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LAB DATA 157623

SEDIMENT
ORGANICS

SEDIMENT ORGANICS
U 44 32
U 44 42

CASE NARRATIVE

481095

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

December 23, 1986

JOB #U-4432
U-4442

SAMPLE #DC-SD-21 through DC-SD-29
DC-SD-31 through DC-SD-36

CASE NARRATIVE

Enclosed are the organic analytical results for sediment samples received on November 6 and 7, 1986. All samples were received in good condition.

All samples except DC-SD-14 were analyzed for volatile organics under medium level methodology. The samples were not analyzed again under the low level method because of hold time constraints.

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

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

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.

The response factors for the following compounds exceeded the 25% difference limit in continuing calibration checks for certain days:

Toluene & Ethylbenze	- C5509	11/13/86
Vinyl Chloride	- C5531	11/14/86
Fluoranthene	- D1258	12/12/86

4,4'-DDT/Endrin breakdown exceeded 20% in the final evaluation standard (Run #52) of the analytical sequence for the primary pesticide analysis. Since no pesticides were detected in the samples analyzed between the final two evaluation standards (Run #43 and #52) of the sequence, data quality has not been affected.

If you have any questions, please feel free to call me.

2
3

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) Ronald E Bock
Field Team Leader: Dan Sewall

STATION NUMBER	DATE	TIME	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE TYPE AIR	SAMPLE INFORMATION EXPECTED COMPOUNDS (Concentration)*	STATION LOCATION	NUMBER OF CONTAINERS	1-8 oz. organics	1-8 oz. cyanide, metals	2-120 ml VOA				REMARKS
DC-SD-13	11-5-86	0955		X		Unknown	DC-SD-13	4	1	1	2				
DC-SD-14		1005		X			DC-SD-14	4	1	1	2				
DC-SD-15		1145		X			DC-SD-15	4	1	1	2				
DC-SD-16		1155		X			DC-SD-16	4	1	1	2				
DC-SD-17		1210		X			DC-SD-17	4	1	1	2				
DC-SD-18		1310		X			DC-SD-18	4	1	1	2				
DC-SD-19		1450		X			DC-SD-19	4	1	1	2				
DC-SD-20		1455		X			DC-SD-20	4	1	1	2				

Relinquished By (Signature)	Date/Time	Received By (Signature)	Relinquished By (Signature)	Date/Time	Received By (Signature)
Ronald E Bock	11-5-86 2000	Fed Ex			
Relinquished By (Signature)	Date/Time	Received By (Signature)	Relinquished By (Signature)	Date/Time	Received By (Signature)
Relinquished By (Signature) Fed Ex	Date/Time 11-5-86	Received For Laboratory By (Signature) [illegible]	Relinquished By (Signature)	Date/Time	Received For Laboratory By (Signature)

Ship Via: Federal Express
BL Airbill Number: 221 974 8274
Date: 11-5-86

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

234055

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

CHAIN-OF-CUSTODY RECORD

Project No.: IC3140
Project Name: DEAD CREEK
Project Manager: M. Miller
Samplers: (Signatures) Ronald E Bock
Field Team Leader: Dan Sewell

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. Organic	1-8oz. Cyanide + metals	2-125ml VOA				REMARKS
DC-SD21	11-5-86	1620		X		Unknown	DC-SD-21	4	1	1	2				Metals Preserved with HNO_3 Cyanide Preserved with NaOH
DC-SD22		1635		X			DC-SD-22	4	1	1	2				
DC-SD23		1652		X			DC-SD-23	4	1	1	2				
DC-SD24		1655		X			DC-SD-24	4	1	1	2				
DC-SD25		1725		X			DC-SD-25	4	1	1	2				
DC-SD26		1740		X			DC-SD-26	4	1	1	2				
DC-SD27		1750		X			DC-SD-27	4	1	1	2				
DC-SD28		1810		X			DC-SD-28	4	1	1	2				
DC-SD29		1855		X			DC-SD-29	4	1	1	2				

Relinquished By (Signature)	Date/Time	Received By (Signature)	Relinquished By (Signature)	Date/Time	Received By (Signature)
Ronald E Bock	11-5-86/2000	Fed Ex			
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)
Fed Ex		Vic Chatelle			

Ship Via: Federal Express
B/L/Airbill Number: 2219748274
Date: 11-5-86

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

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International Specialists in the Environment

CHAIN-OF-CUSTODY RECORD

Page ____ of ____

Project No.: IL3140
Project Name: DEAD CREEK
Project Manager: M. Miller
Samplers (Signatures): Ronald E Bode
Field Team Leader: Dan Sewell

STATION NUMBER	DATE	TIME	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE TYPE AIR	SAMPLE INFORMATION / EXPECTED COMPOUNDS (Concentration)*	STATION LOCATION	NUMBER OF CONTAINERS	1-8 oz. organics	1-8 oz. metals & cyanide	2-120 ml VOA				REMARKS
DC-SD-31	11-6-86	0955		X			DC-SD-31	4	1	1	2				
DC-SD-32		1245		X			DC-SD-32	4	1	1	2				
DC-SD-33		1230		X			DC-SD-33	4	1	1	2				
DC-SD-34		1235		X			DC-SD-34	4	1	1	2				
DC-SD-35		1320		X			DC-SD-35	4	1	1	2				
DC-SD-36		1330		X			DC-SD-36	4	1	1	2				

Relinquished By (Signature)	Date/Time	Received By (Signature)	Relinquished By (Signature)	Date/Time	Received By (Signature)
Ronald E Bode	11/6/86 1600	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)
Fed Express	11-7-86/0935	[illegible]			

Ship Via: FEDERAL EXPRESS
BL/Airbill Number: 221974 8434
Date: 11/6/86

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

234055

SURROGATE PERCENT RECOVERY SUMMARY

481095

SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case No. U 132/U-4442 Contract Laboratory Ecology & Environment Inc. Contract No. IL-3140

Low _____ Medium X

page 1 of 2

SMO TRAFFIC NO.	VOLATILE: TOLUENE-D8 (81-117)	VOLATILE: BFB (74-121)	VOLATILE: 1,2 DICHLORO-ETHANE-D4 (70-121)	SEMI-VOLATILE: NITRO-BENZENE-D5 (23-120)	SEMI-VOLATILE: 2-FLUORO-BIPHENYL (30-116)	SEMI-VOLATILE: TERPHENYL-D14 (18-137)	SEMI-VOLATILE:	SEMI-VOLATILE:	SEMI-VOLATILE: PHENOL-D5 (24-113)	SEMI-VOLATILE: 2-FLUORO-PHENOL (25-121)	SEMI-VOLATILE: 2,4,6 TRIBROMO PHENOL (19-122)	PESTICIDE: DIBUTYL-CHLORENDATE ** (20-150)
DC-SD-13	104	92	96									
DC-SD-14	131*	87	108									
DC-SD-15	102	94	94									
DC-SD-16	96	92	96									
DC-SD-17	96	92	100									
DC-SD-18	100	88	94									
DC-SD-19	100	90	100									
DC-SD-20	100	94	92									
DC-SD-21	98	94	92									
DC-SD-22	96	90	88									
DC-SD-23	98	94	94									
DC-SD-24	96	94	96									
DC-SD-25	100	100	100									
DC-SD-26	102	100	102									
DC-SD-27	100	96	96									
DC-SD-28	96	92	94									
DC-SD-29	100	98	100									
DC-SD-31	98	90	94									
DC-SD-32	96	96	98									
DC-SD-33	98	96	98									
DC-SD-34	96	92	92									
DC-SD-35	94	92	90									
DC-SD-36	100	94	94									
DC-SD-14+	130*	115	96									

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

** ADVISORY LIMITS ONLY

Volatiles: ++ out of ++ ; outside of QC limits (See p 27/185)

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

Pesticides: _____ out of _____ ; outside of QC limits

\+ original analysis - too concentrated - reanalyzed demonstrates matrix effect Toluene D8 recovery

Comments:

FORM II

493095

SUMMA.

Case No. U 132/U-4442 Contract Laboratory ECOLOGY & ENVIRONMENT INC. Contract No. IL-3140

Low _____ Medium X

SMO TRAFFIC NO.	VOLATILE: TOLUENE-D8 (81-117)	VOLATILE: BFB (74-121)	VOLATILE: 1,2 DICHLORO-ETHANE-D4 (70-121)	SEMI-VOLATILE: NITRO-BENZENE-D5 (23-120)	SEMI-VOLATILE: 2-FLUORO-BIPHENYL (30-115)	SEMI-VOLATILE: TERPHENYL-D14 (18-137)	SEMI-VOLATILE:	SEMI-VOLATILE:	SEMI-VOLATILE: PHENOL-D5 (24-113)	SEMI-VOLATILE: 2-FLUORO-PHENOL (25-121)	SEMI-VOLATILE: 2,4,6 TRIBROMO PHENOL (19-122)	PESTICIDE: DIBUTYL-CHLORENDATE ✡✡ (20-150)
DC-SD-13MS	94	90	92									
C-SD-13MSD	102	96	100									
BLKC5510	94	88	94									
BLKC5546	94	92	90									
BLKC5527	88	88	80									
BLKC5539	100	96	96									
BLKC5482	94	78	94									

✡ VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

✡✡ ADVISORY LIMITS ONLY

Volatiles: 2 out of 93 ; outside of QC limits

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

Pesticides: _____ out of _____ ; outside of QC limits

7/85

Comments: _____

FORM II

493095

SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case No. V-132/V-4442 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)
DC-SD-13				DL	50	54			DL	19 *	DL	DL
DC-SD-14				DL	66	47			DL	DL	DL	DL
DC-SD-15				101	110	86			75	69	22	102
DC-SD-16				72	95	88			35	62	30	DL
DC-SD-17				61	91	78			33	42	20	DL
DC-SD-18				48	66	59			32	27	24	DL
DC-SD-19				36	51	38			35	31	6 *	DL
DC-SD-20				55	70	80			42	38	21	DL
DC-SD-21				57	77	42			60	51	30	DL
DC-SD-22				44	60	39			42	45	13 *	DL
DC-SD-23				68	110	58			63	60	22	DL
DC-SD-24				63	73	80			53	68	39	DL
DC-SD-25				49	55	67			50	63	27	DL
DC-SD-26				39	45	63			37	28	24	65
DC-SD-27				35	53	35			44	37	15 *	DL
DC-SD-28				43	51	64			46	55	21	INF.
DC-SD-29				40	44	66			38	39	28	INF.
DC-SD-31				66	73	86			59	79	37	71
DC-SD-32				46	73	73			55	72	42	DL
DC-SD-33				DL	36	DL			30	35	DL	DL
DC-SD-34				62	97	63			54	69	47	DL
DC-SD-35				82	101	69			73	78	46	DL
DC-SD-36				114	135 *	81			88	107	41	DL

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

** ADVISORY LIMITS ONLY

Volatiles: ____ out of ____ ; outside of QC limits

Semi-Volatiles: 6 out of 152 ; outside of QC limits

Pesticides: 0 out of 7 ; outside of QC limits

7/85

Comments: DL = DILUTED OUT
INF. = INTERFERENCE

FORM II

493095

SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case No. V 32/U-4442 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)
DC-SD-15MS				105	101	107			90	86	50	92
DC-SD-15MSD				91	93	48			85	82	51	78
BLANK (11/11)				54	56	65			39	58	14 *	—
BLANK (11/13)				81	89	113			64	91	46	—
BLANK 11/11												90
BLANK 11/12												78

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

** ADVISORY LIMITS ONLY

Volatiles: ____ out of ____ ; outside of QC limits

Semi-Volatiles: 6 out of 152 ; outside of QC limits

Pesticides: 0 out of 7 ; outside of QC limits

7/85

Comments: ____

FORM II

493095

MS/MSD SUMMARY

481095

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. U-4432/U-4442 Contractor Ecology & Environment Inc. Contract No. IL-3140

Low Level _____ Medium Level X

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug/Kg)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY
VOA SMO SAMPLE NO. DC-SD-13	1,1-Dicholorethene	22000	0	14000	64	16000	73	13	22	59-172
	Trichloroethene	↓	↓	18000	82	20000	91	11	24	62-137
	Chlorobenzene			19000	86	21000	95	10	21	60-133
	Toluene			19000	86	21000	95	10	21	59-139
	Benzene			19000	86	20000	91	5	21	66-142
B/N SMO SAMPLE NO.	1,2,4-Trichlorobenzene								23	38-107
	Acenaphthene								19	31-137
	2,4 Dinitrotoluene								47	28-89
	Pyrene								36	35-142
	N-Nitrosodi-n-Propylamine								38	41-126
_____	1,4-Dichlorobenzene								27	28-104
ACID SMO SAMPLE NO.	Pentachlorophenol								47	17-109
	Phenol								35	26-90
	2-Chlorophenol								50	25-102
	4-Chloro-3-Methylphenol								33	26-103
_____	4-Nitrophenol								50	11-114
PEST SMO SAMPLE NO.	Lindane								50	46-127
	Heptachlor								31	35-130
	Aldrin								43	34-132
	Dieldrin								38	31-134
	Endrin								45	42-139
_____	4,4'-DDT								50	23-134

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

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

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

Comments: _____

FORM III

7/85

495095

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. V-4432/V-4442 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.	1,1-Dicholorethene								22	59-172
	Trichloroethene								24	62-137
	Chlorobenzene								21	60-133
	Toluene								21	59-139
	Benzene								21	66-142
B/N SMO SAMPLE NO. DC-SD-15	1,2,4-Trichlorobenzene	5000	0	5200	104	4500	90	14	23	38-107
	Acenaphthene	5000	0	4700	94	4300	86	8.9	19	31-137
	2,4 Dinitrotoluene	5000	0	4700	94*	4400	88	6.6	47	28-89
	Pyrene	5000	0	5800	116	5100	102	13	36	35-142
	N-Nitrosodi-n-Propylamine	5000	0	4700	94	4400	86	6.6	38	41-126
	1,4-Dichlorobenzene	5000	0	4400	86	3700	74	17	27	28-104
ACID SMO SAMPLE NO. DC-SD-15	Pentachlorophenol	10000	0	8600	86	8100	81	6.0	47	17-109
	Phenol	10000	0	8600	86	8100	81	6.0	35	26-90
	2-Chlorophenol	10000	0	8400	84	8000	80	4.9	50	25-102
	4-Chloro-3-Methylphenol	10000	0	7600	76	7200	72	5.4	33	26-103
	4-Nitrophenol	10000	0	5700	57	4200	42	30	50	11-114
PEST SMO SAMPLE NO. DC-SD-15	Lindane	40.5	0	38.8	96	37.9	94	2.3	50	46-127
	Heptachlor	40.5	0	29.4	73	25.9	64	13	31	35-130
	Aldrin	40.5	0	29.9	74	25.3	62	17	43	34-132
	Dieldrin	101	0	91.5	91	130	129	35	38	31-134
	Endrin	101	0	75.1	74	69.3	69	8.0	45	42-139
	4,4'-DDT	101	0	75.7	75	72.4	72	4.5	50	23-134

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

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

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

Comments: PESTICIDE RECOVERIES CALCULATED BY PEAK HEIGHT.

FORM III

7/85

495095

STANDARDS DATA

481095

INITIAL CALIBRATION DATA

481095

Initial Calibration Data
HSL Compounds

Case No: U-4432/U-4442 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%

Compound		RF 100.00	RF 250.00	RF 500.00	RF 750.00	RF 1000.00	$\overline{RF}$	% RSD	CCC	SPCC	
Laboratory ID:		>C3505	>C3500	>C3501	>C3502	>C3503					
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=250.0,250.0,250.0,250
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=250.0,250.0,250.0,250
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-4432/U-4442 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 RF 100.00	>C3500 RF 250.00	>C3501 RF 500.00	>C3502 RF 750.00	>C3503 RF 1000.00	$\overline{RF}$	% RSD	CCC	SPCC	
Compound										
4-BROMOFLUOROBENZENE(SURR)	95 .70434	.69639	.76293	.69405	.69743	.71103	4.116			(Conc=250.0,250.0,250.0,250.
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 (**)

VC10

Initial Calibration Data
HSL Compounds

Case No: U-4432/U-4442 Instrument ID: HP-5995C

Contractor: E & E, INC. Calibration Date: 08/27/86

Contract No: IL-3140

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

Compound		>C4686 RF 20.00	>C4687 RF 50.00	>C4688 RF 100.00	>C4689 RF 150.00	>C4690 RF 200.00	$\overline{RF}$	% RSD	CCC	SPCC	
CHLOROMETHANE	50	1.51261	1.36840	1.38055	1.59462	1.27699	1.42823	8.775		**	
BROMOMETHANE	94	1.10195	.64400	.65596	.67527	.80877	.79319	25.172			
VINYL CHLORIDE	62	.59555	.59313	.51670	.86164	.50281	.61396	23.593	*		
CHLOROETHANE	64	.54660	.41755	.42217	.51621	.27090	.43470	24.782			
METHYLENE CHLORIDE	84	2.70137	2.01268	1.84053	1.83905	1.65935	2.01235	20.123			
ACETONE	43	.70413	.54300	.43570	.42038	.42083	.50481	24.290			
TRICHLOROFLUOROMETHANE	101	2.95527	2.76905	2.77094	3.00577	2.59619	2.81945	5.825			
CARBON DISULFIDE	76	4.47571	4.27118	4.37298	4.71046	4.13194	4.39246	4.975			
1,1-DICHLOROETHENE	61	3.05700	2.94252	2.96034	3.20994	2.81701	2.99736	4.882	*		
1,1-DICHLOROETHANE	63	3.31645	3.14080	3.18457	3.45580	3.04764	3.22905	4.939		**	
TRANS-1,2-DICHLOROETHENE	96	1.54663	1.48573	1.49992	1.63148	1.42083	1.51692	5.160			
CHLOROFORM	83	3.27718	3.10039	3.11003	3.32612	2.98113	3.15897	4.459	*		
1,2-DICHLOROETHANE	62	2.71789	2.71336	2.71294	2.54085	2.69616	2.67624	2.845			
1,2-DICHLOROETHANE-D4(SURR)	65	2.36053	2.49545	2.60707	2.53585	2.83050	2.56588	6.743			(Conc=50.0,50.0,50.0,50.0,50.0)
2-BUTANONE	72	.04297	.03739	.03140	.02315	.03315	.03361	21.881			
1,1,1-TRICHLOROETHANE	97	.55645	.54439	.54279	.54039	.52853	.54251	1.838			
CARBON TETRACHLORIDE	117	.53155	.52778	.51992	.51554	.49734	.51843	2.579			
VINYL ACETATE	43	.58349	.57735	.56023	.49965	.54462	.55307	6.058			
BROMODICHLOROMETHANE	83	.61487	.60306	.59880	.56560	.60562	.59759	3.150			
1,2-DICHLOROPROPANE	63	.46335	.46387	.45272	.42721	.44731	.45009	3.328	*		
TRANS-1,3-DICHLOROPROPENE	75	.77766	.77132	.75522	.70766	.75337	.75304	3.639			
TRICHLOROETHENE	130	.40368	.39124	.37168	.36700	.35459	.37764	5.201			
DIBROMOCHLOROMETHANE	129	.48448	.48927	.45953	.37680	.43233	.44848	10.267			
1,1,2-TRICHLOROETHANE	97	.32361	.33708	.31349	.24522	.30582	.30504	11.616			
BENZENE	78	1.20688	1.15514	1.11285	1.07162	1.05278	1.11985	5.593			
CIS-1,3-DICHLOROPROPENE	75	.40793	.40307	.38548	.35067	.36868	.38317	6.232			
2-CHLOROETHYLVINYLETHER	63	.05797	.03012	.02283	.05812	.01766	.03734	51.985			
BROMOFORM	173	.46077	.52902	.51955	.37555	.53655	.48429	13.987		**	
4-METHYL-2-PENTANONE	43	.35724	.41899	.40640	.38059	.46595	.40583	10.149			
2-HEXANONE	43	.31485	.34100	.31768	.28828	.35929	.31982	10.946			
TETRACHLOROETHENE	164	.49236	.47235	.45158	.46337	.41058	.45805	6.645			
1,1,2,2-TETRACHLOROETHANE	83	.57441	.66566	.66212	.46259	.68781	.61052	15.292		**	
TOLUENE-D8 (SURR)	98	1.44081	1.45525	1.48425	1.54822	1.52029	1.49136	2.852			(Conc=50.0,50.0,50.0,50.0,50.0)
TOLUENE	92	.97767	.91986	.89142	.91055	.86557	.91301	4.566	*		
CHLOROBENZENE	112	1.09059	1.03528	1.02098	1.01667	.98461	1.02263	3.767		**	
ET[illegible]BENZENE	91	1.93098	1.85270	1.81066	1.85300	1.79389	1.85025	2.889	*		

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

$\overline{RF}$ - Average Response Factor

RSD - Percent Relative Standard Deviation

Initial Calibration Data
HSL Compounds

Case No: U-4432/U-4442 Instrument ID: HP-5995C

Contractor: E & E, INC. Calibration Date: 08/27/86

Contract No: IL-3140

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

Laboratory ID:		>C4686 RF 20.00	>C4687 RF 50.00	>C4688 RF 100.00	>C4689 RF 150.00	>C4690 RF 200.00	$\overline{RF}$	% RSD	CCC	SPCC	
Compound											
4-BROMOFLUOROBENZENE(SURR)	95	.87576	.87437	.88850	.88341	.93945	.89230	3.024			(Conc=50.0,50.0,50.0,50.0,50.0)
STYRENE	104	1.05690	.98537	.96584	.98433	.97490	.99348	3.656			
TOTAL XYLENES	91	1.52761	1.39765	1.39801	1.44575	1.40835	1.43547	3.842			

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

$\overline{RF}$ - Average Response Factor

RSD - Percent Relative Standard Deviation

Initial Calibration Data
HSL Compounds

Case No: U-4432/U-4442 Instrument ID: HP-5970D

Contractor: 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 RF 20.00	>D0037 RF 50.00	>D0038 RF 80.00	>D0039 RF 120.00	>D0040 RF 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	.47594	.48930	1.901		
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 (**)

Initial Calibration Data
HSL Compounds

Case No: U-4432/U-4442 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:		>82318	>82317	>82320	>82321	>82322				
		RF	RF	RF	RF	RF				
Compound		20.00	50.00	80.00	120.00	160.00	$\overline{RF}$	% RSD	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)

$\overline{RF}$ - 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-4432/U-4442 Instrument ID: HP-5970 B

ontractor: 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%

Compound		RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RF}$	% RSD	CCC	SPCC
Laboratory ID:		>B2318	>B2317	>B2320	>B2321	>B2322				
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-4432/U-4442 Instrument ID: HP-5970 B

Contractor: E & E, INC. Calibration Date: ~~07/31/86~~ 7/30/86

Contract No: IL-3140

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

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	.15895	.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-4432/U-4442 Instrument ID: HP-59700

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	1.38815	1.47624	5.436		
1,4-DICHLOROBENZENE	146	1.61777	1.38930	1.48504	1.45121	1.40035	1.46374	6.256	*	
BENZYL ALCOHOL	79	1.01010	1.90872	1.21875	1.21807	1.21800	1.13473	10.082		
1,2-DICHLOROBENZENE	146	1.63938	1.36507	1.53750	1.47276	1.44493	1.49193	6.908		
BIS(2-CHLOROISOPROPYL)ETHER	45	2.68736	2.47650	2.77020	2.69646	2.77634	2.68137	4.535		
N-NITROSO-DI-N-PROPYLAMINE	70	1.12218	1.08234	1.21987	1.19548	1.28596	1.18117	6.816		**
HEXACHLOROETHANE	117	.74389	.66875	.73696	.70875	.68371	.70841	4.605		
NITROBENZENE-D5 (SURR)	82	.35564	.33927	.38027	.40789	.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	.37509	.38442	6.671		
NAPHTHALENE	128	1.07749	.91373	.97630	.97339	.89249	.96668	7.446		
4-CHLOROANILINE	127	.33401	.32798	.42540	.44310	.35932	.37796	14.044		
HEXACHLOROBUTADIENE	225	.29443	.24392	.26045	.25805	.23855	.25908	8.420	*	
2-METHYLNAPHTHALENE	142	.67945	.60785	.66493	.68192	.59005	.64484	6.046		
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	1.41834	1.37281	6.493		
2-NITROANILINE	65	.43757	.43867	.51133	.51859	.47610	.47545	8.092		
DIMETHYL PHTHALATE	163	1.83005	1.68051	1.71649	1.69378	1.67638	1.71954	3.704		
4-NITROANILINE	138	.23949	.23631	.27642	.27327	.26539	.25828	7.365		
DIBENZOFURAN	168	2.04488	1.83571	1.94866	1.91782	1.79656	1.90873	5.115		
ACENAPHTHYLENE	152	2.24178	1.99625	2.09922	2.09094	2.07508	2.10865	4.229		
FLUORENE	166	1.55490	1.33626	1.34395	1.28944	1.20896	1.34670	9.518		
3-NITROANILINE	138	-	.04883	.11452	.11792	.08856	.09246	34.506		
ACENAPHTHENE	153	1.52777	1.33296	1.39452	1.37214	1.26556	1.37857	7.016	*	
2,4-DINITROTOLUENE	165	.35967	.32323	.34179	.32754	.30831	.33212	5.867		
2,6-DINITROTOLUENE	165	.38599	.35678	.37953	.36738	.36597	.37112	3.126		
DIETHYLPHTHALATE	149	1.88063	1.62616	1.53368	1.45917	1.43355	1.58664	11.393		
4-CHLOROPHENYL-PHENYLETHER	204	.78393	.66962	.70197	.69165	.66856	.70414	7.032		
N-NITROSODIPHENYLAMINE	169	.51567	.44734	.53097	.55655	.53302	.51771	8.111	*	
4-BROMOPHENYL-PHENYL ETHER	248	.31339	.30497	.33954	.35732	.35891	.33482	7.415		
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

Initial Calibration Data
HSL Compounds

Case No: U-4432/U-4442 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	1.06808	.96082	1.02609	1.02304	.99723	1.01505	3.896		
ANTHRACENE	178	1.03628	.92880	1.01124	1.03132	.98638	.99874	4.387		
DI-N-BUTYLPHTHALATE	149	1.16959	.91435	.95835	.92928	.88461	.97124	11.741		
FLUORANTHENE	202	.74009	.58463	.63445	.60617	.54197	.62146	11.974		*
BENZIDINE		-	.65247	-	-	-	.65247	-		
PYRENE	202	2.67187	2.75714	2.57294	2.60959	2.82056	2.68642	3.814		
TERPHENYL-D14 (SURR)	244	1.42937	1.47810	1.43384	1.50928	1.55799	1.48172	3.638		
BUTYLBENZYLPHTHALATE	149	.62104	.62940	.71297	.68630	.76414	.68277	8.728		
3,3'DICHLOROBENZIDINE	252	.08557	.07185	.16233	.19359	.14980	.13263	39.182		
BENZO(A)ANTHRACENE	228	.79361	.77498	.97287	1.00315	1.03159	.91524	13.276		
BIS(2-ETHYLHEXYL)PHTHALATE	149	.78298	.70108	.85062	.83155	.91270	.81579	9.708		
CHRYSENE	228	1.34326	1.12613	1.17809	1.12675	1.18262	1.19137	7.479		
DI-N-OCTYL PHTHALATE	149	1.37470	1.35508	1.83002	1.65900	1.98983	1.64173	16.968		*
BENZO(B)FLUORANTHENE	252	.92969	.97296	1.14091	1.25304	1.37734	1.13479	16.551		
BENZO(K)FLUORANTHENE	252	1.68215	1.48612	1.69304	1.46335	1.43849	1.55063	7.844		
BENZO(A)PYRENE	252	1.05697	.98485	1.15488	1.16496	1.18217	1.10877	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	1.18888	8.264		

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

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CONTINUING CALIBRATION DATA

481095

Continuing Calibration Check
HSL Compounds

Ca o: V-4432/V-4442 Calibration Date: 11/12/86

Contractor: E & EM INC. Time: 16:01

Contract No: 68-01-7158 Laboratory ID: >C5481

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	2.61509	13.55		**
BROMOMETHANE	94	1.43187	1.76530	23.29		
VINYL CHLORIDE	62	1.60438	1.89373	18.03	*	
CHLOROETHANE	64	.69191	.86149	24.51		
METHYLENE CHLORIDE	84	1.38013	1.60420	16.24		
ACETONE	43	1.61869	.54605	66.27		
TRICHLOROFLUOROMETHANE	101	3.13900	3.46171	10.28		
CARBON DISULFIDE	76	3.82990	5.59125	45.99		
1,1-DICHLOROETHENE	61	3.02810	3.29869	8.94	*	
1,1-DICHLOROETHANE	63	3.36439	3.60182	7.06		**
TRANS-1,2-DICHLOROETHENE	96	1.55781	1.79979	15.53		
CHLOROFORM	83	3.56796	3.74626	5.00	*	
1,2-DICHLOROETHANE	62	3.55680	3.31096	6.91		
1,2-DICHLOROETHANE-D4(SURR)	65	2.99858	2.40738	19.72		
2-BUTANONE	72	.06798	.08088	18.97		
1,1,1-TRICHLOROETHANE	97	.59787	.62126	3.91		
CARBON TETRACHLORIDE	117	.59043	.58827	.37		
VINYL ACETATE	43	1.19023	1.14425	3.86		
BROMODICHLOROMETHANE	83	.65552	.64508	1.59		
1,2-DICHLOROPROPANE	63	.46960	.47199	.51	*	
TRANS-1,3-DICHLOROPROPENE	75	.70348	.83150	18.20		
TRICHLOROETHENE	130	.40336	.43589	8.07		
DIBROMOCHLOROMETHANE	129	.55837	.50553	9.46		
1,1,2-TRICHLOROETHANE	97	.36284	.38150	5.15		
BENZENE	78	1.16600	1.28431	10.15		
CIS-1,3-DICHLOROPROPENE	75	.52628	.48015	8.77		
2-CHLOROETHYLVINYLETHER	63	.33081	.18519	44.02		
BROMOFORM	173	.62246	.47122	24.30		**
4-METHYL-2-PENTANONE	43	1.12348	.82507	26.56		
2-HEXANONE	43	.92838	.60740	34.57		
TETRACHLOROETHENE	164	.47024	.49522	5.31		
1,1,2,2-TETRACHLOROETHANE	83	.80085	.81163	1.35		**
TOLUENE-D8 (SURR)	98	1.36277	1.33573	1.98		
TOLUENE	92	.89572	1.03937	16.04	*	
CHLOROBENZENE	112	1.10402	1.24357	12.64		**
ETHYLBENZENE	91	1.85835	2.07414	11.79	*	

RF - Response Factor from daily standard file at 250.00 NGE

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

%Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

Ca .o: V-4432/V-4442 Calibration Date: 11/12/86

Contractor: E & EM INC. Time: 16:01

Contract No: 68-01-7159 Laboratory ID: /C5431

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	.86934	22.27		
STYRENE	104	.98260	1.42953	45.49		
TOTAL XYLENES	91	1.41320	1.92492	36.21		

RF - Response Factor from daily standard file at [illegible]

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

%Diff - % Difference from original average or curve

[illegible]

