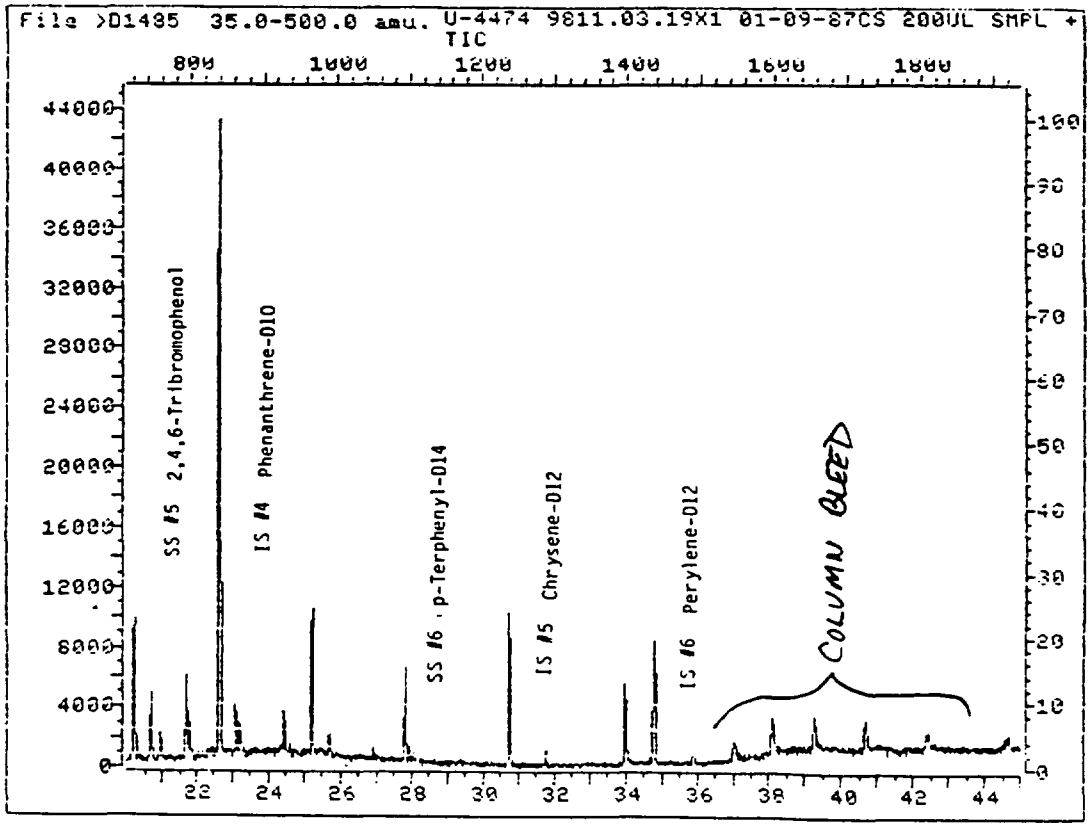
DC-SS-46





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QUANT REPORT --

Operator ID: USER6 Quant Rev: 4 Quant Time: 870109 16:15
Output File: ^D1485::D2 Injected at: 870109 15:27
Data File: >D1485::D3 Dilution Factor: 2.00
Name: U-4474 9811.03.19X1 DC-SS-46
Misc: 11-09-87CS 200UL SMPL + 200UL MECL2 + 4UL IS (2X) Bot # 1

ID File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870109 14:56

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.13	177	34386	40.00	UG/L	87
2)	PHENOL-D5	(SURR)	99	8.83	162	37313	61.89	UG/L	100
5)	2-FLUOROPHENOL	(SURR)	112	5.87	17	33962	26.79	UG/L	99
~~[illegible]~~	~~1,3-DICHLOROBENZENE~~		~~146~~	~~9.17~~	~~179~~	~~346~~	~~.68~~	~~UG/L~~	98
~~10)~~	~~1,4-DICHLOROBENZENE~~		~~146~~	~~9.17~~	~~179~~	~~346~~	~~.68~~	~~UG/L~~	96
~~[illegible]~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~10.00~~	~~264~~	~~3045~~	~~8.05~~	~~UG/L~~	86
19)	*NAPHTHALENE-D8	(IS)	136	12.88	361	115117	40.00	UG/L	100
[illegible]	NITROBENZENE-D5	(SURR)	82	10.90	264	22211	30.74	UG/L	96
~~[illegible]~~	~~NAPHTHALENE~~		~~128~~	~~12.94~~	~~364~~	~~1111~~	~~.94~~	~~UG/L~~	100
[illegible]	2-METHYLNAPHTHALENE		142	15.08	469	1056	1.29	UG/L	99
~~[illegible]~~	~~2-METHYLNAPHTHALENE~~		~~142~~	~~15.36~~	~~489~~	~~595~~	~~.64~~	~~UG/L~~	86
34)	*ACENAPHTHENE-D10	(IS)	162	18.22	623	46796	40.00	UG/L	99
38)	2-FLUOROBIPHENYL	(SURR)	172	16.40	534	56368	54.25	UG/L	95
~~[illegible]~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.24~~	~~654~~	~~14664~~	~~15.68~~	~~UG/L~~	100
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.68	744	2501	18.21	UG/L	95
~~[illegible]~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.42~~	~~623~~	~~5768~~	~~34.45~~	~~UG/L~~	100
56)	*PHENANTHRENE-D10	(IS)	188	22.64	840	48083	40.00	UG/L	92
63)	DI-N-BUTYLPHTHALATE		149	25.22	967	16008	35.17	UG/L	99
65)	*CHRYSENE-D12	(IS)	240	30.75	1238	13863	40.00	UG/L	100
68)	TERPHENYL-D14	(SURR)	244	27.83	1095	9340	49.46	UG/L	100
72)	BIS(2-ETHYLHEXYL)PHTHALATE		149	31.78	1289	734	5.08	UG/L	93
74)	*PERYLENE-D12	(IS)	264	34.80	1437	11540	40.00	UG/L	100

~~10) 11) 12) 19) 20) 21) 34) 38) 48) 56) 65) 68) 72) 74)~~ No GPM

~~21) 34) 38) 48) 56) 65) 68) 72) 74)~~ No GPM

~~21) 34) 38) 48) 56) 65) 68) 72) 74)~~ No GPM

~~21) 34) 38) 48) 56) 65) 68) 72) 74)~~ No GPM

* Compound is ISTD

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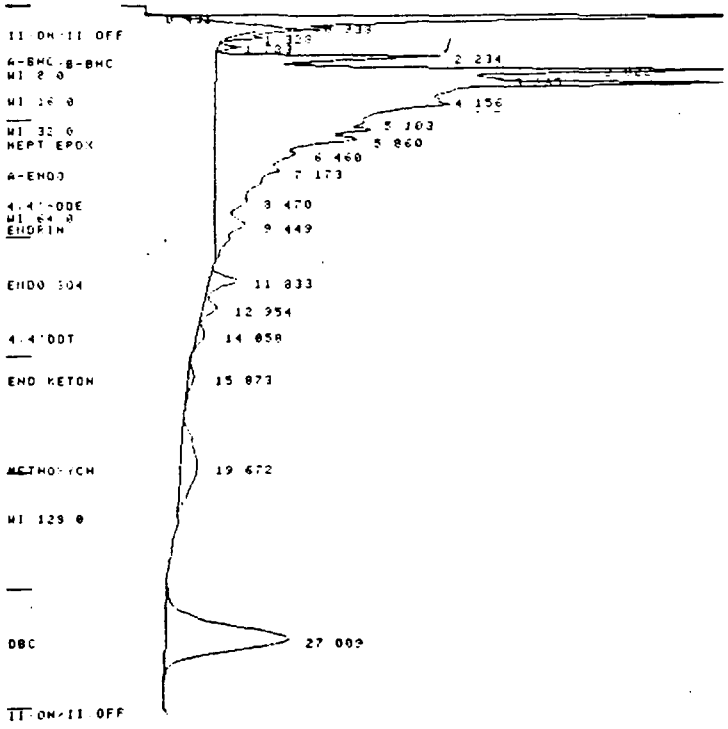
CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 10% 5 MIN/TICK



DC-SS-46

CHANNEL: 1A - 1 TITLE: RUN# 28 12:15 9 DEC 86

SAMPLE: 9811.03.19A1 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	1.783		26360	VB	5.94
2	B-BHC	20.3994	2.234	0.004	251428	BV	? 5.19
3	~~B-BHC~~	4.3742	2.350	-0.090	142419	VV	? 9.00
4		0.0000	2.822		554344	VV	? 9.19
5		0.0000	2.963		761566	VV	? 11.00
6		0.0000	3.285		438700	VV	? 18.25
7		0.0000	3.469		1598398	VV	? 15.81
8	~~HEPTACHLO~~	14.3362	4.156	0.266	357573	VV	? 15.88
9		0.0000	4.342		1063493	VV	? 33.44
10	~~ALDRIN~~	8.9715	5.103	0.303	292412	VV	? 82.31
11		0.0000	5.447		437545	VV	? 38.56
12	HEPT EPOX	17.2014	5.860	0.040	522766	VV	? 36.06
13		0.0000	6.460		336334	VV	? 47.06
14	~~A-ENDO~~	16.4311	7.173	-0.057	470706	VV	?128.19
15	~~DIELDRIN~~	4.4077	8.470	0.050	136669	VV	? 65.88
16	~~ENDRIN~~	8.5220	9.449	0.049	206138	VB	? 51.75
17	~~ENDO SO4~~	5.2988	11.833	-0.437	104945	BV	25.06
18		0.0000	12.954		64613	VV	23.44
19	~~4,4'DDT~~	2.5935	14.058	0.408	37659	VV	27.89
20	~~END KETON~~	1.4424	15.873	0.143	39902	VV	37.50
21	~~METHOXYCH~~	31.0682	19.672	-0.398	292852	VB	?142.31
22	DBC 75%	50.0301	27.009	-0.361	1191821	BB	68.69
TOTALS:		185.0764		-0.080	9325643		

DETECTED PKS: 33 REJECTED PKS: 11

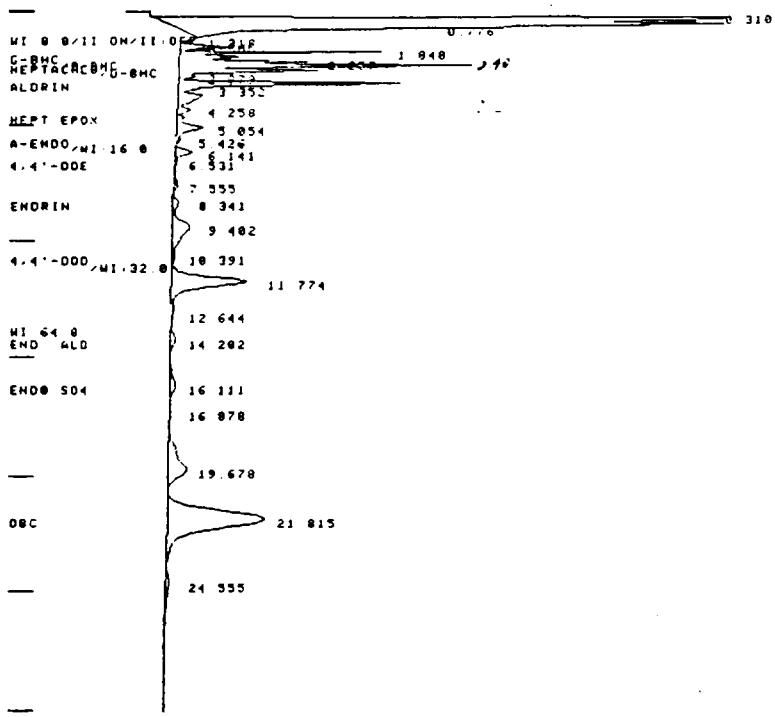
DIVISOR: 1.50000 MULTIPLIER: 1000.00000

NOISE: 22.9 OFFSET: -16

NOTES:
NOTEBOOK:259-52 ANALYST:RICHARD SAMSON
SECURE AREA:D JOB# U-4474
INST:VARIAN 6000#2 A 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
AUTOSAMPLER
PEST/PCB ANALYSIS

POST RUN:
SAVE FILE: RAW D.CREEK3551

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



CHANNEL: 1B - 1 TITLE: RUN# 18 11:07 18 DEC 86

DC-SS-46

SAMPLE: 9811.03.19A1 METHOD: PEPA 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		32914	VV	?	4.75
2	A-BHC	0.0000	1.598	-0.052	79720	VV	?	5.19
3		0.0000	1.848		248377	VV		4.44
4	G-BHC	0.0000	2.037	-0.063	193342	VV	?	8.94
5		0.0000	2.257		203350	VV	?	6.13
6	B-BHC 25.6	0.0000	2.399	0.029	472115	VV		5.88
7	HEPTACHLO	0.0000	2.584	0.024	302586	VV		7.25
8	D-BHC	0.0000	2.879	0.109	32734	VV	?	9.38
9	ALDRIN	0.0000	3.145	0.025	473136	VV		7.69
10		0.0000	3.352		35708	VV	?	7.13
11		0.0000	3.701		191297	VV	?	25.31
12		0.0000	4.258		44772	VV		10.81
13	HEPT EPOX	0.0000	4.624	-0.056	31956	VV		10.06
14		0.0000	5.054		139908	VV		13.69
15	A-ENDO	0.0000	6.141	0.241	70785	BV		14.50
16	ENDRIN	0.0000	8.341	-0.339	38567	VV		28.13
17		0.0000	9.402		238899	VV		40.13
18	4,4'-DDD	0.0000	10.391	0.091	21295	VV	?	56.25
19	4,4'DDT	0.0000	11.774	-0.636	635312	VV		27.88
20	END. ALD.	0.0000	14.169	0.239	45852	VB		30.38
21	ENDO SO4	0.0000	16.109	-0.301	57327	BB		40.44
22		0.0000	19.666		305400	BV		48.75
23	DBC	0.0000	21.794	-0.316	1395356	VB		50.88
24	METHOXYCH	0.0000	24.555	0.795	51890	BB		41.63
TOTALS:		0.0000		-0.210	5249598			

DETECTED PKS: 36 REJECTED PKS: 12

DIVISOR: 1.50000 MULTIPLIER: 1.00000

NOISE: 57.1 OFFSET: -11

NOTES:
NOTEBOOK:259-59 ANALYST:P. BRUTSCHER
SECURE AREA: D JOB#:U-4474
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
PESTICIDE/PCB CONFIRMATIONS
DEAD CREEK

POST RUN:
SAVE FILE: RAW D.C.#3765

SAMPLE NUMBER DC-SS-47

481095

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Sample Number
DC-SS-47

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474

Lab Sample ID No: 9812 QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: [signature] Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-21-86

Conc./Dil Factor: 3 pH 8.3

Percent Moisture: (Not Decanted) 12

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	32B
67-64-1	Acetone	33B
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	30B
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	15u
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	15u
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	30u
591-78-6	2-Hexanone	30u
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	15u
108-90-7	Chlorobenzene	15u
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

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 indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

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

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

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

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Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No U-4474

Sample Number DC-SS-47

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared 11-18-86

Date Analyzed: 12-22-86

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	380	U
111-44-4	bis(-2-Chloroethyl)Ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1 3-Dichlorobenzene	380	U
106-46-7	1 4-Dichlorobenzene	380	U
100-51-6	Benzyl Alcohol	380	U
95-50-1	1 2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
39638-32-9	bis(2-chloroisopropyl)Ether	380	U
106-44-5	4-Methylphenol	380	U
621-64-7	N-Nitroso-Di-n-Propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2. 4-Dimethylphenol	380	U
65-85-0	Benzoic Acid	1800	U
111-91-1	bis(-2-Chloroethoxy)Methane	380	U
120-83-2	2. 4-Dichlorophenol	380	U
120-82-1	1. 2. 4-Trichlorobenzene	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-Methylphenol	380	U
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2 4 6-Trichlorophenol	380	U
95-95-4	2. 4 5-Trichlorophenol	1800	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethyl Phthalate	380	U
208-96-8	Acenaphthylene	380	U
99-09-2	3-Nitroaniline	1800	U

CAS Number		ug/l or (ug/Kg) (Circle One)	
83-32-9	Acenaphthene	380	U
51-28-5	2. 4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	380	U
121-14-2	2 4-Dinitrotoluene	380	U
606-20-2	2 6-Dinitrotoluene	380	U
84-66-2	Diethylphthalate	380	U
7005-72-3	4-Chlorophenyl-phenylether	380	U
86-73-7	Fluorene	380	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4. 6-Dinitro-2-Methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine (1)	380	U
101-55-3	4-Bromophenyl-phenylether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
84-74-2	Di-n-Butylphthalate	230	J
206-44-0	Fluoranthene	380	U
129-00-0	Pyrene	380	U
85-68-7	Butylbenzylphthalate	380	U
91-94-1	3. 3 -Dichlorobenzidine	750	U
56-55-3	Benzo(a)Anthracene	380	U
117-81-7	bis(2-Ethylhexyl)Phthalate	380	U
218-01-9	Chrysene	380	U
117-84-0	Di-n-Octyl Phthalate	380	U
205-99-2	Benzo(b)Fluoranthene	380	U
207-08-9	Benzo(k)Fluoranthene	380	U
50-32-8	Benzo(a)Pyrene	380	U
193-39-5	Indeno(1 2. 3-cd)Pyrene	380	U
53-70-3	Dibenzo(a h)Anthracene	380	U
191-24-2	Benzo(g h i)Perylene	380	U

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No U-4474

Sample Number DC-SS-47

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-18-86

Date Analyzed 12-9-86

Conc/Dil Factor 2X

Percent Moisture (decanted) 12.6

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	32 u
319-85-7	Beta-BHC	32 u
319-86-8	Delta-BHC	32 u
58-89-9	Gamma-BHC (Lindane)	32 u
76-44-8	Heptachlor	32 u
309-00-2	Aldrin	32 u
1024-57-3	Heptachlor Epoxide	32 u
959-98-8	Endosulfan I	32 u
60-57-1	Dieldrin	64 u
72-55-9	4,4'-DDE	64 u
72-20-8	Endrin	64 u
33213-65-9	Endosulfan II	64 u
72-54-8	4,4'-DDD	64 u
1031-07-8	Endosulfan Sulfate	64 u
50-29-3	4,4'-DDT	64 u
72-43-5	Methoxychlor	320 u
53494-70-5	Endrin Ketone	64 u
57-74-9	Chlordane	320 u
8001-35-2	Toxaphene	640 u
12674-11-2	Aroclor-1016	320 u
11104-28-2	Aroclor-1221	320 u
11141-16-5	Aroclor-1232	320 u
53469-21-9	Aroclor-1242	320 u
12672-29-6	Aroclor-1248	320 u
11097-69-1	Aroclor-1254	640 u
11096-82-5	Aroclor-1260	640 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 30 V_t 1,000 V_i 4 µl

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Laboratory Name ecology and environment, inc.

Case No 11-41171

Sample Number
DC-SS-47

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.	No TIC's in VOA fraction			
2.				
3.	UNKNOWN	BNA	34.0	1700 J
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
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24.				
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26.				
27.				
28.				
29.				
30				

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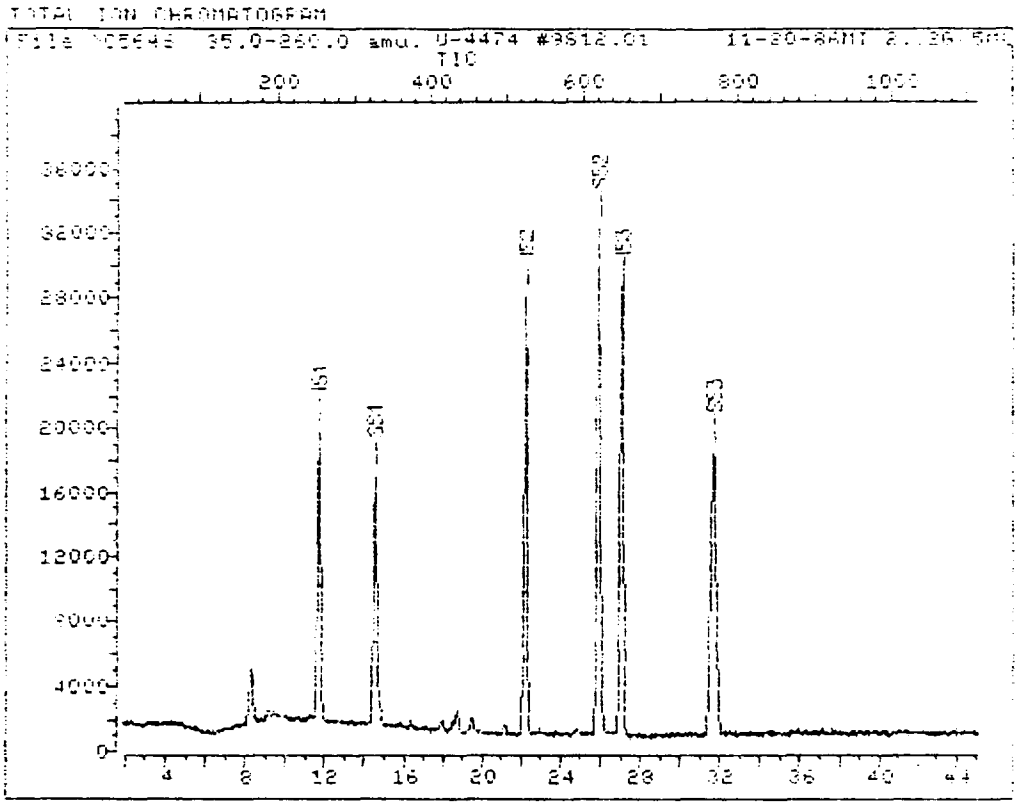

Data File: >C5646::D3
Name: U-4474 #9812.01 DC-SS-47
Misc: 11-20-86MI 2.32G/5MLS DI + 10UL IS/SS

Id File: VOALRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861120 23:54

Operator ID: USER8
Quant Time: 861121 09:07
Injected at: 861121 08:21

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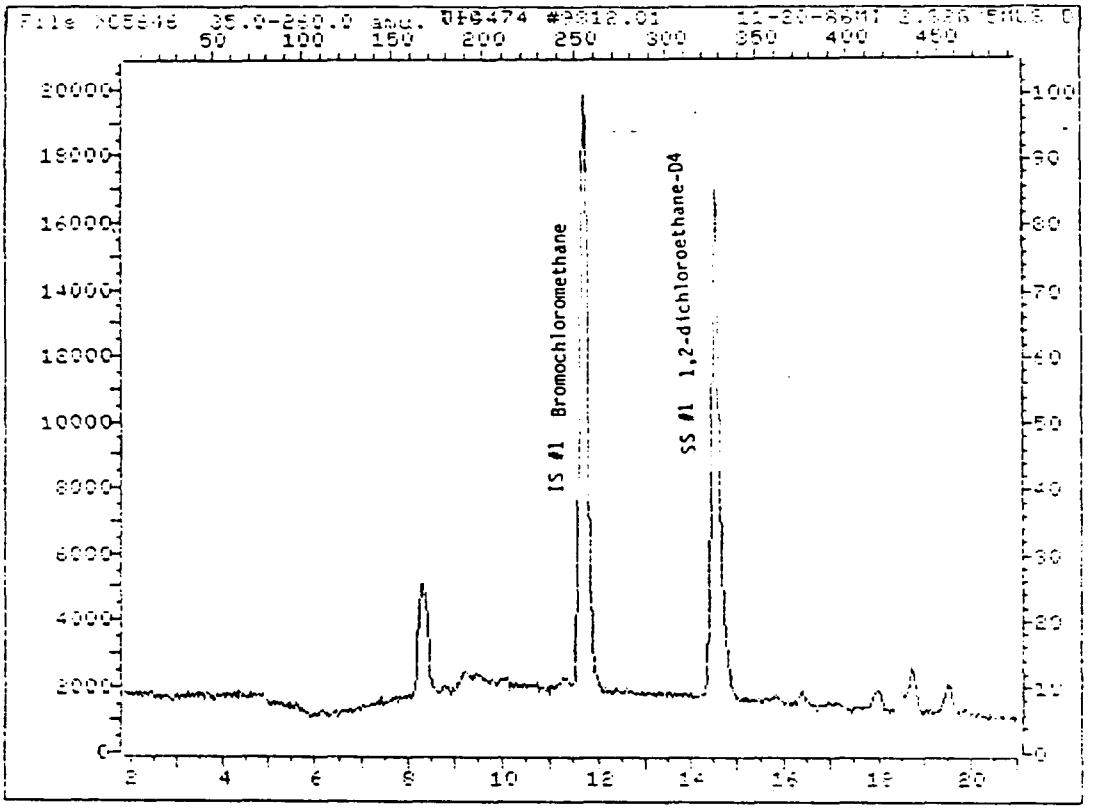
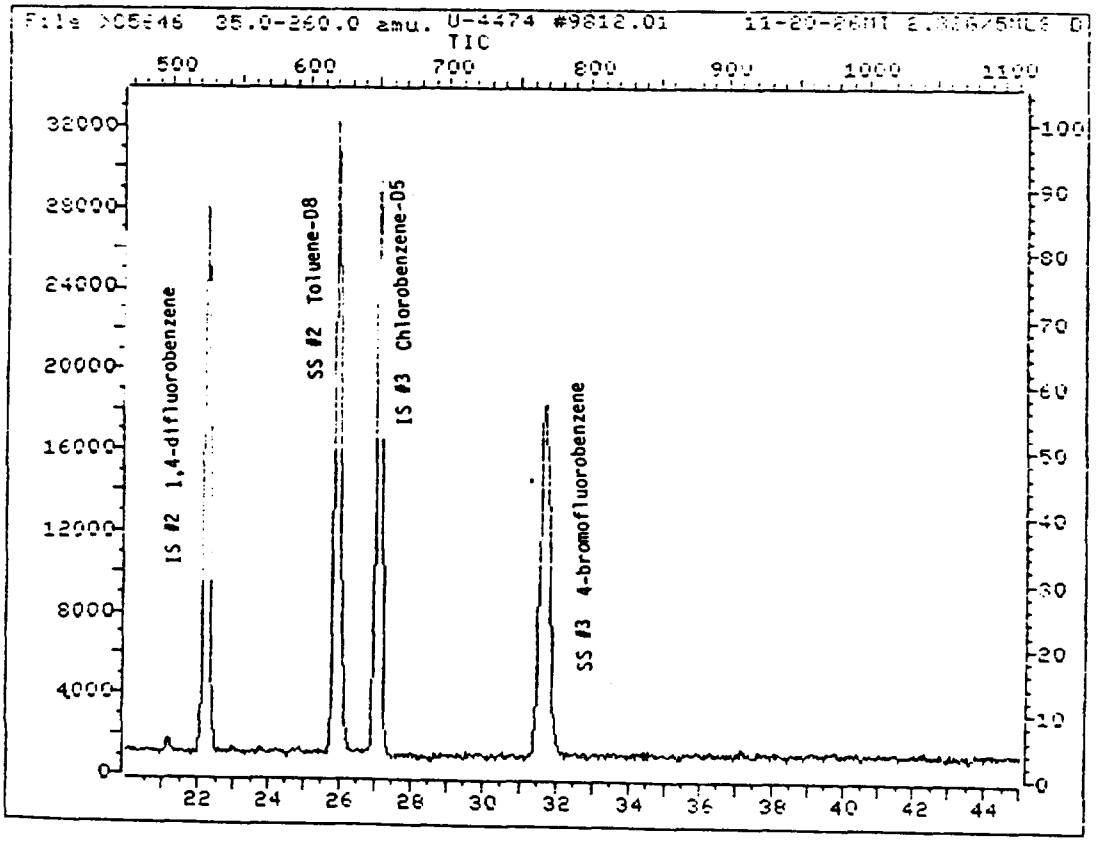
DC-SS-47





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QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861121 [illegible]
Output File: [illegible]05646::Q2 Injected at: 861121 [illegible]
Data File: [illegible]05646::D3 Dilution Factor: 1.00
Name: U-4474 #9812.01 DC-SS-47
Misc: 11-20-86MI 2.32G/5MLS D1 + 10UL IS/SS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861120 23:54

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.70	254	25896	[illegible]	NGS	100
6)	METHYLENE CHLORIDE		84	8.29	166	8806	[illegible]	NGS	100
7)	ACETONE		43	9.26	191	4202	[illegible]	NGS	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.53	327	61796	238.41	NGS	86
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.22	525	114027	[illegible]	NGS	100
17)	2-BUTANONE		72	14.73	332	2789	60.71	NGS	[illegible]
31)	*CHLOROBENZENE-D5	(IS)	117	27.07	550	90119	[illegible]	NGS	[illegible]
[illegible]	TOLUENE-D8	(SURR)	98	25.40	600	[illegible]	237.4[illegible]	[illegible]	[illegible]
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.69	769	64265	[illegible]	NGS	[illegible]

* Compound is ISTD

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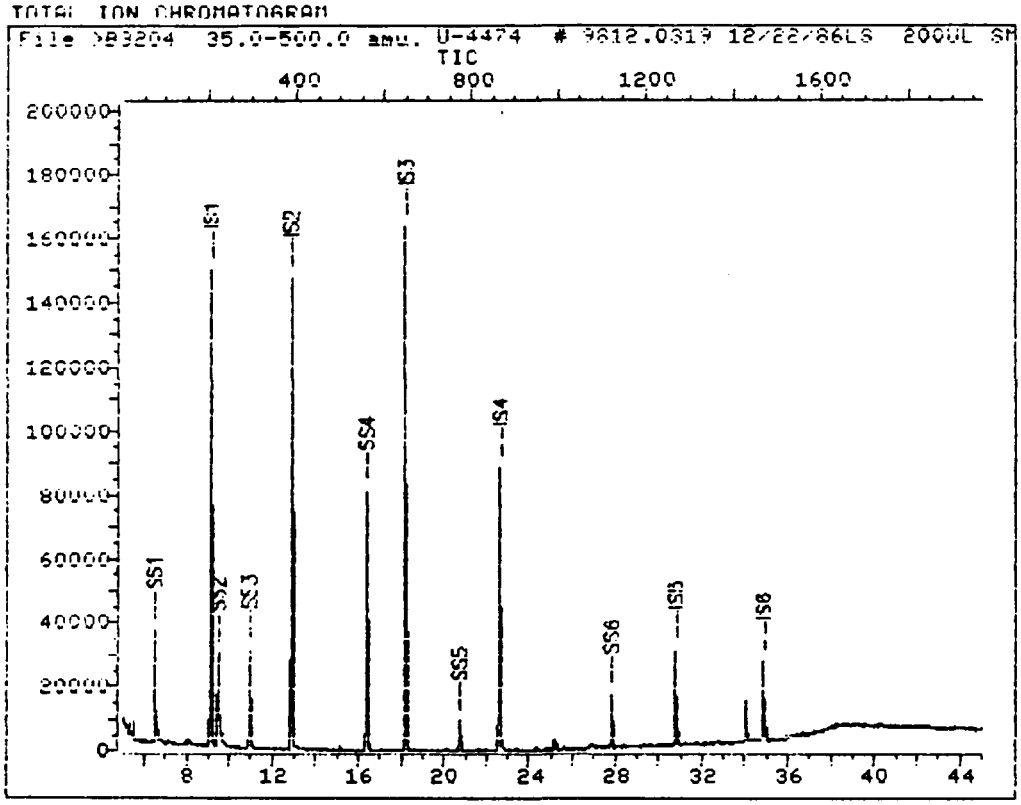
TOTAL ION CHROMATOGRAM



Data File: >B3204::D4
Name: U-4474 # 9812.0319 DC-SS-47
Misc: 12/22/86LS 200UL SMPL + 200UL MECL2 + 4UL IS

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861222 16:20

Operator ID: USER8
Quant Time: 861222 18:24
Injected at: 861222 17:36

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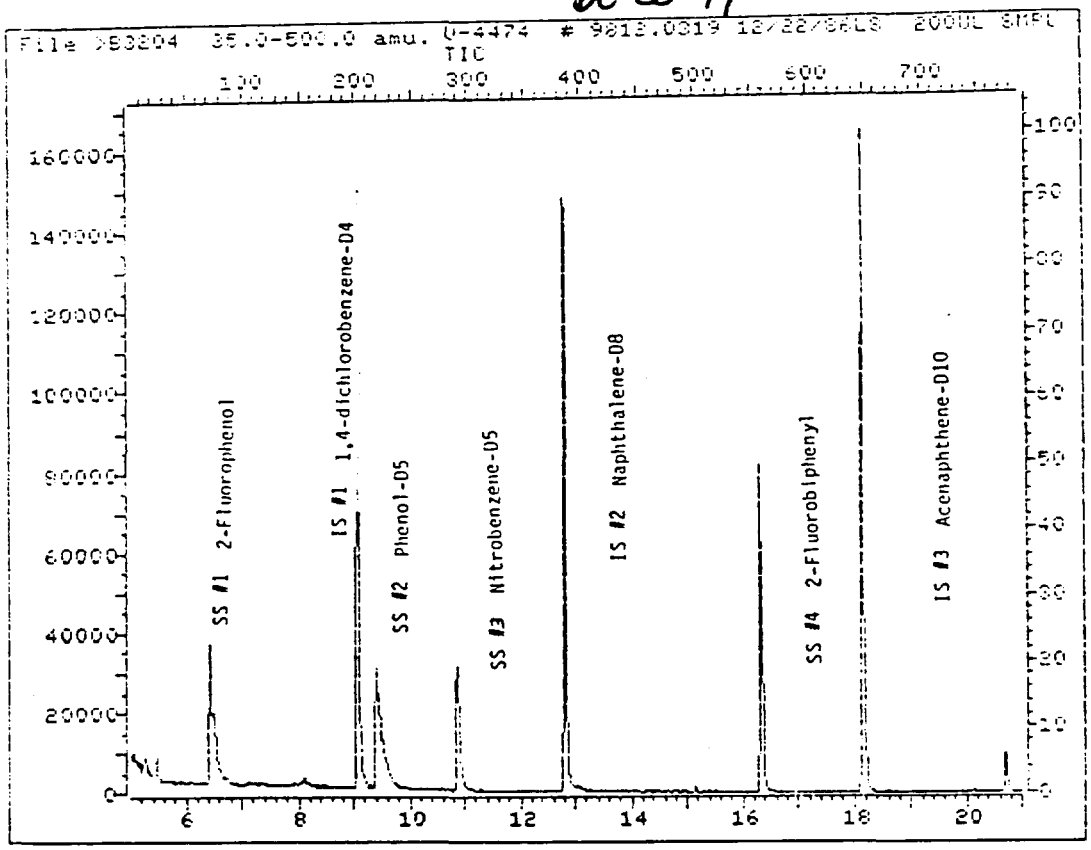
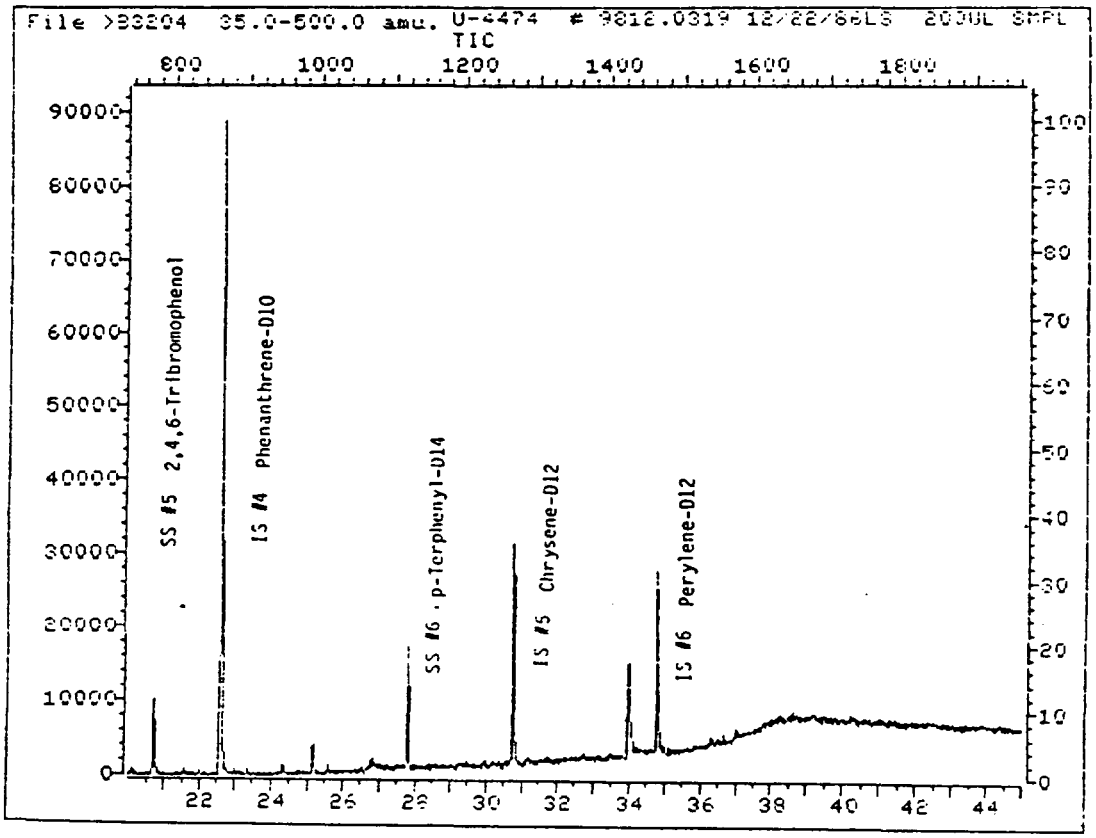
DC-SS-47





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QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861222 18:24
Output File: ^B3204::Q2 Injected at: 861222 17:36
Data File: >B3204::D4 Dilution Factor: 2.00
Name: U-4474 # 9812.0319 DC-SS-47
Misc: 12/22/86LS 200UL SMPL + 200UL MECL2 + 4UL IS

ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861222 16:20

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.09	202	62414	40.00	UG/L	85
2)	PHENOL-D5	(SURR)	99	9.40	217	81362	95.01	UG/L	89
5)	2-FLUOROPHENOL	(SURR)	112	6.43	71	22258	31.27	UG/L	74
~~17)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~10.88~~	~~290~~	~~5019~~	~~6.49~~	~~UG/L~~ No BFH	88
19)	*NAPHTHALENE-D8	(IS)	136	12.81	385	215808	40.00	UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	10.88	290	35392	37.11	UG/L	93
~~29)~~	~~NAPHTHALENE~~		~~128~~	~~12.97~~	~~388~~	~~768~~	~~.30~~	~~UG/L~~ No BFH	100
34)	*ACENAPHTHENE-D10	(IS)	162	18.16	648	85799	40.00	UG/L	98
38)	2-FLUOROBIPHENYL	(SURR)	172	16.33	558	71525	40.93	UG/L	94
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.16~~	~~648~~	~~25131~~	~~15.90~~	~~UG/L~~ No BFH	100
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.70	773	5868	26.50	UG/L	98
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.16~~	~~648~~	~~10931~~	~~32.45~~	~~UG/L~~ No BFH	100
55)	*PHENANTHRENE-D10	(IS)	188	22.59	866	101404	40.00	UG/L	97
63)	DI-N-BUTYLPHTHALATE		149	25.17	993	7288	6.12	UG/L	98
65)	*CHRYSENE-D12	(IS)	240	30.74	1267	39865	40.00	UG/L	100
68)	TERPHENYL-D14	(SURR)	244	27.79	1122	19735	43.85	UG/L	100
74)	*PERYLENE-D12	(IS)	264	34.81	1467	34735	40.00	UG/L	100

* Compound is ISTD

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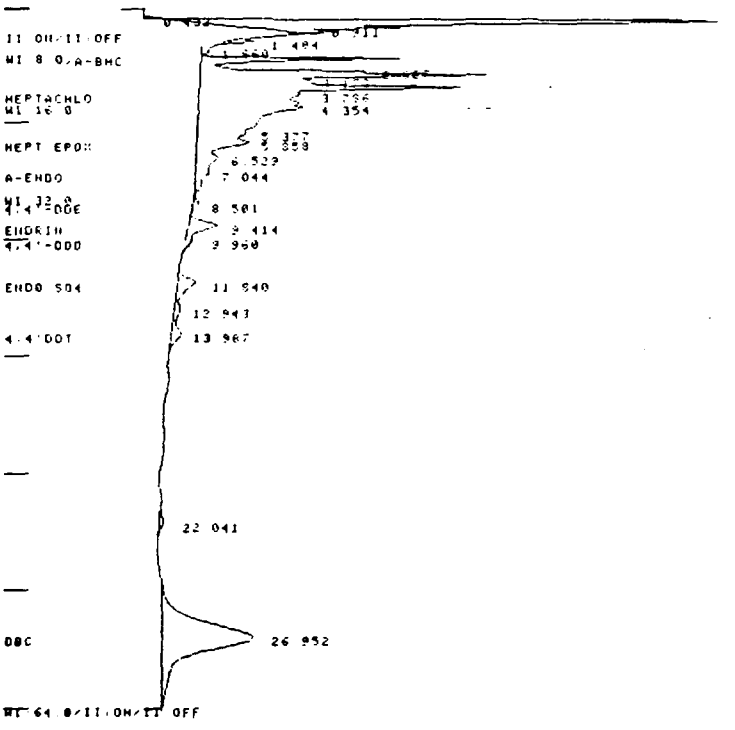
DC-SS-47

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



CHANNEL: 1A - 1 TITLE: RUN# 29 13:56 9 DEC 86

SAMPLE: 9812.03.19A1 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG WET	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		WI/2 (SEC)
1	B-BHC	34.2493	2.242	0.012	211066	BV		6.44
2		0.0000	2.827		201357	VV	?	9.19
3		0.0000	2.968		326761	VV	?	9.06
4		0.0000	3.178		102409	VV	?	7.99
5		0.0000	3.474		561216	VV		11.98
6	HEPTACHLO	15.1796	3.786	-0.104	199305	VV	?	57.63
7		0.0000	4.132		195690	VV	?	14.39
8		0.0000	4.354		598821	VV	?	127.94
9		0.0000	5.377		106041	VV	?	
10	HEPT EPOX	10.6553	5.858	0.038	163460	VV	?	30.33
11		0.0000	6.529		101342	VV	?	47.00
12	A-ENDO	4.2727	7.044	-0.186	61200	VB	?	36.50
13	ENDRIN	0.5704	9.414	0.014	116958	VV		23.65
14	ENDO SO4	8.7602	11.840	-0.430	86750	BV		29.39
15		0.0000	12.943		30321	VV	?	18.54
16	4,4'-DDT	7.3832	13.987	0.337	53605	VB		25.25
17	DBC	86.7044	26.952	-0.418	1032740	BB	?	73.63
TOTALS:		176.8751		-0.737	4139042			

Conf 1

Raise off on conf 0

DETECTED PKS: 29 REJECTED PKS: 12

DIVISOR: 1.50000 MULTIPLIER: 2000.00000

NOISE: 57.1 OFFSET: -8

NOTES:
NOTEBOOK:259-52 ANALYST:RICHARD SAMSON
SECURE AREA:D JOB# U-4474
INST:VARIAN 6000#2 A 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
AUTOSAMPLER
PEST/PCB ANALYSIS

POST RUN:
SAVE FILE: RAW D.CREEK3552

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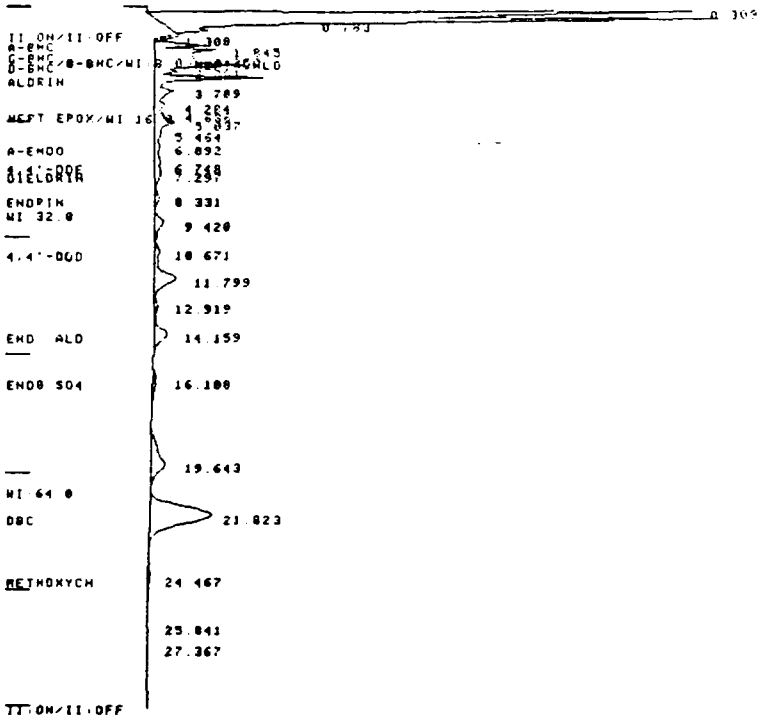
CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10% 5 MIN/TICK



DC-SS-47

CHANNEL: 1B - 1 TITLE: RUN# 19 11:44 18 DEC 86

SAMPLE: 9812.03.19A1 METHOD: PEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		W1/2 (SEC)
1		0.0000	1.526		28865	VV	?	5.69
2	A-BHC	0.0000	1.595	-0.055	83965	VV	?	6.00
3		0.0000	1.845		185191	VV		4.81
4	G-BHC	0.0000	2.050	-0.050	117225	VV	?	9.06
5		0.0000	2.250		87234	VV	?	9.06
6	B-BHC	0.0000	2.397	0.027	284508	VV		6.44
7	HEPTACHLO	0.0000	2.580	0.020	197415	VV		7.63
8	D-BHC	0.0000	2.881	0.111	58822	VV	?	12.81
9	ALDRIN	0.0000	3.139	0.019	257918	VV		7.75
10		0.0000	3.709		85125	VV	?	18.38
11		0.0000	3.916		21861	VV	?	
12		0.0000	4.284		46502	VV	?	24.06
13	HEPT EPOX	0.0000	4.686	0.006	25695	VV	?	13.88
14		0.0000	5.037		115881	VV		18.13
15		0.0000	5.464		30268	VV	?	
16	A-ENDO	0.0000	6.092	0.192	34930	VV	?	32.94
17	4,4'-DDE	0.0000	6.748	0.018	47252	VV	?	19.31
18	DIELDRIN	0.0000	7.297	0.097	61959	VV	?	44.13
19	ENDRIN	0.0000	8.331	-0.349	43166	VV		25.81
20		0.0000	9.420		87647	VV		33.06
21	B-ENDOSUL	0.0000	10.671	0.091	51704	VV	?	31.19
22		0.0000	11.799		208704	VV		33.44
23	4,4'DDT	0.0000	12.919	0.509	36658	VV		34.31
24	END. ALD.	0.0000	14.159	0.229	119007	VB		33.38
25	ENDO SO4	0.0000	16.108	-0.302	43120	BB		40.31
26		0.0000	19.643		226205	BB	?	58.44
27	DBC	0.0000	21.823	-0.287	825908	BV		48.19
28	METHOXYCH	0.0000	24.467	0.707	30251	T		48.75
TOTALS:		0.0000		0.983	3442986			

DETECTED PKS: 39 REJECTED PKS: 11

DIVISOR: 1.50000 MULTIPLIER: 2.00000

NOISE: 331.4 OFFSET: 8

NOTES:
NOTEBOOK:259-59 ANALYST:P. BRUTSCHER
SECURE AREA: D JOB#:U-4474
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
PESTICIDE/PCB CONFIRMATIONS
DEAD CREEK

POST RUN:

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SAMPLE NUMBER DC-SS-48

481095

414

Sample Number
DC-SS-48

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474

Lab Sample ID No: 9813 QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: [signature] Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-26-86

Conc/Dil Factor: 3 pH 8.6

Percent Moisture: (Not Decanted) 9.3

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	24B
67-64-1	Acetone	12BJ
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	15u
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-05-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	35B
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	15u
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	15u
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	30u
591-78-6	2-Hexanone	30u
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	15u
108-90-7	Chlorobenzene	15u
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

Data Reporting Qualifiers

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

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

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

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

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

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

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

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Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No U-4474

Sample Number DC-SS-48

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 11-18-86

Date Analyzed 12-22-86

Conc/Dil Factor 2

Percent Moisture (Decanted) 9

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	360	U
111-44-4	bis(2-Chloroethyl)Ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
100-51-6	Benzyl Alcohol	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
39638-32-9	bis(2-chloroisopropyl)Ether	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-Di-n-Propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
65-85-0	Benzoic Acid	1800	U
111-91-1	bis(2-Chloroethoxy)Methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-Methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	1800	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethyl Phthalate	360	U
208-96-8	Acenaphthylene	360	U
99-09-2	3-Nitroaniline	1800	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	360	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-Methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
84-74-2	Di-n-Butylphthalate	360	U
206-44-0	Fluoranthene	360	U
129-00-0	Pyrene	360	U
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	720	U
56-55-3	Benzo(a)Anthracene	360	U
117-81-7	bis(2-Ethylhexyl)Phthalate	360	U
218-01-9	Chrysene	360	U
117-84-0	Di-n-Octyl Phthalate	360	U
205-99-2	Benzo(b)Fluoranthene	360	U
207-08-9	Benzo(k)Fluoranthene	360	U
50-32-8	Benzo(a)Pyrene	360	U
193-39-5	Indeno(1,2,3-cd)Pyrene	360	U
53-70-3	Dibenz(a,h)Anthracene	360	U
191-24-2	Benzo(g,h,i)Perylene	360	U

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No U-4474

Sample Number DC-SS-48

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-18-86

Date Analyzed 12-9-86

Conc/Dil Factor 5x

Percent Moisture (decanted) 9.3

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	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	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 30 V_t 1000 V_i 4

Laboratory Name ecology and environment, inc.

Case No 11-41471

Sample Number DC-SS-48

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.	No TIC's in VOA fraction			
2.				
3.	No Semi-Volatile Compounds Found			
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
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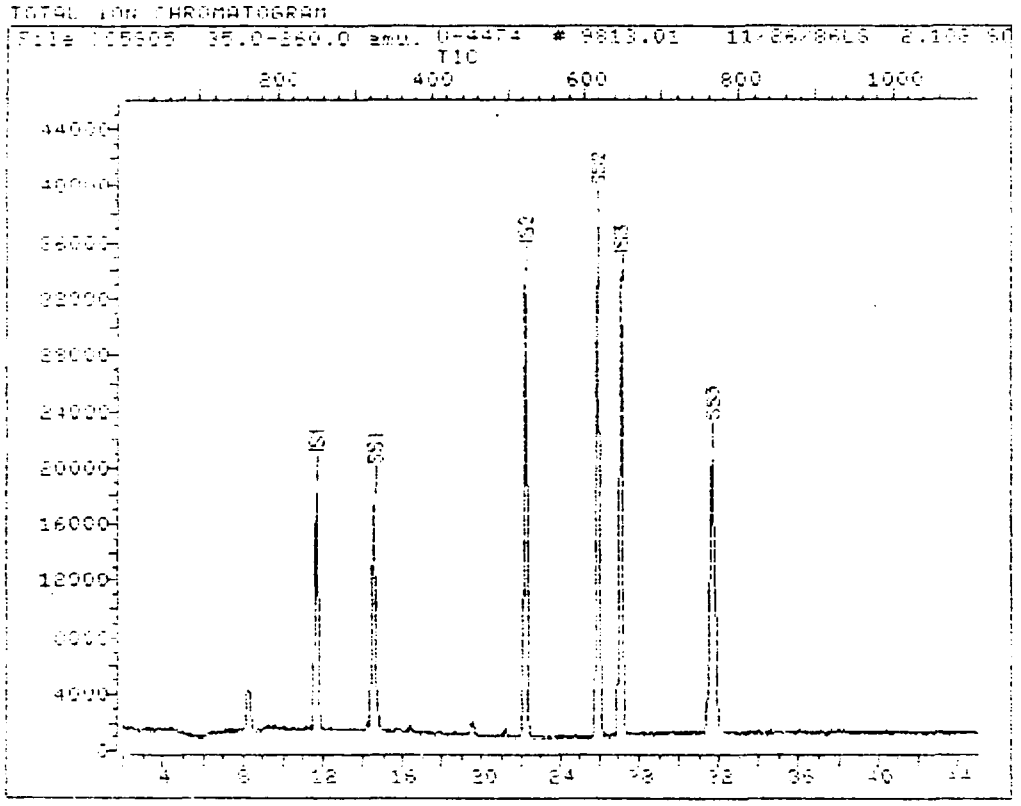
29.				
30				



Data File: 109405::03
Name: U-4474 # 9813.01 DC-SS-48
Misc: 11/26/86LS 2.10G SOIL IN 5 ML DI + 1[illegible] UL [illegible]

Id File: VOAORG::02
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861126 17:32

Operator ID: USER6
Quant Time: 861126 17:32
Injected at: 861126 16:43

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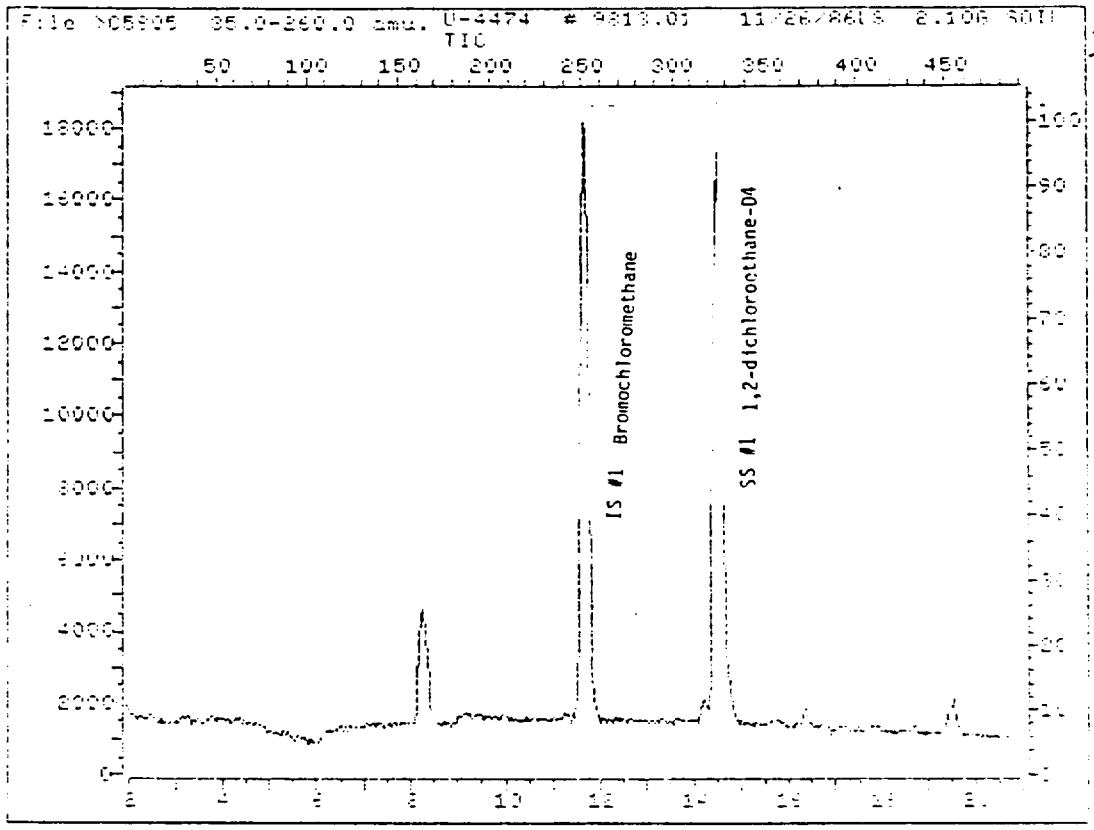
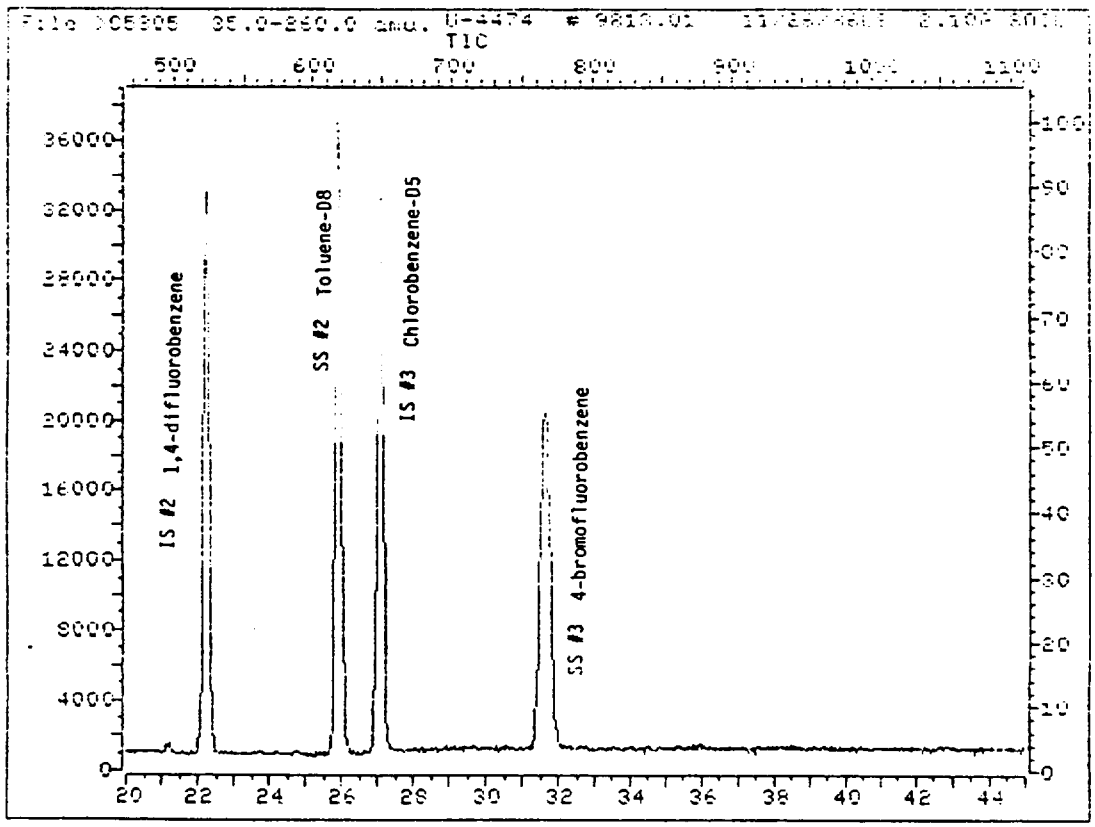
DC-SS-4E





recycled

QUANT REPORT

Operator ID: USER6 Quant Rev: 4 Quant Time: 861126 17:32
Output File: >C5805::D2 Injected at: 861126 16:4[illegible]
Data File: >C5805::D3 Dilution Factor: [illegible]
Name: U-4474 # 9813.01 DC-SS-48
Misc: 11/26/86LS 2.10G SOIL IN 5 ML DI + 10 UL IS/SS

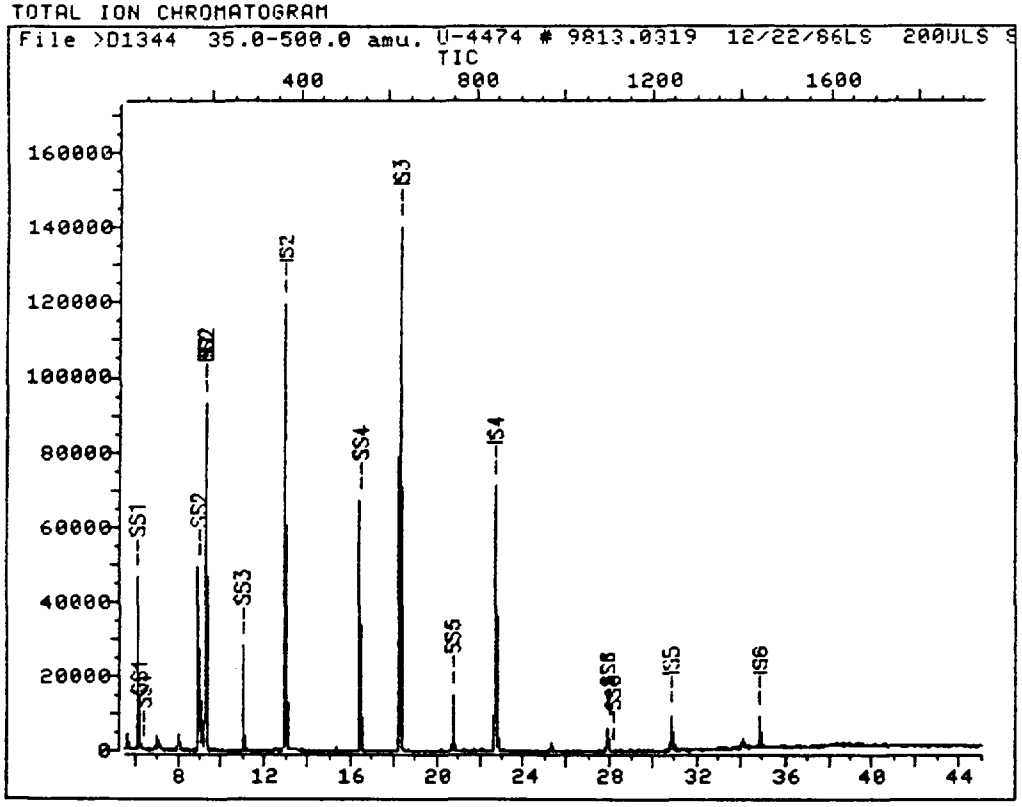
ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861126 17:32

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.65	251	23689	250.00	NGS	100
6)	METHYLENE CHLORIDE		84	8.23	163	7638	45.41	NGS	100
7)	ACETONE		43	9.20	188	3266	22.17	NGS	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.52	325	63317	195.13	NGS	84
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.20	523	136387	250.00	NGS	100
9)	2-BUTANONE		72	14.63	328	2952	66.49	NGS	100
[illegible]	*CHLOROBENZENE-D5	(IS)	117	27.05	648	102460	250.00	NGS	[illegible]
[illegible]	TOLUENE-D8	(SURR)	98	25.89	618	142703	253.18	NGS	[illegible]
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.64	766	67163	237.19	NGS	100

* Compound is ISTD

recycled paper

TOTAL ION CHROMATOGRAM

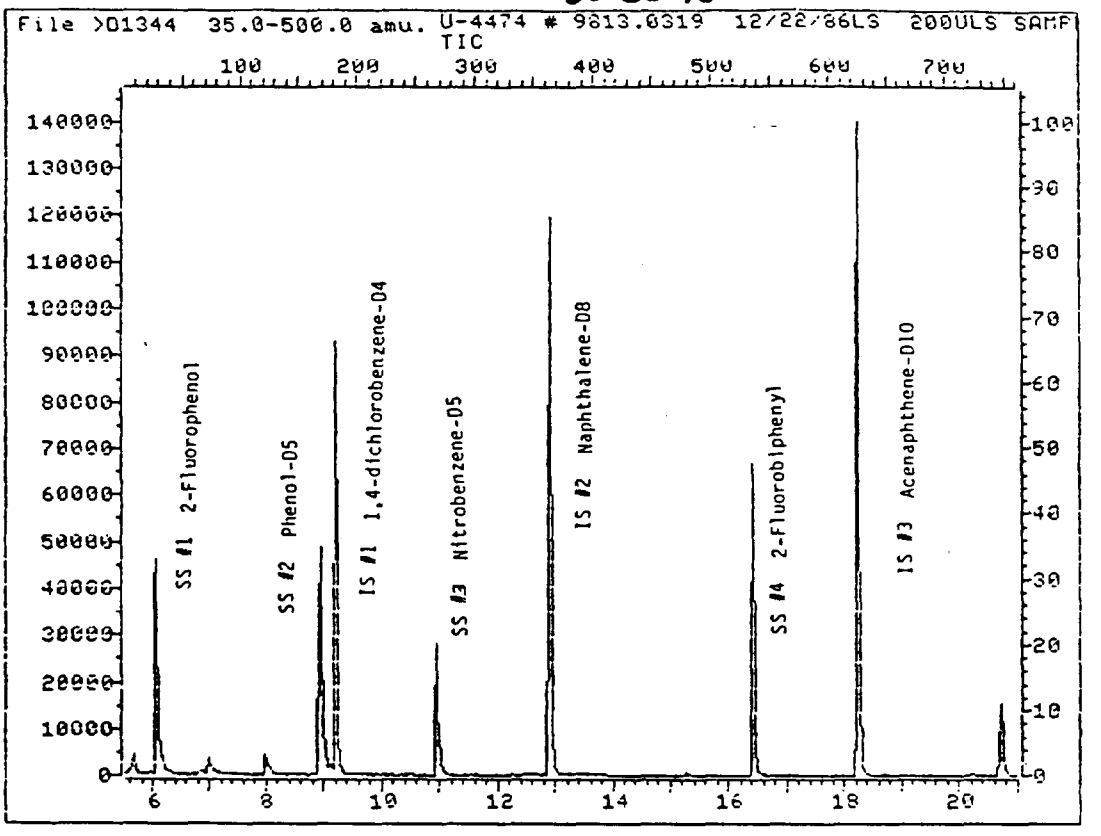


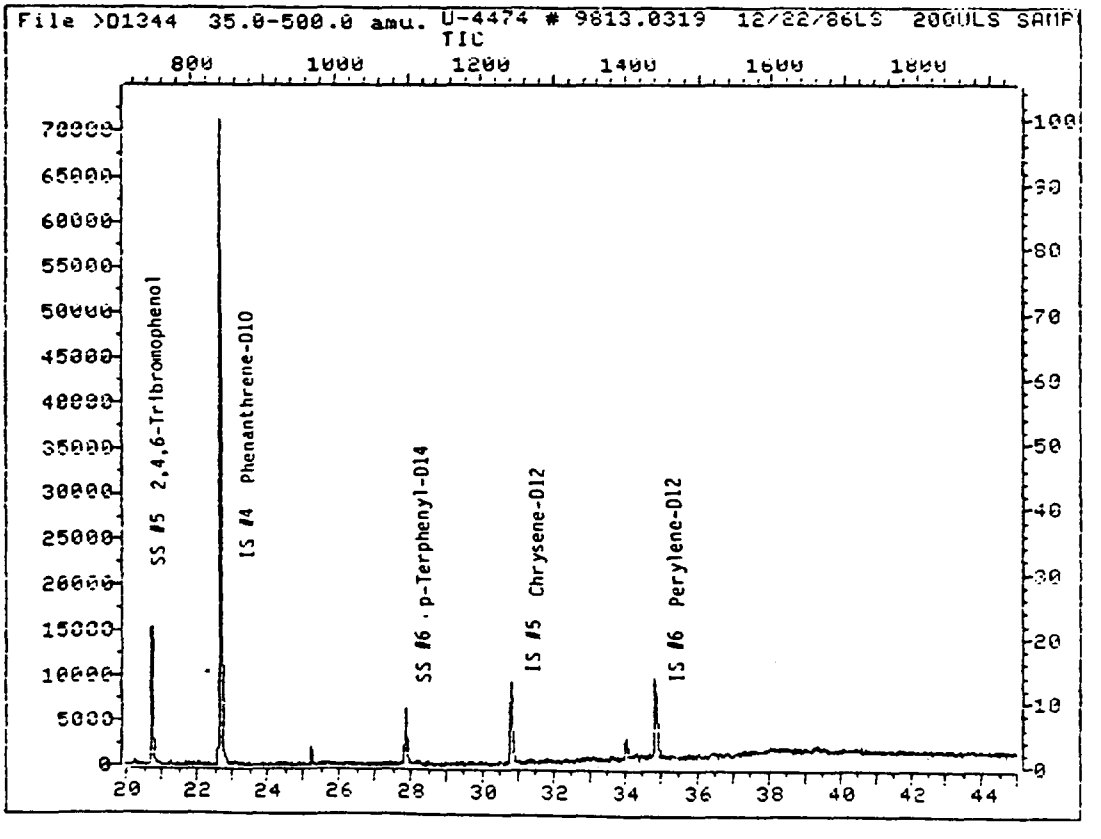
Data File: >D1344::D2
Name: U-4474 # 9813.0319 DC-SS-48
Misc: 12/22/86LS 200ULS SAMPLE + 200ULS MECL2 + 4ULS IS BTL# 2