Continuing Calibration Check
HSL Compounds

ase : V-4432/V-4442 Calibration Date: 11/13/86

ontractor: E & E, INC. Time: 12:48

ontract No: 68-01-7158 Laboratory ID: C5479

nstrument ID: HP-5995C Initial Calibration Date: 08/27/86

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

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
CHLOROMETHANE	50	1.42823	1.19704	16.19		**
BROMOMETHANE	94	.79319	.78559	.96		
VINYL CHLORIDE	62	.61396	.50965	16.99	*	
CHLOROETHANE	64	.43470	.58327	34.18		
METHYLENE CHLORIDE	84	2.01255	3.63569	80.67		
CETONE	43	.50481	.34703	31.25		
RICHLOROFLUOROMETHANE	101	2.81945	3.32726	18.01		
ARBON DISULFIDE	76	4.39246	4.99646	13.75		
,1-DICHLOROETHENE	61	2.99736	2.96381	1.12	*	
,1-DICHLOROETHANE	63	3.22905	3.26364	1.07		**
RANS-1,2-DICHLOROETHENE	96	1.51692	1.60434	5.76		
HLOROFORM	83	3.15897	3.50696	11.02	*	
,2-DICHLOROETHANE	62	2.67624	2.90430	8.52		
,2-DICHLOROETHANE-D4(SURR)	65	2.56586	2.49446	2.78		
-BUTANONE	72	.03361	.03640	8.30		
,1,1-TRICHLOROETHANE	97	.54251	.62699	15.57		
ARBON TETRACHLORIDE	117	.51843	.63754	22.98		
INYL ACETATE	43	.55307	.26889	51.39		
ROMODICHLOROMETHANE	83	.59759	.66013	10.47		
,2-DICHLOROPROPANE	63	.45095	.42259	6.28	*	
RANS-1,3-DICHLOROPROPENE	75	.75304	.77176	2.49		
RICHLOROETHENE	130	.37764	.39374	4.26		
IBROMOCHLOROMETHANE	129	.44948	.48995	9.05		
,1,2-TRICHLOROETHANE	97	.30504	.33200	8.8-		
ENZENE	78	1.11955	1.17103	4.57		
IS-1,3-DICHLOROPROPENE	75	.38517	.43757	14.20		
-CHLOROETHYLVINYLETHER	63	.03734	.12493	234.56		
ROMOFORM	173	.48429	.36323	25.00		**
-METHYL-2-PENTANONE	43	.40533	.40623	.19		
-HEXANONE	43	.31981	.31121	2.69		
ETRACHLOROETHENE	164	.45935	.45137	1.4-		
,1,2,2-TETRACHLOROETHANE	83	.61951	.63242	3.59		**
OLUENE-D8 (SURR)	98	1.49176	1.53971	3.21		
OLUENE	91	.91301	1.01674	11.36	*	
HLOROBENZENE	112	1.02967	1.24375	20.73		**
THYLBENZENE	91	1.85017	2.16905	17.27	*	

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

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

Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

Case No: V-4432/V-4442 Calibration Date: 11/13/86

Contractor: E & E, INC. Time: 12:48

Contract No: 68-01-7158 Laboratory ID: HC5499

Instrument ID: HP-5995C Initial Calibration Date: 08/27/86

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

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
4-BROMOFLUOROBENZENE(SURR) 95	.89230	.82434	7.62		
STYRENE 104	.99348	1.28883	29.73		
TOTAL XYLENES 91	1.43547	1.73412	24.29		

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 Compound

Continuing Calibration Check
HSL Compounds

Case No: V-4432/V-4442 Calibration Date: 11/13/86

Contractor: E & E, INC. Time: 2203

Contract No: 68-01-7158 Laboratory ID: [illegible]

Instrument ID: HP-5995C Initial Calibration Date: [illegible]

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

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
CHLOROMETHANE	50	1.42823	1.66967	16.90		**
BROMOMETHANE	94	.79319	1.10661	39.51		
VINYL CHLORIDE	62	.61396	.71938	17.17	*	
CHLOROETHANE	64	.43470	.27260	37.29		
METHYLENE CHLORIDE	84	2.01235	3.01918	50.03		
ACETONE	43	.50481	.50046	.86		
TRICHLOROFLUOROMETHANE	101	2.81945	3.64646	29.33		
CARBON DISULFIDE	76	4.39246	6.64723	51.33		
1,1-DICHLOROETHENE	61	2.99736	3.49136	16.49	*	
1,1-DICHLOROETHANE	63	3.22905	3.63690	12.63		**
TRANS-1,2-DICHLOROETHENE	96	1.51692	1.93545	27.59		
CHLOROFORM	83	3.15897	3.66902	16.15	*	
1,2-DICHLOROETHANE	62	2.67624	2.74672	2.63		
1,2-DICHLOROETHANE-D4(SURR)	65	2.56588	1.98988	22.45		
2-BUTANONE	72	.03361	.04637	37.95		
1,1,1-TRICHLOROETHANE	97	.54251	.64354	18.62		
CARBON TETRACHLORIDE	117	.51843	.62327	20.21		
VINYL ACETATE	43	.55307	.77120	39.44		
BROMODICHLOROMETHANE	83	.59259	.63210	6.67		
1,2-DICHLOROPROPANE	63	.45089	.47260	4.81	*	
TRANS-1,3-DICHLOROPROPENE	75	.75304	.85162	13.09		
TRICHLOROETHENE	130	.37764	.47132	24.91		
DIBROMOCHLOROMETHANE	129	.44848	.46567	3.83		
1,1,2-TRICHLOROETHANE	97	.30504	.32311	5.92		
BENZENE	78	1.11985	1.31967	17.84		
CIS-1,3-DICHLOROPROPENE	75	.38317	.42676	11.38		
2-CHLOROETHYLVINYLETHER	63	.05734	.12762	241.77		
BROMOFORM	173	.48429	.38697	20.11		**
4-METHYL-2-PENTANONE	43	.40583	.49264	21.39		
2-HEXANONE	43	.31982	.35111	9.79		
TETRACHLOROETHENE	164	.46805	.61413	31.24		
1,1,2,2-TETRACHLOROETHANE	83	.61062	.61551	.79		**
TOLUENE-D8 (SURR)	98	1.49136	1.47294	3.94		
TOLUENE	92	.91301	1.17699	28.91	*	
CHLOROBENZENE	112	1.02963	1.38501	34.47		**
BENZENE	91	1.85025	2.33284	26.07	*	

RF - Response Factor from daily standard file at [illegible]

$\overline{RF}$ - Average Response Factor from initial calibration [illegible]

Continuing Calibration Check
HSL Compounds

Case No: V-4432/V-4442 Calibration Date: 11/13/86

Contractor: E & E, INC. Time: 22:03

Contract No: 68-01-7158 Laboratory ID: 25609

Instrument ID: HP-5995C Initial Calibration Date: 09/27/86

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

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
4-BROMOFLUOROBENZENE(SURR)	95	.89230	.71774	19.56	
STYRENE	104	.99349	1.32149	33.02	
TOTAL XYLENES	91	1.43547	1.80419	25.69	

RF - Response Factor from daily standard file at [illegible]

$\overline{RF}$ - Average Response Factor from Initial Calibration [illegible]

Continuing Calibration Check
HSL Compounds

Case No: V-4432/V-4442 Calibration Date: 11/14/86

Contractor: E & E, INC. Time: 10:45

Contract No: 68-01-7158 Laboratory ID: 3C5521

Instrument ID: HP-5995C Initial Calibration Date: 08/27/86

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

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
CHLOROMETHANE	50	1.42823	.96525	32.42		**
BROMOMETHANE	94	.79319	.55938	29.48		
VINYL CHLORIDE	62	.61396	.47191	23.14	*	
CHLOROETHANE	64	.43470	.36497	16.04		
METHYLENE CHLORIDE	84	2.01235	2.84393	41.32		
ACETONE	43	.50481	.53157	5.30		
TRICHLOROFLUOROMETHANE	101	2.81945	2.93570	4.12		
CARBON DISULFIDE	76	4.39246	5.03182	14.56		
1,1-DICHLOROETHENE	61	2.99736	2.89755	3.33	*	
1,1-DICHLOROETHANE	63	3.22905	3.43458	6.36		**
TRANS-1,2-DICHLOROETHENE	96	1.51692	1.70006	12.07		
CHLOROFORM	83	3.15897	3.55659	12.59	*	
1,2-DICHLOROETHANE	62	2.67624	2.89805	8.29		
1,2-DICHLOROETHANE-D4(SURR)	65	2.56588	2.24002	12.70		
2-BUTANONE	72	.03361	.05639	67.77		
1,1,1-TRICHLOROETHANE	97	.54251	.61287	12.97		
CARBON TETRACHLORIDE	117	.51843	.61652	18.92		
VINYL ACETATE	43	.55307	.32647	40.97		
BROMODICHLOROMETHANE	83	.59759	.67566	13.07		
1,2-DICHLOROPROPANE	63	.45089	.47232	4.75	*	
TRANS-1,3-DICHLOROPROPENE	75	.75304	.86850	15.33		
TRICHLOROETHENE	130	.37764	.47190	24.96		
DIBROMOCHLOROMETHANE	129	.44848	.55897	24.64		
1,1,2-TRICHLOROETHANE	97	.30504	.39055	28.03		
BENZENE	78	1.11985	1.28449	14.70		
CIS-1,3-DICHLOROPROPENE	75	.38317	.46871	22.33		
2-CHLOROETHYLVINYLETHER	63	.03734	.14605	291.12		
BROMOFORM	173	.48429	.53988	11.48		**
4-METHYL-2-PENTANONE	43	.40583	.56445	39.08		
2-HEXANONE	43	.31982	.43767	36.85		
TETRACHLOROETHENE	164	.45805	.58700	28.15		
1,1,2,2-TETRACHLOROETHANE	83	.61052	.84462	38.35		**
TOLUENE-D8 (SURR)	98	1.49136	1.51654	1.69		
TOLUENE	92	.91301	1.13245	24.03	*	
CHLOROBENZENE	112	1.02963	1.41186	37.12		**
ETHYLBENZENE	91	1.85025	2.27793	23.11	*	

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

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

%Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

Case No: V-4432/V-4442

Calibration Date: 11/14/86

Contractor: E & E, INC.

Time: 10:45

Contract No: 68-01-7158

Laboratory ID: VC5521

Instrument ID: HP-5995C

Initial Calibration Date: 08/27/86

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

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
4-BROMOFLUOROBENZENE(SURR)	95	.89230	.74445	16.57		
STYRENE	104	.99348	1.34207	35.09		
TOTAL XYLENES	91	1.43547	1.80100	25.46		

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

Ca o: V-4432/V-4442 Calibration Date: 11/14/86

Contractor: E & E, INC. Time: 20:41

Contract No: 68-01-7158 Laboratory ID: 2C5931

Instrument ID: HP-5995C Initial Calibration Date: 08/27/86

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

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
CHLOROMETHANE	50	1.42823	.80985	43.30		**
BROMOMETHANE	94	.79319	.44235	44.23		
VINYL CHLORIDE	62	.61396	.44198	28.01	*	
CHLOROETHANE	64	.43470	.49283	13.37		
METHYLENE CHLORIDE	84	2.01235	2.37402	17.97		
ACETONE	43	.50481	.34233	32.19		
TRICHLOROFLUOROMETHANE	101	2.81945	2.59475	7.97		
CARBON DISULFIDE	76	4.39246	4.29908	2.13		
1,1-DICHLOROETHENE	61	2.99736	2.48645	17.05	*	
1,1-DICHLOROETHANE	63	3.22905	2.90310	10.09		**
TRANS-1,2-DICHLOROETHENE	96	1.51692	1.45391	4.15		
CHLOROFORM	83	3.15897	3.02276	4.31	*	
1,2-DICHLOROETHANE	62	2.67624	2.37298	11.33		
1,2-DICHLOROETHANE-D4(SURR)	65	2.56588	2.09607	18.31		
2-BUTANONE	72	.03361	.03778	12.40		
1,1,1-TRICHLOROETHANE	97	.54251	.52732	2.80		
CARBON TETRACHLORIDE	117	.51843	.53206	2.63		
VINYL ACETATE	43	.55307	.24740	55.27		
BROMODICHLOROMETHANE	83	.59759	.55865	6.52		
1,2-DICHLOROPROPANE	63	.45089	.40035	11.21	*	
TRANS-1,3-DICHLOROPROPENE	75	.75304	.73545	2.34		
TRICHLOROETHENE	130	.37764	.40867	8.22		
DIBROMOCHLOROMETHANE	129	.44848	.44637	.47		
1,1,2-TRICHLOROETHANE	97	.30504	.30850	1.13		
BENZENE	78	1.11985	1.08556	3.06		
CIS-1,3-DICHLOROPROPENE	75	.38317	.39293	2.55		
2-CHLOROETHYLVINYLETHER	63	.03734	.10165	172.23		
BROMOFORM	173	.48429	.39639	18.15		**
4-METHYL-2-PENTANONE	43	.40583	.38821	4.34		
2-HEXANONE	43	.31982	.27109	15.24		
TETRACHLOROETHENE	164	.45805	.50849	11.01		
1,1,2,2-TETRACHLOROETHANE	83	.61052	.55982	8.30		**
TOLUENE-D8 (SURR)	98	1.49136	1.43470	3.80		
TOLUENE	92	.91301	.96906	6.14	*	
CHLOROBENZENE	112	1.02963	1.17175	13.80		**
ETHYLBENZENE	91	1.85025	1.91661	3.59	*	

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 Compound (*) SPCC - [illegible]

Continuing Calibration Check
HSL Compounds

Ca .o: V-4432/V-4442 Calibration Date: 11/14/86

Contractor: E & E, INC. Time: 20:41

Contract No: 68-01-7158 Laboratory ID: >C5531

Instrument ID: HP-5995C Initial Calibration Date: 08/27/86

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

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
4-BROMOFLUOROBENZENE(SURR)	95	.89230	.71315	20.08		
STYRENE	104	.99348	1.15229	15.98		
TOTAL XYLENES	91	1.43547	1.53025	6.60		

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 Compound

Continuing Calibration Check
HSL Compounds

Case No: V-4432/V-4442 Calibration Date: 11/17/86

Contractor: E & E, INC. Time: 09:58

Contract No: 68-01-7158 Laboratory ID: VC5545

Instrument ID: HP-5995C Initial Calibration Date: 08/27/86

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

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
CHLOROMETHANE	50	1.42823	1.37925	3.43		**
BROMOMETHANE	94	.79319	.53259	32.86		
VINYL CHLORIDE	62	.61396	.72429	17.97	*	
CHLOROETHANE	64	.43470	.61214	40.81		
METHYLENE CHLORIDE	84	2.01235	2.56736	27.58		
ACETONE	43	.50481	.68282	35.26		
TRICHLOROFLUOROMETHANE	101	2.81945	3.30346	17.17		
CARBON DISULFIDE	76	4.39246	5.70913	29.98		
1,1-DICHLOROETHENE	61	2.99736	2.86171	4.53	*	
1,1-DICHLOROETHANE	63	3.22909	3.01989	6.48		**
TRANS-1,2-DICHLOROETHENE	96	1.51692	1.66102	9.50		
CHLOROFORM	83	3.15897	3.24495	2.72	*	
1,2-DICHLOROETHANE	62	2.67624	2.53903	5.13		
1,2-DICHLOROETHANE-D4(SURR)	65	2.56588	2.25353	12.17		
2-BUTANONE	72	.03361	.04176	24.25		
1,1,1-TRICHLOROETHANE	97	.54251	.61122	12.67		
CARBON TETRACHLORIDE	117	.51843	.59723	15.20		
VINYL ACETATE	43	.55307	.81365	47.12		
BROMODICHLOROMETHANE	83	.59759	.58875	1.48		
1,2-DICHLOROPROPANE	63	.45089	.40544	10.09	*	
TRANS-1,3-DICHLOROPROPENE	75	.75304	.76341	1.38		
TRICHLOROETHENE	130	.37764	.41508	9.91		
DIBROMOCHLOROMETHANE	129	.44848	.47198	5.24		
1,1,2-TRICHLOROETHANE	97	.30504	.31378	2.86		
BENZENE	78	1.11985	1.17625	5.04		
CIS-1,3-DICHLOROPROPENE	75	.38317	.42599	11.18		
2-CHLOROETHYLVINYLETHER	63	.03734	.13104	250.93		
BROMOFORM	173	.48429	.39367	18.71		**
4-METHYL-2-PENTANONE	43	.40583	.43900	8.17		
2-HEXANONE	43	.31982	.29827	6.74		
TETRACHLOROETHENE	164	.45805	.51246	11.88		
1,1,2,2-TETRACHLOROETHANE	83	.61052	.58452	4.26		**
TOLUENE-D8 (SURR)	98	1.49136	1.56039	4.63		
TOLUENE	92	.91301	1.02879	12.68	*	
CHLOROBENZENE	112	1.02963	1.23660	20.10		**
ETHYLBENZENE	91	1.85025	2.05179	10.89	*	

RF - Response Factor from daily standard file at 50.0 UG/L

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

%Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

Cas .: V-4432/V-4442 Calibration Date: 11/17/86

Contractor: E & E, INC. Time: 09:58

Contract No: 68-01-7158 Laboratory ID: >C5545

Instrument ID: HP-5995C Initial Calibration Date: 08/27/86

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

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
4-BROMOFLUOROBENZENE(SURR)	95	.89230	.76445	14.33		
STYRENE	104	.99348	1.20958	21.75		
TOTAL XYLENES	91	1.43547	1.60482	11.80		

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

Ca:): U-4432/U-4442 Calibration Date: 11/20/86

Contractor: E & E, INC. Time: 10:09

Contract No: 68-01-7158 Laboratory ID: >B3075

Instrument ID: HP-5970 Initial Calibration Date: ~~07/31/86~~ 7/30/86

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	1.33464	3.21		
PENTAFLUOROPHENOL	184	-	-	-		
2-FLUOROPHENOL	(SURR) 112	.86917	.83326	4.13		
PHENOL	94	1.27723	1.22466	4.12	*	
2-METHYL PHENOL	108	1.06214	1.08303	1.97		
2-CHLOROPHENOL	128	1.17232	1.10860	5.44		
3-METHYL PHENOL	108	1.06894	1.06430	.43		
-NITROPHENOL	139	.19333	.22995	18.94	*	
,4-DIMETHYLPHENOL	122	.27900	.31689	13.58		
ENZOIC ACID	105	.23920	.20894	12.65		
,4-DICHLOROPHENOL	162	.30213	.36132	19.59	*	
-CHLORO-3-METHYLPHENOL	107	.33099	.32836	.79	*	
,4,6-TRICHLOROPHENOL	196	.44521	.53647	20.50	*	
,4,5-TRICHLOROPHENOL	196	.51987	.56780	9.22		
,4,6-TRIBROMOPHENOL	(SURR) 330	.32822	.28674	12.64		
,4-DINITROPHENOL	184	.16189	.13376	17.38		**
-NITROPHENOL	139	.16233	.14477	10.81		**
,6-DINITRO-2-METHYLPHENOL	198	.14211	.14850	4.49		
ENTACHLOROPHENOL	266	.17144	.14826	13.52	*	

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

F - Average Response Factor from Initial Calibration Form VI

Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

ise ... U-4432/U-4442 Calibration Date: 11/20/86

ntractor: E & E, INC. Time: 11:03

ntract No: 68-01-7158 Laboratory ID: >B3076

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
ANILINE	93	1.52341	1.16568	23.48		
BIS(-2-CHLOROETHYL)ETHER	93	1.23992	1.16568	5.99		
1,3-DICHLOROBENZENE	146	1.38276	1.33921	3.15		
1,4-DICHLOROBENZENE	146	1.36777	1.30625	4.50	*	
BENZYL ALCOHOL	79	1.07958	.88536	17.99		
2-DICHLOROBENZENE	146	1.42808	1.24817	12.60		
S(2-CHLOROISOPROPYL)ETHER	45	2.97018	2.09489	29.47		
NITROSO-DI-N-PROPYLAMINE	70	1.29228	.92253	28.61		**
XACHLOROETHANE	117	.70913	.58775	17.12		
TROBENZENE-D5 (SURR)	82	.40084	.33967	15.26		
TROBENZENE	77	.41948	.31676	24.49		
OPHORONE	82	.80995	.64655	20.17		
S(-2-CHLOROETHOXY)METHANE	93	.45577	.39393	13.57		
2,4-TRICHLOROBENZENE	180	.37851	.36368	3.92		
PHTHALENE	128	.98472	.91889	6.68		
CHLOROANILINE	127	.39458	.38816	1.63		
XACHLOROBUTADIENE	225	.25803	.24930	3.38	*	
METHYLNAPHTHALENE	142	.62355	.56862	8.81		
XACHLOROCYCLOPENTADIENE	237	.45397	.48122	6.00		**
FLUOROBIPHENYL (SURR)	172	1.33061	1.66062	24.80		
CHLORONAPHTHALENE	162	1.20816	1.35112	11.83		
NITROANILINE	65	.43896	.41176	6.20		
METHYL PHTHALATE	163	1.43709	1.56810	9.12		
NITROANILINE	138	.25992	.28595	10.02		
BENZOFURAN	168	1.61498	1.76151	9.07		
ENAPHTHYLENE	152	1.80371	2.03662	12.91		
JORENE	166	1.19425	1.23430	3.35		
NITROANILINE	138	.15454	.17116	10.76		
ENAPHTHENE	153	1.18706	1.33889	12.79	*	
4-DINITROTOLUENE	165	.38188	.35664	6.61		
6-DINITROTOLUENE	165	.35087	.37697	7.44		
ETHYLPHTHALATE	149	1.39014	1.52824	9.93		
CHLOROPHENYL-PHENYLETHER	204	.62534	.62970	.70		
NITROSODIPHENYLAMINE	169	.42524	.49156	15.60	*	
BROMOPHENYL-PHENYL ETHER	248	.26659	.27995	5.01		
XACHLOROBENZENE	284	.34094	.31043	8.95		

- 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

ase ..: U-4432/U-4442 Calibration Date: 11/20/86

ontractor: E & E, INC. Time: 11:08

ontract No: 68-01-7158 Laboratory ID: >B3076

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
FHENANTHRENE	178	.97758	.95316	2.50		
ANTHRACENE	178	1.00646	.99507	1.13		
DI-N-BUTYLPHTHALATE	149	1.12721	1.14987	2.01		
FLUORANTHENE	202	.81517	.84573	3.75	*	
BENZIDINE		-	.22081	-		
YRENE	202	1.60192	1.28621	19.71		
ERPHENYL-D14 (SURR)	244	1.11052	.81814	26.33		
JTYLBENZYLPHTHALATE	149	.67361	.61190	9.16		
,3'DICHLOROBENZIDINE	252	.31882	.35402	11.04		
ENZO(A)ANTHRACENE	228	1.12037	1.01602	9.31		
IS(2-ETHYLHEXYL)PHTHALATE	149	.90083	.86921	3.51		
HRYSENE	228	1.12666	1.06822	5.19		
I-N-OCTYL PHTHALATE	149	1.70682	1.59816	6.37	*	
ENZO(B)FLUORANTHENE	252	1.21474	1.05783	12.92		
ENZO(K)FLUORANTHENE	252	1.23716	1.11725	9.69		
ENZO(A)PYRENE	252	1.12089	1.01600	9.36	*	
NDENO(1,2,3-CD)PYRENE	276	1.04154	.95124	8.67		
BENZ(A,H)ANTHRACENE	278	1.06755	.92766	13.10		
ENZO(G,H,I)PERYLENE	276	1.15866	1.03679	10.52		

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

- Average Response Factor from Initial Calibration Form VI

iff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

Ca: : U-4432/U-4442 Calibration Date: 11/21/86

Contractor: E & E, INC. Time: 12:34

Contract No: 69-01-7158 Laboratory ID: >B3090

Instrument ID: HP-5970 Initial Calibration Date: ~~07/31/86~~ 7/30/86

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	1.41745	2.79		
PENTAFLUOROPHENOL	184	-	-	-		
2-FLUOROPHENOL	(SURR) 112	.86917	1.02392	17.80		
PHENOL	94	1.27723	1.38700	8.59	*	
2-METHYL PHENOL	108	1.06214	1.05042	1.10		
2-CHLOROPHENOL	128	1.17232	1.27869	9.07		
4-METHYL PHENOL	108	1.06894	1.05918	.91		
2-NITROPHENOL	139	.19533	.23077	19.37	*	
2,4-DIMETHYLPHENOL	122	.27900	.30767	10.28		
BENZOIC ACID	105	.23920	.18494	22.68		
2,4-DICHLOROPHENOL	162	.30213	.35160	16.37	*	
4-CHLORO-3-METHYLPHENOL	107	.33099	.31236	5.63	*	
2,4,6-TRICHLOROPHENOL	196	.44521	.54437	22.27	*	
2,4,5-TRICHLOROPHENOL	196	.51987	.53863	3.61		
2,4,6-TRIBROMOPHENOL	(SURR) 330	.32822	.25743	21.57		
2,4-DINITROPHENOL	184	.16189	.10064	37.84		**
4-NITROPHENOL	139	.16233	.12396	23.63		**
4,6-DINITRO-2-METHYLPHENOL	198	.14211	.13081	7.95		
PENTACHLOROPHENOL	266	.17144	.13231	22.83	*	

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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

Ca No: V-4432/V-4442 Calibration Date: 11/21/86

Contractor: E & E, INC. Time: 13:42

Contract No: 68-01-7158 Laboratory ID: 283091

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
ANILINE	93	1.32341	1.26094	17.23		
BIS(-2-CHLOROETHYL)ETHER	93	1.23992	.94948	23.42		
1,3-DICHLOROBENZENE	146	1.38276	1.32033	4.52		
1,4-DICHLOROBENZENE	146	1.36777	1.43436	4.87	*	
BENZYL ALCOHOL	79	1.07958	.95789	11.27		
1,2-DICHLOROBENZENE	146	1.42803	1.32875	6.96		
BIS(2-CHLOROISOPROPYL)ETHER	45	2.97018	2.22934	24.94		
N-NITROSO-DI-N-PROPYLAMINE	70	1.29228	.97382	24.64		**
HEXACHLOROETHANE	117	.70913	.61665	13.04		
NITROBENZENE-D5 (SURR)	82	.40084	.33956	15.29		
NITROBENZENE	77	.41948	.34575	17.58		
ISOPHORONE	82	.80995	.61639	23.90		
BIS(-2-CHLOROETHOXY)METHANE	93	.45577	.37326	18.10		
1,2,4-TRICHLOROBENZENE	180	.37851	.36198	4.37		
NAPHTHALENE	128	.98472	.88654	9.97		
4-CHLOROANILINE	127	.39458	.38531	2.35		
HEXACHLOROBUTADIENE	225	.25803	.23997	7.00	*	
2-METHYLNAPHTHALENE	142	.62355	.58263	6.56		
HEXACHLOROCYCLOPENTADIENE	237	.45397	.45313	.19		**
2-FLUOROBIPHENYL (SURR)	172	1.33061	1.64544	23.66		
2-CHLORONAPHTHALENE	162	1.20816	1.32198	9.41		
2-NITROANILINE	65	.43896	.38527	12.23		
DIMETHYL PHTHALATE	163	1.43709	1.60636	11.78		
4-NITROANILINE	138	.25992	.25825	.64		
DIBENZOFURAN	168	1.61498	1.68966	4.62		
ACENAPHTHYLENE	152	1.80371	1.96529	8.96		
FLUORENE	166	1.19425	1.19848	.35		
3-NITROANILINE	138	.15454	.14437	6.58		
ACENAPHTHENE	153	1.18706	1.28615	8.35	*	
2,4-DINITROTOLUENE	165	.38188	.32416	15.12		
2,6-DINITROTOLUENE	165	.35087	.35895	2.30		
DIETHYLPHTHALATE	149	1.39014	1.39496	.35		
4-CHLOROPHENYL-PHENYLETHER	204	.62534	.59110	5.48		
N-NITROSODIPHENYLAMINE	169	.42524	.51600	21.34	*	
4-BROMOPHENYL-PHENYL ETHER	248	.26659	.28948	8.21		
HEXACHLOROBENZENE	284	.34094	.32485	4.72		

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

C No: V-4432/V-4442 Calibration Date: 11/01/86

Contractor: E & E, INC. Time: 13:42

Contract No: 68-01-7158 Laboratory ID: >B3091

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	.98765	1.03		
ANTHRACENE		178	1.00646	1.01603	.95		
DI-N-BUTYLPHTHALATE		149	1.12721	1.13290	.50		
FLUORANTHENE		202	.81517	.76609	6.02	*	
BENZIDINE			-	.20617	-		
PYRENE		202	1.60192	1.29551	19.13		
TERPHENYL-D14	(SURR)	244	1.11052	.81383	26.72		
BUTYLBENZYLPHTHALATE		149	.67361	.61186	9.17		
3,3'DICHLOROBENZIDINE		252	.31882	.34188	7.23		
BENZO(A)ANTHRACENE		228	1.12037	1.00284	10.49		
BIS(2-ETHYLHEXYL)PHTHALATE		149	.90033	.86772	3.68		
CHRYSENE		228	1.12666	1.03179	8.42		
DI-N-OCTYL PHTHALATE		149	1.70682	1.59006	6.84	*	
BENZO(B)FLUORANTHENE		252	1.21474	1.01976	16.05		
BENZO(K)FLUORANTHENE		252	1.23716	1.17882	4.72		
BENZO(A)PYRENE		252	1.12089	1.02824	8.27	*	
INDENO(1,2,3-CD)PYRENE		276	1.04154	.94345	9.42		
DIBENZ(A,H)ANTHRACENE		278	1.06755	.95484	10.56		
BENZO(G,H,I)PERYLENE		276	1.15866	1.04726	9.61		

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

e No: U-4432/U-4442 Calibration Date: 11/24/86

Contractor: E & E, INC. Time: 15:58

Contract No: 68-01-7158 Labbratory ID: >83117

Instrument ID: HP-5970 Initial Calibration Date: ~~07/31/86~~ 1/30/86

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	1.28183	7.04		
PENTAFLUOROPHENOL	184	-	-	-		
2-FLUOROPHENOL	(SURR) 112	.86917	.83374	4.08		
PHENOL	94	1.27723	1.27163	.44	*	
2-METHYL PHENOL	108	1.06214	1.03285	2.83		
2-CHLOROPHENOL	128	1.17232	1.16541	.59		
4-METHYL PHENOL	108	1.06894	1.04586	2.16		
2-NITROPHENOL	139	.19533	.21086	9.07	*	
2,4-DIMETHYLPHENOL	122	.27930	.29331	5.13		
BENZOIC ACID	105	.23920	.17019	28.85		
2,4-DICHLOROPHENOL	162	.30213	.27161	10.10	*	
4-CHLORO-3-METHYLPHENOL	107	.33099	.29230	11.69	*	
2,4,6-TRICHLOROPHENOL	196	.44521	.50991	14.53	*	
2,4,5-TRICHLOROPHENOL	196	.51987	.53865	3.61		
2,4,6-TRIBROMOPHENOL	(SURR) 330	.32822	.23242	29.19		
2,4-DINITROPHENOL	184	.16189	.11208	30.77		**
4-NITROPHENOL	139	.16233	.09020	44.43		**
4,6-DINITRO-2-METHYLPHENOL	198	.14211	.13055	8.12		
PENTACHLOROPHENOL	266	.17144	.13784	19.60	*	

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

No: V-4432/V-4442 Calibration Date: 11/24/86

Contractor: E & E, INC. Time: 16:56

Contract No: 68-01-7158 Laboratory ID: >83118

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
ANILINE	93	1.52341	1.16980	23.21		
BIS(-2-CHLOROETHYL)ETHER	93	1.23992	.90103	27.33		
1,3-DICHLOROBENZENE	146	1.38276	1.42129	2.79		
1,4-DICHLOROBENZENE	146	1.36777	1.28944	5.73	*	
BENZYL ALCOHOL	79	1.07958	.91060	15.65		
1,2-DICHLOROBENZENE	146	1.42808	1.32522	7.20		
BIS(2-CHLOROISOPROPYL)ETHER	45	2.97018	2.23191	24.86		
N-NITROSO-DI-N-PROPYLAMINE	70	1.29228	.98354	23.89		**
HEXACHLOROETHANE	117	.70913	.61594	13.14		
NITROBENZENE-D5 (SURR)	82	.40084	.33674	15.99		
NITROBENZENE	77	.41948	.31502	24.30		
ISOPHORONE	82	.80995	.64597	20.25		
BIS(-2-CHLOROETHOXY)METHANE	93	.45577	.36119	20.75		
1,2,4-TRICHLOROBENZENE	180	.37851	.36504	3.56		
NAPHTHALENE	128	.98472	.90124	8.48		
4-CHLOROANILINE	127	.39458	.36151	8.38		
HEXACHLOROBUTADIENE	225	.25803	.24629	4.55	*	
2-METHYLNAPHTHALENE	142	.62355	.57442	7.88		
HEXACHLOROCYCLOPENTADIENE	237	.45397	.49098	8.15		**
2-FLUOROBIPHENYL (SURR)	172	1.33061	1.63137	22.60		
2-CHLORONAPHTHALENE	162	1.20816	1.28810	6.62		
2-NITROANILINE	65	.43896	.33802	23.00		
DIMETHYL PHTHALATE	163	1.43709	1.49599	4.10		
4-NITROANILINE	138	.25992	.20763	20.12		
DIBENZOFURAN	168	1.61498	1.62141	.40		
ACENAPHTHYLENE	152	1.80371	2.03637	12.90		
FLUORENE	166	1.19425	1.11142	6.94		
3-NITROANILINE	138	.15454	.11194	27.57		
ACENAPHTHENE	153	1.18706	1.30813	10.20	*	
2,4-DINITROTOLUENE	165	.38188	.29171	23.61		
2,6-DINITROTOLUENE	165	.35087	.33106	5.65		
DIETHYLPHTHALATE	149	1.39014	1.42774	2.70		
4-CHLOROPHENYL-PHENYLETHER	204	.62534	.55679	10.96		
N-NITROSODIPHENYLAMINE	169	.42524	.49323	15.99	*	
4-BROMOPHENYL-PHENYL ETHER	248	.26659	.26646	.05		
HEXACHLOROBENZENE	284	.34094	.34939	2.48		

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

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

%Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

Case No: U-4432/U-4442 Calibration Date: 11/24/86

Contractor: E & E, INC. Time: 16:56

Contract No: 68-01-7158 Laboratory ID: >B3118

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	.95411	2.40		
ANTHRACENE	178	1.00646	.98810	1.82		
DI-N-BUTYLPHTHALATE	149	1.12721	1.28049	13.60		
FLUORANTHENE	202	.81517	.81068	.55	*	
BENZIDINE		-	.04414	-		
PYRENE	202	1.60192	1.53194	4.37		
TERPHENYL-D14 (SURR)	244	1.11052	.84160	24.22		
BUTYLBENZYLPHTHALATE	149	.67361	.66799	.83		
3,3'DICHLOROBENZIDINE	252	.31882	.24840	22.09		
BENZO(A)ANTHRACENE	228	1.12037	1.01603	9.31		
BIS(2-ETHYLHEXYL)PHTHALATE	149	.90083	.93409	3.69		
CHRYSENE	228	1.12666	1.01092	10.27		
DI-N-OCTYL PHTHALATE	149	1.70682	1.75402	2.77	*	
BENZO(B)FLUORANTHENE	252	1.21474	1.04511	13.96		
BENZO(K)FLUORANTHENE	252	1.23716	1.27670	3.20		
BENZO(A)PYRENE	252	1.12089	1.02361	8.68	*	
INDENO(1,2,3-CD)PYRENE	276	1.04154	.80342	22.86		
DIBENZ(A,H)ANTHRACENE	278	1.06755	.81808	23.37		
BENZO(G,H,I)PERYLENE	276	1.15866	.88968	23.20		

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

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

%Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

Case No: U-4432/U-4442

Calibration Date: 11/25/86

Contractor: E & E, INC.

Time: 12:57

Contract No: 68-01-7158

Laboratory ID: >D1132

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	1.40627	.41		
PENTAFLUOROPHENOL	184	-	-	-		
2-FLUOROPHENOL	(SURR) 112	.92130	.96745	5.01		
PHENOL	94	1.34105	1.32555	1.16	*	
2-METHYL PHENOL	108	1.03158	1.07520	4.23		
2-CHLOROPHENOL	128	1.13833	1.26111	10.79		
4-METHYL PHENOL	108	1.07582	1.10208	2.44		
2-NITROPHENOL	139	.20262	.21791	7.55	*	
2,4-DIMETHYLPHENOL	122	.28916	.29078	.56		
BENZOIC ACID	105	.20401	.19423	4.80		
2,4-DICHLOROPHENOL	162	.31568	.32857	4.08	*	
4-CHLORO-3-METHYLPHENOL	107	.33577	.33697	.36	*	
2,4,6-TRICHLOROPHENOL	196	.45546	.54195	18.99	*	
2,4,5-TRICHLOROPHENOL	196	.48930	.54450	11.28		
2,4,6-TRIBROMOPHENOL	(SURR) 330	.32584	.39364	20.81		
2,4-DINITROPHENOL	184	.17071	.11890	30.35		**
4-NITROPHENOL	139	.32314	.09754	69.81		**
4,6-DINITRO-2-METHYLPHENOL	198	.12041	.11554	4.04		
PENTACHLOROPHENOL	266	.18773	.14036	25.23	*	

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

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

%Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

Case No: V-4432/V-4442

Calibration Date: 11/25/86

Contractor: E & E, INC.

Time: 14:02

Contract No: 68-01-7158

Laboratory ID: >D1133

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	1.29374	16.01		
BIS(-2-CHLOROETHYL)ETHER	93	1.18428	1.03039	12.99		
1,3-DICHLOROBENZENE	146	1.47624	1.36240	7.71		
1,4-DICHLOROBENZENE	146	1.46874	1.39553	4.98	*	
BENZYL ALCOHOL	79	1.13473	1.05843	6.72		
1,2-DICHLOROBENZENE	146	1.49193	1.41549	5.12		
BIS(2-CHLOROISOPROPYL)ETHER	45	2.68137	2.41400	9.97		
N-NITROSO-DI-N-PROPYLAMINE	70	1.18117	1.06186	10.10		**
HEXACHLOROETHANE	117	.70841	.64577	8.84		
NITROBENZENE-D5 (SURR)	82	.37437	.34472	7.92		
NITROBENZENE	77	.37969	.33642	11.40		
ISOPHORONE	82	.75594	.66729	11.73		
BIS(-2-CHLOROETHOXY)METHANE	93	.41266	.39134	5.17		
1,2,4-TRICHLOROBENZENE	180	.38442	.36600	4.79		
NAPHTHALENE	128	.96668	.92425	4.39		
4-CHLOROANILINE	127	.37796	.37310	1.29		
HEXACHLOROBUTADIENE	225	.25908	.25490	1.61	*	
2-METHYLNAPHTHALENE	142	.64484	.64624	.22		
HEXACHLOROCYCLOPENTADIENE	237	.56814	.43418	23.58		**
2-FLUOROBIPHENYL (SURR)	172	1.61321	1.60978	.21		
2-CHLORONAPHTHALENE	162	1.37281	1.31608	4.13		
2-NITROANILINE	65	.47645	.40672	14.64		
DIMETHYL PHTHALATE	163	1.71954	1.54805	9.97		
4-NITROANILINE	138	.25828	.22798	11.73		
DIBENZOFURAN	168	1.90873	1.78498	6.48		
ACENAPHTHYLENE	152	2.10065	1.97541	5.96		
FLUORENE	166	1.34670	1.25470	6.83		
3-NITROANILINE	138	.09246	.06918	25.18		
ACENAPHTHENE	153	1.37857	1.31627	4.52	*	
2,4-DINITROTOLUENE	165	.33212	.28460	14.31		
2,6-DINITROTOLUENE	165	.37112	.33026	11.01		
DIETHYLPHTHALATE	149	1.58664	1.42986	9.88		
4-CHLOROPHENYL-PHENYLETHER	204	.70414	.64186	8.84		
N-NITROSODIPHENYLAMINE	169	.51771	.51913	.27	*	
4-BROMOPHENYL-PHENYL ETHER	248	.33482	.32747	2.20		
HEXACHLOROBENZENE	284	.43791	.39947	8.78		

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

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

%Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

Case No: V-4432/V-4442

Calibration Date: 11/25/86

Contractor: E & E, INC.

Time: 14:02

Contract No: 68-01-7158

Laboratory ID: >D1133

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	.95134	6.28		
ANTHRACENE	178	.99874	.92698	7.19		
DI-N-BUTYLPHTHALATE	149	.97124	.94487	2.71		
FLUORANTHENE	202	.62146	.59322	4.54	*	
BENZIDINE		.65247	.34892	46.52		
PYRENE	202	2.68642	1.82031	32.24		
TERPHENYL-D14 (SURR)	244	1.48172	.99777	32.66		
BUTYLBENZYLPHTHALATE	149	.68277	.57305	16.07		
3,3'DICHLOROBENZIDINE	252	.13263	.14569	9.84		
BENZO(A)ANTHRACENE	228	.91524	.89329	2.40		
BIS(2-ETHYLHEXYL)PHTHALATE	149	.81579	.76176	6.62		
CHRYSENE	228	1.19137	.99769	16.26		
DI-N-OCTYL PHTHALATE	149	1.64173	1.34204	18.25	*	
BENZO(B)FLUORANTHENE	252	1.13479	1.08905	4.03		
BENZO(K)FLUORANTHENE	252	1.55063	1.15607	25.45		
BENZO(A)PYRENE	252	1.10877	1.00546	9.32	*	
INDENO(1,2,3-CD)PYRENE	276	.99032	1.03620	4.63		
DIBENZ(A,H)ANTHRACENE	278	.81159	1.06276	30.95		
BENZO(G,H,I)PERYLENE	276	1.10886	1.31243	18.36		

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

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

%Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

Case No: V-4432/V-4442

Calibration Date: 12/01/86

Contractor: E & E, INC.

Time: 10:32

Contract No: 68-01-7198

Laboratory ID: >B3134

Instrument ID: HP-5970

Initial Calibration Date: ~~07/31/86~~ 7/30/86

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	1.19774	13.14		
PENTAFLUOROPHENOL	184	-	-	-		
2-FLUOROPHENOL	(SURR) 112	.86917	.73524	15.41		
PHENOL	94	1.27723	1.05248	17.60	*	
2-METHYL PHENOL	108	1.06214	.93000	12.44		
2-CHLOROPHENOL	128	1.17232	.99974	14.72		
4-METHYL PHENOL	108	1.06894	.95046	11.08		
2-NITROPHENOL	139	.19333	.21171	9.51	*	
2,4-DIMETHYLPHENOL	122	.27900	.29012	3.99		
BENZOIC ACID	105	.23920	.21189	11.42		
2,4-DICHLOROPHENOL	162	.30213	.32770	8.46	*	
4-CHLORO-3-METHYLPHENOL	107	.33099	.30214	8.72	*	
2,4,6-TRICHLOROPHENOL	196	.44521	.50978	14.50	*	
2,4,5-TRICHLOROPHENOL	196	.51987	.55293	6.36		
2,4,6-TRIBROMOPHENOL	(SURR) 330	.32822	.25054	23.67		
2,4-DINITROPHENOL	184	.16189	.15258	5.76		**
4-NITROPHENOL	139	.16233	.10857	33.12		**
4,6-DINITRO-2-METHYLPHENOL	198	.14211	.16152	13.65		
PENTACHLOROPHENOL	266	.17144	.16472	3.92	*	

RF - Response Factor from daily standard file at 50.00 ng

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

%Diff - % Difference from original average or curve

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

Continuing Calibration Check
HSL Compounds

Case No: U-4432/U-4442 Calibration Date: 12/01/86

Contractor: E & E, INC. Time: 11:28

Contract No: 68-01-7158 Laboratory ID: >B3135

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
ANILINE	93	1.52341	1.07182	29.64		
BIS(-2-CHLOROETHYL)ETHER	93	1.23992	.91166	26.47		
1,3-DICHLOROBENZENE	146	1.38276	1.21320	12.26		
1,4-DICHLOROBENZENE	146	1.36777	1.19731	12.46	*	
BENZYL ALCOHOL	79	1.07958	.84066	22.13		
1,2-DICHLOROBENZENE	146	1.42808	1.31979	7.58		
BIS(2-CHLOROISOPROPYL)ETHER	45	2.97018	2.13959	27.96		
N-NITROSO-DI-N-PROPYLAMINE	70	1.29228	.92613	28.33		**
HEXACHLOROETHANE	117	.70913	.59412	16.22		
NITROBENZENE-D5 (SURR)	82	.40084	.32706	18.41		
NITROBENZENE	77	.41948	.31755	24.30		
ISOPHORONE	82	.80995	.65938	18.59		
BIS(-2-CHLOROETHOXY)METHANE	93	.45577	.37549	17.61		
1,2,4-TRICHLOROBENZENE	180	.37851	.36546	3.45		
NAPHTHALENE	128	.98472	.93078	5.48		
4-CHLOROANILINE	127	.39458	.32779	16.93		
HEXACHLOROBUTADIENE	225	.25803	.25402	1.55	*	
2-METHYLNAPHTHALENE	142	.62355	.56434	9.50		
HEXACHLOROCYCLOPENTADIENE	237	.45397	.46686	2.84		**
2-FLUOROBIPHENYL (SURR)	172	1.33061	1.53503	15.36		
2-CHLORONAPHTHALENE	162	1.20816	1.21970	.95		
2-NITROANILINE	65	.43896	.30816	29.80		
DIMETHYL PHTHALATE	163	1.43709	1.42791	.64		
4-NITROANILINE	138	.25992	.16322	37.20		
DIBENZOFURAN	168	1.61498	1.48572	8.00		
ACENAPHTHYLENE	152	1.80371	1.87374	3.88		
FLUORENE	166	1.19425	1.09894	7.98		
3-NITROANILINE	138	.15454	.05415	64.96		
ACENAPHTHENE	153	1.19706	1.33022	12.06	*	
2,4-DINITROTOLUENE	165	.39188	.26782	29.87		
2,6-DINITROTOLUENE	165	.35887	.33241	5.26		
DIETHYLPHTHALATE	149	1.39014	1.42708	2.66		
4-CHLOROPHENYL-PHENYLETHER	204	.62534	.52877	15.44		
N-NITROSODIPHENYLAMINE	169	.42524	.48050	13.00	*	
4-BROMOPHENYL-PHENYL ETHER	248	.26659	.27589	3.49		
HEXACHLOROBENZENE	284	.34094	.37530	10.08		

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

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

%Diff - % Difference from original average or curve

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

Continuing Calibration Check
HSL Compounds

Case No: U-4432/U-4442 Calibration Date: 12/01/86

ntractor: E & E, INC. Time: 11:28

Contract No: 68-01-7158 Laboratory ID: >B3135

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	.96721	1.06		
ANTHRACENE	178	1.00646	.93566	7.03		
DI-N-BUTYLPHTHALATE	149	1.12721	1.26177	11.94		
FLUORANTHENE	202	.81517	.71556	12.22	*	
BENZIDINE		-	-	-		
PYRENE	202	1.60192	2.10706	31.53		
TERPHENYL-D14 (SURR)	244	1.11052	1.01485	8.61		
BUTYLBENZYLPHTHALATE	149	.67361	.73182	8.64		
3,3'DICHLOROBENZIDINE	252	.31882	.20516	35.65		
BENZO(A)ANTHRACENE	228	1.12037	.90019	19.65		
BIS(2-ETHYLHEXYL)PHTHALATE	149	.90083	1.00510	11.57		
CHRYSENE	228	1.12666	1.12361	.27		
DI-N-OCTYL PHTHALATE	149	1.70682	1.89323	10.92	*	
BENZO(B)FLUORANTHENE	252	1.21474	1.01014	16.84		
BENZO(K)FLUORANTHENE	252	1.23716	1.30544	5.52		
BENZO(A)PYRENE	252	1.12089	1.00875	10.00	*	
INDENO(1,2,3-CD)PYRENE	276	1.04154	.65918	36.71		
DIBENZ(A,H)ANTHRACENE	278	1.06755	.79079	25.92		
BENZO(G,H,I)PERYLENE	276	1.15866	.87737	24.28		

$\overline{RF}$ - Response Factor from daily standard file at 50.00 UG/L

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

ıse No: U-4432/U-4442

Calibration Date: 12/12/86

Contractor: E & E, INC.

Time: 12:50

Contract No: 68-01-7158

Laboratory ID: >D1257

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	1.43754	2.64		
PENTAFLUOROPHENOL	184	-	-	-		
2-FLUOROPHENOL (SURR)	112	.92130	1.03507	12.35		
PHENOL	94	1.34105	1.49348	11.37	*	
2-METHYL PHENOL	108	1.03158	1.11274	7.87		
2-CHLOROPHENOL	128	1.13833	1.27044	11.61		
4-METHYL PHENOL	108	1.07582	1.14300	6.24		
2-NITROPHENOL	139	.20262	.21748	7.34	*	
2,4-DIMETHYLPHENOL	122	.28916	.29353	1.51		
BENZOIC ACID	105	.20401	.20350	.25		
2,4-DICHLOROPHENOL	162	.31568	.31341	.72	*	
4-CHLORO-3-METHYLPHENOL	107	.33577	.28332	15.62	*	
2,4,6-TRICHLOROPHENOL	196	.45546	.53723	17.95	*	
2,4,5-TRICHLOROPHENOL	196	.48930	.46485	5.00		
2,4,6-TRIBROMOPHENOL(SURR)	330	.32584	.22775	30.10		
2,4-DINITROPHENOL	184	.17071	.14850	13.01		**
4-NITROPHENOL	139	.32314	.16861	47.82		**
4,6-DINITRO-2-METHYLPHENOL	198	.12041	.14775	22.71		
PENTACHLOROPHENOL	266	.18773	.16782	10.60	*	

kF - 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

se No: V-4432/V-4442

Calibration Date: 12/12/86

Contractor: E & E, INC.

Time: 13:51

Contract No: 68-01-7158

Laboratory ID: >D1258

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	1.29285	16.07		
BIS(-2-CHLOROETHYL)ETHER	93	1.18428	1.17380	.89		
1,3-DICHLOROBENZENE	146	1.47624	1.36738	7.37		
1,4-DICHLOROBENZENE	146	1.46874	1.36825	6.84	*	
BENZYL ALCOHOL	79	1.13473	1.12814	.58		
1,2-DICHLOROBENZENE	146	1.49193	1.41691	5.03		
BIS(2-CHLOROISOPROPYL)ETHER	45	2.68137	3.17397	18.37		
N-NITROSO-DI-N-PROPYLAMINE	70	1.18117	1.23810	4.82		**
HEXACHLOROETHANE	117	.70841	.68225	3.69		
NITROBENZENE-D5 (SURR)	82	.37437	.38116	1.81		
NITROBENZENE	77	.37969	.37752	.57		
ISOPHORONE	82	.75594	.73872	2.28		
BIS(-2-CHLOROETHOXY)METHANE	93	.41266	.43828	6.21		
1,2,4-TRICHLOROBENZENE	180	.38442	.35760	6.98		
NAPHTHALENE	128	.96668	.90170	6.72		
4-CHLOROANILINE	127	.37796	.26201	30.68		
HEXACHLOROBUTADIENE	225	.25908	.24603	5.04	*	
2-METHYLNAPHTHALENE	142	.64484	.60345	6.42		
HEXACHLOROCYCLOPENTADIENE	237	.56814	.46481	18.19		**
2-FLUOROBIPHENYL (SURR)	172	1.61321	1.63257	1.20		
2-CHLORONAPHTHALENE	162	1.37281	1.31595	4.14		
2-NITROANILINE	65	.47645	.47384	.55		
DIMETHYL PHTHALATE	163	1.71954	1.58881	7.60		
4-NITROANILINE	138	.25828	.21336	17.39		
DIBENZOFURAN	168	1.90873	1.71778	10.00		
ACENAPHTHYLENE	152	2.10065	1.98618	5.45		
FLUORENE	166	1.34670	1.21891	9.49		
3-NITROANILINE	138	.09246	.09132	1.23		
ACENAPHTHENE	153	1.37857	1.29744	5.88	*	
2,4-DINITROTOLUENE	165	.33212	.29693	10.60		
2,6-DINITROTOLUENE	165	.37112	.33486	9.77		
DIETHYLPHTHALATE	149	1.58664	1.49152	6.00		
4-CHLOROPHENYL-PHENYLETHER	204	.70414	.59569	15.40		
N-NITROSODIPHENYLAMINE	169	.51771	.49624	4.15	*	
4-BROMOPHENYL-PHENYL ETHER	248	.33482	.26480	20.91		
HEXACHLOROBENZENE	284	.43791	.30389	30.60		

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

ɜe No: V-4432/V-4442

Calibration Date: 12/12/86

Contractor: E & E, INC.

Time: 13:51

Contract No: 68-01-7158

Laboratory ID: >D1258

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	.95380	6.03		
ANTHRACENE	178	.99874	.93780	6.10		
DI-N-BUTYLPHTHALATE	149	.97124	1.11210	14.50		
FLUORANTHENE	202	.62146	.78012	25.53	*	
BENZIDINE		.65247	.19622	69.93		
PYRENE	202	2.68642	1.27115	52.68		
TERPHENYL-D14 (SURR)	244	1.48172	.76560	48.33		
BUTYLBENZYLPHTHALATE	149	.68277	.66902	2.01		
3,3'DICHLOROBENZIDINE	252	.13263	.14883	12.22		
BENZO(A)ANTHRACENE	228	.91524	1.00480	9.79		
BIS(2-ETHYLHEXYL)PHTHALATE	149	.81579	.97813	19.90		
CHRYSENE	228	1.19137	1.01650	14.68		
DI-N-OCTYL PHTHALATE	149	1.64173	1.92622	17.33	*	
BENZO(B)FLUORANTHENE	252	1.13479	1.26211	11.22		
BENZO(K)FLUORANTHENE	252	1.55063	1.05799	31.77		
BENZO(A)PYRENE	252	1.10877	1.04184	6.04	*	
INDENO(1,2,3-CD)PYRENE	276	.99032	.93532	5.55		
DIBENZ(A,H)ANTHRACENE	278	.81159	.89580	10.38		
BENZO(G,H,I)PERYLENE	276	1.10886	.95233	14.12		

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

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

%Diff - % Difference from original average or curve

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PESTICIDE STANDARDS

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

481095

Pesticide Evaluation Standards Summary
(Page 1)

Case No: V-4432 V-4442 Region: –

Contract No: IL-3140

Date of Analysis 11-18-86 11-19-86 11-20-86

Laboratory: ECOLOGY AND ENVIRONMENT INC.

GC Column: OV-1

Instrument ID: VARIAN 6000 #2

Evaluation Check for Linearity

Laboratory ID	RUN 1	RUN 2	RUN 3	
Pesticide	Calibration Factor Eval. Mix A	Calibration Factor Eval. Mix B	Calibration Factor Eval. Mix C	% RSD (≤10%)
Aldrin	512	535	490	4.4
Endrin	572	665	561	8.6
4,4'- DDT(1)	246	286	283	8.2
Dibutyl Chlorendate	356	374	355	3.0

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

	Laboratory I.D.	Time of Analysis	Endrin	4,4'- DDT	Combined(2)
Eval Mix B 72 Hour					
Eval Mix B	RUN 2	13:05			4.7
Eval Mix B	RUN 19	0:31			17
Eval Mix B	RUN 31	18:14			9.8
Eval Mix B	RUN 43	10:49			18
Eval Mix B	RUN 52	19:00			24
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					

(1) See Exhibit E, Section 7.5.4
(2) See Exhibit E, Section 7.3.1.2.2.1

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

SMO Sample No	Lab ID	Time of Analysis	Percent Diff	SMO Sample No	Lab ID	Time of Analysis	Percent Diff
EVAL. A	RUN1	12:26	—				
EVAL. B	RUN2	13:05	0.15				
EVAL. C	RUN3	13:39	0.11				
IND. A	RUN 4	14:32	0.19				
IND. B	RUN 5	15:06	0.08				
TOXAPHENE	RUN 6	15:40	0.19				
CHLORDANE	RUN 7	16:15	0.08				
PCB 1016/1260	RUN 8	16:49	0.15				
PCB 1221	RUN 9	17:23	0.08				
PCB 1232	RUN10	17:57	0.15				
PCB 1242	RUN 11	18:31	0.30				
PCB 1248	RUN12	19:06	0.49				
PCB 1254	RUN13	19:40	0.60				
BLANK 11-11	RUN 14	20:55	0.45				
BLANK 11-12	RUN16	22:49	0.56				
9651	RUN17	23:23	DL				
9652	RUN18	23:57	DL				
EVAL MIXB	RUN19	0:31	0.83				
9653	RUN20	1:04	0.04				
9653	RUN21	10:29	0.08				
9653 MS	RUN22	11:04	0.11				
9653 MSD	RUN23	11:46	0.15				
9654	RUN24	12:22	DL				
PCB 1248	RUN25	13:06	0.60				
9655	RUN26	14:26	DL				
9656	RUN27	15:00	DL				
9657	RUN28	15:37	DL				
9658	RUN29	16:11	DL				
9659	RUN30	16:47	DL				
EVAL MIXB	RUN31	18:14	0.11				
9660	RUN32	18:50	DL				
9661	RUN33	19:36	DL				
9662	RUN34	20:10	DL				
9663	RUN35	20:46	DL				
9664	RUN36	21:38	0.34				
PCB 1254	RUN37	22:17	0.04				
9665	RUN38	22:53	DL				
9666	RUN 39	23:33	INF.				
9667	RUN 40	0:12	INF				
9667	RUN 41	0:47	0.49				
9683	RUN 42	10:07	1.1				
EVAL. B	RUN43	10:49	0.41				
9684	RUN44	12:01	DL				
9685	RUN45	12:37	DL				
9686	RUN46	15:05	DL				
9687	RUN47	15:44	DL				
9688	RUN 48	16:19	DL				
PCB 1016/1260	RUN49	17:06	0.08				
9684	RUN50	17:47	DL				
BLANK 11-14	RUN51	18:22	0.11				
EVAL. B	RUN52	19:00	0.26				
PCB 1254	RUN53	19:39	0.41				

DL = DILUTED OUT
INF = INTERFERENCE

Pesticide Evaluation Standards Summary

(Page 1)

Case No: V-4432 V-4442 Region: –

Contract No: IL-3140

Date of Analysis 11-20-86 11-21-86 11-22-86

Laboratory: ECOLOGY AND ENVIRONMENT, INC

GC Column: SP2250 / SP2401

Instrument ID: VARIAN 6000 #2

Evaluation Check for Linearity

Laboratory ID	RUN 1	RUN 2	RUN 3	
Pesticide	Calibration Factor Eval. Mix A	Calibration Factor Eval. Mix B	Calibration Factor Eval. Mix C	% RSD (≤10%)
Aldrin	699	741	721	2.9
Endrin	622	670	653	3.8
4,4'- DDT(1)	206	241	270	13
Dibutyl Chlorendate	431	455	451	2.9

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	23:44	<1.0	8.0	NA
Eval Mix B	RUN 20	22:41	<1.0	6.1	NA
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					

(1) See Exhibit E, Section 7 5 4

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

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

SMO Sample No	Lab ID	Time of Analysis	Percent Diff	SMO Sample No	Lab ID	Time of Analysis	Percent Diff
EVAL MIX A	RUN # 1	23:12	—				
EVAL MIX B	2	23:44	0.18				
EVAL MIX C	3	0:17	0				
PCB 1016/1260	4	0:51	0.09				
PCB 1248	5	1:25	0.14				
IND MIX A	6	9:19	0.32				
IND MIX B	7	11:23	0.18				
PCB 1254	8	11:56	0.59				
BLANK 11-11	9	14:45	0.82				
BLANK 11-12	10	15:23	0.96				
9651.03.19A1	11	15:58	DL				
9652.03.19A1	12	16:40	DL				
BLANK 11-14	13	18:08	0.96				
PCB 1254	14	18:38	1.05				
9656.03.19A1	15	19:13	DL				
9658.03.19A1	16	19:50	DL				
9659.03.19A1	17	20:23	DL				
9663.03.19A1	18	21:31	DL				
9667.03.19A1	19	22:14	DL				
EVAL MIX B	20	22:41	1.23				
9667.03.19A1	21	23:11	DL				
9687.03.19A1	22	23:41	DL				
PCB 1254	23	10:38	1.23				

PESTICIDE/PCB STANDARDS SUMMARY

Case No. U-4432/U-4442 Laboratory ECOLOGY + ENVIRONMENT, INC.

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

11-18-86 16:49 19:06 19:40 Run#8 Run#12 Run#13	DATE OF ANALYSIS 11-18-86 TIME OF ANALYSIS 14:32 / 15:06 LABORATORY ID Run#4 / Run#5				DATE OF ANALYSIS 11-19-86 TIME OF ANALYSIS 13:06 LABORATORY ID Run#25			
COMPOUND	RT	RETENTION TIME WINDOW	CALIBRATION FACTOR	CONF. OR QUANT.	RT	CALIBRATION FACTOR	CONF. OR QUANT.	PERCENT DIFF.**
alpha-BHC	2.04	2.00-2.08	576					
beta-BHC	2.17	2.13-2.21	206					
delta-BHC	2.45	2.41-2.49	485					
gamma-BHC	2.38	236-2.40	497					
Heptachlor	3.79	3.75-3.83	434					
Aldrin	4.68	4.63-4.73	508					
Heptachlor Epoxide	5.67	5.60-5.74	478					
Endosulfan I	7.04	6.94-7.14	449					
Dieldrin	8.20	8.08-8.32	453					
4,4'-DDE	8.09	7.93-8.25	463					
Endrin	9.13	8.94-9.26	449					
Endosulfan II	9.32	9.20-9.44	431					
4,4'-DDD	10.16	9.95-10.37	399					
Endosulfan Sulfate	11.92	11.66-12.18	325					
4,4'-DDT	13.26	13.09-13.43	265					
Methoxychlor	19.50	19.20-19.80	161					
Endrin Ketone	15.28	14.96-15.60	472					
Tech. Chlordane								
alpha-Chlordane*								
gamma-Chlordane*								
Toxaphene								
Aroclor - 1016								
Aroclor - 1221								
Aroclor - 1232								
Aroclor - 1242								
Aroclor - 1248	5.81	5.64-5.98	115	QUANT.	5.81	116		0.90
Aroclor - 1254	13.81	13.50-14.12	165	QUANT.				
Aroclor - 1260	21.78	21.14-22.42	196	QUANT.				

* SEE EXHIBIT E, PART 7

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

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FORM IV

PESTICIDE/PCB STANDARDS SUMMARY

Case No. U-4432/U-4442 Laboratory ECOLOGY & ENVIRONMENT, INC.