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861222 15:30

Operator ID: USER6
Quant Time: 861222 20:18
Injected at: 861222 19:30

DC-SS-48


File >D1344 35.0-500.0 amu. U-4474 # 9813.0319 12/22/86LS 200ULS SAMP
TIC
SS #1 2-Fluorophenol
SS #2 Phenol-D5
IS #1 1,4-dichlorobenzene-D4
SS #3 Nitrobenzene-D5
IS #2 Naphthalene-D8
SS #4 2-Fluorobiphenyl
IS #3 Acenaphthene-D10


File >D1344 35.0-500.0 amu. U-4474 # 9813.0319 12/22/86LS 200ULS SAMP
TIC
SS #5 2,4,6-Tribromophenol
IS #4 Phenanthrene-D10
SS #6 p-Terphenyl-D14
IS #5 Chrysene-D12
IS #6 Perylene-D12

QUANT REPORT

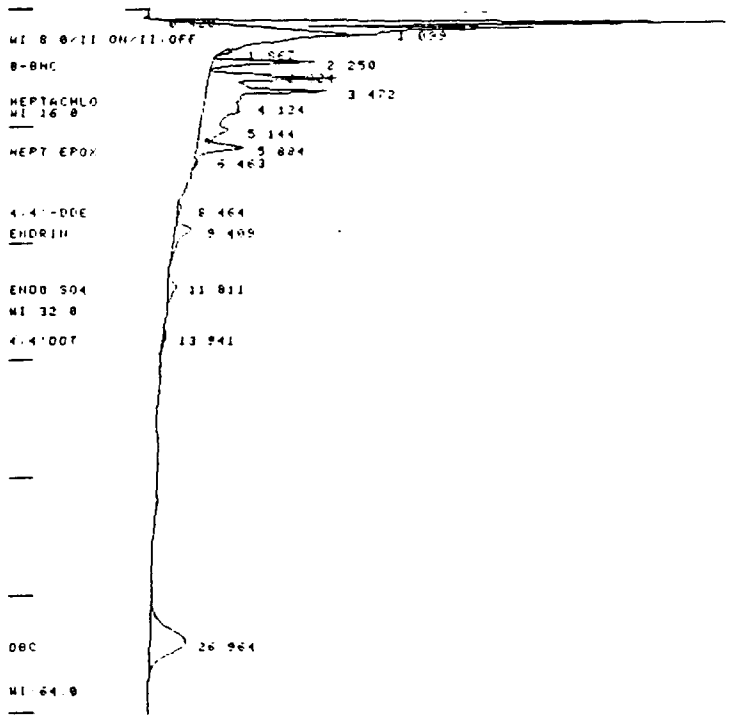
Operator ID: USER6 Quant Rev: 4 Quant Time: 861222 20:18
Output File: ^D1344::Q2 Injected at: 861222 19:30
Data File: >D1344::D2 Dilution Factor: 2.00
Name: U-4474 # 9813.0319 DC-SS-48
Misc: 12/22/86LS 200ULS SAMPLE + 200ULS MECL2 + 4ULS IS BTL# 2

ID File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861222 15:30

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.22	182	47953	40.00	UG/L	87
2)	PHENOL-D5	(SURR)	99	8.93	168	54492	71.84	UG/L	95
~~2)~~	~~PHENOL-D5~~	~~(SURR)~~	~~99~~	~~9.22~~	~~182~~	~~1291~~	~~1.70~~	~~UG/L~~	84
5)	2-FLUOROPHENOL	(SURR)	112	6.06	27	44056	80.12	UG/L	99
5)	2-FLUOROPHENOL	(SURR)	112	6.16	32	3827	6.96	UG/L	90
~~5)~~	~~2-FLUOROPHENOL~~	~~(SURR)~~	~~112~~	~~6.39~~	~~43~~	~~384~~	~~.70~~	~~UG/L~~	87
~~17)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~10.95~~	~~267~~	~~4018~~	~~6.95~~	~~UG/L~~	89
19)	*NAPHTHALENE-D8	(IS)	136	12.91	363	169117	40.00	UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	10.95	267	24878	37.12	UG/L	98
~~29)~~	~~NAPHTHALENE~~		~~128~~	~~12.97~~	~~366~~	~~921~~	~~.50~~	~~UG/L~~	100
34)	*ACENAPHTHENE-D10	(IS)	162	18.24	625	85483	40.00	UG/L	97
38)	2-FLUOROBIPHENYL	(SURR)	172	16.41	535	73258	42.73	UG/L	92
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.24~~	~~625~~	~~26398~~	~~17.55~~	~~UG/L~~	100
~~43)~~	~~DIBENZOFURAN~~		~~168~~	~~18.90~~	~~657~~	~~145~~	~~.07~~	~~UG/L~~	100
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.71	746	11873	23.30	UG/L	98
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.24~~	~~625~~	~~18811~~	~~32.25~~	~~UG/L~~	100
55)	*PHENANTHRENE-D10	(IS)	188	22.66	842	96795	40.00	UG/L	91
65)	*CHRYSENE-D12	(IS)	240	30.81	1242	20545	40.00	UG/L	100
68)	TERPHENYL-D14	(SURR)	244	27.88	1098	11817	57.23	UG/L	100
~~68)~~	~~TERPHENYL-D14~~	~~(SURR)~~	~~244~~	~~28.12~~	~~1110~~	~~123~~	~~.68~~	~~UG/L~~	100
74)	*PERYLENE-D12	(IS)	264	34.87	1441	18597	40.00	UG/L	100

* Compound is ISTD

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



DC-SS-48

CHANNEL: 1A - 1 TITLE: RUN# 30 14:43 9 DEC 86

SAMPLE: 9813.03.19A1 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-BHC 180	49.5077	2.250	0.020	112039	BV		8.25
2	RATIO off on Comp	0.0000	2.824		54387	VV	?	6.81
3		0.0000	2.967		133648	VV		7.31
4		0.0000	3.472		255604	VV		10.06
5	~~HEPTACHLO~~	14.9336	3.775	-0.115	74495	VV	?	42.25
6		0.0000	4.124		65144	VV	?	33.63
7		0.0000	4.346		137279	VV	?	46.50
8		0.0000	5.144		110531	VV	?	21.31
9	~~HEPT EPO~~	20.2588	5.884	0.064	124314	VV		13.75
10	~~ENDRIN~~	15.4104	9.409	0.009	74552	BB		23.75
11	~~ENDO SO4~~	~~9.6324~~	11.811	-0.459	38155	BB		28.38
12	DBC 106	70.8170	26.964	-0.406	337402	BB		66.56
TOTALS:		180.5599		-0.887	1529550			

DETECTED PKS: 22 REJECTED PKS: 10

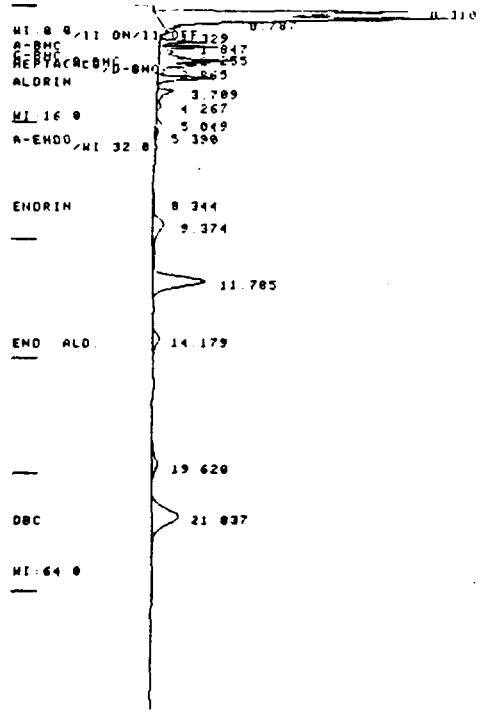
DIVISOR: 1.50000 MULTIPLIER: 5000.00000

NOISE: 22.9 OFFSET: -11

NOTES:
NOTEBOOK:259-52 ANALYST:RICHARD SAMSON
SECURE AREA:D JOB# U-4474
INST:VARIAN 6000#2 A 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
AUTOSAMPLER
PEST/PCB ANALYSIS

POST RUN:
SAVE FILE: RAW D.CREEK3553

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



DC-SS-48

CHANNEL: 1B - 1 TITLE: RUN# 21 14:02 18 DEC 86

SAMPLE: 9813.03.19A1 METHOD: PEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		W1/2 (SEC)
1	A-BHC	0.0000	1.598	-0.052	68242	VV		4.44
2		0.0000	1.847		79730	VV		4.50
3	G-BHC	0.0000	2.042	-0.058	37317	VV	?	9.50
4		0.0000	2.255		42675	VV	?	7.05
5	B-BHC N° 34.7	0.0000	2.398	0.028	127782	VV		6.00
6	HEPTACHLO	0.0000	2.581	0.021	91766	VV		7.13
7	ALDRIN	0.0000	3.139	0.019	126282	VV		7.55
8		0.0000	3.709		54182	VV		11.31
9		0.0000	5.049		31516	BV		14.66
10		0.0000	9.374		136672	VV		37.00
11	4,4'DDT	0.0000	11.785	-0.625	392978	VB		27.06
12	END. ALD.	0.0000	14.179	0.249	66325	BB		35.75
13		0.0000	19.620		81780	BV		49.19
14	DBC	0.0000	21.837	-0.273	361283	VB		48.19
TOTALS:		0.0000		-0.691	1698530			

DETECTED PKS: 29 REJECTED PKS: 15

DIVISOR: 1.50000 MULTIPLIER: 5.00000

NOISE: 68.6 OFFSET: 7

NOTES:
NOTEBOOK:259-59 ANALYST:P. BRUTSCHER
SECURE AREA: D JOB#:U-4474
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
PESTICIDE/PCB CONFIRMATIONS
DEAD CREEK

POST RUN:
SAVE FILE: RAW D.C.#3768

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)

ecology and environment

Sample Number
BLK C5592

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No.: U-4474
Lab Sample ID No: Method Blank
QC Report No:
Sample Matrix: Water for Soil
Contract No.: EL-3140
Data Release Authorized By: C Stoytowicz
Date Sample Received:

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-19-86

Conc./Dil Factor: 1 pH

Percent Moisture: (Not Decanted)

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	24
67-64-1	Acetone	10u
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, etc. (This is not necessarily the instrument detection limit.) The footnote should read: U Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

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

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

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

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

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ecology and environment

Laboratory Name Ecology & Environment, Inc

Case No U-4474

Sample Number BLKC5592

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number min.	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.4	2 J
2.	Unknown Ketone	VOA	19.9	1 J
3.	Hexane isomer	VOA	21.5	6 J
4.	Dichlorobenzene isomer (carryover)	VOA	41.2	39 J
5.				
6.				
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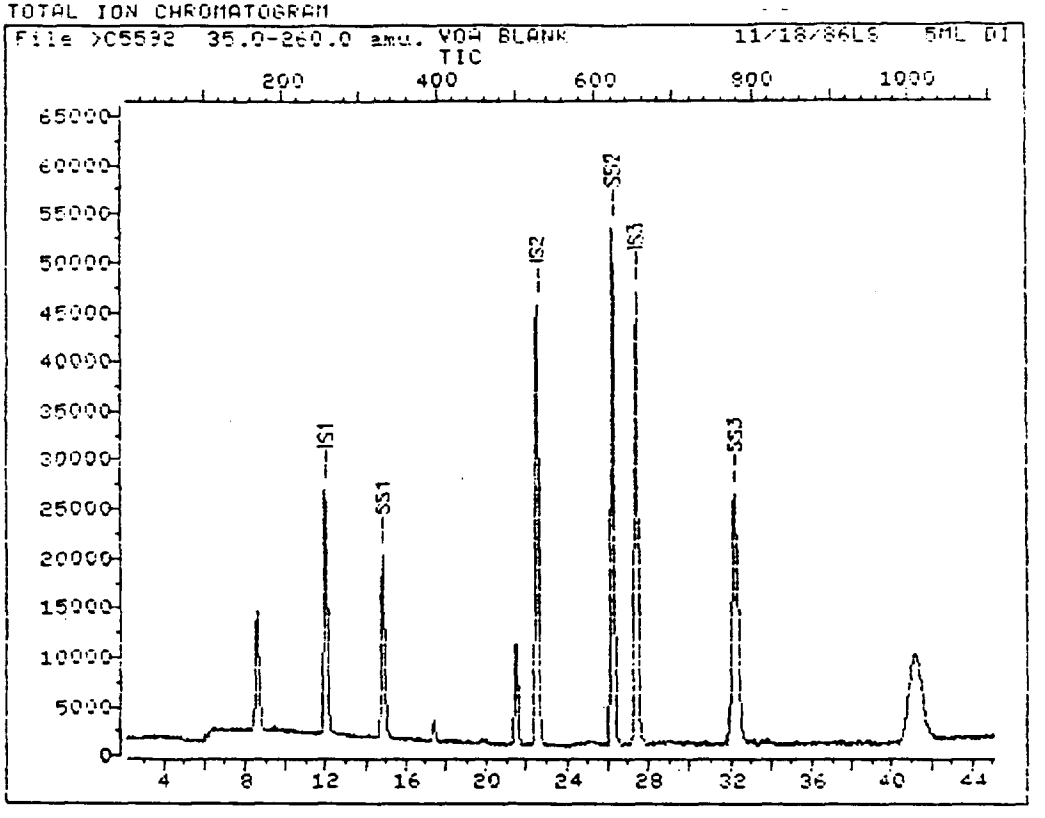
TOTAL ION CHROMATOGRAM

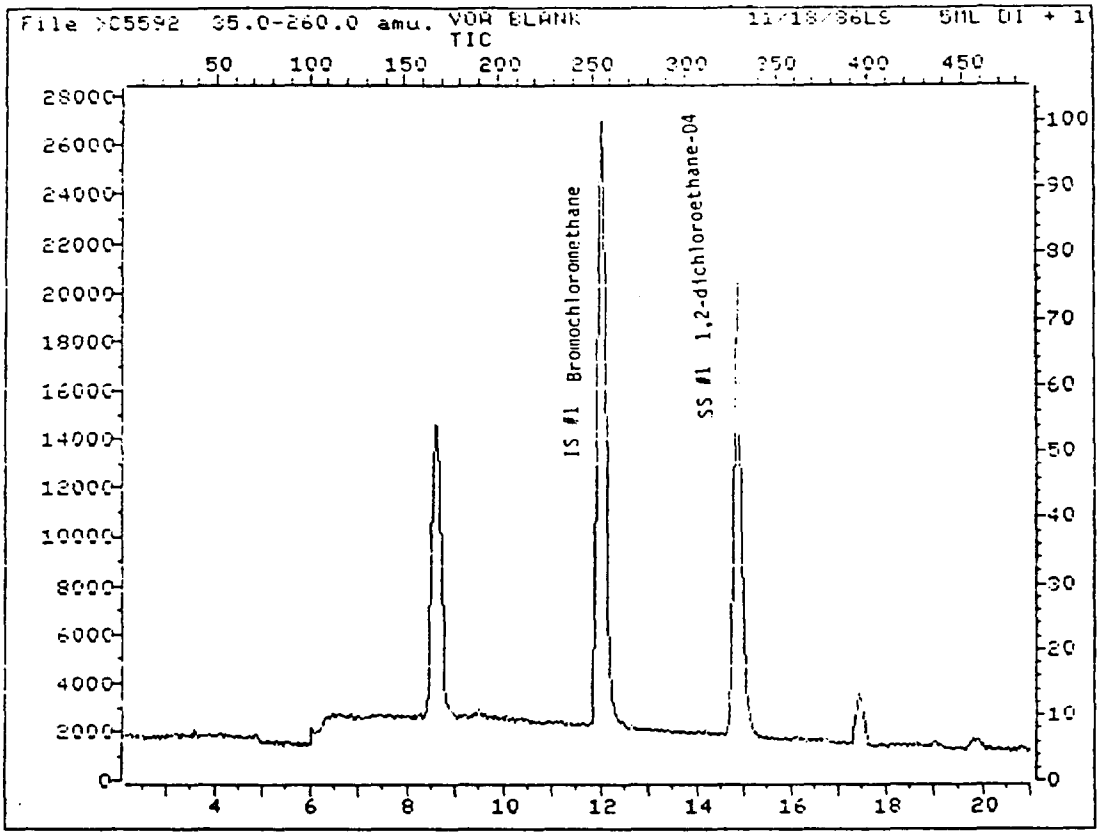


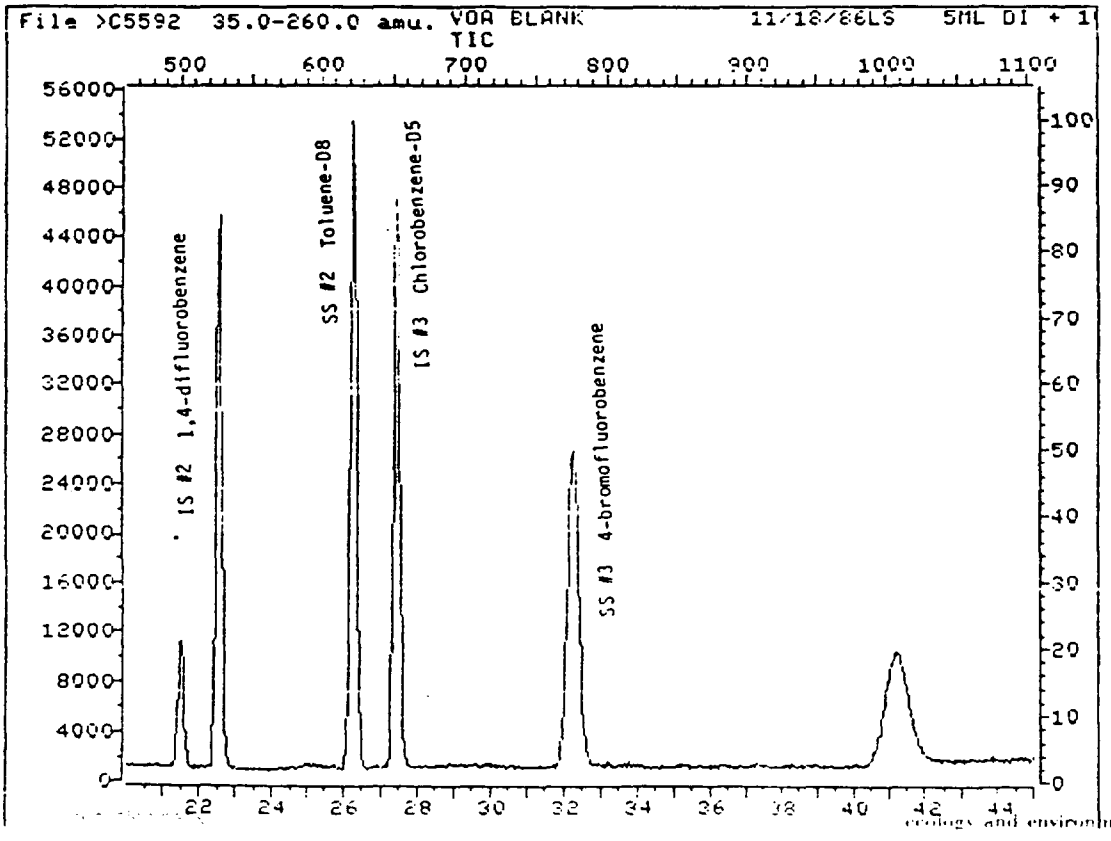
Data File: >C5592::D3
Name: VOA BLANK
Misc: 11/18/86LS 5ML DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861118 22:56

Operator ID: USER8
Quant Time: 861119 04:58
Injected at: 861119 04:12

BLKC5592


File >C5592 35.0-260.0 amu. VOA BLANK 11/18/86LS 5ML DI + 1
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File >C5592 35.0-260.0 amu. VOA BLANK 11/18/86LS 5ML DI + 1
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861119 04:58
Output File: ^C5592::Q2 Injected at: 861119 04:12
Data File: >C5592::D3 Dilution Factor: 1.00
Name: VOA BLANK
Misc: 11/18/86LS 5ML DI + 10UL IS/SS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861118 22:56

	Compound	M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE (IS)	128	12.01	255	40077	250.00	NGS	100
6)	METHYLENE CHLORIDE	84	8.60	167	34223	118.00	NGS	100
15)	1,2-DICHLOROETHANE-D4(SURR)	65	14.84	328	81026	204.42	NGS	90
16)	*1,4-DIFLUOROBENZENE (IS)	114	22.56	527	201070	250.00	NGS	100
31)	*CHLOROBENZENE-D5 (IS)	117	27.42	652	151891	250.00	NGS	100
36)	TOLUENE-D8 (SURR)	98	26.25	622	214752	236.93	NGS	94
40)	4-BROMOFLUOROBENZENE(SURR)	95	32.23	776	101390	18[illegible].10	NGS	100

* Compound is ISTD

ecology and environment

Sample Number
BLKC 5612

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No. U-4474

Lab Sample ID No: Method Blank QC Report No: _____

Sample Matrix: Soil Contract No. IL-3140

Data Release Authorized By: C Wojtowicz Date Sample Received: 11-14-86

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: _____

Date Analyzed: 11-19-86

Conc/Dil Factor: 1 pH _____

Percent Moisture: (Not Decanted) _____

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	12
67-64-1	Acetone	5J
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	10
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.

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Laboratory Name ecology and environment, inc.

Case No 11-41471

Sample Number
BLKC5612

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	(RT) or Scan Number min.	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.4	2J
2.	Unknown ketone	↓	19.8	2J
3.	Hexane isomer	↓	21.5	8J
4.				
5.				
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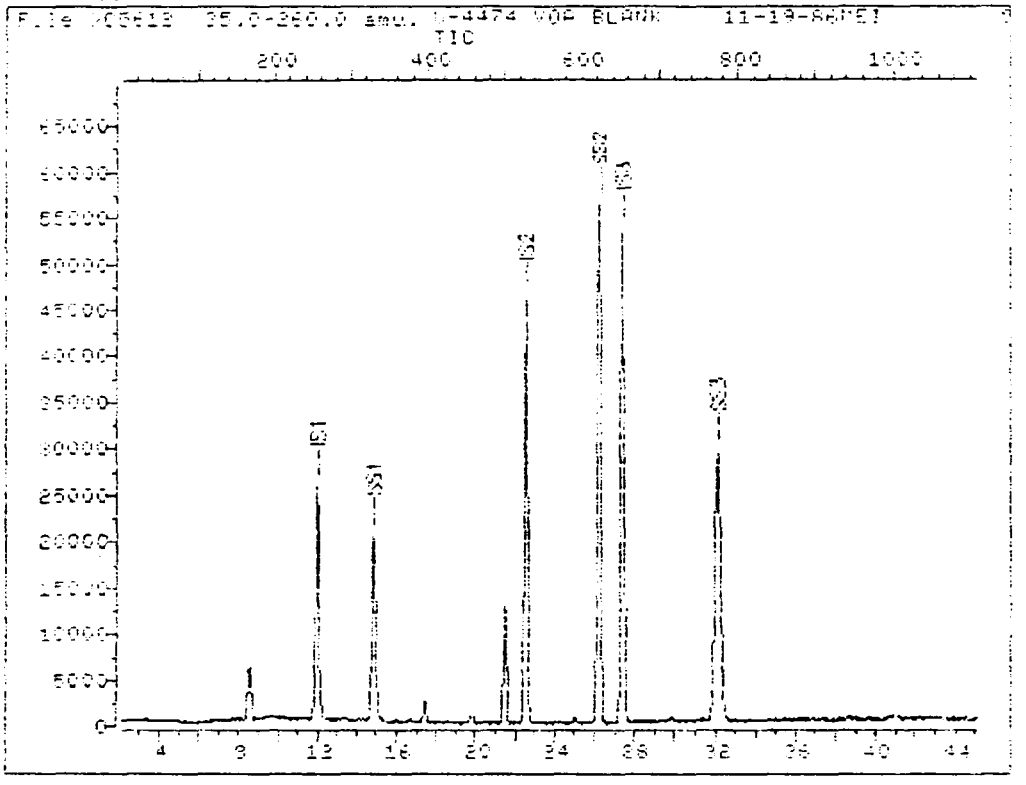
464

TOTAL ION CHROMATOGRAM

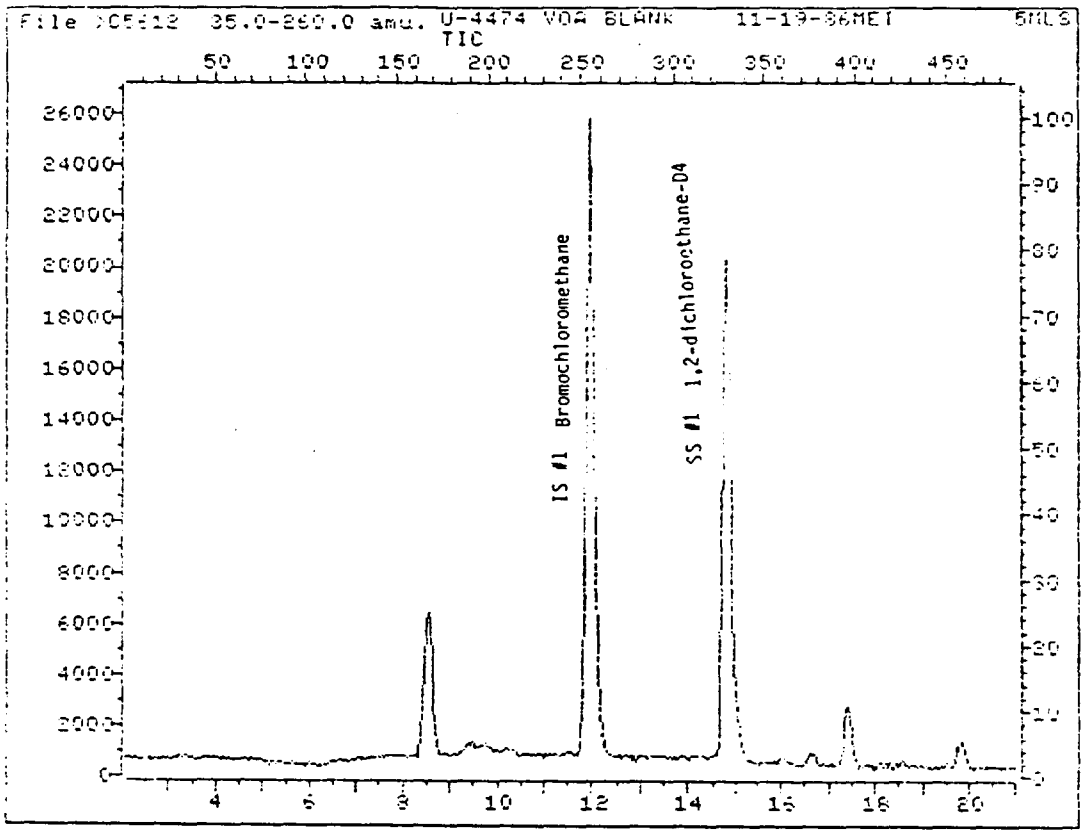


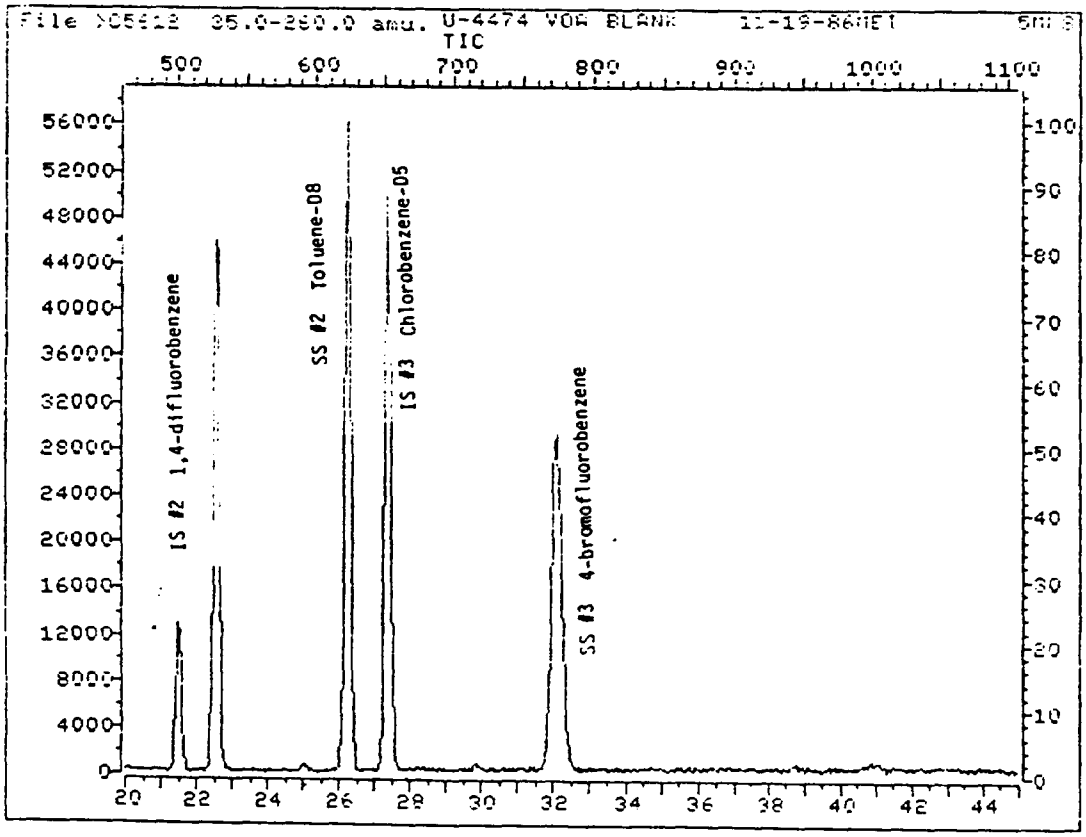
Data File: /C9612::D3
Name: U-4474 VOA BLANK
Misc: 11-19-86MEI 5MLS DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861119 19:02

Operator ID: USER8
Quant Time: 861120 00:04
Injected at: 861119 23:18

BLKC5612


File >C5612 35.0-260.0 amu. U-4474 VOA BLANK 11-19-86MET 5MLS
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File >C5612 35.0-260.0 amu. U-4474 VOA BLANK 11-19-86MET 5MLS
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

QUANT REPORT

Operator ID: USERS, Quant Rev: 4 Quant Time: 861120 00:04
Output File: ^C9612::Q2 Injected at: 861119 22:18
Data File: ^C9612::D3 Dilution Factor: 1.00
Name: U-4474 VOA BLANK
Misc: 11-19-86ME! 5MLS DI + 10UL IS/SS

ID File: VOACPS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861119 19:02

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	%
1)	*BROMOCHLOROMETHANE	(IS)	128	11.96	255	36215	250.00	NGS	0
6)	METHYLENE CHLORIDE		84	8.54	167	14619	59.74	NGS	100
7)	ACETONE		43	9.47	191	4898	27.02	NGS	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.79	328	80725	222.94	NGS	87
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.51	527	194241	250.00	NGS	100
17)	2-BUTANONE		72	14.94	332	3436	48.57	NGS	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.37	692	166408	250.00	NGS	100
36)	TOLUENE-D8	(SURR)	98	26.20	622	225051	233.51	NGS	94
40)	4-BROMOFLUOROBENZENE	(SURR)	95	32.10	774	112407	235.10	NGS	100

* Compound is ISTD

ecology and environment

Sample Number
BLK C5626

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No. U-4474
Lab Sample ID No: Method Blank QC Report No:
Sample Matrix: Soil Contract No: IL-3140
Data Release Authorized By: C Hoytowicz Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-20-86

Conc./Dil Factor: 1 pH

Percent Moisture: (Not Decanted)

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	11
67-64-1	Acetone	12
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	15
71-55-6	1, 1, 1-Trichloroethane	5u
56-23-5	Carbon Tetrachloride	5u
108-05-4	Vinyl Acetate	10u
75-27-4	Bromodichloromethane	5u

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

Data Reporting Qualifiers

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

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

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

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

Laboratory Name ecology and environment, inc.

Case No 11-4474

Sample Number
BLKC5626

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.	No TIC's in VOA fraction			
2.				
3.				
4.				
5.				
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9.				
10.				
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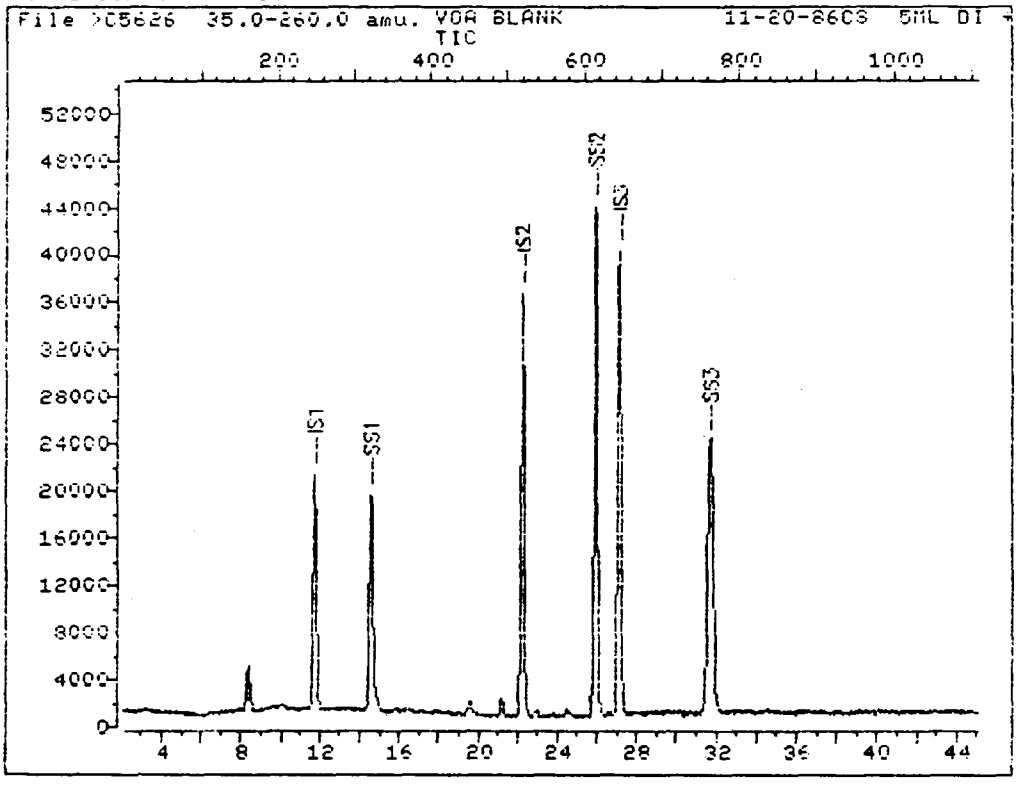
TOTAL ION CHROMATOGRAM

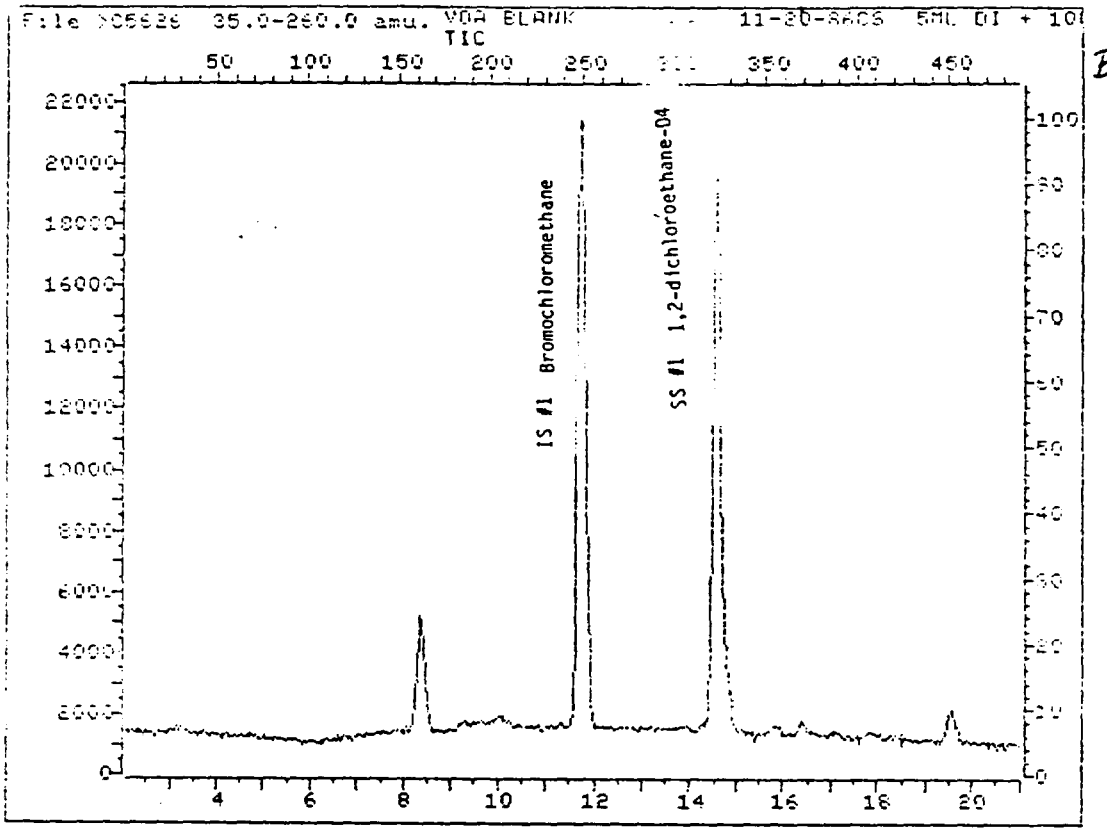


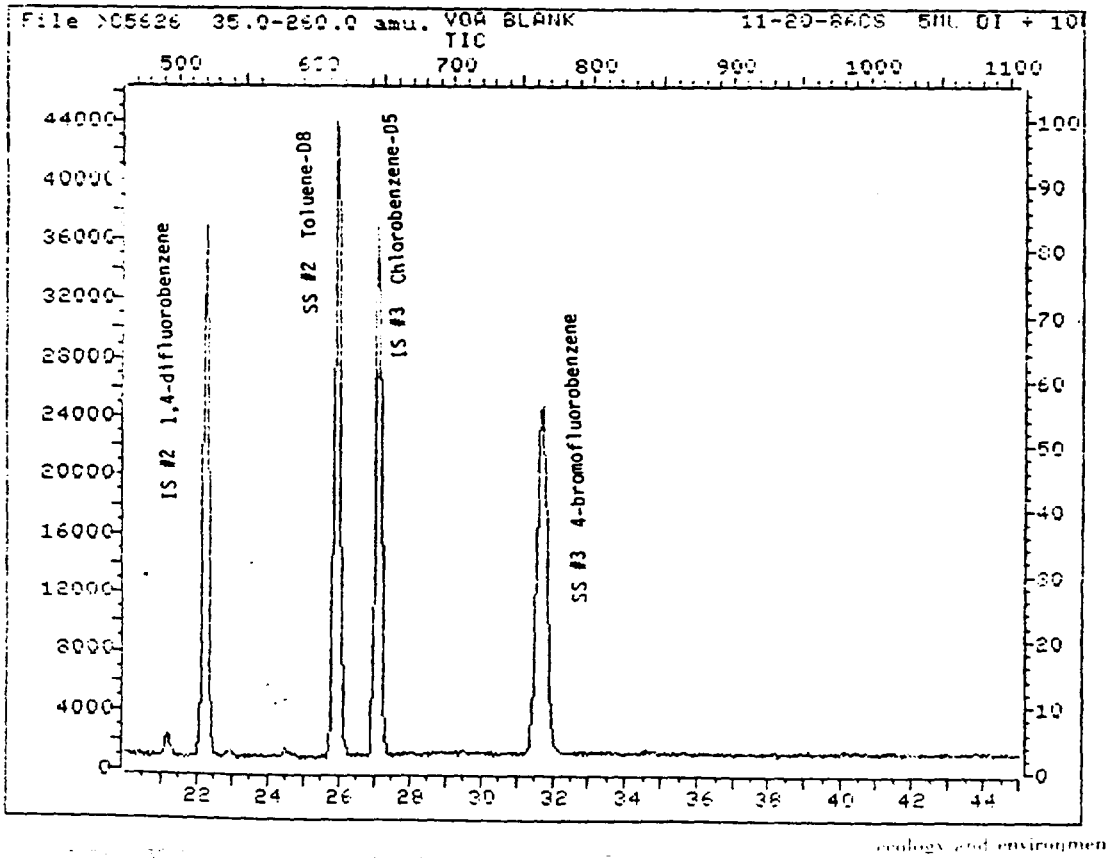
Data File: >C5626::D3
Name: VOA BLANK
Misc: 11-20-86CS 5ML DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861120 13:16

Operator ID: USER8
Quant Time: 861120 13:20
Injected at: 861120 12:34

BLKC5626





ecology and environment

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861120 13:20
Output File: ^C5626::Q2 Injected at: 861120 12:34
Data File: >C5626::D3 Dilution Factor: 1.00
Name: VOA BLANK
Misc: 11-20-86CS 5ML DI + 10UL IS/SS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861120 13:16

	Compound	M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE (IS)	128	11.71	249	28007	250.00	NGS	100
6)	METHYLENE CHLORIDE	84	8.34	162	9332	56.00	NGS	100
7)	ACETONE	43	9.27	186	3715	59.27	NGS	100
15)	1,2-DICHLOROETHANE-D4(SURR)	65	14.55	322	75895	274.75	NGS	84
16)	*1,4-DIFLUOROBENZENE (IS)	114	22.23	520	148425	250.00	NGS	100
17)	2-BUTANONE	72	14.70	326	4056	75.24	NGS	100
31)	*CHLOROBENZENE-D5 (IS)	117	27.12	646	119739	250.00	NGS	100
32)	4-METHYL-2-PENTANONE	43	22.93	538	3491	10.36	NGS	84
33)	2-HEXANONE	43	24.48	578	3256	12.29	NGS	100
36)	TOLUENE-D8 (SURR)	98	25.92	615	172133	270.67	NGS	96
40)	4-BROMOFLUOROBENZENE(SURR)	95	31.67	763	83182	250.27	NGS	100

* Compound is ISTD

ecology and environment

Sample Number
BLKC5637

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474

Lab Sample ID No: Method Blank QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: [signature] Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-21-86

Conc./Dil Factor: 1 pH

Percent Moisture: (Not Decanted)

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
67-64-1	Acetone	9 J
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	13
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	6u
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 ug/l and a concentration of 3 ug/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.

ecology and environment

Laboratory Name ecology and environment, inc.

Case No 11-1/1/71

Sample Number
BLK C5637

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.	No TIC's in VOA fraction			
2.				
3.				
4.				
5.				
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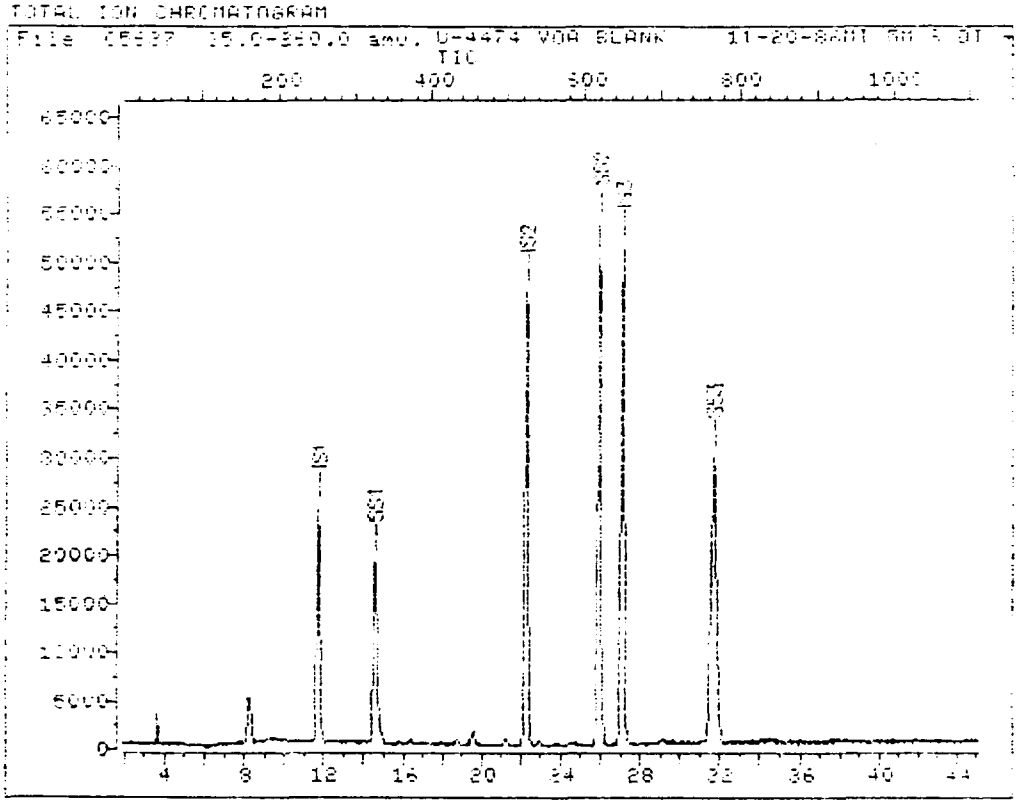
30				

TOTAL ION CHROMATOGRAM

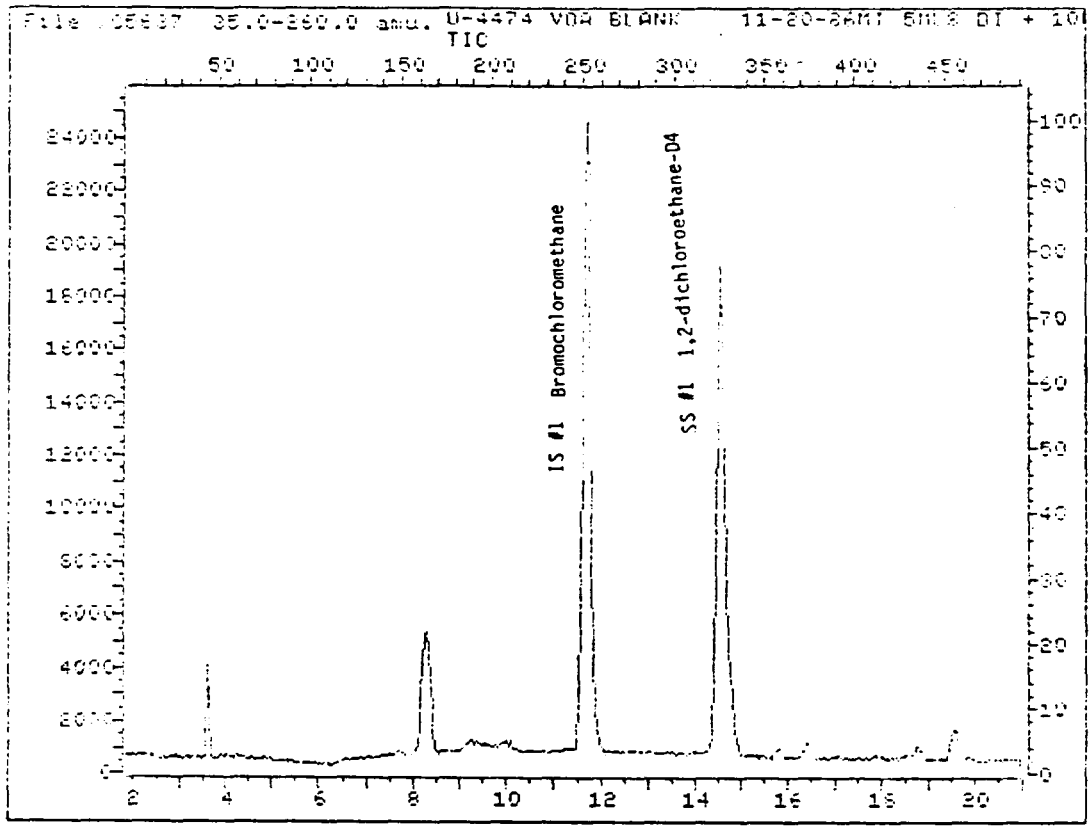


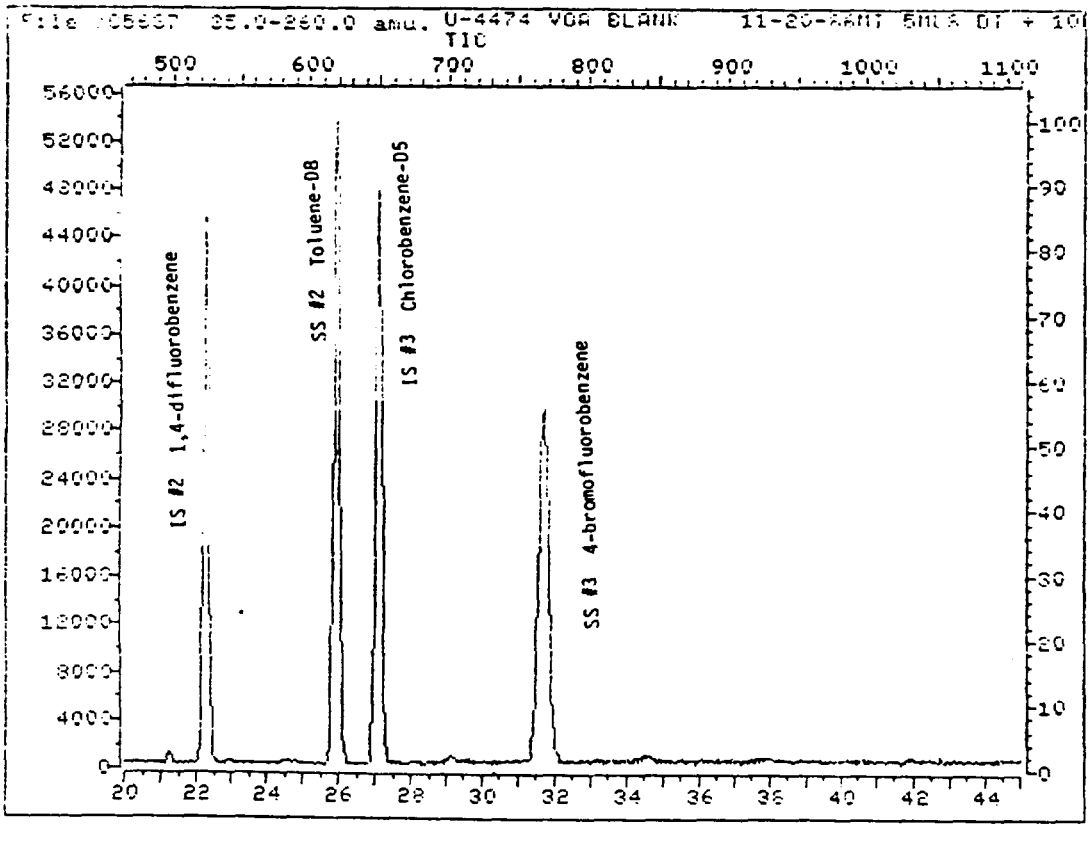
Data File: >C5637::D3
Name: U-4474 VOA BLANK
Misc: 11-20-86MI 5MLS DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861120 23:54

Operator ID: USER8
Quant Time: 861121 11:29
Injected at: 861121 00:02

BLKC5637


File 05637 35.0-260.0 amu. U-4474 VOA BLANK 11-20-88MT 5ML8 DT + 10
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File 05637 35.0-260.0 amu. U-4474 VOA BLANK 11-20-88MT 5ML8 DT + 10
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861121 11:29
Output File: <C5637::D2 Injected at: 861121 00:02
Data File: >C5637::D3 Dilution Factor: 1.00
Name: U-4474 VOA BLANK
Misc: 11-20-86MI 5MLS DI + 10UL IS/SS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861120 23:54

	Compound	M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE (IS)	128	11.69	252	33586	250.00	NGS	100
6)	METHYLENE CHLORIDE	84	8.24	163	12310	70.92	NGS	100
7)	ACETONE	43	9.21	188	3547	44.20	NGS	100
15)	1,2-DICHLOROETHANE-D4(SURR)	65	14.53	325	80506	239.71	NGS	87
16)	*1,4-DIFLUOROBENZENE (IS)	114	22.25	524	190931	250.00	NGS	100
17)	2-BUTANONE	72	14.72	330	4819	62.65	NGS	100
31)	*CHLOROBENZENE-D5 (IS)	117	27.10	649	157786	250.00	NGS	100
36)	TOLUENE-D8 (SURR)	98	25.93	619	211995	238.11	NGS	93
40)	4-BROMOFLUOROBENZENE(SURR)	95	31.68	767	107021	200.25	NGS	100

* Compound is ISTD

477

Sample Number
BLKC5649

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No: U-4474
Lab Sample ID No: Method Blank
QC Report No:
Sample Matrix: Water for Soil
Contract No: IL-3140
Data Release Authorized By: C Stoytowicz
Date Sample Received:

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-21-86

Conc/Dil Factor: 1 pH

Percent Moisture: (Not Decanted)

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	10 u
75-09-2	Methylene Chloride	11
67-64-1	Acetone	11
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	14
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/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.

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Laboratory Name Ecology & Environment, Inc

Case No u-4465

Sample Number
BLK C5649

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.	Unknown Ketone	VOA	19.6 min	2.4 J
2.	Hexane isomer	VOA	21.2 min	1 J
3.				
4.				
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6.				
7.				
8.				
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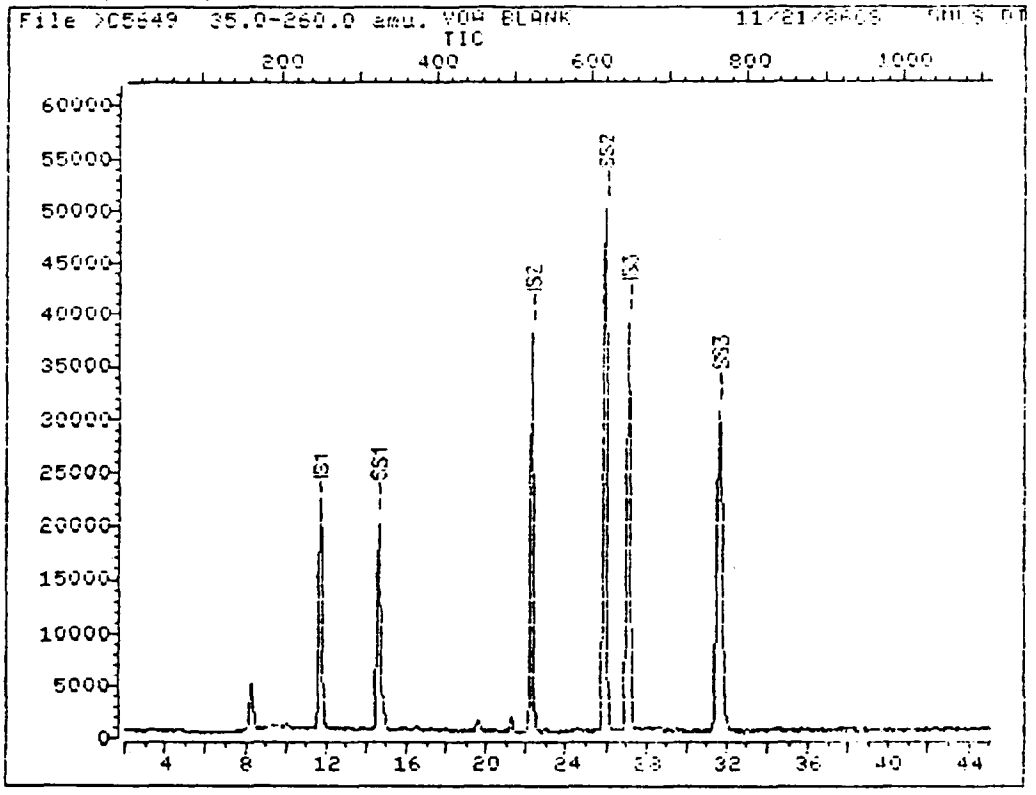
TOTAL ION CHROMATOGRAM

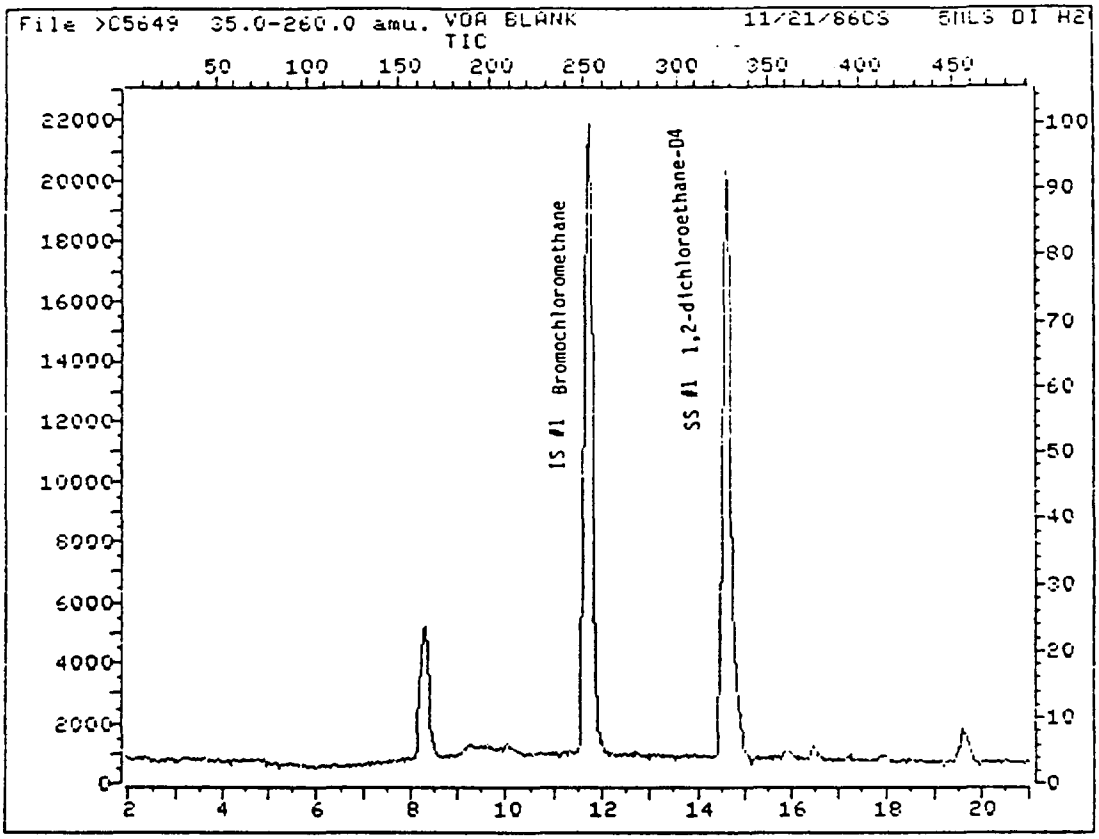


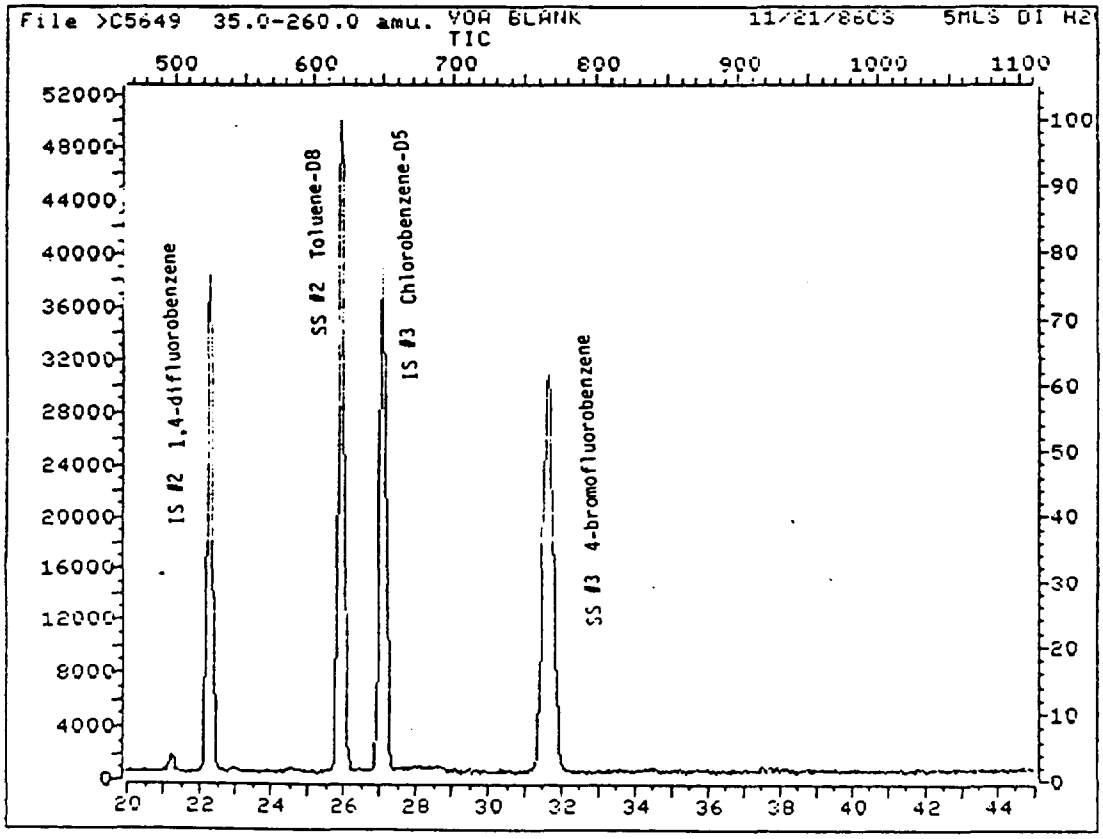
Data File: >C5649::D3
Name: VOA BLANK
Misc: 11/21/86CS 5MLS DI H2O + 10UL IS/SS

Id File: VOACRS:D2:D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861121 11:51

Operator ID: USER8
Quant Time: 861121 12:14
Injected at: 861121 11:28

BLKC5649





ecology and environment

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861121 12:14
Output File: ^C5649::Q2 Injected at: 861121 11:28
Data File: >C5649::D3 Dilution Factor: 1.00
Name: VOA BLANK
Misc: 11/21/86CS 5MLS DI H2O + 10UL IS/SS

ID File: VOACRS:D2:D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861121 11:51

	Compound	M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE (IS)	128	11.69	252	29743	250.00	NGS	100
6)	METHYLENE CHLORIDE	84	8.27	164	11369	57.04	NGS	100
7)	ACETONE	43	9.36	192	5289	53.45	NGS	100
15)	1,2-DICHLOROETHANE-D4(SURR)	65	14.60	327	80658	273.29	NGS	107 87
16)	*1,4-DIFLUOROBENZENE (IS)	114	22.28	525	152481	250.00	NGS	100
17)	2-BUTANONE	72	14.79	332	3744	70.70	NGS	100
31)	*CHLOROBENZENE-D5 (IS)	117	27.09	649	121865	250.00	NGS	100
36)	TOLUENE-D8 (SURR)	98	25.93	619	191989	275.87	NGS	110 95
40)	4-BROMOFLUOROBENZENE(SURR)	95	31.64	766	108710	301.38	NGS	120 100

* Compound is ISTD

ology and environment

Sample Number
BLK C5687

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No: U-4474
Lab Sample ID No: Method Blank
QC Report No:
Sample Matrix: Water for Soil
Contract No: IL-3140
Data Release Authorized By: [illegible]
Date Sample Received:

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-25-86

Conc./Dil Factor: 1 pH

Percent Moisture: (Not Decanted)

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	16
67-64-1	Acetone	3J
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	7J
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	7.2
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.