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

11-18-86 16:49 19:06 19:40 Run#8 Run#12 Run#13	DATE OF ANALYSIS 11-18-86 TIME OF ANALYSIS 14:32 / 15:06 LABORATORY ID Run#4 / Run#5				DATE OF ANALYSIS 11-19-86 TIME OF ANALYSIS 22:17 LABORATORY ID Run#37			
COMPOUND	RT	RETENTION TIME WINDOW	CALIBRATION FACTOR	CONF. OR QUANT.	RT	CALIBRATION FACTOR	CONF. OR QUANT.	PERCENT DIFF.**
alpha-BHC	2.04	2.00-2.08	576					
beta-BHC	2.17	2.13-2.21	206					
delta-BHC	2.45	2.41-2.49	485					
gamma-BHC	2.38	2.36-2.40	497					
Heptachlor	3.79	3.75-3.83	434					
Aldrin	4.68	4.63-4.73	508					
Heptachlor Epoxide	5.67	5.60-5.74	478					
Endosulfan I	7.04	6.94-7.14	449					
Dieldrin	8.20	8.08-8.32	453					
4,4'-DDE	8.09	7.93-8.25	463					
Endrin	9.13	8.94-9.26	449					
Endosulfan II	9.32	9.20-9.44	431					
4,4'-DDD	10.16	9.95-10.37	399					
Endosulfan Sulfate	11.92	11.66-12.18	325					
4,4'-DDT	13.26	13.09-13.43	265					
Methoxychlor	19.50	19.20-19.80	161					
Endrin Ketone	15.28	14.96-15.60	472					
Tech. Chlordane								
alpha-Chlordane*								
gamma-Chlordane*								
Toxaphene								
Aroclor - 1016								
Aroclor - 1221								
Aroclor - 1232								
Aroclor - 1242								
Aroclor - 1248	5.81	5.64-5.98	115	QUANT.				
Aroclor - 1254	13.81	13.50-14.12	165	QUANT.	13.68	162		1.8
Aroclor - 1260	21.78	21.14-22.42	196	QUANT.				

* SEE EXHIBIT E, PART 7

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

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FORM IX

504095

PESTICIDE/PCB STANDARDS SUMMARY

Case No. U-4432/U-4442 Laboratory ECOLOGY & ENVIRONMENT, INC.

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

11-18-86 16:49 Run#8	19:06 Run#12	19:40 Run#13	DATE OF ANALYSIS 11-18-86 TIME OF ANALYSIS 14:32 / 15:06 LABORATORY ID Run#4 / Run#5			DATE OF ANALYSIS 11-20-86 TIME OF ANALYSIS 17:06 LABORATORY ID Run#49			
COMPOUND	RT	RETENTION TIME WINDOW	CALIBRATION FACTOR	CONF. OR QUANT.		RT	CALIBRATION FACTOR	CONF. OR QUANT.	PERCENT DIFF. **
alpha-BHC	2.04	2.00-2.08	576						
beta-BHC	2.17	2.13-2.21	206						
delta-BHC	2.45	2.41-2.49	485						
gamma-BHC	2.38	2.36-2.40	497						
Heptachlor	3.79	3.75-3.83	434						
Aldrin	4.68	4.63-4.73	508						
Heptachlor Epoxide	5.67	5.60-5.74	478						
Endosulfan I	7.04	6.94-7.14	449						
Dieldrin	8.20	8.08-8.32	453						
4,4'-DDE	8.09	7.93-8.25	463						
Endrin	9.13	8.94-9.26	449						
Endosulfan II	9.32	9.20-9.44	431						
4,4'-DDD	10.16	9.95-10.37	399						
Endosulfan Sulfate	11.92	11.66-12.18	325						
4,4'-DDT	13.26	13.09-13.43	265						
Methoxychlor	19.50	19.20-19.80	161						
Endrin Ketone	15.28	14.96-15.60	472						
Tech. Chlordane									
alpha-Chlordane*									
gamma-Chlordane*									
Toxaphene									
Aroclor - 1016									
Aroclor - 1221									
Aroclor - 1232									
Aroclor - 1242									
Aroclor - 1248	5.81	5.64-5.98	115	QUANT.					
Aroclor - 1254	13.81	13.50-14.12	165	QUANT.					
Aroclor - 1260	21.78	21.14-22.42	196	QUANT.		21.78	213	QUANT.	8.7

* SEE EXHIBIT E, PART 7

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

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FORM IV

PESTICIDE/PCB STANDARDS SUMMARY

Case No. U-4432/U-4442 Laboratory ECOLOGY + ENVIRONMENT, INC.

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

11-18-86
16:49 19:06 19:40
Run#8 Run#12 Run#13

DATE OF ANALYSIS	11-18-86	DATE OF ANALYSIS	11-20-86
TIME OF ANALYSIS	14:32 / 15:06	TIME OF ANALYSIS	19:39
LABORATORY ID	Run#4 / Run#5	LABORATORY ID	Run#53

COMPOUND	RT	RETENTION TIME WINDOW	CALIBRATION FACTOR	CONF. OR QUANT.	RT	CALIBRATION FACTOR	CONF. OR QUANT.	PERCENT DIFF. **
alpha-BHC	2.04	2.00-2.08	576					
beta-BHC	2.17	2.13-2.21	206					
delta-BHC	2.45	2.41-2.49	485					
gamma-BHC	2.38	2.36-2.40	497					
Heptachlor	3.79	3.75-3.83	434					
Aldrin	4.68	4.63-4.73	508					
Heptachlor Epoxide	5.67	5.60-5.74	478					
Endosulfan I	7.04	6.94-7.14	449					
Dieldrin	8.20	8.08-8.32	453					
4,4'-DDE	8.09	7.93-8.25	463					
Endrin	9.13	8.94-9.26	449					
Endosulfan II	9.32	9.20-9.44	431					
4,4'-DDD	10.16	9.95-10.37	399					
Endosulfan Sulfate	11.92	11.66-12.18	325					
4,4'-DDT	13.26	13.09-13.43	265					
Methoxychlor	19.50	19.20-19.80	161					
Endrin Ketone	15.28	14.96-15.60	472					
Tech. Chlordane								
alpha-Chlordane*								
gamma-Chlordane*								
Toxaphene								
Aroclor - 1016								
Aroclor - 1221								
Aroclor - 1232								
Aroclor - 1242								
Aroclor - 1248	5.81	5.64-5.98	115	QUANT.				
Aroclor - 1254	13.81	13.50-14.12	165	QUANT.	13.72	161		2.4
Aroclor - 1260	21.78	21.14-22.42	196	QUANT.				

* SEE EXHIBIT E, PART 7

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

7/85

FORM IX

PESTICIDE/PCB STANDARDS SUMMARY

Case No. U-4432/U-4442 Laboratory ECOLOGY + ENVIRONMENT, INC

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

11-21-86

0:51 1:25 11:25
Run#4 Run#5 Run#6

DATE OF ANALYSIS	11-21-86	11-21-86
TIME OF ANALYSIS	9:19 / 11:23	18:38
LABORATORY ID	Run#6 / Run#7	Run#14

COMPOUND	RT	RETENTION TIME WINDOW	CALIBRATION FACTOR	CONF. OR QUANT.	RT	CALIBRATION FACTOR	CONF. OR QUANT.	PERCENT DIFF. **
alpha-BHC	1.66	1.63-1.69	835					
beta-BHC	2.39	2.34-2.44	275					
delta-BHC	2.78	2.73-2.83	468					
gamma-BHC	2.09	2.07-2.11	646					
Heptachlor	2.56	2.54-2.58	629					
Aldrin	3.10	3.07-3.13	698					
Heptachlor Epoxide	4.65	4.60-4.70	641					
Endosulfan I	5.84	5.77-5.91	589					
Dieldrin	7.14	7.05-7.24	634	CONF				
4,4'-DDE	6.74	6.60-6.88	590					
Endrin	8.71	8.53-7.89	463					
Endosulfan II	10.48	10.32-10.64	540					
4,4'-DDD	10.31	10.09-10.53	407					
Endosulfan Sulfate	16.79	16.49-17.09	236					
4,4'-DDT	12.36	12.16-12.56	160					
Methoxychlor	23.62	23.18-24.06	91					
Endrin Ketone	22.00	21.49-22.51	44					
Tech. Chlordane								
alpha-Chlordane*								
gamma-Chlordane*								
Toxaphene								
Aroclor - 1016								
Aroclor - 1221								
Aroclor - 1232								
Aroclor - 1242								
Aroclor - 1248	4.76	4.62-4.90	197	CONF				
Aroclor - 1254	8.46	8.21-8.71	252	CONF	8.49	260		3.2
Aroclor - 1260	19.02	18.45-19.59	277	CONF				

* SEE EXHIBIT E, PART 7

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

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FORM IX

504095

PESTICIDE/PCB STANDARDS SUMMARY

Case No. U-4432/U-4442 Laboratory ECOLOGY + ENVIRONMENT, INC

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

11-21-86

0:51 1:25 11:25

Run#4 Run#5 Run#6

DATE OF ANALYSIS	11-21-86				DATE OF ANALYSIS	11-22-86		
TIME OF ANALYSIS	9:19	/ 11:23			TIME OF ANALYSIS	10:38		
LABORATORY ID	RUN#6	/ RUN#7			LABORATORY ID	RUN#23		
COMPOUND	RT	RETENTION TIME WINDOW	CALIBRATION FACTOR	CONF. OR QUANT.	RT	CALIBRATION FACTOR	CONF. OR QUANT.	PERCENT DIFF.**
alpha-BHC	1.66	1.63-1.69	835					
beta-BHC	2.39	2.34-2.44	275					
delta-BHC	2.78	2.73-2.83	468					
gamma-BHC	2.09	2.07-2.11	646					
Heptachlor	2.56	2.54-2.58	629					
Aldrin	3.10	3.07-3.13	698					
Heptachlor Epoxide	4.65	4.60-4.70	641					
Endosulfan I	5.84	5.77-5.91	589					
Dieldrin	7.14	7.05-7.24	634	CONF				
4,4'-DDE	6.74	6.60-6.88	590					
Endrin	8.71	8.53-7.89	463					
Endosulfan II	10.48	10.32-10.64	540					
4,4'-DDD	10.31	10.09-10.53	407					
Endosulfan Sulfate	16.79	16.49-17.09	236					
4,4'-DDT	12.36	12.16-12.56	160					
Methoxychlor	23.62	23.18-24.06	91					
Endrin Ketone	22.00	21.49-22.51	44					
Tech. Chlordane								
alpha-Chlordane*								
gamma-Chlordane*								
Toxaphene								
Aroclor - 1016								
Aroclor - 1221								
Aroclor - 1232								
Aroclor - 1242								
Aroclor - 1248	4.76	4.62-4.90	197	CONF				
Aroclor - 1254	8.46	8.21-8.71	252	CONF	8.51	247		2.0
Aroclor - 1260	19.02	18.45-19.59	277	CONF				

* SEE EXHIBIT E, PART 7

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

7/85

FORM IX

Pesticide/PCB Identification

Case No. U-4432/U-4442 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)
9651	OV-1	PCB 1260	9.43-21.91	6.85-21.78	SP2250/SP2401	7.48-19.20	6.84-19.02	N
9652	OV-1	PCB 1248	2.59-11.63	2.59-6.44	SP2250/SP2401	1.96-13.16	1.95-12.17	Y
9652	OV-1	PCB 1260	12.72-21.87	6.85-21.78	SP2250/SP2401	14.83-19.21	6.84-19.02	Y
9653	OV-1	PCB 1248	3.31-6.43	2.59-6.44	SP2250/SP2401			N
9653	OV-1	PCB 1254	6.86-9.98	6.88-21.92	SP2250/SP2401			N
9653	OV-1	PCB 1260	11.63-21.81	6.85-21.78	SP2250/SP2401			N
9654	OV-1	PCB 1248	2.60-6.45	2.59-6.44	SP2250/SP2401			N
9654	OV-1	PCB 1254	6.88-13.78	6.88-21.92	SP2250/SP2401			N
9655	OV-1	PCB 1248	3.33-6.46	2.59-6.44	SP2250/SP2401			N
9655	OV-1	PCB 1254	6.88-13.75	6.88-21.92	SP2250/SP2401			N
9655	OV-1	PCB 1260	15.86-21.84	6.85-21.78	SP2250/SP2401			N
9656	OV-1	PCB 1260	9.39-21.84	6.85-21.78	SP2250/SP2401	10.82-19.19	6.84-19.02	N
9657	OV-1	PCB 1254	4.06-13.71	6.88-21.92	SP2250/SP2401			Y
9657	OV-1	PCB 1260	15.88-21.79	6.85-21.78	SP2250/SP2401			Y
9658	OV-1	PCB 1254	4.06-13.73	6.88-21.92	SP2250/SP2401	4.05-13.17	3.15-19.95	Y
9658	OV-1	PCB 1260	15.89-21.81	6.85-21.78	SP2250/SP2401	14.52-19.19	6.84-19.02	Y
9660	OV-1	PCB 1248	3.32-5.10	2.59-6.44	SP2250/SP2401			N
9660	OV-1	PCB 1254	5.83-13.73	6.88-21.92	SP2250/SP2401			N
9660	OV-1	PCB 1260	15.84-21.81	6.85-21.78	SP2250/SP2401			N
9661	OV-1	PCB 1254	4.06-13.74	6.88-21.92	SP2250/SP2401			N
9661	OV-1	PCB 1260	15.88-21.78	6.85-21.78	SP2250/SP2401			N
9662	OV-1	PCB 1254	4.05-13.70	6.88-21.92	SP2250/SP2401			N
9663	OV-1	DIELDRIN	8.22	8.08-8.32	SP2250/SP2401	7.24	7.05-7.24	N
9665	OV-1	PCB 1254	4.05-8.36	6.88-21.92	SP2250/SP2401			N
9665	OV-1	PCB 1260	9.36-21.70	6.85-21.78	SP2250/SP2401			N
9666	OV-1	PCB 1254	4.04-13.67	6.88-21.92	SP2250/SP2401			N
9684	OV-1	PCB 1248	2.58-6.44	2.59-6.44	SP2250/SP2401			Y
9684	OV-1	PCB 1254	6.84-13.72	6.88-21.92	SP2250/SP2401			Y
9685	OV-1	PCB 1248	2.59-6.42	2.59-6.44	SP2250/SP2401			N
9685	OV-1	PCB 1254	7.94-13.71	6.88-21.92	SP2250/SP2401			N
9685	OV-1	PCB 1260	15.84-21.78	6.85-21.78	SP2250/SP2401			N

4/84
505095

FORM X

Pesticide/PCB Identification

Case No. U-4432/U-4442 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)
9686	OV-1	PCB 1248	2.59-5.80	2.59-6.44	SP2250/SP2401			N
9686	OV-1	PCB 1254	6.86-13.73	6.88-21.92	SP2250/SP2401			N
9686	OV-1	PCB 1260	15.86-21.82	6.85-21.78	SP2250/SP2401			N
9687	OV-1	PCB 1254	4.05-13.71	6.88-21.92	SP2250/SP2401	4.51-13.18	3.15-19.95	Y
9687	OV-1	PCB 1260	15.84-21.75	6.85-21.78	SP2250/SP2401	14.75-19.22	6.84-19.02	Y
9688	OV-1	PCB 1254	4.05-13.70	6.88-21.92	SP2250/SP2401			N
9688	OV-1	PCB 1260	15.86-21.78	6.85-21.78	SP2250/SP2401			N

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605005

FORM X

GC/MS TUNING

1. DFTPP FORM V

2. BFB FORM V

481095

GC/MS TUNING AND MASS CALIBRATION

Decafluorotriphenylphosphine (DFTPP)

Case No. U-4432/U-4442 Contractor Ecology & Environment Inc. Contract No. IL-3140

Instrument ID HP5970D Date 6-19-86 Time 1436

Lab ID D0034 Data Release Authorized By: C Stojtowicz

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

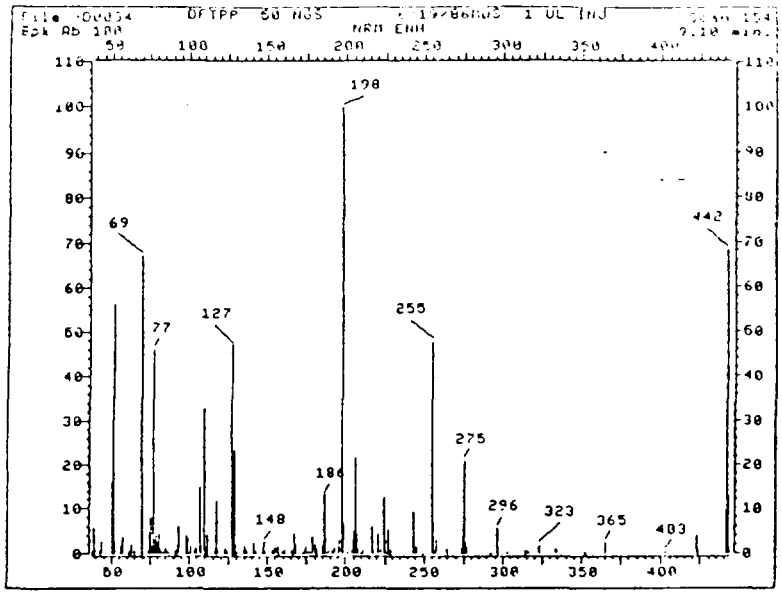
THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

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

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

FORM V

493095 7/85



>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	.29	142.00	.76	188.05	.18	245.05	1.11
39.95	1.12	92.00	.27	143.00	.54	188.95	.65	245.95	1.70
42.95	.23	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	5.25
69.00	67.05	111.90	.29	164.90	.82	208.05	1.11	296.85	.76
70.00	.21	116.00	.83	166.00	.71	208.25	.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	.29	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. 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-4432/U-4442 Contractor Ecology & Environment Inc. Contract No. IL-3140

Instrument ID HP5970B Date 7-30-86 Time 1051

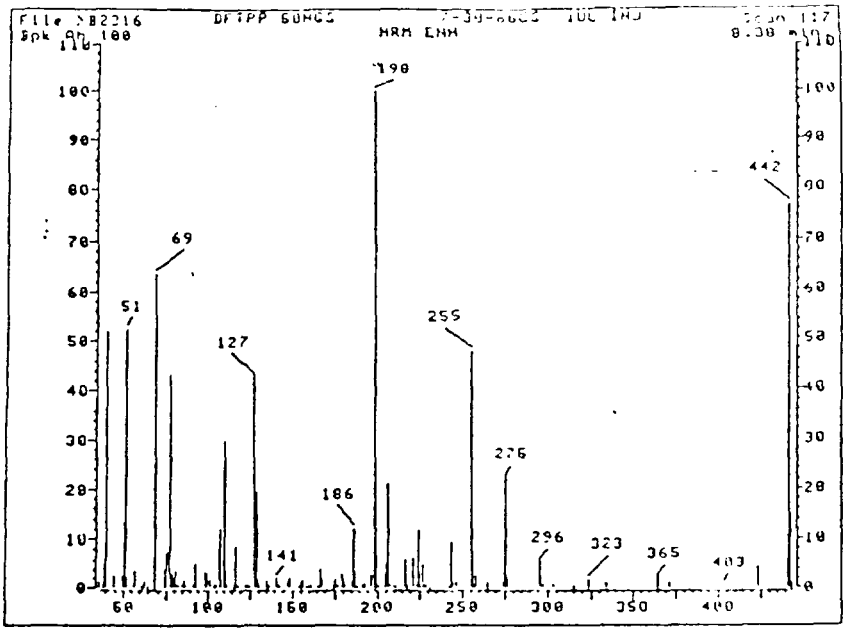
Lab ID B2316 Data Release Authorized By: C Slajtowicz

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: MTEON 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-4432/V-4442 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 Sbytowicz

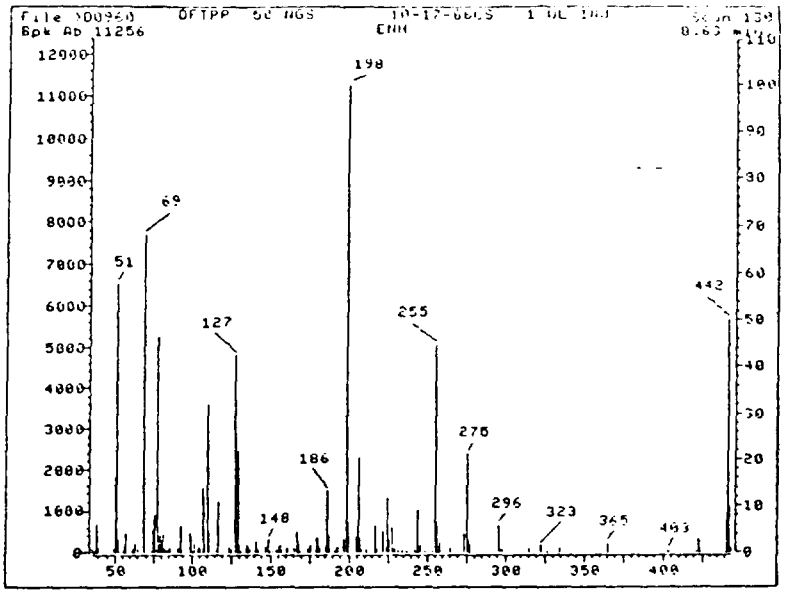
m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	58.2
68	less than 2.0% of mass 69	0 (0)[1]
69	mass 69 relative abundance	68.4
70	less than 2.0% of mass 69	0 (0)[1]
127	40.0 - 60.0% of mass 198	42.6
197	less than 1.0% of mass 198	0
198	base peak, 100% relative abundance	100
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 - 20ug/L	D0965	10-17-86	1554
	50 ug/L	D0966		1652
	80 ug/L	D0967		1747
	120 ug/L	D0968		1839
	160 ug/L	D0969		1931

FORM V 493035 7/85



>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	168.90	.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	.38
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
Miso : 10-17-86CS 1 UL INJ BTL# 1
Sys. #: 1 MS model: 70 SW/HW rev.: CA ALS # : 0
Method file: DFTPPD Tuning file: MTDOH2 No. of extra records: 1
Source temp.: 0 Analyzer temp.: 275 Transfer line temp. : 20

Chromatographic temperatures : 120. 200. 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-4432/V-4442 Contractor Ecology & Environment Inc. Contract No. IL-3140

Instrument ID HP5970 B Date 11-20-86 Time 944

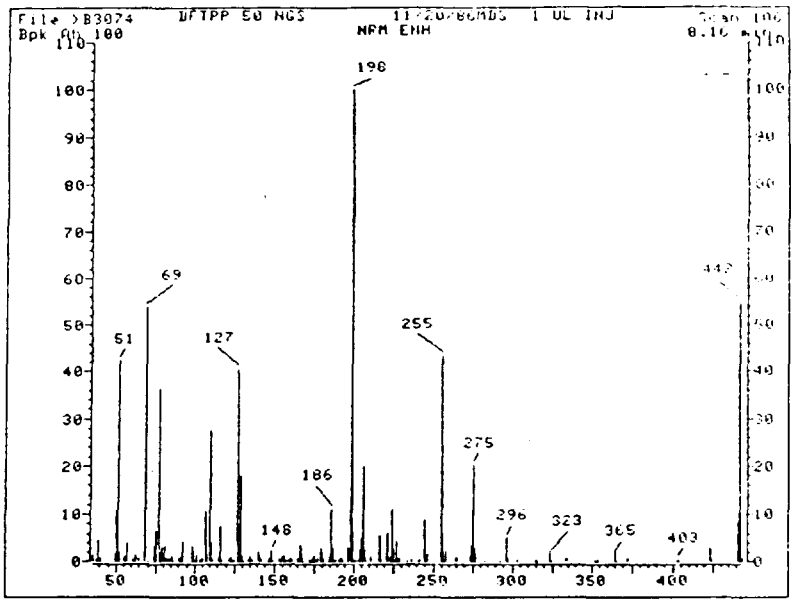
Lab ID B3074 Data Release Authorized By: C Stojtowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	42.4
68	less than 2.0% of mass 69	0 (0)[1]
69	mass 69 relative abundance	53.9
70	less than 2.0% of mass 69	0.13 (0.24)[1]
127	40.0 - 60.0% of mass 198	40.4
197	less than 1.0% of mass 198	0
198	base peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.59
275	10.0 - 30.0% of mass 198	20.3
365	greater than 1.00% of mass 198	1.98
441	present, but less than mass 443	8.43
442	greater than 40.0% of mass 198	54.6
443	17.0 - 23.0% of mass 442	10.2 (18.7)[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
-	AP STD - 50ng	B3075	11-20-86	1009
-	BN STD - 50ng	B3076		1108
-	BLANK (11/13)	B3079		1418
-	BLANK (11/11)	B3080		1519
DC-SD-29	9667	B3081		1621



>B3074 DFTPP 50 NGS 11/20/86MDS 1 UL INJ
106 NRM ENH

File: >B3074 Scan #: 106 Retn. time: 8.16

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.05	1.49	99.00	2.42	154.00	.32	197.95	100.00	265.00	.98
38.15	.41	100.00	.15	155.05	1.01	198.95	6.59	273.00	1.35
39.05	4.50	101.00	1.33	156.05	1.49	200.05	.31	274.00	3.46
40.15	.71	103.10	.51	156.95	.22	201.35	.24	275.00	20.35
41.05	.60	104.10	.86	157.95	.26	203.05	.33	276.00	2.85
49.05	1.61	105.10	.75	159.05	.18	204.05	2.69	277.00	1.53
50.15	10.97	107.00	10.57	160.05	.68	205.05	4.96	283.00	.12
51.15	42.44	108.10	1.39	161.05	.81	206.05	19.82	285.00	.18
52.00	1.92	110.00	27.77	161.75	.21	207.05	2.74	292.90	.18
55.10	1.04	111.10	3.78	165.05	.69	208.05	.40	296.00	5.13
56.00	1.17	112.10	.37	165.95	.62	211.05	.91	297.10	.45
57.00	3.78	116.10	.64	166.95	3.57	216.95	5.44	303.00	.34
61.10	.48	117.00	7.40	167.95	1.72	218.05	.54	315.00	.35
62.00	.51	118.00	.30	168.95	.20	221.05	6.17	316.00	.19
63.00	1.46	122.00	.66	171.95	.26	223.05	1.06	323.00	1.58
65.10	.64	123.00	1.11	173.05	.40	224.05	10.91	324.00	.18
67.10	.13	124.10	.50	174.05	.83	225.05	2.58	326.90	.20
69.00	53.89	125.10	.52	175.05	1.21	226.05	.23	334.00	.61
70.00	.13	127.00	40.45	175.95	.35	227.05	4.41	346.00	.20
74.00	3.37	128.10	3.18	177.05	.71	227.95	.39	352.10	.32
75.00	6.33	129.00	18.17	178.95	3.02	228.95	.81	353.10	.20
77.10	36.41	130.00	1.34	180.05	1.88	230.85	.23	354.10	.30
78.10	2.13	131.10	.19	180.95	.85	231.05	.23	364.95	1.98
79.00	2.90	134.00	.29	183.85	.12	234.05	.16	365.95	.17
80.00	1.73	135.10	1.10	184.05	.12	237.05	.24	372.05	.78
81.00	3.21	136.00	.39	185.05	1.40	241.05	.17	402.05	.22
82.10	.65	137.10	.42	186.05	11.09	242.05	.35	402.95	.42
83.10	.85	141.00	1.92	187.05	2.98	244.05	8.77	403.95	.12
83.90	.61	142.00	.67	188.05	.27	245.05	.90	421.05	.18
85.00	.51	143.00	.33	188.95	.56	246.05	1.61	423.05	2.90
85.90	1.03	146.20	.18	191.05	.24	253.15	.14	424.05	.53
87.00	.21	147.10	.83	192.05	.84	255.05	43.34	441.05	8.43
91.00	.65	148.10	2.18	193.05	.82	256.05	5.95	442.05	54.61
92.10	.64	149.00	.43	193.95	.13	256.90	.31	443.05	10.22
93.00	4.39	151.70	.16	196.05	3.05	258.00	2.36	443.95	.86
98.00	3.13	153.00	.60						

MS data file header from : >B3074

Sample: DFTPP 50 NGS Operator: USER3 MS 11/20/86 9:44
Misc : 11/20/86MDS 1 UL INJ
Sys. #: 2 MS model: 70 SW/HW rev.: CA HCS # : 0
Method file: DFTPP8 Tuning file: MT80N 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

:B4MDN

GC/MS TUNING AND MASS CALIBRATION

Decafluorotriphenylphosphine (DFTPP)

Case No. U-4432/U-4442 Contractor Ecology & Environment Inc. Contract No. IL-3140

Instrument ID HP5970B Date 11-21-86 Time 1207

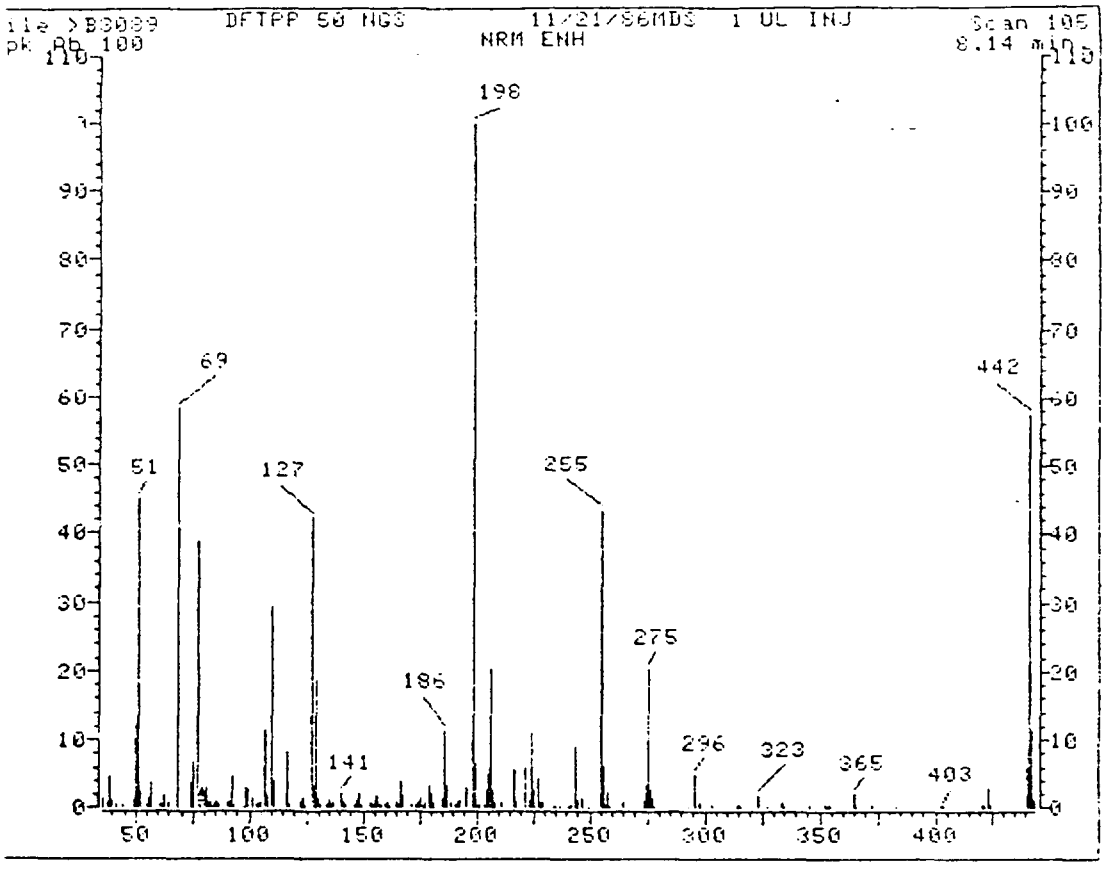
Lab ID B3089 Data Release Authorized By: C Slojtowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	45.1
68	less than 2.0% of mass 69	0 (0)[1]
69	mass 69 relative abundance	58.3
70	less than 2.0% of mass 69	0 (0)[1]
127	40.0 - 60.0% of mass 198	42.2
197	less than 1.0% of mass 198	0
198	base peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.40
275	10.0 - 30.0% of mass 198	20.3
365	greater than 1.00% of mass 198	2.03
441	present, but less than mass 443	8.44
442	greater than 40.0% of mass 198	57.5
443	17.0 - 23.0% of mass 442	11.1 (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-50ng	B3090	11-21-86	1234
-	BN STD-50ng	B3091		1342
DC-SD-15MS	9653 MS	B3094		1636
DC-SD-15MSD	9653 MSD	B3095		1727
DC-SD-20	9658	B3096		1819
DC-SD-26	9664	B3097		1910
DC-SD-16	9654	B3098		2001
DC-SD-17	9655	B3099		2052
DC-SD-18	9656	B3100		2144



MS data file header from : >B3089

Sample: DFTPP 50 NGS Operator: USER3 MS 11/21/86 12:07
Misc : 11/21/86MDS 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

B3089 DFTPP 50 NGS 11/21/86MDS 1 UL INJ
105 NRM ENH

File: B3089 Scan #: 105 Retn. time: 8.14

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.05	1.52	94.00	.34	154.00	.55	204.05	2.57	275.00	20.34
38.05	.86	97.20	.11	155.05	.95	205.05	5.03	276.00	2.57
39.15	4.41	98.10	3.04	156.05	1.53	206.05	20.14	277.00	1.36
40.05	1.01	99.00	2.80	157.15	.38	207.05	2.63	278.00	.19
41.15	.38	101.00	1.50	157.85	.33	207.95	.65	293.00	.22
44.05	.45	103.00	.55	160.05	.54	210.75	.76	296.00	5.03
49.15	1.45	104.00	.81	161.05	.84	211.05	.43	297.10	.57
50.15	12.15	105.10	.84	161.95	.15	216.95	5.61	303.00	.37
51.15	45.07	107.10	11.43	165.05	.69	217.95	.65	313.90	.12
52.10	2.18	108.00	1.64	166.05	.26	221.05	5.89	315.00	.49
55.00	.54	110.00	29.16	166.95	3.96	223.05	1.14	316.00	.19
56.10	1.48	111.00	4.00	167.95	1.56	224.05	10.92	323.10	1.71
57.00	3.59	117.00	7.95	171.95	.33	225.05	2.49	326.90	.23
61.00	.53	118.00	.51	173.05	.42	226.95	4.38	334.10	.66
62.00	.45	122.00	.62	174.05	.72	228.05	.58	335.00	.21
63.00	1.56	123.00	1.21	174.95	1.33	228.95	.88	346.00	.24
65.00	.70	124.00	.48	176.05	.51	233.95	.19	352.10	.33
69.00	58.28	127.00	42.22	177.05	.73	235.05	.18	353.00	.22
74.10	3.75	128.10	3.22	178.95	3.21	237.05	.17	354.10	.38
75.00	6.65	129.00	18.72	179.95	1.94	241.05	.16	364.95	2.03
77.10	38.79	130.10	1.40	181.05	.86	241.95	.41	365.95	.18
78.10	2.50	131.10	.34	185.05	1.42	244.05	9.08	372.05	.56
79.10	3.02	134.00	.42	186.05	11.42	245.05	1.07	382.95	.15
80.00	2.21	135.00	1.17	186.95	3.24	246.05	1.45	402.05	.25
81.00	3.12	136.00	.53	189.05	.67	246.95	.23	402.95	.32
82.00	.68	137.10	.59	191.05	.30	248.95	.19	420.95	.29
83.10	.76	141.00	2.07	192.05	.88	255.05	43.34	421.95	.25
84.00	.17	142.10	.74	193.05	.92	256.05	6.23	423.05	2.99
85.20	.57	143.00	.48	195.95	3.08	256.90	.31	424.05	.34
86.00	.87	146.00	.34	197.95	100.00	258.00	2.21	441.15	8.44
87.00	.36	147.00	.92	198.95	6.40	259.00	.20	442.05	57.51
91.10	.75	148.00	2.03	200.05	.40	265.00	.79	443.05	11.15
92.00	.66	149.00	.42	201.45	.46	273.00	1.18	444.05	.94
93.00	4.69	153.10	.63	203.05	.49	274.00	3.44		

GC/MS TUNING AND MASS CALIBRATION
Decafluorotriphenylphosphine (DFTPP)

Case No. U-4432/U-4442 Contractor Ecology & Environment Inc. Contract No. IL-3140

Instrument ID HP5970B Date 11/24/86 Time 1416

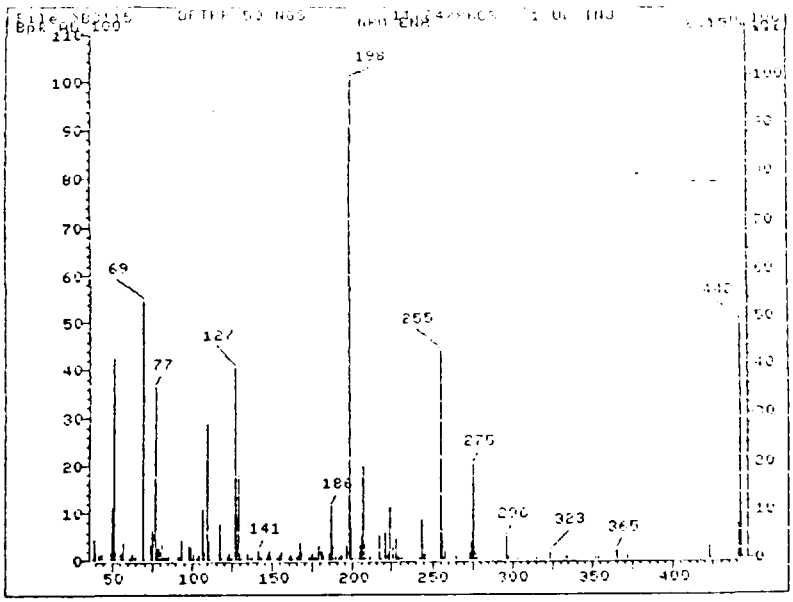
Lab ID B3115 Data Release Authorized By: C Slojtowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	42.4
68	less than 2.0% of mass 69	0 (0)[1]
69	mass 69 relative abundance	54.5
70	less than 2.0% of mass 69	0.16 (0.29)[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	6.50
275	10.0 - 30.0% of mass 198	19.9
365	greater than 1.00% of mass 198	1.88
441	present, but less than mass 443	7.17
442	greater than 40.0% of mass 198	48.5
443	17.0 - 23.0% of mass 442	9.37 (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 - 50 ng	B3117	11-24-86	1558
-	BN STD - 50 ng	B3118	↓	1656
DC-SD-14	9652	B3124		2221
DC-SD-13	9651	B3125	↓	2312



>B3115 DFTPP 50 NGS 11/24/86CS 1 UL INJ
106 NRM ENH

File: >B3115 Scan #: 106 Retn. time: 8.15

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
38.05	.54	93.00	4.33	142.00	.74	185.15	1.35	243.05	.53
39.15	4.53	94.00	.16	142.90	.39	186.05	11.24	244.05	8.48
40.05	1.76	98.00	3.06	146.00	.29	187.05	3.06	245.05	.95
41.25	1.07	99.00	2.66	147.10	.94	189.05	.59	246.05	1.40
44.05	1.52	100.10	.13	148.00	1.91	191.05	.31	255.05	43.23
49.15	1.66	101.10	1.35	149.10	.59	192.05	.26	256.05	6.09
50.05	10.87	102.90	.40	151.10	.16	193.95	.94	257.00	.41
51.15	42.37	104.10	.98	153.10	.35	195.95	2.99	258.00	2.21
52.00	1.97	105.10	.93	154.00	.43	197.95	100.00	265.00	.76
55.10	1.32	107.00	10.67	155.05	1.10	198.95	6.50	273.00	1.29
56.00	1.34	108.10	1.57	156.05	1.56	200.05	.35	274.00	3.60
57.00	3.60	110.00	28.49	157.15	.28	201.15	.47	275.00	19.38
61.10	.34	111.00	3.83	157.95	.20	203.05	.54	276.00	2.52
62.00	.31	112.00	.22	159.95	.50	204.05	2.81	276.90	1.50
63.10	1.36	117.00	7.44	160.95	.90	205.05	4.29	278.00	.26
65.10	.57	118.00	.48	161.95	.27	207.05	19.69	296.00	4.30
69.00	54.50	122.00	.68	165.05	.68	207.95	3.50	297.10	.61
70.10	.16	123.10	1.36	165.95	.57	208.05	.62	303.00	.24
74.00	3.16	124.10	.45	167.05	3.70	210.05	.28	315.00	.47
75.00	6.03	125.10	.46	168.05	1.68	210.95	.26	323.00	1.10
77.10	36.26	127.00	40.01	171.95	.17	216.95	5.27	334.10	.37
78.10	2.25	128.10	3.17	173.05	.40	218.05	.55	353.00	.42
79.10	2.76	129.00	17.74	173.95	.83	221.05	5.24	354.00	.57
80.00	1.93	130.00	1.47	175.05	1.49	223.05	1.10	365.05	1.88
81.00	3.29	131.10	.32	175.95	.44	224.05	10.92	371.95	.28
82.00	.61	134.10	.36	177.05	.66	225.05	2.59	423.05	2.61
83.10	.83	135.00	1.38	177.95	.14	227.05	4.45	423.95	.52
84.10	.77	136.00	.26	178.95	2.86	228.05	.57	441.05	7.12
85.10	.59	137.10	.54	180.05	1.93	229.05	.86	442.05	49.48
86.10	.87	140.20	.12	181.05	1.01	231.05	.38	443.05	9.32
91.10	.79	141.00	1.96	183.95	.15	242.05	.50	444.15	.23
92.00	.48								

MS data file header from : >B3115

Sample: DFTPP 50 NGS Operator: USER6 MS 11/24/86 14:16
Misc : 11/24/86CS 1 UL INJ
Sys. #: 2 MS model: 70 SW:HM rev.: CH ACS # : 0
Method file: DFTPPB Tuning file: M180N No. of extra records: 1
Source temp.: 0 Analyzer temp.: 275 Transfer line temp. : 0

Chromatographic temperatures : 120. 250. 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-4432/U-4442 Contractor Ecology & Environment Inc. Contract No. IL-3140

Instrument ID HP5970D Date 11-25-86 Time 1126

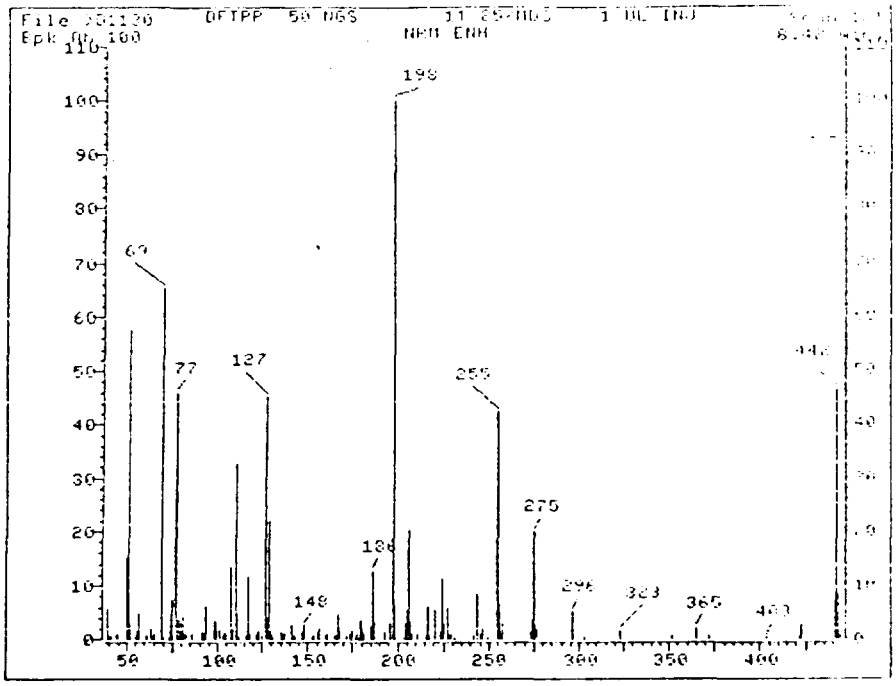
Lab ID D1130 Data Release Authorized By: C Stojowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	57.8
68	less than 2.0% of mass 69	0 (0)[1]
69	mass 69 relative abundance	65.3
70	less than 2.0% of mass 69	0.52 (0.80)[1]
127	40.0 - 60.0% of mass 198	45.1
197	less than 1.0% of mass 198	0
198	base peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.07
275	10.0 - 30.0% of mass 198	19.9
365	greater than 1.00% of mass 198	2.08
441	present, but less than mass 443	7.35
442	greater than 40.0% of mass 198	46.2
443	17.0 - 23.0% of mass 442	8.16 (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
–	AP STD - 50ng	D1132	11-25-86	1257
–	BN STD - 50ng	D1133		1402
DC-SD-15	9653	D1135		1616
DC-SD-21	9659	D1137		1801
DC-SD-23	9661	D1138		1936
DC-SD-27	9665	D1142		2320



>D1130 DFTPP 50 NGS 11/25/MDS 1 UL INJ
121 NRM ENH

File: >D1130 Scan #: 121 Retn. time: 8.42

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.85	1.01	83.05	.91	131.00	.59	181.00	.90	244.00	8.31
38.35	.87	85.05	.90	135.00	1.47	185.05	2.21	245.00	1.09
39.05	5.86	85.95	1.11	135.90	.63	186.05	12.70	246.00	1.84
40.05	.85	91.00	1.25	137.10	1.09	187.05	3.19	249.00	.48
43.95	1.04	91.90	.88	141.00	2.49	193.05	1.[illegible]	255.00	40.[illegible]
50.00	15.11	93.00	6.03	142.10	.86	196.05	3.01	256.00	[illegible]
51.00	57.84	98.00	3.54	142.90	.57	197.95	100.00	257.10	.50
52.00	2.68	99.00	3.38	146.95	1.44	198.95	[illegible]	258.00	[illegible]
55.00	.58	101.00	1.95	147.95	2.49	207.00	.[illegible]	273.05	1.30
56.10	1.67	103.00	.72	152.95	.64	204.05	7.10	275.95	[illegible]
57.00	4.88	104.10	1.40	153.95	.71	205.00	5.39	275.05	19.88
61.00	.84	105.10	1.12	155.05	1.34	206.00	20.23	276.05	[illegible]
62.00	.69	107.10	13.67	156.05	2.11	207.00	3.49	277.05	1.89
63.10	1.98	108.05	1.88	160.05	.74	208.10	.94	296.00	5.19
64.00	.46	110.05	32.71	161.05	1.17	211.00	.99	303.05	.49
65.10	.91	111.05	4.48	164.95	.86	216.10	.60	307.00	1.68
68.95	65.31	112.05	.48	166.10	.87	217.00	6.13	352.05	.58
70.05	.52	116.05	.84	167.00	4.70	218.10	.26	364.90	[illegible]
73.05	.54	117.05	11.45	168.10	2.06	221.00	5.51	372.00	.82
74.05	4.89	117.95	.89	172.00	.65	223.10	1.50	403.00	.38
74.95	7.59	122.05	1.07	174.00	1.17	224.05	11.40	421.95	.50
77.05	45.95	123.05	1.71	175.00	1.73	224.95	2.92	423.05	[illegible]
78.05	3.62	125.05	.79	176.10	.72	226.95	5.76	441.10	[illegible]
79.05	3.54	127.00	45.08	177.00	1.10	228.05	.[illegible]	442.00	[illegible]
80.05	2.92	128.00	3.94	178.00	.48	229.95	1.09	443.00	8.16
81.05	4.18	129.00	21.86	179.00	3.72	231.1[illegible]	.41	444.00	[illegible]
82.05	.95	130.00	1.63	180.10	1.93	242.05	.69		

MS data file header from : >D1130

Sample: DFTPP 50 NGS Operator: USER6 [illegible] 11/25/86 11:26
Misc : 11/25/MDS 1 UL INJ [illegible] 1
Sys. #: 1 MS model: 70 SW/HW [illegible]: [illegible]
Method file: DFTPPO Tuning file: [illegible] [illegible] records: 1
Source temp.: 0 Analyzer temp.: 275 [illegible] temp. : [illegible]

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

GC/MS TUNING AND MASS CALIBRATION

Decafluorotriphenylphosphine (DFTPP)

Case No. V-4432/V-4442 Contractor Ecology & Environment Inc. Contract No. IL-3140

Instrument ID HP5970B Date 12-1-86 Time 1011

Lab ID B3133 Data Release Authorized By: C Wojtowicz

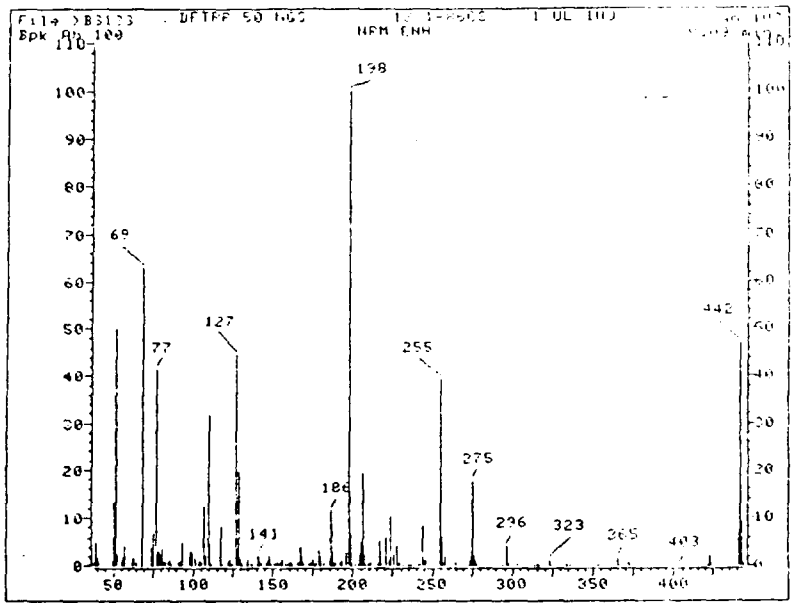
m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	50.0
68	less than 2.0% of mass 69	0 (0)[1]
69	mass 69 relative abundance	63.1
70	less than 2.0% of mass 69	0 (0)[1]
127	40.0 - 60.0% of mass 198	44.6
197	less than 1.0% of mass 198	0
198	base peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.61
275	10.0 - 30.0% of mass 198	17.8
365	greater than 1.00% of mass 198	1.59
441	present, but less than mass 443	7.04
442	greater than 40.0% of mass 198	46.7
443	17.0 - 23.0% of mass 442	9.11 (19.5)[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
-	AP STD-50 ng	B3134	12-1-86	1032
-	BN STD-50 ng	B3135		1128
DC-SD-24	9662	B3137		1341
DC-SD-25	9663	B3138		1432
DC-SD-28	9666	B3139		1523
DC-SD-31	9683	B3140		1620
DC-SD-32	9684	B3141		1722

FORM V



>B3133 DFTPP 50 NGS 12-1-86CS 1 UL INJ
103 NRM ENH

File: >B3133 Scan #: 103 Retn. time: 8.09

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
38.15	.63	107.00	12.21	160.05	.59	210.05	.38	276.00	2.18
39.15	5.04	108.00	1.92	160.95	.83	210.95	.60	277.00	1.02
40.05	1.54	110.00	31.68	161.95	.04	216.05	.39	278.00	.04
41.15	.87	111.00	4.42	164.95	.65	216.95	5.36	285.00	.05
49.15	1.04	112.10	.48	166.05	.57	217.95	.44	293.00	.05
50.05	13.14	117.00	8.17	166.95	3.93	221.05	5.82	296.00	4.19
51.15	50.04	118.10	.46	167.95	1.79	223.05	1.19	297.00	.54
52.00	2.47	122.10	.72	168.95	.27	224.05	10.37	303.00	.33
55.00	1.11	123.00	1.29	172.05	.30	225.05	2.54	314.00	.04
56.00	1.81	124.10	.53	173.05	.36	227.05	4.33	315.00	.40
57.00	4.19	125.10	.44	174.05	.71	228.05	.50	316.00	.05
62.10	.49	127.00	44.55	175.05	1.42	228.95	.69	323.00	1.14
63.10	1.68	128.10	3.47	176.15	.51	231.05	.05	324.00	.05
65.00	.74	129.00	19.66	177.05	.72	233.95	.04	327.00	.05
67.30	.03	130.10	1.25	178.95	3.37	234.95	.04	334.10	.54
69.00	63.13	131.10	.36	179.95	1.87	236.05	.03	335.10	.04
74.00	3.95	134.00	.39	181.05	.85	237.05	.05	345.90	.05
75.00	6.78	135.00	1.25	185.05	1.19	239.05	.03	352.10	.03
77.10	41.54	136.10	.49	186.05	11.60	241.05	.24	353.00	.05
78.10	2.88	137.10	.56	187.05	3.11	242.05	.39	354.00	.24
79.00	2.93	140.20	.22	188.15	.27	243.05	.09	364.95	1.59
80.00	2.21	141.10	2.12	189.05	.59	244.05	8.72	365.95	.06
81.00	3.56	142.10	.68	192.05	.76	245.05	1.02	371.95	.22
82.10	.74	143.10	.39	193.05	.89	246.05	1.28	372.85	.03
83.10	.83	146.00	.39	196.05	2.81	247.05	.21	382.95	.04
85.10	.59	147.00	.94	197.95	100.00	249.05	.24	401.95	.05
86.00	1.04	148.10	2.03	198.95	6.61	255.05	39.16	403.05	.09
87.10	.34	149.00	.40	200.05	.35	256.05	5.87	403.95	.04
91.10	.69	151.20	.27	201.55	.46	257.10	.30	421.05	.08
92.10	.63	151.70	.26	203.05	.47	258.00	2.09	422.05	.06
93.00	4.86	153.10	.65	204.05	2.52	259.00	.06	423.05	2.37
98.00	3.32	154.00	.47	205.05	4.94	265.00	.59	424.05	.37
99.00	2.87	155.05	.88	206.05	19.33	272.00	.03	441.05	7.04
101.00	1.70	156.05	1.42	207.05	2.72	273.00	1.13	442.05	46.73
103.00	.49	157.15	.35	207.95	.09	274.00	2.95	443.05	9.11
104.00	.94	157.95	.34	209.05	.03	275.00	17.76	444.05	.60
105.10	.87	159.05	.27						

MS data file header from : >B3133

Sample: DFTPP 50 NGS Operator: USER [illegible] 12-01-86 10:1[illegible]
Misc : 12-1-86CS 1 UL INJ
Sys. #: 2 MS model: [illegible] rev.: [illegible]
Method file: DFTPP0 Tuning file: MTB0[illegible] No. of extra records: 1
Source temp.: 0 Analyzer temp.: 275 [illegible] temp.: 0

Chromatographic temperatures : 120. [illegible]
Chromatographic times, min. : 0.0 [illegible]
Chromatographic rate, deg/min: 10.0 [illegible]

GC/MS TUNING AND MASS CALIBRATION
Decafluorotriphenylphosphine (DFTPP)

Case No. U-4432/U-4442 Contractor Ecology & Environment Inc. Contract No. IL-3140

Instrument ID HP5970D Date 12-12-86 Time 1222

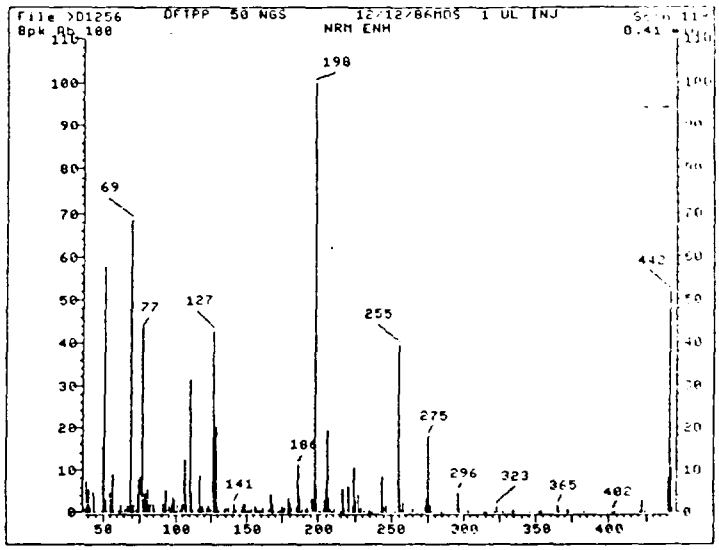
Lab ID D1256 Data Release Authorized By: C Stojtowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	57.7
68	less than 2.0% of mass 69	0 (0)[1]
69	mass 69 relative abundance	68.7
70	less than 2.0% of mass 69	1.21 (1.76)[1]
127	40.0 - 60.0% of mass 198	42.8
197	less than 1.0% of mass 198	0
198	base peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.58
275	10.0 - 30.0% of mass 198	18.1
365	greater than 1.00% of mass 198	1.82
441	present, but less than mass 443	8.25
442	greater than 40.0% of mass 198	51.9
443	17.0 - 23.0% of mass 442	10.3 (19.8)[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 - 50ng	D1257	12-12-86	1250
-	BN STD - 50ng	D1258		1351
DC-SD-36	9688	D1262		1800
DC-SD-19	9657	D1263		1913
DC-SD-34	9686	D1265		2120
DC-SD-35	9687	D1266		2213
DC-SD-22	9660	D1267		2307
DC-SD-33	9685	D1268	12-13-86	0000



>D1256 DFTPP 50 NGS 12/12/86MDS 1 UL INJ
119 NRM ENH

File: >D1256 Scan #: 119 Retn. time: 8.41

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.95	.75	97.20	2.00	151.85	.03	203.05	.59	275.05	18.09
39.05	7.35	98.00	3.64	152.95	.23	204.05	2.82	276.05	2.10
40.05	1.76	99.00	3.05	154.05	.52	205.00	5.01	277.05	1.54
41.05	5.66	100.00	.21	155.05	1.30	206.00	19.33	278.05	.03
42.05	.90	101.00	1.98	156.05	1.51	207.10	3.18	285.00	.03
43.15	4.92	103.10	.47	157.05	.33	208.00	.64	293.00	.04
44.05	3.53	104.00	1.12	157.95	.47	209.00	.04	296.00	4.60
45.05	.09	105.10	2.06	159.05	.31	210.30	.18	297.00	.66
49.15	.41	107.10	12.64	160.05	.53	211.00	.64	302.95	.50
50.10	15.30	108.05	1.90	161.05	1.19	215.10	.04	303.95	.02
51.00	57.71	110.05	31.57	162.05	.03	216.10	.06	314.15	.03
52.10	2.81	111.05	4.92	165.05	.77	217.00	5.38	314.95	.06
52.90	.46	112.05	.43	167.00	4.19	218.00	.59	316.05	.13
55.10	4.65	115.95	.80	168.00	2.09	221.00	6.09	321.00	.02
56.00	3.01	117.05	8.80	169.00	.33	223.00	1.42	322.20	.02
57.00	8.92	117.95	.45	170.80	.18	224.05	10.76	323.10	1.47
58.10	.25	119.15	1.47	171.10	.02	225.05	2.69	324.10	.03
61.10	.06	120.05	.03	172.10	.05	226.95	4.22	327.00	.05
62.10	.52	122.05	.60	173.00	.49	227.95	.26	327.90	.02
63.10	1.66	123.05	1.72	174.00	.23	228.95	.88	333.10	.02
64.00	.19	124.05	.83	175.00	1.32	231.05	.29	334.10	.85
65.10	.70	125.05	.84	176.00	.35	235.05	.26	335.00	.02
67.20	1.80	127.00	42.80	177.00	.98	237.05	.21	345.95	.15
68.95	68.72	128.00	3.46	178.10	.04	238.95	.02	352.05	.22
70.15	1.21	129.00	20.29	179.00	3.37	241.05	.24	353.15	.04
71.05	1.99	130.00	1.37	180.00	2.05	242.15	.02	354.05	.29
72.95	.63	131.00	.29	181.00	.90	243.10	.09	365.00	1.82
74.05	4.38	132.10	.02	184.10	.17	244.00	8.33	366.00	.19
75.05	8.52	134.00	.44	185.05	1.25	245.00	1.22	372.00	.69
77.05	43.64	135.10	1.15	186.05	11.45	246.00	1.55	373.10	.02
78.05	3.06	137.10	1.04	187.05	3.13	247.00	.22	382.95	.02
79.05	4.48	140.10	.22	188.05	.22	248.90	.04	402.10	.15
80.05	2.54	141.00	2.07	189.05	.66	252.00	.01	403.00	.04
81.05	5.39	142.10	.63	191.15	.52	253.00	.04	404.00	.02
82.05	1.69	143.00	.42	191.95	.90	255.00	39.56	420.95	.24
83.15	2.71	146.10	.30	193.05	.99	256.00	5.61	422.05	.27
85.05	1.97	146.95	1.39	194.05	.02	257.00	.35	423.05	2.81
86.05	.97	147.95	1.92	196.05	3.18	258.00	2.29	424.05	.49
91.00	1.84	149.05	1.85	197.95	100.00	259.00	.27	441.10	8.25
92.10	.82	149.95	.02	199.05	6.58	265.05	.79	442.00	51.87
93.00	5.26	150.15	.02	200.05	.35	273.05	1.21	443.00	10.32
95.10	1.73	151.15	.34	201.55	.42	274.05	3.34	444.00	.90
96.10	1.04								

MS data file header from : >D1256

Sample: DFTPP 50 NGS Operator: USER8 MS 12/12/86 12:22
Misc : 12/12/86MDS 1 UL INJ BTL# 1
Sys. #: 1 MS model: 70 SW/HW rev.: CA ALS # : 0
Method file: DFTPPD Tuning file: MTDON No. of extra records: 1
Source temp.: 0 Analyzer temp.: 275 Transfer line temp. : 20

Chromatographic temperatures : 120. 200. 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

Bromofluorobenzene (BFB)

Case No. U-4432/U-4442 Contractor Ecology & Environment Inc. Contract No. IC-3140

Instrument ID HP5995C Date 7-14-86 Time 1426

Lab ID C3498 Data Release Authorized By: C Zoytowicz

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

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

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

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

FORM V

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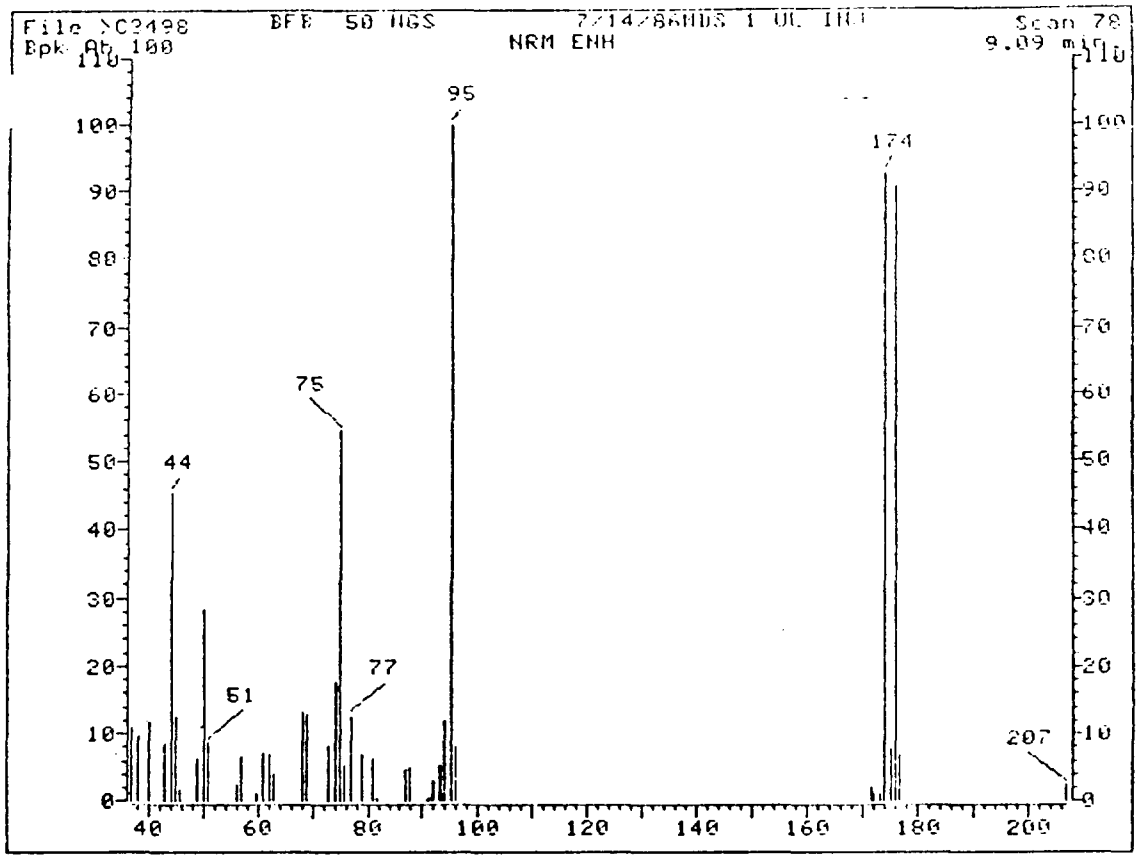