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Laboratory Name Ecology & Environment, Inc

Case No U-4465

Sample Number BLKC5687

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 Ketone	VOA	19.6	2 J
2.	Hexane isomer	VOA	21.1	2 J
3.				
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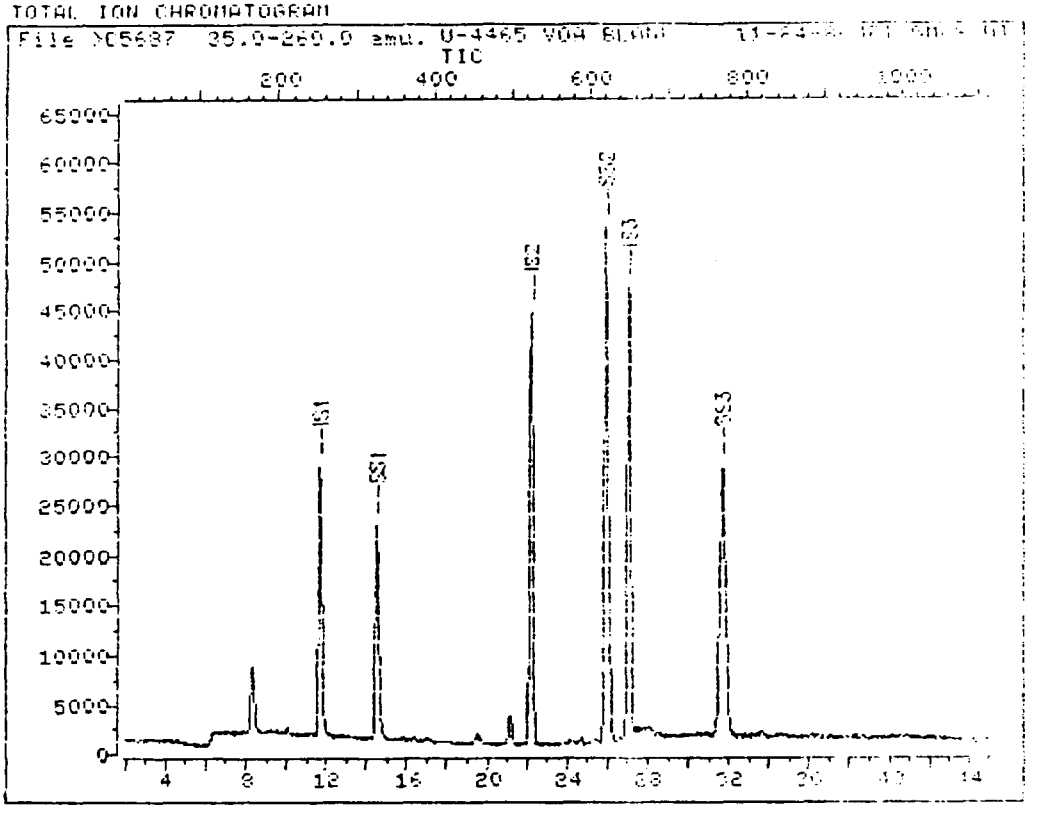
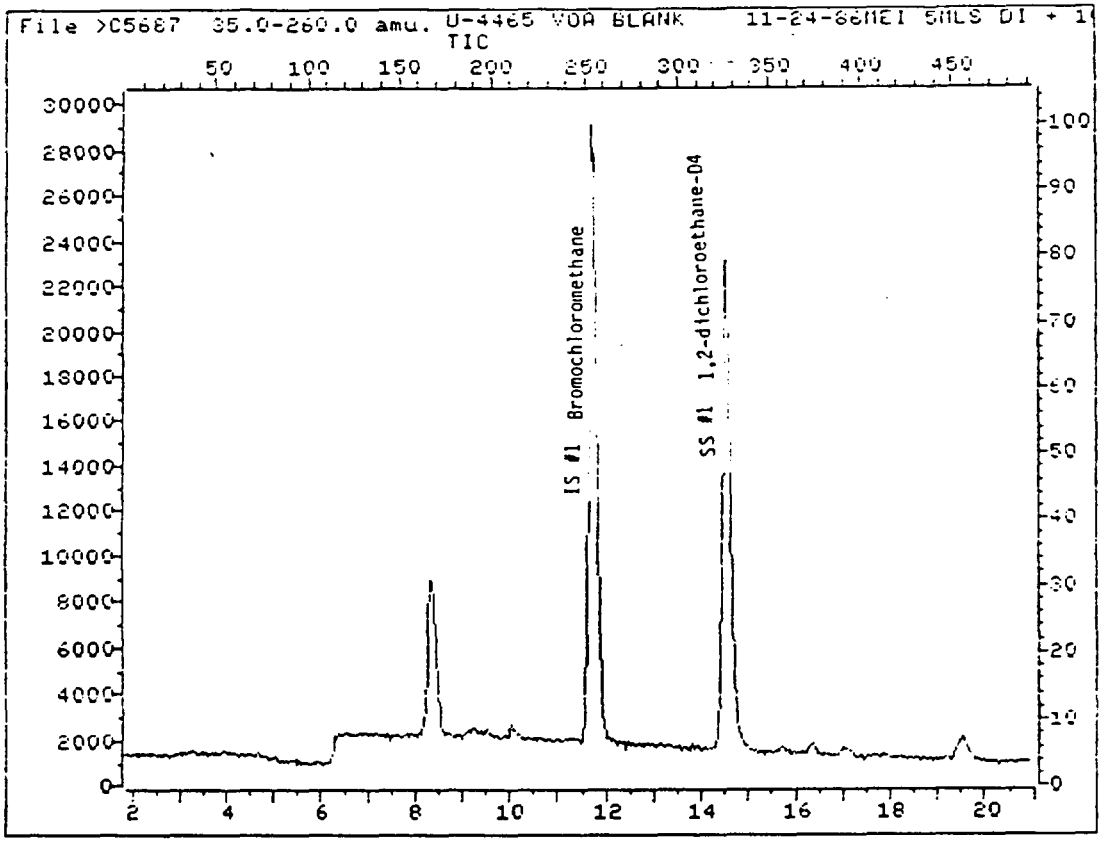
TOTAL ION CHROMATOGRAM



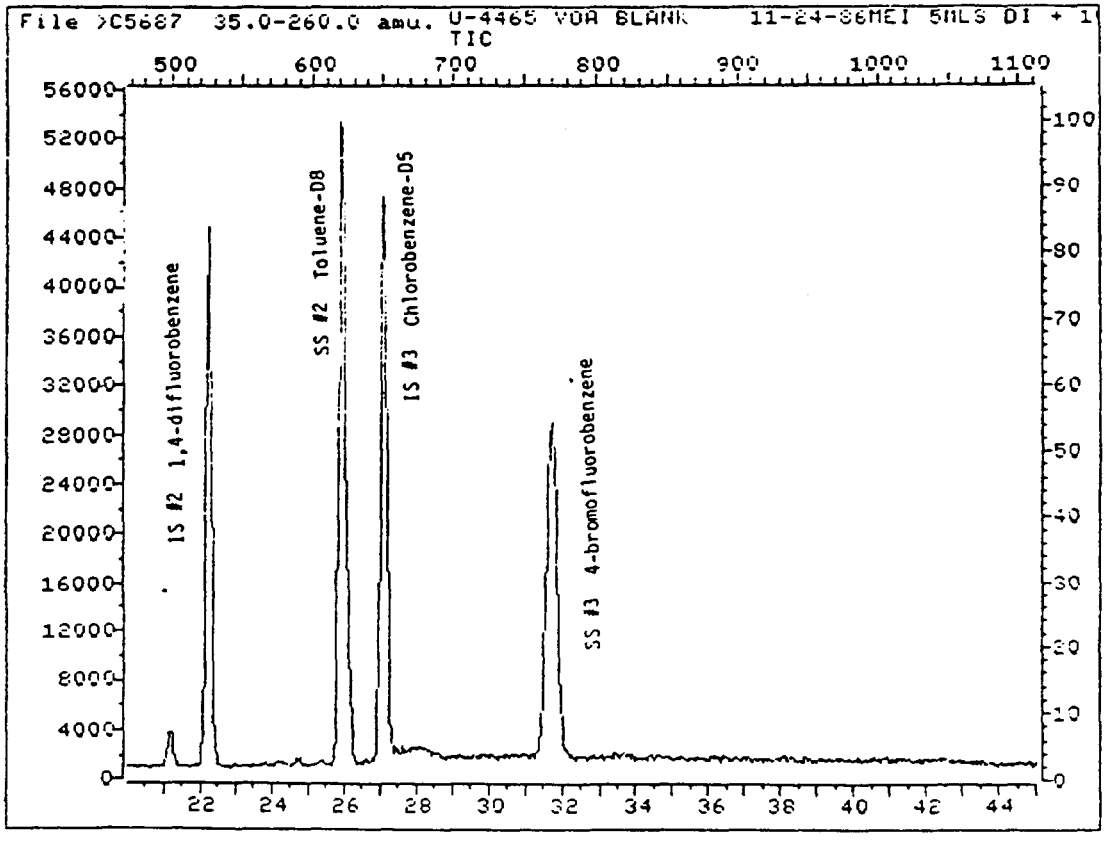
Data File: >C5687::D3
Name: U-4465 VOA BLANK
Misc: 11-24-86MEI 5MLS DI + IMR. IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (QUNT. CAL
Last Calibration: 861124 23:52

Operator ID: USER6
Quant Time: 861125 01:36
Injected at: 861125 00:50


File >C5687 35.0-260.0 amu. U-4465 VOA BLANK 11-24-86MEI 5MLS DI + 1
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4

BLKC5687


File >C5687 35.0-260.0 amu. U-4465 VOA BLANK 11-24-86MEI 5MLS DI + 1
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

QUANT REPORT

Operator ID: USER6 Quant Rev: 4 [illegible] 861125 01:36
Output File: ^C5687::02 [illegible] 861125 00:50
Data File: >C5687::03 Dilution Factor: 1.00
Name: U-4465 VOA BLANK
Misc: 11-24-86MEI 5MLS DI + 10UL IS SS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 [illegible]
Last Calibration: 861124 23:52

	Compound	M/E	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1)	*BROMOCHLOROMETHANE (IS)	128	[illegible]	[illegible]	[illegible]	250.00	NGS	100
6)	METHYLENE CHLORIDE	[illegible]	[illegible]	[illegible]	[illegible]	78.[illegible]	NGS	100
7)	ACETONE	[illegible]	9.27	[illegible]	[illegible]	14.25	NGS	100
15)	1,2-DICHLOROETHANE-D4(SURR)	65	14.51	[illegible]	[illegible]	220.95	NGS	86
16)	*1,4-DIFLUOROBENZENE (IS)	114	22.23	[illegible]	[illegible]	250.00	NGS	100
17)	2-BUTANONE	72	14.66	[illegible]	[illegible]	36.30	NGS	100
31)	*CHLOROBENZENE-D5 (IS)	117	27.08	[illegible]	[illegible]	250.00	NGS	100
36)	TOLUENE-D8 (SURR)	98	25.91	[illegible]	208341	248.13	NGS	95
37)	TOLUENE	92	26.11	[illegible]	24156	36.44	NGS	96
40)	4-BROMOFLUOROBENZENE(SURR)	95	31.70	[illegible]	[illegible]	246.40	NGS	100

* Compound is ISTD

Sample Number
BLK C5698

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No. U-4474

Lab Sample ID No: Method Blank QC Report No: _____

Sample Matrix: Water for Soil Contract No. IL-3140

Data Release Authorized By: C Stoytowicz Date Sample Received: _____

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: _____

Date Analyzed: 11-25-86

Conc/Dil Factor: 1 pH _____

Percent Moisture. (Not Decanted) _____

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	11
67-64-1	Acetone	7J
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
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	1J
591-78-6	2-Hexanone	1J
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.

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ecology and environment

Laboratory Name Ecology & Environment, Inc

Case No U-4465

Sample Number BLKC5698

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 Volatile TIC's found			
2.				
3.				
4.				
5.				
6.				
7.				
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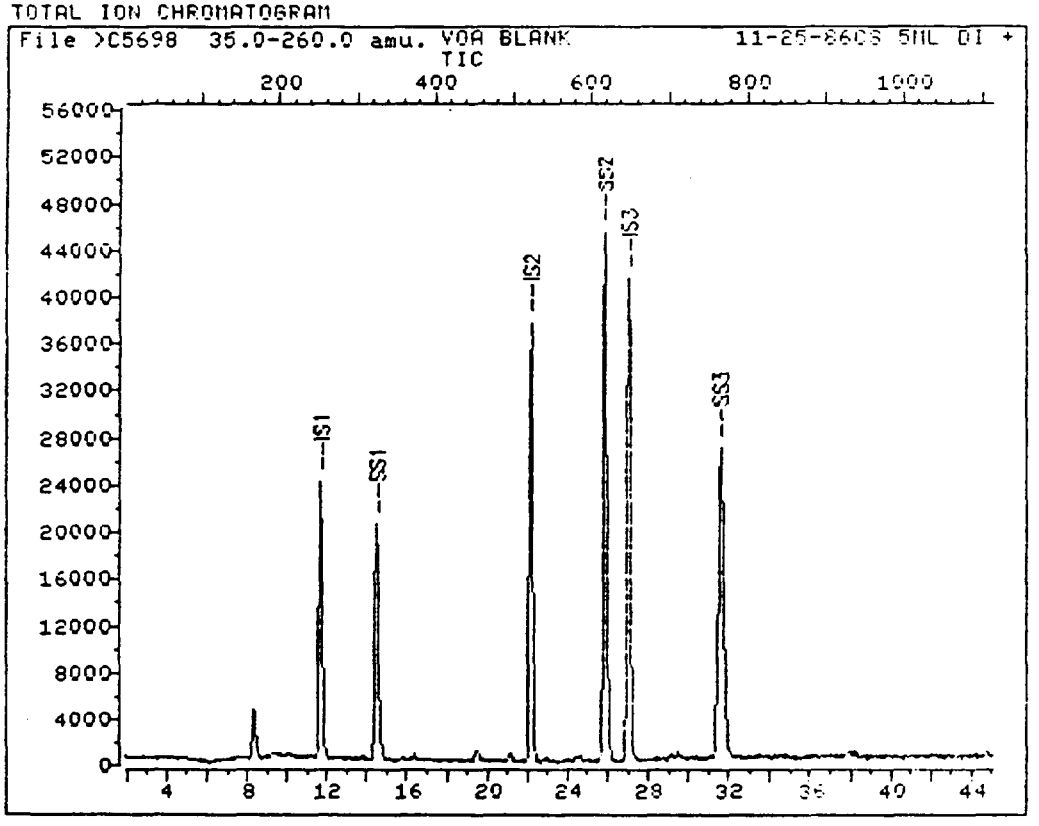
TOTAL ION CHROMATOGRAM

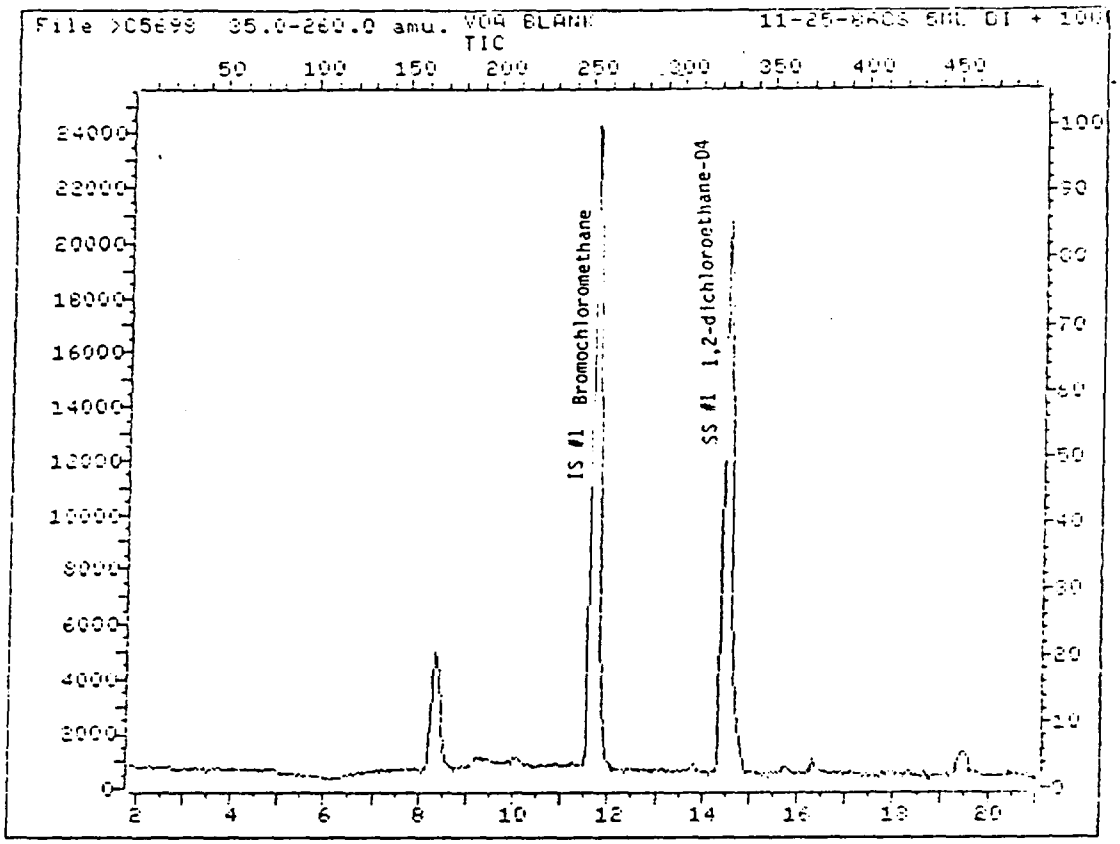


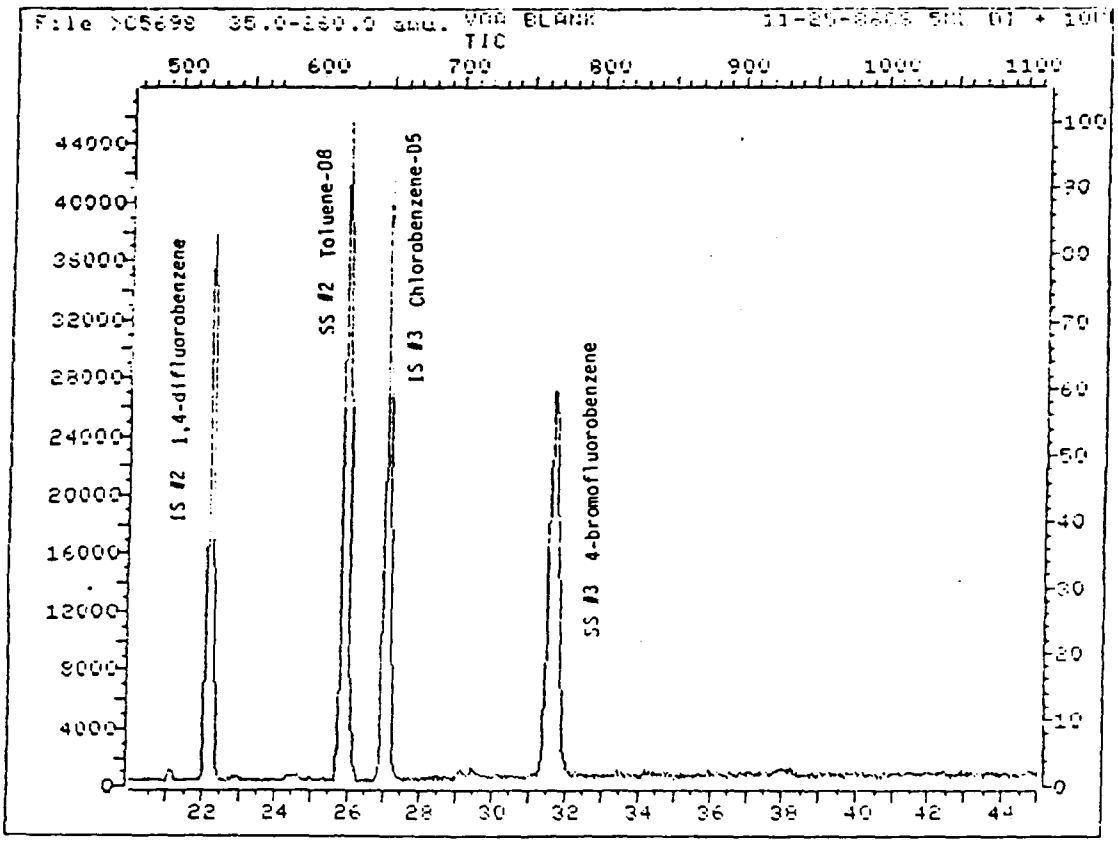
Data File: >C5698::D2
Name: VOA BLANK
Misc: 11-25-86CS 5ML DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861125 10:50

Operator ID: USER6
Quant Time: 861125 11:51
Injected at: 861125 11:05

ELK05698


File >05698 35.0-260.0 amu. VOA BLANK
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File >05698 35.0-260.0 amu. VOA BLANK
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

QUANT REPORT

Operator ID: USER6 Quant Rev: 4 Quant Time: 861125 11:51
Output File: ^C5698::Q2 Injected at: 861125 11:05
Data File: >C5698::D2 Dilution Factor: 1.00
Name: VOA BLANK
Misc: 11-25-86CS 5ML DI + 10UL IS/SS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861125 10:50

	Compound	M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE (IS)	128	11.67	253	34443	250.00	NGS	100
6)	METHYLENE CHLORIDE	84	8.37	168	11143	56.02	NGS	100
7)	ACETONE	43	9.34	193	4250	33.22	NGS	100
15)	1,2-DICHLOROETHANE-D4(SURR)	65	14.50	326	84777	244.89	NGS	86
16)	*1,4-DIFLUOROBENZENE (IS)	114	22.18	524	154164	250.00	NGS	100
17)	2-BUTANONE	72	14.62	329	3660	56.88	NGS	100
31)	*CHLOROBENZENE-D5 (IS)	117	27.07	650	129773	250.00	NGS	100
32)	4-METHYL-2-PENTANONE	43	22.84	541	3124	5.85	NGS	74
33)	2-HEXANONE	43	24.43	582	2498	5.79	NGS	100
36)	TOLUENE-D8 (SURR)	98	25.87	619	184537	249.31	NGS	93
40)	4-BROMOFLUOROBENZENE(SURR)	95	31.62	767	95313	227.90	NGS	100

* Compound is ISTD

Sample Number
BLKC5715

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc. Case No. U-4474
Lab Sample ID No: Method Blank QC Report No:
Sample Matrix: Water for Soil Contract No: IL-3140
Data Release Authorized By: C Boytowicz Date Sample Received:

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-26-86

Conc./Dil Factor: 1 pH

Percent Moisture: (Not Decanted)

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	12
67-64-1	Acetone	11
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	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, etc. (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.

ecology and environment

Laboratory Name ecology and environment, inc.

Case No U-4474

Sample Number BLK C5715

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.	No TIC's in VOA fraction			
2.				
3.				
4.				
5.				
6.				
7.				
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9.				
10.				
11.				
12.				
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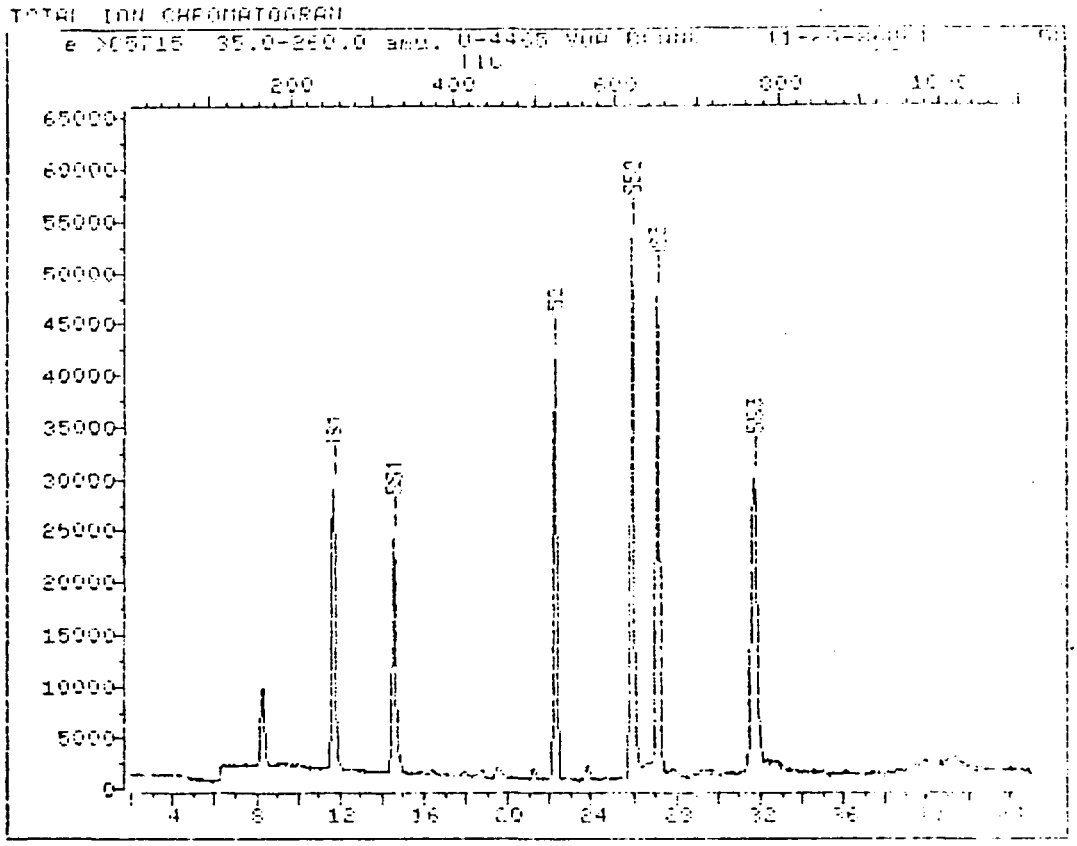
30				

TOTAL ION CHROMATOGRAM

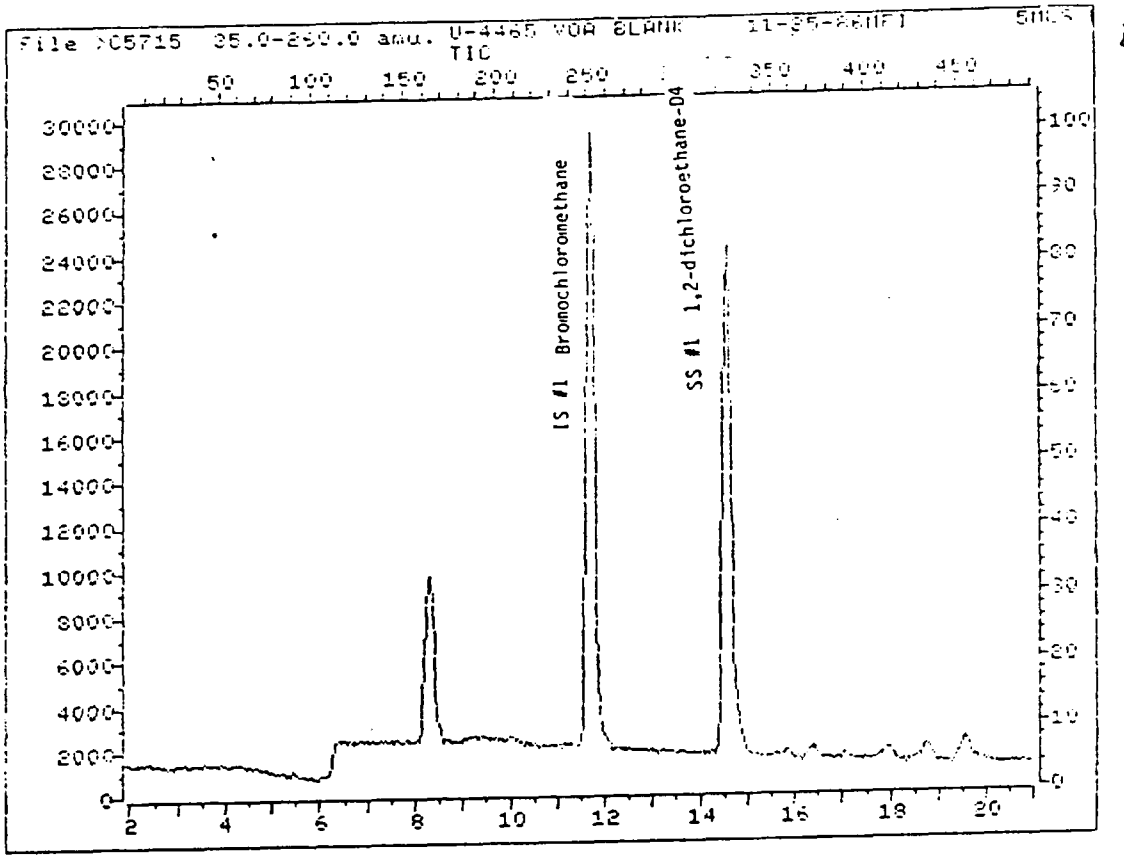


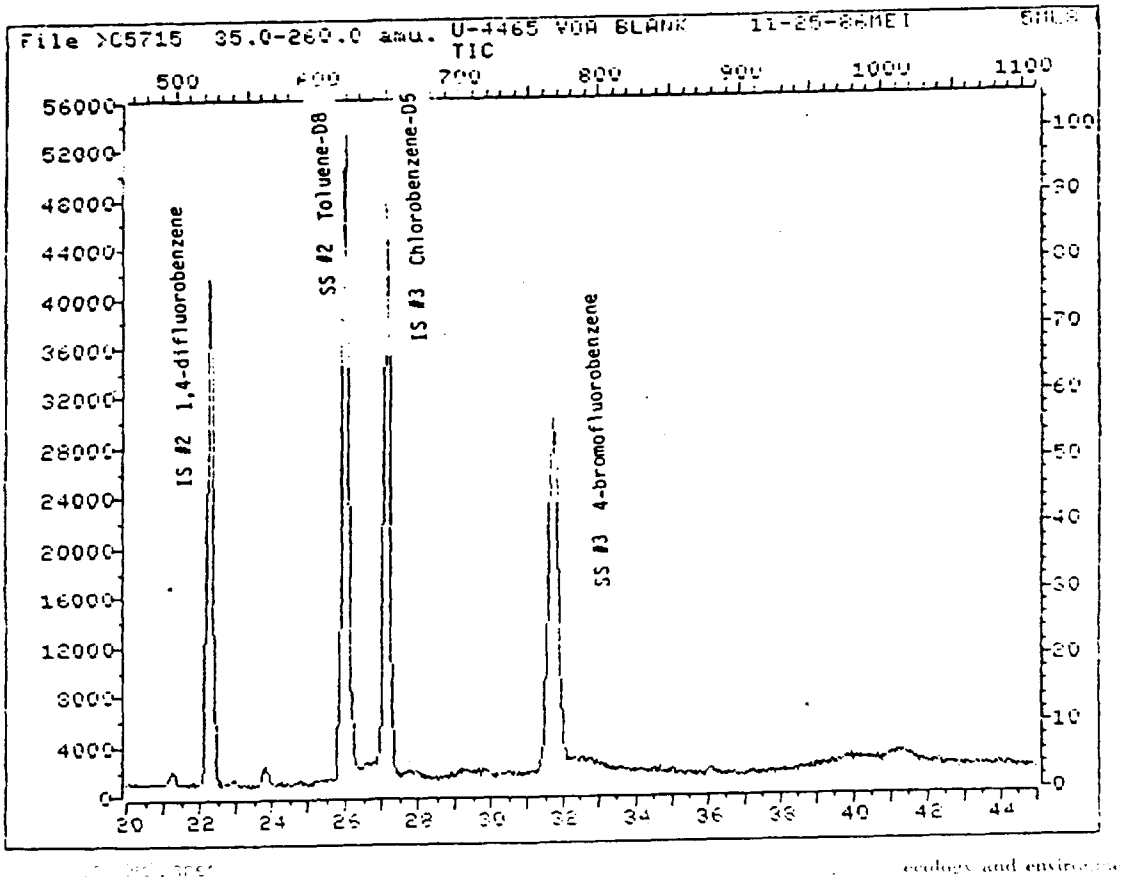
Data File: >C5715::D1
Name: U-4465 VOA BLANK
Misc: 11-25-86MEI 5MLS DI + 10UL [illegible]

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861125 22:54

Operator ID: USLM6
Quant Time: 861126 03:[illegible]
Injected at: 861126 0[illegible]:47

BLKC5715


File >C5715 35.0-260.0 amu. U-4465 VOA BLANK 11-25-86MEI
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File >C5715 35.0-260.0 amu. U-4465 VOA BLANK 11-25-86MEI
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

VOAQC DLIQPI

erator ID: USER6 Quant Rev: 4 Run Time: 861126 03:[illegible]
tput File: ^C5715::D2 Injected at: 861126 03:47
ta File: >C5715::D1 Dilution factor: 1.00
me: U-4465 VOA BLANK
sc: 11-25-86NEI 5MLS UI + 10UL IS/SS

) File: VOAQRS::D2
tle: VOA TO FILE FOR HP-5995 (CURR. CAL.)
st Calibration: 861125 22:54

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.68	252	42268	250.00	UGS	100
6)	METHYLENE CHLORIDE		84	8.27	164	72078	59.90	UGS	100
7)	ACETONE		43	9.28	198	4960	55.67	UGS	100
7)	~~ACETONE~~		~~43~~	~~[illegible]~~	~~198~~	~~[illegible]~~	~~[illegible]~~	~~UGS~~	100
15)	1,2-DICHLOROETHANE-D4(SURR)		65	14.56	326	92760	275.99	UGS	88
4)	*1,4-DIFLUOROBENZENE	(IS)	114	22.24	524	188877	250.00	UGS	100
7)	2-BUTANONE		72	14.71	330	4193	61.03	UGS	100
)	*CHLOROBENZENE-D5	(IS)	117	27.13	650	142767	250.00	UGS	100
)	~~2-HEXANONE~~		~~43~~	~~27.79~~	~~5[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UGS~~	100
)	TOLUENE-D8	(SURR)	98	25.96	620	295[illegible]	242.87	UGS	96
)	4-BROMOFLUOROBENZENE	(SURR)	95	31.72	768	1[illegible]	246.90	UGS	100

Compound is ISID

Sample Number
BLKC5808

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474
Lab Sample ID No: Method Blank QC Report No:
Sample Matrix: Soil Contract No: IL-3140
Data Release Authorized By: CStoytowicz Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-26-86

Conc./Dil Factor: 1 pH

Percent Moisture: (Not Decanted)

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
67-64-1	Acetone	4J
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	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 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

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

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

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

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Laboratory Name ecology and environment, inc.

Case No 11-11171

Sample Number BLKC5808

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.	No TIC's in VOA fraction			
2.				
3.				
4.				
5.				
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9.				
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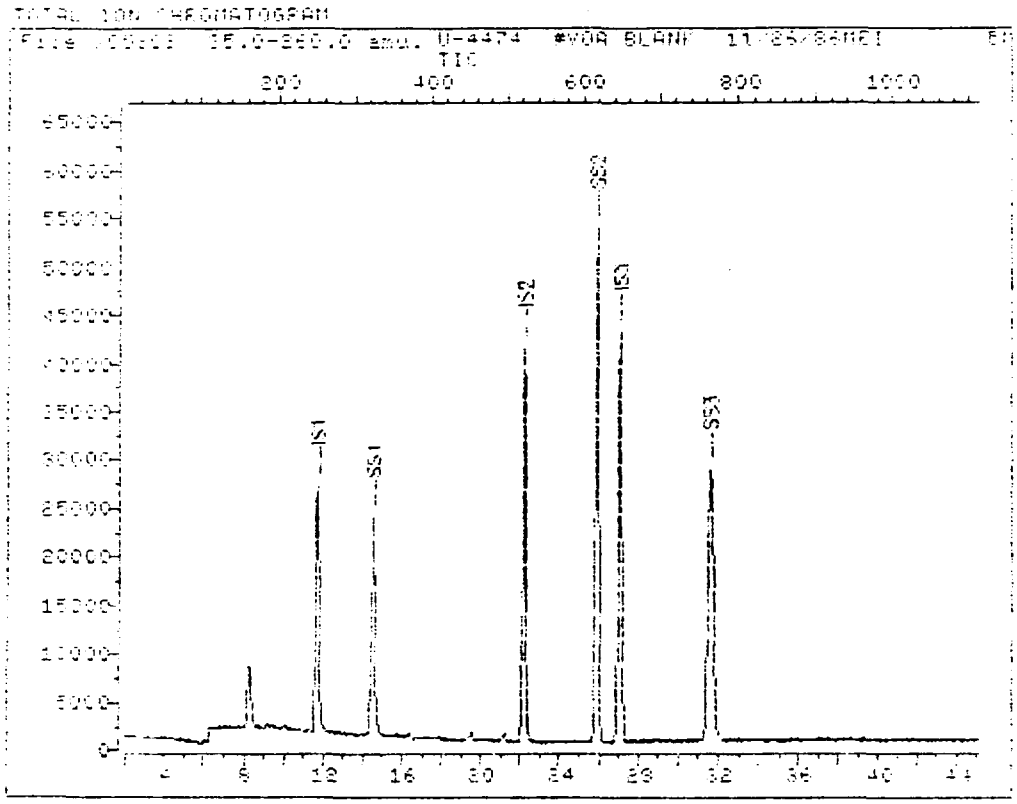


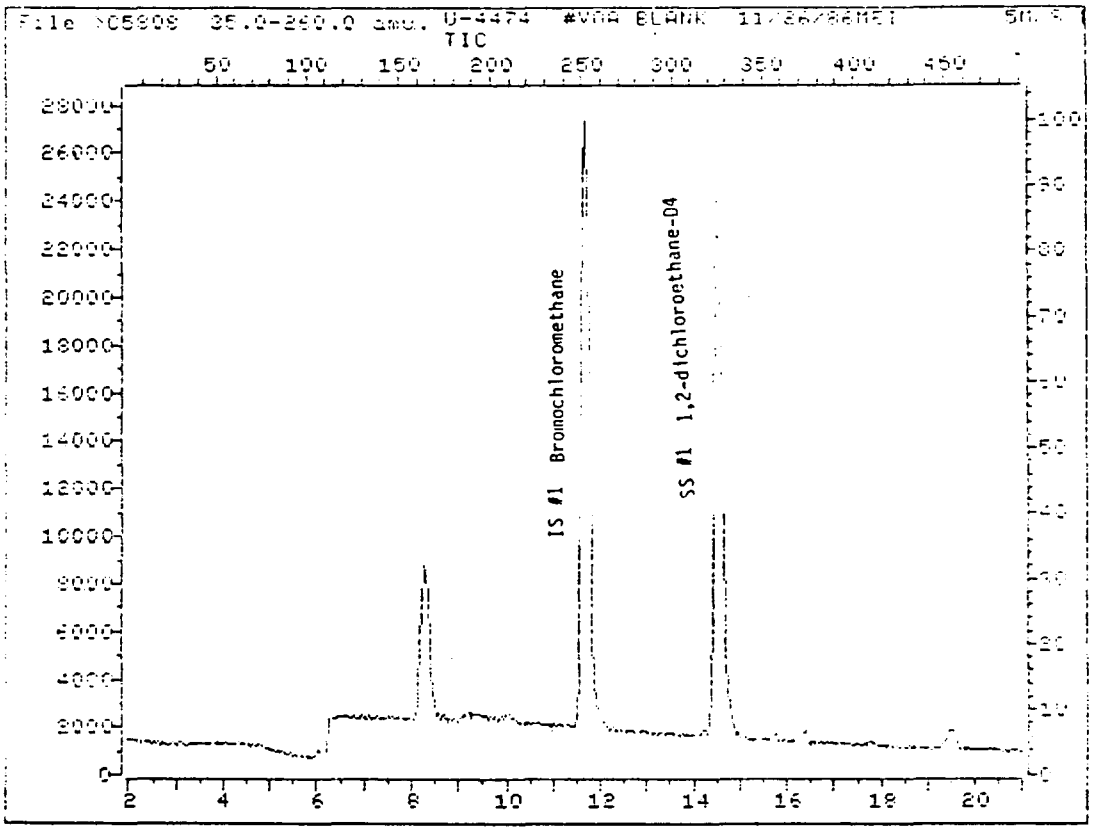
Data File: [illegible]::D3
Name: [illegible]-4474 #VOA BLANK
Misc: 11/26/86MEI 5MLS DI + 10UL IS/SS

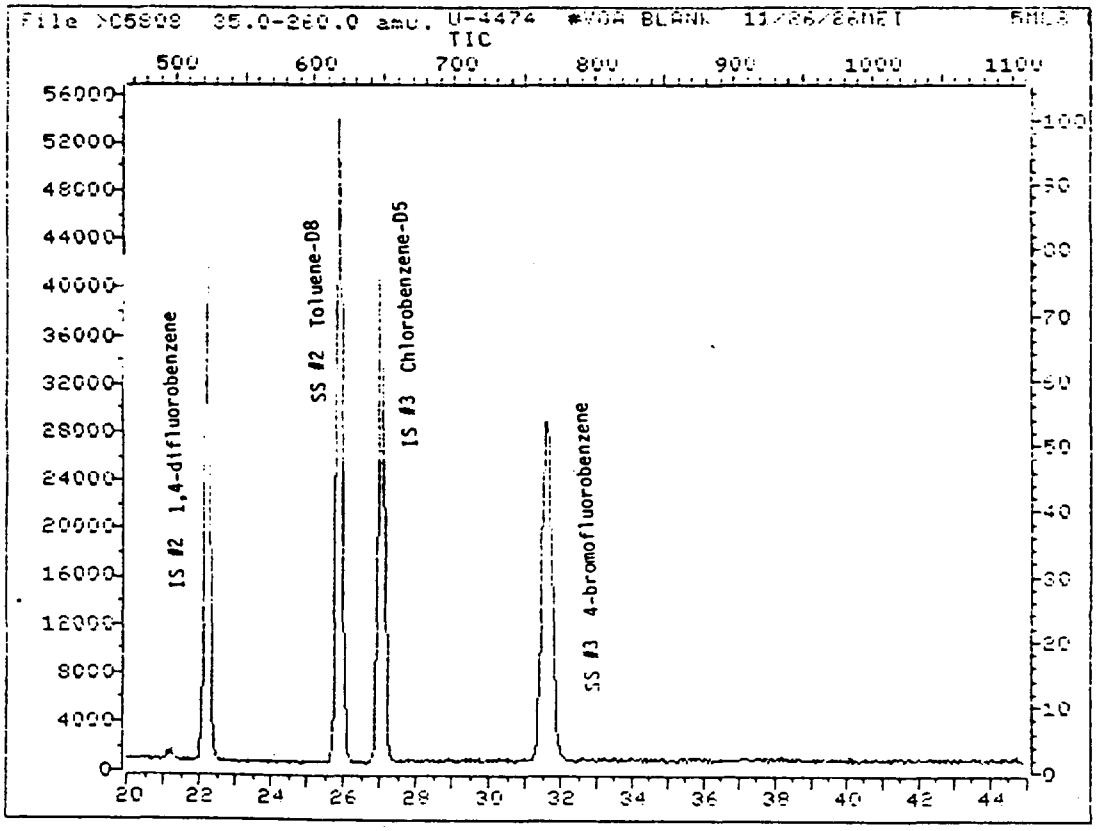
Id File: VOAUPS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861126 17:32

Operator ID: USER6
Quant Time: 861126 20:15
Injected at: 861126 19:29

BLKC5808

BLKC58





501

QUANT REPORT

Operator ID: USERS Quant Rev: 4 Quant Time: 861126 20:15
Output File: >C5808::Q2 Injected at: 861126 19:29
Data File: >C5808::D3 Dilution Factor: 1.00
Name: U-4474 #VOA BLANK
Misc: 11 26/86OSI 5MLS DI + 10UL IS/SS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861126 17:32

	Compound		M/E	R.T.	Scan#	Area	Cond	Units	%
1)	*BROMOCHLOROMETHANE	(IS)	128	11.68	252	38820	250.00	NGS	100
6)	METHYLENE CHLORIDE		84	8.31	165	18791	68.18	NGS	100
7)	ACETONE		43	9.24	189	4574	18.95	NGS	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.52	325	92424	173.81	NGS	88
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.20	523	173204	250.00	NGS	100
17)	2-BUTANONE		72	14.67	329	3252	59.70	NGS	100
30)	*CHLOROBENZENE-D5	(IS)	117	27.05	649	138868	250.00	NGS	100
36)	TOLUENE-D8	(SURR)	98	25.89	618	214104	280.27	NGS	[illegible]
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.60	765	104217	265.84	NGS	100

* Compound is ISTD

Sample Number
BLK C5811

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474
Lab Sample ID No: Method Blank QC Report No:
Sample Matrix: Water for Soil Contract No: IL-3140
Data Release Authorized By: D Wojtowicz Date Sample Received:

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-26-86

Conc/Dil Factor: 1 pH

Percent Moisture: (Not Decanted)

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	7
67-64-1	Acetone	11
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	17
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	2J
127-18-4	Tetrachloroethene	5u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5u
108-88-3	Toluene	5u
108-90-7	Chlorobenzene	5u
100-41-4	Ethylbenzene	5u
100-42-5	Styrene	5u
	Total Xylenes	5u

Data Reporting Qualifiers

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

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

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

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

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

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

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

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Laboratory Name ecology and environment, inc.

Case No U-4465

Sample Number BLKC5811

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) ug
1.	No TIC's in Volatile Fraction			
2.				
3.				
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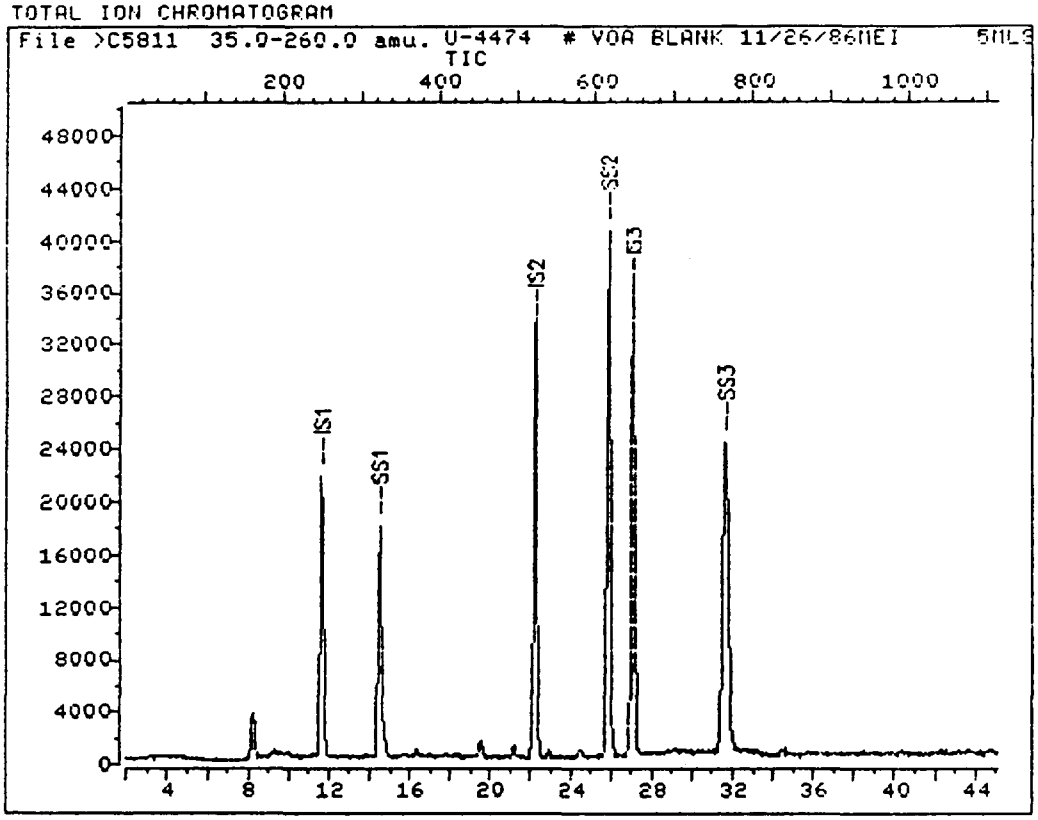
TOTAL ION CHROMATOGRAM

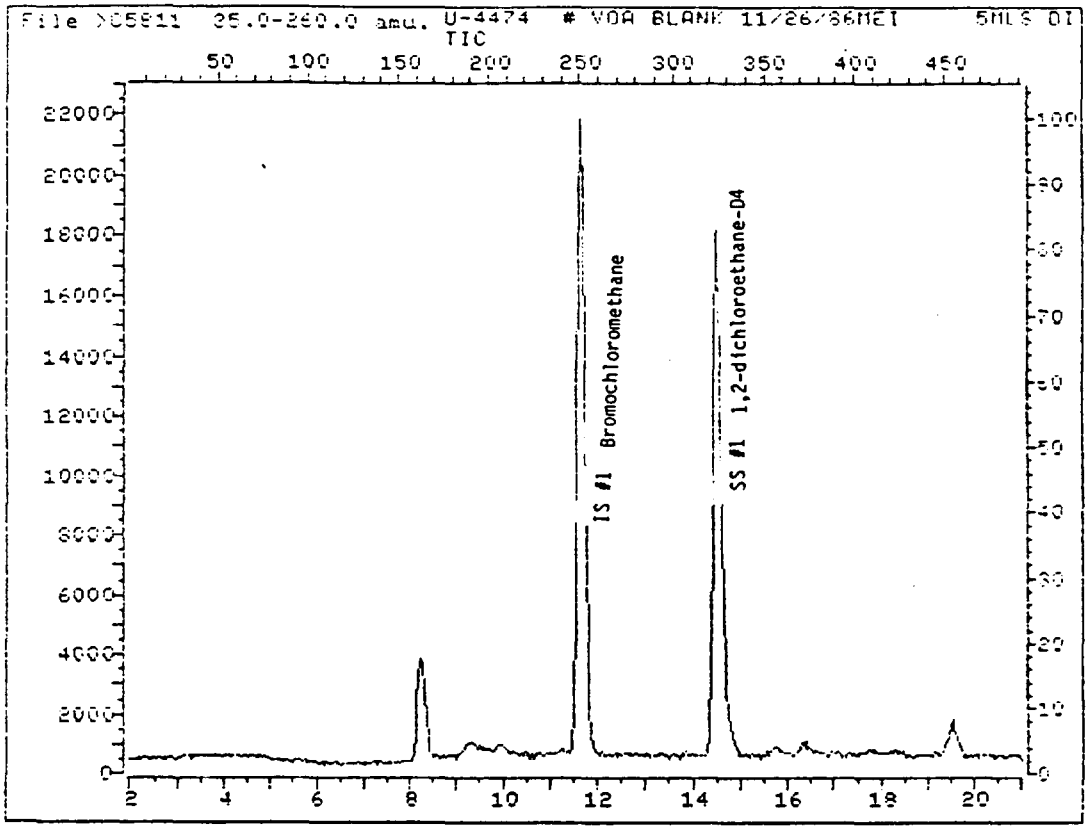


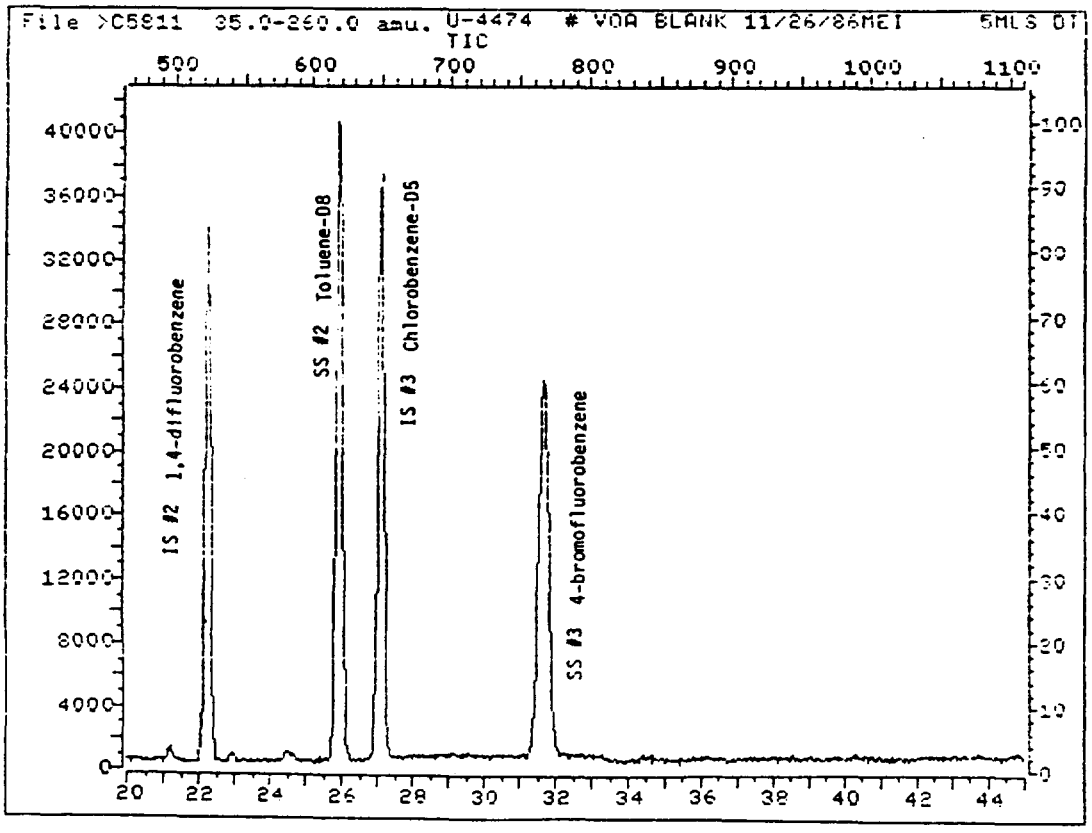
Data File: >C5811::D3
Name: U-4474 # VOA BLANK
Misc: 11/26/86MEI 5MLS DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861126 21:46

Operator ID: USER6
Quant Time: 861126 22:49
Injected at: 861126 22:03

BLKC5811


File >C5811 35.0-260.0 amu. U-4474 # VOA BLANK 11/26/86MEI 5MLS DI
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File >C5811 35.0-260.0 amu. U-4474 # VOA BLANK 11/26/86MEI 5MLS DI
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

QUANT REPORT

Operator ID: USER6 Quant Rev: 4 Quant Time: 861126 22:49
Output File: ^C5811::Q2 Injected at: 861126 22:03
Data File: >C5811::D3 Dilution Factor: 1.00
Name: U-4474 # VOA BLANK
Misc: 11/26/86MEI 5MLS DI + 10UL IS/SS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861126 21:46

	Compound	M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE (IS)	128	11.64	251	29764	250.00	NGS	100
6)	METHYLENE CHLORIDE	84	8.23	163	7903	34.67	NGS	100
7)	ACETONE	43	9.32	191	6339	54.67	NGS	100
15)	1,2-DICHLOROETHANE-D4(SURR)	65	14.48	324	70113	193.72	NGS	86
16)	*1,4-DIFLUOROBENZENE (IS)	114	22.20	523	141364	250.00	NGS	100
17)	2-BUTANONE	72	14.67	329	3548	86.89	NGS	100
~~30)~~	~~BROMOFORM~~	~~173~~	~~22.24~~	~~524~~	~~309~~	~~1.85~~	~~NGS~~ No BM	100
31)	*CHLOROBENZENE-D5 (IS)	117	27.05	648	115923	250.00	NGS	100
33)	2-HEXANONE	43	24.45	581	3943	11.69	NGS	100
36)	TOLUENE-D8 (SURR)	98	25.88	618	160313	258.70	NGS	94
40)	4-BROMOFLUOROBENZENE(SURR)	95	31.64	766	79805	257.50	NGS	100

* Compound is ISTD

Laboratory Name Ecology & Environment Inc.

Case No V-4474

Sample Number B3187

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 11/17/86

Date Analyzed: 12/19/86

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

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

(1)-Cannot be separated from diphenylamine

Laboratory Name Ecology & Environment Inc.

Case No U-4474

Sample Number B3187

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 Semi-Volatile Compounds Found			
2.				
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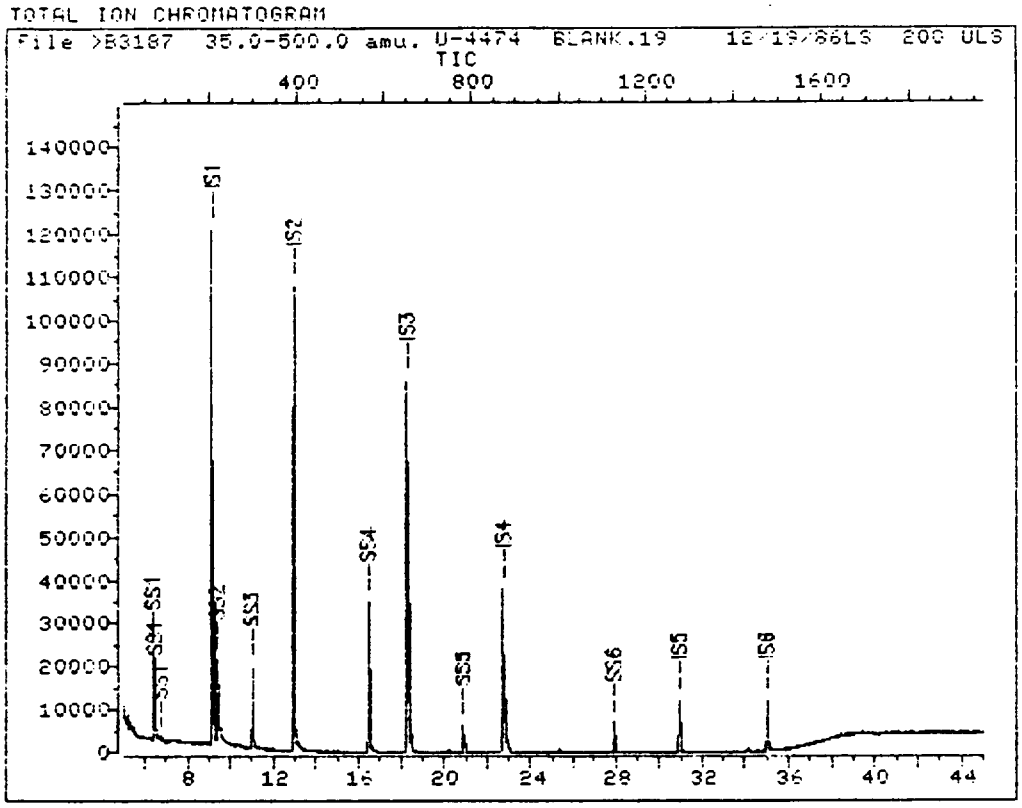
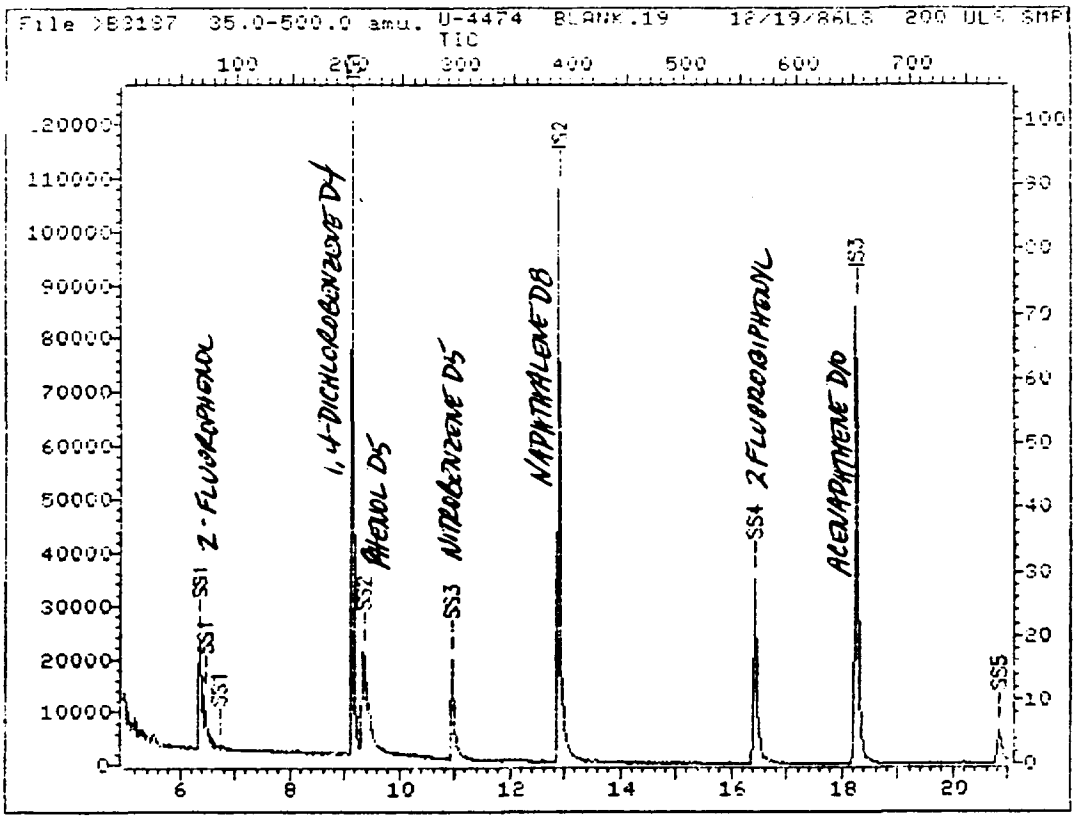
TOTAL ION CHROMATOGRAM

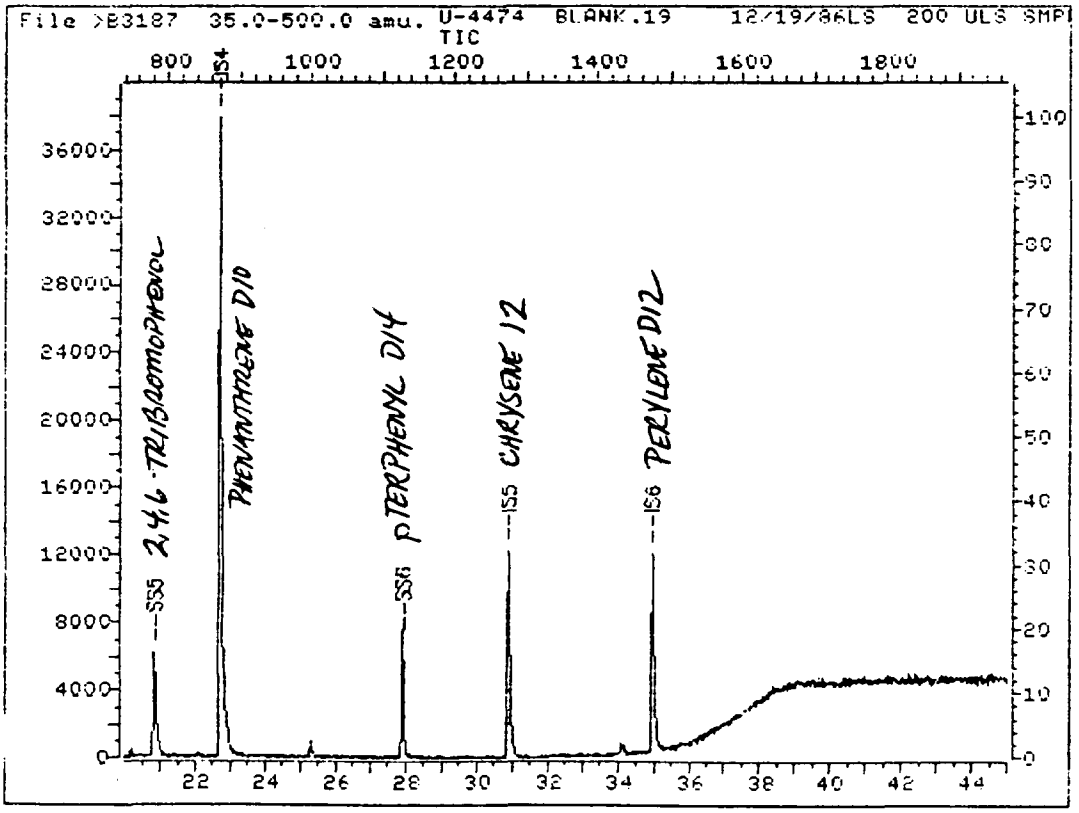


Data File: >B3187::D4
Name: U-4474 BLANK.19
Misc: 12/19/86LS 200 ULS SMPL + 200 ULS MECL2 + 4 ULS IS (1

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861224 12:42

Operator ID: USER8
Quant Time: 861226 09:16
Injected at: 861219 15:06





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QUANT REPORT

erator ID: USER8 Quant Rev: 4 Quant Time: 861226 09:16
Output File: ^B3187::Q2 Injected at: 861219 15:06
Data File: >B3187::D4 Dilution Factor: 2.00
Name: U-4474 BLANK.19 (11/17)
Misc: 12/19/86LS 200 ULS SMPL + 200 ULS MECL2 + 4 ULS IS (1

ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861224 12:42

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.13	204	54271	40.00	UG/L	86
2)	PHENOL-D5	(SURR)	99	9.34	214	29057	29.95	UG/L 30	86
5)	2-FLUOROPHENOL	(SURR)	112	6.35	67	26825	35.36	UG/L	84
5)	2-FLUOROPHENOL	(SURR)	112	6.45	72	7255	9.56	UG/L 46	88
5)	2-FLUOROPHENOL	(SURR)	112	6.69	84	850	1.12	UG/L	86
17)	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~10.94~~	~~293~~	~~3623~~	~~5.16~~	~~UG/L~~ NOGM	88
19)	*NAPHTHALENE-D8	(IS)	136	12.89	389	189267	40.00	UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	10.94	293	26389	33.18	UG/L 66	94
34)	*ACENAPHTHENE-D10	(IS)	162	18.24	652	76409	40.00	UG/L	98
38)	2-FLUOROBIPHENYL	(SURR)	172	16.41	562	59955	40.45	UG/L 82	93
41)	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.24~~	~~652~~	~~22315~~	~~16.35~~	~~UG/L~~ NOGM	100
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.82	779	7392	35.28	UG/L	92
52)	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.24~~	~~652~~	~~8926~~	~~28.63~~	~~UG/L~~ NOGM	100
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.38~~	~~659~~	~~131~~	~~.42~~	~~UG/L~~	100
55)	*PHENANTHRENE-D10	(IS)	188	22.69	871	88524	40.00	UG/L	96
65)	*CHRYSENE-D12	(IS)	240	30.88	1274	30936	40.00	UG/L	100
68)	TERPHENYL-D14	(SURR)	244	27.89	1127	16964	58.30	UG/L 116	100
74)	*PERYLENE-D12	(IS)	264	34.94	1474	27181	40.00	UG/L	100

* Compound is ISTD

ecology and environment

Laboratory Name Ecology & Environment Inc.