>C3498 BFB 50 NGS 7/14/86MDS 1 UL INJ
78 NRM ENH

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: USEPA 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: MTC04 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. V-4432/V-4442 Contractor Ecology & Environment Inc. Contract No. IL-3140

Instrument ID HP5995C Date 8-26-86 Time 2211

Lab ID C4684 Data Release Authorized By. C Wojtowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of the base peak	21.2
75	30.0 - 60.0% of the base peak	46.7
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of the base peak	7.15
173	Less than 1.0% of the base peak	None Present
174	Greater than 50.0% of the base peak	83.9
175	5.0 - 9.0% of mass 174	5.45 (6.50)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	84.6 (100.8)[1]
177	5.0 - 9.0% of mass 176	6.26 (7.40)[2]

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

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

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
—	VOA-STD-20 ug/L C4686	8-26-86	2334
—	VOA STD-50 ug/L C4687	8-27-86	0032
—	" 100 ug/L C4688		0131
—	" 150 ug/L C4689		0231
—	" 200 ug/L C4690		0332

FORM V

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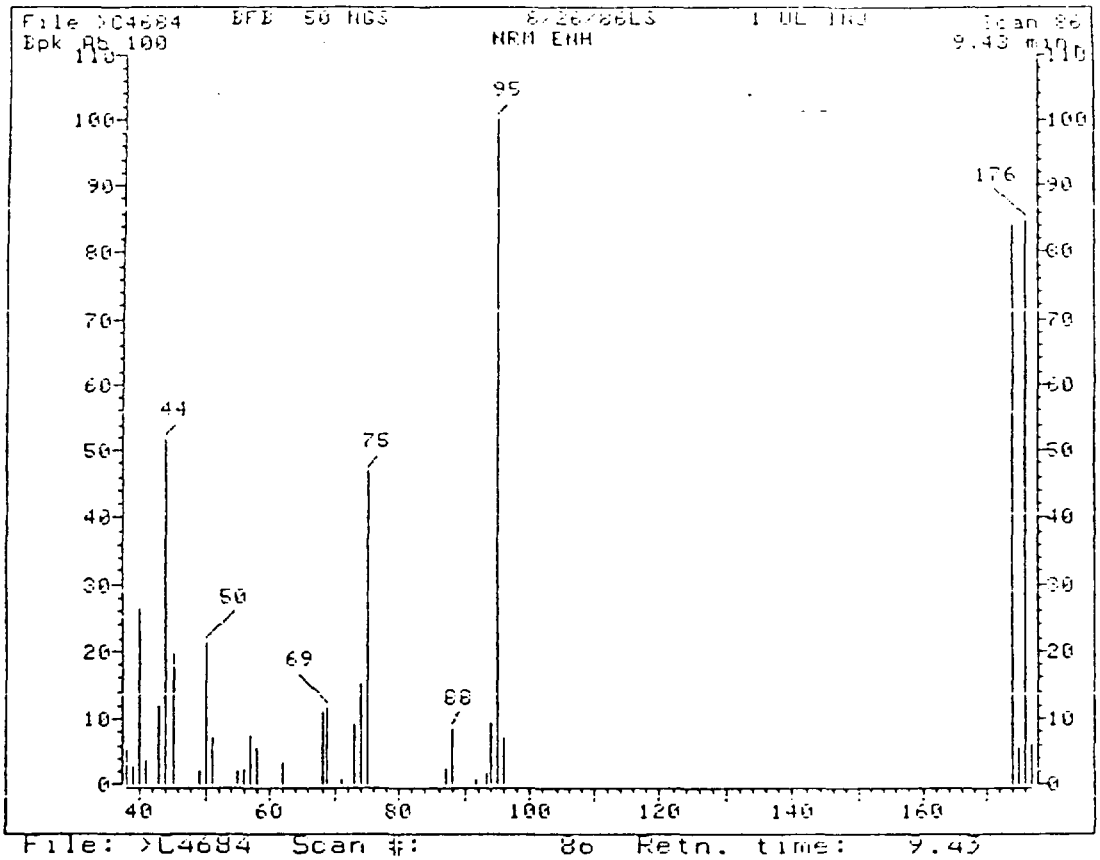
497095



m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
38.10	5.34	49.00	2.07	61.95	3.34	75.05	46.71	95.05	100.00
39.10	2.64	50.00	21.23	68.05	11.11	87.05	2.38	96.05	7.15
40.00	26.21	51.10	7.22	68.95	11.71	88.05	8.43	173.95	83.88
41.00	3.58	54.90	2.15	71.05	.79	91.85	.72	174.95	5.45
43.00	11.79	56.00	2.32	72.95	8.96	93.35	1.79	175.95	84.63
44.00	51.65	57.10	7.54	74.05	15.22	94.05	9.33	176.95	6.26
45.10	19.50	58.00	5.60						

MS data file header from : >C4684

Sample: BFB 50 NGS Operator: USER6 MS 8/26/86 22:11
Misc : 8/26/86LS 1 UL INJ
Sys. #: 1 MS model: 96 SW/HW rev.: CA ALS # : 0
Method file: BFB001 Tuning file: MTCU4 No. of extra records: 1
Source temp.: 200 Analyzer temp.: 220 Transfer line temp. : 200

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

GC/MS TUNING AND MASS CALIBRATION

Bromofluorobenzene (BFB)

Case No. U-4432/U-4442 Contractor Ecology & Environment Contract No. TL-3140

Instrument ID HP5995C Date 11-12-86 Time 15:29

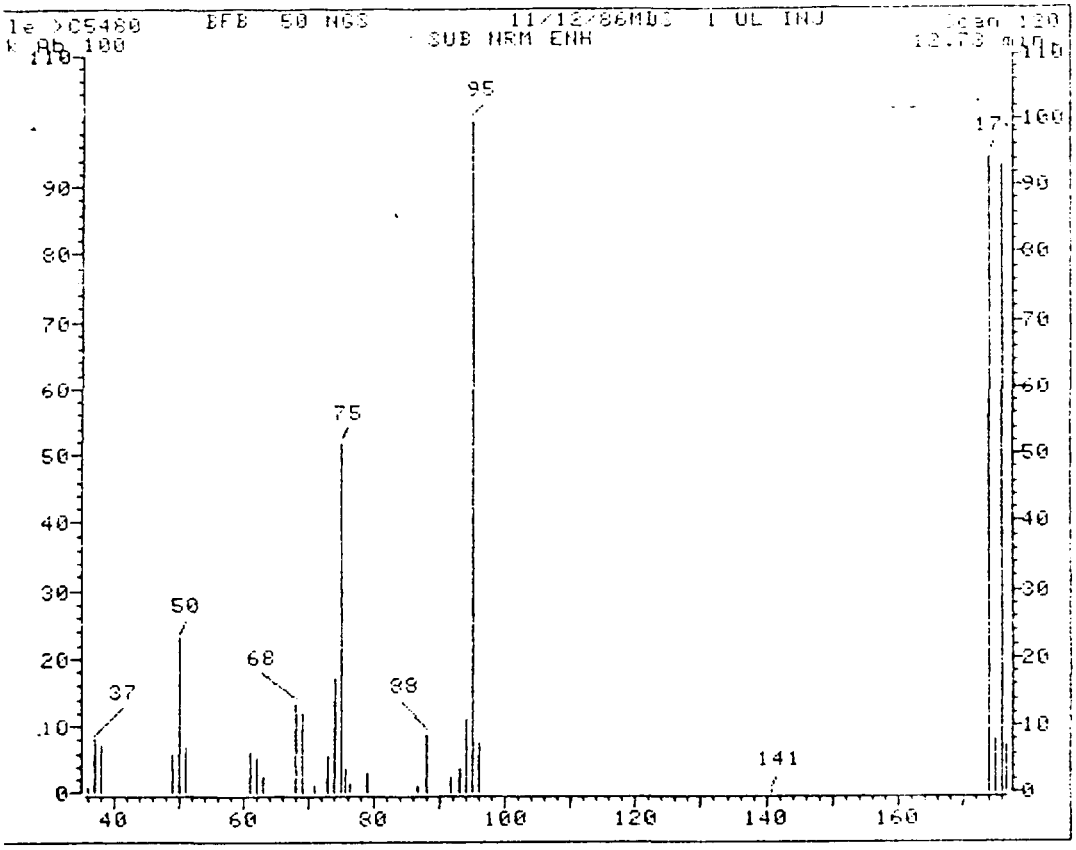
Lab ID C5480 Data Release Authorized By: C. Sojtowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of the base peak	23
75	30.0 - 60.0% of the base peak	52
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of the base peak	7.4
173	Less than 1.0% of the base peak	0
174	Greater than 50.0% of the base peak	94
175	5.0 - 9.0% of mass 174	8.2 (8.7)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	93 (99)[1]
177	5.0 - 9.0% of mass 176	7.2 (7.7)[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
	Calib Check C5481	11-12-86	16:01
BLK C5482	Method Blank C5482	11-12-86	17:14
DC-SD-14	9652 C5491	11-13-86	02:14



C5480 BFB 50 NGS 11/12/86MDS 1 UL INJ
120 SUB NRM ENH

ile: >C5480 Scan #: 120 Retn. time: 12.73

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
35.80	.74	61.00	6.30	72.95	5.59	86.75	1.19	95.95	7.36
36.00	.74	62.00	5.12	73.95	17.22	87.95	8.88	140.30	.37
36.90	8.00	63.10	2.32	74.95	51.68	91.75	2.19	173.95	94.29
37.90	7.00	68.00	13.23	75.75	3.73	93.05	3.58	175.05	8.19
49.00	5.72	69.00	11.78	76.25	1.49	94.05	10.96	175.95	93.03
50.00	23.12	70.90	1.12	78.95	2.98	95.05	100.00	176.35	7.16
51.00	6.73								

S data file header from : >C5480

ample: BFB 50 NGS Operator: USER8 MS 11 12/86 15:29
isc : 11/12/86MDS 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. U-4432/4442 Contractor Ecology & Environment Contract No. IL-3140

Instrument ID HP5995C Date 11-13-86 Time 12:19

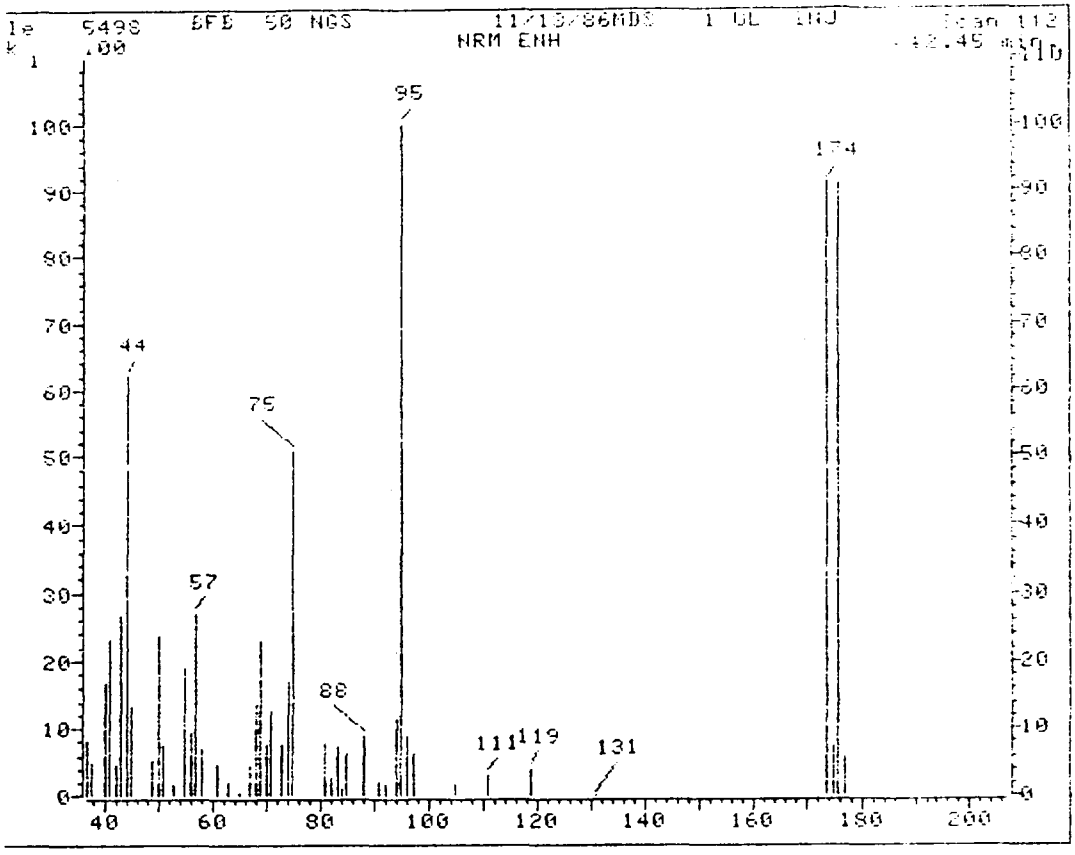
Lab ID C5498 Data Release Authorized By: C Stojtowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of the base peak	24
75	30.0 - 60.0% of the base peak	51
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of the base peak	8.9
173	Less than 1.0% of the base peak	0
174	Greater than 50.0% of the base peak	91
175	5.0 - 9.0% of mass 174	7.2 (7.9)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	91 (100)[1]
177	5.0 - 9.0% of mass 176	5.5 (6.1)[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
	Calib Check C5499	11-13-86	12:48
DC-SD-15	9653 C5505	11-13-86	18:42
	Method Blank C5510	11-14-86	00:10
DC-SD-13	9651 C5501	11-13-86	14:40



C5498 BFB 50 NGS 11/13/86MDS 1 UL INJ
112 NRM ENH

ile: >C5498 Scan #: 112 Retn. time: 12.45

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.00	7.95	50.90	7.48	68.00	13.44	84.05	1.19	111.15	3.03
37.90	4.93	53.10	1.61	69.00	23.28	85.05	6.19	118.85	3.98
40.00	16.76	55.10	18.95	70.10	7.52	88.05	8.74	119.15	.05
41.00	23.21	56.10	9.51	71.10	12.60	90.85	1.85	131.00	.03
42.00	4.53	57.10	27.09	72.95	7.32	92.05	1.74	173.95	91.22
43.10	26.68	58.10	6.69	73.95	16.91	94.05	11.25	174.95	7.16
44.00	62.07	61.00	4.52	75.05	50.74	95.05	100.00	175.95	90.87
45.10	13.30	62.90	2.00	80.85	7.75	96.05	8.85	176.95	5.53
48.90	5.28	65.10	.25	82.05	2.56	97.15	6.13	206.75	.02
50.00	23.74	67.00	4.48	83.15	7.22	105.15	1.59		

S ta file header from : >C5498

ample: BFB 50 NGS Operator: USER8 MS 11/13/86 12:19
isc : 11/13/86MDS 1 UL INJ
ys. #: 1 MS model: 96 SW/HW rev.: 3A MS # : 3
Method file: BFB001 Tuning file: MTDV4 No. of extra records: 1
Source temp.: 200 Analyzer temp.: 220 Transfer line temp. : 200

GC/MS TUNING AND MASS CALIBRATION

Bromofluorobenzene (BFB)

Case No. U-4432/4442 Contractor Ecology & Environ. Contract No. IL-3140

Instrument ID HP5995C Date 11-13-86 Time 20:38

Lab ID C5507 Data Release Authorized By: C Slytowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of the base peak	23
75	30.0 - 60.0% of the base peak	49
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of the base peak	8.8
173	Less than 1.0% of the base peak	0
174	Greater than 50.0% of the base peak	88
175	5.0 - 9.0% of mass 174	4.9 (5.5)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	89 (100)[1]
177	5.0 - 9.0% of mass 176	6.2 (7.0)[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 C5509	11-13-86	22:03
	MeOH Blank C5510	11-14-86	00:10
DC-SD-13-MS	9651 MS C5511	11-14-86	1:06
DC-SD-13-MSD	9651 MSD C5512	11-14-86	2:03
DC-SD-16	9654 C5513	11-14-86	2:59
DC-SD-17	9655 C5515	11-14-86	4:53
DC-SD-18	9656 C5516	11-14-86	5:50
DC-SD-19	9657 C5517	11-14-86	6:48

FORM V

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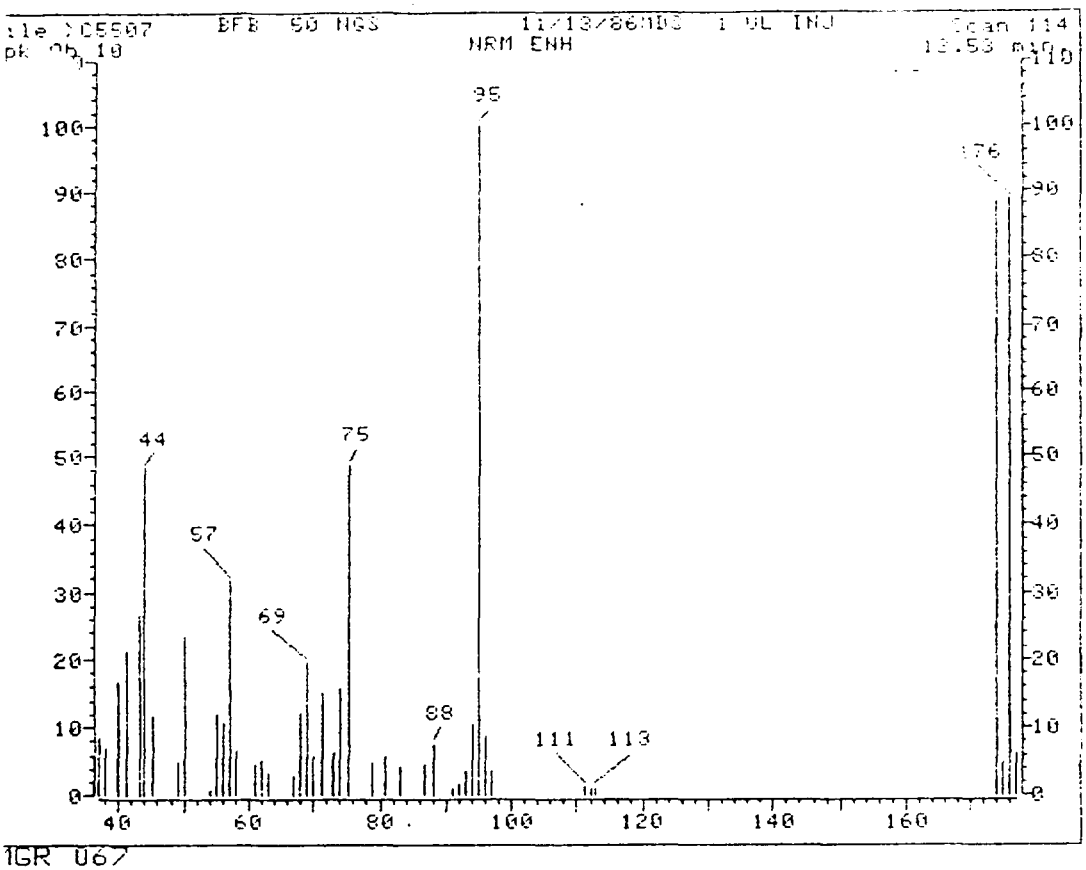
497095



IGR 067

>C5507 BFB 50 NGS 11/13/86MDS 1 UL INJ
114 NRM ENH

File: >C5507 Scan #: 114 Retn. time: 10.53

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.00	8.46	54.20	.68	68.00	12.15	83.05	4.35	96.95	3.75
38.00	6.77	55.00	11.86	69.10	19.50	86.75	4.47	111.05	1.31
40.00	16.77	56.10	10.65	70.00	5.90	88.05	7.54	112.15	1.19
41.10	21.21	57.00	31.76	71.10	15.22	91.15	1.13	112.95	1.17
43.10	26.81	58.00	6.57	73.05	6.29	92.05	1.70	173.95	88.34
44.00	48.29	61.00	4.42	73.95	15.91	92.95	3.63	174.95	4.87
45.10	11.63	61.90	5.20	75.05	48.70	93.95	10.43	175.85	88.67
49.00	4.74	63.00	3.32	78.95	4.83	95.05	100.00	176.75	6.24
50.10	23.31	67.00	3.12	80.95	5.77	96.05	8.84	176.95	1.30

MS data file header from : >C5507

Sample: BFB 50 NGS Operator: USEPA MS 11/13/86 20:38
Disc : 11/13/86MDS 1 UL INJ
Sys. #: 1 MS model: 96 SW/HW rev.: CR ADS # : 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-4432/4442 Contractor Ecology & Environ. Contract No IL-3140

Instrument ID HP5995C Date 11-14-86 Time 10:13

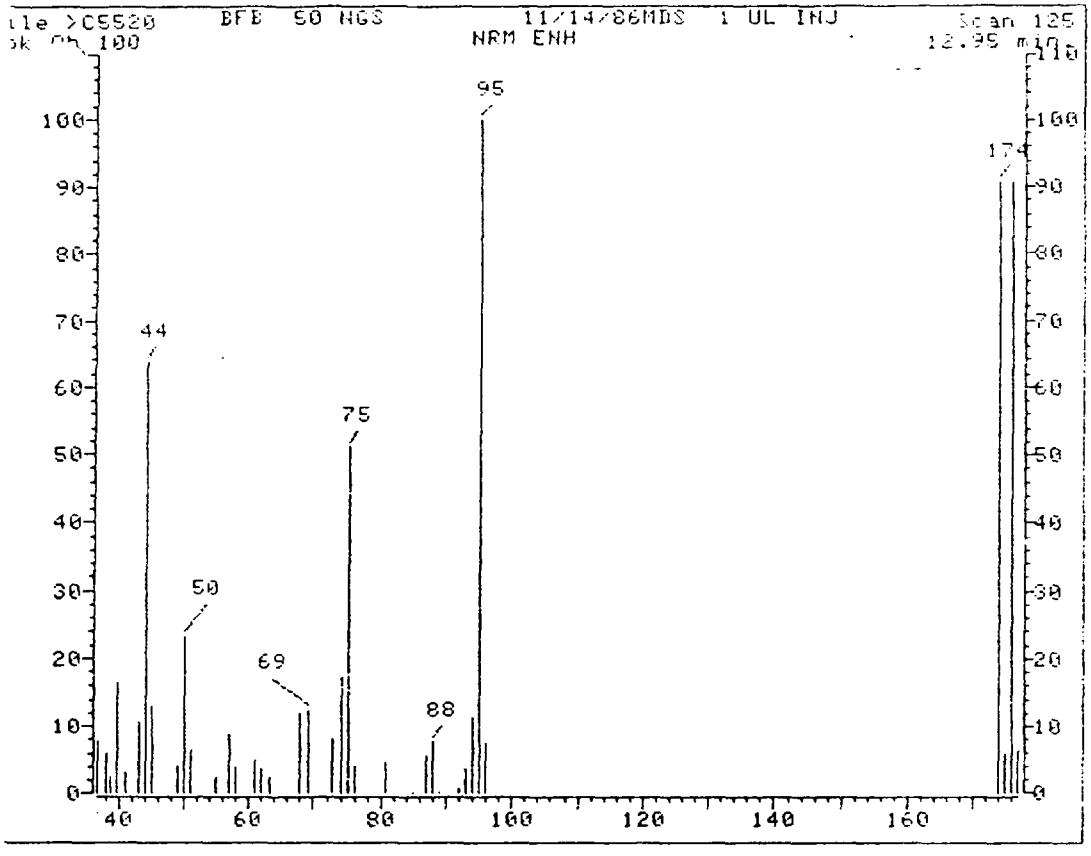
Lab ID >C5520 Data Release Authorized By: CStojtowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of the base peak	23
75	30.0 - 60.0% of the base peak	51
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of the base peak	7.3
173	Less than 1.0% of the base peak	0
174	Greater than 50.0% of the base peak	91
175	5.0 - 9.0% of mass 174	5.8 (6.3)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	91 (100)[1]
177	5.0 - 9.0% of mass 176	6.6 (7.3)[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	>C5521	11-14-86	10:45
DC-SD-20	9658	>C5524	11-14-86	14:14
DC-SD-21	9659	>C5525	11-14-86	15:09
DC-SD-22	9660	>C5526	11-14-86	16:06
BLK C5527	Method Blank	>C5527	11-14-86	17:01
DC-SD-23	9661	>C5528	11-14-86	17:56



C5520 BFB 50 NGS 11/14/86MDS 1 UL INJ
125 NRM ENH

ile: >C5520 Scan #: 125 Retn. time: 12.95

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.90	7.88	48.90	3.90	63.10	2.32	80.85	4.63	94.05	11.42
38.10	5.99	50.10	23.20	67.95	11.93	84.95	.22	95.05	100.00
38.90	2.40	51.00	6.61	69.05	12.37	87.05	5.61	96.05	7.31
39.90	16.32	55.00	2.40	72.95	8.19	88.05	7.71	173.95	90.86
41.10	2.99	57.10	8.82	74.05	17.43	88.95	.18	174.95	5.76
43.10	10.76	57.90	3.87	75.05	51.24	91.85	.61	175.95	90.71
44.00	63.73	61.00	5.02	76.05	3.78	93.05	3.45	176.95	6.61
45.10	12.85	62.00	3.60						

IS data file header from : >C5520

ample: BFB 50 NGS Operator: USER8 MS 11/14/86 10:13
isc : 11/14/86MDS 1 UL INJ
ys. #: 1 MS model: 96 SW/HW rev.: CA ALS # : 9
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-4432/U-4442 Contractor Ecology & Environment, Inc Contract No. IL-3140

Instrument ID HP5995C Date 11-17-86 Time 09:25

Lab ID >C5544 Data Release Authorized By: C Stojowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of the base peak	25
75	30.0 - 60.0% of the base peak	52
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of the base peak	5.3
173	Less than 1.0% of the base peak	0
174	Greater than 50.0% of the base peak	96
175	5.0 - 9.0% of mass 174	6.9 (7.2)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	96 (100)[1]
177	5.0 - 9.0% of mass 176	5.8 (6.0)[2]

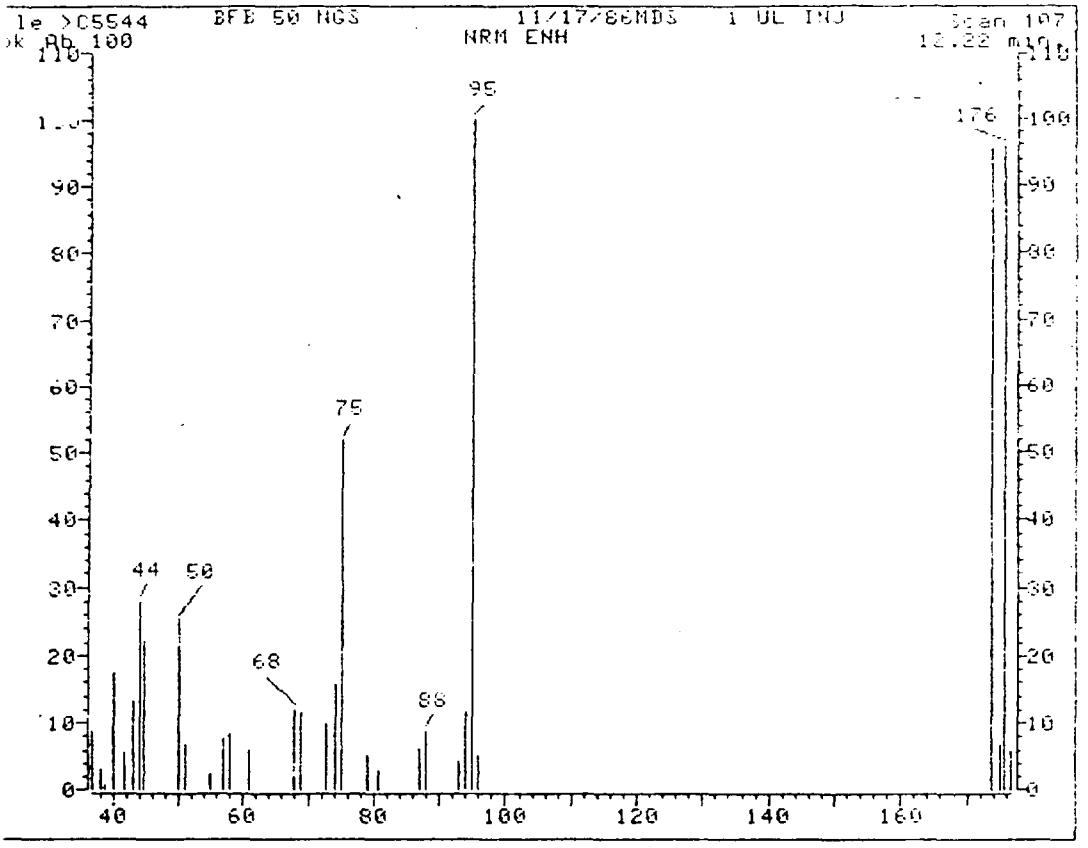
THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

[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 Calibr >C5545	11-17-86	09:58
BLK C5546	Method Blank >C5546	11-17-86	11:11
DC-SD-35	9687 >C5548	11-17-86	13:12
DC-SD-36	9688 >C5549	11-17-86	14:02
DC-SD-34	9686 >C5550	11-17-86	14:51

FORM V 7/85

497095



C5544 BFB 50 NGS 11/17/86MDS 1 UL INJ
107 NRM ENH

ile: >C5544 Scan #: 107 Retn. time: 12.22

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.90	8.81	44.90	22.23	60.80	5.89	78.95	5.08	94.95	100.00
38.00	2.92	49.90	25.35	67.95	12.08	80.65	3.02	95.95	5.25
38.90	.73	50.90	6.75	68.95	11.70	86.85	6.05	173.85	95.64
40.00	17.52	55.00	2.36	72.95	9.95	87.85	8.78	174.95	6.90
41.80	5.53	57.10	7.64	73.95	15.92	92.95	4.40	175.85	95.91
43.00	13.35	58.00	8.55	74.95	51.83	93.95	11.46	176.85	5.78
44.00	28.04								

S data file header from : >C5544

ample: BFB 50 NGS Operator: USER8 MS 11/17/86 9:29
isc : 11/17/86MDS 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. U-4432/4442 Contractor Ecology & Environ. Contract No IL-3140

Instrument ID HP5995C Date 11-14-86 Time 19:42

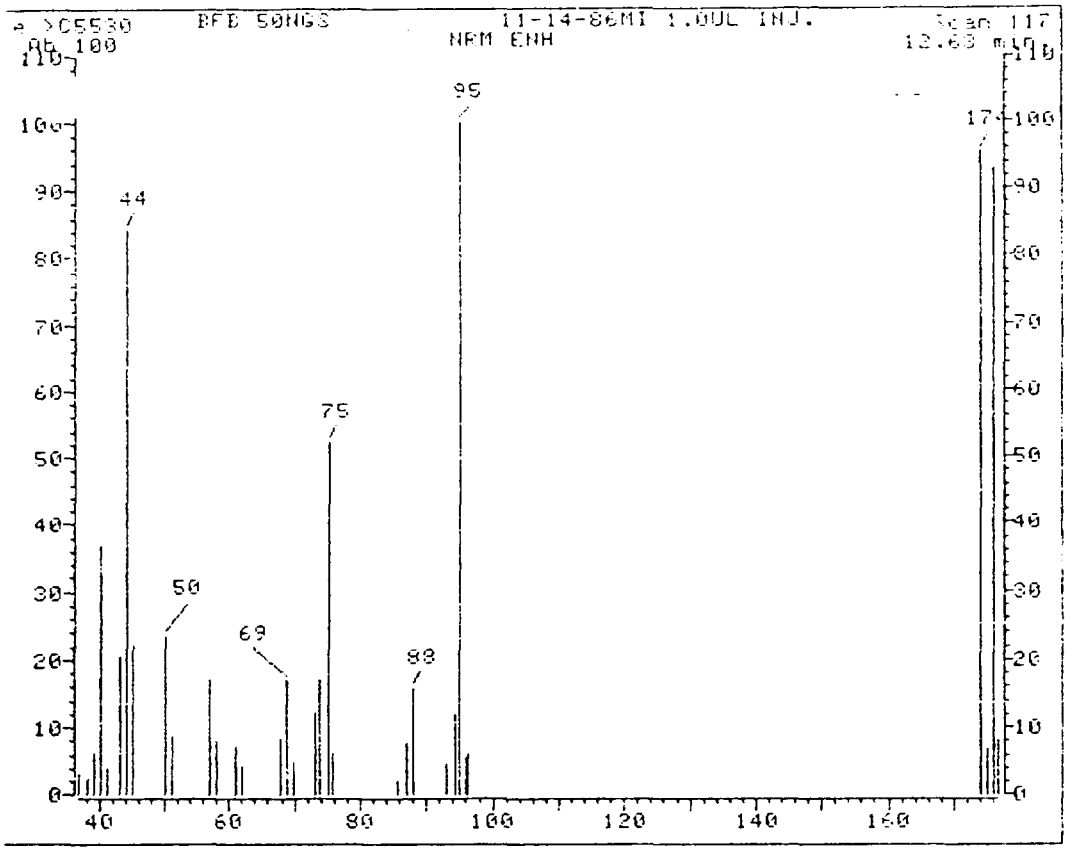
Lab ID >C5530 Data Release Authorized By: C Slojtowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of the base peak	24
75	30.0 - 60.0% of the base peak	52
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of the base peak	6.0
173	Less than 1.0% of the base peak	0
174	Greater than 50.0% of the base peak	95
175	5.0 - 9.0% of mass 174	6.7 (7.0)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	93 (97)[1]
177	5.0 - 9.0% of mass 176	8.2 (8.9)[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	>C5531	11-14-86	20:41
DC-SD-24	9662	>C5533	11-14-86	22:22
DC-SD-25	9663	>C5534	11-14-86	23:12
DC-SD-26	9664	>C5535	11-15-86	00:04
DC-SD-27	9665	>C5536	11-15-86	00:55
DC-SD-28	9666	>C5537	11-15-86	01:47
DC-SD-29	9667	>C5538	11-15-86	02:38
BLK C5539	Method Blank	>C5539	11-15-86	03:30
DC-SD-31	9683	>C5540	11-15-86	04:22
DC-SD-32	9684	>C5541	11-15-86	05:13
DC-SD-33	9685	>C5542	11-15-86	06:05



:5530 BFB 50NGS 11-14-86MI 1.0UL INJ.
117 NRM ENH

le: >C5530 Scan #: 117 Retn. time: 12.63

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.90	3.35	45.00	22.28	67.75	3.69	75.85	6.14	95.75	5.62
38.00	2.36	49.90	23.57	67.95	3.33	85.75	1.93	96.05	6.01
39.00	6.14	50.90	8.59	68.85	17.00	86.95	7.69	173.95	95.41
40.00	36.75	56.90	17.09	69.85	4.85	87.95	15.93	174.85	6.70
41.00	4.04	58.00	8.03	72.95	12.19	92.95	4.47	175.85	92.92
43.00	20.44	60.90	7.26	73.85	17.05	94.15	11.94	176.75	8.24
44.00	84.33	62.00	4.38	74.95	52.34	94.95	100.00		

3 data file header from : >C5530

ample: BFB 50NGS Operator: USER8 MS 11/14/86 19:42
.sc : 11-14-86MI 1.0UL INJ.
s. #: 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

SAMPLE DATA

481095

SAMPLE NUMBER DC-SD-13

481095

Sample Number
DC-SD-13

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment Case No: U-4432 / U-4442

Lab Sample ID No: 9651 QC Report No:

Sample Matrix: Soil Contract No: IL-3140

Data Release Authorized By: C Stoytowicz Date Sample Received: 11-6-86

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-13-86

Conc./Dil Factor: 2 pH 7.2

Percent Moisture: (Not Decanted) 48

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	4000u
74-83-9	Bromomethane	4000u
75-01-4	Vinyl Chloride	4000u
75-00-3	Chloroethane	4000u
75-09-2	Methylene Chloride	11000 B
67-64-1	Acetone	15000 B
75-15-0	Carbon Disulfide	2000u
75-35-4	1, 1-Dichloroethene	2000u
75-34-3	1, 1-Dichloroethane	2000u
156-60-5	Trans-1, 2-Dichloroethene	2000u
67-66-3	Chloroform	2000u
107-06-2	1, 2-Dichloroethane	2000u
78-93-3	2-Butanone	21000 B
71-55-6	1, 1, 1-Trichloroethane	2000u
56-23-5	Carbon Tetrachloride	2000u
108-05-4	Vinyl Acetate	4000u
75-27-4	Bromodichloromethane	2000u

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

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.

5

aboratory Name ecology and environment, inc.

ase No: U-4432 / U-4442

Sample Number
DC-SD-L3

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

oncentration: (Low) Medium (Circle One)

ate Extracted/Prepared: 11-11-86

ate Analyzed: 11-24-86

onc/Dil Factor: 50

ercent Moisture (Decanted) 48

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	17000	U
11-44-4	bis(-2-Chloroethyl)Ether	17000	U
5-57-8	2-Chlorophenol	17000	U
41-73-1	1 3-Dichlorobenzene	17000	U
06-46-7	1, 4-Dichlorobenzene	17000	U
00-51-6	Benzyl Alcohol	17000	U
5-50-1	1 2-Dichlorobenzene	17000	U
5-48-7	2-Methylphenol	17000	U
9638-32-9	bis(2-chloroisopropyl)Ether	17000	U
06-44-5	4-Methylphenol	17000	U
21-64-7	N-Nitroso-Di-n-Propylamine	17000	U
7-72-1	Hexachloroethane	17000	U
8-95-3	Nitrobenzene	17000	U
8-59-1	Isophorone	17000	U
8-75-5	2-Nitrophenol	17000	U
05-67-9	2, 4-Dimethylphenol	17000	U
5-85-0	Benzoic Acid	83000	U
11-91-1	bis(-2-Chloroethoxy)Methane	17000	U
20-83-2	2, 4-Dichlorophenol	17000	U
20-82-1	1, 2, 4-Trichlorobenzene	17000	U
1-20-3	Naphthalene	400	J
06-47-8	4-Chloroaniline	17000	U
7-68-3	Hexachlorobutadiene	17000	U
3-50-7	4-Chloro-3-Methylphenol	17000	U
1-57-6	2-Methylnaphthalene	17000	U
7-47-4	Hexachlorocyclopentadiene	17000	U
3-06-2	2 4 6-Trichlorophenol	17000	U
5 95-4	2, 4 5-Trichlorophenol	83000	U
7	2-Chloronaphthalene	17000	U
3-74-4	2-Nitroaniline	83000	U
31-11-3	Dimethyl Phthalate	17000	U
08-96-8	Acenaphthylene	17000	U
9-09-2	3-Nitroaniline	83000	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	17000	U
51-28-5	2, 4-Dinitrophenol	83000	U
100-02-7	4-Nitrophenol	83000	U
132-64-9	Dibenzofuran	17000	U
121-14-2	2 4-Dinitrotoluene	17000	U
606-20-2	2 6-Dinitrotoluene	17000	U
84-66-2	Diethylphthalate	17000	U
7005-72-3	4-Chlorophenyl-phenylether	17000	U
86-73-7	Fluorene	17000	U
100-01-6	4-Nitroaniline	83000	U
534-52-1	4, 6-Dinitro-2-Methylphenol	83000	U
86-30-6	N-Nitrosodiphenylamine (1)	17000	U
101-55-3	4-Bromophenyl-phenylether	17000	U
118-74-1	Hexachlorobenzene	17000	U
87-86-5	Pentachlorophenol	83000	U
85-01-8	Phenanthrene	17000	U
120-12-7	Anthracene	17000	U
84-74-2	Di-n-Butylphthalate	17000	U
206-44-0	Fluoranthene	17000	U
129-00-0	Pyrene	17000	U
85-68-7	Butylbenzylphthalate	17000	U
91-94-1	3 3'-Dichlorobenzidine	34000	U
56-55-3	Benzo(a)Anthracene	17000	U
117-81-7	bis(2-Ethylhexyl)Phthalate	9900	J
218-01-9	Chrysene	17000	U
117-84-0	Di-n-Octyl Phthalate	17000	U
205-99-2	Benzo(b)Fluoranthene	17000	U
207-08-9	Benzo(k)Fluoranthene	720	J
50-32-8	Benzo(a)Pyrene	1100	J
193-39-5	Indeno(1 2 3-cd)Pyrene	17000	U
53-70-3	Dibenzo(a h)Anthracene	17000	U
191-24-2	Benzo(g h i)Perylene	17000	U

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No U-4432 / U-4442

Sample Number
DC-SD-13

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-11-86

Date Analyzed 11-18-86

Conc/Dil Factor 50

Percent Moisture (decanted) 47.5

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	8000 u
53494-70-5	Endrin Ketone	1600 u
57-74-9	Chlordane	8000 u
8001-35-2	Toxaphene	16,000 u
12674-11-2	Aroclor-1016	8000 u
11104-28-2	Aroclor-1221	8000 u
11141-16-5	Aroclor-1232	8000 u
53469-21-9	Aroclor-1242	8000 u
12672-29-6	Aroclor-1248	8000 u
11097-69-1	Aroclor-1254	16000 u
11096-82-5	Aroclor-1260	10,300 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

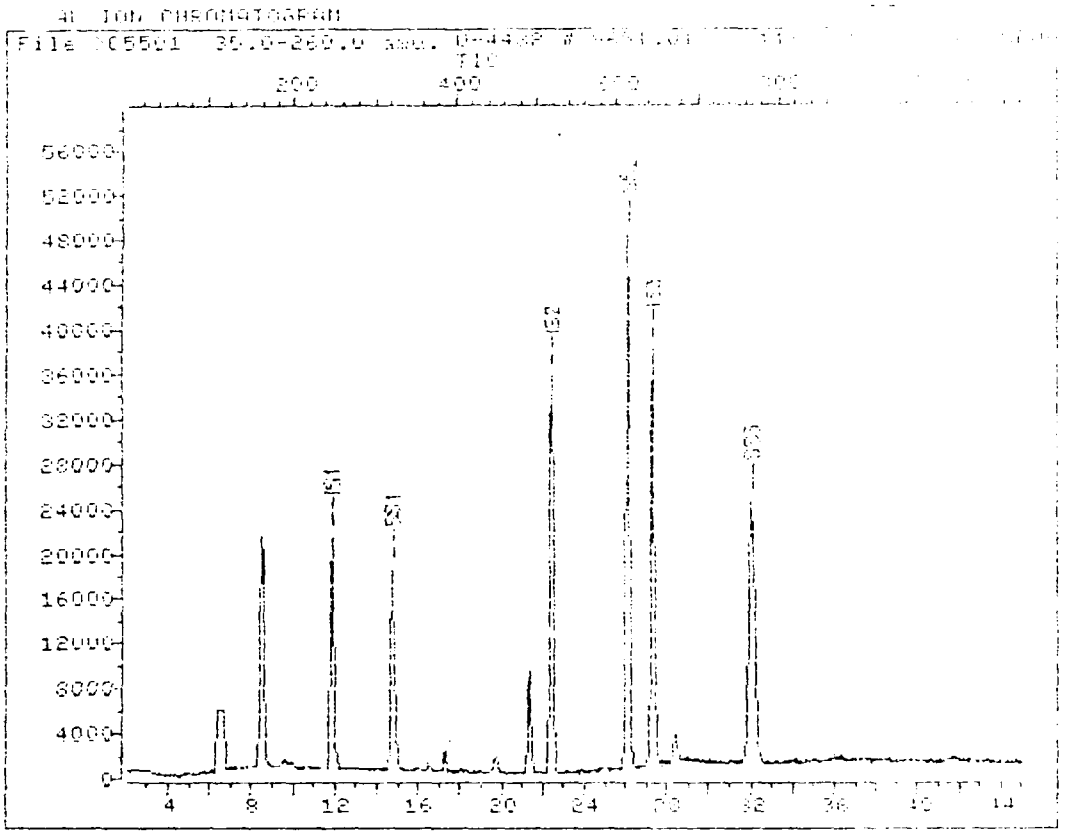
Case No U-4432 / U-4442

Sample Number DC-SD-13

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.3 min	820 BJ
2.	Unknown ketone	VOA	19.1 min	1400 J
3.	Hexane isomer	VOA	21.4 min	2900 BJ
4.	Unknown	VOA	28.4 min	990 J
5.				
6.	UNKNOWN	BNA	22.2	14000 J
7.	UNKNOWN		22.7	28000 J
8.	TETRAMETHYL BUTYL PHENOL ISOMER		22.8	66000 J
9.	NONYL PHENOL ISOMER		22.9	44000 J
10.	NONYL PHENOL ISOMER		23.1	18000 J
11.	TETRAMETHYL BUTYL PHENOL ISOMER		23.2	27000 J
12.	UNKNOWN		23.3	19000 J
13.	UNKNOWN PHTHALATE		23.4	23000 J
14.	DIMETHYL ETHYL PHENOL ISOMER		23.5	31000 J
15.	UNKNOWN PHTHALATE		23.6	22000 J
16.	UNKNOWN HYDROCARBON		24.2	9800 J
17.	UNKNOWN LONG-CHAIN HYDROCARBON ACID		26.3	26000 J
18.	UNKNOWN		28.5	12000 J
19.	UNKNOWN LONG CHAIN HYDROCARBON ACID		28.7	12000 J
20.	UNKNOWN		37.9	7900 J
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30				



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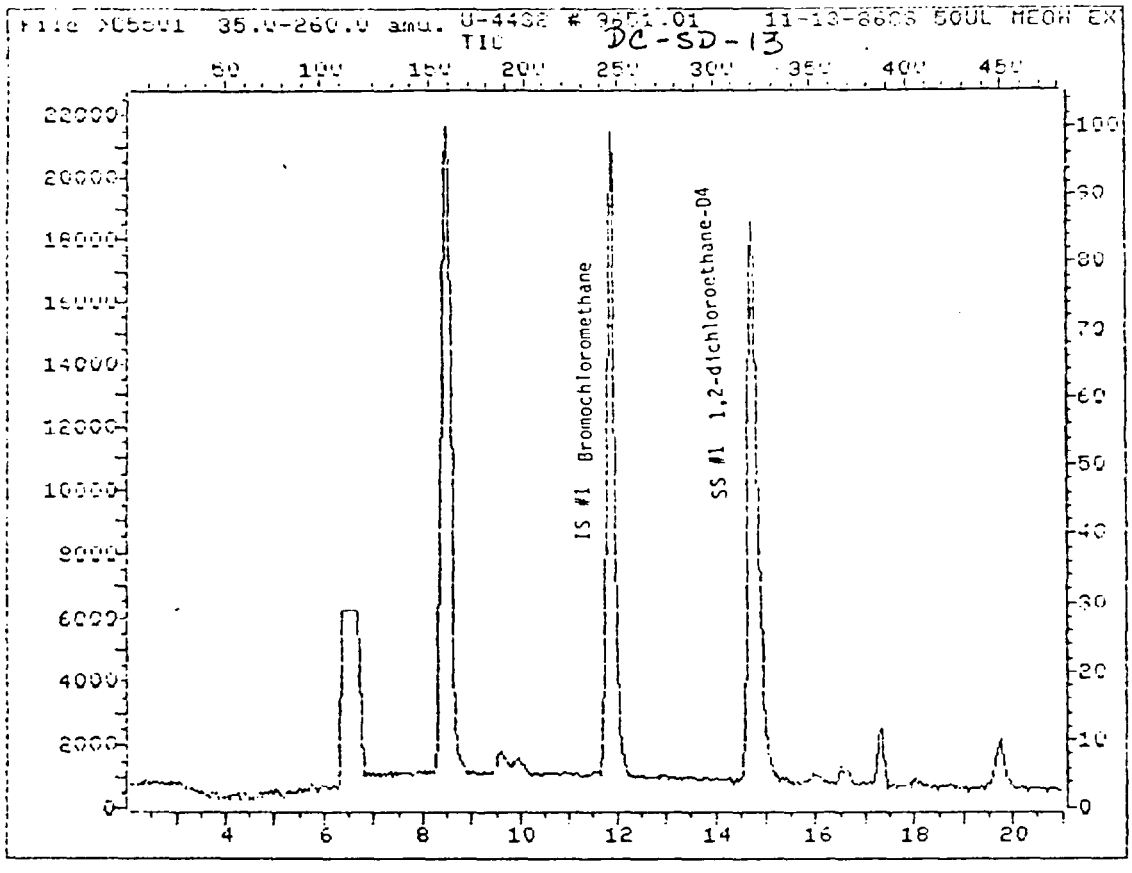
Misc: 11-13-86DS 500UL METHA

Id File: VOAUR::U2
Title: VOA ID FILE FOR
Last Calibration: 861113

Operator ID: USER8
Quant Time: 861113 15:26
Injected at: 861113 14:40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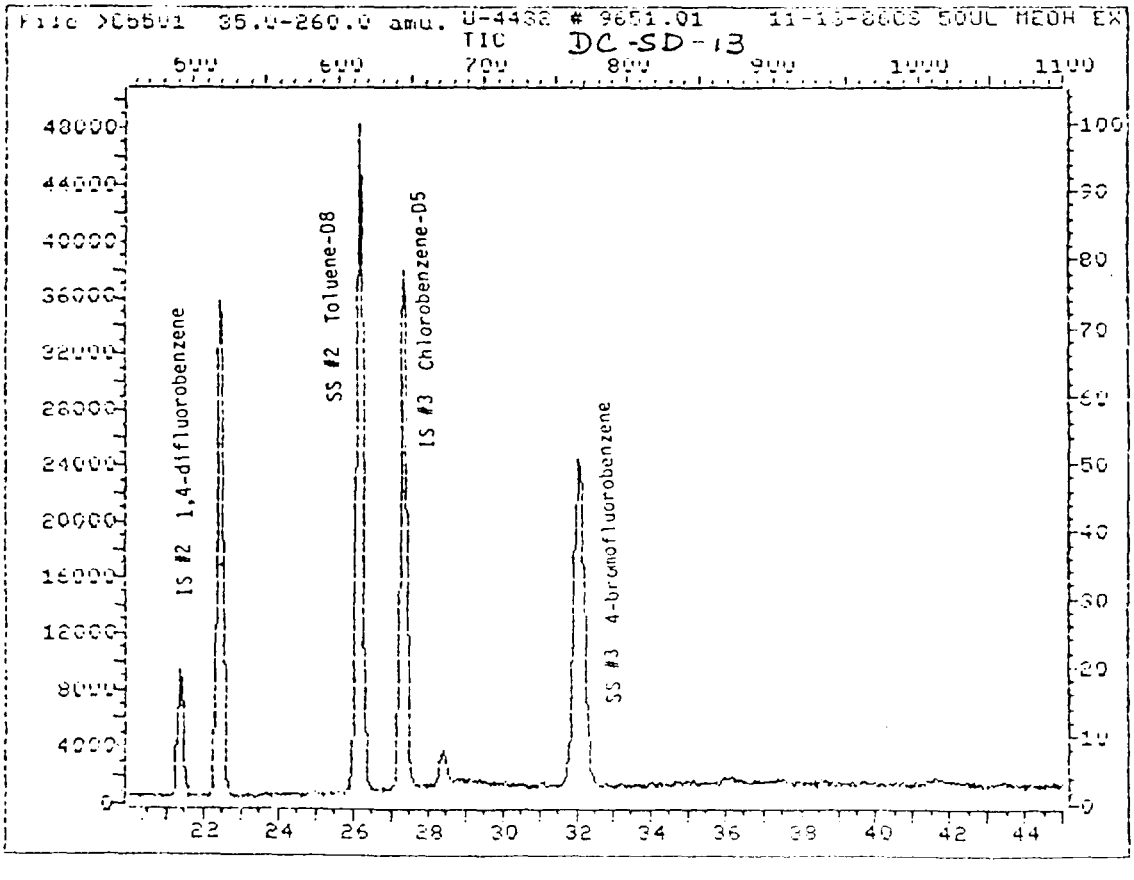
TIC
DC-SD-13
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File >C6501 35.0-260.0 amu. U-4438 # 9651.01 11-13-8605 50UL MEOH EX
TIC
DC-SD-13
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

[illegible] REPORT

erator ID: USER8 Quant Rev: 4 Int Time: [illegible]
tput File: ^C5501::D2 Screen Off: [illegible]
ata File: >C5501::D4 Dilution Factor: 1.00
ame: U-4432 # 9651.01 DC-SD-13
ise: 11-13-86CS 50UL MEOH EXT (4.296-100L) IN [illegible] - 100

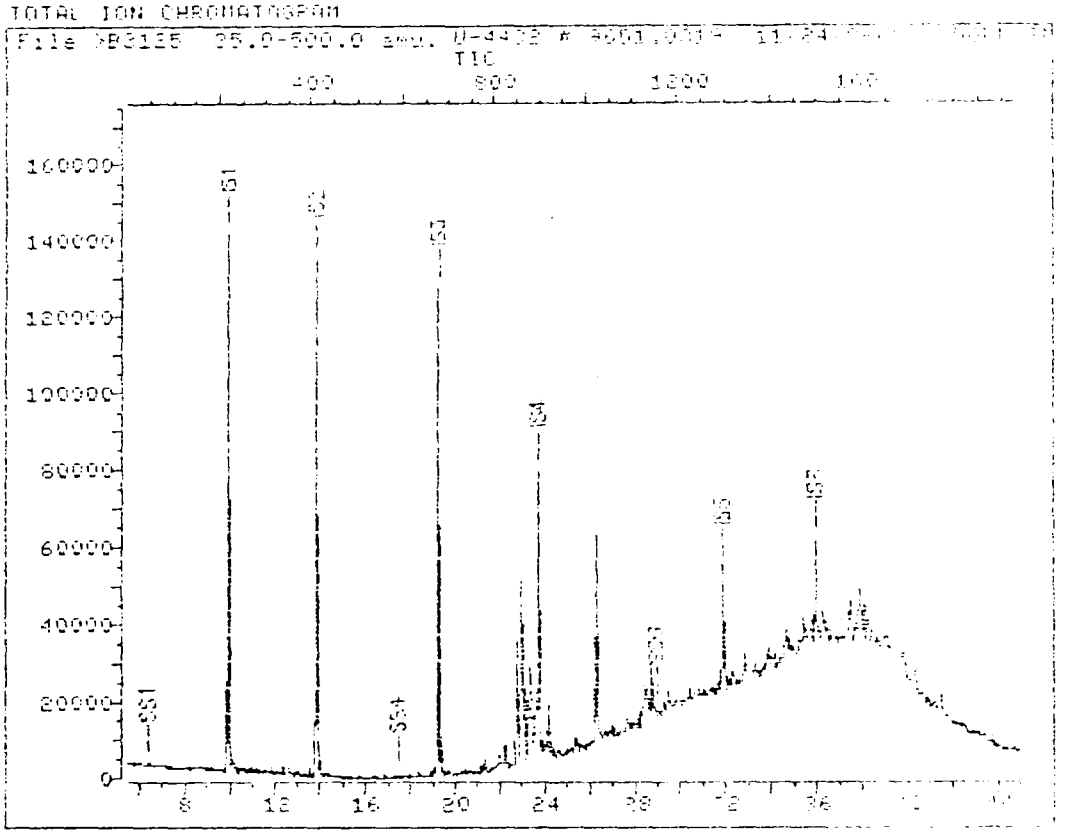
) File: VOACR::D2
itle: VOA ID FILE FOR HP-5995 (CONT. VOL.)
est Calibration: 86l113 13:39

	Compound		m/e	R.T.	Scans	Area	Conc	Qual	S
1)	*BROMOCHLOROMETHANE	(IS)	128	11.27	[illegible]	[illegible]	[illegible]	[illegible]	100
6)	METHYLENE CHLORIDE		84	8.50	[illegible]	[illegible]	14.52	[illegible]	100
7)	ACETONE		[illegible]	[illegible]	[illegible]	[illegible]	37.59	[illegible]	100
7)	~~ACETONE~~		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
5)	1,2-DICHLOROETHANE-D4(SURR)		65	14.74	[illegible]	[illegible]	[illegible]	[illegible]	98
3)	*1,4-DIFLUOROBENZENE	(IS)	114	22.[illegible]	[illegible]	[illegible]	50.00	[illegible]	100
7)	2-BUTANONE		[illegible]	14.85	[illegible]	[illegible]	[illegible]	[illegible]	100
1)	*CHLOROBENZENE-D5	(IS)	117	22.[illegible]	[illegible]	[illegible]	50.00	[illegible]	100
5)	TOLUENE-D8	(SURR)	98	25.14	[illegible]	[illegible]	[illegible]	[illegible]	96
1)	4-BROMOFLUOROBENZENE	(SURR)	95	32.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100

* Compound is ISTD

µ eq

TOTAL ION CHROMATOGRAM



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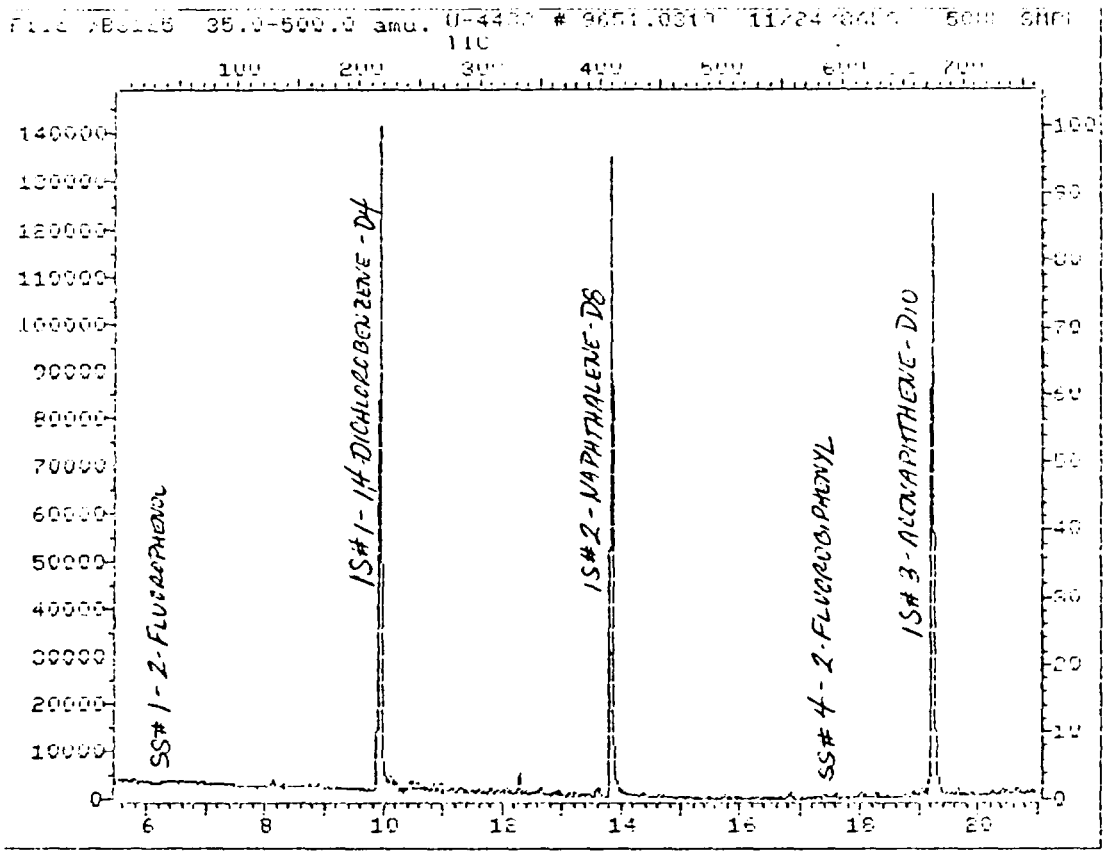
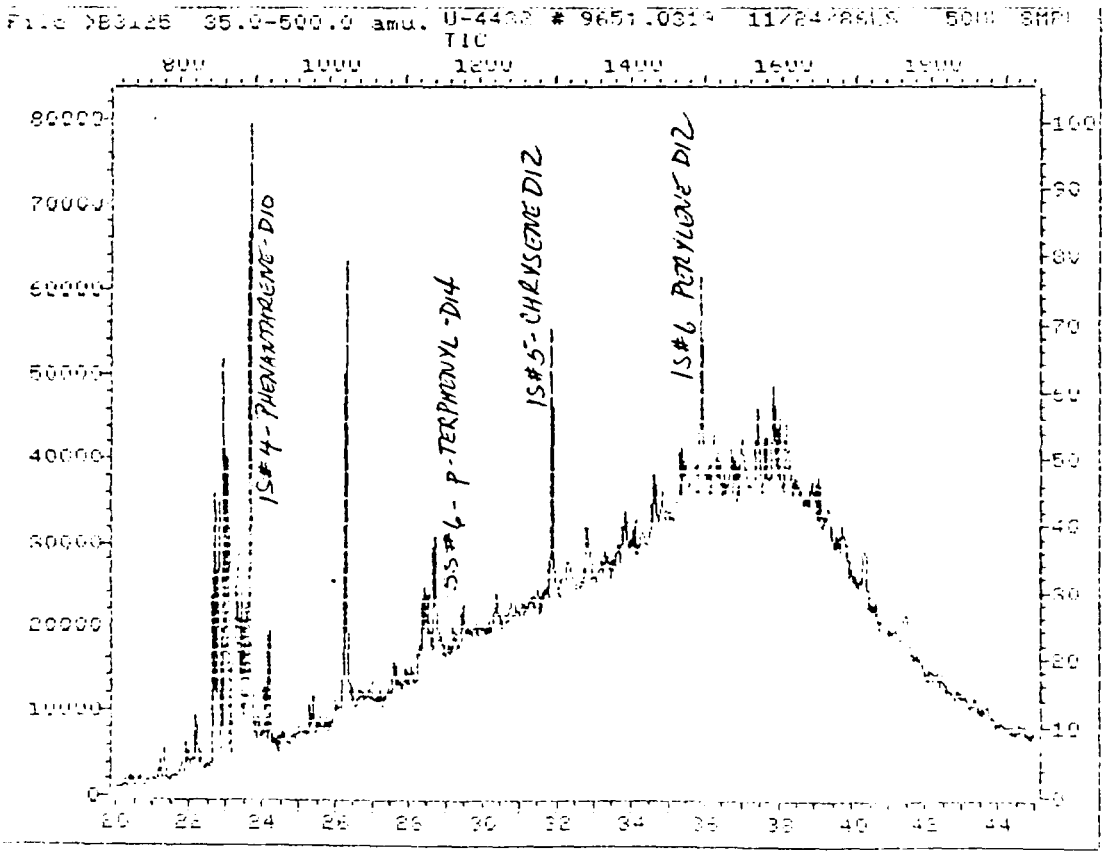
Misc: 11/24/86LS 50ML 50ML