Case No V-4474

Sample Number D1484

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 1/2/87

Date Analyzed: 1/9/87

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

CAS Number		ug/l or (ug/Kg) (Circle One)	
83-32-9	Acenaphthene	330	U
51-28-5	2, 4-Dinitrophenol	1600	U
100-02-7	4-Nitrophenol	1600	U
132-64-9	Dibenzofuran	330	U
121-14-2	2 4-Dinitrotoluene	330	U
606-20-2	2 6-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	1600	U
534-52-1	4. 6-Dinitro-2-Methylphenol	1600	U
86-30-6	N-Nitrosodiphenylamine (1)	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
87-86-5	Pentachlorophenol	1600	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
84-74-2	Di-n-Butylphthalate	1300	
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3. 3'-Dichlorobenzidine	660	U
56-55-3	Benzo(a)Anthracene	330	U
117-81-7	bis(2-Ethylhexyl)Phthalate	330	U
218-01-9	Chrysene	330	U
117-84-0	Di-n-Octyl Phthalate	330	U
205-99-2	Benzo(b)Fluoranthene	330	U
207-08-9	Benzo(k)Fluoranthene	330	U
50-32-8	Benzo(a)Pyrene	330	U
193-39-5	Indeno(1 2. 3-cd)Pyrene	330	U
53-70-3	Dibenzo(a h)Anthracene	330	U
191-24-2	Benzo(g h. i)Perylene	330	U

(1)-Cannot be separated from diphenylamine

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Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No V-4474

Sample Number D1484

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	20.2	580 J
2.	UNKNOWN	BNA	34.0	1300 J
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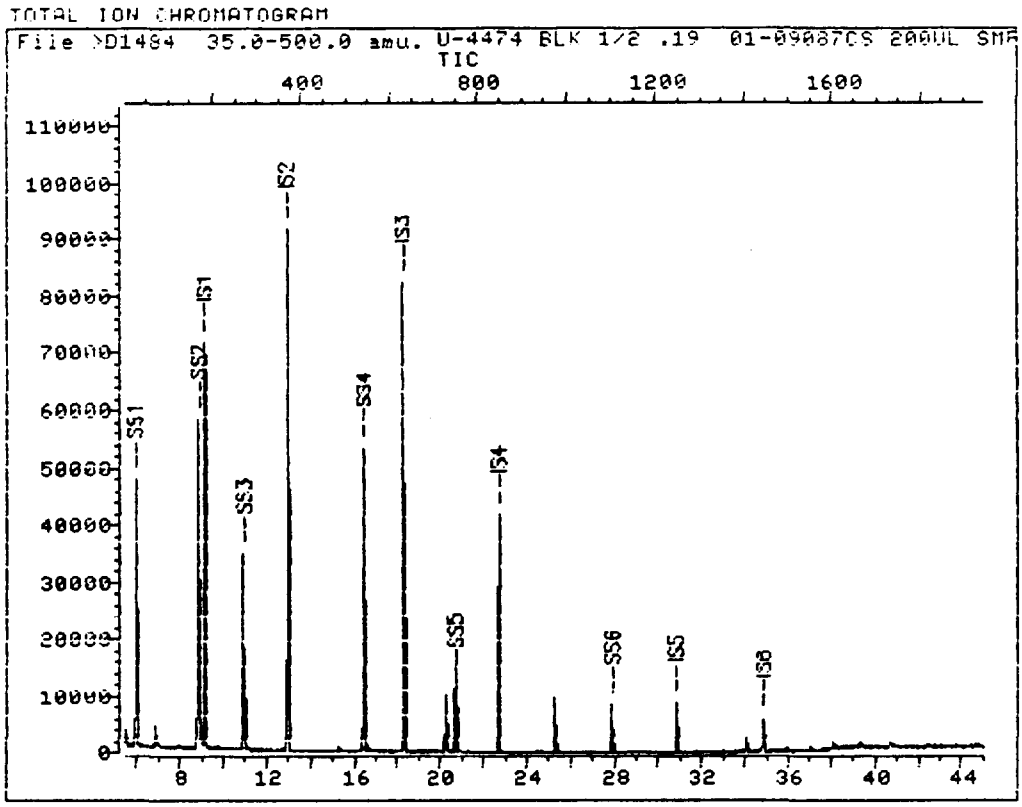

Data File: >D1484::D3
Name: U-4474 BLK 1/2 .19
Misc: 01-09087CS 200UL SMPL + 200UL MECL2 + 4UL IS (2X) BTL# 1

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870109 14:56

Operator ID: USER6
Quant Time: 870109 15:13
Injected at: 870109 14:26

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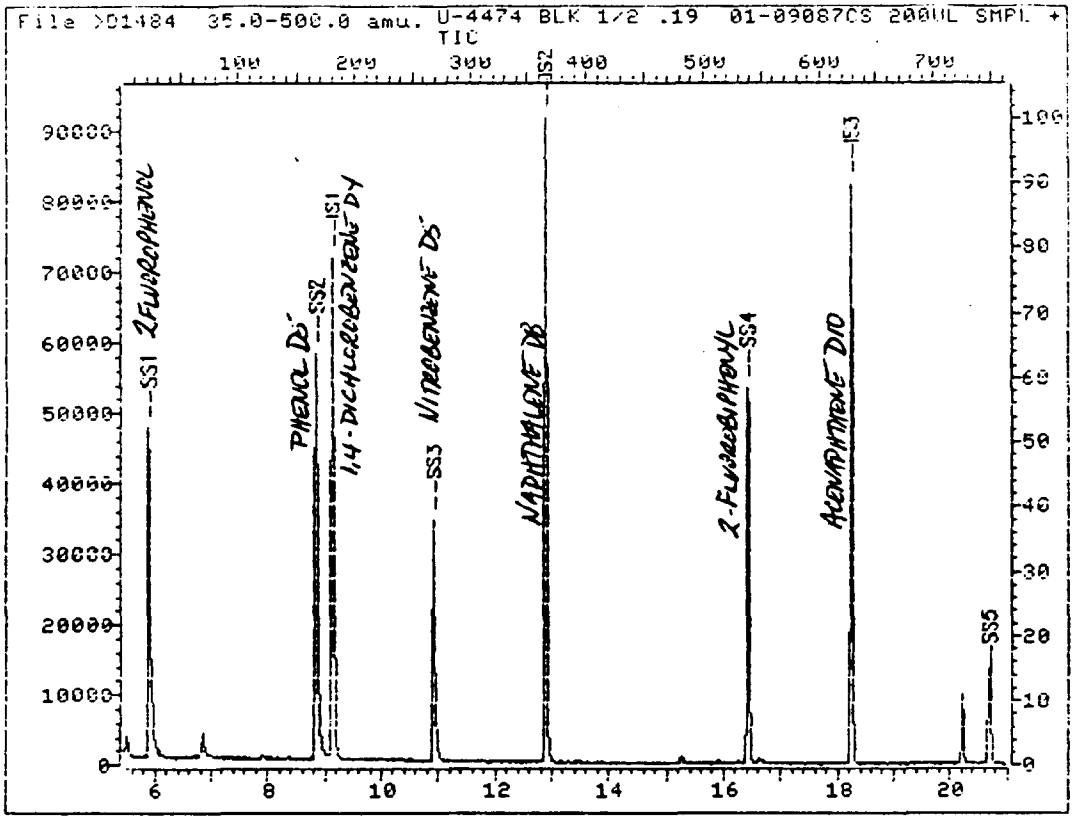

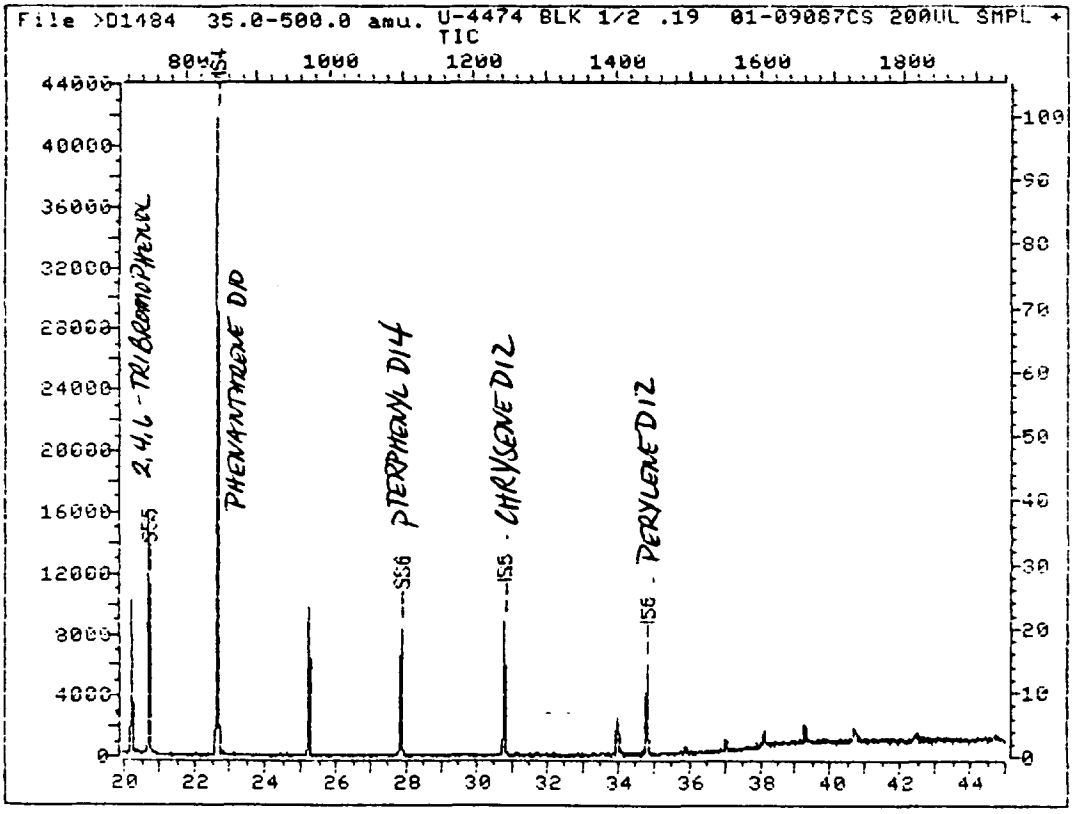

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ecology and environment

QUANT REPORT

Operator ID: USER6 Quant Rev: 4 Quant Time: 870109 15:13
Output File: ^D1484::Q2 Injected at: 870109 14:26
Data File: >D1484::D3 Dilution Factor: 2.00
Name: U-4474 BLK 1/2 .19
Misc: 01-09087CS 200UL SMPL + 200UL MECL2 + 4UL IS (2X) BTL# 1

ID File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870109 14:56

	Compound		MK	R.T.	Scan#	Area	Conc	Units		q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.12	180	35313	40.00	UG/L		89
2)	PHENOL-D5	(SURR)	99	8.83	166	49991	80.74	UG/L	81	92
5)	2-FLUOROPHENOL	(SURR)	112	5.88	21	37517	82.60	UG/L	83	88
17)	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~10.91~~	~~268~~	~~4603~~	~~9.38~~	~~UG/L~~	NCLP	92
19)	*NAPHTHALENE-D8	(IS)	136	12.89	365	124208	40.00	UG/L		100
20)	NITROBENZENE-D5	(SURR)	82	10.91	268	26680	34.23	UG/L	68	93
34)	*ACENAPHTHENE-D10	(IS)	162	18.24	628	44410	40.00	UG/L		97
38)	2-FLUOROBIPHENYL	(SURR)	172	16.41	538	51020	50.78	UG/L	102	94
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.24~~	~~628~~	~~14088~~	~~17.90~~	~~UG/L~~	NCLP	100
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.69	748	5786	44.38	UG/L	44	98
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.24~~	~~628~~	~~5645~~	~~34.95~~	~~UG/L~~	NCLP	100
55)	*PHENANTHRENE-D10	(IS)	188	22.66	845	49110	40.00	UG/L		92
~~63)~~	~~DI-N-BUTYLPHTHALATE~~		~~149~~	~~25.25~~	~~972~~	~~12567~~	~~32.79~~	~~UG/L~~	NCLP	99
65)	*CHRYSENE-D12	(IS)	240	30.77	1243	13589	40.00	UG/L		100
68)	TERPHENYL-D14	(SURR)	244	27.86	1100	10888	58.81	UG/L	118	100
74)	*PERYLENE-D12	(IS)	264	34.82	1442	8609	40.00	UG/L		100

* Compound is ISTD

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ecology and environment

Laboratory Name ecology and environment, inc.

Case No U-4474

Sample Number BLANK

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed 12-9-86

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	8.0 U
319-85-7	Beta-BHC	8.0 U
319-86-8	Delta-BHC	8.0 U
58-89-9	Gamma-BHC (Lindane)	8.0 U
76-44-8	Heptachlor	8.0 U
309-00-2	Aldrin	8.0 U
1024-57-3	Heptachlor Epoxide	8.0 U
959-98-8	Endosulfan I	8.0 U
60-57-1	Dieldrin	16 U
72-55-9	4,4'-DDE	16 U
72-20-8	Endrin	16 U
33213-65-9	Endosulfan II	16 U
72-54-8	4,4'-DDD	16 U
1031-07-8	Endosulfan Sulfate	16 U
50-29-3	4,4'-DDT	16 U
72-43-5	Methoxychlor	80 U
53494-70-5	Endrin Ketone	16 U
57-74-9	Chlordane	80 U
8001-35-2	Toxaphene	160 U
12674-11-2	Aroclor-1016	80 U
11104-28-2	Aroclor-1221	80 U
11141-16-5	Aroclor-1232	80 U
53469-21-9	Aroclor-1242	80 U
12672-29-6	Aroclor-1248	80 U
11097-69-1	Aroclor-1254	160 U
11096-82-5	Aroclor-1260	220

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 30 V_t 1000 V_i 4

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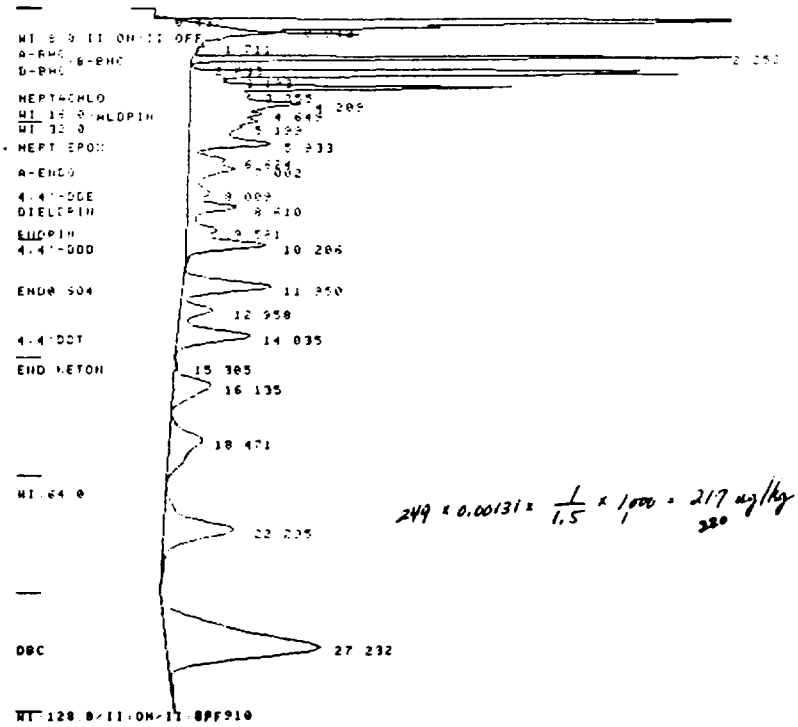
CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 10% 5 MIN/TICK



249 x 0.00131 x $\frac{1}{1.5}$ x 1,000 = 217 ug/kg 1260 $\frac{\text{wet}}{\text{Dry}}$
320

RECALCULATE ON FILE: D.CREEK3537

CHANNEL: 1A - 1 TITLE: RUN# 14 3:46 9 DEC 86

SAMPLE: BLK.19 11-17 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		WI/2 (SEC)
1	B-BHC	[illegible]	2.252	0.022	1153229	BB		5.00
2	BHC offscale	0.0000	2.960		421014	VV	?	7.06
3		0.0000	2.978		440775	VV	?	8.56
4		0.0000	3.193		32074	VV	?	16.50
5		0.0000	3.503		456012	VV		8.56
6	HEPTACHLOR	[illegible]	3.855	-0.035	101283	VV	?	13.19
7		0.0000	4.209		332340	VV	?	28.81
8	ALDRIN	[illegible]	4.649	-0.151	153253	VV	?	29.94
9		0.0000	4.952		144879	VV	?	24.94
10		0.0000	5.199		176744	VV	?	49.50
11	HEPT EPOX	[illegible]	5.933	0.113	281175	VV		27.25
12		0.0000	6.624		88596	VV	?	21.31
13	A-ENDO	[illegible]	7.002	-0.228	185026	VV	?	34.75
14	4,4'-DDE	[illegible]	8.009	-0.321	90949	VV	?	37.94
15	DIELDRIN	[illegible]	8.610	0.190	169389	VV		21.50
16	B-ENDO	[illegible]	9.581	0.001	109621	VV	?	25.44
17	4,4'-DDD	[illegible]	10.206	-0.244	273936	VB		23.75
18	ENDO SO4	[illegible]	11.950	-0.320	376115	BV		30.75
19		0.0000	12.958	1260	134529	VV		26.88
20	4,4'-DDT	[illegible]	14.035	0.385	249 339113	VV		30.75
21	END KETONE	[illegible]	16.135	0.405	244508	VB		47.63
22		0.0000	18.471		309203	BV		59.06
23		0.0000	22.295		530490	VV		49.31
24	DBC	65.4 [illegible]	27.232	-0.138	1559016	VV		76.25

TOTALS: 12911.57 -0.321 8094760

DETECTED PKS: 36 REJECTED PKS: 12

DIVISOR: 1.50000 MULTIPLIER: ~~50000.0023~~ 1,000

NOISE: 22.9 OFFSET: -24

RACK: 1 VIAL: 14 INJ: 1

NOTES:
NOTEBOOK:259-52 ANALYST:RICHARD SAMSON
SECURE AREA:D JOB# U-4474
INST:VARIAN 6000#2 A 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
AUTOSAMPLER
PEST:PCE ANALYSIS

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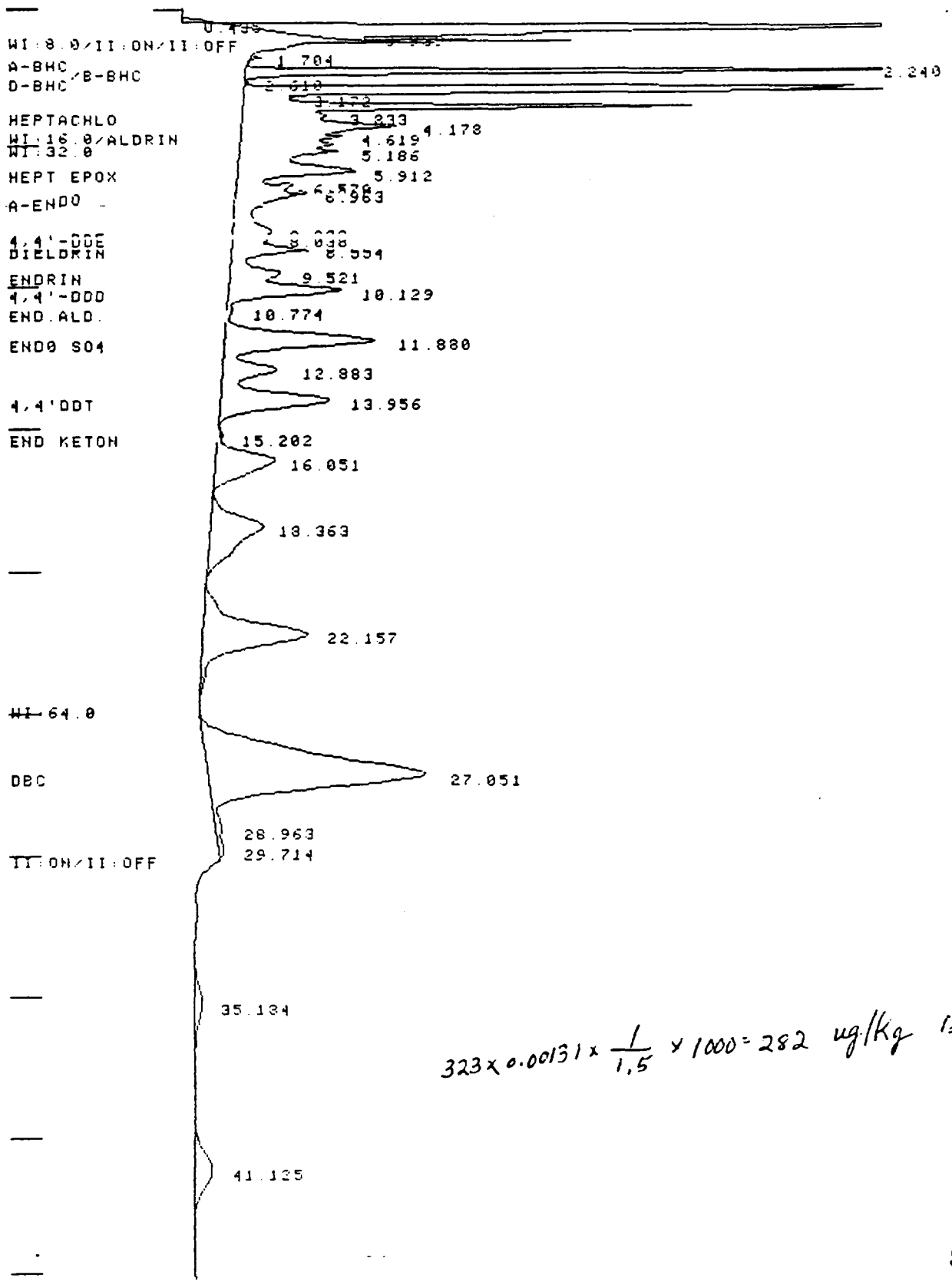
CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 10% 5 MIN/TICK



$323 \times 0.00131 \times \frac{1}{1.5} \times 1000 = 282$ ug/Kg 1260

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CHANNEL: 1A - 1 TITLE: RUN# 51 16:45 10 DEC 86

SAMPLE: BLK19 11-17 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1	B-BHC	107.0455	2.240	0.010	1319364	VB	5.13
2		0.0000	2.843		465361	VV	? 7.06
3		0.0000	2.960		481964	VV	? 8.56
4		0.0000	3.172		34939	VV	? 15.69
5		0.0000	3.482		516920	VV	8.63
6	[illegible]	4.8484	3.833	-0.057	120928	VV	? 13.50
7		0.0000	4.178		370184	VV	? 28.06
8		0.0000	4.619		174566	VV	? 27.75
9	[illegible]	4.0712	4.926	0.126	132693	VV	? 25.63
10		0.0000	5.186		213192	VV	? 39.69
11	[illegible]	11.3999	5.912	0.092	349768	VV	26.63
12		0.0000	6.570		123178	VV	? 22.56
13	[illegible]	7.9453	6.963	-0.267	227612	VV	? 29.69
14	[illegible]	4.2311	8.038	-0.292	116561	VV	? 29.94
15	[illegible]	6.9685	8.554	0.134	219236	VV	21.06
16	[illegible]	5.4862	9.521	-0.059	150303	VV	? 22.56
17	[illegible]	13.2856	10.129	-0.321	318347	VV	21.69
18	[illegible]	27.0092	11.880	-0.390	534931	VV	31.06
19		0.0000	12.883		165784	VV	28.19
20	[illegible]	30.2705	13.956	0.306	439551	VV	32.19
21	[illegible]	11.4104	16.051	0.321	315649	VB	47.31
22		0.0000	18.363		403557	BV	59.81
23		0.0000	22.157		668175	VB	50.69
24	DBC	75.9860	27.051	-0.319	1810145	BV	76.25
25		0.0000	28.963		20882	VV	? 55.19
26		0.0000	35.184		79852	BV	76.94
27		0.0000	41.125		170625	VV	88.81
TOTALS:		309.9577		-0.716	9964267		

DETECTED PKS: 41 REJECTED PKS: 14

DIVISOR: 1.50000 MULTIPLIER: 1000.00000

NOISE: 11.4 OFFSET: 2

NOTES:
NOTEBOOK:259-52 ANALYST:RICHARD SAMSON
SECURE AREA:D JOB# U-4474
INST:VARIAN 6000#2 A 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
AUTOSAMPLER
PEST/PCB ANALYSIS

POST RUN:
SAVE FILE: RAW D.CREEK3576

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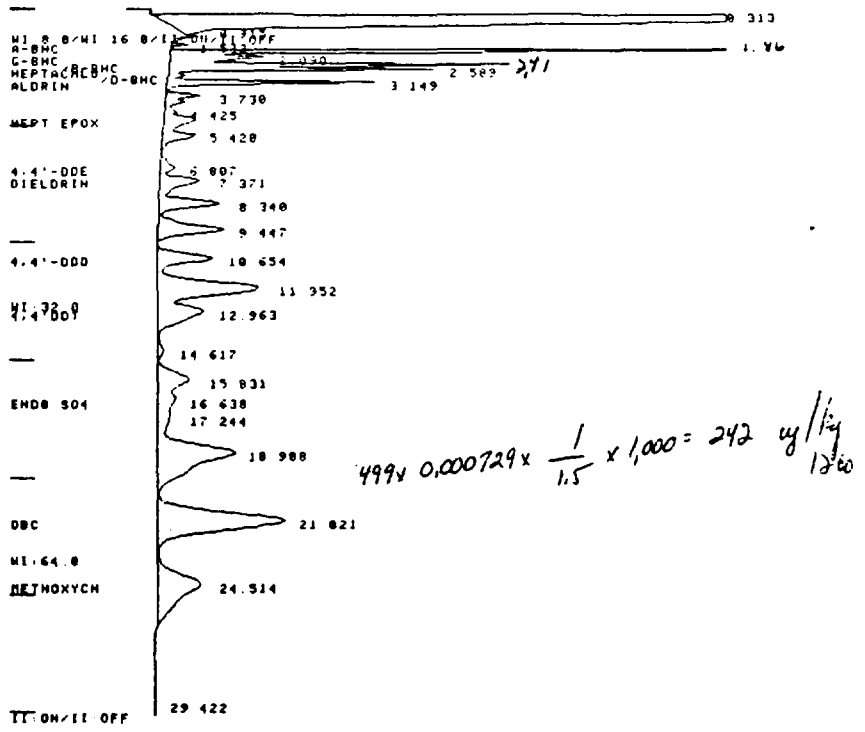
CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10% 5 MIN/TICK



RECALCULATE ON FILE: D.C.#3763

CHANNEL: 1B - 1 TITLE: RUN# 16 9:58 18 DEC 86

SAMPLE: BLK.19A11/17 METHOD: PEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT ~~UG/KG~~	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		W1/2 (SEC)
1	A-BHC	0.0004	1.533	-0.147	22247	BV		3.81
2		0.0000	1.858		2099504	VV		3.69
3	G-BHC	0.0066	2.090	-0.020	302941	VV	?	20.06
4	B-BHC	0.0354	2.414	-0.006	652727	VV		6.25
5	HEPTACHLO	0.0120	2.589	-0.011	475973	VV		6.69
6	D-BHC	0.0009	2.894	0.074	35152	VV	?	7.94
7	ALDRIN	0.0091	3.149	0.009	428543	VV		7.38
8		0.0000	3.730		101209	VV		10.25
9		0.0000	3.988		53013	VV	?	11.06
10		0.0000	4.425		44484	VV		12.69
11	HEPT EPOX	0.0047	4.754	0.044	197803	VV		20.31
12		0.0000	5.420		188678	VB		19.06
13	4,4'-DDE	0.0024	6.807	-0.023	91137	BV		21.00
14	DIELDRIN	0.0064	7.371	0.131	275726	VV		23.88
15	ENDRIN	0.0130	8.340	-0.460	343073	VV		20.19
16		0.0000	9.447		453733	VB		22.50
17	B-ENDOSUL	0.0098	10.654	0.014	387395	BV		25.69
18		0.0000	11.952		1038447	VV	?	38.50
19	4,4'DDT	0.0188	12.963	0.413	518013	VV		44.81
20	END. ALD.	0.0017	14.617	0.597	52839	VV		32.56
21		0.0000	15.831		341477	VV		43.13
22		0.0000	16.638		193011	VV	?	54.94
23	END0 SO4	0.0136	17.244	0.274	131147	VV	?	
24		0.0000	18.908		1250471	VV		51.88
25	DBC	0.0553	21.821	-0.419	1722646	VV		49.69
26	METHOXYCH	0.0861	24.514	0.494	826177	VB		65.81
TOTALS:		0.2762		0.964	12230566			

DETECTED PKS: 35 REJECTED PKS: 9

DIVISOR: 1.50000 MULTIPLIER: ~~1.00000~~ 1,000

NOISE: 57.1 OFFSET: -24

NOTES:
NOTEBOOK:259-59 ANALYST:RICHARD SAMSON
SECURE AREA: D JOB#:U-4474
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
PESTICIDE/PCB CONFIRMATIONS
DEAD CREEK

recycled paper

Laboratory Name ecology and environment, inc.

Case No V-4474

Sample Number
BLANK

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared: 11-18-86

Date Analyzed: 12-9-86

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	8.0 U
319-85-7	Beta-BHC	8.0 U
319-86-8	Delta-BHC	8.0 U
58-89-9	Gamma-BHC (Lindane)	8.0 U
76-44-8	Heptachlor	8.0 U
309-00-2	Aldrin	8.0 U
1024-57-3	Heptachlor Epoxide	8.0 U
959-98-8	Endosulfan I	8.0 U
60-57-1	Dieldrin	16 U
72-55-9	4,4'-DDE	16 U
72-20-8	Endrin	16 U
33213-65-9	Endosulfan II	16 U
72-54-8	4,4'-DDD	16 U
1031-07-8	Endosulfan Sulfate	16 U
50-29-3	4,4'-DDT	16 U
72-43-5	Methoxychlor	80 U
53494-70-5	Endrin Ketone	16 U
57-74-9	Chlordane	80 U
8001-35-2	Toxaphene	160 U
12674-11-2	Aroclor-1016	80 U
11104-28-2	Aroclor-1221	80 U
11141-16-5	Aroclor-1232	80 U
53469-21-9	Aroclor-1242	80 U
12672-29-6	Aroclor-1248	80 U
11097-69-1	Aroclor-1254	160 U
11096-82-5	Aroclor-1260	160 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

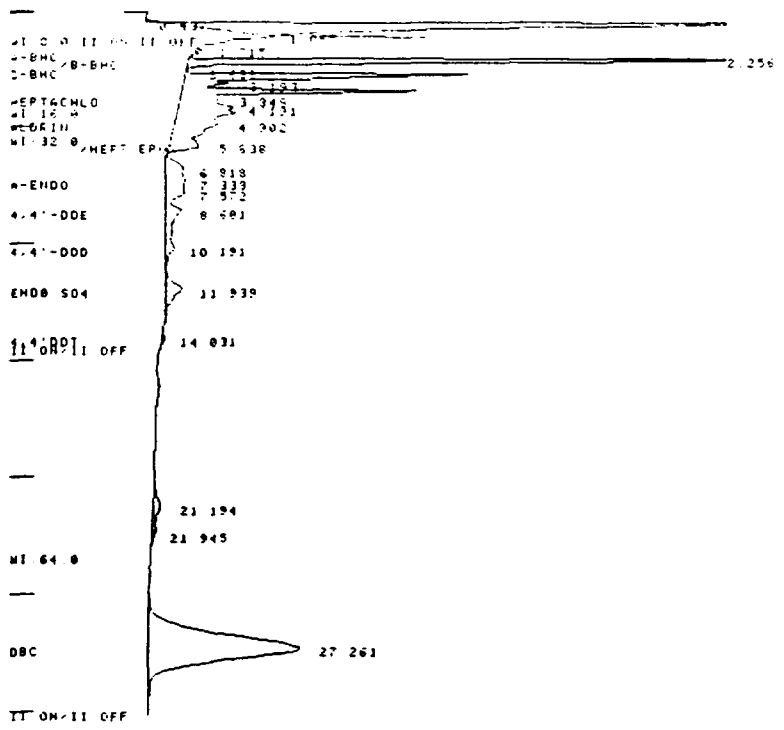
W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 30 V_t 1000 V_i 4 533

✓

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



CHANNEL: 1A - 1 TITLE: RUN # /5 4:20 9 DEC 86

SAMPLE: BLK.19 11-18 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	WI/2 (SEC)
1	B-BHC	194.6402	2.256	0.026	2398991	VB	5.06
2	RATIO off on Clean	0.0000	2.860		422478	VV	11.63
3		0.0000	3.193		57515	VV	? 13.19
4		0.0000	3.507		324818	VV	8.25
5	~~HEPTACHLO~~	2.3865	3.848	-0.042	59524	VV	? 35.75
6		0.0000	4.191		118003	VV	? 18.50
7		0.0000	4.407		169599	VV	? 19.38
8	~~ALDRIN~~	3.2611	4.902	0.102	106289	VV	? 25.63
9		0.0000	5.141		71936	VV	? 31.19
10	~~HEPT EPOX~~	3.5999	5.838	0.018	110451	VV	? 26.44
11		0.0000	6.818		71894	VV	? 38.19
12	~~A-ENDO~~	2.2497	7.338	0.108	64447	VV	? 21.06
13		0.0000	7.572		66630	VV	? 61.94
14	~~DIELDRIN~~	2.9861	8.601	0.181	93947	VV	36.31
15	~~4,4' DDD~~	1.5795	10.191	-0.259	37847	VV	? 31.94
16	~~ENDO SO4~~	4.1070	11.939	-0.331	81341	VB	31.69
17		0.0000	21.194		46987	BV	41.50
18	DBC 70%	59.7760	27.261	-0.109	1423990	BB	68.31
TOTALS:		274.5859		-0.306	5726687		

DETECTED PKS: 29 REJECTED PKS: 11

DIVISOR: 1.50000 MULTIPLIER: 1000.00000

NOISE: 45.7 OFFSET: -44

RACK: 1 VIAL: 15 INJ: 1

NOTES:
NOTEBOOK:259-52 ANALYST:RICHARD SAMSON
SECURE AREA:D JOB# U-4474
INST:VARIAN 6000#2 A 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
AUTOSAMPLER
PEST/PCB ANALYSIS

POST RUN:
SAVE FILE: PAW D.CREEK3538

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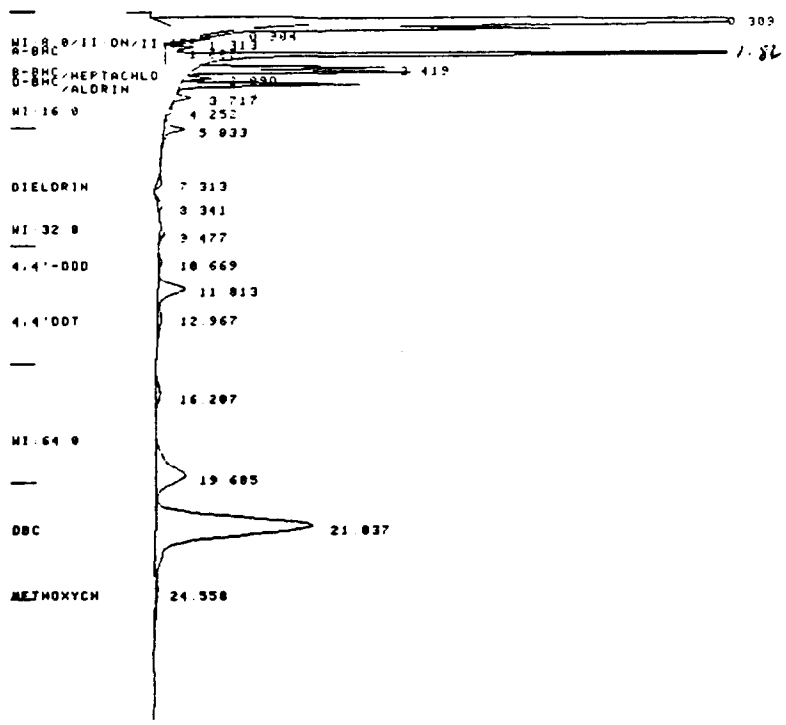
CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10% 5 MIN/TICK



RECALCULATE ON FILE: D.C.#3764

CHANNEL: 1B - 1 TITLE: RUN# 17 10:32 18 DEC 86

SAMPLE: BLK.19A11-18 METHOD: PEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1	A-BHC	0.0012	1.526	-0.154	63196	VV	5.56
2		0.0000	1.855		10054320	VV	? 4.69
3	B-BHC	0.0171	2.419	-0.001	315714	T	7.25
4	HEPTACHLO	0.0095	2.588	-0.012	378240	T	6.75
5	D-BHC	0.0015	2.890	0.070	55238	T	11.56
6	ALDRIN	0.0075	3.146	0.006	352044	T	7.75
7		0.0000	3.717		51981	T	15.81
8	HEPT EPOX	0.0019	5.033	0.323	81973	BV	12.13
9	DIELDRIN	0.0006	7.313	0.073	25652	BV	12.94
10	ENDRIN	0.0014	8.341	-0.459	37417	VB	? 34.50
11		0.0000	9.477		30710	BB	19.19
12	B-ENDOSUL	0.0006	10.669	0.029	24881	BV	24.19
13		0.0000	11.813		231534	VV	28.94
14	4,4'DDT	0.0020	12.967	0.417	56296	VB	38.25
15	END0 SO4	0.0064	16.207	-0.763	61230	BB	51.25
16		0.0000	19.685		434127	BV	48.00
17	DBC	0.0722	21.837	-0.403	2249360	VV	50.00
18	METHOXYCH	0.0027	24.558	0.538	26215	T	? 35.56
TOTALS:		0.1247		-0.336	14530128		

DETECTED PKS: 28 REJECTED PKS: 10

DIVISOR: 1.50000 MULTIPLIER: 1.00000

NOISE: 57.1 OFFSET: -22

NOTES:
NOTEBOOK:259-59 ANALYST:RICHARD SAMSON
SECURE AREA: D JOB#:U-4474
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
PESTICIDE/PCB CONFIRMATIONS
DEAD CREEK

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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)

recycled paper

ecology and environment

Sample Number
DC-SS-24 MS

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474

Lab Sample ID No: 9790-MS QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: C Bojtowicz Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-19-86

Conc./Dil Factor: 3 pH 6.7

Percent Moisture: (Not Decanted) 28

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	75 B
67-64-1	Acetone	44
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	SPIKE
75-34-3	1, 1-Dichloroethane	Ea
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	30u
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	SPIKE
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	SPIKE
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	480
591-78-6	2-Hexanone	30u
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	SPIKE
108-90-7	Chlorobenzene	SPIKE
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

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 indicates 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.

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Laboratory Name Ecology & Environment Inc.

Case No V-4474

Sample Number DC-SS-36 MS

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed: 12-22-86

Conc/Dil Factor: 4

Percent Moisture (Decanted) 27

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	SPIKE
111-44-4	bis(-2-Chloroethyl)Ether	900 U
95-57-8	2-Chlorophenol	SPIKE
541-73-1	1 3-Dichlorobenzene	900 U
106-46-7	1 4-Dichlorobenzene	SPIKE
100-51-6	Benzyl Alcohol	900 U
95-50-1	1 2-Dichlorobenzene	900 U
95-48-7	2-Methylphenol	900 U
39638-32-9	bis(2-chloroisopropyl)Ether	900 U
106-44-5	4-Methylpheno	900 U
621-64-7	N-Nitroso-Di-n-Propylamine	SPIKE
67-72-1	Hexachloroethane	900 U
98-95-3	Nitrobenzene	900 U
78-59-1	Isophorone	900 U
88-75-5	2-Nitrophenol	900 U
105-67-9	2, 4-Dimethylphenol	900 U
65-85-0	Benzoic Acid	4400 U
111-91-1	bis(-2-Chloroethoxy)Methane	900 U
120-83-2	2 4-Dichlorophenol	900 U
120-82-1	1, 2, 4-Trichlorobenzene	SPIKE
91-20-3	Naphthalene	78 J
106-47-8	4-Chloroaniline	900 U
87-68-3	Hexachlorobutadiene	900 U
59-50-7	4-Chloro-3-Methylphenol	SPIKE
91-57-6	2-Methylnaphthalene	900 U
77-47-4	Hexachlorocyclopentadiene	900 U
88-06-2	2 4 6-Trichlorophenol	900 U
95-95-4	2, 4, 5-Trichlorophenol	4400 U
91-58-7	2-Chloronaphthalene	900 U
88-74-4	2-Nitroaniline	2000 J
131-11-3	Dimethyl Phthalate	900 U
208-96-8	Acenaphthylene	900 U
99-09-2	3-Nitroaniline	4400 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	SPIKE
51-28-5	2, 4-Dinitrophenol	4400 U
100-02-7	4-Nitrophenol	SPIKE
132-64-9	Dibenzofuran	99 J
121-14-2	2 4-Dinitrotoluene	SPIKE
606-20-2	2 6-Dinitrotoluene	900 U
84-66-2	Diethylphthalate	900 U
7005-72-3	4-Chlorophenyl-phenylether	900 U
86-73-7	Fluorene	900 U
100-01-6	4-Nitroaniline	4400 U
534-52-1	4, 6-Dinitro-2-Methylphenol	4400 U
86-30-6	N-Nitrosodiphenylamine (1)	900 U
101-55-3	4-Bromophenyl-phenylether	900 U
118-74-1	Hexachlorobenzene	900 U
87-86-5	Pentachlorophenol	SPIKE
85-01-8	Phenanthrene	3700
120-12-7	Anthracene	750 J
84-74-2	Di-n-Butylphthalate	900 U
206-44-0	Fluoranthene	6400
129-00-0	Pyrene	SPIKE
85-68-7	Butylbenzylphthalate	900 U
91-94-1	3, 3'-Dichlorobenzidine	1800 U
56-55-3	Benzo(a)Anthracene	3400
117-81-7	bis(2-Ethylhexyl)Phthalate	900 U
218-01-9	Chrysene	4300
117-84-0	Di-n-Octyl Phthalate	900 U
205-99-2	Benzo(b)Fluoranthene	7800
207-08-9	Benzo(k)Fluoranthene	900 U
50-32-8	Benzo(a)Pyrene	2800
193-39-5	Indeno(1 2, 3-cd)Pyrene	2700
53-70-3	Dibenz(a h)Anthracene	820 J
191-24-2	Benzo(g h, i)Perylene	2200

(1)-Cannot be separated from diphenylamine

Form I

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Laboratory Name ecology and environment, inc.

Case No V-4474

Sample Number
DC-SS-36 MS

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed 12-9-86

Conc/Dil Factor 250

Percent Moisture (decanted) 27.4

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	4,000 u
319-85-7	Beta-BHC	4,000 u
319-86-8	Delta-BHC	4,000 u
58-89-9	Gamma-BHC (Lindane)	S 4,000 u
76-44-8	Heptachlor	S 4,000 u
309-00-2	Aldrin	S 4,000 u
1024-57-3	Heptachlor Epoxide	4,000 u
959-98-8	Endosulfan I	4,000 u
60-57-1	Dieldrin	S 8,000 u
72-55-9	4, 4'-DDE	8,000 u
72-20-8	Endrin	S 8,000 u
33213-65-9	Endosulfan II	8,000 u
72-54-8	4, 4'-DDD	8,000 u
1031-07-8	Endosulfan Sulfate	8,000 u
50-29-3	4 4 -DDT	S 8,000 u
72-43-5	Methoxychlor	40,000 u
53494-70-5	Endrin Ketone	8,000 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	121,000

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 30g V_t 1,000 V_i 4 µl

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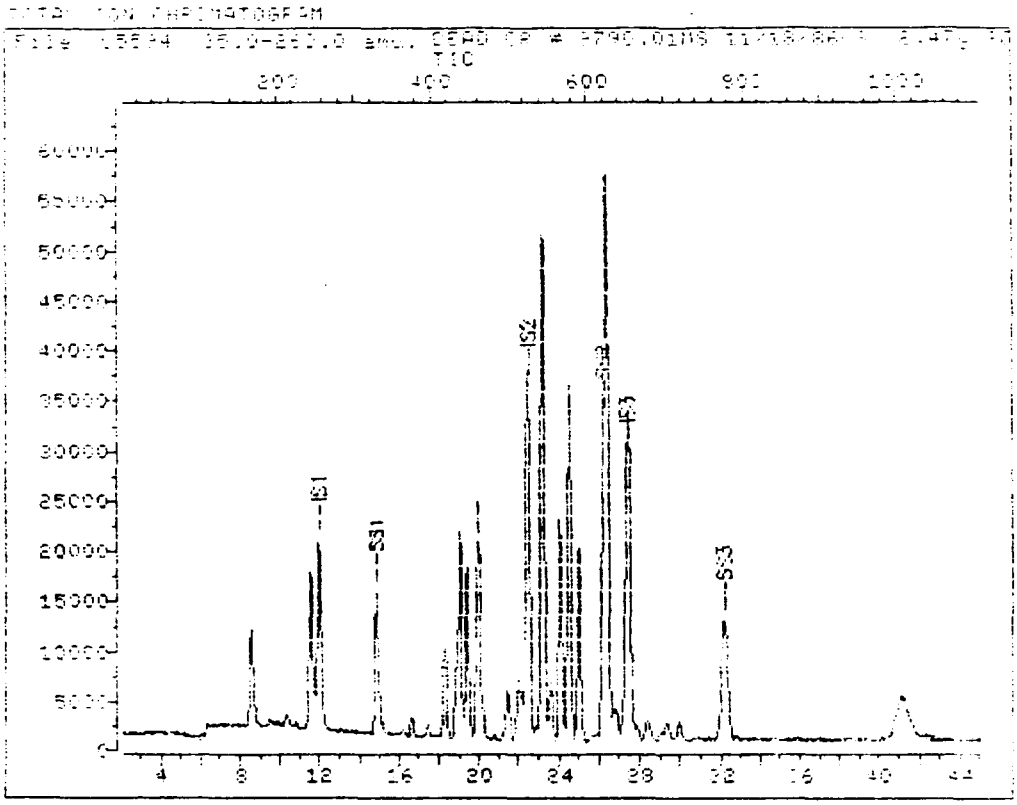

Data File: >C9594::D3
Name: DEAD CR # 9790.01MS DC-SS-24MS
Misc: 11/18/86LS 2.47g SOIL IN 5ML DI + 100UL [illegible]

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861118 22:56

Operator ID: USER8
Quant Time: 861119 06:49
Injected at: 861119 06:03

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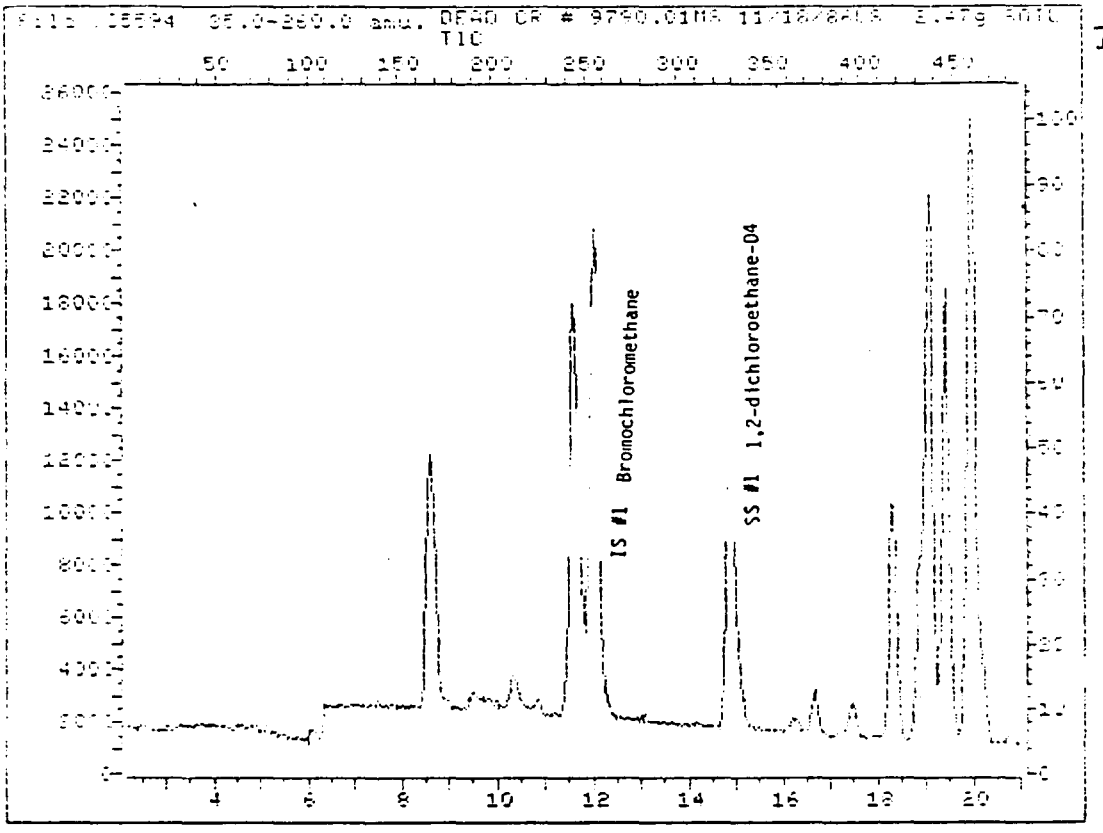
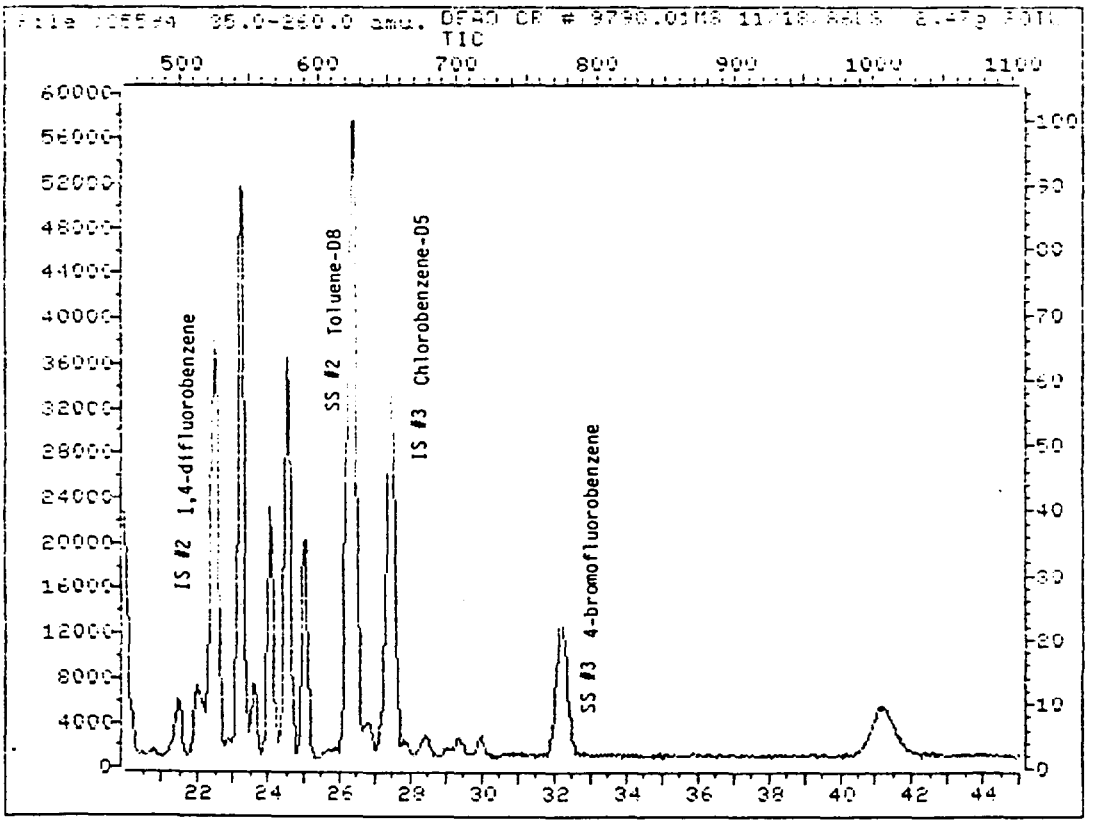
DC-SS-24-MS





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U-4474

QUANT REPORT

Operator ID: JSERS Quant Rev: 4 Quant Time: 961119 16:49
Outout File: 105994::0L Injected at: 961119 16:49
Data File: 105994::U3 Dilution Factor: 1.00
Name: D:AD OF # 9790.01MS DC-SS-24 MS
Misc: 11/18/96LS 2.4/g SOIL IN 5ML DI + 10UL IS/SS/MS

ID File: VOALRS::02
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 961118 22:56

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	%
1)	*BROMOCHLOROMETHANE	(IS)	128	12.01	255	29191	200.00	NG/G	100
6)	METHYLENE CHLORIDE		84	8.60	167	28263	133.29	NG/G	200
7)	ACETONE		43	9.53	191	4718	98.90	NG/G	100
~~9)~~	~~CARBON DISULFIDE~~		~~76~~	~~10.54~~	~~212~~	~~12990~~	~~23.30~~	~~NG/G~~	~~100~~
10)	1,1-DICHLOROETHENE		61	11.58	244	39549	115.76	NG/G	49
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.84	328	61743	217.86	NG/G	91
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.53	526	113582	200.00	NG/G	100
20)	1,2-DICHLOROPROPANE		63	18.99	415	459	2.49	NG/G	1
24)	TRICHLOROETHENE		130	19.42	446	73873	191.91	NG/G	77
27)	BENZENE		78	19.96	460	137856	210.45	NG/G	94
31)	*CHLOROBENZENE-D5	(IS)	117	27.38	651	72319	200.00	NG/G	[illegible]
32)	4-METHYL-2-PENTANONE		43	23.22	544	211794	850.90	NG/G	[illegible]
~~34)~~	~~4-METHYL-2-PENTANONE~~		~~43~~	~~24.06~~	~~560~~	~~[illegible]~~	~~[illegible]~~	~~NG/G~~	~~[illegible]~~
~~34)~~	~~2-HEXANONE~~		~~43~~	~~24.08~~	~~562~~	~~[illegible]~~	~~[illegible]~~	~~NG/G~~	~~[illegible]~~
~~33)~~	~~2-HEXANONE~~		~~43~~	~~24.54~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~NG/G~~	~~[illegible]~~
~~[illegible]~~	~~2-HEXANONE~~		~~43~~	~~25.05~~	~~591~~	~~[illegible]~~	~~[illegible]~~	~~NG/G~~	~~[illegible]~~
36)	TOLUENE-D8	(SURR)	98	26.21	611	1.4118	[illegible]	NG/G	[illegible]
37)	TOLUENE		92	26.41	626	103711	155.15	NG/G	[illegible]
38)	CHLOROBENZENE		112	27.54	690	79934	[illegible]	NG/G	94
40)	4-BROMOFLUOROBENZENE	(SURR)	95	32.20	775	42266	170.[illegible]	NG/G	[illegible]

* Compound is ISTD

no CH 1%

+7%

~~no CH~~

OK

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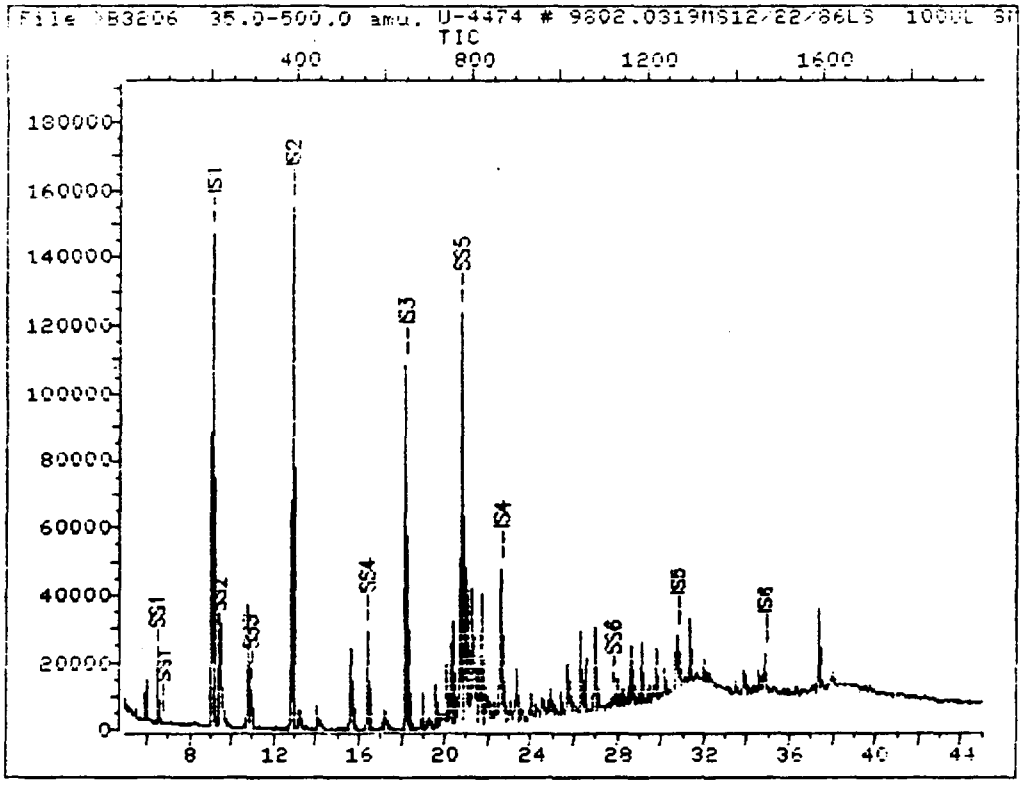
TOTAL ION CHROMATOGRAM



Data File: >B3206::D4
Name: U-4474 # 9802.0319MS
Misc: 12/22/86LS 100UL SMPL + 300UL MECL2 + 4UL IS

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861222 16:20

Operator ID: USER8
Quant Time: 861222 20:07
Injected at: 861222 19:19

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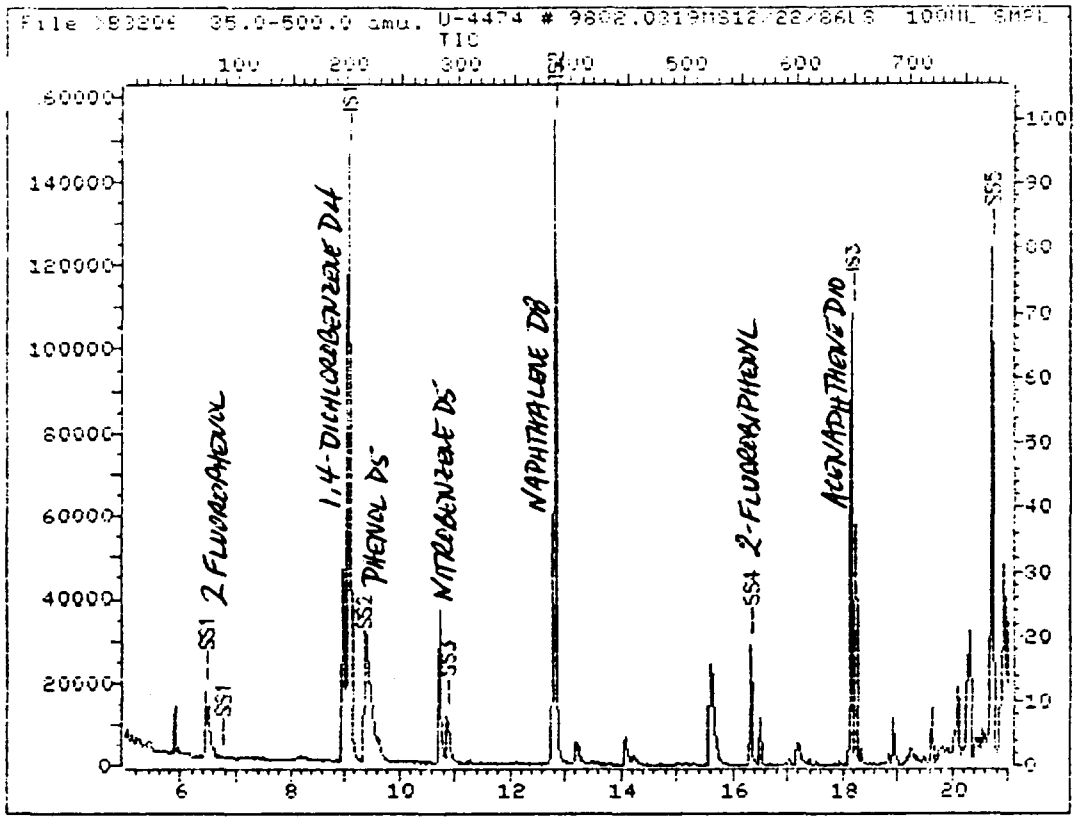

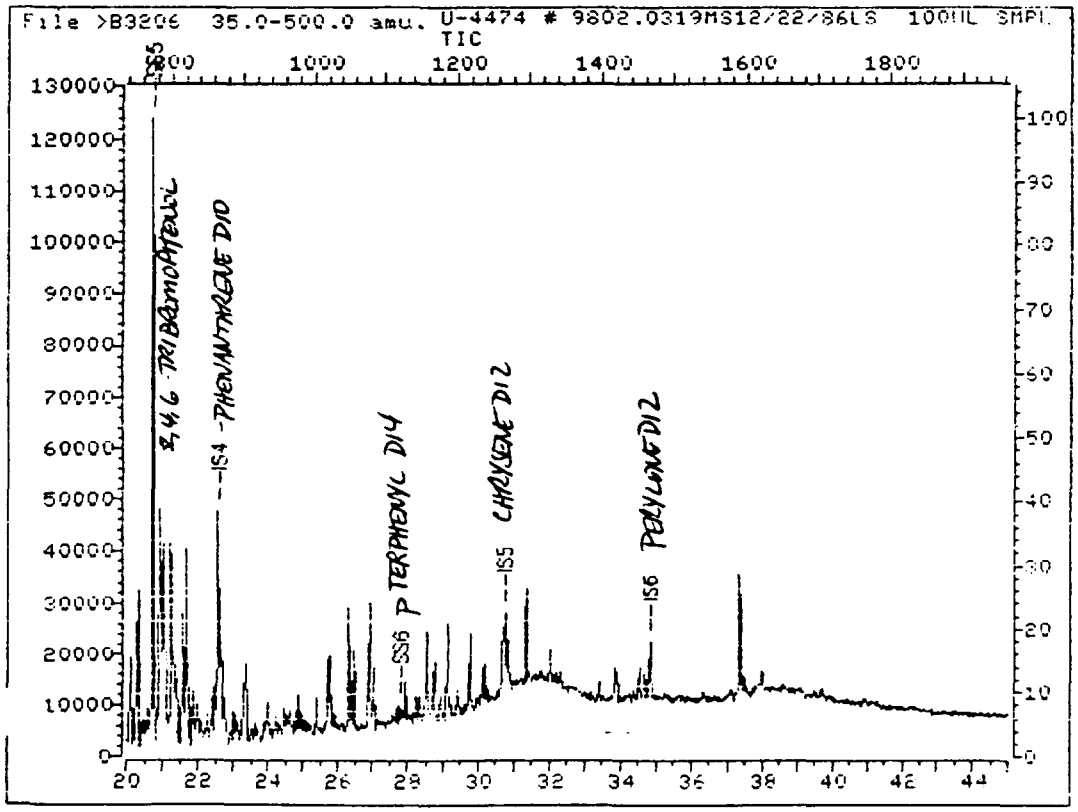

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QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861222 20:07
Output File: ^B3206::Q2 Injected at: 861222 19:19
Data File: >B3206::D4 Dilution Factor: 4.00
Name: U-4474 # 9802.0319MS
Misc: 12/22/86LS 100UL SMPL + 300UL MECL2 + 4UL IS

ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861222 16:20

	Compound		M/E	R.T.	Scan#	Area	Conc	Units		q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.08	201	56793	40.00	UG/L		86
2)	PHENOL-D5	(SURR)	99	9.36	215	32014	82.17	UG/L		89
5)	2-FLUOROPHENOL	(SURR)	112	6.45	72	9776	30.19	UG/L	>32	93
5)	2-FLUOROPHENOL	(SURR)	112	6.76	87	514	1.59	UG/L		94
6)	PHENOL		94	9.40	217	64698	149.73	UG/L	75%	53
7)	~~ANILINE~~		~~93~~	~~8.95~~	~~195~~	~~921~~	~~2.36~~	~~UG/L~~	No GK	34
9)	~~1,3-DICHLOROBENZENE~~		~~146~~	~~9.12~~	~~203~~	~~32345~~	~~70.87~~	~~UG/L~~		99
10)	1,4-DICHLOROBENZENE		146	9.12	203	32345	68.40	UG/L	68%	96
12)	~~1,2-DICHLOROBENZENE~~		~~146~~	~~9.64~~	~~229~~	~~700~~	~~1.45~~	~~UG/L~~	No GK	90
15)	2-CHLOROPHENOL		128	8.95	195	55230	115.86	UG/L	50%	95
17)	N-NITROSO-DI-N-PROPYLAMINE		70	10.72	282	22466	63.85	UG/L	64%	98
17)	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~10.89~~	~~290~~	~~3298~~	~~9.37~~	~~UG/L~~	No GK	81
19)	*NAPHTHALENE-D8	(IS)	136	12.82	385	178320	40.00	UG/L		100
20)	NITROBENZENE-D5	(SURR)	82	10.86	289	13554	34.40	UG/L	68	87
28)	1,2,4-TRICHLOROBENZENE		180	12.78	383	31656	82.65	UG/L	83%	100
29)	NAPHTHALENE		128	12.88	388	1780	1.70	UG/L		100
30)	~~4-CHLOROANILINE~~		~~127~~	~~14.08~~	~~447~~	~~2467~~	~~50.06~~	~~UG/L~~	No GK	94
32)	4-CHLORO-3-METHYLPHENOL		107	15.60	522	28158	95.65	UG/L	48%	88
33)	~~2-METHYLNAPHTHALENE~~		~~142~~	~~15.03~~	~~494~~	~~802~~	~~1.27~~	~~UG/L~~	No GK	96
33)	~~2-METHYLNAPHTHALENE~~		~~142~~	~~15.32~~	~~508~~	~~675~~	~~1.07~~	~~UG/L~~		98
34)	*ACENAPHTHENE-D10	(IS)	162	18.16	648	55371	40.00	UG/L		98
38)	2-FLUOROBIPHENYL	(SURR)	172	16.33	558	25283	44.83	UG/L	90	95
40)	2-NITROANILINE		65	17.19	600	6126	44.38	UG/L		89
41)	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.16~~	~~648~~	~~16421~~	~~32.19~~	~~UG/L~~	No GK	100
43)	DIBENZOFURAN		168	18.79	679	1236	2.16	UG/L		100
47)	ACENAPHTHENE		153	18.24	652	33482	73.61	UG/L	74%	96
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.70	773	2453	34.33	UG/L	34	93
50)	4-NITROPHENOL		139	20.50	763	1198	26.24	UG/L	>15%	100
50)	4-NITROPHENOL		139	20.62	769	136	2.98	UG/L		100
51)	2,4-DINITROTOLUENE		165	19.24	701	5893	60.56	UG/L	61%	100
52)	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.16~~	~~648~~	~~6996~~	~~64.37~~	~~UG/L~~	No GK	100
55)	*PHENANTHRENE-D10	(IS)	188	22.60	866	44996	40.00	UG/L		98
60)	PENTACHLOROPHENOL		266	22.54	863	5691	143.27	UG/L	72%	100
61)	PHENANTHRENE		178	22.66	869	22552	81.76	UG/L		98
61)	~~PHENANTHRENE~~		~~178~~	~~22.80~~	~~876~~	~~4440~~	~~16.10~~	~~UG/L~~	No GK	96
62)	~~ANTHRACENE~~		~~178~~	~~22.66~~	~~869~~	~~22552~~	~~83.77~~	~~UG/L~~		98
62)	ANTHRACENE		178	22.80	876	4440	16.49	UG/L		96
64)	FLUORANTHENE		202	26.30	1048	24688	141.30	UG/L		96
65)	*CHRYSENE-D12	(IS)	240	30.74	1266	16073	40.00	UG/L		100
[illegible])	~~BENZIDINE~~		~~184~~	~~26.89~~	~~1077~~	~~293~~	~~293.00~~	~~NO CALIB~~	No GK	100
[illegible])	~~BENZIDINE~~		~~184~~	~~27.05~~	~~1085~~	~~762~~	~~762.00~~	~~NO CALIB~~		100
67)	PYRENE		202	26.91	1078	32098	184.36	UG/L	84%	96
68)	TERPHENYL-D14	(SURR)	244	27.79	1121	3049	33.61	UG/L	98	100
70)	~~3,3'DICHLOROBENZIDINE~~		~~252~~	~~31.33~~	~~1295~~	~~1192~~	~~57.68~~	~~UG/L~~	No GK	100
71)	BENZO(A)ANTHRACENE		228	30.70	1264	7668	75.69	UG/L		95
71)	~~BENZO(A)ANTHRACENE~~		~~228~~	~~30.82~~	~~1270~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	No GK	98

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	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
72)	~~BIS(2-ETHYLHEXYL PHTHALATE~~		~~149~~	~~31.72~~	~~1314~~	~~1095~~	~~12.12~~	~~UG/L~~	~~99~~
73)	~~CHRYSENE~~		~~228~~	~~30.78~~	~~1264~~	~~7568~~	~~72.11~~	~~UG/L~~	~~96~~
73)	CHRYSENE		228	30.82	1270	9946	93.64	UG/L	99
74)	*PERYLENE-D12	(IS)	264	34.81	1466	14499	40.00	UG/L	100
75)	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.43~~	~~1390~~	~~331~~	~~1.94~~	~~UG/L~~	~~100~~
75)	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.73~~	~~1413~~	~~350~~	~~2.05~~	~~UG/L~~	~~100~~
75)	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.82~~	~~1417~~	~~268~~	~~1.57~~	~~UG/L~~	~~100~~
75)	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.99~~	~~1420~~	~~401~~	~~2.35~~	~~UG/L~~	~~100~~
75)	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.94~~	~~1423~~	~~286~~	~~1.68~~	~~UG/L~~	~~100~~
76)	BENZO(B)FLUORANTHENE		252	33.84	1418	16320	171.55	UG/L	100
76)	~~BENZO(B)FLUORANTHENE~~		~~252~~	~~34.12~~	~~1432~~	~~1125~~	~~11.83~~	~~UG/L~~	~~100~~
77)	~~BENZO(K)FLUORANTHENE~~		~~252~~	~~33.84~~	~~1418~~	~~16320~~	~~141.39~~	~~UG/L~~	~~100~~
77)	~~BENZO(K)FLUORANTHENE~~		~~252~~	~~34.12~~	~~1432~~	~~1125~~	~~9.75~~	~~UG/L~~	~~100~~
78)	~~BENZO(A)PYRENE~~		~~252~~	~~34.53~~	~~1452~~	~~6053~~	~~63.90~~	~~UG/L~~	~~100~~
78)	BENZO(A)PYRENE		252	34.67	1459	5783	61.05	UG/L	100
78)	~~BENZO(A)PYRENE~~		~~252~~	~~34.90~~	~~1470~~	~~1531~~	~~16.16~~	~~UG/L~~	~~100~~
79)	~~INDENO(1,2,3-CD)PYRENE~~		~~276~~	~~37.24~~	~~1585~~	~~979~~	~~10.83~~	~~UG/L~~	~~100~~
79)	INDENO(1,2,3-CD)PYRENE		276	37.44	1595	5194	59.25	UG/L	100
80)	~~DIBENZ(A,H)ANTHRACENE~~		~~278~~	~~37.24~~	~~1585~~	~~1164~~	~~13.66~~	~~UG/L~~	~~100~~
80)	~~DIBENZ(A,H)ANTHRACENE~~		~~278~~	~~37.44~~	~~1595~~	~~250~~	~~2.93~~	~~UG/L~~	~~100~~
80)	DIBENZ(A,H)ANTHRACENE		278	37.52	1599	1538	18.06	UG/L	100
80)	~~DIBENZ(A,H)ANTHRACENE~~		~~278~~	~~37.75~~	~~1610~~	~~1008~~	~~11.83~~	~~UG/L~~	~~100~~
80)	~~DIBENZ(A,H)ANTHRACENE~~		~~278~~	~~37.83~~	~~1614~~	~~1212~~	~~14.23~~	~~UG/L~~	~~100~~
81)	BENZO(G,H,I)PERYLENE		276	37.97	1621	4879	49.31	UG/L	100
81)	~~BENZO(G,H,I)PERYLENE~~		~~276~~	~~38.38~~	~~1637~~	~~284~~	~~2.89~~	~~UG/L~~	~~100~~

* Compound is ISTD

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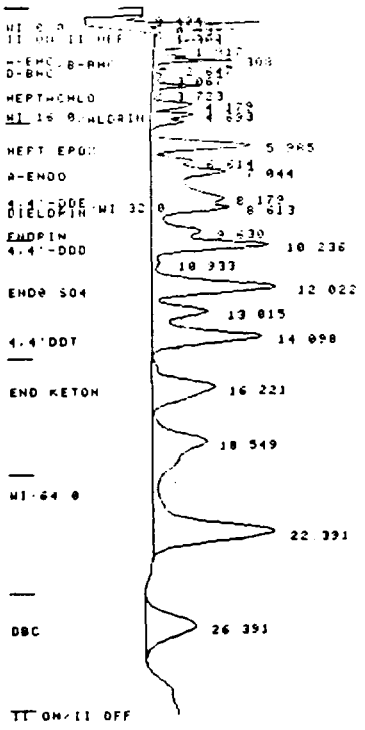
CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 10% 5 MIN/TICK



4H x 0.0013/V $\frac{1}{1.5}$ x 250,000 = 88,000 ug/kg 1260

RECALCULATE ON FILE: D.CREEK3545

CHANNEL: 1A - 1 TITLE: RUN# 22 8:13 9 DEC 86

DC-SS-36 MS SAMPLE: 9802.01.19A15 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	1.420		30937	VV	3.44
2		0.0000	1.817		15119	VV	5.75
3	~~BHC~~	50.8464	2.138	0.048	36549	VV	7.13
4	~~BHC~~	275.9374	2.308	0.078	68020	VV	5.56
5		0.0000	3.397		61476	VV	7.63
6	~~HEPTACHLO~~	47.5002	3.723	-0.167	13695	VV	? 16.63
7		0.0000	4.179		92510	VV	17.56
8	~~ALDRIN~~	127.1315	4.693	-0.107	82873	VV	15.38
9		0.0000	4.992		95213	VV	? 12.06
10	~~HEPT EPOX~~	442.8903	5.985	0.165	271765	VV	20.25
11		0.0000	6.614		53055	VV	? 16.44
12	~~A-ENDO~~	475.3729	7.044	-0.186	272363	VV	30.63
13	~~[illegible]~~	691.6945	8.179	-0.151	391104	VV	? 37.13
14	~~DIELDRIN~~	434.4912	8.613	0.193	273390	VV	? 35.50
15	~~B-ENDO~~	344.9511	9.630	0.050	189011	VV	? 29.31
16	~~4,4'-DDE~~	853.4215	10.236	-0.214	409991	VV	25.25
17	~~ENDRIN~~	54.3130	10.933	0.393	23421	VV	? 36.81
18	~~ENDO SO4~~	1387.794	12.022	-0.248	549720	VV	32.63
19		0.0000	13.015		225130	VV	30.44
20	~~4,4'-DDT~~	1809.679	14.098	0.448	535559	VB	34.63
21	~~END KETON~~	785.9384	16.221	0.491	434833	BV	52.56
22		0.0000	18.549		521681	VV	60.81
23		0.0000	22.391		869975	VB	50.00
24	~~DBC~~	877.2569	26.391	-0.979	417962	BB	62.75

TOTALS: 8659.210 -0.186 5959152

DETECTED PKS: 36 REJECTED PKS: 12

DIVISOR: 1.50000 MULTIPLIER: ~~50000.0000~~ 250,000

NOISE: 22.9 OFFSET: -57

RACK: 2 VIAL: 7 INJ: 1

NOTES:
NOTEBOOK:259-52 ANALYST:RICHARD SAMSON
SECURE AREA:D JOB# U-4474
INST:VARIAN 6000#2 A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE:3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN.
DET:200 C INJ:220 C
200 C ISOTHERMAL 4 UL INJECTION

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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)

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Sample Number
DC-SS-24-MSD

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc Case No: U-4474

Lab Sample ID No: 9790 MSD QC Report No:

Sample Matrix: Soil Contract No: IL-3140.

Data Release Authorized By: C Stogowicz Date Sample Received: 11-14-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-19-86

Conc/Dil Factor: 3 pH 6.7

Percent Moisture: (Not Decanted) 28

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	30u
74-83-9	Bromomethane	30u
75-01-4	Vinyl Chloride	30u
75-00-3	Chloroethane	30u
75-09-2	Methylene Chloride	66 B
67-64-1	Acetone	62
75-15-0	Carbon Disulfide	15u
75-35-4	1, 1-Dichloroethene	SPIKE
75-34-3	1, 1-Dichloroethane	15u
156-60-5	Trans-1, 2-Dichloroethene	15u
67-66-3	Chloroform	15u
107-06-2	1, 2-Dichloroethane	15u
78-93-3	2-Butanone	48
71-55-6	1, 1, 1-Trichloroethane	15u
56-23-5	Carbon Tetrachloride	15u
108-05-4	Vinyl Acetate	30u
75-27-4	Bromodichloromethane	15u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	15u
10061-02-6	Trans-1, 3-Dichloropropene	15u
79-01-6	Trichloroethene	SPIKE
124-48-1	Dibromochloromethane	15u
79-00-5	1, 1, 2-Trichloroethane	15u
71-43-2	Benzene	SPIKE
10061-01-5	cis-1, 3-Dichloropropene	15u
110-75-8	2-Chloroethylvinylether	30u
75-25-2	Bromoform	15u
108-10-1	4-Methyl-2-Pentanone	940
591-78-6	2-Hexanone	30u
127-18-4	Tetrachloroethene	15u
79-34-5	1, 1, 2, 2-Tetrachloroethane	15u
108-88-3	Toluene	SPIKE
108-90-7	Chlorobenzene	SPIKE
100-41-4	Ethylbenzene	15u
100-42-5	Styrene	15u
	Total Xylenes	15u

Data Reporting Qualifiers

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

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

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

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

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

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

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

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Laboratory Name Ecology & Environment Inc.

Case No V-4474

Sample Number DC-SS-36 MSD

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared 1/2/87

Date Analyzed 1/9/87

Conc/Dil Factor 4

Percent Moisture (Decanted) 27

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	SPIKE
111-44-4	bis(-2-Chloroethyl)Ether	900 U
95-57-8	2-Chlorophenol	SPIKE
541-73-1	1 3-Dichlorobenzene	900 U
106-46-7	1 4-Dichlorobenzene	SPIKE
100-51-6	Benzyl Alcohol	900 U
95-50-1	1 2-Dichlorobenzene	900 U
95-48-7	2-Methylphenol	900 U
39638-32-9	bis(2-chloroisopropyl)Ether	900 U
106-44-5	4-Methylphenol	900 U
621-64-7	N-Nitroso-Di-n-Propylamine	SPIKE
67-72-1	Hexachloroethane	900 U
98-95-3	Nitrobenzene	900 U
78-59-1	Isophorone	900 U
88-75-5	2-Nitrophenol	900 U
105-67-9	2, 4-Dimethylphenol	900 U
65-85-0	Benzoic Acid	4400 U
111-91-1	bis(-2-Chloroethoxy)Methane	900 U
120-83-2	2 4-Dichlorophenol	900 U
120-82-1	1, 2, 4-Trichlorobenzene	SPIKE
91-20-3	Naphthalene	66 J
106-47-8	4-Chloroaniline	900 U
87-68-3	Hexachlorobutadiene	900 U
59-50-7	4-Chloro-3-Methylphenol	SPIKE
91-57-6	2-Methylnaphthalene	900 U
77-47-4	Hexachlorocyclopentadiene	900 U
88-06-2	2 4 6-Trichlorophenol	900 U
95-95-4	2 4, 5-Trichlorophenol	4400 U
91-58-7	2-Chloronaphthalene	900 U
88-74-4	2-Nitroaniline	2500 J
131-11-3	Dimethyl Phthalate	900 U
208-96-8	Acenaphthylene	900 U
99-09-2	3-Nitroaniline	4400 U

CAS Number		ug/l or (ug/Kg) (Circle One)
83-32-9	Acenaphthene	SPIKE
51-28-5	2, 4-Dinitrophenol	4400 U
100-02-7	4-Nitrophenol	SPIKE
132-64-9	Dibenzofuran	900 U
121-14-2	2 4-Dinitrotoluene	SPIKE
606-20-2	2 6-Dinitrotoluene	900 U
84-66-2	Diethylphthalate	900 U
7005-72-3	4-Chlorophenyl-phenylether	900 U
86-73-7	Fluorene	900 U
100-01-6	4-Nitroaniline	4400 U
534-52-1	4, 6-Dinitro-2-Methylphenol	4400 U
86-30-6	N-Nitrosodiphenylamine (1)	900 U
101-55-3	4-Bromophenyl-phenylether	900 U
118-74-1	Hexachlorobenzene	900 U
87-86-5	Pentachlorophenol	SPIKE
85-01-8	Phenanthrene	3100
120-12-7	Anthracene	680 J
84-74-2	Di-n-Butylphthalate	2300 B
206-44-0	Fluoranthene	10000
129-00-0	Pyrene	SPIKE
85-68-7	Butylbenzylphthalate	900 U
91-94-1	3, 3'-Dichlorobenzidine	1800 U
56-55-3	Benzo(a)Anthracene	3600
117-81-7	bis(2-Ethylhexyl)Phthalate	900 U
218-01-9	Chrysene	4700
117-84-0	Di-n-Octyl Phthalate	900 U
205-99-2	Benzo(b)Fluoranthene	6500
207-08-9	Benzo(k)Fluoranthene	900 U
50-32-8	Benzo(a)Pyrene	3000
193-39-5	Indeno(1 2, 3-cd)Pyrene	1700
53-70-3	Dibenz(a h)Anthracene	1400 J
191-24-2	Benzo(g h i)Perylene	2700

(1)-Cannot be separated from diphenylamine

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Laboratory Name ecology and environment, inc.

Case No V-4474

Sample Number
DC-SS-36 MSD

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-17-86

Date Analyzed 12-9-86

Conc/Dil Factor 250

Percent Moisture (decanted) 27.4

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	4,000 u
319-85-7	Beta-BHC	4,000 u
319-86-8	Delta-BHC	4,000 u
58-89-9	Gamma-BHC (Lindane)	S 4,000 u
76-44-8	Heptachlor	S 4,000 u
309-00-2	Aldrin	S 4,000 u
1024-57-3	Heptachlor Epoxide	4,000 u
959-98-8	Endosulfan I	4,000 u
60-57-1	Dieldrin	S 8,000 u
72-55-9	4, 4'-DDE	8,000 u
72-20-8	Endrin	S 8,000 u
33213-65-9	Endosulfan II	8,000 u
72-54-8	4, 4'-DDD	8,000 u
1031-07-8	Endosulfan Sulfate	8,000 u
50-29-3	4 4'-DDT	S 8,000 u
72-43-5	Methoxychlor	40,000 u
53494-70-5	Endrin Ketone	8,000 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	121,000

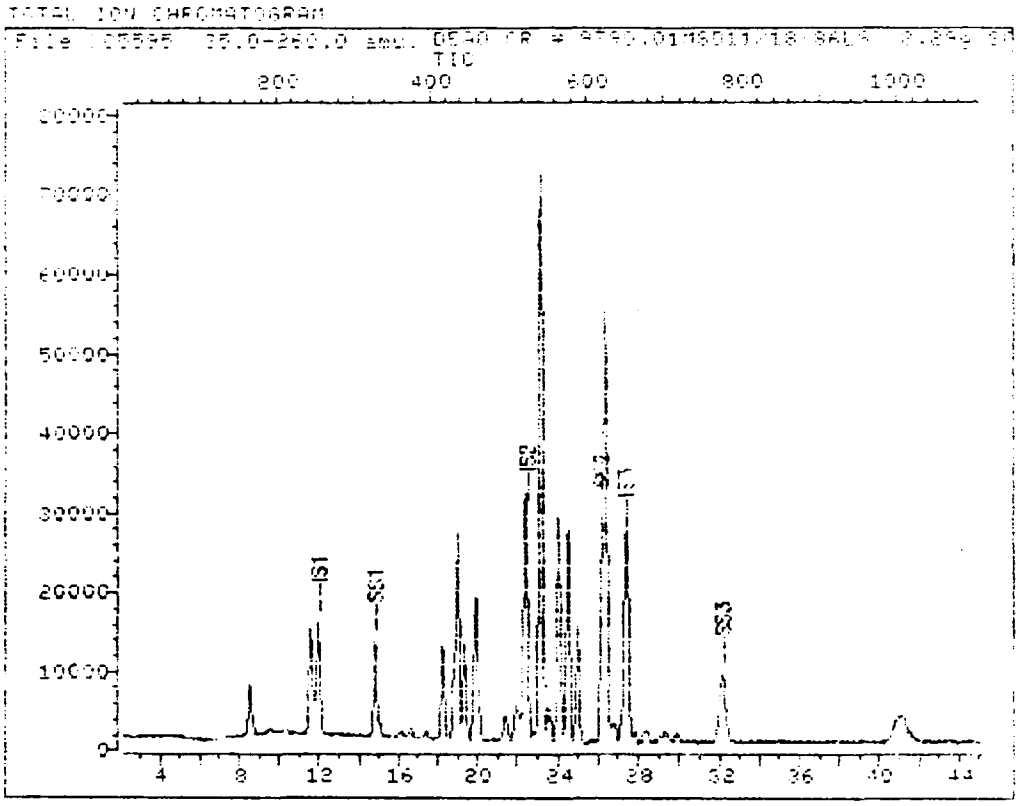
V_i = Volume of extract injected (ul)

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 30g V_t 1,000 V_i 4 µl



Data File: >C5595::D3
Name: DEAD CR # 9790.01MSD **DC-SS-24 MSD**
Misc: 11/18/86LS 2.29g SOIL IN 5ML DI - 10UL 15/55/MS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861118 22:56

Operator ID: USER8
Quant Time: 861119 07:45
Injected at: 861119 06:59

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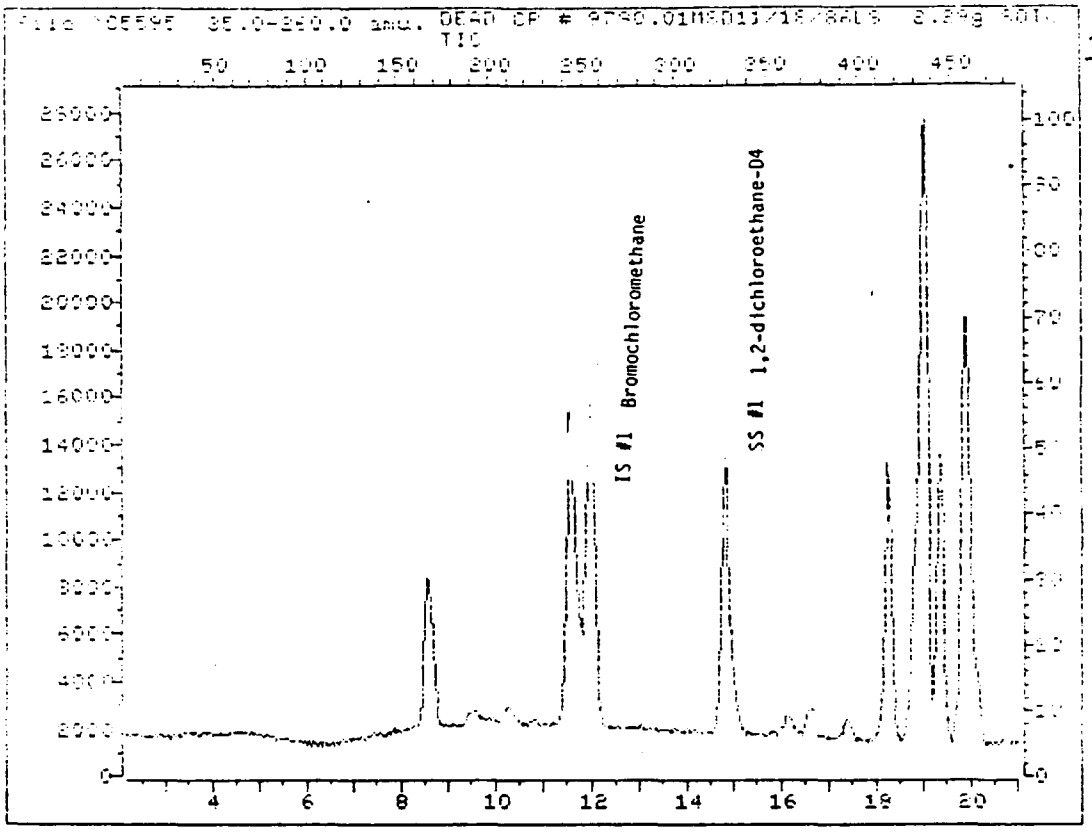
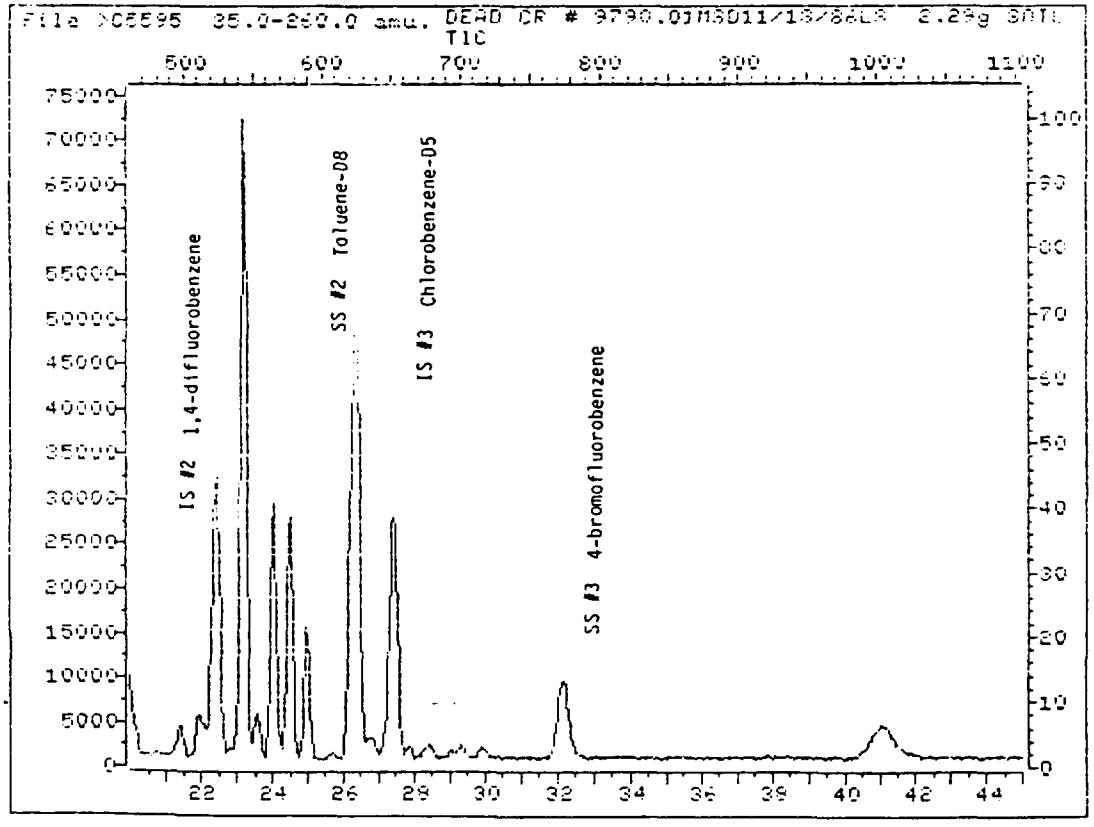
DC-SS-24-MSI





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U-4474

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861119 07:45
Output File: C5995::D2 Injected at: 861119 06:54
Data File: C5995::D3 Dilution Factor: 1.00
Name: DEAD CR # 9790.01MSD DC-SS-24MSD
Misc: 11/18/86LS 2.29g SOIL IN 5ML DI + 100UL IS/SS/MS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861118 22:56

	Compound	M/E	R.T.	Scan#	Area	Conc	Units	%
1)	*BROMOCHLOROMETHANE (IS)	128	11.97	254	19306	250.00	NGS	100
6)	METHYLENE CHLORIDE	84	8.56	166	15137	108.55	NGS	100
7)	ACETONE	43	9.53	191	4055	102.54	NGS	100
7)	~~ACETONE~~	~~43~~	~~10.49~~	~~240~~	~~2295~~	~~70.56~~	~~NGS~~	~~100~~
10)	1,1-DICHLOROETHENE	61	11.58	244	26706	119.22	NGS	99
15)	1,2-DICHLOROETHANE-D4(SURR)	65	14.80	327	48295	252.93	NGS	84
16)	*1,4-DIFLUOROBENZENE (IS)	114	22.49	525	94504	250.00	NGS	100
17)	2-BUTANONE	72	14.96	331	2397[illegible]	78.55	NGS	100
14)	TRICHLOROETHENE	130	19.34	444	22969	[illegible]	NGS	[illegible]
27)	BENZENE	78	19.93	459	27170	182.97	NGS	100
31)	*CHLOROBENZENE-D5 (IS)	117	27.38	651	61571	250.00	NGS	100
32)	4-METHYL-2-PENTANONE	43	23.18	543	306540	1546.62	NGS	86
32)	~~4-METHYL-2-PENTANONE~~	~~43~~	~~24.04~~	~~56[illegible]~~	~~40[illegible]~~	~~2[illegible]~~	~~NGS~~	~~[illegible]~~
33)	~~2-HEXANONE~~	~~43~~	~~24.04~~	~~56[illegible]~~	~~42[illegible]~~	~~16[illegible]~~	~~NGS~~	~~100~~
33)	~~2-HEXANONE~~	~~43~~	~~24.50~~	~~57[illegible]~~	~~6[illegible]~~	~~[illegible]~~	~~NGS~~	~~[illegible]~~
33)	2-HEXANONE	43	24.97	589	47842	308.[illegible]	NGS	100
36)	TOLUENE-D8 (SURR)	98	26.17	620	98528	2[illegible].51	NGS	[illegible]
37)	TOLUENE	92	26.37	635	104794	449.28	NGS	[illegible]
38)	CHLOROBENZENE	112	27.50	654	61831	2[illegible].82	NGS	[illegible]
40)	4-BROMOFLUOROBENZENE(SURR)	95	32.16	774	34019	154.04	NGS	[illegible]

* Compound is ISTD

no cut 47%

63% 73%

ND

15% 20%

OIL matrix

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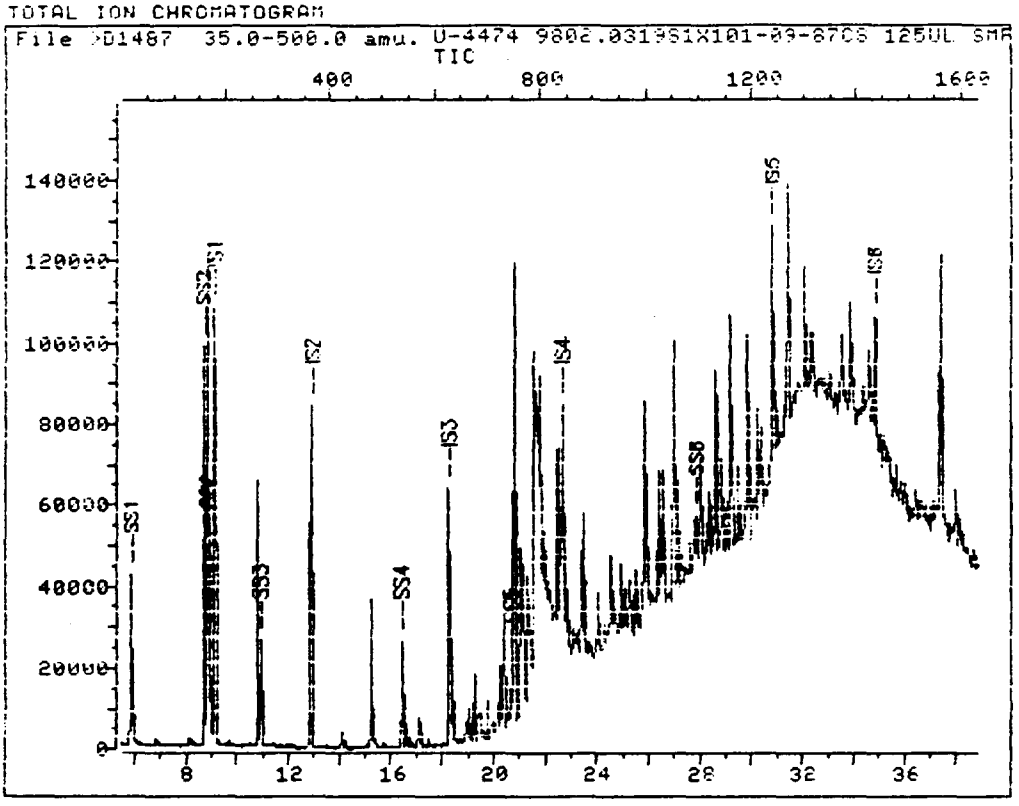
TOTAL ION CHROMATOGRAM



Data File: >D1487::D3
Name: U-4474 9802.0319S1X1
Misc: 01-09-87CS 125UL SMPL + 375UL MECL2 + 5UL IS (4X) BTL# 2

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870109 14:56

Operator ID: USER6
Quant Time: 870109 17:20
Injected at: 870109 16:20

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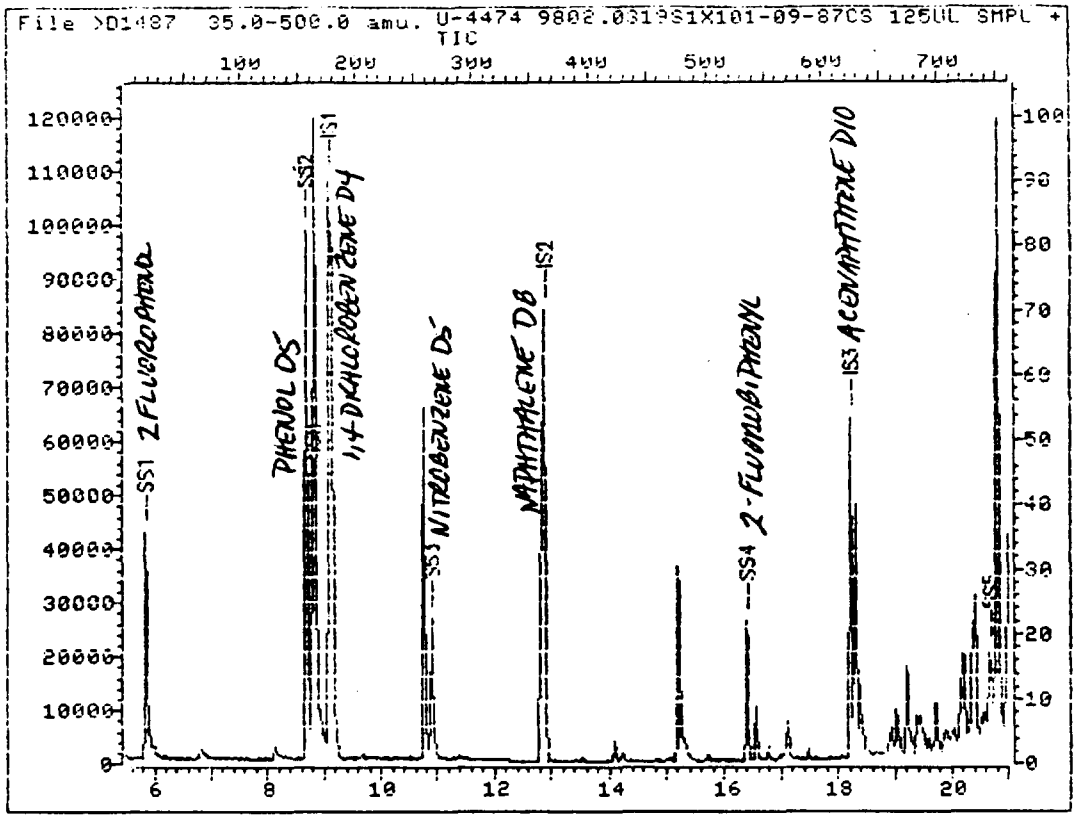

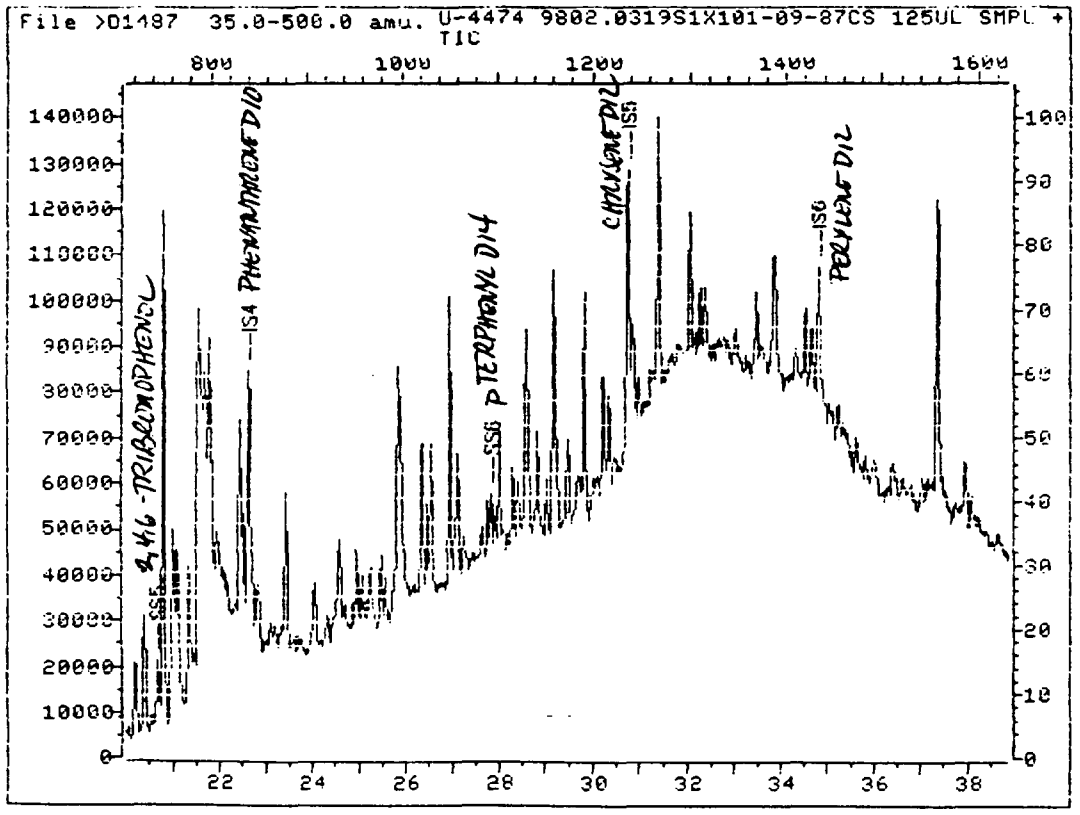

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QUANT REPORT

Operator ID: USER6 Quant Rev: 4 Quant Time: 870109 17:20
Output File: ^D1487::Q2 Injected at: 870109 16:20
Data File: >D1487::D3 Dilution Factor: 4.00
Name: U-4474 9802.0319S1X1 (1/2)
Misc: 01-09-87CS 125UL SMPL + 375UL MECL2 + 5UL IS (4X) BIL# 2

ID File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870109 14:56

	Compound		m/e	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.10	177	52110	40.00	UG/L	88
2)	PHENOL-D5	(SURR)	99	8.67	156	3867	8.47	UG/L	40
2)	PHENOL-D5	(SURR)	99	8.79	162	43178	94.52	UG/L	95
5)	2-FLUOROPHENOL	(SURR)	112	5.84	17	31412	93.74	UG/L	73
6)	PHENOL		94	8.83	164	86023	187.59	UG/L	68
~~7)~~	~~ANILINE~~		~~93~~	~~8.67~~	~~156~~	~~1355~~	~~3.49~~	~~UG/L~~	~~27~~
~~9)~~	~~1,3-DICHLOROBENZENE~~		~~146~~	~~9.14~~	~~179~~	~~50583~~	~~115.93~~	~~UG/L~~	~~99~~
10)	1,4-DICHLOROBENZENE		146	9.14	179	50583	112.73	UG/L	98
~~12)~~	~~1,2-DICHLOROBENZENE~~		~~146~~	~~9.69~~	~~206~~	~~593~~	~~1.31~~	~~UG/L~~	~~94~~
~~14)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~10.06~~	~~224~~	~~359~~	~~.41~~	~~UG/L~~	~~100~~
~~14)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~10.32~~	~~237~~	~~323~~	~~.37~~	~~UG/L~~	~~100~~
~~14)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~10.46~~	~~244~~	~~560~~	~~.64~~	~~UG/L~~	~~100~~
~~14)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~10.59~~	~~250~~	~~339~~	~~.38~~	~~UG/L~~	~~100~~
~~14)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~10.75~~	~~258~~	~~552~~	~~.63~~	~~UG/L~~	~~100~~
15)	2-CHLOROPHENOL		128	8.67	156	75364	191.98	UG/L	94
17)	N-NITROSO-DI-N-PROPYLAMINE		70	10.75	258	35917	99.20	UG/L	91
~~17)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~10.89~~	~~265~~	~~4185~~	~~11.54~~	~~UG/L~~	~~89~~
~~17)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.04~~	~~272~~	~~140~~	~~.39~~	~~UG/L~~	~~50~~
19)	*NAPHTHALENE-D8	(IS)	136	12.89	363	113477	40.00	UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	10.89	265	21416	60.14	UG/L	97
28)	1,2,4-TRICHLOROBENZENE		180	12.83	360	33150	101.37	UG/L	100
~~29)~~	~~NAPHTHALENE~~		~~128~~	~~12.93~~	~~365~~	~~865~~	~~1.45~~	~~UG/L~~	~~100~~
32)	4-CHLORO-3-METHYLPHENOL		107	15.19	476	28296	147.73	UG/L	91
~~33)~~	~~2-METHYLNAPHTHALENE~~		~~142~~	~~15.07~~	~~470~~	~~633~~	~~1.56~~	~~UG/L~~	~~88~~
~~33)~~	~~2-METHYLNAPHTHALENE~~		~~142~~	~~15.19~~	~~476~~	~~22990~~	~~56.68~~	~~UG/L~~	~~22~~
~~33)~~	~~2-METHYLNAPHTHALENE~~		~~142~~	~~15.37~~	~~485~~	~~1085~~	~~2.68~~	~~UG/L~~	~~63~~
34)	*ACENAPHTHENE-D10	(IS)	162	18.23	625	37044	40.00	UG/L	90
38)	2-FLUOROBIPHENYL	(SURR)	172	16.39	535	26100	62.29	UG/L	91
40)	2-NITROANILINE		65	17.13	571	4031	55.59	UG/L	91
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.23~~	~~625~~	~~11520~~	~~35.12~~	~~UG/L~~	~~100~~
43)	DIBENZOFURAN		168	18.82	654	945	2.40	UG/L	100
47)	ACENAPHTHENE		153	18.31	629	33159	113.64	UG/L	94
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.67	745	4779	87.89	UG/L	98
50)	4-NITROPHENOL		139	19.39	682	7102	269.18	UG/L	100
51)	2,4-DINITROTOLUENE		165	19.21	673	8802	159.92	UG/L	100
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.23~~	~~625~~	~~4030~~	~~69.76~~	~~UG/L~~	~~100~~
55)	*PHENANTHRENE-D10	(IS)	188	22.64	841	50967	40.00	UG/L	88
~~59)~~	~~HEXACHLOROBENZENE~~		~~284~~	~~21.76~~	~~799~~	~~885~~	~~3.45~~	~~UG/L~~	~~100~~
60)	PENTACHLOROPHENOL		266	22.43	831	25533	488.06	UG/L	100
61)	PHENANTHRENE		178	22.70	844	19715	67.12	UG/L	97
~~61)~~	~~PHENANTHRENE~~		~~178~~	~~22.84~~	~~851~~	~~4182~~	~~14.24~~	~~UG/L~~	~~95~~
~~62)~~	~~ANTHRACENE~~		~~178~~	~~22.70~~	~~844~~	~~19715~~	~~69.90~~	~~UG/L~~	~~97~~
62)	ANTHRACENE		178	22.84	851	4182	14.83	UG/L	95
63)	DI-N-BUTYLPHTHALATE		149	25.21	967	12136	50.31	UG/L	95
~~64)~~	~~FLUORANTHENE~~		~~202~~	~~26.32~~	~~1021~~	~~41712~~	~~227.79~~	~~UG/L~~	~~88~~
65)	*CHRYSENE-D12	(IS)	240	30.75	1237	43422	40.00	UG/L	100

	Compound	M/E	R.T.	Scan#	Area	Conc	Units	q
66)	BENZIDINE	184	26.93	1051	1129	1129.00	NO CALIB	90
66)	BENZIDINE	184	27.06	1057	614	614.00	NO CALIB	100
66)	BENZIDINE	184	27.12	1060	2675	2675.00	NO CALIB	100
66)	BENZIDINE	184	27.24	1066	675	675.00	NO CALIB	100
66)	BENZIDINE	184	27.63	1085	664	664.00	NO CALIB	100
67)	PYRENE	202	26.95	1052	68113	.127.47	UG/L	91
67)	PYRENE	202	27.06	1057	947	1.77	UG/L	44
68)	TERPHENYL-D14 (SURR)	244	27.84	1095	10509	35.53	UG/L	100
69)	BUTYLBENZYLPHTHALATE	149	29.72	1187	1121	7.40	UG/L	59
70)	3,3'DICHLOROBENZIDINE	252	30.73	1236	2264	53.73	UG/L	100
70)	3,3'DICHLOROBENZIDINE	252	30.87	1243	1318	31.42	UG/L	100
70)	3,3'DICHLOROBENZIDINE	252	30.96	1247	718	17.12	UG/L	100
70)	3,3'DICHLOROBENZIDINE	252	31.24	1261	474	11.30	UG/L	100
70)	3,3'DICHLOROBENZIDINE	252	31.39	1268	5596	133.40	UG/L	100
71)	BENZO(A)ANTHRACENE	228	30.71	1235	21610	79.27	UG/L	90
71)	BENZO(A)ANTHRACENE	228	30.93	1241	26947	98.85	UG/L	97
71)	BENZO(A)ANTHRACENE	228	31.04	1251	1768	6.49	UG/L	50
72)	BIS(2-ETHYLHEXYL)PHTHALATE	149	31.47	1272	848	3.97	UG/L	94
72)	BIS(2-ETHYLHEXYL)PHTHALATE	149	31.80	1288	3245	14.34	UG/L	85
72)	BIS(2-ETHYLHEXYL)PHTHALATE	149	32.09	1302	163	.72	UG/L	88
72)	BIS(2-ETHYLHEXYL)PHTHALATE	149	32.26	1310	226	1.00	UG/L	67
73)	CHRYSENE	228	30.71	1235	21610	82.53	UG/L	91
73)	CHRYSENE	228	30.83	1241	26947	102.91	UG/L	97
73)	CHRYSENE	228	31.04	1251	1768	6.75	UG/L	51
74)	*PERYLENE-D12 (IS)	264	34.80	1434	45026	40.00	UG/L	100
75)	DI-N-OCTYL PHTHALATE	149	33.34	1363	341	.77	UG/L	100
75)	DI-N-OCTYL PHTHALATE	149	33.46	1368	305	.69	UG/L	100
75)	DI-N-OCTYL PHTHALATE	149	33.61	1376	663	1.49	UG/L	100
75)	DI-N-OCTYL PHTHALATE	149	33.75	1383	233	.53	UG/L	100
75)	DI-N-OCTYL PHTHALATE	149	34.02	1396	324	.73	UG/L	100
76)	BENZO(B)FLUORANTHENE	252	33.49	1370	691	1.84	UG/L	100
76)	BENZO(B)FLUORANTHENE	252	33.73	1382	591	1.57	UG/L	100
76)	BENZO(B)FLUORANTHENE	252	33.84	1387	53370	141.86	UG/L	100
76)	BENZO(B)FLUORANTHENE	252	34.12	1401	4100	10.90	UG/L	100
76)	BENZO(B)FLUORANTHENE	252	34.29	1409	627	1.67	UG/L	100
77)	BENZO(K)FLUORANTHENE	252	33.49	1370	691	2.23	UG/L	100
77)	BENZO(K)FLUORANTHENE	252	33.84	1387	53370	172.61	UG/L	100
77)	BENZO(K)FLUORANTHENE	252	34.12	1401	4100	13.26	UG/L	100
77)	BENZO(K)FLUORANTHENE	252	34.29	1409	627	2.03	UG/L	100
77)	BENZO(K)FLUORANTHENE	252	34.37	1413	595	1.92	UG/L	100
78)	BENZO(A)PYRENE	252	34.29	1409	627	2.11	UG/L	100
78)	BENZO(A)PYRENE	252	34.37	1413	595	2.00	UG/L	100
78)	BENZO(A)PYRENE	252	34.54	1421	20998	70.69	UG/L	100
78)	BENZO(A)PYRENE	252	34.66	1427	19726	66.41	UG/L	100
78)	BENZO(A)PYRENE	252	34.86	1437	5980	20.13	UG/L	100
79)	INDENO(1,2,3-CD)PYRENE	276	37.21	1551	3580	12.78	UG/L	100
79)	INDENO(1,2,3-CD)PYRENE	276	37.41	1561	9267	33.08	UG/L	100
79)	INDENO(1,2,3-CD)PYRENE	276	37.46	1563	10381	37.06	UG/L	100
79)	INDENO(1,2,3-CD)PYRENE	276	37.72	1576	1475	5.27	UG/L	100
79)	INDENO(1,2,3-CD)PYRENE	276	37.81	1580	912	3.26	UG/L	100
80)	DIBENZ(A,H)ANTHRACENE	278	37.23	1552	5329	20.72	UG/L	100
80)	DIBENZ(A,H)ANTHRACENE	278	37.44	1562	1524	5.93	UG/L	100
80)	DIBENZ(A,H)ANTHRACENE	278	37.54	1567	8081	31.43	UG/L	100
80)	DIBENZ(A,H)ANTHRACENE	278	37.72	1576	4338	16.87	UG/L	100
80)	DIBENZ(A,H)ANTHRACENE	278	37.81	1580	4397	17.10	UG/L	100
81)	BENZO(G,H,I)PERYLENE	276	37.41	1561	10076	32.95	UG/L	100

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	Compound	M/E	R.T.	Scan#	Area	Conc	Units	q
81)	BENZO(G,H,I)PERYLENE	276	37.93	1586	18440	60.12	UG/L	100

* Compound is ISTD

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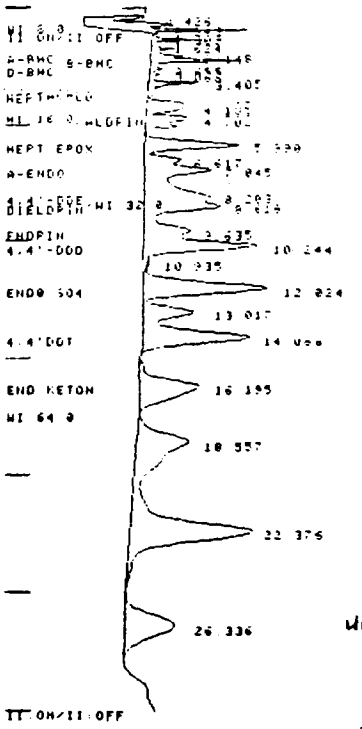
CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 10% 5 MIN/TICK



$46.5 \times 0.00131 \times \frac{1}{1.5} \times 250{,}000 = 88{,}000$ ug/kg 1260 wet
121,000 ug/kg dry

RECALCULATE ON FILE: D.CREEK3545

CHANNEL: 1A - 1 TITLE: RUN# 23 8:46 9 DEC 86

DC-SS-36 MSD

SAMPLE: 9802.01.19A15.4 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	1.423		28423	VV	3.19
2		0.0000	1.822		22774	VV	5.56
3	~~A-BHC~~	55.8668	2.148	0.258	39059	VV	? 6.63
4	~~B-BHC~~	322.6098	2.317	0.087	79525	VV	5.63
5		0.0000	3.405		61891	VV	7.50
6	~~HEPTACHLO~~	46.8868	3.729	-0.161	23389	VV	12.50
7		0.0000	4.185		88709	VV	17.63
8	~~ALDRIN~~	126.4442	4.702	-0.098 54.5	82425	VV	14.88
9		0.0000	5.000		54897	VB	? 11.53
10	~~HEPT EPOX~~	418.5187	5.990	0.170	256816	BV	20.31
11		0.0000	6.517		80658	VV	? 15.56
12	~~A-ENDO~~	401.3869	7.045	-0.185	229973	VV	25.88
13	~~4,4'-DDE~~	593.0433	8.203	-0.127	326750	VV	? 36.50
14	~~DIELDRIN~~	422.3173	8.518	0.198	265730	VV	? 35.06
15	~~B-ENDO~~	321.7750	9.535	0.255	176312	VV	? 28.25
16	~~4,4'-DDD~~	955.1534	10.244	-0.206	409821	VV	24.81
17	~~ENDO SO4~~	1329.351	12.024	-0.246	526570	VV	31.06
18		0.0000	13.017 1260	4.3	202449	VV	28.06
19	~~4,4'DDT~~	1721.484	14.088	0.438	499946	VB	33.13
20	~~END KETON~~	761.9625	16.195	0.465	421568	BB	52.44
21		0.0000	18.557		528771	BV	62.56
22		0.0000	22.376		998410	VV	49.31
23	~~DDE~~	869.0418	25.336	-1.034	414048	VB	62.56

TOTALS: 8245.843 -0.586 5818914

DETECTED PKS: 39 REJECTED PKS: 16

DIVISOR: 1.50000 MULTIPLIER: ~~50000.0000~~ AS 250,000

NOISE: 22.9 OFFSET: -17

RACK: 2 VIAL: 8 INJ: 1

NOTES:
NOTEBOOK:259-52 ANALYST:RICHARD SAMSON
SECURE AREA:D JOB# U-4474
INST:VARIAN 6000#2 A 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
AUTOSAMPLER
PEST/PCB ANALYSIS

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ATTACHMENT A

FORMS I

CASE NUMBER U-4474

SURFACE SOIL INORGANICS

Date 1/29/87

COVER PAGE
INORGANIC ANALYSES DATA PACKAGE

Lab Name Ecology and Environment, Inc. Case No. U-4474

SOW No. 784 Q.C. Report No.

Sample Numbers

	Lab ID No.		Lab ID No.
DC-SS-24	9790	DC-SS-33	9799
DC-SS-25	9791	DC-SS-34	9800
DC-SS-26	9792	DC-SS-35	9801
DC-SS-27	9793	DC-SS-36	9802
DC-SS-28	9794	DC-SS-37	9803
DC-SS-29	9795	DC-SS-38	9804
DC-SS-30	9796	DC-SS-39	9805
DC-SS-31	9797	DC-SS-40	9806
DC-SS-32	9798	DC-SS-41	9807

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 1/29/87

COVER PAGE
INORGANIC ANALYSES DATA PACKAGE

Lab Name Ecology and Environment, Inc. Case No. U-4474

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

Sample Numbers

	Lab ID No.			Lab ID No.
DC-SS-42	9808			
DC-SS-43	9809			
DC-SS-44	9810			
DC-SS-46	9811			
DC-SS-47	9812			
DC-SS-48	9813			

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).

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

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+ - 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 Environment

January 29, 1987

Job # U-4474

Sample # DC-SS-24 through DC-SS-44
DC-SS-46 through DC-SS-48

CASE NARRATIVE

Enclosed are the inorganic analytical results for soil samples received on November 14, 1986. 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 November 21, November 24, and November 25, 1986.

A calibration verification standard and blank for mercury were not performed at the required frequency. This problem was not noted until hold times had expired. The data are believed to be valid because spiked samples were run late in the analytical sequence with excellent recovery.

Approximately one gram of sample was digested and brought to a final volume of 200 mL in preparation for ICP/furnace AA analysis.

Sample 9778, 9794, and 9806 were arbitrarily chosen for replication and matrix spiking. The high RPD and poor spike recovery reflect the extremely heterogeneous nature of the samples. The samples are coarse in texture and contain chunks of material, some colored brown, white, red, orange, or black. Every attempt was made to take a "representative" one gram sample (0.2 for Hg). However, this is next to impossible with a sample of this nature.

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

Gary Hahn / BJK

Gary Hahn, Manager
Analytical Services Center

GH/db

Enclosures

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

CHAIN-OF-CUSTODY RECORD

Project No.: IL3140
Project Name: DEAD CREEK
Project Manager: M. MILLER
Samplers: (Signatures) Kevin Phillips
Field Team Leader: KEVIN PHILLIPS

STATION NUMBER	DATE	TIME	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE TYPE AIR	SAMPLE INFORMATION / EXPECTED COMPOUNDS (Concentration)*	STATION LOCATION	NUMBER OF CONTAINERS	1-8oz. HSL ORGANICS	1-8oz. METALS + CYANIDE	2-120 ml. VOA'S				REMARKS E+E #
DC-SS24	11-11-86	1515		X		UNKNOWN. MAY CONTAIN HIGHER CONC.	GRID # G-4	4	1	1	2				0700
DC-SS25	11-11-86	1515		X		AND/OR OILS	G-4	4	1	1	2				0
DC-SS26	11-11-86	1540		X			H-4	4	1	1	2				0
DC-SS27	11-11-86	1545		X			I-4	4	1	1	2				0
DC-SS28	11-11-86	1555		X			J-4	4	1	1	2				0
DC-SS29	11-11-86	1545		X			A-5	4	1	1	2				0
DC-SS30	11-11-86	1600		X			B-5	4	1	1	2				0
DC-SS31	11-11-86	1600		X			B-5	4	1	1	2				0
DC-SS32	11-11-86	1600		X			C-5	4	1	1	2				0
DC-SS33	11-12-86	1030		X			D-5	4	1	1	2				0
DC-SS-34	11-12-86	1050		X			E-5	4	1	1	2				0800
DC-SS-35	11-12-86	1100		X			F-5	4	1	1	2				0

Relinquished By (Signature)	Date/Time	Received By (Signature)	Relinquished By (Signature)	Date/Time	Received By (Signature)	Ship Via
Kevin Phillips	11-13-86/1700	FED EXP				FEDERAL EXPRESS
Relinquished By (Signature)	Date/Time	Received By (Signature)	Relinquished By (Signature)	Date/Time	Received By (Signature)	BL/Airbill Number: 2219748285
Relinquished By (Signature) F.T. E.C.	Date/Time 11-14-86/0930	Received For Laboratory By (Signature)	Relinquished By (Signature)	Date/Time	Received For Laboratory By (Signature)	Date: 11-13-86

Distribution: Original Accompanies Shipment. Copy to Coordinator Field Files

*See CONCENTRATION RANGE on back of form

234055

C7

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International Specialists in the Environment

CHAIN-OF-CUSTODY RECORD

Project No: 1L3140
Project Name: DEAD CREEK
Project Manager: M. MILLER
Samplers (Signatures): Kevin Phillips
Field Team Leader: KEVIN PHILLIPS

STATION NUMBER	DATE	TIME	SAMPLE TYPE: COMP	SAMPLE TYPE: GRAB	SAMPLE TYPE: AIR	SAMPLE INFORMATION / EXPECTED COMPOUNDS (Concentration)*	STATION LOCATION	NUMBER OF CONTAINERS	1-8oz. HSL ORGANICS	1-8oz. METALS (+ CYANIDE)	2-120ml VOA'S				REMARKS
															EQE
DC-SS36	11-12-86	1120		X		UNKNOWN. MAY CONTAIN HIGHER CONC./OILS	GRID# G-5	4	1	1	2				9802
DC-SS37	11-12-86	1130		X			H-5	4	1	1	2				03
DC-SS38	11-12-86	1100		X			A-6	4	1	1	2				04
DC-SS39	11-12-86	1120		X			B-6	4	1	1	2				05
DC-SS40	11-12-86	1200		X			C-6	4	1	1	2				06
DC-SS41	11-12-86	1240		X			D-6	4	1	1	2				07
DC-SS42	11-12-86	1245		X			F-6	4	1	1	2				08
DC-SS43	11-12-86	1215		X			B-7	4	1	1	2				09
DC-SS44	11-13-86	1200		X			BLANK	4	1	1	2				9810
DC-SS46	11-13-86	1035		X			STERLING STEEL 1	4	1	1	2				11
DC-SS47	11-13-86	1100		X			STERLING STEEL 2	4	1	1	2				12
DC-SS48	11-13-86	1100		X			STERLING STEEL 2	4	1	1	2				9813

Relinquished By (Signature)	Date/Time	Received By (Signature)	Relinquished By (Signature)	Date, Time	Received By (Signature)	Ship Via
Kevin Phillips	11-13-86/1700	FED EXP				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: 2219748285 — Date: 11-13-86
FED EXP	11-14-86/0750	R Marsh				

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

*See CONCENTRATION RANGE on back of form

Form I

Sample No.
DC-SS-24

Date 1/29/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

SOW NO. 784

LAB SAMPLE ID. NO. 9790 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	4470	P	13.	Magnesium	NR	
2.	Antimony	16 U	P	14.	Manganese	184 R *	P
3.	Arsenic	39 *	F	15.	Mercury	1.02	CV
4.	Barium	6320	P	16.	Nickel	105 *	P
5.	Beryllium	1.3 U	P	17.	Potassium	NR	
6.	Cadmium	17 R *	P	18.	Selenium	1.4 U	F
7.	Calcium	NR		19.	Silver	3.7 R *	P
8.	Chromium	41 R *	P	20.	Sodium	NR	
9.	Cobalt	13 U	P	21.	Thallium	2.7 U	F
10.	Copper	1480	P	22.	Tin	11 U	F
11.	Iron	26800 *	P	23.	Vanadium	64	P
12.	Lead	418 *	P	24.	Zinc	32200	P
Cyanide		1.3		Percent Solids (%)		77	

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 Bruce H Rohrbach

Form I

Sample No.
DC-SS-25

Date 1/29/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

SOW NO. 784

LAB SAMPLE ID. NO. 9791 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	5720	P	13.	Magnesium	NR	
2.	Antimony	17 U	P	14.	Manganese	204 R *	P
3.	Arsenic	24 *	F	15.	Mercury	1.13	CV
4.	Barium	2220	P	16.	Nickel	135 *	P
5.	Beryllium	1.4 U	P	17.	Potassium	NR	
6.	Cadmium	20 R *	P	18.	Selenium	1.4 U	F
7.	Calcium	NR		19.	Silver	3.4 R *	P
8.	Chromium	50 R *	P	20.	Sodium	NR	
9.	Cobalt	[5.0]	P	21.	Thallium	2.8 U	F
10.	Copper	1900	P	22.	Tin	16	F
11.	Iron	29200 *	P	23.	Vanadium	75	P
12.	Lead	437 *	P	24.	Zinc	41400	P

Cyanide 1.70 Percent Solids (%) 69

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 Bruce H Rotstrack

Form I

Sample No.
DC-SS-26

Date 1/29/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

SOW NO. 784

LAB SAMPLE ID. NO. 9792 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	16300	P	13.	Magnesium	NR	
2.	Antimony	15 U	P	14.	Manganese	326 R*	P
3.	Arsenic	11 *	F	15.	Mercury	1.6	CV
4.	Barium	3190	P	16.	Nickel	60 *	P
5.	Beryllium	1.2 U	P	17.	Potassium	NR	
6.	Cadmium	21 R*	P	18.	Selenium	1.2 U	F
7.	Calcium	NR		19.	Silver	3.5 R*	P
8.	Chromium	137 R*	P	20.	Sodium	NR	
9.	Cobalt	[6.3]	P	21.	Thallium	2.4 U	F
10.	Copper	1020	P	22.	Tin	9.8 U	F
11.	Iron	33900 *	P	23.	Vanadium	108	P
12.	Lead	580 *	P	24.	Zinc	4660	P
Cyanide		1.3	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 Bruce H Rohstrach

Form I

Sample No.
DC-SS-27

Date 1/29/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

SOW NO. 784

LAB SAMPLE ID. NO. 9793 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	5040	P	13.	Magnesium	NR	
2.	Antimony	15 U	P	14.	Manganese	259 R *	P
3.	Arsenic	10 *	F	15.	Mercury	26	CV
4.	Barium	1460	P	16.	Nickel	34 *	P
5.	Beryllium	1.2 U	P	17.	Potassium	NR	
6.	Cadmium	27 R *	P	18.	Selenium	1.3 U	F
7.	Calcium	NR		19.	Silver	2.5 U R *	P
8.	Chromium	22 R *	P	20.	Sodium	NR	
9.	Cobalt	[5.2]	P	21.	Thallium	2.5 U	F
10.	Copper	648	P	22.	Tin	10 U	F
11.	Iron	28700 *	P	23.	Vanadium	59	P
12.	Lead	440 *	P	24.	Zinc	4520	P
	Cyanide	1.3	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 Bruce H Rohrbach

Form I

Sample No.
DC-SS-28

Date 1/29/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

SOW NO. 784

LAB SAMPLE ID. NO. 9794 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	14900	P	13.	Magnesium	NR	
2.	Antimony	14 U	P	14.	Manganese	247 R *	P
3.	Arsenic	11 *	F	15.	Mercury	3.0	CV
4.	Barium	1000	P	16.	Nickel	86 *	P
5.	Beryllium	1.4	P	17.	Potassium	NR	
6.	Cadmium	5.2 R *	P	18.	Selenium	1.2 U	F
7.	Calcium	NR		19.	Silver	2.3 U R *	P
8.	Chromium	92 R *	P	20.	Sodium	NR	
9.	Cobalt	[3.9]	P	21.	Thallium	2.4 U	F
10.	Copper	4880	P	22.	Tin	43	F
11.	Iron	35600 *	P	23.	Vanadium	75	P
12.	Lead	873 *	P	24.	Zinc	3280	P

Cyanide 2.5 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 Bruce H Rohrbach

Form I

Sample No.
DC-SS-29

Date 1/29/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

SOW NO. 784

LAB SAMPLE ID. NO. 9795 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	19500	P	13.	Magnesium	NR	
2.	Antimony	21 U	P	14.	Manganese	75 R *	P
3.	Arsenic	10 *	F	15.	Mercury	0.66	CV
4.	Barium	3760	P	16.	Nickel	111 *	P
5.	Beryllium	1.8 U	P	17.	Potassium	NR	
6.	Cadmium	8.0 R *	P	18.	Selenium	1.8 U	F
7.	Calcium	NR		19.	Silver	3.5 U R *	P
8.	Chromium	12 R *	P	20.	Sodium	NR	
9.	Cobalt	[18]	P	21.	Thallium	3.5 U	F
10.	Copper	489	P	22.	Tin	14 U	F
11.	Iron	12500 *	P	23.	Vanadium	11	P
12.	Lead	279 *	P	24.	Zinc	3080	P
	Cyanide	1.8	U		Percent Solids (%)	56	

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 Bruce H Rohrbach

Form I

Sample No.
DC-SS-31

Date 1/29/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

SOW NO. 784

LAB SAMPLE ID. NO. 9797 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	4790	P	13.	Magnesium	NR	
2.	Antimony	18 U	P	14.	Manganese	408 R *	P
3.	Arsenic	74 *	F	15.	Mercury	18	CV
4.	Barium	1250	P	16.	Nickel	35 *	P
5.	Beryllium	1.5 U	P	17.	Potassium	NR	
6.	Cadmium	8.7 R *	P	18.	Selenium	1.5 U	F
7.	Calcium	NR		19.	Silver	3.0 U R *	P
8.	Chromium	29 R *	P	20.	Sodium	NR	
9.	Cobalt	15 U	P	21.	Thallium	3.0 U	F
10.	Copper	624	P	22.	Tin	14	F
11.	Iron	82900 *	P	23.	Vanadium	632	P
12.	Lead	232 *	P	24.	Zinc	20600	P
	Cyanide	1.6	U		Percent Solids (%)	64	

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 Bruce H Rotisbach

Form I

Sample No.
DC-SS-30

Date 1/29/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

SOW NO. 784

LAB SAMPLE ID. NO. 9796 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	2890	P	13.	Magnesium	NR	
2.	Antimony	17 U	P	14.	Manganese	238 R *	P
3.	Arsenic	84 *	F	15.	Mercury	23	CV
4.	Barium	1430	P	16.	Nickel	52 *	P
5.	Beryllium	1.4 U	P	17.	Potassium	NR	
6.	Cadmium	11 R *	P	18.	Selenium	1.4 U	F
7.	Calcium	NR		19.	Silver	3.6 R *	P
8.	Chromium	28 R *	P	20.	Sodium	NR	
9.	Cobalt	[3.3]	P	21.	Thallium	2.9 U	F
10.	Copper	852	P	22.	Tin	12	F
11.	Iron	34000 *	P	23.	Vanadium	284	P
12.	Lead	304 *	P	24.	Zinc	67800	P
	Cyanide	2.9 +	U		Percent Solids (%)	69	

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.
+: Elevated detection limit due to matrix interference.

Lab Manager Bruce H Rohrbach

Form I

Sample No.
DC-SS-32

Date 1/29/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

SOW NO. 784

LAB SAMPLE ID. NO. 9798 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	12700	P	13.	Magnesium	NR	
2.	Antimony	16 U	P	14.	Manganese	191 R *	P
3.	Arsenic	8.6 *	F	15.	Mercury	0.91	CV
4.	Barium	1390	P	16.	Nickel	29 *	P
5.	Beryllium	1.3 U	P	17.	Potassium	NR	
6.	Cadmium	8.1 R *	P	18.	Selenium	1.3 U	F
7.	Calcium	NR		19.	Silver	5.4 R *	P
8.	Chromium	21 R *	P	20.	Sodium	NR	
9.	Cobalt	[4.0]	P	21.	Thallium	2.7 U	F
10.	Copper	1420	P	22.	Tin	11 U	F
11.	Iron	17500 *	P	23.	Vanadium	30	P
12.	Lead	1270 *	P	24.	Zinc	1890	P
	Cyanide	1.3	U		Percent Solids (%)	75	

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 Bruce H. Rohrbach

Form I

Sample No.
DC-SS-33

Date 1/29/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

SOW NO. 784

LAB SAMPLE ID. NO. 9799 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	14300	P	13.	Magnesium	NR	
2.	Antimony	19	P	14.	Manganese	43 R *	P
3.	Arsenic	16 *	F	15.	Mercury	0.90	CV
4.	Barium	1340	P	16.	Nickel	12 U *	P
5.	Beryllium	1.4 U	P	17.	Potassium	NR	
6.	Cadmium	5.2 R *	P	18.	Selenium	1.4 U	F
7.	Calcium	NR		19.	Silver	4.1 R *	P
8.	Chromium	14 R *	P	20.	Sodium	NR	
9.	Cobalt	14 U	P	21.	Thallium	2.9 U	F
10.	Copper	596	P	22.	Tin	12 U	F
11.	Iron	12400 *	P	23.	Vanadium	16	P
12.	Lead	417 *	P	24.	Zinc	44400	P
Cyanide		2.9 +	U	Percent Solids (%)		68	

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.
+: Elevated detection limit due to matrix interference.

Lab Manager Bruce H Robstad

Form I

Sample No.
DC-SS-34

Date 1/29/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

SOW NO. 784

LAB SAMPLE ID. NO. 9800 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	5720		P	13.	Magnesium	NR		
2.	Antimony	16	U	P	14.	Manganese	119	R *	P
3.	Arsenic	25	*	F	15.	Mercury	2.0		CV
4.	Barium	9200		P	16.	Nickel	21	*	P
5.	Beryllium	1.3	U	P	17.	Potassium	NR		
6.	Cadmium	6.5	R *	P	18.	Selenium	1.3 U		F
7.	Calcium	NR			19.	Silver	2.6 U	R *	P
8.	Chromium	24	R *	P	20.	Sodium	NR		
9.	Cobalt	[12]		P	21.	Thallium	2.7 U		F
10.	Copper	435		P	22.	Tin	11 U		F
11.	Iron	16400	*	P	23.	Vanadium	12		P
12.	Lead	318	*	P	24.	Zinc	12000		P

Cyanide 2.0 Percent Solids (%) 76

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 Bruce H Potstock

Form I.

Sample No.
DC-SS-35

Date 1/29/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

SOW NO. 784

LAB SAMPLE ID. NO. 9801 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	2830		P	13.	Magnesium	NR	
2.	Antimony	14	U	P	14.	Manganese	102	R * P
3.	Arsenic	16	*	F	15.	Mercury	2.2	CV
4.	Barium	533		P	16.	Nickel	15	* P
5.	Beryllium	1.2	U	P	17.	Potassium	NR	
6.	Cadmium	4.3	R *	P	18.	Selenium	1.1	U F
7.	Calcium	NR			19.	Silver	2.4	U R * P
8.	Chromium	28	R *	P	20.	Sodium	NR	
9.	Cobalt	[2.4]		P	21.	Thallium	2.3	U F
10.	Copper	317		P	22.	Tin	9.1	U F
11.	Iron	23400	*	P	23.	Vanadium	39	P
12.	Lead	205	*	P	24.	Zinc	21700	P

Cyanide 22 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 Bruce H Rohrbach

Form I

Sample No.
DC-SS-36

Date 1/29/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

SOW NO. 784

LAB SAMPLE ID. NO. 9802 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	6370	P	13.	Magnesium	NR	
2.	Antimony	17 U	P	14.	Manganese	243 R*	P
3.	Arsenic	4.6 *	F	15.	Mercury	4.5	CV
4.	Barium	1750	P	16.	Nickel	95 *	P
5.	Beryllium	1.4 U	P	17.	Potassium	NR	
6.	Cadmium	15 R *	P	18.	Selenium	1.9	F
7.	Calcium	NR		19.	Silver	8.9 R*	P
8.	Chromium	49 R *	P	20.	Sodium	NR	
9.	Cobalt	[9.7]	P	21.	Thallium	2.6 U	F
10.	Copper	5500	P	22.	Tin	14	F
11.	Iron	28400 *	P	23.	Vanadium	132	P
12.	Lead	689 *	P	24.	Zinc	4980	P
	Cyanide	1.4	U		Percent Solids (%)	73	

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 Bruce H Rohrbach

Form I

Sample No.
DC-SS-37

Date 1/29/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

SOW NO. 784

LAB SAMPLE ID. NO. 9803 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	4560	P	13.	Magnesium	NR	
2.	Antimony	16 U	P	14.	Manganese	746 R *	P
3.	Arsenic	5.2 *	F	15.	Mercury	2.6	CV
4.	Barium	3870	P	16.	Nickel	53 *	P
5.	Beryllium	1.4 U	P	17.	Potassium	NR	
6.	Cadmium	26 R *	P	18.	Selenium	4.1	F
7.	Calcium	NR		19.	Silver	8.0 R *	P
8.	Chromium	45 R *	P	20.	Sodium	NR	
9.	Cobalt	[5.9]	P	21.	Thallium	2.8 U	F
10.	Copper	2260	P	22.	Tin	18	F
11.	Iron	53900 *	P	23.	Vanadium	118	P
12.	Lead	724 *	P	24.	Zinc	4720	P

Cyanide 2.3 Percent Solids (%) 73

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 Bruce H. Pohlstrack

Form I

Sample No.
DC-55-38

Date 1/29/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

SOW NO. 784

LAB SAMPLE ID. NO. 9804 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	2630	P	13.	Magnesium	NR	
2.	Antimony	16 U	P	14.	Manganese	50 R *	P
3.	Arsenic	4.1 *	F	15.	Mercury	0.49	P
4.	Barium	18300	P	16.	Nickel	35 *	P
5.	Beryllium	1.4 U	P	17.	Potassium	NR	
6.	Cadmium	2.0 R *	P	18.	Selenium	1.4 U	F
7.	Calcium	NR		19.	Silver	2.7 U R *	P
8.	Chromium	19 R *	P	20.	Sodium	NR	
9.	Cobalt	[20]	P	21.	Thallium	2.8 U	F
10.	Copper	327	P	22.	Tin	16	F
11.	Iron	9780 *	P	23.	Vanadium	23	P
12.	Lead	105 *	P	24.	Zinc	239	P

Cyanide 1.4 Percent Solids (%) 73

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 Bruce H Rohstrad

Form I

Sample No.
DC-SS-39

Date 1/29/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

SOW NO. 784

LAB SAMPLE ID. NO. 9805 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	4890	P	13.	Magnesium	NR	
2.	Antimony	16	P	14.	Manganese	193 R *	P
3.	Arsenic	17 *	F	15.	Mercury	2.9	CV
4.	Barium	4480	P	16.	Nickel	159 *	P
5.	Beryllium	1.3 U	P	17.	Potassium	NR	
6.	Cadmium	9.7 R *	P	18.	Selenium	1.8	F
7.	Calcium	NR		19.	Silver	6.9 R *	P
8.	Chromium	26 R *	P	20.	Sodium	NR	
9.	Cobalt	[6.3]	P	21.	Thallium	2.6 U	F
10.	Copper	1090	P	22.	Tin	17	F
11.	Iron	22000 *	P	23.	Vanadium	120	P
12.	Lead	725 *	P	24.	Zinc	1660	P
	Cyanide	1.3	U		Percent Solids (%)	77	

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 Bruce H Rohrbach

Form I

Sample No.
DC-SS-40

Date 1/29/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

SOW NO. 784

LAB SAMPLE ID. NO. 9806 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	7640	P	13.	Magnesium	NR	
2.	Antimony	18	P	14.	Manganese	457 R *	P
3.	Arsenic	18 *	F	15.	Mercury	2.2	CV
4.	Barium	1940	P	16.	Nickel	70 *	P
5.	Beryllium	1.2 U	P	17.	Potassium	NR	
6.	Cadmium	26 R *	P	18.	Selenium	1.3	F
7.	Calcium	NR		19.	Silver	19 R *	P
8.	Chromium	106 R *	P	20.	Sodium	NR	
9.	Cobalt	[16]	P	21.	Thallium	2.4 U	F
10.	Copper	1660	P	22.	Tin	22	F
11.	Iron	75100 *	P	23.	Vanadium	33	P
12.	Lead	18400 *	P	24.	Zinc	6350	P
	Cyanide	13			Percent Solids (%)	83	

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 Bruce H Rohrbach

Form I

Sample No.
DC-SS-41

Date 1/29/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

SOW NO. 784

LAB SAMPLE ID. NO. 9807 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	10300	P	13.	Magnesium	NR	
2.	Antimony	18 U	P	14.	Manganese	77 R *	P
3.	Arsenic	42 *	F	15.	Mercury	1.2	CV
4.	Barium	5210	P	16.	Nickel	30 *	P
5.	Beryllium	1.5 U	P	17.	Potassium	NR	
6.	Cadmium	8.1 R *	P	18.	Selenium	1.5 U	F
7.	Calcium	NR		19.	Silver	3.9 R *	P
8.	Chromium	20 R *	P	20.	Sodium	NR	
9.	Cobalt	[4.6]	P	21.	Thallium	3.0 U	F
10.	Copper	1510	P	22.	Tin	12 U	F
11.	Iron	15300 *	P	23.	Vanadium	17	P
12.	Lead	516 *	P	24.	Zinc	39000	P
	Cyanide	1.8			Percent Solids (%)	66	

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 Bruce H Rohrbach

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Form I

Sample No.
DC-SS-42

Date 1/29/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

SOW NO. 784

LAB SAMPLE ID. NO. 9808 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	5540	P	13.	Magnesium	NR	
2.	Antimony	15 U	P	14.	Manganese	331 R *	P
3.	Arsenic	12 *	F	15.	Mercury	2.8	CV
4.	Barium	1960	P	16.	Nickel	145 *	P
5.	Beryllium	1.3 U	P	17.	Potassium	NR	
6.	Cadmium	13 R *	P	18.	Selenium	1.4	F
7.	Calcium	NR		19.	Silver	2.8 R *	P
8.	Chromium	21 R *	P	20.	Sodium	NR	
9.	Cobalt	[10]	P	21.	Thallium	2.4 U	F
10.	Copper	1090	P	22.	Tin	10 U	F
11.	Iron	26500 *	P	23.	Vanadium	550	P
12.	Lead	411 *	P	24.	Zinc	2360	P
	Cyanide	1.3			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 Bruce H Rohrbach

Form I

Sample No.
DC-SS-43

Date 1/29/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

SOW NO. 784

LAB SAMPLE ID. NO. 9809 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	8960	P	13.	Magnesium	NR	
2.	Antimony	16 U	P	14.	Manganese	159 R *	P
3.	Arsenic	8.2 *	F	15.	Mercury	3.4	P
4.	Barium	360	P	16.	Nickel	27 *	P
5.	Beryllium	1.3 U	P	17.	Potassium	NR	
6.	Cadmium	14 R *	P	18.	Selenium	1.2 U	F
7.	Calcium	NR		19.	Silver	2.6 R *	P
8.	Chromium	66 R *	P	20.	Sodium	NR	
9.	Cobalt	[4.4]	P	21.	Thallium	2.4 U	F
10.	Copper	753	P	22.	Tin	10 U	F
11.	Iron	17700 *	P	23.	Vanadium	16	P
12.	Lead	326 *	P	24.	Zinc	1500	P
	Cyanide	1.3	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 Bruce H Rohrbach

Form I

Sample No.
DC-SS-44

Date 1/29/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

SOW NO. 784

LAB SAMPLE ID. NO. 9810 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	7520	P	13.	Magnesium	NR	
2.	Antimony	16 U	P	14.	Manganese	336 R *	P
~~3.~~	Arsenic	4.7 U *	F	15.	Mercury	0.12 U	CV
4.	Barium	441	P	~~16.~~	Nickel	15 *	P
5.	Beryllium	1.3 U	P	17.	Potassium	NR	
6.	Cadmium	1.5 R *	P	~~18.~~	Selenium	1.3 U	F
7.	Calcium	NR		~~19.~~	Silver	2.6 U R *	P
~~8.~~	Chromium	11 R *	P	20.	Sodium	NR	
9.	Cobalt	[4.1]	P	~~21.~~	Thallium	2.6 U	F
10.	Copper	33	P	22.	Tin	10 U	F
11.	Iron	13400 *	P	23.	Vanadium	19	P
12.	Lead	60 *	P	24.	Zinc	170	P
Cyanide		1.3	U	Percent Solids (%)		77	

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 Bruce H Rotstrack

Form I.

Sample No.
DC-SS-46

Date 1/29/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

SOW NO. 784

LAB SAMPLE ID. NO. 9811 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	4810	P	13.	Magnesium	NR	
2.	Antimony	17 U	P	14.	Manganese	627 R *	P
3.	Arsenic	5.3 *	F	15.	Mercury	0.41	CV
4.	Barium	346	P	16.	Nickel	59 *	P
5.	Beryllium	1.4 U	P	17.	Potassium	NR	
6.	Cadmium	2.3 R *	P	18.	Selenium	1.4 U	F
7.	Calcium	NR		19.	Silver	2.8 U R *	P
8.	Chromium	123 R *	P	20.	Sodium	NR	
9.	Cobalt	14 U	P	21.	Thallium	2.8 U	F
10.	Copper	135	P	22.	Tin	11 U	F
11.	Iron	52500 *	P	23.	Vanadium	14 U	P
12.	Lead	34 *	P	24.	Zinc	65	P
	Cyanide	1.4	U		Percent Solids (%)	72	

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 Bruce H Rohrbach

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Form I

Sample No.
DC-SS-47

Date 1/29/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

SOW NO. 784

LAB SAMPLE ID. NO. 9812 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	630	P	13.	Magnesium	NR	
2.	Antimony	13 U	P	14.	Manganese	2180 R *	P
3.	Arsenic	9.1 *	F	15.	Mercury	0.09 U	CV
4.	Barium	25	P	16.	Nickel	350 *	P
5.	Beryllium	1.1 U	P	17.	Potassium	NR	
6.	Cadmium	13 R *	P	18.	Selenium	1.1 U	F
7.	Calcium	NR		19.	Silver	2.2 U R *	P
8.	Chromium	690 R *	P	20.	Sodium	NR	
9.	Cobalt	[19]	P	21.	Thallium	2.2 U	F
10.	Copper	614	P	22.	Tin	10 U	F
11.	Iron	243000 *	P	23.	Vanadium	11 U	P
12.	Lead	23 *	P	24.	Zinc	46	P
Cyanide		1.1	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 Bruce H Rotstrack

Form I

Sample No.
DC-SS-48

Date 1/29/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

SOW NO. 784

LAB SAMPLE ID. NO. 9813 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____

Matrix: Water _____ Soil X Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	651 P	13.	Magnesium	NR
2.	Antimony	13 U P	14.	Manganese	1430 R * P
3.	Arsenic	6.4 * F	15.	Mercury	0.09 U CV
4.	Barium	24 P	16.	Nickel	377 * P
5.	Beryllium	1.1 U P	17.	Potassium	NR
6.	Cadmium	9.9 R * P	18.	Selenium	1.1 U F
7.	Calcium	NR	19.	Silver	2.1 U R * P
8.	Chromium	500 R * P	20.	Sodium	NR
9.	Cobalt	[13] P	21.	Thallium	2.2 U F
10.	Copper	615 P	22.	Tin	10 U F
11.	Iron	201000 * P	23.	Vanadium	11 U P
12.	Lead	30 * P	24.	Zinc	34 P
	Cyanide	1.1 U		Percent Solids (%)	91

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 Bruce H Rohrbach

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Form II

Q. C. Report No. _____

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Ecology and Environment, Inc.

CASE NO. U-4474

SOW NO. 784

DATE 11/25/86

UNITS µg/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
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	2.0	2.0	100						CV
16. Nickel									
17. Potassium									
18. Selenium									
19. Silver									
20. Sodium									
21. Thallium									
22. Tin									
23. Vanadium									
24. Zinc									
Other:									
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-4474

SOW NO. 784

DATE 12/12/86

UNITS µg/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum	500	510	102	500	528	106	502	100	P
2. Antimony	500	520	104	500	532	106	507	101	P
3. Arsenic									
4. Barium	500	521	104	500	536	107	506	101	P
5. Beryllium	500	509	102	500	529	106	483	97	P
6. Cadmium	500	515	103	500	552	110	494	99	P
7. Calcium									
8. Chromium	500	516	103	500	547	109	496	99	P
9. Cobalt	500	507	101	500	541	108	485	97	P
10. Copper	500	516	103	500	530	106	475	95	P
11. Iron	500	514	103	500	543	109	498	100	P
12. Lead	500	542	108	500	487	97	494	99	P
13. Magnesium									
14. Manganese	500	521	104	500	528	106	500	100	P
15. Mercury									
16. Nickel	500	508	102	500	512	102	489	98	P
17. Potassium									
18. Selenium									
19. Silver	500	503	101	500	541	108	491	98	P
20. Sodium									
21. Thallium									
22. Tin									
23. Vanadium	500	512	102	500	538	108	499	100	P
24. Zinc	500	512	102	500	538	108	462	92	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-4474

SOW NO. 784

DATE 12/12/86

UNITS µg/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum				500	499	101	504	101	P
2. Antimony				500	511	102	477	95	P
3. Arsenic									
4. Barium				500	508	102	504	101	P
5. Beryllium				500	475	95	478	96	P
6. Cadmium				500	476	95	487	97	P
7. Calcium									
8. Chromium				500	491	98	487	97	P
9. Cobalt				500	483	97	489	98	P
10. Copper				500	489	98	490	98	P
11. Iron				500	487	97	497	99	P
12. Lead				500	467	93	497	99	P
13. Magnesium									
14. Manganese				500	496	99	496	99	P
15. Mercury									
16. Nickel				500	488	98	482	96	P
17. Potassium									
18. Selenium									
19. Silver				500	498	100	472	94	P
20. Sodium									
21. Thallium									
22. Tin									
23. Vanadium				500	493	99	494	99	P
24. Zinc				500	488	98	493	99	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-4474

SOW NO. 784

DATE 1/9/87 UNITS µg/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
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	50	49	98	50	51	102	51	102	F
22. Tin	100	94	94	100	98	98	97	97	F
23. Vanadium									
24. Zinc									
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-4474

SOW NO. 784

DATE 1/12/87 UNITS µg/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
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	50	49	98	50	51	102	48	96	
19. Silver									
20. Sodium									
21. Thallium									
22. Tin									
23. Vanadium									
24. Zinc									
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-4474

SOW NO. 784

DATE 1/13/87

UNITS µg/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									
2. Antimony									
3. Arsenic	50	49	98	50	52	104	52	104	F
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] 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: F - 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-4474

SOW NO. 784

DATE 1/14/87

UNITS µg/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
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	100	96	96	100	96	96	105	105	F
23. Vanadium									
24. Zinc									
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-4474

SOW NO. 784

DATE 1/15/87 UNITS µg/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									
2. Antimony									
3. Arsenic	25	25	100	25	27	108	26	104	F
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	25	23	92	25	23	92	26	104	F
19. Silver									
20. Sodium									
21. Thallium	50	52	104	50	50	100	52	104	F
22. Tin									
23. Vanadium									
24. Zinc									
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-4474

SOW NO. 784

DATE 1/16/87

UNITS µg/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									
2. Antimony									
3. Arsenic	50	49	98	50	48	96	48	96	F
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] 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-4474

SOW NO. 784

DATE 1/16/87

UNITS µg/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									
2. Antimony									
3. Arsenic				50	52	104	52	104	F
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] 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-4474

DATE 11/25/86 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	
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
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-4474

DATE 12/12/86 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	200U	200U	200U	200U	200U	200U
2. Antimony	60U	60U	60U	60U	60U	60U	60U
3. Arsenic							
4. Barium	200 U	200U	200U	200U	200U	200U	200U
5. Beryllium	5U	5U	5U	5U	5U	5U	5U
6. Cadmium	5U	5U	5U	5U	5U	5U	5U
7. Calcium							
8. Chromium	10U	10U	10U	10U	10U	10U	10U
9. Cobalt	50U	50U	50U	50U	50U	50U	50U
10. Copper	25U	25U	25U	25U	25U	25U	25U
11. Iron	100U	100U	100U	100U	100U	100U	100U
12. Lead	50U	71	50U	50U	50U	50U	50U
13. Magnesium							
14. Manganese	15U	15U	15U	15U	15U	15U	15U
15. Mercury							
16. Nickel	40U	40U	40U	40U	40U	40U	40U
17. Potassium							
18. Selenium							
19. Silver	10U	10U	10U	10U	10U	10U	10U
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium	50U	50U	50U	50U	50U	50U	50U
24. Zinc	20U	20U	20U	20U	20U	20U	20U
Other:							
Cyanide							

Form III

Q. C. Report No. _____

BLANKS

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

DATE 1/9/87 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							
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
22. Tin	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-4474

DATE 11/12/87 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	5U	5U	5U			5U	5U
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-4474

DATE 1/13/87 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							
2. Antimony							
3. Arsenic	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							
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-4474

DATE 1/14/87 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	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-4474

DATE 11/15/87 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	
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	5U	5U	5U			5U	
19. Silver							
20. Sodium							
21. Thallium	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-4474

DATE 11/6/87 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	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							
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 and Environment, Inc.

DATE 1/29/87

CASE NO. U-4474

Sample No. DC-SS-28

Lab Sample ID No. 9794

Units mg/kg dry weight

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	"	3.7	3.0	0.48	146
16. Nickel	"				
17. Potassium	"				
18. Selenium	"				
19. Silver	"				
20. Sodium	"				
21. Thallium	"				
22. Tin	"				
23. Vanadium	"				
24. Zinc	"				
Other:					
Cyanide	"				

ok

1 %R = [(SSR - SR)/SA] x 100

"R"- out of control

Form V

Q. C. Report No. _____

SPIKE SAMPLE RECOVERY

LAB NAME Ecology and Environment, Inc.

DATE 1/29/87

CASE NO. U-4474

Sample No. DC-SS-29

Lab Sample ID No. 9795

Units mg/kg dry weight

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	"	22	11	14	78
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	"	3.1	1.2U	3.5	113
19. Silver	"				
20. Sodium	"				
21. Thallium	"	16	2.4U	18	112
22. Tin	"				
23. Vanadium	"				
24. Zinc	"				
Other:					
Cyanide	"				

1 %R = [(SSR - SR)/SA] x 100

"R" - out of control

Form V

Q. C. Report No. _____

SPIKE SAMPLE RECOVERY

LAB NAME Ecology and Environment, Inc.

DATE 1/29/87

CASE NO. U-4474

Sample No. DC-SS-40

Lab Sample ID No. 9806

Units mg/kg dry weight

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	"	137	18	117	102
3. Arsenic	"	26	18	9.3	86
4. Barium	"	2740	1940	467	171
5. Beryllium	"	11	1.2 u	12	92
6. Cadmium	"	44	26	12	150 R
7. Calcium	"				
8. Chromium	"	134	106	47	60 R
9. Cobalt	"	112	16	117	82
10. Copper	"	2060	1660	58	--
11. Iron	"				
12. Lead	"	16800	18400	117	--
13. Magnesium	"				
14. Manganese	"	670	457	117	182 R
15. Mercury	"				
16. Nickel	"	170	70	117	85
17. Potassium	"				
18. Selenium	"	3.7	1.3	2.3	104
19. Silver	"	26	19	12	58 R
20. Sodium	"				
21. Thallium	"	13	2.4 u	12	92
22. Tin	"				
23. Vanadium	"	132	33	117	85
24. Zinc	"	6840	6350	117	--
Other:					
Cyanide	"				

1 %R = [(SSR - SR)/SA] x 100

"R"- out of control

Form V

Q. C. Report No. _____

SPIKE SAMPLE RECOVERY

LAB NAME Ecology and Environment, Inc.

DATE 1/29/86

CASE NO. U-4474

Sample No. DC-SS-48

Lab Sample ID No. 9813

Units mg/kg dry weight

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	"	8.0	1.1 U	7.2	90

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. II-4474

Sample No. DC-SS-36

DATE 1/29/87

Lab Sample ID No. 9792

Units mg/kg dry weight

Matrix soil

Compound	Control Limit[1]	Sample(S)	Duplicate(D)	RPD[2]
Metals:				
1. Aluminum				
2. Antimony				
3. Arsenic		11	10	9.5
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		1.2U	1.2U	NC
19. Silver				
20. Sodium				
21. Thallium		2.4U	2.4U	NC
22. Tin		9.8U	9.8U	NC
23. Vanadium				
24. Zinc				
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 and Environment, Inc.

CASE NO. U-4474

Sample No. DC-SS-27

DATE 1/29/87

Lab Sample ID No. 9793

Units mg/kg dry weight

Matrix soil

Compound	Control Limit[1]	Sample(S)	Duplicate(D)	RPD[2]
Metals:				
1. Aluminum		5040	5860	15
2. Antimony		15 U	17	NC
3. Arsenic				
4. Barium		1460	1230	17
5. Beryllium		1.2 U	1.3 U	NC
6. Cadmium		27	36	29 *
7. Calcium				
8. Chromium		22	25	13
9. Cobalt		5.2	5.9	13
10. Copper		648	637	1.7
11. Iron		28700	29900	4.1
12. Lead		440	484	9.5
13. Magnesium				
14. Manganese		259	339	27 *
15. Mercury				
16. Nickel		34	37	8.4
17. Potassium				
18. Selenium				
19. Silver		2.5 U	2.6 U	NC
20. Sodium				
21. Thallium				
22. Tin				
23. Vanadium		59	60	1.7
24. Zinc		4520	4160	8.3
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 and Environment, Inc.

CASE NO. IJ-4474

Sample No. DC-SS-08

DATE 1/29/87

Lab Sample ID No. 9794

Units mg/kg dry weight

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		3.0	3.0	0
16. Nickel				
17. Potassium				
18. Selenium				
19. Silver				
20. Sodium				
21. Thallium				
22. Tin				
23. Vanadium				
24. Zinc				
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 and Environment, Inc.

CASE NO. U-4474

Sample No. DC-SS-3d

DATE 1/29/87

Lab Sample ID No. 97916

Units mg/kg dry weight

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		2.9 U	2.9 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 VI

Q. C. Report No. _____

DUPLICATES

LAB NAME Ecology and Environment, Inc.

CASE NO. U-4474

Sample No. DC-SS-32

DATE 1/29/87

Lab Sample ID No. 9798

Units mg/kg dry weight

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		0.91	0.86	5.6
16. Nickel				
17. Potassium				
18. Selenium				
19. Silver				
20. Sodium				
21. Thallium				
22. Tin				
23. Vanadium				
24. Zinc				
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 and Environment, Inc.

CASE NO. U-4474

Sample No. DC-SS-40

DATE 1/29/87

Lab Sample ID No. 9806

Units mg/kg dry weight

Matrix soil

Compound	Control Limit[1]	Sample(S)	Duplicate(D)	RPD[2]
Metals:				
1. Aluminum		7640	7140	6.8
2. Antimony		18	14 U	NC
3. Arsenic		18	29	47*
4. Barium		1940	2030	4.5
5. Beryllium		1.2 U	1.2 U	NC
6. Cadmium		26	26	0
7. Calcium				
8. Chromium		106	378	112*
9. Cobalt		16	15	6.4
10. Copper		1660	1800	8.1
11. Iron		75100	93900	22*
12. Lead		18400	14000	27*
13. Magnesium				
14. Manganese		457	538	16
15. Mercury				
16. Nickel		70	226	105*
17. Potassium				
18. Selenium		1.3	1.3	0
19. Silver		19	14	30*
20. Sodium				
21. Thallium		2.4 U	2.4 U	NC
22. Tin		22	21	4.6
23. Vanadium		33	29	13
24. Zinc		6350	5970	6.2
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 and Environment, Inc.

CASE NO. U-4474

Sample No. DC-SS-41

DATE 1/29/87

Lab Sample ID No. 9807

Units mg/kg dry weight

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		1.8	1.5	18

* 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-4474

DATE 11/25/86 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		4.40	4.41	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:						
Cyanide	10					

Form VII

Q.C. Report No. _____

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

DATE 12/12/86 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		970	1000	103
2. Antimony	60	6	5	990	1130	114
3. Arsenic	10		5			
4. Barium	200	10		970	1010	104
5. Beryllium	5	5		960	943	98
6. Cadmium	5	5	1	940	930	99
7. Calcium	5000	1000				
8. Chromium	10	10		1030	977	95
9. Cobalt	50	10		1000	988	99
10. Copper	25	10		1030	973	94
11. Iron	100	25		1020	987	97
12. Lead	5	50	5	1010	1020	101
13. Magnesium	5000	1000				
14. Manganese	15	5		1020	1000	98
15. Mercury	0.2	0.2				
16. Nickel	40	15		1020	1000	98
17. Potassium	5000	1000				
18. Selenium	5		5			
19. Silver	10	10	5	6000	5750	96
20. Sodium	5000	1000				
21. Thallium	10		5			
22. Tin	40	40	5			
23. Vanadium	50	10		1010	965	96
24. Zinc	20	10		1010	1010	100
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-4474

DATE 1/9/87 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	24	96
22. Tin	40	40	5			
23. Vanadium	50	10				
24. Zinc	20	10				
Other:						
Cyanide	10					

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Form VII

Q.C. Report No. _____

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

DATE 1/12/87 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	7.9	8.0	101
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:						
						63
Cyanide	10					

Form VII

Q.C. Report No. _____

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

DATE 1/13/87 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				
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:						
						64
Cyanide	10					

Form VII

Q.C. Report No. _____

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

DATE 1/15/87 LCS UNITS ug/L mg/kg (Circle One)

Compound	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l ICP/AA	Instrument Detection Limits (IDL)-ug/l Furnace	Lab Control Sample True	Lab Control Sample Found	Lab Control Sample %R
Metals:						
1. Aluminum	200	100				
2. Antimony	60	6	5			
3. Arsenic	10		5	20	22	110
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	6.9	87
19. Silver	10	10	5			
20. Sodium	5000	1000				
21. Thallium	10		5	25	24	96
22. Tin	40	40	5			
23. Vanadium	50	10				
24. Zinc	20	10				
Other:						
						55
Cyanide	10					

Form VII

Q.C. Report No. _____

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME Ecology and Environment, Inc. CASE NO. U-4474

DATE 1/16/87 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	19	95
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			
22. Tin	40	40	5			
23. Vanadium	50	10				
24. Zinc	20	10				
Other:						
Cyanide	10					

JOB #4474 DEAD CREEK

DEC 12 1986

86/12/11
09:03

Result Name: 8612111002

BLANK	50 PPM NEW	9793.0301 RS	4474 9796.0301
BLANK	100 PPM 6-0456	9793 RS 1/10	9796 1/10
STANDARD	4474 9790.0301	BLK #962	9796 1/100
STANDARD	9790 1/10	CAL BLK	4474 9797.0301
500 PPB	9790. 0 1/10	500 PPB	9797. 1/10
500 PPB	4474 9791.0301	500 PPB	4474 9798.0301
500 PPB	9791. 1/10	500 PPB	4474 9798.0301
ICAP-19	9791. 0.1/10	500 PPB	9798. 1/10
ICAP-7	4474 9792.0301	500 PPB	4474 9799.0301
EPA 303#2 1/50	9792. 1/10	500 PPB	9799. 1/10
500 PPM ICS	4474 9793.0301	4474 9794.0301	9799. 0.1/10
10000 PPB	9793. 1/10	9794. 1/10	4474 9800.0301
10 PPM	9793.0301 R	4474 9795.0301	9800. 1/10
CAL BLK	9793.R 1/10	9795. 1/10	4474 9801.0301

Command?

Result Name: 8412111002

9801. 1/10	4474 9805.0301	9810. 1/10	CAL BLK
4474 9802.0301	9806. 1/10	4474 9811.0301	500 PPM ICS
9802. 1/10	9806.0301 R	9811. 1/10	500 PPB
4474 9803.0301	9806.R 1/10	CAL BLK	500 PPB
9803. 1/10	9806.0301 RS	500 PPB	500 PPB
CAL BLK	9806.RS 1/10	500 PPB	
500 PPB	4474 9807.0301	500 PPB	
500 PPB	9807. 1/10	4474 9812.0301	
500 PPB	9807. 0.1/10	9812. 1/10	
500 PPB	4474 9808.0301	9812. 0.1/10	
4474 9804.0301	9808. 1/10	4474 9813.0301	
9804. 1/10	4474 9809.0301	9813. 1/10	
4474 9805.0301	9809. 1/10	9813. 0.1/10	
9805. 1/10	4474 9810.0301	BLK #966	

Displaying page 2 of 2.

Command?

[illegible]	[illegible]	[illegible]	intensity	0.00	cv
[illegible]	[illegible]	[illegible]	intensity	29.10	cv
[illegible]	[illegible]	[illegible]	intensity	0.10	cv
[illegible] PPB		513.05	ug/L	0.15	cv
[illegible]		1010.25	ug/L	3.45	cv
[illegible] PPM ICP		925.20	ug/L	0.47	cv
[illegible] PPB		[illegible]	ug/L	0.90	cv
[illegible] PPM		10843.00	ug/L	0.03	cv
[illegible]		0.03	ug/L <15.0	48.88	cv
[illegible] PPM NEW		[illegible]	ug/L	0.14	cv
[illegible]	9790.0301	[illegible]	ug/L	0.03	cv
9790. 1/10		13350.00	ug/L	0.23	cv
9790. 0.1/10		1242.50	ug/L	0.29	cv
[illegible]	9791.03011360	.00	ug/L	0.03	cv
9791. 1/10		[illegible]	ug/L	0.32	cv
9791. 0.1/10		1449.00	ug/L	0.00	cv
[illegible]	9792.03013120	.00	ug/L	0.07	cv
9792. 1/10		1908.00	ug/L	0.01	cv
[illegible]	9793.03017175	.00	ug/L	0.29	cv
9793. 1/10		1816.00	ug/L	0.30	cv
9793.0301 R		13145.00	ug/L	1.00	cv
9793.R 1/10		1607.00	ug/L	0.25	cv
BHR 9793.0301 R		17845.00	ug/L	1.81	cv
9793.RS 1/10		1892.00	ug/L	0.45	cv
BLK [illegible]		4.03	ug/L <15.0	10.12	cv
CAL BLK		2.54	ug/L ⊥	32.98	cv
[illegible] PPB		538.25	ug/L	1.20	cv
[illegible]	9794.03013615	.00	ug/L	1.17	cv
9794. 1/10		1400.50	ug/L	0.54	cv
[illegible]	9795.0301	8713.00	ug/L	0.39	cv
[illegible]	9796.03011013	.00	ug/L	0.22	cv
9796. 1/10		25965.00	ug/L	1.00	cv
9796. 1/100		2419.00	ug/L	1.17	cv
[illegible]	9797.03011370	.00	ug/L	0.05	cv
9797. 1/10		6799.00	ug/L	0.77	cv
[illegible]	9798.03017048	.00	ug/L	0.01	cv
[illegible]	9798.0301	7092.50	ug/L	1.76	cv
[illegible]	9799.03019605	.00	ug/L	5.91	cv
9799. 1/10		16170.00	ug/L	0.79	cv
9799. 0.1/10		1548.50	ug/L	0.14	cv
[illegible]	9800.03010005	.00	ug/L	0.06	cv
9800. 1/10		4517.00	ug/L	0.09	cv
[illegible]	9801.03011430	.00	ug/L	0.03	cv
9801. 1/10		9229.50	ug/L	0.28	cv
[illegible]	9802.03016115	.00	ug/L	1.63	cv
9802. 1/10		1791.00	ug/L	0.72	cv
[illegible]	9803.03016350	.00	ug/L	0.43	cv
9803. 1/10		1732.50	ug/L	0.20	cv
CAL BLK		1.14	ug/L <15.0	109.98	cv
[illegible] PPB		461.50	ug/L	0.00	cv
[illegible] PPB		498.75	ug/L	1.40	cv
[illegible]	9804.0301	882.65	ug/L	1.20	cv
[illegible]	9805.0301	3390.00	ug/L	1.15	cv
[illegible]	9806.03016055	.00	ug/L	1.71	cv
9806. 1/10		2691.00	ug/L	0.36	cv
9806.R 1/10		2503.50	ug/L	1.03	cv
9806.RS 1/10		2928.00	ug/L	0.19	cv

4474 9807.0301	1299.00	ug/L		0.16	cv	
9807. 1710	13965.00	ug/L		0.23	cv	
9807. 0.1710	1321.00	ug/L		0.54	cv	
4474 9808.0301	9317.00	ug/L		1.00	cv	
4474 9809.0301	5828.00	ug/L		1.83	cv	
4474 9810.0301	647.05	ug/L		1.65	cv	
4474 9811.0301	235.95	ug/L		2.18	cv	
CAL BLK	0.29	ug/L	<15.0	367.47	cv	
500 PPB	487.60	ug/L		0.78	cv	
4474 9812.0301	210.75	ug/L		0.06	cv	
4474 9813.0301	160.75	ug/L		0.22	cv	
BLK 9814	8.82	ug/L	<15.0	0.24	cv	
CAL BLK	7.29	ug/L		4.85	cv	
500 PPM ICB	911.35	ug/L		0.49	cv	
100 PPB	192.95	ug/L		2.50	cv	

CD_VHS

BLANK	10.77	intensity		0.00	cv	
BLANK	5.70	intensity		129.33	cv	window edge
[illegible]	18270.00	intensity		0.14	cv	
500 PPB	514.90	ug/L		0.90	cv	
ICAI-13	930.05	ug/L		2.42	cv	
500 PPM ICB	848.70	ug/L		0.34	cv	
10000 PPB	10300.00	ug/L		0.13	cv	
CAL BLK	2.18	ug/L	<5.00	115.90	cv	
4474 9790.0301	66.35	ug/L		3.35	cv	
4474 9791.0301	69.24	ug/L		2.18	cv	
4474 9792.0301	85.59	ug/L		0.65	cv	
4474 9793.0301	108.60	ug/L		1.08	cv	
9793.0301 R	138.65	ug/L		4.45	cv	
9793.0301 R/BHR	135.60	ug/L		2.51	cv	
BLK 9794	-0.60	ug/L	<5.00	-33.24	cv	window edge
CAL BLK	0.97	ug/L	<5.00	68.63	cv	
500 PPB	551.50	ug/L		0.84	cv	
500 PPB	404.80	ug/L		0.00	cv	
500 PPB	563.10	ug/L		0.00	cv	
500 PPB	483.70	ug/L		0.64	cv	
4474 9794.0301	22.20	ug/L		1.95	cv	
4474 9795.0301	22.47	ug/L		6.68	cv	
4474 9796.0301	39.88	ug/L		1.55	cv	
4474 9797.0301	28.74	ug/L		0.82	cv	
4474 9798.0301	30.28	ug/L		2.95	cv	
4474 9799.0301	15.26	ug/L		122.48	cv	
4474 9800.0301	24.57	ug/L		1.59	cv	
4474 9801.0301	18.35	ug/L		3.05	cv	
4474 9802.0301	55.39	ug/L		0.63	cv	
4474 9803.0301	96.50	ug/L		2.45	cv	
CAL BLK	0.34	ug/L	<5.00	44.00	cv	
500 PPB	426.90	ug/L		0.00	cv	
500 PPB	493.50	ug/L		1.47	cv	
4474 9804.0301	7.37	ug/L		2.81	cv	
4474 9805.0301	37.32	ug/L		2.54	cv	
4474 9806.0301	108.00	ug/L		1.04	cv	
9806.0301 R	109.70	ug/L		0.75	cv	
9806.0301 RE	188.15	ug/L		1.09	cv	
4474 9807.0301	27.41	ug/L		2.32	cv	
4474 9808.0301	51.62	ug/L		2.44	cv	
4474 9809.0301	53.53	ug/L		1.76		
4474 9810.0301	5.84	ug/L		17.97	cv	

4474 9811.0301	8.33	ug/L		14.47	cv	
CAL BLK	0.01	ug/L	<5.00	199.36	cv	window edge
500 PPB	472.10	ug/L		0.11	cv	
4474 9812.0301	50.42	ug/L		0.68	cv	
4474 9813.0301	46.33	ug/L		4.17	cv	
BLK 4966	-0.63	ug/L	<5.00	-49.10	cv	window edge
CAL BLK	-0.95	ug/L	<5.00	-102.3	cv	window edge
500 PPM ICS	811.40	ug/L		0.22	cv	
500 PPB	486.90	ug/L		2.71	cv	

2b_VHC_2

blank	165.90	intensity		0.00	cv	
blank	-11.68	intensity		-191.2	cv	
standard	3653.00	intensity		0.05	cv	
50 PPB	519.70	ug/L		3.51	cv	
ICAP-1	1129.50	ug/L		1.13	cv	
500 PPM ICS	1071.50	ug/L		1.16	cv	
CAL BLK	1.31	ug/L	<60.0	3310.2	cv	
4474 9790.0301	-16.23	ug/L		-338.1	cv	window edge
4474 9791.0301	-22.29	ug/L		-65.72	cv	window edge
4474 9792.0301	-18.32	ug/L		-103.1	cv	window edge
4474 9793.0301	-13.67	ug/L		-408.5	cv	window edge
9793.0301 R	53.92	ug/L		20.76	cv	
9793.0301 RS/BHR	20.64	ug/L	<60.0	108.78	cv	
BLK 4962	11.36	ug/L	<60.0	179.53	cv	
CAL BLK	1.13	ug/L		5011.7	cv	
500 PPB	531.60	ug/L		1.24	cv	
4474 9794.0301	188.55	ug/L		26.63	cv	
4474 9795.0301	54.47	ug/L	<60.0	84.27	cv	window edge
4474 9796.0301	48.89	ug/L		37.43	cv	window edge
4474 9797.0301	10.51	ug/L		683.16	cv	window edge
4474 9798.0301	56.14	ug/L		79.99	cv	
4474 9799.0301	25.90	ug/L		13.72	cv	
4474 9800.0301	53.92	ug/L	<60.0	4.05	cv	window edge
4474 9801.0301	17.57	ug/L		262.97	cv	window edge
4474 9802.0301	40.16	ug/L		79.09	cv	window edge
4474 9803.0301	52.96	ug/L		49.56	cv	
CAL BLK	32.41	ug/L	<60.0	53.41	cv	
500 PPB	507.45	ug/L		6.42	cv	
4474 9804.0301	50.93	ug/L	<60.0	33.14	cv	
4474 9805.0301	60.15	ug/L		25.37	cv	window edge
4474 9806.0301	77.58	ug/L		52.93	cv	window edge
9806.0301 R	31.72	ug/L		8.41	cv	window edge
9806.0301 RS	585.05	ug/L		0.23	cv	
4474 9807.0301	24.16	ug/L	<60.0	107.89	cv	
4474 9808.0301	41.70	ug/L		142.10	cv	window edge
4474 9809.0301	49.30	ug/L		64.97	cv	window edge
4474 9810.0301	39.80	ug/L		107.82	cv	
4474 9811.0301	11.90	ug/L		359.60	cv	window edge
CAL BLK	-19.51	ug/L	<60.0	-56.86	cv	window edge
500 PPB	510.83	ug/L		2.07	cv	
4474 9812.0301	35.40	ug/L	<60.0	578.68	cv	window edge
4474 9813.0301	-19.78	ug/L		-336.1	cv	window edge
BLK 4966	38.68	ug/L	<60.0	43.61	cv	
CAL BLK	3.21	ug/L		1310.4	cv	
500 PPM ICS	1059.90	ug/L		5.95	cv	
500 PPB	476.70	ug/L		5.94	cv	

Sb

Pb

Blank	[illegible]	intensity		0.00 cv	
Blank	-131.[illegible]	intensity		-3.22 cv	window edge
Standard	1450.50	intensity		1.35 cv	
500 PPB	542.50	ug/L		1.46 cv	
ICAP-19	1020.50	ug/L		0.35 cv	
500 PPM ICS	1100.50	ug/L		5.65 cv	
10000 PPB	10105.00	ug/L		[illegible] cv	
50 PPM	5[illegible]	ug/L		0.12 cv	
CAL BLK	0.31	ug/L		2190.3 cv	window edge
50 PPM NEW	[illegible]	ug/L		0.79 cv	
4474 9790.0301	1614.50	ug/L		2.93 cv	
4474 9791.0301	1550.50	ug/L		0.68 cv	
4474 9792.0301	2372.50	ug/L		1.15 cv	
4474 9793.0301	1769.50	ug/L		1.31 cv	
9793.0301 R	1869.50	ug/L		1.26 cv	
9793.0301 R/	1992.00	ug/L		3.03 cv	
BLK #962 BHR	[illegible]	ug/L	<100.0	-609.6 cv	
CAL BLK	71.22	ug/L	⊥	80.63 cv	
500 PPB	595.10	ug/L		3.40 cv	
500 PPB	431.80	ug/L		0.00 cv	
500 PPB	677.60	ug/L		0.00 cv	
500 PPB	477.85	ug/L		5.20 cv	
4474 9794.0301	3733.50	ug/L		0.06 cv	
4474 9795.0301	786.9[illegible]	ug/L		4.83 cv	
4474 9796.0301	1086.50	ug/L		0.06 cv	
4474 9797.0301	762.70	ug/L		3.81 cv	
4474 9798.0301	4771.50	ug/L		1.79 cv	
4474 9799.0301	1453.50	ug/L		0.68 cv	
4474 9800.0301	1197.00	ug/L		0.22 cv	
4474 9801.0301	872.80	ug/L		1.61 cv	
4474 9802.0301	2476.50	ug/L		0.37 cv	
4474 9803.0301	2656.00	ug/L		1.87 cv	
CAL BLK	17.07	ug/L	<100.0	31.35 cv	
500 PPB	409.20	ug/L		0.00 cv	
500 PPB	494.10	ug/L		4.15 cv	
4474 9804.0301	337.10	ug/L		3.47 cv	
4474 9805.0301	2792.00	ug/L		3.70 cv	
BHR ~~4474 9806.0301~~	~~[illegible]~~	~~ug/L~~		0.02 cv	
9806. 1/10	7798.50	ug/L		1.10 cv	
9806.R 1/10	5860.50	ug/L		0.03 cv	
9806.RS 1/10	7206.50	ug/L		0.56 cv	
4474 9807.0301	1748.00	ug/L		0.16 cv	
4474 9808.0301	1620.50	ug/L		0.5[illegible] cv	
4474 9809.0301	1254.00	ug/L		1.56 cv	
4474 9810.0301	228.85	ug/L		9.61 cv	
4474 9811.0301	124.50	ug/L		30.76 cv	
CAL BLK	42.97	ug/L	<100	18.77 cv	
500 PPB	467.35	ug/L		2.29 cv	
4474 9812.0301	106.18	ug/L		17.70 cv	
4474 9813.0301	142.60	ug/L		3.10 cv	
BLK #966	29.01	ug/L	<100	128.86 cv	
CAL BLK	31.38	ug/L		161.34 cv	window edge
500 PPM ICS	1160.50	ug/L		2.35 cv	
500 PPB	496.65	ug/L		0.78 cv	

[illegible]

Blank	27.16	intensity	0.00 cv	
Blank	55.83	intensity	7.48 cv	
Standard	7541.00	intensity	0.35 cv	

500 PPB	507.75	ug/L		0.41	cv	
ICAP 19	987.91	ug/L		1.55	cv	
500 PPM ICS	833.75	ug/L		1.04	cv	
10000 PPB	9915.00	ug/L		0.31	cv	
CAL BLK	-3.18	ug/L	<10.0	-62.57	cv	window edge
4474 9790.0301	4.32	ug/L	⊥	46.47	cv	window edge
4474 9791.0301	17.60	ug/L		2.03	cv	
4474 9792.0301	25.78	ug/L		3.90	cv	
4474 9793.0301	30.80	ug/L		1.80	cv	
9793.0301 R	32.75	ug/L		4.06	cv	
9793.0301 R/BHR	15.94	ug/L		9.85	cv	
BLK #962	4.12	ug/L	<10.0	-126.1	cv	
CAL BLK	4.29	ug/L	⊥	-23.83	cv	window edge
500 PPB	540.95	ug/L		0.20	cv	
4474 9794.0301	50.54	ug/L		0.00	cv	
4474 9795.0301	11.76	ug/L		15.65	cv	
4474 9796.0301	12.07	ug/L		30.50	cv	
4474 9797.0301	2.35	ug/L	<10.0	8.64	cv	
4474 9798.0301	24.79	ug/L		34.75	cv	
4474 9799.0301	7.75	ug/L	<10.0	17.17	cv	
4474 9800.0301	19.82	ug/L		14.60	cv	
4474 9801.0301	10.44	ug/L		33.44	cv	
4474 9802.0301	34.82	ug/L		9.23	cv	
4474 9803.0301	31.50	ug/L		12.68	cv	
CAL BLK	-6.02	ug/L	<10.0	-21.92	cv	
500 PPB	485.45	ug/L		0.25	cv	
4474 9804.0301	73.80	ug/L		6.35	cv	
4474 9805.0301	24.31	ug/L		12.48	cv	
4474 9806.0301	66.58	ug/L		3.13	cv	
9806.0301 R	63.70	ug/L		7.42	cv	
9806.0301 RS	479.20	ug/L		0.56	cv	
4474 9807.0301	15.63	ug/L		27.07	cv	
4474 9808.0301	45.60	ug/L		11.67	cv	
4474 9809.0301	16.94	ug/L		38.46	cv	
4474 9810.0301	15.71	ug/L		12.99	cv	
4474 9811.0301	5.76	ug/L	<10.0	105.58	cv	
CAL BLK	-2.95	ug/L	<10.0	-110.8	cv	window edge
500 PPB	482.70	ug/L		1.37	cv	
4474 9812.0301	86.80	ug/L		4.78	cv	
4474 9813.0301	60.32	ug/L		0.33	cv	
BLK #965	-5.34	ug/L	<10.0	-66.31	cv	window edge
CAL BLK	-11.61	ug/L	⊥	-26.55	cv	window edge
500 PPM ICS	819.75	ug/L		0.61	cv	
500 PPB	488.70	ug/L		3.12	cv	

MI_VHC

Blank	-30.66	intensity		-319.1	cv
standard	17965.00	intensity		0.22	cv
500 PPB	508.60	ug/L		0.44	cv
ICAP-11	1005.00	ug/L		0.66	cv
500 PPM ICS	832.95	ug/L		0.20	cv
10000 PPB	10105.00	ug/L		0.70	cv
CAL BLK	4.46	ug/L		14.04	cv
4474 9790.0301	403.85	ug/L		0.82	cv
4474 9791.0301	472.55	ug/L		0.74	cv
4474 9792.0301	246.80	ug/L		1.85	cv
4474 9793.0301	135.70	ug/L		2.91	cv
9793.0301 R	143.60	ug/L		5.48	cv
9793.0301 R/BHR	134.10	ug/L		0.76	cv

4474 9794.0301	383.95	ug/L		0.52	cv	
4474 9795.0301	314.35	ug/L		0.25	cv	
4474 9796.0301	184.35	ug/L		1.92	cv	
4474 9797.0301	115.80	ug/L		1.45	cv	
4474 9798.0301	108.80	ug/L		2.17	cv	
4474 9799.0301	39.31	ug/L	<40.0	0.41	cv	
4474 9800.0301	77.61	ug/L		0.57	cv	
4474 9801.0301	63.54	ug/L		0.08	cv	
4474 9802.0301	340.25	ug/L		1.67	cv	
4474 9803.0301	194.50	ug/L		0.70	cv	
CAL BLK	3.15	ug/L	<40.0	43.94	cv	
500 PPB	489.25	ug/L		0.18	cv	
4474 9804.0301	129.60	ug/L		2.00	cv	
4474 9805.0301	610.50	ug/L		0.09	cv	
4474 9806.0301	296.80	ug/L		0.58	cv	
9806.0301 R	949.60	ug/L		1.03	cv	
9806.0301 RS	727.90	ug/L		2.34	cv	
4474 9807.0301	101.65	ug/L		6.88	cv	
4474 9808.0301	570.80	ug/L		0.07	cv	
4474 9809.0301	105.80	ug/L		1.57	cv	
4474 9810.0301	57.45	ug/L		1.63	cv	
4474 9811.0301	212.30	ug/L		3.91	cv	
CAL BLK	0.82	ug/L	<40.0	1047.2	cv	window edge
500 PPB	498.20	ug/L		0.72	cv	
4474 9812.0301	1594.00	ug/L		0.37	cv	
4474 9813.0301	1759.50	ug/L		0.04	cv	
BLK #966	-1.32	ug/L	<40.0	-413.7	cv	window edge
CAL BLK	3.84	ug/L	⊥	180.25	cv	
500 PPM ICS	814.30	ug/L		1.54	cv	
500 PPB	492.35	ug/L		1.09	cv	

MA_VHG

blank	7.68	intensity		15.48	cv
standard	23550.00	intensity		0.40	cv
500 PPB	521.00	ug/L		0.21	cv
ICAP-19	1005.00	ug/L		0.61	cv
500 PPM ICS	878.25	ug/L		1.25	cv
10000 PPB	10415.00	ug/L		1.29	cv
CAL BLK	0.83	ug/L		63.49	cv
4474 9790.0301	709.05	ug/L		0.51	cv
4474 9791.0301	712.30	ug/L		0.69	cv
4474 9792.0301	1334.00	ug/L		0.31	cv
4474 9793.0301	1041.50	ug/L		0.08	cv
9793.0301 R	1011.50	ug/L		0.36	cv
9793.0301 RS	918.55	ug/L		1.12	cv
BLK #962	0.09	ug/L		112.62	cv
CAL BLK	-0.06	ug/L		-229.4	cv
500 PPB	559.30	ug/L		0.17	cv
500 PPB	528.25	ug/L		0.95	cv
4474 9794.0301	1050.00	ug/L		0.78	cv
4474 9795.0301	212.90	ug/L		1.10	cv
4474 9796.0301	850.65	ug/L		0.79	cv
4474 9797.0301	1345.50	ug/L		0.45	cv
4474 9798.0301	714.10	ug/L		0.31	cv

4474 9795.0301	35450.00	ug/L	BHR	0.57	cv
4474 9796.0301	17275.00	ug/L		0.01	cv
9796. 1/10	12130.00	ug/L		1.20	cv
4474 9797.0301	13020.00	ug/L		0.01	cv
9797. 1/10	27320.00	ug/L		0.06	cv

4474 9798.03010985.00	ug/L	0.11	cv	
4474 9798.03019810.00	ug/L	0.04	cv	
9798. 1/10 6548.00	ug/L	0.48	cv	
4474 9799.03043240.00	ug/L	0.42	cv	BHR
4474 9800.03014100.00	ug/L	0.23	cv	
9800. 1/10 6195.50	ug/L	0.63	cv	
4474 9801.03016455.00	ug/L	0.08	cv	
9801. 1/10 9943.50	ug/L	0.25	cv	
4474 9802.03016305.00	ug/L	0.21	cv	
9802. 1/10 10225.00	ug/L	0.62	cv	
4474 9803.03018250.00	ug/L	0.06	cv	
9803. 1/10 19790.00	ug/L	1.22	cv	
CAL BLK -1.13	ug/L <	-72.44	cv	
500 PPB 498.35	ug/L	0.69	cv	
4474 9804.03036085.00	ug/L	1.23	cv	BHR
4474 9805.03014320.00	ug/L	0.19	cv	
9805. 1/10 8458.50	ug/L	0.76	cv	
4474 9806.03017865.00	ug/L	0.00	cv	
9806. 1/10 31845.00	ug/L	0.68	cv	
9806.R 1/10 39380.00	ug/L	0.75	cv	
9806.RS 1/10 28175.00	ug/L	0.14	cv	
4474 9807.03012480.00	ug/L	1.38	cv	
9807. 1/10 5163.00	ug/L	0.44	cv	
4474 9808.03016200.00	ug/L	0.33	cv	
9808. 1/10 10470.00	ug/L	0.00	cv	
4474 9809.03016620.00	ug/L	0.01	cv	
9809. 1/10 6855.50	ug/L	0.38	cv	
4474 9810.03012955.00	ug/L	0.70	cv	
9810. 1/10 5106.50	ug/L	0.02	cv	
4474 9811.03018200.00	ug/L	0.02	cv	
9811. 1/10 18975.00	ug/L	0.58	cv	
CAL BLK 1.90	ug/L <	9.72	cv	
500 PPB 487.45	ug/L	0.83	cv	
4474 9812.03015995.00	ug/L	0.04	cv	
BHR ~~9812. 1/10 78105.00~~	~~ug/L~~	0.06	cv	
9812. 0.1/10 11065.00	ug/L	2.51	cv	
4474 9813.03016440.00	ug/L	0.02	cv	
9813. 1/10 77335.00	ug/L	0.19	cv	
9813. 0.1/10 9407.00	ug/L	0.25	cv	
BLK #966 14.38	ug/L <	22.92	cv	
CAL BLK 14.58	ug/L <	4.27	cv	
500 PPM ICS 77650.00	ug/L	0.03	cv	
500 PPB 496.85	ug/L	3.71	cv	

V_VHC

blank 40.38	intensity	183.38	cv	
standard 36040.00	intensity	0.44	cv	
500 PPB 512.55	ug/L	0.10	cv	
ICAF-19 965.50	ug/L	0.84	cv	
500 PPM ICS 874.30	ug/L	0.53	cv	
10000 PPB 10475.00	ug/L	1.71	cv	
CAL BLK 1.25	ug/L	144.26	cv	
4474 9790.0301 248.35	ug/L	0.12	cv	
4474 9791.0301 260.95	ug/L	0.03	cv	
4474 9792.0301 442.15	ug/L	0.43	cv	
4474 9793.0301 235.65	ug/L	0.11	cv	
9793.0301 R 230.45	ug/L	0.03	cv	
9793.0301 R/BHR 241.55	ug/L	1.49	cv	
BLK #962 0.01	ug/L	22.05	cv	

CAL BLK	0.33	ug/L	<50.0	53.25	cv	
500 PPB	538.35	ug/L		0.70	cv	
4474 9794.0301	321.60	ug/L		0.23	cv	
4474 9795.0301	31.67	ug/L		0.43	cv	
4474 9796.0301	1013.50	ug/L	BHR	0.11	cv	
4474 9797.0301	2085.00	ug/L		0.68	cv	
4474 9798.0301	114.00	ug/L		0.51	cv	
4474 9799.0301	55.54	ug/L		1.36	cv	
4474 9800.0301	422.85	ug/L		0.96	cv	
4474 9801.0301	165.20	ug/L		0.50	cv	
4474 9802.0301	473.25	ug/L		1.03	cv	
4474 9803.0301	434.70	ug/L		0.68	cv	
CAL BLK	0.64	ug/L	<50.0	6.45	cv	
500 PPB	499.25	ug/L		0.24	cv	
4474 9804.0301	84.60	ug/L		1.25	cv	
4474 9805.0301	460.80	ug/L		0.03	cv	
4474 9806.0301	141.55	ug/L		2.13	cv	
9806.0301 R	121.00	ug/L		1.76	cv	
9806.0301 RS	563.80	ug/L		0.64	cv	
4474 9807.0301	57.84	ug/L		2.96	cv	
4474 9808.0301	2168.00	ug/L	BHR	0.25	cv	
4474 9809.0301	64.04	ug/L		3.12	cv	
4474 9810.0301	72.60	ug/L		0.79	cv	
4474 9811.0301	-5.44	ug/L	<50.0	-25.37	cv	window edge
CAL BLK	0.71	ug/L		466.20	cv	
500 PPB	492.85	ug/L		0.08	cv	
4474 9812.0301	-45.77	ug/L	<50.0	-21.27	cv	window edge
4474 9813.0301	17.79	ug/L	<50.0	45.50	cv	window edge
BLK #966	1.29	ug/L		177.29	cv	
CAL BLK	1.04	ug/L		42.30	cv	
500 PPM ICS	862.35	ug/L		0.09	cv	
500 PPB	493.50	ug/L		2.01	cv	

Be_VHG

blank	0.56	intensity		32.58	cv
standard	18000.00	intensity		0.54	cv
500 PPB	509.55	ug/L		0.70	cv
ICAP-19	943.00	ug/L		1.72	cv
500 PPM ICS	898.65	ug/L		0.04	cv
10000 PPB	10105.00	ug/L		1.08	cv
CAL BLK	0.27	ug/L	<5.00	101.93	cv
4474 9790.0301	2.07	ug/L		6.74	cv
4474 9791.0301	2.40	ug/L		17.25	cv
4474 9792.0301	2.62	ug/L		1.70	cv
4474 9793.0301	2.65	ug/L		3.28	cv
9793.0301 R	2.91	ug/L		6.77	cv
9793.0301 RS BHR	2.70	ug/L		1.16	cv
BLK #962	0.04	ug/L		115.95	cv
CAL BLK	-0.03	ug/L		-740.1	cv
500 PPB	528.90	ug/L		0.06	cv
4474 9794.0301	6.18	ug/L		0.95	cv
4474 9795.0301	0.99	ug/L	<5.00	27.33	cv
4474 9796.0301	0.85	ug/L		13.64	cv
4474 9797.0301	1.08	ug/L		11.50	cv
4474 9798.0301	1.54	ug/L		8.80	cv
4474 9799.0301	1.16	ug/L		7.14	cv
4474 9800.0301	1.48	ug/L		11.45	cv
4474 9801.0301	1.12	ug/L		0.95	cv
4474 9802.0301	3.28	ug/L		2.87	cv

4474 9803.0301	1.51	ug/L	<5.00	15.33	cv
CAL BLK	0.23	ug/L		110.36	cv
500 PPB	433.30	ug/L		0.51	cv
4474 9804.0301	0.86	ug/L	<5.00	5.17	cv
4474 9805.0301	2.97	ug/L		2.06	cv
4474 9806.0301	2.07	ug/L		4.99	cv
9806.0301 R	1.99	ug/L		4.61	cv
9806.0301 RS	45.29	ug/L	BHR	0.57	cv
4474 9807.0301	2.02	ug/L	<5.00	5.18	cv
4474 9808.0301	3.06	ug/L		3.80	cv
4474 9809.0301	1.68	ug/L		0.97	cv
4474 9810.0301	1.67	ug/L		8.33	cv
4474 9811.0301	0.75	ug/L		19.29	cv
CAL BLK	-0.00	ug/L		-375.0	cv
500 PPB	474.65	ug/L		1.23	cv
4474 9812.0301	-0.31	ug/L	<5.00	-51.74	cv
4474 9813.0301	0.19	ug/L		32.64	cv
BLK #966	0.03	ug/L		73.76	cv
CAL BLK	0.09	ug/L		48.59	cv
500 PPM ICS	869.30	ug/L		0.93	cv
500 PPB	478.20	ug/L		2.06	cv

CS_VHC

blank	165.90	intensity	46.96	cv
standard	39360.00	intensity	0.56	cv
500 PPB	516.10	ug/L	0.47	cv
ICAP-19	973.25	ug/L	0.81	cv
500 PPM ICS	895.30	ug/L	0.52	cv
10000 PPB	10355.00	ug/L	0.19	cv
CAL BLK	3.15	ug/L	64.70	cv
4474 9790.0301	5702.50	ug/L	0.66	cv
4474 9791.0301	6632.50	ug/L	0.25	cv
4474 9792.0301	4150.50	ug/L	0.49	cv
4474 9793.0301	2605.00	ug/L	0.88	cv
9793.0301 R	2433.00	ug/L	0.87	cv
9793.0301 RS	2369.00	ug/L	0.73	cv
BLK #962 BHR	-2.25	ug/L	-43.66	cv
CAL BLK	1.03	ug/L	161.19	cv
500 PPB	530.10	ug/L	0.41	cv
4474 9794.0301	2890.00	ug/L	0.18	cv
9794. 1/10	2087.50	ug/L	0.85	cv
4474 9795.0301	1382.00	ug/L	1.09	cv
4474 9796.0301	3042.00	ug/L	0.49	cv
4474 9797.0301	2055.00	ug/L	0.40	cv
4474 9798.0301	5318.50	ug/L	0.18	cv
4474 9799.0301	2077.50	ug/L	0.92	cv
4474 9800.0301	1640.50	ug/L	0.67	cv
4474 9801.0301	1349.00	ug/L	0.61	cv
4474 9802.0301	0090.00	ug/L	0.08	cv
9802. 1/10	1978.00	ug/L	0.19	cv
4474 9803.0301	3289.00	ug/L	0.07	cv
CAL BLK	2.48	ug/L	125.84	cv
500 PPB	474.85	ug/L	0.03	cv
4474 9804.0301	1207.00	ug/L	1.04	cv
4474 9805.0301	1205.50	ug/L	0.10	cv
4474 9806.0301	7042.50	ug/L	0.13	cv
9806.0301 R	7532.50	ug/L	1.00	cv
9806.0301 RS	6808.00	ug/L	1.99	cv
4474 9807.0301	5111.00	ug/L	0.10	cv

4474 9808.0301	3285.00	ug/L		0.89	cv
4474 9809.0301	2920.00	ug/L		1.17	cv
4474 9810.0301	124.85	ug/L		0.07	cv
4474 9811.0301	487.10	ug/L		0.15	cv
CAL BLK	1.52	ug/L		40.69	cv
500 PPB	488.85	ug/L		0.10	cv
4474 9812.0301	2796.00	ug/L		0.05	cv
4474 9813.0301	2871.00	ug/L		0.14	cv
BLK #966	-0.31	ug/L		-577.2	cv
CAL BLK	2.03	ug/L		21.12	cv
500 PPM ICS	878.95	ug/L		0.23	cv
500 PPB	490.15	ug/L		1.69	cv

Ag_VHG

blank	81.09	intensity		234.68	cv	window edge
standard	43160.00	intensity		0.34	cv	
500 PPB	503.50	ug/L		0.90	cv	
EPA 233#2 1/50	115.15	ug/L		1.67	cv	
500 PPM ICS	967.65	ug/L		0.05	cv	
CAL BLK	3.34	ug/L	<10.0	227.55	cv	window edge
4474 9790.0301	14.16	ug/L		30.66	cv	
4474 9791.0301	11.75	ug/L		13.80	cv	
4474 9792.0301	14.14	ug/L		23.27	cv	
4474 9793.0301	9.14	ug/L	<10.0	12.65	cv	
9793.0301 R	9.07	ug/L	<10.0	28.03	cv	
9793.0301 R/BHR	13.03	ug/L		10.20	cv	
BLK #962	1.04	ug/L	<10.0	144.80	cv	
CAL BLK	3.50	ug/L	⊥	262.16	cv	
500 PPB	540.60	ug/L		0.47	cv	
4474 9794.0301	9.81	ug/L	<10.0	4.35	cv	
4474 9795.0301	8.60	ug/L	⊥	30.71	cv	
4474 9796.0301	12.86	ug/L		35.43	cv	
4474 9797.0301	7.81	ug/L	<10.0	18.67	cv	
4474 9798.0301	20.10	ug/L		5.83	cv	
4474 9799.0301	14.37	ug/L		5.32	cv	
4474 9800.0301	9.63	ug/L	<10.0	18.89	cv	
4474 9801.0301	5.05	ug/L	⊥	6.21	cv	
4474 9802.0301	31.98	ug/L		0.98	cv	
4474 9803.0301	29.46	ug/L		16.34	cv	
CAL BLK	1.02	ug/L	<10.0	579.14	cv	
500 PPB	490.90	ug/L		0.89	cv	
4474 9804.0301	8.71	ug/L	<10.0	55.26	cv	
4474 9805.0301	26.63	ug/L		20.28	cv	
4474 9806.0301	80.88	ug/L		2.84	cv	
9806.0301 R	59.18	ug/L		0.70	cv	
9806.0301 RS	113.50	ug/L		2.24	cv	
4474 9807.0301	13.28	ug/L		15.51	cv	
4474 9808.0301	11.18	ug/L		22.14	cv	
4474 9809.0301	10.08	ug/L		42.39	cv	
4474 9810.0301	0.58	ug/L	<10.0	654.87	cv	window edge
4474 9811.0301	4.26	ug/L	⊥	101.43	cv	
CAL BLK	0.12	ug/L	⊥	5977.5	cv	window edge
500 PPB	498.40	ug/L		0.45	cv	
4474 9812.0301	3.74	ug/L	<10.0	95.14	cv	
4474 9813.0301	2.51	ug/L	⊥	12.15	cv	window edge
BLK #966	3.01	ug/L	⊥	2.94	cv	window edge
CAL BLK	0.99	ug/L	⊥	124.43	cv	
500 PPM ICS	971.75	ug/L		0.24	cv	
500 PPB	472.25	ug/L		1.12	cv	

A1_VHC

Blank	167.65	intensity	60.96	cv
standard	11375.00	intensity	0.62	cv
500 PPB	503.90	ug/L	2.02	cv
ICAP-7	1004.25	ug/L	1.22	cv
500 PPM ICS	53105.00	ug/L	0.02	cv
10000 PPB	7882.00	ug/L	1.69	cv
50 PPM	54361.00	ug/L	1.10	cv
CAL BLK	-3.31	ug/L	-59.34	cv
50 PPM NEW	49650.00	ug/L	0.43	cv
100 PPM 6-045	9420.00	ug/L	0.00	cv
4474 9790.0301	17270.00	ug/L	0.25	cv
4474 9791.0301	20605.00	ug/L BHR	0.13	cv
4474 9792.0301	19310.00	ug/L	2.06	cv
9792. 1/10	3652.50	ug/L	0.18	cv
4474 9793.0301	20375.00	ug/L BHR	1.18	cv
9793.0301 R	22650.00	ug/L	0.07	cv
9793.0301 RS	20655.00	ug/L	0.24	cv
BLK 4962 BHR	10.53	ug/L	141.85	cv
CAL BLK	-1.93	ug/L	-513.3	cv
500 PPB	528.55	ug/L	3.64	cv
4474 9794.0301	17270.00	ug/L	0.71	cv
9794. 1/10	6377.00	ug/L	0.61	cv
4474 9795.0301	18810.00	ug/L	1.07	cv
9795. 1/10	3516.50	ug/L	0.06	cv
4474 9796.0301	10305.00	ug/L	0.58	cv
4474 9797.0301	15790.00	ug/L	0.71	cv
4474 9798.0301	47700.00	ug/L BHR	1.25	cv
4474 9799.0301	49840.00	ug/L BHR	0.68	cv
4474 9800.0301	21585.00	ug/L BHR	0.41	cv
4474 9801.0301	12055.00	ug/L	0.16	cv
4474 9802.0301	23905.00	ug/L	1.08	cv
4474 9803.0301	16745.00	ug/L	0.14	cv
CAL BLK	1.81	ug/L	346.36	cv
500 PPB	502.10	ug/L	0.67	cv
4474 9804.0301	9694.00	ug/L	0.12	cv
4474 9805.0301	18805.00	ug/L	0.09	cv
4474 9806.0301	32390.00	ug/L BHR	0.48	cv
9806.0301 R	27930.00	ug/L	1.08	cv
9806.0301 RS	32200.00	ug/L	1.19	cv
4474 9807.0301	35030.00	ug/L BHR	0.08	cv
4474 9808.0301	21055.00	ug/L BHR	0.31	cv
4474 9809.0301	34740.00	ug/L BHR	0.41	cv
4474 9810.0301	23565.00	ug/L BHR	0.80	cv
4474 9811.0301	17400.00	ug/L	0.73	cv
CAL BLK	1.94	ug/L	59.76	cv
500 PPB	493.10	ug/L	0.06	cv
4474 9812.0301	2888.00	ug/L	0.70	cv
4474 9813.0301	3041.00	ug/L	0.17	cv
BLK 4966	-4.14	ug/L	-44.14	cv
CAL BLK	-5.85	ug/L	-87.27	cv
500 PPM ICS	86265.00	ug/L	0.04	cv
500 PPB	503.55	ug/L	0.38	cv

D1_VHC

Blank	3.95	intensity	102.62	cv
standard	16790.00	intensity	0.18	cv
500 PPB	521.35	ug/L	0.52	cv

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ICAP-7	1011.00	ug/L	0.63	cv
500 PPM ICS	917.40	ug/L	0.31	cv
10000 PPB	9908.00	ug/L	0.70	cv
50 PPM	55060.00	ug/L	0.13	cv
CAL BLK	-0.02	ug/L	-841.1	cv
50 PPM NEW	51240.00	ug/L	0.36	cv
4474 9790.0301	24385.00	ug/L	0.54	cv
4474 9791.0301	7752.50	ug/L	0.54	cv
4474 9792.0301	13045.00	ug/L	2.77	cv
4474 9793.0301	3887.50	ug/L	0.16	cv
9793.0301 R	4759.50	ug/L	0.64	cv
9793.0301 RS	5077.00	ug/L	0.08	cv
BLK #962	0.37	ug/L	107.52	cv
CAL BLK	0.20	ug/L	210.38	cv
500 PPB	535.95	ug/L	0.49	cv
4474 9791.0301	4279.50	ug/L	0.05	cv
4474 9795.0301	10620.00	ug/L	0.36	cv
4474 9796.0301	5102.00	ug/L	0.09	cv
4474 9797.0301	1129.50	ug/L	0.22	cv
4474 9798.0301	5214.50	ug/L	0.27	cv
4474 9799.0301	1660.00	ug/L	0.53	cv
4474 9800.0301	34680.00	ug/L	1.12	cv
4474 9801.0301	2269.00	ug/L	0.42	cv
4474 9802.0301	6279.50	ug/L	0.30	cv
4474 9803.0301	14205.00	ug/L	0.94	cv
CAL BLK	0.01	ug/L	665.73	cv
500 PPB	506.25	ug/L	0.41	cv
4474 9804.0301	10275.00	ug/L	0.17	cv
9804. 1/10	6743.50	ug/L	0.37	cv
4474 9805.0301	17255.00	ug/L	0.91	cv
4474 9806.0301	8216.50	ug/L	1.08	cv
9806.0301 R	8517.00	ug/L	1.18	cv
9806.0301 RS	11730.00	ug/L	1.56	cv
4474 9807.0301	17640.00	ug/L	0.33	cv
4474 9808.0301	7731.00	ug/L	0.01	cv
4474 9809.0301	1397.00	ug/L	1.39	cv
4474 9810.0301	1674.50	ug/L	0.20	cv
4474 9811.0301	1249.50	ug/L	0.65	cv
CAL BLK	0.23	ug/L	62.02	cv
500 PPB	508.25	ug/L	0.09	cv
4474 9812.0301	114.35	ug/L	0.92	cv
4474 9813.0301	113.65	ug/L	0.93	cv
BLK #966	-0.00	ug/L	-4135.	cv
CAL BLK	-0.01	ug/L	-754.3	cv
500 PPM ICS	899.40	ug/L	0.19	cv
500 PPB	504.50	ug/L	0.93	cv

Cr_VHC

blank	46.86	intensity	2.88	cv
standard	19905.00	intensity	1.09	cv
500 PPB	516.55	ug/L	1.05	cv
ICAP-19	976.80	ug/L	2.23	cv
500 PPM ICS	884.75	ug/L	0.19	cv
10000 PPB	10175.00	ug/L	0.91	cv
CAL BLK	-0.40	ug/L	-176.4	cv
4474 9790.0301	159.95	ug/L	1.04	cv
4474 9791.0301	173.75	ug/L	0.12	cv
4474 9792.0301	558.50	ug/L	1.69	cv
4474 9793.0301	87.10	ug/L	3.14	cv

9793.0301 R		96.19	ug/L		2.57	cv	
9793.0301 R1		105.05	ug/L		0.86	cv	
BLK #962	3HR	-0.82	ug/L	<10.0	-48.77	cv	
CAL BLK		-1.90	ug/L	⊥	-117.2	cv	window edge
500 PPB		546.75	ug/L		0.64	cv	
4474 9794.0301		395.60	ug/L		1.47	cv	
4474 9795.0301		34.28	ug/L		2.45	cv	
4474 9796.0301		99.97	ug/L		1.77	cv	
4474 9797.0301		94.87	ug/L		1.05	cv	
4474 9798.0301		78.25	ug/L		2.30	cv	
4474 9799.0301		49.70	ug/L		0.58	cv	
4474 9800.0301		90.43	ug/L		3.26	cv	
4474 9801.0301		118.55	ug/L		0.50	cv	
4474 9802.0301		175.65	ug/L		1.53	cv	
4474 9803.0301		164.10	ug/L		1.05	cv	
CAL BLK		-1.56	ug/L	<10.0	-143.3	cv	window edge
500 PPB		495.60	ug/L		0.78	cv	
4474 9804.0301		69.46	ug/L		0.89	cv	
4474 9805.0301		99.09	ug/L		2.74	cv	
4474 9806.0301		451.45	ug/L		2.14	cv	
9806.0301 R		1581.00	ug/L		0.37	cv	
9806.0301 RS		572.00	ug/L		1.16	cv	
4474 9807.0301		66.55	ug/L		1.30	cv	
4474 9808.0301		83.04	ug/L		1.11	cv	
4474 9809.0301		255.20	ug/L		0.79	cv	
4474 9810.0301		40.27	ug/L		2.03	cv	
4474 9811.0301		443.55	ug/L		0.08	cv	
CAL BLK		-0.99	ug/L		-111.2	cv	
500 PPB		491.15	ug/L		0.82	cv	
4474 9812.0301		3142.00	ug/L		1.28	cv	
4474 9813.0301		2334.50	ug/L		0.50	cv	
BLK #966		0.29	ug/L	<10.0	822.87	cv	window edge
CAL BLK		0.52	ug/L	⊥	285.19	cv	
500 PPM ICB		855.35	ug/L		0.37	cv	
500 PPB		486.65	ug/L		1.76	cv	

Dead Creek

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ecology and environment, inc.

AAS METAL ANALYSIS SHEET

Job No.: 4474 Test: Hg Test Date: 11/25/86

Digest Date: / / A.A. or A.E.: A.A. Analyst: MICHAEL I. POTTER

Standard Notebook No.: _____; Page No.: _____

	Readings	Average	Unit (ug/L) ~~(mg/L)~~	Results (ug/L) (mg/L)	Comments/Calculations
Prep Blk #					
Prep Blk #					
EPA # WS378#14	4.41		µg/L	4.41	known = 4.40
EPA #					known =

Sample Lab.	µg/L Conc.	(100mL) ~~25.0 ppb~~ Spike Amt.	Recovery	D.F.	Units (ug/L) ~~(µg/L)~~ (mg/kg)	BASIS WET WT. Final Conc.	BASIS DRY WEIGHT Comments/Calculations
9790.03	2.45				mg/kg	0.790	1.02 mg/kg
9791.03	2.83					0.785	1.13
9792.03	3.77					1.26	1.58
9793.03	4.25			10→100		20.25	25.9
9794.03	7.66					2.47	2.95
9794.03 REP	7.70					2.57	3.06
9794.03	8.79	1.00 ppb	111%				(SPIKE) 3.75
9795.03	.86					0.374	0.66
9796.03	~~4.43~~ 3.82			10→100		15.92	23.0
9797.03	2.43			10→100		11.23	17.5
9798.03	1.43					0.680	0.91
9798.03 REP	1.62					0.646	0.87
9798.03	2.83	1.00ppb	130%				(SPIKE) 1.80 (+0.64)
9799.03	1.54					0.616	0.90
9800.03	3.17					1.51	1.98

030016

Lab Notebook 261 Page 32 → 33

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ecology and environment, inc.

AAS METAL ANALYSIS SHEET

Job No.: 4474 Test: Hg Test Date: 11/25/86

Digest Date: / / A.A. or A.E.: AA Analyst: MICHAEL L. POTTER

Standard Notebook No.: _____; Page No.: _____

	Readings	Average	Unit (ug/L) (mg/L)	Results (ug/L) (mg/L)	Comments/Calculations
Prep Blk #					
Prep Blk #					
EPA # WS378#14	4.41		µg/L	4.41	known = 4.40
EPA #					known =

Sample Lab.	µg/L Conc.	(100mL) ~~25.0 ppb~~ Spike Amt.	Recovery	D.F.	Units ~~(ug/L)~~ ~~(mg/L)~~ (mg/kg)	WET WT BASIS Final Conc.	DRY Weight BASIS Comments/Calculations
9801.03	4.11				mg/kg	1.96	2.25 mg/kg
9802.03	8.46					3.25	4.48
9803.03	4.94					1.90	2.61
9804.03	.90					0.359	0.49
9805.03	6.23					2.22	2.89
9806.03	~~2.24~~ .38			10→100		1.81	2.18
9807.03	2.22					0.766	1.17
9808.03	4.72					2.25	2.82
9809.03	5.40					2.70	3.44
9810.03	<.20					<0.100	<0.12
9811.03	.63					0.302	0.41
9812.03	<.20					<0.100	<0.09
9813.03	<.20					<0.100	<0.09

030016

From Page No.
Test Performed: Hg
Date Received: NOVEMBER 25, 1986
Work Performed By: [illegible]

(SEE Page 1)

CLP-SOILS: 1 REP + 20% QC
(SEE page 59-61 BOOK 224 IL V

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From	READ	(µg/L) CONC.	D.F.	AMOUNT of SAMPLE	UNITS	FINAL CONC.	
	Blank			3						r= .999993
	0.2 µg/L			9						y= .038x-.12
	0.4			14						
	0.8			24						
	2.0			56						
	4.0			109						
	8.0			215						
	WS378 #14			120	4.41		100 ml.	µg/L	4.41	(Known=4.4
4474	9790.03	No	A-12	68	2.45 µg/L		0.31	mg/kg	0.790	
	9791.03			78	2.83		0.36		0.785	
	9792.03			103	3.77		0.30		1.26	
	9793.03			[illegible]	/		0.36		/	← RE-RUN 11/26
	9794.03			206	7.66	~~7.66~~ (mg)	0.31		2.47	2.52 Avg.
	9794. REP			207	7.70		0.30		2.57	
	9794 +1.0 ppb			236	8.79		0.28			(111% Rec.)
	9795.03			26	.86		0.23		0.374	
	9796.03			[illegible]	/		0.20		/	← RE-RUN 11/26
	9797.03			[illegible]	/		0.21		/	← RE-RUN 11/26
	9798.03			41	1.43	1.53	0.21		0.680	
	9798. REP			46	1.62		0.25		0.646	
	9798. +1.0 ppb			78	2.83		0.21		~~1.35~~	(130% Rec)
	9799.03			44	1.54		0.25		0.616	
	9800.03			87	3.17		0.21		1.51	
	9801.03			112	4.11		0.21		1.96	
	9802.03			227	8.46		0.26	mg/kg	3.25	

Witnessed & Understood by:

To Page No.

From Page No. (32)

Test Performed: Hg (CONT'D)

Date Received: NOVEMBER 25, 1986

Performed By: [illegible]

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From	READ	(µg/L) CONC.	D.F.	AMOUNT of SAMPLE	UNITS	FINAL CONC	
4474	9803.03	No	11-12	134	4.94		0.26	mg/Kg	1.90	
(CONT'D)	9804.03			27	.90		0.25		0.359	
	9805.03			168	6.23		0.28		2.22	
	9806.03			[illegible]	/		0.22		/	← Re-Run 11/26
	9807.03			62	2.22		0.29		0.766	
	9808.03			128	4.72		0.21		2.25	
	9809.03			146	5.40		0.20		2.70	
	9810.03			4	<.20		0.21		<0.100	
	9811.03			20	.63		0.21		0.302	
	9812.03			6	<.20		0.25		<0.100	
	9813.03			5	<.20		0.24	mg/Kg	<0.100	
4465	9756.03	No	11-3	29	.47 µg/L	10 → 100	0.21	mg/Kg	4.64	
	9759.03			66	2.37	10 → 100	0.26		9.13	
	9761.03			30	1.01	10 → 100	0.21		4.82	
	9762.03			17	.52	10 → 100	0.20		2.61	
	9763.03			27	.90	10 → 100	0.20		4.50	
	9764.03			28	.94	10 → 100	0.20		4.68	
	9766.03			50	1.77	10 → 100	0.22		8.04	
	9768.03			16	.48	10 → 100	0.22		2.20	
	9770.03			54	1.92	10 → 100	0.22	mg/Kg	8.72	

To Page

Witnessed & Understood by: [illegible] Date: 11/25/86 Inventor: [illegible] Date: 11/25/86

Test Performed: As
Date Received: 1/13/87
Work Performed By: J Olka

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	20.0ppb Spike	% Rec	D	F	Samp Wgt	Units	Final Conc
									41.2	102 ~~41.2~~	50			µg/l	20.9
	W5378#3				20.9				19.8	99 ~~19.8~~					<10.0
	Cal Blk				0.0				71.4	111 ~~71.4~~	50			µg/l	49.3
	50.0ppb				49.3				38.6	107 ~~38.6~~	2→10		1.03	mg/kg	4.6
4474	9802.0302				16.8	17.5	17.2	2.89	42.1	114	2→10		1.02		5.2
	9803.0302				20.0	18.9	19.4	4.00	33.0	89			1.01		4.1
	9804.0302				15.8	14.8	15.3	4.62	85.5	85			1.02		17.3
	9805.0302				69.3	67.7	68.5	1.65	36.0	104	2→10		1.02		18
	9806.0302				15.0	15.6	15.3	2.77	45.3	103	2→10		1.03		29
	9806 R1				24.7	24.9	24.8	0.57	43.5	107	2→10		1.04		25.8
	9806 R1S1				22.3	22.0	22.2	0.96	45.3	84	2→10		1.03		42
	9807.0302				29.0	28.0	28.5	2.48	65.4	82			1.01		12
	9808.0302				48.7	49.3	49.0	0.87	47.4	72			1.03	mg/kg	8.2
	9809.0302				32.1	34.2	33.1	4.48	22.6	113				µg/l	<10.0
	Cal Blk				1.3	0.3	0.8	—	71.7	100				µg/l	51.8
	50.0ppb				52.5	51.2	51.8	1.77	36.2	90			1.01	mg/kg	4.7
	9810.0302				18.5	18.0	18.2	1.94	37.9	94			1.00		5.
	9811.0302				18.9	19.4	19.1	1.85	61.4	107			1.00	mg/kg	9.
	9812.0302				40.5	39.4	40.0	1.95	20.4	102				µg/l	<10.
	*Blk963				1.2	-0.5	0.3	—	18.9	95					<10.
	Blk967				0.2				21.3	107					<10.
	Cal Blk				0.2				71.7	97				µg/l	52
	50.0ppb				52.4				50.2	101			1.04	mg/kg	6.
	*9813.0302				31.0	29.3	30.1	3.99							

To Page No.

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B H Rohrbach 1/14/87 J. Olka 1/13/87

HGA FORM #1

ELEMENT: As , DATE: 1/12/87 .

S_1 = 25.0 PPB., S_2 = 50.0 PPB.

S_3 = 100.0 PPB, BOOK NO. 366 , [illegible]

AS

	501	WS 378 #3	
	X02	Cal Blank	
	X03	50.0 ppb	
	X04	9802.0302	(2→10) 1476
JOB #:	X05	9803.	(2→10)
	X06	9804.	
	X07	9805.	
	X08	9806.	(2→10)
	X09	9806. R1	(2→10)
	X10	9806. R1S1	(2→10)
	X11	9807.	(2→10)
	X12	9808.	
	X13	9809.	
	X14	Cal Blank	
	X15	50.0 ppb	
	X16	9810.	
	X17	9811.	, S_2
	X18	9812.	
	X19	9813.	
	X20	Prep Blank 963	
	X21	Prep Blank 967	
	X22	Cal Blank	
	X23	50.0 ppb	
	X24		
	X25		
	X26		
	X27		
	X28		
	X29		
	X30		
	X31		
	X32		
	X33		
	X34		
	X35		, S_3

	0.001	
	0.000	A
	0.104	
	25.0	S
	48.2	C
	50.0	S
	96.5	C
	100.0	S
501	18.5	
502	-0.6	
503	49.2	
	17.2	
	17.6	
504	17.4	AV
	1.63	CV
	20.1	
	20.3	
505	20.2	AV
	0.70	CV
	17.9	
	17.2	
506	17.5	AV
	2.82	CV
	77.0	
	77.9	
507	77.5	AV
	0.82	CV
	16.1	
	15.7	
508	15.9	AV
	1.78	CV
	24.7	
	24.7	
509	24.7	AV
	0.00	CV
	22.4	
	22.7	
510	22.6	AV
	0.94	CV
	28.0	
	27.9	
511	28.0	AV
	0.25	CV
	56.4	
	55.6	
512	56.0	AV
	1.01	CV
	36.7	
	33.2	
513	34.9	AV
	7.08	CV
514	-1.1	
515	46.2	

As 1/12/87

	21.7	
	20.6	
516	21.2	AV
	3.68	CV
	17.5	
	19.7	
517	18.6	AV
	8.36	CV
	39.6	
	40.9	
518	40.2	AV
	2.28	CV
	30.1	
	29.5	
519	29.8	AV
	1.42	CV
	-0.3	
	-0.9	
520	-0.6	AV
	70.71	CV
	-0.2	
	0.7	
521	0.2	AV
	06	CV

522	0.3
~~523~~ POOR INJ	~~44.0~~
523	50.1

As spinned

501	45.7
502	22.8
503	77.3
504	42.3
505	44.4
506	37.7
507	98.9
508	39.0
509	49.2
510	47.7
511	46.0
512	74.6
513	54.9
514	23.5
515	79.5
516	42.5
517	43.7
518	68.3
519	22.0
520	21.5
521	22.0
522	21.8
523	83.4

501	41.2	
502	19.8	
503	71.4	
504	38.6	
505	42.1	
506	33.0	
507	85.5	
508	36.0	
509	45.3	
510	43.5	
511	45.3	
512	55.4	
513	47.4	
514	22.6	
515	71.7	
516	36.2	
517	37.9	
518	61.4	
519	50.2	
520	20.4	
521	18.9	
522	21.3	
523	71.7	
501	20.9	

502	0.0	
503	49.3	
	16.8	
	17.5	
504	17.2	AV
	2.89	CV
	20.0	
	18.9	
505	19.4	AV
	4.00	CV
	15.8	
	14.8	

506	15.3	AV
	4.02	CV
	69.3	
	67.7	
507	68.5	AV
	1.66	CV
	15.0	
	15.6	
508	15.3	AV
	2.77	CV
	24.7	
	24.9	
509	24.6	AV
	0.57	CV
	22.3	
	22.0	
510	22.2	AV
	0.96	CV
	29.0	
	28.0	
511	28.5	AV
	2.48	CV
	48.7	
	49.3	
512	49.0	AV
	0.87	CV
	32.1	
	34.2	
513	33.1	AV
	4.48	CV
	1.3	
	0.3	
514	0.8	AV
	88.39	CV
	52.5	
	51.2	
515	51.8	AV
	1.77	CV
	18.5	
	18.0	
516	18.2	AV
	1.94	CV
	18.9	
	19.4	
517	19.1	AV
	1.65	CV
	40.5	
	39.4	
518	40.0	AV
	1.95	CV
	31.0	
	29.3	
519	30.1	AV
	3.99	CV
	1.2	
	-0.5	
520	0.3	AV
	[illegible]	[illegible]
521	0.2	
522	0.2	
523	52.4	

As 1/12/87

501	35.9
502	19.5
503	57.9
504	35.6
505	35.0
506	33.9
507	85.9
508	36.5
509	37.3
510	35.9
511	39.4
512	53.2
513	50.1
514	16.3
515	53.8
516	34.8
517	34.8
518	54.7
519	21.7
520	18.7
521	18.2
522	15.5
523	53.7

As
page 1 of 3

506
505 9803
504 9802
503 50.0ppb
502 BLANK
501 WS378#3

523 50.0ppb
522 BLANK
521 BLANK
520 BLANK
519 9813
518 9812
517 9811
516 9810
515 50.0ppb
514 CAL BLANK
513 9809
512 9808
511 9807
510 9806 SPIKE
509 9806 REP
508 9806
507 9805
506 9804
505 9803
504 9802
503 50.0ppb
502 CAL BLANK
501 WS378#3

As

PERKIN-ELMER CHART NO. 050-7300

As
page 2 of 3

523 50.0ppb

522
521 } BLANKS
520

519 9813

518 9812

517 9811

516 9810

515 50.0ppb

514 BLANK

513 9809

512 9808

511 9807

510 9806 SPIKE

509 9806 REP

508 9806

507 9805

506 9804

505 9803

PERKIN-ELMER CHART NO. 056-7300

As
page 3 of 3

23 50.0 ppb
22 cal Blank
21 PrepBlank 967
20 PrepBlank 963
19 9813
18 9812
17 9811
16 9810
15 50.0 ppb
14 cal Blank
13 9809
12 9808
11 9807
10 9806 R.S.
9 9806 R.
8 9806
7 9805
6 9804
5 9803
4 9802
503 50.0 ppb
502 cal Blank
501 EPA 378#3

As (spiked)

PERKIN-ELMER CHART NO 056-7300

TITLE _____ Project No. _____ Book No. _____

From Page No. _____ Test Performed: As
Date Received: 1/15/87
Work Performed By: J OLKA [illegible]

λ 193.7
Energy: 38
Time: 5 sec

S_1 25.0ppb
S_2 50.0
S_3 100

See Std Log #038 pg. 86

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From		ppb Burn 1	ppb Burn 2	ppb Ave	CV	20.0ppb Spike	% Rec	DF	Samp Wgt	Units	Final Conc
			n	c										
	WS 378# 3			jo	~~14.5~~ 21.6	18.2	~~18.5~~	~~4.53~~	38.1	83			µg/l	21.6
	Cal Blk				~~-0.2~~ -0.1	~~1.3~~	~~0.5~~	-	20.6	103				<10.0
	25.0ppb				~~27.1~~ 24.1	~~23.5~~	~~25.3~~	~~10.1~~	45.0	101			µg/l	24.9
4474	9790.0303X				~~-0.7~~ 101.7	~~0.6~~ 112.6	~~-0.1~~ 109.1	3.81	146.0	/		1.02	mg/kg	29.4
	9791.0303X			jo	~~-0.3~~ 84.4	~~0.2~~ 78.7	~~-0.1~~ 81.5	4.94	117.1	/		1.02		23.0
	9792.0303X				41.7	46.5	46.6	0.30	46.3	/		1.03		11.4
	9792 R1				39.1	41.0	40.1	3.36	54.9	/		1.03		9.8
	9793.0303X				45.5	43.5	44.5	3.13	72.2	/		1.01		11.3
	9794.0303X				47.[illegible]	46.3	46.9	0.30	54.1	/		1.02		11.0
	9795.0303X				34.6	34.6	34.6	0.00	55.4	104		1.01		12.1
	9795 S1				65.0	65.9	65.4	0.97	95.3	/		1.00		22.9 0 77%
	9796.0303X				163.9	163.2	163.6	0.29	237.1	/		1.00		48.
	9797.0303X				165.0	168.0	166.5	1.27	317.4	/		1.03	mg/kg	50.
	Cal Blk				1.5				23.3	109			µg/l	<10.
	25.0ppb				26.9	26.7	26.8	0.53	49.4	113			µg/l	26.8
	9798.0303X				38.3	41.1	39.7	4.97	61.2	108		1.00	mg/kg	10.6
	9799.0303X				41.3	41.5	44.5	10.5	31.4	/		1.01		12.
	9800.0303X				82.1	84.1	83.1	1.70	46.2	/		1.03		22.
	9801.0303X				83.4	78.6	81.0	4.13	26.7	/		1.01	mg/kg	18.
	Blk 11				6.6	0.7	3.7	-	18.2	91			µg/l	<10.
	Cal Blk				0.3	0.5	0.6	-	23.7	119				<10.
	25.0ppb				25.3	26.0	25.6	1.93	34.0	/			µg/l	25.

To Page No. _____

Witnessed & Understood by: [illegible] 1/14/87

Inventor: [illegible]

Date: 1/15/87

Page No. 6
Performed: As (cont'd)
Received: 1/16/87
Performed By: J. Olka

Page 6

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	200 ppb Spike	% Rec	DF	Sump Wgt	Units	Dry Wt Basis Final Conc
	WS378 #3				19.1				39.4	102			µg/l	—
	Cal Blk				-1.1				19.4	97				—
	50.0ppb				49.1				71.3	114			µg/l	—
4474	9790.0303x				29.1	29.1	29.1	0.00	48.7	98	2→10	1.02	mg/kg	39.3
	9791.0303x				15.9	16.6	17.3	5.72	35.3	90	2→10	1.02		24.4
	9792.0303x				23.1	22.8	22.5	2.21	43.3	107	1→2	1.03		11.0
	9792 R1				23.1	19.5	21.5	12.0	41.4	101	1→2	1.03		10.4
	9793.0303x				20.7	13.1	17.1	29.3	41.4	/	1→2	1.01		~~8.7~~ BH
	9794.0303x				23.5	21.1	22.3	7.61	44.9	113	1→2	1.02		10.5
	9795.0303x				15.5	12.9	12.7	2.23	37.6	/	1→2	1.01		/
	9795 S1				31.5	29.6	30.6	4.40	50.9	102	1→2	1.00		21.5
	9796.0303x				51.2	53.7	52.4	3.37	76.4	/	2→10	1.01		/
	9797.0303x				47.6	42.9	45.7	7.35	70.5	/	2→10	1.03	mg/kg	/
	Cal Blk				-0.7	-0.7	-0.3	177	19.5	98			µg/l	—
	50.0ppb				49.5	47.1	48.3	3.51	72.6	122			µg/l	—
	9798.0303x				15.4	16.9	16.2	6.57	39.4	116	1→2	1.00	mg/kg	8.6
	9799.0303x				26.4	28.1	27.2	4.41	44.9	89	1→2	1.01		16
	9800.0303x				43.3	40.1	41.7	5.45	67.3	/	1→2	1.03		/
	9801.0303x				37.7	32.3	35.2	9.[illegible]	55.4	116	1→2	1.01	mg/kg	16.
	Blk II				-0.1	-0.2	-0.2	-	22.1	111			µg/l	/
	Cal Blk				-0.4	-1.5	-0.9	-	20.5	103				/
	50.0ppb				46.1	50.1	48.3	6.58	79.3	/			µg/l	/
	9793.0303x				20.2	20.0	20.1	0.70	40.7	103	1→2			10.2 ~~9.8~~
	9795.0303x				14.1	13.3	14.0	1.52	37.0	92	1→2			9.8
	9796.0303x				55.1	57.7	57.9	0.47	76.4	92	2→10			84.
	9797.0303x				47.7	47.7	48.7	2.70	69.0	96	2→10			74
	9800.0303x				4[illegible]	[illegible]	[illegible]	[illegible]	65.1	94	1→2			25
	Cal Blk				-0.1									
	50.0ppb				[illegible]									

To Page No.

Witnessed & Understood by me: Bill Rohrbach
Date: 1/19/87
Invented by:
Recorded by: [illegible]
Date: 1/16/87

n Page No.

t Performed: As (Cont'd)

e P ved: January 16, 1987

k P ormed By: J.O. [signature]

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.	20.0 ppb Spike	% Rec.	D.F.	Amt. of Sample	Units	Final Conc.
	9798.0303x				15.8	17.2	16.5	6.00	35.6	96	1→2	1.00	mg/kg	E.E.
	9801.0303x				34.9	36.3	35.6	2.78	59.8	121	1→2	1.01	mg/kg	/
	Cal Blank				-0.8				20.2	101			µg/L	<10.0
	50.0 ppb				52.4				77.8	/			µg/L	—
	9801.0303x				14.1	14.1	14.1	0.00	32.7	93	2→10	1.01	mg/kg	16.0
	Cal Blank				0.9	~~19.0~~			19.0	95			µg/L	<10.0
	50.0 ppb				53.0				81.0	/			µg/L	

To Page No.

Bill Rohrbach 1/19/87 [signature] 1/16/86

HGA FORM #1

ELEMENT: As, DATE: 1/16/87.

S_1 = 25.0 PPB., S_2 = 500 PP

S_3 = 100 PPB, BOOK NO. 281, pg

				0.114	
				[illegible]	[illegible]
				0.116	
	501	WS 373 #3		29.0	[illegible]
	X02	Cal Blk		[illegible]	[illegible]
	X03	50.0 ppb		[illegible]	[illegible]
	X04	9790.0303x (2→10)		104.1	[illegible]
				101.0	[illegible]
JOB #:	X05	9791.0303x (2→10)	501	4.5	
	X06	9792.0303x (1→2)	501	8.5	
	X07	9792 R1 (1→2)	502	48.2	
	X08	9793.0303x (1→2)			
	X09	9794.0303x (1→2)	501	14.1	
	X10	9795.0303x (1→2)	502	-1.1	
	X11	9795 S1 (1→2)	503	49.1	
	X12	9796.0303x (2→10)		29.1	
	X13	9797.0303x (2→10)		29.1	
	X14	Cal Blk	504	29.1	AV
	X15	50.0 ppb		0.00	CV
	X16	9798.0303x (1→2)		13.0	
	X17	9799.0303x (1→2) S_2		16.5	
	X18	9800.0303x (1→2)	505	17.3	AV
	X19	9801.0303x (1→2)		5.72	CV
	X20	Blk 11		22.1	
	X21	Cal Blk		22.5	
	X22	50.0 ppb	506	22.5	AV
	X23	[illegible] 1→2		2.21	CV
	X24	[illegible] 1→2		23.1	
	X25	Cal Blk		19.5	
	X26	[illegible]	507	21.3	AV
	X27			11.95	CV
	X28			7.0	
	X29			19.6	
	X30		508	13.1	AV
	X31			55.40	CV
	X32				
	X33			20.7	
	X34			13.6	
	X35	, S_3	509	17.1	AV
				29.27	CV
				23.5	
				21.1	
			510	22.3	AV
				7.61	CV
				12.5	
				12.9	

As 1/16/87

	19.4	
501	39.4	
502	19.4	
503	71.3	
504	43.7	
505	35.3	
506	43.3	
507	41.4	
508	41.4	
509	44.9	
510	37.6	
511	50.9	
512	76.4	
513	70.5	
514	19.5	
515	72.5	
516	39.4	
517	44.9	
518	67.3	
519	58.4	
520	22.1	
521	20.5	
522	79.3	
523	47.5	
	20.2	
	20.0	
508	20.1	AV
	0.70	CV
508	40.7	
	14.1	
	13.8	
510	14.0	AV
	1.52	CV
510	37.7	
510	37.0	
	53.1	
	57.7	

511	57.9	AV
	0.33	CV
512	74.7	
	67.7	
	69.7	
513	69.7	AV
	2.96	CV
513	53.0	
	45.1	
	45.4	
514	45.3	AV
	0.05	CV
515	65.1	
521	-0.1	
522	52.5	
	15.3	
	17.2	
523	16.5	AV
	0.80	CV
	34.9	
	36.3	
524	35.6	AV
	2.78	CV
525	-0.3	
526	52.4	
523	35.1	
524	50.8	
525	20.2	
526	77.9	
	14.1	
	14.1	
524	14.1	AV
	0.00	CV
525	0.0	
526	50.9	
526	32.0	
524	32.7	
525	19.0	
526	21.0	

Original Missing
Pages 98 - 101

Performed: Se

Re d: 1/12/87

Performed By: L. OLKA

See pg 24

Lab No.	ID No.	Custody Seal Intact Yes	No	Secure Storage Area Received From N	C	ppb Burn 1	ppb Burn 2	ppb Ave	CV	10.0ppb Spike	% Rec	DF	Samp Wgt	Units	Final Conc
	W3378#14					7.98				20.88	129			µg/l	7.98
	Cal Blk					-0.15				11.79	118				<5.00
	50.0ppb					48.96				64.48	155			µg/l	49.0
1176	9802.0302					7.04	7.05	7.05	0.10	16.62	96		1.03	mg/kg	1.9
	9803.0302					15.08	14.94	15.01	0.66	26.17	112		1.02		4.1
	9804.0302					2.44	2.14	2.29	9.26	12.78	105		1.01		<1.4
	9805.0302					6.99	7.23	7.11	2.39	17.82	107		1.02		1.8
	9806.0302					5.52	5.16	5.49	8.50	17.01	115		1.02		1.3
	9806R1					5.81	5.49	5.65	4.01	16.73	111		1.03		1.3 ~~B~~
	9806R1S1					15.78	15.9[illegible]	15.82	0.81	23.86	/		1.04		103%Rec
	9807.0302					4.73	5.25	4.99	7.37	14.00	90		1.03		<1.5
	9808.0302					5.43	5.65	5.54	2.51	15.86	103		1.01		1.4
	9809.0302					3.12	3.46	3.29	7.31	12.59	93		1.03	mg/kg	<1.2
	Cal Blk					0.13				10.54	105		X.J.	µg/l	<5.00
	50.0ppb					51.35				62.97	117			µg/l	51.3
	9810.0302					1.22	1.15	1.19	4.13	11.79	106		1.01	mg/kg	<1.3
	9811.0302					-0.03	0.57	0.26	—	10.83	108		1.00		<1.4
	9812.0302					0.07	0.23	0.15	—	11.18	112		1.00		<1.1
	9813.0302					0.31	0.35	0.33	—	10.34	103		1.04	mg/kg	<1.1
	Blk.963					-0.11	0.21	0.05		10.63	106			µg/l	<5.00
	Blk.967					0.13				10.88	109				<5.00
	Cal Blk.					0.01				11.21	112				<5.00
	50.0ppb					47.94				62.32	124			µg/l	47.9

To Page No.

Reviewed/Understood by: H Bolsback

1/14/87

Prepared by: L Olka

Date 1/12/87

Original Missing
Pages 103 to 108

Se 1/14/87

	-0.053	
	[illegible]	[illegible]
	2.081	
	[illegible]	[illegible]
	0.42	
	0.035	
	[illegible]	[illegible]
	0.034	
	[illegible]	[illegible]
	22.54	[illegible]
	[illegible]	[illegible]
	41.[illegible]	[illegible]
	50.[illegible]	[illegible]
601	6.93	
602	-1.94	
603	[illegible]	[illegible]
603	[illegible]	[illegible]
603	[illegible]	[illegible]
603	75.14	[illegible]
603	23.38	
	-2.54	
	-2.79	
604	-2.67	AV
	6.63	CV
	-0.38	
	-2.05	
605	-1.22	AV
	97.19	CV
	-0.60	
	-0.48	
606	-0.54	AV
	15.71	CV
	-2.44	
	-2.40	
607	-2.42	AV
	1.17	CV
	-1.36	
	-2.96	
608	-2.16	AV
	52.33	CV
	-2.83	
	-2.84	
609	-2.86	AV
	1.48	CV
	-1.67	
	-1.73	
610	-1.70	AV
	2.50	CV
	6.75	
	-2.85	
611	1.86	AV
	[illegible]	[illegible]
	1.97	
	2.31	
612	2.14	AV
	11.23	CV
	2.47	
	2.40	
613	2.44	AV
	2.03	CV
	-2.63	
	-2.74	
614	-2.69	AV
	2.90	CV
	22.21	
	23.71	
615	22.96	AV
	4.62	CV
	0.76	
	0.61	
616	0.69	AV
	15.48	CV
	-0.70	
	-0.25	
617	-0.47	AV
	66.09	CV
	3.92	
	3.56	
618	3.24	AV
	13.97	CV
	-1.66	
	-2.62	
619	-2.24	AV
	36.62	CV
	-2.38	
	-2.59	
620	-2.48	AV
	5.98	CV
	-2.91	
	-2.71	
621	-2.81	AV
	5.03	CV
	25.61	
	25.82	
622	25.71	AV
	0.59	CV

Se

page 1 of 3

611 979551

604 9990

603 25.0 ppb

602 Cal Blk

601 WS 378 #14

0 10 20 30 40 50 60 70 80 90 100

100 90 80 70 60 50 40 30 20 10 0

50.0 (S_3)

25.0 (S_2)

10.0 (S_1)

Blank

Se

PERKIN-ELMER CHART NO 056-7300

Se
page 2 of 3

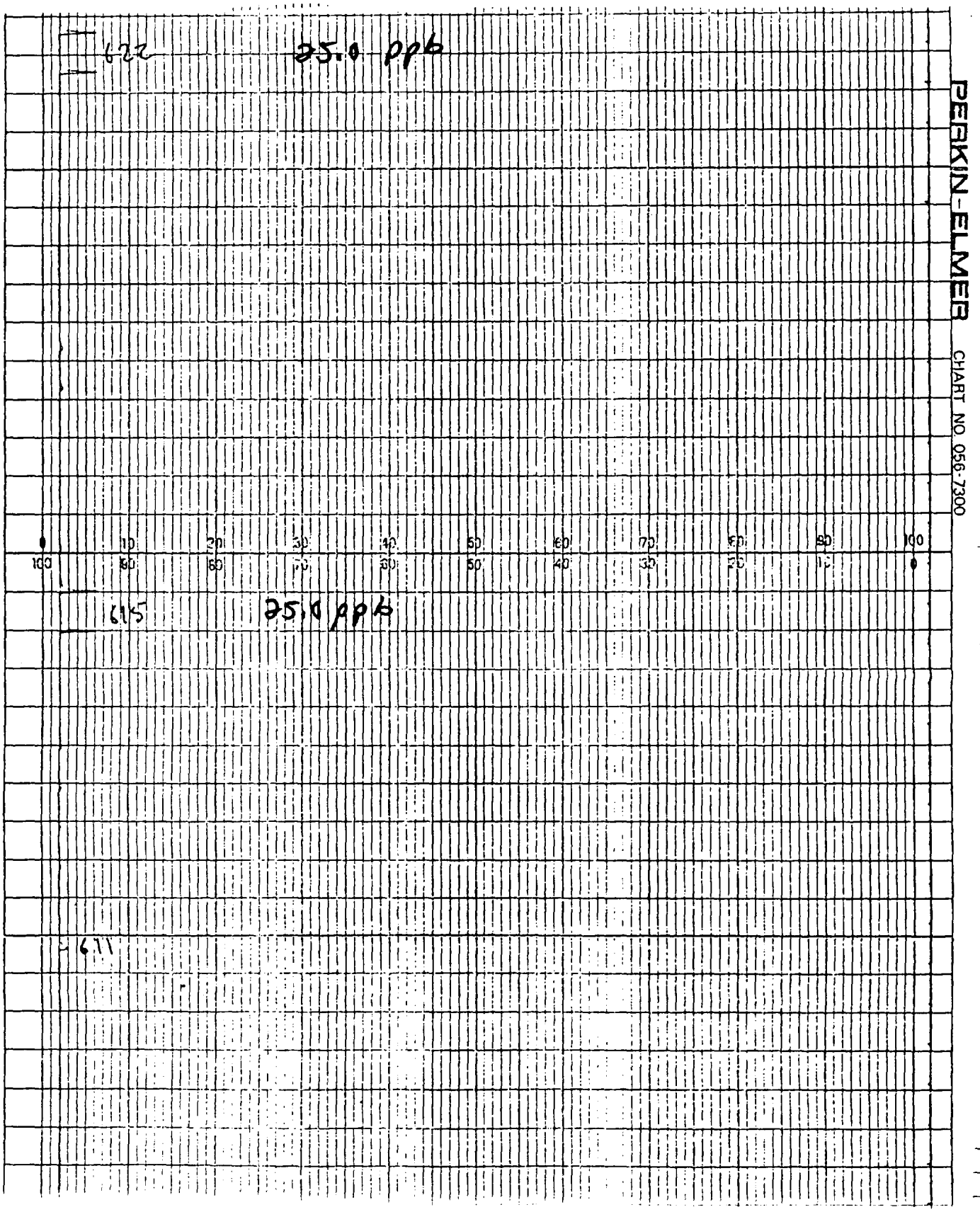


CHART NO 056-7300

622	25.0 ppb
621	Cal Blk
620	Blk 11
619	9801
618	9800
617	9799
616	9798
615	25.0 ppb
614	Cal Blk
613	9797
612	9796
611	9795 S.
610	9795
609	9794
608	9793
607	9792 R.
606	9792
605	9791
604	9790
603	25.0 ppb
602	Cal Blank
601	WS 378 #14

Se

page 3 of 3

603

602

601

50.0

25.0

PERKIN-ELMER

CHART NO 056-7300

ned: Sn
ed 1/9/87
rmed by: J. OLKA

See pg 18.

(Dry Wt Basis)

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					-0.7				75.0	94			µg/l	<40.0
100 ppb					94.1				138.5	118			µg/l	94.1
100ppb					94.1				191.9	122			µg/l	94.1
9790.0302					34.5	34.3	34.4	0.41	122.5	110		1.03	mg/kg	<
9791.0302					31.3	30.0	30.6	3.00	114.6	105		0.99		<
9792.0302					22.1	21.2	21.6	2.94	104.7	104		1.00		<
9793.0302					20.6	19.8	20.2	2.80	99.6	99		1.02		<
9793 R1					35.6	34.2	34.9	2.84	122.8	110		1.02		<
9793 R1S1					13.0	12.9	12.9	0.55	93.0	100		1.02		<
9794.0302					307.6	307.8	307.7	0.05	426.3			1.02		
9795.0302					1.9	1.4	1.7	-	82.8	101		1.00		<
9796.0302					30.6	33.1	31.8	5.55	112.0	100		1.02		<
9797.0302					29.3	30.8	30.0	3.53	109.9	100		1.02	mg/kg	<
Cal BLK					-1.2	-1.5	-1.4	-	73.5	92			µg/l	<40.0
100ppb					93.4	93.1	93.3	0.23	134.7	114			µg/l	93.3
9798.0302					20.4	20.5	20.4	0.35	95.1	93		1.00	mg/kg	<
9799.0302					15.9	18.8	17.4	11.32	89.5	90		1.01		<
9800.0302					13.7	14.0	13.8	1.53	83.6	87		0.99		<
9801.0302					23.2	24.0	23.6	2.40	95.8	90		1.00		<
9802.0302					53.2	52.4	52.8	1.07	136.2	104		1.03		14.1
9803.0302					66.3	69.2	67.8	3.03	145.3	97		1.02		18.3
9804.0302					59.8	61.0	60.4	1.41	140.2	100		1.01		16.3
9805.0302					67.7	69.5	68.6	1.86	147.4	99		1.02		17.4
9806.0302					91.4	95.4	93.4	3.03	171.7	98		1.02		22.0
9806 R1					92.9	90.2	91.6	2.09	178.4	109		1.03	mg/kg	21.3
Cal BLK					-1.6	-1.7	-1.6	-	82.8	104			µg/l	<40.0
100ppb					98.1	98.8	98.5	0.50	169.6	89			µg/l	98.5
OE R1S1					119.2	121.1	120.2	1.14	203.3	104		1.04	mg/kg	~~23.0~~ 27.9

To Page No.

ed & Understood by: Shahack 1/14/87
ed by:
Date 1/9/87

Page No. 38

formed: Sn (cont'd)

ce: 1/9/87

erformed By: J. OLKA

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	Samp Wgt	Units	Final Conc
4	9807.0302			25.8	24.2	25.0	4.53	97.9	91		1.03	mg/kg	< 10.0
	9808.0302			27.9	27.7	27.8	0.51	109.7	102		1.01		< 10.0
	9809.0302			22.6	22.9	22.7	0.93	107.5	106		1.03		< 10.0
	9810.0302			7.9	8.2	8.0	2.64	93.3	107		1.01		< 10.0
	9811.0302			15.1	15.1	15.1	0.00	106.1	114		1.00		< 10.0
	9812.0302			69.1	67.2	68.2	1.97	~~162.9~~ 143.8 JO	95		1.00		~~<~~
	9813.0302			37.8	37.3	37.6	0.94	129.2	115		1.04	mg/kg	< 10.0
	BIK 963			8.8				91.1	103			µg/l	< 10.0
	BIK 967			30.1				115.6	107				< 10.0
	Cal BIK			-1.3				74.3	93				< 40.0
	100ppb			97.4				178.2	101			µg/l	97.4
	9794.0302			59.2	55.8	57.5	4.18	142.2	106	2→10	1.02	mg/kg	
	9812.0302			69.1	67.2	68.2	1.97	143.8	95		1.00	mg/kg	<10.0

To Page No. X

ssed & Understood by ... Date 1/14/87 Invented by Date 1/9/87

J. Rohrbach Recorded by J. Olka

HGA FORM #1

ELEMENT: Sn, DATE: 1/9/89.

S_1 = 50.0 PPB., S_2 = 100 PPB.

S_3 = 200 PPB, BOOK NO. 2cc, pp 35-39

JOB #:

301	Cal Blk	
X02	100 ppb	
X03	100 ppb	
X04	9790.0302	
X05	9791	
X06	9792	
X07	9793	
X08	9793 R1	
X09	9793 R1S1	
X10	9794.0302	
X11	9795	
X12	9796	
X13	9797	
X14	Cal Blk	
X15	100 ppb	
X16	9798.0302	
X17	9799	, S_2
X18	9800	
X19	9801	
X20	9802	
X21	9803	
X22	9804	
X23	9805	
X24	9806	
X25	9806 R1	
X26	Cal Blk	
X27	100 ppb	
X28	9806 R1S1	
X29	9807.0302	
X30	9808	
X31	9809	
X32	9810	
X33	9811	
X34	9812	
X35	9813	, S_3
36	Blk 963	
37	Blk 967	
38	Cal Blk	
39	100 ppb	

Bad Reprepare & Reanalyze

(2)

301	-0.7	
302	94.1	
303	94.4	
	34.5	
	34.3	
304	34.4	AV
	0.41	CV
	31.3	
	30.0	
305	30.6	AV
	3.00	CV
	22.1	
	21.2	
306	21.6	AV
	2.94	CV
	20.6	
	19.8	
307	20.2	AV
	2.80	CV
	35.6	
	34.2	
308	34.9	AV
	2.84	CV
	13.0	
	12.9	
309	12.9	AV
	0.55	CV
	307.6	C
	307.[illegible]	C
310	307.7	AV
	0.05	CV
	1.9	
	1.4	
311	1.7	AV
	21.43	CV
	30.6	
	33.1	
312	31.8	AV
	5.55	CV
	29.3	
	30.8	
313	30.0	AV
	3.53	CV
	-1.2	
	-1.5	
314	-1.4	AV
	15.71	CV
	93.4	
	93.1	
315	93.3	AV

Sn 1/9/87

(3)

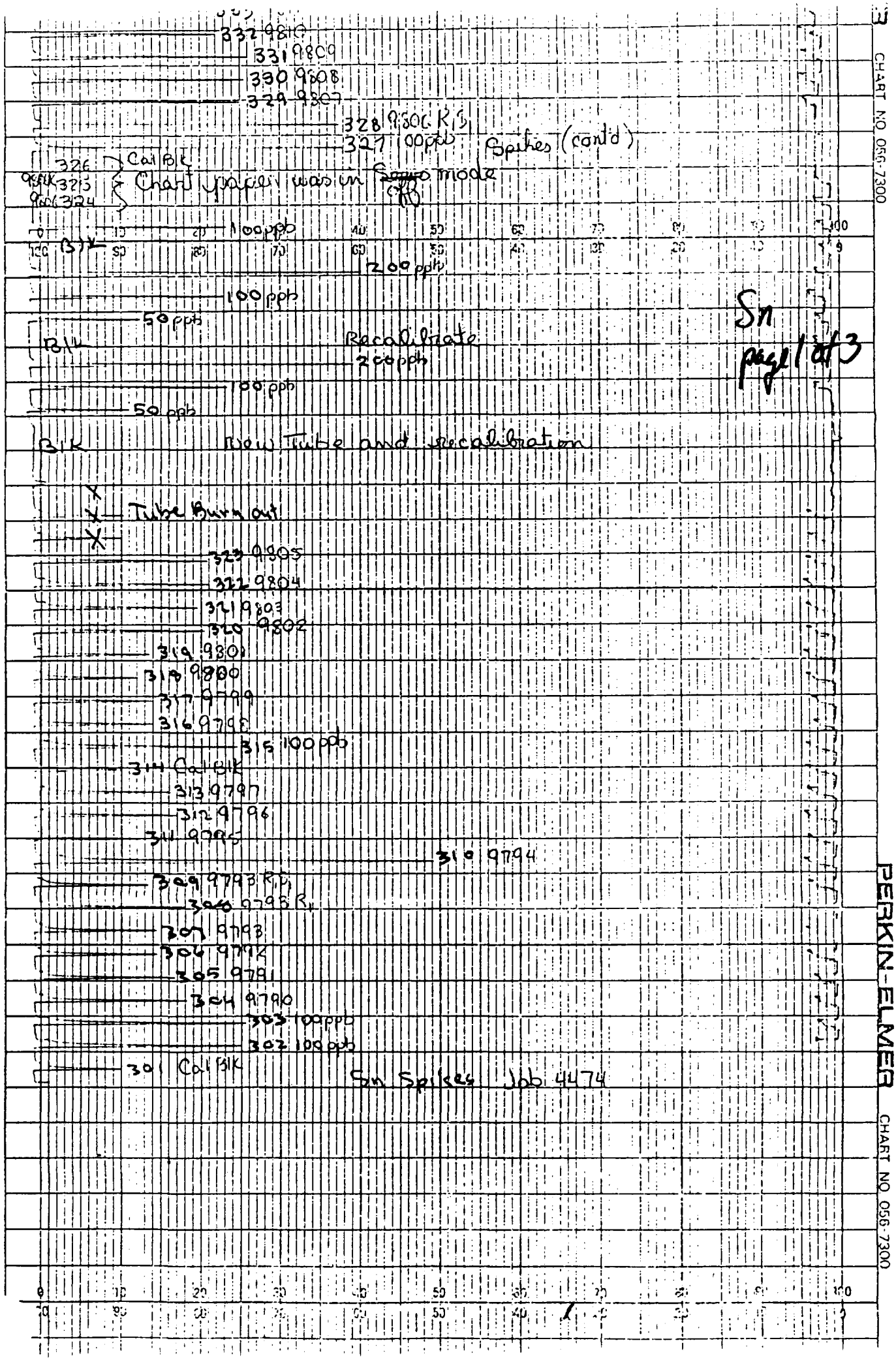
316	20.4	AV
	0.35	CV
	15.9	
	18.8	
317	17.4	AV
	11.82	CV
	13.7	
	14.0	
318	13.5	AV
	1.53	CV
	23.2	
	24.0	
319	23.6	AV
	2.40	CV
	53.2	
	52.4	
320	52.8	AV
	1.07	CV
	66.3	
	69.2	
321	67.8	AV
	3.03	CV
	59.8	
	61.0	
322	60.4	AV
	1.41	CV
	67.7	
	69.5	
323	68.6	AV
	1.86	CV
	91.4	
	95.4	
324	93.4	AV
	3.03	CV
	92.9	
	90.2	
325	91.6	AV
	2.09	CV
	-1.6	
	-1.7	
326	-1.6	AV
	4.29	CV
	98.1	
	98.8	
327	98.5	AV
	0.50	CV
	119.2	
	121.1	
328	120.2	AV
	1.12	CV
	25.8	
	24.2	
329	25.0	AV
	4.53	CV
	27.9	
	27.7	
330	27.8	AV
	0.51	CV
	22.6	
	22.9	

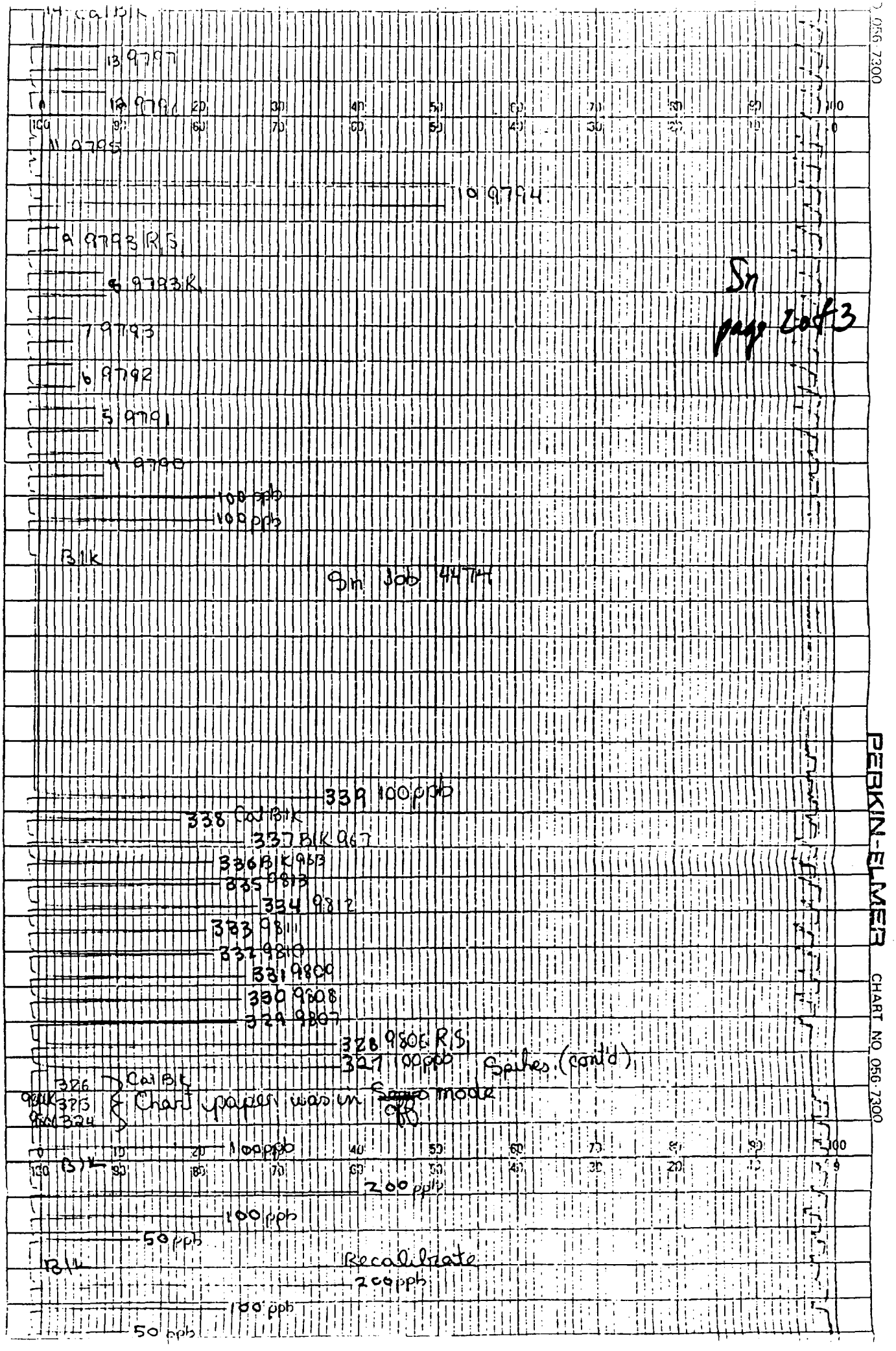
(4)

331	22.7	AV
	0.93	CV
	7.9	
	8.2	
332	8.0	AV
	2.64	CV
	15.1	
	15.1	
333	15.1	AV
	0.00	CV
	69.1	
	67.2	
334	68.2	AV
	1.97	CV
	37.8	
	37.3	
335	37.6	AV
	0.94	CV
334	143.8	
336	8.8	
337	30.1	
338	-1.3	
339	97.4	
	142.0	
	142.4	
340	142.2	AV
	0.20	CV
	59.2	
	55.8	
340	57.5	AV
	4.18	CV

(1)

301	75.0	
302	188.5	
303	191.9	
304	122.5	
305	114.6	
306	104.7	
307	99.6	
308	122.8	
309	93.0	
310	425.3	C
311	82.8	
312	112.0	
313	109.9	
314	73.5	
315	184.7	
316	95.1	
317	89.5	
318	83.6	
319	95.8	
320	136.2	
321	145.3	
322	140.2	
323	147.4	
~~324~~	~~66.0~~	Tube
~~325~~	~~66.7~~	Burn
~~326~~	~~3.1~~	Out
	-2.000	
	0.000	AZ
	0.188	
	50.0	S1
	103.1	C
	100.0	S2
	177.2	C
	12	EN
	-2.050	C
	0.000	AZ
	0.199	C
	50.0	S1
	93.1	C
	100.0	S2
	213.0	C
	200.0	S2
301	-0.9	
302	99.3	
324	171.7	
325	178.4	
326	82.8	
327	169.6	
328	203.3	
329	97.9	
330	109.7	
331	107.5	
332	93.3	
333	106.1	
334	162.9	
335	129.2	
336	91.1	
337	115.6	
338	74.3	
339	178.2	


332 9810
331 9809
330 9808
329 9807
328 9806 R,S
327 100ppb
Spikes (cont'd)
326 Cal Blk
9804 325
9806 324
Chart paper was in Servo mode
100ppb
B/L
200 ppb
100 ppb
50 ppb
B/L
Recalibrate
200ppb
100 ppb
50 ppb
B/K
New Tube and recalibration
Tube Burn out
323 9805
322 9804
321 9803
320 9802
319 9801
318 9800
317 9799
316 9798
315 100ppb
314 Cal Blk
313 9797
312 9796
311 9795
310 9794
309 9793 R,S
308 9793 R
307 9793
306 9792
305 9791
304 9790
303 100ppb
302 100ppb
301 Cal Blk
Sn Spikes Job 4474
Sn
page 1 of 3
CHART NO 056-7300
PERKIN-ELMER
CHART NO 056-7300


14 Cal Blk
13 9797
12 9796
11 9795
10 9794
9 9793 R.S.
8 9793 R.
7 9793
6 9792
5 9791
4 9790
100 ppb
100 ppb
Blk
Sn Job 4474
339 100 ppb
338 Cal Blk
337 Blk 967
336 Blk 963
335 9813
334 9812
333 9811
332 9810
331 9809
330 9808
329 9807
328 9806 R.S.
327 100 ppb
Spikes (cont'd)
326 Cal Blk
Chart paper was in ~~Sequo~~ mode off
325
324
100 ppb
Blk
200 ppb
100 ppb
50 ppb
Blk
Recalibrate
200 ppb
100 ppb
50 ppb
Sn
page 2 of 3
PERKIN-ELMER
CHART NO 056-7300

40 9794 (7→10)

40 Spike 9794 (7→10) + Spike

39 100ppb

38 Cal Blk

37 Blk967

36 Blk968

34 Spk 9812 Spiked

35 9813

34 9812

33 9811

32 9810

31 9809

30 9808

29 9807

26 9800 RiS

27 100ppb

26 Cal Blk

25 9800R

24 9800

23 9800

22 9804

21 9803

20 9802

19 9801

18 9800

17 9799

Sn page 3 of 3

PERKIN-ELMER CHART NO. 056-7300

Page No. 2

Test Performed: Sn (Cu/Th)

Date Received: 1/4/87

Work Performed By: J. Dike

Job No.	ID No.	Custody Seal Intact Yes	No	Secure Storage Area Received From N	C	ppb Burn 1	ppb Burn	ppb Ave	CV	80.0 ppb Spike (so)	% Rec	% Solid ~~DF~~	Wet Samp Wgt	Units	Bas Dry Final Conc
	100 ppb					96.6				176.7	100	(72.2) BHP		µg/l	96.6
	Cal Blk					-0.1				74.8	94	(69.3) BHP			<40
	100 ppb					96.1				182.8	110			µg/l	96.1
	9790.0303X					30.8	29.3	30.3	2.33	99.9	97	(72.2)	1.02	mg/kg	< 10
	9791.0303X					60.1	56.6	58.3	4.24	139.3	101	(69.3)	1.02		16.
	9792.0303X					22.3	22.9	22.6	1.93	95.2	91	(79.4)	1.03		< 9.
	9792. R1					26.8	24.8	25.8	5.48	114.3	111	(79.4)	1.03		< 9.8
	9793.0303X					20.5	21.3	20.9	2.71	95.3	93	(78.1)	1.01		< 10.
	9794.0303X					185.5	177.8	181.7	3.00	254.6	91	(83.8)	1.02		42.
	9795.0303X					4.4	4.7	4.6	4.66	86.5	102	(56.5)	1.01		< 14
	9795. S1					5.8	5.7	5.8	1.23	91.2	107	1	1.00		< 14.
	9796.0303X					42.1	39.6 ~~40.9~~ (so)	40.9	4.33	123.7	104	(69.3)	1.00		11.
	9797.0303X					46.7	43.0	44.8	5.83	130.3	107	(64.0)	1.03	mg/kg	13.
	Cal Blk					0.1	0.0	0.1	—	86.3	109	—		µg/l	< 40
	100 ppb					92.9	100.2	96.5	5.35	184.5	110	—		µg/l	96
	9798.0303X					19.0	18.5	18.7	1.89	105.4	108	(74.9)	1.00	mg/kg	< 10.
	9799.0303X					13.6	13.5	13.5	0.56	88.1	95	(68.3)	1.01		< 11.
	9800.0303X					9.7	9.0	9.3	5.29	82.3	91	(72.6)	1.03		< 10
	9801.0303X					19.7	19.8	19.7	0.36	~~19.6~~ 91.7	90	(86.8)	1.01	mg/kg	< 9.
	Blk II					10.4	10.4	10.4	0.00	77.95	97	—		µg/l	< 40
	Cal Blk					0.2				82.5	103	—			< 40
	100 ppb					105.0				189.4	106	—		µg/l	105

To Page No.

Analyst: B. M. Richmond 1/19/

Date: 1/14/87

HGA FORM #1

ELEMENT: Sn, DATE: 1/24/87.

S_1 = 50.0 PPB., S_2 = 100 PPB.

S_3 = 200 PPB, BOOK NO. [illegible]

JOB #:

301	100 ppb	
X02	Cal Blk	
X03	100ppb	
X04	9790.0303X	
X05	9791	
X06	9792	
X07	9792 R_1	
X08	9793	
X09	9794	
X10	9795	
X11	9795 S_1	
X12	9796	
X13	9797	
X14	Cal Blk	
X15	100ppb	
X16	9798.0303X	
X17	9799	, S_2
X18	9800	
X19	9801	
X20	Blk 11	
X21	Cal Blk	
X22	100ppb	
X23		
X24		
X25		
X26		
X27		
X28		
X29		
X30		
X31		
X32		
X33		
X34		
X35		, S_3

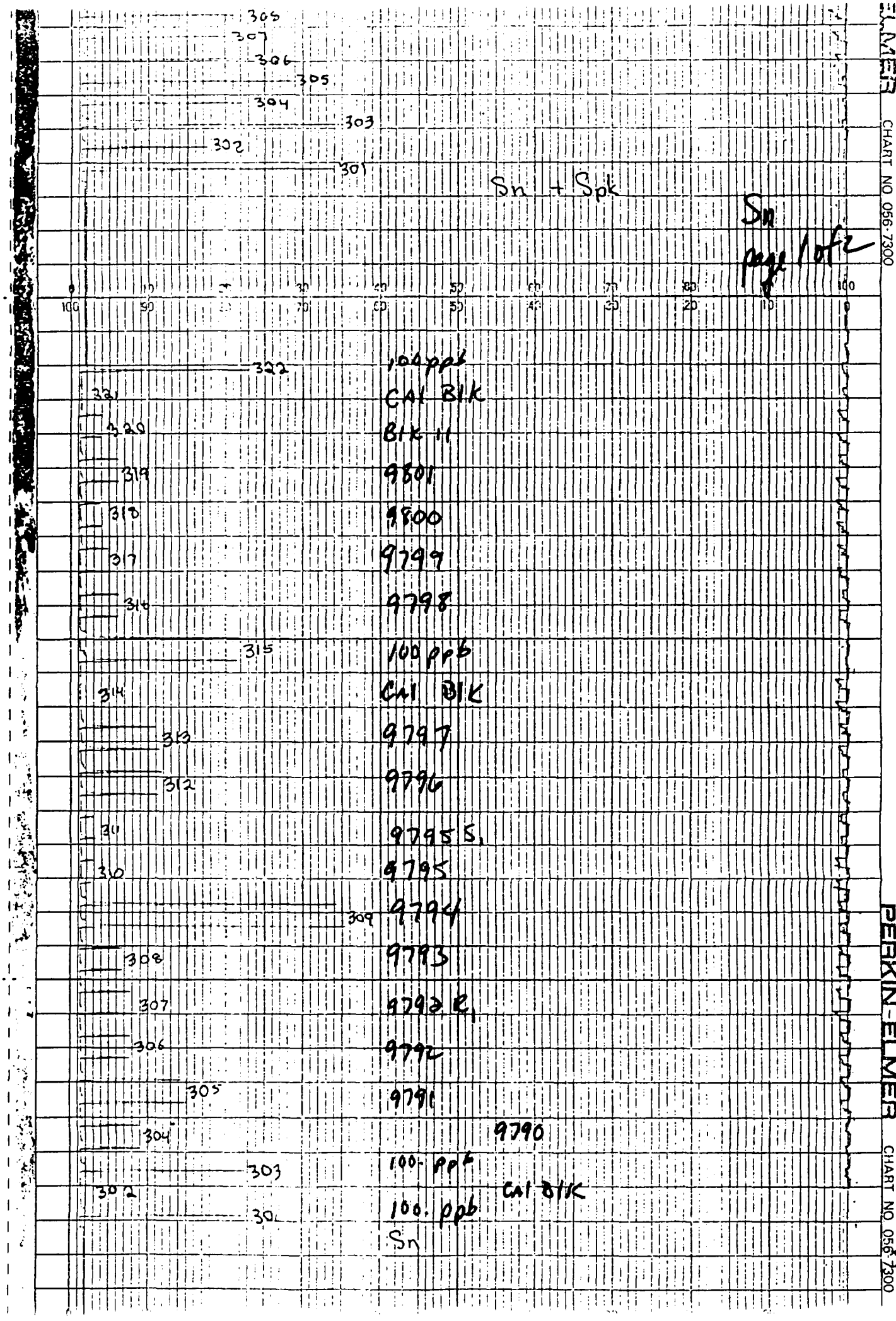
301	96.6	
302	-0.1	
303	96.1	
	30.8	
	29.8	
304	30.3	A
	2.33	C
	60.1	
	56.0	
305	58.3	A
	4.24	C
	22.3	
	22.9	
306	22.6	A
	1.88	C
	26.8	
	24.8	
307	25.8	A
	5.48	C
	20.5	
	21.3	
308	20.9	A
	2.71	C
	185.5	
	177.8	
309	181.7	A
	3.00	C
	4.4	
	4.7	
310	4.6	A
	4.66	C
	5.8	
	5.7	
311	5.8	A
	1.23	C
	39.6	
	42.1	
312	40.9	A
	4.33	C
	46.7	
	43.0	
313	44.8	A
	5.83	C
	0.1	
	0.0	
314	0.1	A
	0.0	C
	92.9	
	100.2	
315	96.5	A
	5.35	C
	19.0	
	18.5	
316	18.7	A
	1.89	C
	12.6	

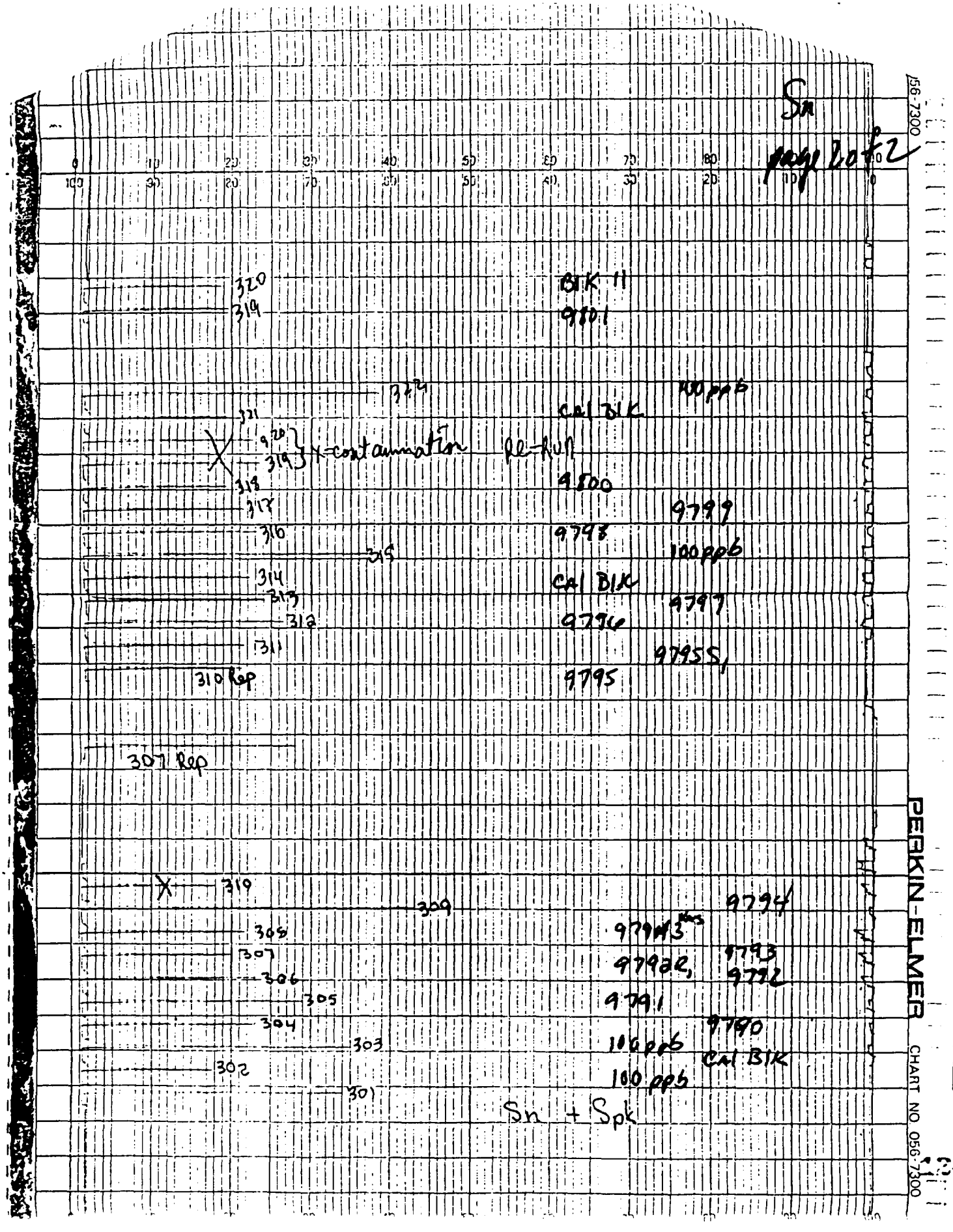
Sn
1/14/87

317	12.5	AV
	0.56	CV
	9.7	
	9.0	
318	9.3	AV
	5.29	CV
	19.7	
	19.8	
319	19.7	AV
	0.36	CV
	10.4	
	10.4	
320	10.4	AV
	0.00	CV
321	0.2	
322	105.0	

301	176.7	
302	74.8	
303	182.8	
304	99.9	
305	139.3	
306	95.2	
307	78.8	
308	95.3	
309	254.5	C
310	71.2	
311	8.3	
307	114.3	
310	86.5	
311	91.2	
312	123.7	
313	130.3	
314	86.8	
315	184.5	
316	105.4	
317	88.1	
318	82.3	
~~319~~	~~113.6~~	x-contam
~~320~~	~~95.3~~	
321	82.5	
322	189.4	

319	91.7
320	77.9


PERKIN-ELMER
CHART NO 056-7300
Sn + Spk
Sn
page 1 of 2
100 ppb
CAL BLK
BLK II
9801
9800
9799
9798
100 ppb
CAL BLK
9797
9796
9795 S,
9795
9794
9793
9792 R,
9792
9791
9790
100. ppb
CAL BLK
100. ppb
Sn


Sn
page 2 of 2
320
319
BLK 11
9801
322
100 ppb
321
Cal BLK
X
320
319
X-contamination
Re-Run
318
9800
317
9799
316
9798
315
100 ppb
314
Cal BLK
313
9797
312
9796
311
9795S1
310 Rep
9795
307 Rep
X
319
309
9794
308
9794 3 Kms
307
9793
9792R1
9792
306
305
9791
304
9790
303
100 ppb
Cal BLK
302
100 ppb
301
Sn + Spk
PERKIN-ELMER
CHART NO 056-7300

Book No.

om Page No.

st Performed: Tl

ate Received: January 9, 1987

ork Performed By: [signature]

(see page 7)

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.	20.0 ppb Spike	% Rec.	D.F.	Dry Wt. Amt. of Sample	Units	Fi Co
	WP 1183 #1				24.5				44.1	98			µg/L	
	Cal Blank				0.2				19.0	95			µg/L	
	50.0 ppb				49.9				65.2	77			µg/L	
4474	9790.0302				1.3	1.7	1.5		18.6	93			mg/Kg	
	9791.0302				2.0	2.4	2.2		18.9	95				
	9792.0302				0.9	1.1	1.0		19.4	97				
	9793.0302				2.9	2.6	2.8		22.4	112				
	9793. R1				2.5	2.4	2.4	2.89	22.6	113				
	9793. R1S1				5.4	5.1	5.3		23.4	—				
	9794.0302				0.9	0.6	0.7		21.4	107				
	9795.0302				0.9	0.5	0.7		19.6	98				
	9796.0302				1.1	1.5	1.3		15.1	76				
	9797.0302				1.1	1.3	1.2		15.4	77				
	Cal Blank				-0.2	0.1	-0.1		22.3	112			µg/L	
	50.0 ppb				52.7	51.1	51.9	2.18	72.2	102			µg/L	
	9798.0302				1.1	1.0	1.0	6.13	20.8	104			mg/Kg	
	9799.0302				0.7	0.9	0.8		12.0	60				
	9800.0302				1.4	1.5	1.4	4.88	17.4	87				
	9801.0302				0.7	1.0	0.9		17.8	89				
	9802.0302				2.3	2.6	2.4		21.8	109		0.75		<1
	9803.0302				2.3	0.2	1.2		21.7	109		0.74		<1
	9804.0302				-1.0	0.8	-0.1		19.5	98		0.74		<1
	9805.0302				1.5	1.1	1.3		20.3	102		0.79		<1
	9806.0302				0.1	-0.2	-0.1		20.9	105		0.85		<1
	9806. R1				-0.8	-2.9	-1.9		20.9	105		0.86		<1
	Cal Blank				-3.8	-1.4	-2.6		21.0	105		—	µg/L	
	50.0 ppb				51.8	50.3	51.1	2.08	68.8 ~~73.1~~	89		—	µg/L	

Redigest

To Page No.

Witnessed & Understood by me: [signature]

Date: 1/14/87

Invented by

Date

Record

Page No. 40

Performed: Tl (cont'd)

Received: January 9, 1986

Performed By: [illegible]

Lab No.	ID No.	Custody Seal Intact Yes	No	Secure Storage Area Received From No	C	ppb Burn 1	ppb Burn 2	ppb ~~Burn~~ Avg	C.V. % Rec.	20.0 ppb Spike	% Rec	D.F.	Amt. of Sample	Units	Final Conc.
474	9806. R.S.					53.9	55.2	54.5	1.69	73.1	93		0.86	mg/kg	12.7 (109%)
(cont'd)	9807.0302					0.6	0.4	0.5		15.0	75		0.68		<1.5
	9808.0302					1.5	1.6	1.6	4.56	19.9	100		0.80		<1.2
	9809.0302					1.3	1.1	1.2		20.4	102		0.81		<1.2
	9810.0302					0.6	0.8	0.7		20.7	104		0.78		<1.3
	9811.0302					0.0	0.4	0.2		19.9	100		0.72		<1.4
	9812.0302					0.3	0.5	0.4		19.7	99		0.88		<1.1
	9813.0302					0.1	0.5	0.3		20.5	103		0.94		<1.1
	Prep Blank 963					0.3	-0.0	0.1		20.5	103			µg/L	<10.0
	Prep Blank 967					-0.1	-0.1	-0.1	0.00	20.1	101			µg/L	<10.0
	Cal Blank					-0.2	-0.1	-0.2		21.7	109			µg/L	<10.0
	50.0 ppb					51.4	50.8	51.1	0.83	65.8				µg/L	51.1

To Page No.

Prepared & Verified by: R. H. Pohrbach 1/14/

Inventory

Date 1/9/86

HGA FORM #1

ELEMENT: Tl, DATE: 1/9/87.

S_1 = 25.0 PPB., S_2 = 50.0 PPB.

S_3 = 100 PPB, BOOK NO. 266, pg 40-41

	401	WP 1133 #1			0.023	
	X02	Cal Blk			0.035	
	X03	50.0ppb			0.107	
	X04	9790.0302			25.0	
					47.0	
					50.0	
					104.0	
					100.0	
JOB #:	X05	9791		401	24.5	
	X06	9792		402	0.2	
	X07	9793		403	49.9	
	X08	9793 R1			1.3	
	X09	9793 RS1			1.7	
	X10	9794		404	1.5	AV
	X11	9795			18.66	CV
	X12	9796			2.0	
	X13	9797			2.4	
	X14	Cal BLK		405	2.2	AV
	X15	50.0ppb			12.86	CV
	X16	9798.0302			0.9	
	X17	9799	, S_2		1.1	
	X18	9800		406	1.0	AV
	X19	9801			14.14	CV
	X20	9802			2.9	
	X21	9803			2.6	
	X22	9804		407	2.8	AV
	X23	9805			7.71	CV
	X24	9806			2.5	
	X25	9806 R1			2.4	
	X26	Cal BLK		408	2.4	AV
	X27	50.0ppb			2.89	CV
	X28	9806 RS1			5.4	
	X29	9807			5.1	
	X30	9808		409	5.3	AV
	X31	9809			4.04	CV
	X32	9810			0.9	
	X33	9811			0.6	
	X34	9812		410	0.7	AV
	X35	9813	, S_3		28.28	CV
		BLK 963			0.9	
		BLK 967			0.5	
		Cal BLK		411	0.7	AV
		50.0ppb			40.41	CV
					1.1	
					1.5	
				412	1.3	AV
					21.76	CV
					1.1	
					1.3	
				413	1.2	AV
					11.79	CV
					-0.2	
					0.1	
				414	-0.1	AV

TT 1/9/87

415	51.9	AV
	2.18	CV
	1.1	
	1.0	
416	1.0	AV
	6.73	CV
	0.7	
	0.9	
417	0.8	AV
	17.68	CV
	1.4	
	1.5	
418	1.4	AV
	4.58	CV
	0.7	
	1.0	
419	0.9	AV
	24.96	CV
	2.3	
	2.5	
420	2.4	AV
	6.66	CV
	2.3	
	0.2	
421	1.2	AV
	[illegible]	[illegible]
	-1.0	
	0.8	
422	-0.1	AV
	[illegible]	[illegible]
	1.5	
	1.1	
423	1.3	AV
	21.76	CV
	0.1	
	-0.2	
424	-0.1	AV
	[illegible]	[illegible]
	-0.8	
	-2.9	
425	-1.9	AV
	80.27	CV
	-3.8	
	-1.4	
426	-2.6	AV
	65.27	CV
	[illegible]	
	[illegible]	
427	[illegible]	AV
	[illegible]	CV
	49.5	
	[illegible]	
427	[illegible]	AV
	[illegible]	CV
	42.[illegible]	
	5.4	
427	[illegible]	AV
	[illegible]	
	55.2	

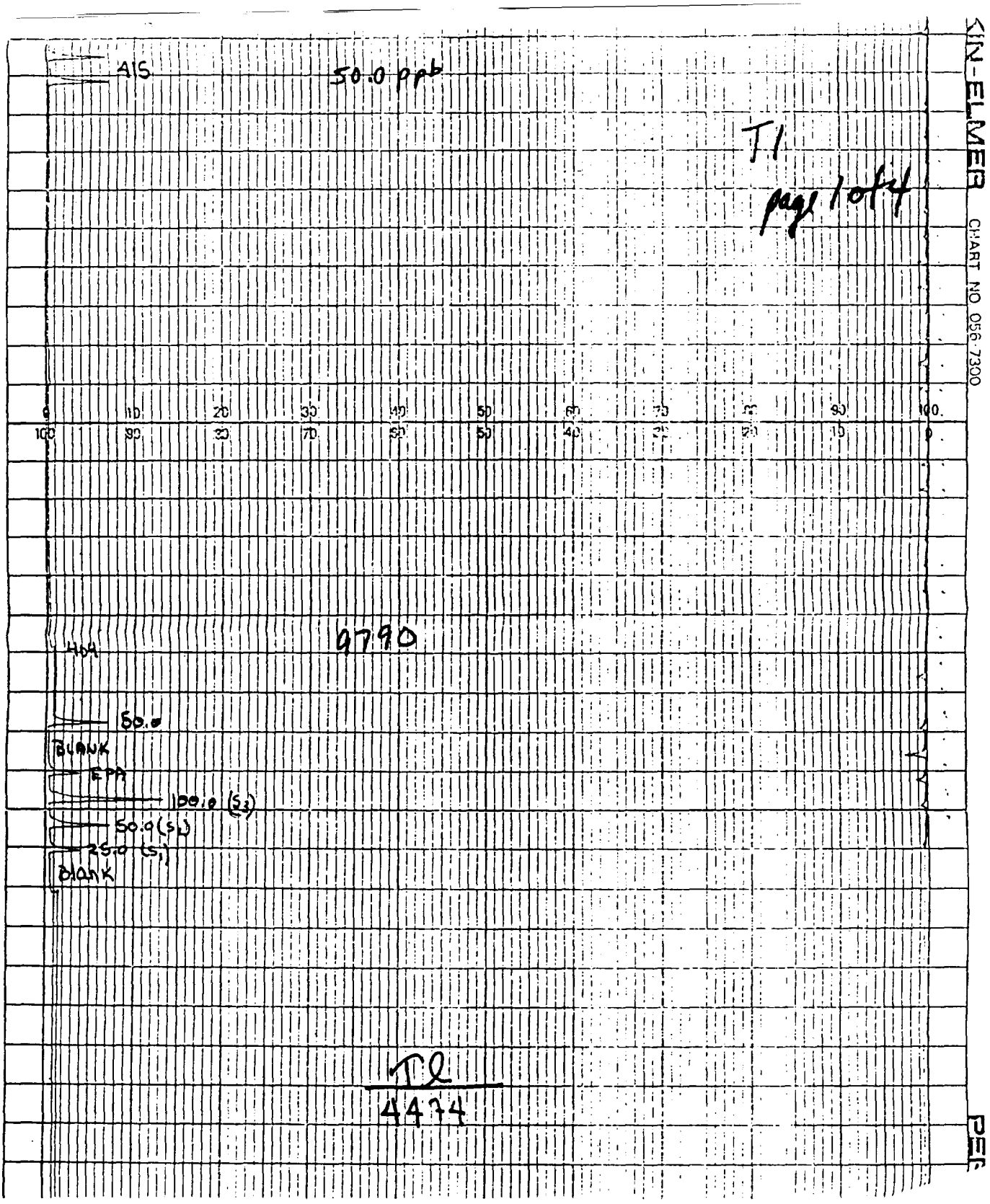
Poor INJ
See Beam
Re Inject
Re Inject

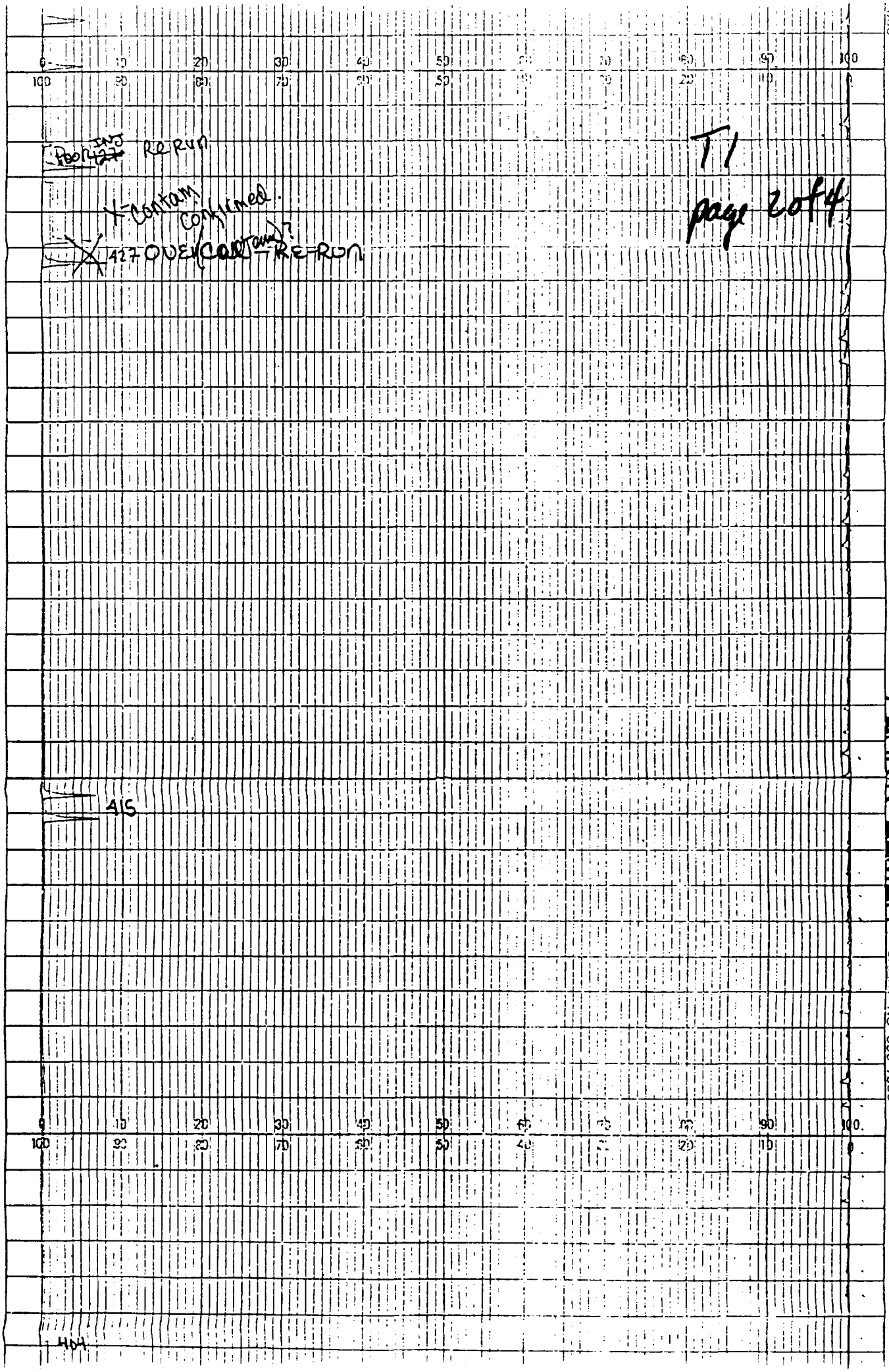
428	54.5	AV
	1.69	CV
	0.6	
	0.4	
429	0.5	AV
	28.28	CV
	1.5	
	1.8	
430	1.6	AV
	4.56	CV
	1.3	
	1.1	
431	1.2	AV
	11.79	CV
	0.6	
	0.8	
432	0.7	AV
	20.20	CV
	0.0	
	0.4	
433	0.2	AV
	[illegible]	[illegible]
	0.3	
	0.5	
434	0.4	AV
	35.36	CV
	0.1	
	0.5	
435	0.3	AV
	94.28	CV
	0.3	
	-0.0	
436	0.1	AV
	[illegible]	[illegible]
	-0.1	
	-0.1	
437	-0.1	AV
	0.00	CV
	-0.2	
	-0.1	
438	-0.2	AV
	47.14	CV
	0.2	
	0.2	
~~439~~	0.2	AV
	0.00	CV
	0.2	
	0.2	
	0.2	AV
	0.00	CV
	51.4	
	50.8	
~~440~~ 439	51.1	AV
	0.53	CV

	51.8
	50.3
427	51.1 AV
	2.08 CV

~~[illegible]~~	~~[illegible]~~
436	20.5
437	20.1
438	21.7
439	65.8

401	44.1
402	19.0
403	65.2
404	18.6
405	18.9
406	19.4
407	22.4
408	22.6
409	23.4
410	21.4
411	19.6
412	15.1
413	15.6
414	22.3
415	72.2
416	20.8
417	12.0
418	17.4
419	17.8
420	21.8
421	21.7
422	19.5
423	20.3
424	20.9
425	20.9
426	21.0
427	68.8
428	73.1
429	15.0
430	19.9
431	20.4
432	20.7
433	19.9
434	19.7
435	20.5


AIS
50.0 ppb
T1
page 1 of 4
0 10 20 30 40 50 60 70 80 90 100
100 90 80 70 60 50 40 30 20 10 0
469
9790
50.0
BLANK
EPA
100.0 (S2)
50.0 (S1)
25.0 (S1)
BLANK
Tl
4474
IN-ELMER
CHART NO 056-7300
PEC



Poor INJ 427 Re Run
X-Contam confirmed
427 OVEN (Contam)? RE-RUN
T1
page 2 of 4
415
404
PERKIN-ELMER
CHART NO 056-7300

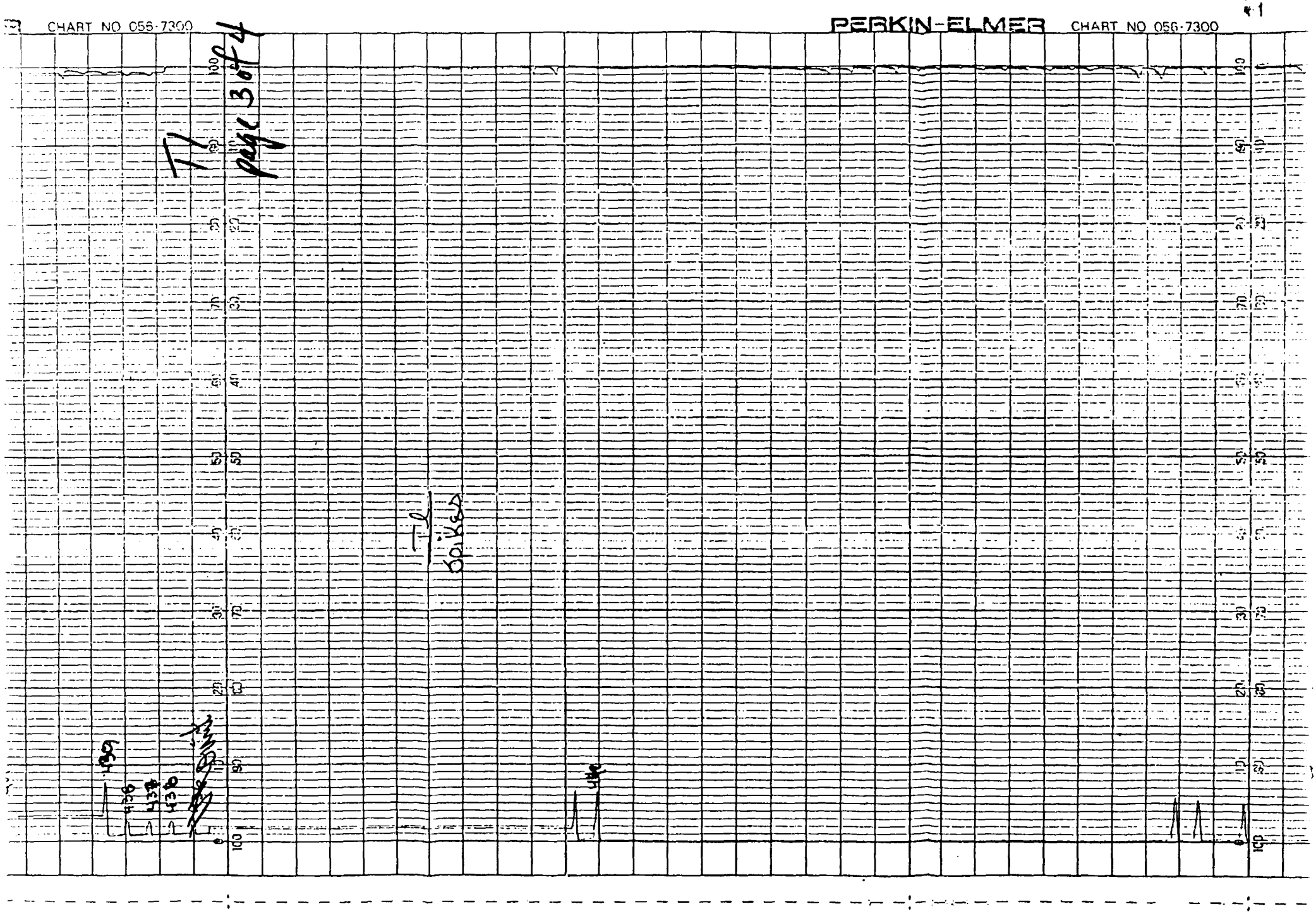


CHART NO 056-7300
PERKIN-ELMER
CHART NO 056-7300
Tl
page 3 of 4
Tl
spiked
438
437
438

T1
page 4 of 4

PERKIN-ELMER CHART NO 056-7300

55	9813
54	9812
53	9811
52	9810
51	9809
50	9808
49	9807
48	9806 R, S,
47	50.0 ppb
46	CAL BLK
45	9806 R
44	9806
43	9805
42	9804
41	9803
40	9802
39	9801
38	9800
37	9799
36	9798
35	50.0 ppb
34	CAL BLANK
33	9797
32	9796
31	9795
30	9794
29	9793 R, S,
28	9793 R,
27	9793
26	9792
25	9791
24	9790
23	50.0 ppb
22	CAL BLK
401	WP 1183 #1
439	
438	
437	
436	

PERKIN-ELMER CHART NO 056-7300

Project No._____

ITLE _____ Book No._____ 7

From [illegible]

Test Performed: TI

Date Received: 1/15-16/87

Work Performed By: [illegible]

Sx 276.3 Energy 57 Time 5 sec

S_1 25.0 ppb S_2 50.0 S_3 100

See Std Log # 088 pg 86

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	(Basis Dry Wt.) Final Conc
	WP1183 # 1				22.2	26.5	24.3	12.5	42.3	90			µg/l	24.3
	Cal Blk				3.3	3.7	3.5	1.39	21.1	106				<10.0
	50.0 ppb				51.2	52.6	51.9	1.91	61.2	/			µg/l	51.9
4474	9790.0303x				5.2	5.0	5.1	2.77	20.9	105		1.02	mg/kg	< 2.7
	9791.0303x				4.1	4.2	4.2	1.76	20.0	100		1.02		< 2.8
	9792.0303x				4.1	4.2	4.1	1.76	31.3	/		1.03		/
	9792 R_1				4.1	4.2	4.2	1.76	18.3	92		1.03		< 2.4
	9793.0303x				5.0	5.3	5.1	4.12	19.5	98		1.01		< 2.5
	9794.0303x				4.1	4.2	4.1	1.76	20.1	100		1.02		< 2.4
	9795.0303x				4.0	4.2	4.1	3.45	22.9	115		1.01		< 3.5
	9795 S_1				47.2	48.6	47.9	2.07	75.8	/		1.00		96% Rec 16.8
	9796.0303x				4.4	4.4	4.4	0.00	17.7	89		1.00		< 2.9
	9797.0303x				4.3	4.2	4.3	1.16	18.1	91		1.03	mg/kg	< 3.0
	Cal Blk				3.5	3.8	3.6	5.51	16.6	83			µg/l	< 10.0
	50.0 ppb				49.8	49.9	49.8	0.14	53.8	/			µg/l	49.8
	9798.0303x				4.2	4.1	4.2	1.76	15.1	76		1.00	mg/kg	< 2.7
	9799.0303x				4.2	4.2	4.2	0.00	18.3	92		1.01		< 2.9
	9800.0303x				4.6	4.3	4.4	4.77	12.9	65		1.03		< 2.7
	9801.0303x				4.0	3.7	3.9	5.51	19.2	96		1.01	mg/kg	< 2.3
	Blk II				3.3	3.5	3.6	5.31	17.1	86			µg/l	<10.0
	Cal Blk				3.7	3.5	3.6	3.93	21.5	108				<10.0
	50.0 ppb				49.3	54.3	52.3	6.76	73.8	108			µg/l	52.3
	9792.0303x				0.7	1.6	1.2	—	15.9	80			mg/kg	< 2.4

To Page No._____

Witnessed & Understood: [signature] 1/19/87

Invented by: _____

Recorded: [signature]

Date: 1/16/87

HGA FORM #1

ELEMENT: Ti, DATE: [illegible].

S_1 = [illegible] PPB., S_2 = [illegible] PPB.

S_3 = [illegible] PPB, BOOK NO. [illegible].

ATTACH TAPE HERE

JOB #:

01	[illegible]
X02	[illegible]
X03	[illegible]
X04	[illegible]
X05	[illegible]
X06	[illegible]
X07	[illegible]
X08	[illegible]
X09	[illegible]
X10	[illegible]
X11	[illegible]
X12	[illegible]
X13	[illegible]
X14	[illegible]
X15	[illegible]
X16	[illegible]
X17	[illegible], S_2
X18	[illegible]
X19	[illegible]
X20	[illegible]
X21	[illegible]
X22	[illegible]
X23	
X24	
X25	
X26	
X27	
X28	
X29	
X30	
X31	
X32	
X33	
X34	
X35	[illegible], S_3

401	42.3
402	21.1
403	61.2
404	20.5
405	20.0
406	31.3
407	18.3
408	19.5
409	20.1
410	22.9
411	75.8
412	17.7
413	15.1
414	16.5
415	53.8
416	15.1
417	18.3
418	12.9
419	19.2
420	17.1
421	21.5
422	73.8
	0.7
	1.6
406	1.2
	55.34
406	15.9

T1 - 1/15-16/87

T1

	0.086	
	0.085	
	0.087	AV
	3.25	CV
	25.0	S1
	40.7	C
	40.5	C
	40.6	AV
	0.35	CV
	50.0	S2
	150.4	C
	151.0	C
	141.9	AV
	3.75	CV
	100.0	S3
	22.2	
	26.5	
401	24.3	AV
	12.69	CV
	3.8	
	3.7	
402	3.8	AV
	1.89	CV
	51.2	
	52.6	
403	51.9	AV
	1.91	CV
	5.2	
	5.0	
404	5.1	AV
	2.77	CV
	4.1	
	4.2	
405	4.2	AV
	1.70	CV
	4.1	
	4.2	
406	4.1	AV
	1.70	CV
	4.1	
	4.2	
407	4.2	AV
	1.70	CV
	5.6	
	5.3	
408	5.1	AV
	4.12	CV
	4.1	
	4.2	
409	4.1	AV
	1.70	CV
	3.8	
	4.2	

410	4.1	AV
	3.45	CV
	47.2	
	45.6	
411	47.0	AV
	2.07	CV
	4.4	
	4.4	
412	4.4	AV
	0.00	CV
	4.3	
	4.2	
413	4.3	AV
	1.05	CV
	3.5	
	3.2	
414	3.5	AV
	5.51	CV
	49.8	
	49.9	
415	49.8	AV
	0.14	CV
	4.2	
	4.1	
416	4.2	AV
	1.70	CV
	4.2	
	4.2	
417	4.2	AV
	0.00	CV
	4.6	
	4.3	
418	4.4	AV
	4.77	CV
	4.0	
	3.7	
419	3.9	AV
	5.51	CV
	3.8	
	3.5	
420	3.6	AV
	5.51	CV
	3.7	
	3.5	
421	3.6	AV
	3.93	CV
	46.4	
	42.2 outlier	
422	44.3	AV
	6.70	CV
	54.3	
	54.8	
423	54.3	AV
	6.70	CV

422 50.0 ppb

out of matrix

421 CAL BLK

420 BLK 11

419 9801

418 9800

417 9799

416 9798

415 50.0 ppb

414 CAL BLK

413 9797

412 9796

411 9795S1

410 9795

409 9794

408 9793

407 9792K

406 9792

405 9791

404 9790

50.0ppb

BLK

WP1183 #1

100ppb

50.0ppb

25.0ppb

BLK

T1

page 1 of 2

PERKIN-ELMER CHART NO. 056-7300

PERKIN-ELMER

4474

T1
page 2 of 2

406		
405		
422		50.0ppb
421	CAl Blk	
420		Blk II
419	9801	
418		9800
417	9799	
416		9798
415	50.0ppb	
414		CAl Blk
413	9791	
412	9796	
411	9795S	
410		9795
409	9794	
408		9793
407	9792R	
406	9792	
405	9791	
404	9790	
403	50.0ppb	
402	CAl Blank	
401	WP 1183 #1	T1 + Spike

PERKIN-ELMER CHART NO. 056-7300

Project No.

E Book No.

m Page No.

Test Performed: DIGESTION
Date Received: 12/9/86
Work Performed By: WILLIAM MAY

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From	AMOUNT OF SAMPLE	DIGESTION	FINAL VOLUME
4474	9790.03	~~YES~~ NO w.m.	A-~~14~~ 12 w.m.	1.00 g	01, ~~02~~ w.m.	200 ml.
	9791.03	~~YES~~ NO w.m.	A-12	1.01 g	01	200 ml.
	9792.03			1.03 g.		
	9793.03			1.03 g		
	9794.03			1.02 g.		
	9795.03			1.00 g.		
	9796.03			1.03 g.		
	9797.03			1.03 g.		
	9798.03			1.00 g.		
	9799.03			1.02 g.		
	9800.03			.99 g.		
	9801.03			.98 g.		
	9793.03 R1	~~YES~~ NO w.m.	A-12	.99 g	01	200
	9793.03 R1 S1	~~YES~~ NO w.m.	A-12	1.01 g	01	200
	BLANK 962			—	01	200 ml.
4474	9790.03	~~YES~~ NO w.m.	A-12	1.03 g.	02	200 ml.
	9791.03	~~YES~~ NO w.m.	A-12	.99 g.	02	200 ml.
	9792.03			1.00 g.		
	9793.03			1.02 g		
	9794.03			1.02 g.		
	9795.03			1.00 g		
	9796.03			1.02 g.		
	*9797.03			1.02 g.		→ 205 mL
	9798.03			1.00 g.		
	9799.03			1.01 g.		
	9800.03			.99 g.		
	9801.03			1.00 g.		
	9793.03 R1			1.02 g		

To Page No.

Witnessed & Understood by me: H Blackwell Date 12/ Invented by Date 12/9/86

Book No. _____ TITLE _____

Page No. 167

Performed: DIGESTION/CONTINUED
Date Received: _____
Work Performed By: _____

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From	AMOUNT OF SAMPLE	DIGESTION	FINAL VOLUME
93.03 R151		~~YES~~ NO W.M.	A-12	1.02g	02	200 ml.
BLANK 963				—	02	200 ml.
	10210.01	YES	A-14	1.03g.	01	100 ml.
	10216.01	YES	A-14	1.00g.	01	100 ml.
	10210.01 R1	YES	A-14	1.02g.	01	100 ml.
	~~10210.01 R1 S1~~ W.M.	~~YES~~ W.M.	~~A-14~~		~~01~~ W.M.	~~100 ml.~~ W.M.
LANK 964				—	01	100 ml.
	10210.01	YES	A-14	1.02g.	02	100 ml.
	10216.01	YES	A-14	1.02	02	100 ml.
	10210.01 R1	YES	A-14	1.02g.	02	100 ml.
	~~10210.01 R1 S1~~ W.M.	~~YES~~	~~A-14~~		~~02~~ W.M.	~~100 ml.~~ W.M.
LANK 965				—	02	100 ml.

Other Clients

Test Performed: DIGESTION
Date Received: 12/10/86
Work Performed By: WILLIAM MAY

Job No.	ID No.	Custody Seal Intact Yes	No	Secure Storage Area Received From	AMOUNT OF SAMPLE	DIGESTION	FINAL VOLUME
4474	9802.03		NO	A-12	.99 gm.	01	200 ml.
	9803.03		NO	A-12	1.01 gm.	01	200 ml.
	9804.03				1.01 gm.		
	9805.03				1.00 gm.		
	9806.03				1.02 gm.		
	9807.03				1.03 gm.		
	9808.03				.99 gm.		
	9809.03				.99 ~~1.01 gm.~~ w.m.		
	9810.03				.99 gm		
	9811.03				1.00 gm		
	9812.03				1.03 gm.		
	9813.03				1.03 gm.		
4474	9806.03	R_1	NO	A-12	1.01 gm	01	200 ml.
	9806.03	R_1S_1	NO	A-12	1.03 gm.	01	200 ml.
4474	9802.03		NO	A-12	1.03 gm	02	200 ml.
	9803.03		NO	A-12	1.02 gm	02	200 ml.
	9804.03				1.01 gm.		
	9805.03				1.02 gm.		
	9806.03				1.02 gm.		
	9807.03				1.03 gm.		
	9808.03				1.01 gm.		
	9809.03				1.03 gm.		
	9810.03				1.01 gm		
	9811.03				1.00 gm.		
	9812.03				1.00 gm.		
	9813.03				1.04 gm.		

To Page No. 17

Project No. _____

Book No. _____ TITLE _____

ge No. 169

erf ed: DIGESTION/CONTINUED

Received: _____

Performed By: _____

b.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From	AMOUNT OF SAMPLE	DIGESTION	FINAL VOLUME	
14	9806.03 RN NO A-12			1.03 gm.	02	200 ml.	
	9806.03 R151 NO A-12			1.04 gm.	02	200 ml.	
	BLANK 966				01	200 ml.	
	BLANK 967				02	200 ml.	
	OTHER CLIENTS						
10	9601.06 NO B-8			25 ml.	01 X	25 ml.	(REDIGESTED FOR Ni)
	9603.06 NO B-8			25 ml.	01 X	25 ml.	(FOR Zn)
	9604.06 NO B-8			25 ml.	01 X	25 ml.	(FOR Ni)
20	9601.06 R1 NO B-8			25 ml.	01 X	25 ml.	(REP. FOR Ni)
	BLANK 968			~~25 ml.~~ a.a.	01	25 ml.	

To Page No. _____

ed & Understood by me. | Date 12/ / | Invented by | Date

Project No._____

E_____ Book No._____

n e No.__

Method EPA-335.2
Instrument Spec 88
Stock CN⁻ 0.0135N .963mg/ml
Prepared 11/7/96 Book, page 251.11
Stand. 11/7/96 Book, page 210, 61
Curve Date 11/7/96 Expires 12/7/96
Other:

STD① = 100ml Stock/1000
STD② = 100ml STD①/1000

t Performed: CN⁻ Curve
e Received: 11-7-96
rk Performed By: [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			10.0ml STD②/250	50	0.581
	144.45 ug			15.0ml STD②/250	50	0.829

Corr. = 0.9995 ✓

To Page No.____

Inessed & Understood by me. | Date | Witnessed by | Da

Project No.

TITLE Book No.

From Page No.

Method EPA 335.2

Initial Spike 80

Std: CN 00150N 0.963 mg/mL

Exp. 11/6/96 Book, page 29, 19

Std. 11/7/96 Book, page 210, 61

Cal. 11/7/96 Expires 11/7/96

Cal. 11/21/96 U. Magel

STD(1) = 100 mL STOCK / 1000

STD(2) = 100 mL STD(1) / 1000

$CN^-, mg/L = \frac{A \times 50}{B + C}$

				(g) dist/liter	(ml) for color	Abs	(mg) from curve	Results (mg/L)
	BLANK			500	50	0.000	-1.02	<0.02 mg/L
D1	SPIKE			5 mL STD(1)/250	50	0.270	45.52	94.5 % rec ✓
1439	967-7,05	N	A-26	~~6.4889~~ g/500	50	0.009	0.53	~~<1 mg/kg~~ ~~<1.3 DP~~ OTHER CLIENT <.02 mg
1474	979,03	N	A-12	~~6.039~~ g/500 ~~500 cm~~ 6.016 g/500	50	0.041	6.04	1.00 mg/kg
1474	979,03	N	A-12	6.039 g/500	50	0.047	7.08	1.17 ✓
1474	978.03	N	A-12	6.142 g/500 0.30	50	0.032	4.49	<1 ✓
1474	979.03	N	A-12	6.0289 g/500 149	50	0.021	2.60	<1
1474	979.03	N	A-12	6.0289 g/500	50	0.080	12.77	2.12 ✓
1474	979.03	N	A-12	6.071 g/500	50	0.010	0.70	<1
1474	979.03	N	A-12	6.220 g/500	50 25/50 10/50	0.068 * 0.002 * 0.000	10.70 -0.70 -1.02	* <2.0 ✓
1474	979.03	REP	A-12	6.315 g/500	50 25/50 10/50	0.320 * 0.040 * 0.002	54.14 5.87 -1.02	* 2.0 ✓ mg/kg

* Samples turned cloudy after addition of chlor-T.

* Increased detection limit due to matrix interference

To Page No.

Witnessed & Understood by me: Date: Invented by: Date

Recorded by:

Project No. _____
Book No. _____ TITLE _____

From Page No. _____

Test Performed: Cr
Date Initiated: 11/24/86
Work Performed: [illegible]
Stock: [illegible]
Prepared _____ Book page _____
Standard Job No. _____ Book page _____
Curve Date _____ Expires _____
Other: _____

Method: EPA 335.2
Instrument: Spec 88
Stock: Cr 0.485N 0.065 mg/ml
Prepared: 11/5/86 Work page 254,19
Standard: 11/21/86 Book page 210,64
Curve Date: 11/21/86 Expires: 12/21/86
Other: _____

STD① = 100 ml stock / 1000
STD② = 100 ml STD① / 1000

Cr, mg/L = $\frac{A \times 50}{B \times C}$

Job #	ID No.	Spike Y/N	Source Sample Area Acquired from	Sample Wt.	Final Vol.	Abs	Avg Curve	Results (mg/L)
1	BLANK			500	50	0.000	-1.02	<0.02 mg/L
2	DI SPIKE			5 ml STD② / 500	50	0.260	43.80	91.0 % rec
3	4471	9797.03	N A-12	6.310 g/500	50	0.015	1.56	<1 mg/kg
4	4474	9798.03	N A-12	6.313 g/500	50	0.009	0.53	<1 mg/kg
5	4474	9799.03	N A-12	6.094 g/500	50	0.304+	52.2	
6	4474	9800.03	N A-12	6.446 g/500	50	0.063	9.84	1.53 mg/kg
7	4474	9801.03	N A-12	6.379 g/500	50	0.716	122.4	19.2 mg/kg
8	4474	9802.03	N A-12	6.216 g/500	50	0.038	5.53	<1
9	4474	9803.03	N A-12	6.482 g/500	50	0.069	10.9	1.68
10	4474	9804.03	N A-12	6.186 g/500	50	0.044	6.56	1.06 mg/kg
4	4474	9804.03	SPIKE A-12	5 ml STD② / 500	50	0.318	53.79	98.1 % rec
				7.116 g/kg			8.06 mg/kg	
1	DI SPIKE			5 ml STD② / 500	50	0.288	48.6	100.9 % rec
2	4473	9784.02	Y A-24	500	50	0.021	2.60	<0.02 mg/L
3	4473	9785.02	Y A-24	500	50	0.020	2.42	<0.02
4	4473	9786.02	Y A-24	500	50	0.021	2.60	<0.02
5	4473	9787.02	Y A-24	500	50	0.011	0.87	<0.02
6	4473	9788.02	Y A-24	500	50	0.022	2.77	<0.02
7	4473	9789.02	Y A-24	500	50	0.030	4.15	<0.02 mg/L
8	4474	9805.03	N A-12	6.015 g/500	50	0.050	4.15	<1 mg/kg
9	4474	9806.03	N A-12	6.259 g/500	50	0.407	69.14	11.0
10	4474	9807.03	N A-12	6.255 g/500	50	0.049	7.42	1.19
11	4474	9807.03	REP A-12	6.191 g/500	50	0.042	6.216	1.00 mg/kg
		9799.03	N A-12	Above	25/50 10/50	0.038 0.001	5.53 -0.85	<2 mg/kg

To Page No. _____

Witnessed & Understood by me, _____ Date _____ Invented by _____ Date _____
Recorded by _____

Project No.

TITLE Book No. 158

From Page No.

Test Performed: Cr

Date Received: 11/25/96

Work Performed by: A. Flagel

Method: EPA 335.2

Instrument: Spec 88

Stock: Cr 0.0050N 0.463mg/ml

Prep: 11/26/96 25 ml

Stand: 11/26/96 21 ml

Curve Date: 11/26/96 12/7/96

Other:

STD(1) = 100ml STOCK/1000

STD(2) = 100ml STD(1)/1000

$Cr, mg/ml = \frac{A \times 50}{B \times C}$

Job No.	Sample No.	Sample Source	Area Received from	(W) mls distilled	(V) mls for color	A/L	Dig from curve	Results
	BLANK			500	50	set@0.000	-1.02	<0.02 mg/L
D1	SPIKE			5ml STD(2)/500	50	0.241	43.97	91.3 % rec
4474	9808.03	N	A-12	6.097 g/500	50	~~0.038~~ 0.042	6.22	1.02 mg/kg
4474	9809.03	N	A-12	6.166 g/500	50	0.006	0.01	<1
4474	9810.03	N	A-12	6.165 g/500	50	0.003	-0.51	<1
4474	9811.03	N	A-12	6.359 g/500	50	0.001	-0.85	<1
4474	9812.03	N	A-12	6.011 g/500	50	~~0.042~~ 0.038	5.53	<1
4474	9813.03	N	A-12	6.004 g/500	50	~~0.038~~ 0.027 0.010	0.70	<1 mg/kg
4474	9813.03	SPIKE	A-12	5ml STD(2)+6.004/500	50	0.258	43.45	88.8 % rec
4479	9836.08	Y	A-9	500	50	0.004	-0.33	<0.02 mg/L
4479	9837.08	Y	A-9	500	50	0.002	-0.7	<0.02 mg/L
D1	SPIKE			5ml STD(2)/500	50	0.250	42.07	87.4 % rec
4479	9838.07	Y	A-9	500	50	0.006	0.01	<0.02 mg/L
4514	9996.01	Y	A-33	500	50	0.030	4.15	<0.02 mg/L
4514	9997.01	Y	A-33	500	50	0.013	1.22	<0.02 mg/L
4515	9999.03	Y	A-33	450ml/500	50	0.000	-1.02	<0.02 mg/L
4515	9999.03	REP	A-33	456ml/500	50	0.000	-1.02	<0.02 mg/L

QC KAS 12/15

To Page No.

Witnessed & Understood by me, Date

Invented by Date 12/15

Recorded by

Job # 4474 Dead Creek All Results Expressed in mg/kg on a Dry Weight Basis

Sample Designation	Wt Wt	% Solids	Dry Wt per 200mL	Ag	Al	Ba	Be	Cd	Cr	Co	Cu	Fe	Pb	Mn	Ni	V	Zn	Sb	Hg
9790.0301	1.00	.772	0.772	3.67	4474	6317	<1.30	17.2	41.4	<2.59	1477	26826	418	184	105	64.3	32189	<15.5	1.02
9791.0301	1.01	.693	0.700	3.36	5716	2215	<1.43	19.8	49.6	5.03	1895	29157	437	204	135	746	41460	<17.1	1.13
9792.0301	1.03	.794	0.818	3.46	16265	3189	<1.22	20.9	13.7	6.30	1015	33863	580	326	60.3	108	4665	<14.7	1.58
9793.0301	1.03	.781	0.804	<2.49	5044	1465	<1.24	27.0	21.7	5.17	648	28706	440	259	33.8	58.6	4517	<14.9	25.9
9793.0301 R	0.99	.781	0.773	<2.59	5860	1231	<1.29	35.9	24.9	5.89	~~674~~ 637	29909	484	339	37.2	59.6	4158	17.3	—
9793.0301 R	1.01	.781	0.789	3.30	5286	1287	<1.27	34.4	26.6	4.19	609	37313	505	233	34.0	61.2	4796	<15.2	—
9794.0301	1.02	.838	0.855	<2.34	14917	1061	1.45	5.19	92.5	3.87	4883	35637	873	247	86.3	75.2	3276	<14.0	295.3
9795.0301	1.00	.565	0.565	<3.54	19527	3759	<1.77	7.95	12.1	17.9	489	12549	279	754	111	11.2	3084	<21.2	0.66
9796.0301	1.03	.693	0.714	3.60	2887	1429	<1.40	11.2	28.0	3.29	852	33978	304	238	51.8	284	67759	<16.8	23.0
9797.0301	1.03	.640	0.659	<3.03	4792	1253	<1.52	8.72	28.8	<3.03	624	82914	232	408	35.1	632	20619	<18.2	17.5
9798.0301	1.00	.749	0.749	5.37	12737	1392	<1.34	8.09	20.9	3.95	1420	17485	1274	191	29.1	30.4	1894	<16.0	091; 0.2
9799.0301	1.02	.683	0.697	4.12	14301	1337	<1.44	5.24	14.3	<2.87	596	12407	417	42.8	<11.5	15.9	44433	18.9	0.90
9800.0301	0.99	.762	0.754	<2.65	5725	9199	<1.33	6.52	24.0	11.9	435	16434	318	119	20.6	112	11981	<15.9	1.98
9801.0301	0.98	.8668	0.851	<2.35	2833	533	<1.18	4.31	27.9	2.45	317	23369	205	102	14.9	38.8	21691	<14.1	2252.0
9802.0301	0.99	.726	0.719	8.89	6371	1747	<1.40	15.4	48.9	9.69	5502	28442	689	243	94.6	132	4982	<16.7	4.48
9803.0301	1.01	.727	0.734	8.03	4563	3871	<1.36	26.3	44.7	5.86	2258	53924	724	746	53.0	118	4721	<16.4	2.61
9804.0301	1.01	.731	0.738	<2.71	2627	18275	<1.36	2.00	18.8	20.0	327	9779	105	50.3	35.1	23.0	239	<16.3	0.49
9805.0301	1.00	.770	0.770	6.92	4884	4482	<1.30	9.69	25.7	6.32	1092	21970	725	193	159	120	1662	15.6	2.89
9806.0301	1.02	.831	0.848	19.1	7639	1938	<1.18	25.5	106	15.7	1661	75106	18393	457	70.0	33.4	6347	18.3	2.18
9806.0301 R	1.01	.831	0.839	14.1	7135	2030	<1.19	26.2	378	15.2	1796	93874	13970	538	226	28.8	5968	<14.3	~~2.72~~
9806.0301 RS	1.03	.831	0.856	26.5	7523	2741	10.6 (92%)	44.0	139 (60%)	112 (83%)	2058	65829	16838	671 (183%)	1701 (86%)	132 (84%)	6841	137 (102%)	3.14
9807.0301	1.03	.657	0.677	3.92	10349	5211	<1.48	8.10	19.7	4.62	1510	15253	516	77.2	30.0	17.1	34025	<17.7	1.17 ~~2.82~~
9808.0301	0.99	.797	0.789	2.83	5537	1960	<1.27	13.1	21.0	10.3	1086	26540	411	331	14.5	550	2364	<15.2	2.82 ~~3.44~~
9809.0301	0.99	.784	0.776	2.60	8959	360	<1.29	13.8	65.8	4.37	753	17669	326	159	27.3	16.5	1502	<15.5	3.44
9810.0301	0.99	.768	0.760	<2.63	7516	441	<1.32	1.54	10.6	4.13	329	13438	60.2	336	15.1	19.1	170	<15.8	<0.12
9811.0301	1.00	.723	0.723	<2.77	4813	~~2916~~ 346	<1.38	2.30	12.3	<2.77	135	52490	34.4	627	58.7	<13.8	65.3	<16.6	0.47
9812.0301	1.03	.884	0.911	<2.20	630	251	<1.10	13.3	690	19.1	614	242,920	23.3	2184	35.0	<11.0	46.3	<13.2	<0.09
9813.0301	1.03	.907	0.934	<2.14	651	24.3	<1.07	9.90	500	12.9	615	201,435	30.5	1432	37.7	<10.7	34.4	<12.8	<0.09

Dead Creek

JOB #4474	Wet Wet 200mL	% Solids	Dry Wt 200mL	As	Se	Sn	Tl
9790.0302X,	1.02	72.2	0.74	39.8	<1.4	< 10.8	< 2.7
9791.0302X,	1.02	69.3	0.71	24	<1.4	16.4	<2.8
9792.0302X,	1.03	79.4	0.82	11	<1.2	< 9.8	<2.4
9792.0302X, R,	1.03	79.4	0.82	10	<1.2	< 9.9	<2.4
9793.0302X,	1.01	78.1	0.79	10	<1.3	< 10.1	<2.5
9794.0302X,	1.02	83.8	0.85	11	<1.2	42.8	<2.4
9795.0302X,	1.01	56.5	0.57	10	<1.8	< 14.0	<3.5
9795.0302X, S,	1.00	56.5	0.57	22	3.1	< 14.0	16.8
% Rec.			(+14)	(56%)	(+3.51) → (88%)	+.8 (+0.00) N/A	(47.5) → 96%
9796.0302X,	1.00	69.3	0.69	8.4	<1.4	11.9	<2.9
9797.0302X,	1.03	64.0	0.66	7.4	<1.5	13.6	<3.0
9798.0302X,	1.00	74.9	0.75	8.6	<1.3	< 10.7	<2.7
9799.0302X,	1.01	68.3	0.69	16	<1.4	< 11.6	<2.9
9800.0302X,	1.03	72.6	0.75	25	<1.3	< 10.7	<2.7
9801.0302X,	1.01	86.8	0.88	16	<1.1	< 9.1	<2.3
9802.0302	1.03	72.6	0.75	4.6	1.9	14.1	<~~1.3~~ 2.6
9803.0302	1.02	72.6	0.74	5.2	4.1	18.3	<~~1.4~~ 2.8
9804.0302	1.01	73.1	0.74	4.1	<1.4	16.3	<~~1.4~~ 2.8
9805.0302	1.02	77.0	0.79	17.3	1.8	17.4	<~~1.3~~ 2.6
9806.0302	1.02	83.1	0.85	18	1.3	22.0	<~~1.2~~ 2.4
9806.0302R,	1.03	83.1	0.86	29	1.3	21.3	<~~1.2~~ 2.4
9806.0302S,	1.04	83.1	0.86	25.8	3.7	27.9	12.7
% Rec.				(+8.2) (84%)	(104%)	(N/A)	(109%)
9807.0302	1.03	65.7	0.68	42	<1.5	<12	<~~1.5~~ 3.0
9808.0302	1.01	79.7	0.80	12	1.4	<10	<~~1.2~~ 2.4
9809.0302	1.03	78.4	0.81	8.2	<1.2	<10	<~~1.2~~ 2.4
9810.0302	1.01	76.8	0.78	4.7	<1.3	<10	<~~1.3~~ 2.6
9811.0302	1.00	72.3	0.72	5.3	<1.4	<11	<~~1.4~~ 2.8
9812.0302	1.00	88.4	0.88	9.1	<1.1	<10	<~~1.1~~ 2.2
9813.0302	1.04	90.7	0.94	6.4	<1.1	<10	<~~1.1~~ 2.2