Id File: BNA-HP::02
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861124 18:09

Operator ID: USEPA
Quant Time: 861125 00:00
Injected at: 861124 23:12

DC-SD-13


File DB3125 35.0-500.0 amu. U-4430 # 9651.0319 11/24/86 50% SMPL
TIC
SS# 1 - 2-FLUORPHENOL
IS#1 - 1,4-DICHLOROBENZENE - D4
IS#2 - NAPHTHALENE-D8
SS# 4 - 2-FLUOROBIPHENYL
IS# 3 - ACENAPHTHENE - D10


File DB3125 35.0-500.0 amu. U-4430 # 9651.0319 11/24/86 50% SMPL
TIC
IS# 4 - PHENANTHRENE-D10
SS#6 - P-TERPHENYL-D14
IS#5 - CHRYSENE D12
IS#6 PERYLENE D12

QUANT REPORT

Operator ID: USER6 Quant Per: 4 Report Time: 861124 00:00
Output File: 083125::U2 Injected at: 861124 23:12
Data File: 083125::U4 Dilution Factor: 10.00
Name: U-4432 # 9651.0719 DC-SD-13
Misc: 11/24/86LS 500UL SMPL + 4900UL DELUX + 100 IS Final volume = 5.0 ml

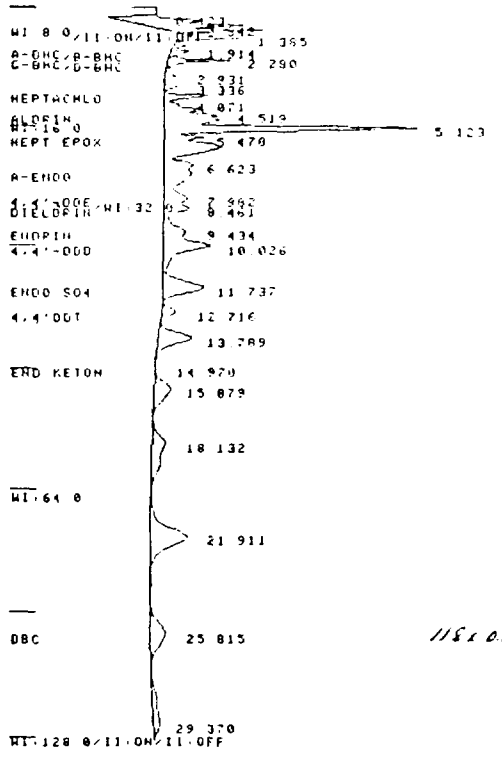
ID File: BNAHP::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861124 18:05

	Compound		M/E	R.T.	Area	Area	Conc	Units	Q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.91	217	57044	40.00	UG/L	89
5)	2-FLUOROPHENOL	(SUPR)	112	6.36	42	445	1.74	UG/L	96
19)	*NAPHTHALENE-D8	(IS)	136	13.84	470	198099	40.00	UG/L	100
29)	NAPHTHALENE		128	13.88	412	496	1.16	UG/L	100
34)	*ACENAPHTHENE-D10	(IS)	162	19.22	[illegible]	[illegible]	40.00	UG/L	98
38)	2-FLUOROBIPHENYL	(SUPR)	172	17.41	[illegible]	1642	5.01	UG/L	98
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.22~~	[illegible]	[illegible]	[illegible]	~~UG/L~~	~~100~~
~~44)~~	~~2,6 DINITROTOLUENE~~		~~165~~	~~19.44~~	[illegible]	[illegible]	[illegible]	~~UG/L~~	~~100~~
								No GC/MS	
55)	*PHENANTHRENE-D10	(IS)	188	23.68	894	93821	40.00	UG/L	97
65)	*CHRYSENE-D12	(IS)	240	31.83	1294	50014	40.00	UG/L	100
68)	TERPHENYL-D14	(SUPR)	244	28.89	1178	546	5.38	UG/L	100
72)	BIS(2-ETHYLHEXYL)PHTHALATE		149	32.81	[illegible]	[illegible]	18.14	UG/L	95
74)	*PERYLENE-D12	(IS)	264	35.91	1494	28498	40.00	UG/L	100
~~75)~~	~~DI-N-BUTYL PHTHALATE~~		~~149~~	~~14.12~~	[illegible]	[illegible]	[illegible]	~~UG/L~~	~~100~~
~~76)~~	~~BUTYL BENZYL PHTHALATE~~		~~149~~	~~[illegible].20~~	[illegible]	[illegible]	[illegible]	~~UG/L~~	~~100~~
								No GC/MS	
75)	DI-N-OCTYL PHTHALATE		149	34.63	1442	11440	7.29	UG/L	100
~~76)~~	~~DI-N-BUTYL PHTHALATE~~		~~149~~	~~[illegible]~~	[illegible]	[illegible]	[illegible]	~~UG/L~~	~~100~~
~~77)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~[illegible].42~~	[illegible]	[illegible]	[illegible]	~~UG/L~~	~~100~~
~~78)~~	~~BENZO(B)FLUORANTHENE~~		~~252~~	~~34.99~~	[illegible]	[illegible]	[illegible]	~~UG/L~~	~~100~~
								No GC/MS	
77)	BENZO(K)FLUORANTHENE		252	34.99	1424	1952	1.86	UG/L	100
78)	BENZO(A)PYRENE		252	35.65	1401	3097	1.14	UG/L	100

* Compound is ISTD

Phenol ds
Nitrobenzene ds
2,4,6 Tribromophenol
} DILUTED OUT

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



118 x 0.00137 x 1/0.757 kg x 50,000 = 10,300 ng/kg 1260

RECALCULATE ON FILE: SLY452

CHANNEL: 1A - 1 TITLE: RUN: 17 23:23 18 NOV 86

DC-SD-13

SAMPLE: 9651.03.19A1 METHOD: DAVE CALCULATED BY: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	WIDTH (SEC)
1		0.0000	1.385		[illegible]	BV	3.69
2	~~C-BHC~~	144.2325	2.260	-0.100	[illegible]	VV	5.19
3	~~HEPTACHLO~~	231.1384	3.727	-0.063	[illegible]	VV	10.19
4		0.0000	4.272		[illegible]	VV	? 11.44
5		0.0000	4.519		[illegible]	VV	? 12.94
6	~~ALDRIN~~	320.2595	4.723	0.053	[illegible]	VV	? 21.88
7		0.0000	5.123		[illegible]	VV	10.88
8		0.0000	5.478		[illegible]	VV	? 12.94
9	~~HEPT EPOX~~	648.8925	5.550	0.180	[illegible]	VV	23.13
10		0.0000	6.623		[illegible]	VV	? 23.56
11	~~A-ENDO~~	421.4399	6.934	-0.095	[illegible]	VV	? 53.75
12	~~4,4'-DDE~~	265.6170	7.982	-0.108	[illegible]	VV	? 34.44
13	~~DIELDRIN~~	264.2299	8.461	0.271	[illegible]	VV	? 29.69
14	~~B-ENDO~~	293.1222	9.434	0.124	[illegible]	VV	? 31.31
15	~~A,4'-DDD~~	761.9294	10.026	-0.134	[illegible]	VV	27.63
16	~~ENDO SO4~~	801.6310	11.737	-0.173	[illegible]	VB	21.56
17		0.0000	12.716		[illegible]	BV	24.63
18	~~4,4'-DDT~~	824.9065	13.789	0.528	[illegible]	VB	29.69
19	~~END KETON~~	344.7193	15.879	0.609	[illegible]	VV	45.38
20		0.0000	18.132	1260 118	[illegible]	VB	55.63
21		0.0000	21.911		[illegible]	BV	51.02
22	~~DBC~~	514.7186	25.815	-0.795	[illegible]	VV	63.56
23		0.0000	29.370		[illegible]	VB	?123.88

TOTALS: 5836.836 0.297 [illegible]

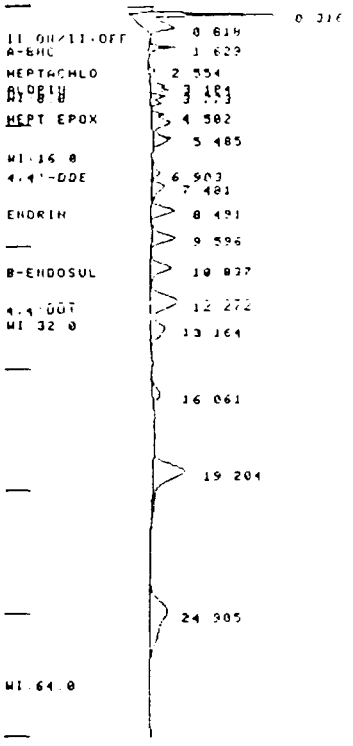
DETECTED PKS: 42 REJECTED PKS: 19

DIVISOR: 0.78750 MULTIPLIER: 50000.0000

NOISE: 22.9 OFFSET: -3

NOTES:
NOTEBOOK: 259-41 ANALYST: K.JONES
SECURE AREA: D JOB#:U-4465
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
PERFORM ANALYSIS

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



DC-SD-13

CHANNEL: 1B - 1 TITLE: RUN# 11 15:59 21 NOV 86

SAMPLE: S651.03.1SA1 METHOD: FEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/L	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	AREA %
1	A-BHC	47.2625	1.629	-0.031	47769	BV	4.00
2	ALDRIN	45.6302	3.184	0.074	40257	BV	? 13.44
3		0.0000	3.396		38319	VV	? 9.05
4		0.0000	3.773		44839	VV	11.59
5		0.0000	4.065		26710	VV	? 10.75
6	HEPT EPOX	47.0477	4.502	-0.139	36202	VV	? 10.94
7		0.0000	4.917		57481	VV	? 22.00
8	A-ENDO	141.4521	5.485	-0.355	100047	VV	? 24.44
9	4,4'-DDE	55.5351	6.903	0.123	39319	BV	? 19.31
10	DIELDRIN	106.5197	7.481	0.351	81051	VV	21.25
11	ENDRIN	225.3352	8.491	-0.209	125243	VB	20.00
12		0.0000	9.596		138777	BB	21.53
13	B-ENDOSUL	233.8040	10.937	0.357	144987	BV	25.44
14	4,4'DDT	1076.429	12.272	-0.069	297099	VV	29.31
15	END. ALD.	307.3998	13.164	-0.656	154315	VB	46.50
16	END0 SO4	241.3455	16.061	-0.729	66283	BB	39.44
17		0.0000	19.204		77566	BB	41.91
18		0.0000	24.905		370312	BB	76.81

TOTALS: 2517.971 -1.251 2173692

DETECTED PKS: 29 REJECTED PKS: 11

DIVISOR: 1.50000 MULTIPLIER: 50000.0000

NOISE: 160.0 OFFSET: 8

NOTES:
NOTEBOOK:259-40 ANALYST:RICHARD THMSON
SECURE AREA: O JOB #U-4432;U-4442
INST: VARIAN 5000#2 B ECD 1041 [illegible]
COLUMN: 6' GLASS 4MM ID 100/120 [illegible]
PHASE:1.5% SP2250-1.95% SP2401
CARRIER GAS: N2 @ 60 ML/MIN.
DET:200 C INJ:200 C
200 C ISOTHERMAL 4 UL INJECTION
PESTICIDE/PCB CONFIRMATIONS
DEAD CREEK

POST RUN:
SAVE FILE: FPA [illegible]

SAMPLE NUMBER DC-SD-14

481095

Sample Number
DC-SD-14

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No: U-4432 / U-4442
Lab Sample ID No: 9652
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: C Sfoytowicz
Date Sample Received: 11-6-86

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-12-86

Conc./Dil Factor: 10 pH 6.9

Percent Moisture: (Not Decanted) 63

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	250u
74-83-9	Bromomethane	250u
75-01-4	Vinyl Chloride	250u
75-00-3	Chloroethane	250u
75-09-2	Methylene Chloride	2200 B
67-64-1	Acetone	820
75-15-0	Carbon Disulfide	120u
75-35-4	1, 1-Dichloroethene	120u
75-34-3	1, 1-Dichloroethane	120u
156-60-5	Trans-1, 2-Dichloroethene	120u
67-66-3	Chloroform	120u
107-06-2	1, 2-Dichloroethane	120u
78-93-3	2-Butanone	510
71-55-6	1, 1, 1-Trichloroethane	120u
56-23-5	Carbon Tetrachloride	120u
108-05-4	Vinyl Acetate	250u
75-27-4	Bromodichloromethane	120u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	120u
10061-02-6	Trans-1, 3-Dichloropropene	120u
79-01-6	Trichloroethene	120u
124-48-1	Dibromochloromethane	120u
79-00-5	1, 1, 2-Trichloroethane	120u
71-43-2	Benzene	87 J
10061-01-5	cis-1, 3-Dichloropropene	120u
110-75-8	2-Chloroethylvinylether	250u
75-25-2	Bromoform	120u
108-10-1	4-Methyl-2-Pentanone	250u
591-78-6	2-Hexanone	220 J
127-18-4	Tetrachloroethene	120u
79-34-5	1, 1, 2, 2-Tetrachloroethane	120u
108-88-3	Toluene	810
108-90-7	Chlorobenzene	5200
100-41-4	Ethylbenzene	3600
100-42-5	Styrene	120u
	Total Xylenes	9900

Data Reporting Qualifiers

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

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

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

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

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

oratory Name ecology and environment, inc.

e No: U-4432 / U-4442

Sample Number
DC-SD-14

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

centration: (Low) Medium (Circle One)

e Extracted/Prepared: 11-11-86

e Analyzed: 11-24-86

c/Dil Factor: 50

cent Moisture (Decanted) 63

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)	
08-95-2	Phenol	23000	U
11-44-4	bis(-2-Chloroethyl)Ether	23000	U
-57-8	2-Chlorophenol	23000	U
1-73-1	1 3-Dichlorobenzene	23000	U
5-46-7	1, 4-Dichlorobenzene	220000	
0-51-6	Benzyl Alcohol	23000	U
-50-1	1 2-Dichlorobenzene	17000	J
-48-7	2-Methylphenol	23000	U
638-32-9	bis(2-chloroisopropyl)Ether	23000	U
5-44-5	4-Methylphenol	23000	U
1-64-7	N-Nitroso-Di-n-Propylamine	23000	U
-72-1	Hexachloroethane	23000	U
95-3	Nitrobenzene	23000	U
-59-1	Isophorone	23000	U
-75-5	2-Nitrophenol	23000	U
5-67-9	2, 4-Dimethylphenol	23000	U
-85-0	Benzoic Acid	110000	U
1-91-1	bis(-2-Chloroethoxy)Methane	23000	U
0-83-2	2, 4-Dichlorophenol	23000	U
0-82-1	1, 2, 4-Trichlorobenzene	5400	J
-20-3	Naphthalene	9500	J
5-47-8	4-Chloroaniline	23000	U
-68-3	Hexachlorobutadiene	23000	U
-50-7	4-Chloro-3-Methylphenol	23000	U
-57-6	2-Methylnaphthalene	8400	J
-47-4	Hexachlorocyclopentadiene	23000	U
-06-2	2 4 6-Trichlorophenol	23000	U
95-4	2, 4, 5-Trichlorophenol	110000	U
-58-7	2-Chloronaphthalene	23000	U
-74-4	2-Nitroaniline	110000	U
1-[illegible]	Dimethyl Phthalate	23000	U
8-5[illegible]-8	Acenaphthylene	23000	U
-09-2	3-Nitroaniline	110000	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	2600	J
51-28-5	2, 4-Dinitrophenol	110000	U
100-02-7	4-Nitrophenol	110000	U
132-64-9	Dibenzofuran	23000	U
121-14-2	2 4-Dinitrotoluene	23000	U
606-20-2	2 6-Dinitrotoluene	23000	U
84-66-2	Diethylphthalate	23000	U
7005-72-3	4-Chlorophenyl-phenylether	23000	U
86-73-7	Fluorene	3900	J
100-01-6	4-Nitroaniline	110000	U
534-52-1	4, 6-Dinitro-2-Methylphenol	110000	U
86-30-6	N-Nitrosodiphenylamine (1)	23000	U
101-55-3	4-Bromophenyl-phenylether	23000	U
118-74-1	Hexachlorobenzene	23000	U
87-86-5	Pentachlorophenol	110000	U
85-01-8	Phenanthrene	15000	J
120-12-7	Anthracene	23000	U
84-74-2	Di-n-Butylphthalate	23000	U
206-44-0	Fluoranthene	11000	J
129-00-0	Pyrene	13000	J
85-68-7	Butylbenzylphthalate	23000	U
91-94-1	3 3'-Dichlorobenzidine	46000	U
56-55-3	Benzo(a)Anthracene	23000	U
117-81-7	bis(2-Ethylhexyl)Phthalate	9500	J
218-01-9	Chrysene	23000	U
117-84-0	Di-n-Octyl Phthalate	2600	J
205-99-2	Benzo(b)Fluoranthene	3400	J
207-08-9	Benzo(k)Fluoranthene	23000	U
50-32-8	Benzo(a)Pyrene	1600	J
193-39-5	Indeno(1 2 3-cd)Pyrene	23000	U
53-70-3	Dibenzo(a h)Anthracene	23000	U
191-24-2	Benzo(g h i)Perylene	23000	U

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No U-4432 / U-4442

Sample Number DC-SD-14

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-11-86

Date Analyzed 11-18-86

Conc/Dil Factor: 200

Percent Moisture (decanted) 63

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	3200 U
319-85-7	Beta-BHC	3200 U
319-86-8	Delta-BHC	3200 U
58-89-9	Gamma-BHC (Lindane)	3200 U
76-44-8	Heptachlor	3200 U
309-00-2	Aldrin	3200 U
1024-57-3	Heptachlor Epoxide	3200 U
959-98-8	Endosulfan I	3200 U
60-57-1	Dieldrin	6400 U
72-55-9	4,4'-DDE	6400 U
72-20-8	Endrin	6400 U
33213-65-9	Endosulfan II	6400 U
72-54-8	4,4'-DDD	6400 U
1031-07-8	Endosulfan Sulfate	6400 U
50-29-3	4,4'-DDT	6400 U
72-43-5	Methoxychlor	32,000 U
53494-70-5	Endrin Ketone	6,400 U
57-74-9	Chlordane	32,000 U
8001-35-2	Toxaphene	64,000 U
12674-11-2	Aroclor-1016	32,000 U
11104-28-2	Aroclor-1221	32,000 U
11141-16-5	Aroclor-1232	32,000 U
53469-21-9	Aroclor-1242	32,000 U
12672-29-6	Aroclor-1248	480,000 C
11097-69-1	Aroclor-1254	64,000 U
11096-82-5	Aroclor-1260	1,6,000 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_i 1000 V_t 4

Laboratory Name Ecology & Environment, Inc

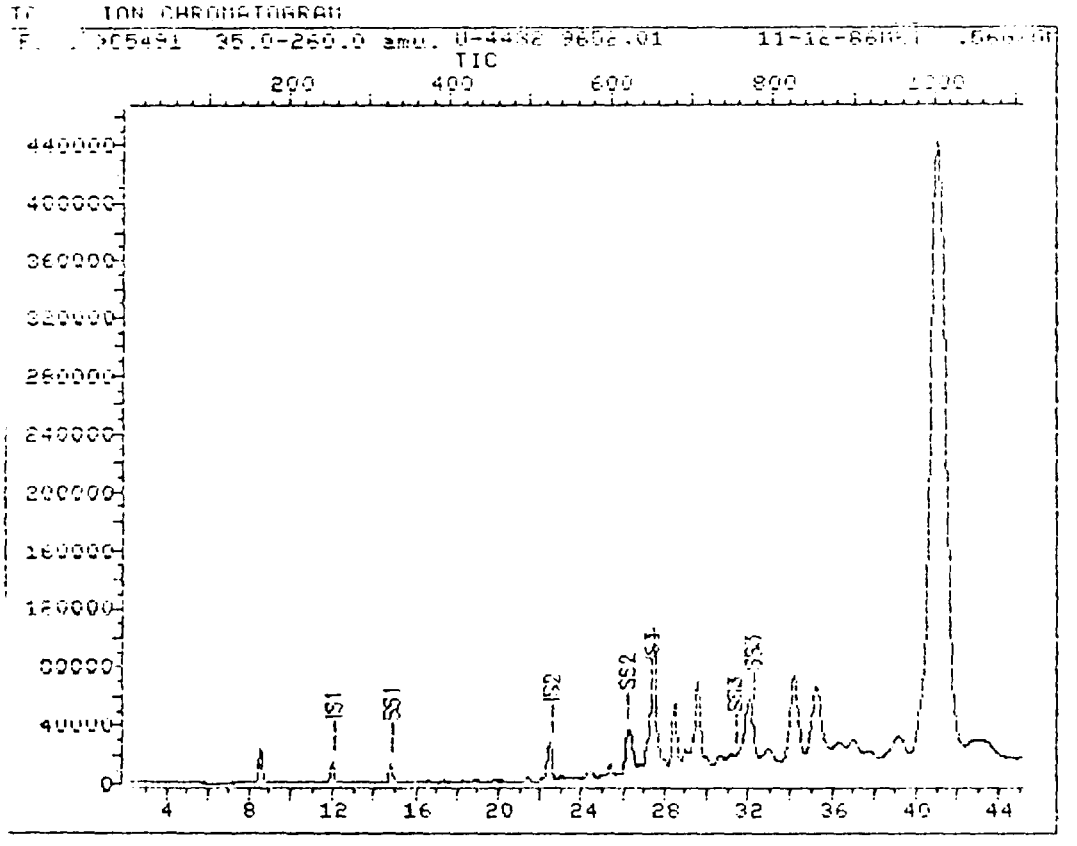
Case No U-4432/ U-4442

Sample Number DC-SD-14

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

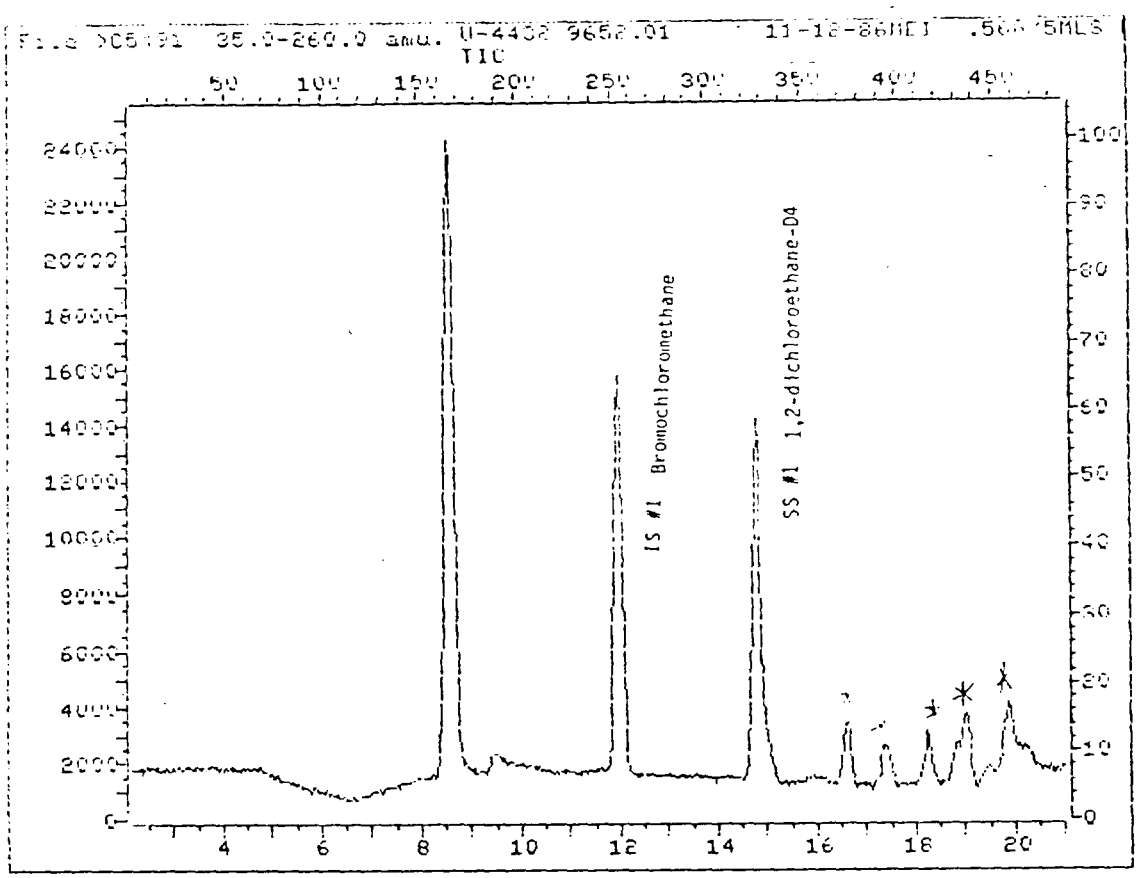
CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	16.6 min	75 J
2.	Hexene isomer	VOA	17.4 min	71 BJ
3.	Unknown hydrocarbon	VOA	18.2 min	120 J
4.	Unknown hydrocarbon	VOA	19.0 min	250 J
5.	Unknown Ketone	VOA	19.8 min	110 BJ
6.	Unknown hydrocarbon	VOA	28.5 min	1800 J
7. 98828	(1-methylethyl) Benzene	VOA	32.1 min	5400 J
8. 95501	1,2-Dichlorobenzene	VOA	39.3 min	1100 J
9. 106467	1,4-Dichlorobenzene	VOA	41.1 min	120,000 J
10.	UNKNOWN HYDROCARBON	BNA	17.6	17000 J
11.	DIMETHYL NAPHTHALENE ISOMER		18.0	10000 J
12.	DIMETHYL NAPHTHALENE ISOMER		18.2	18000 J
13.	UNKNOWN HYDROCARBON		19.0	20000 J
14.	UNKNOWN		21.4	25000 J
15.	DIMETHYL DECYL BENZENE ISOMER		21.6	8100 J
16.	DIMETHYL DECYL BENZENE ISOMER		21.8	40000 J
17.	UNKNOWN HYDROCARBON		21.9	38000 J
18.	PENTAMETHYL HEPTYL BENZENE ISOMER		22.0	49000 J
19.	DIMETHYL DECYL BENZENE ISOMER		22.1	23000 J
20.	DIMETHYL DECYL BENZENE ISOMER		22.3	53000 J
21.	DIMETHYL DECYL BENZENE ISOMER		22.7	32000 J
22.	UNKNOWN HYDROCARBON		22.8	42000 J
23.	DIMETHYL DECYL BENZENE ISOMER		22.9	26000 J
24.	UNKNOWN HYDROCARBON		24.2	30000 J
25.	PCB		25.0-26.4	—
26. 10544500	MOLECULAR SULFUR		27.0	30000 J
27.	UNKNOWN		27.9	25000 J
28.	TETRAMETHYL PHENANTHRENE ISOMER		29.2	20000 J
29.	UNKNOWN		31.3	15000 J
30.	UNKNOWN		32.2	15000 J

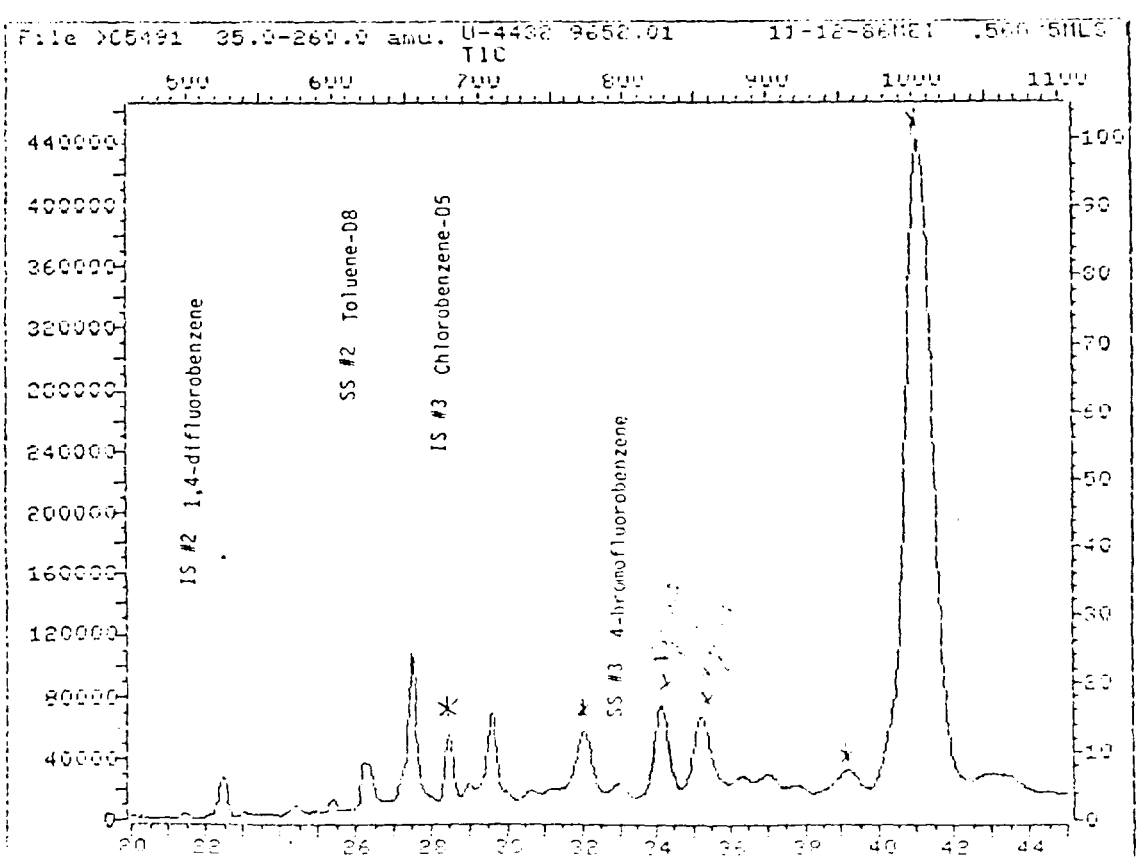


Data File: >C5491::D3
Name: U-4432 9652.01 DC-SD-14
Misc: 11-12-86MSI .56G/5MLS DI + 10UL IS/SS (10)

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861112 16:53

Operator ID: USER8
Quant Time: 861113 03:00
Injected at: 861113 02:14


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

erator ID: USER8 Quant Rev: 4 Quant Time: 861113 03:00
tput File: ^C9491::D2 Injected at: 861113 02:14
ta File: >C9491::D3 Dilution Factor: 1.00
me: U-4432 9652.01 DC-SD-14
sc: 11-12-86MEI .96G/9MLS D1 + 10UL IS/SS (10X)

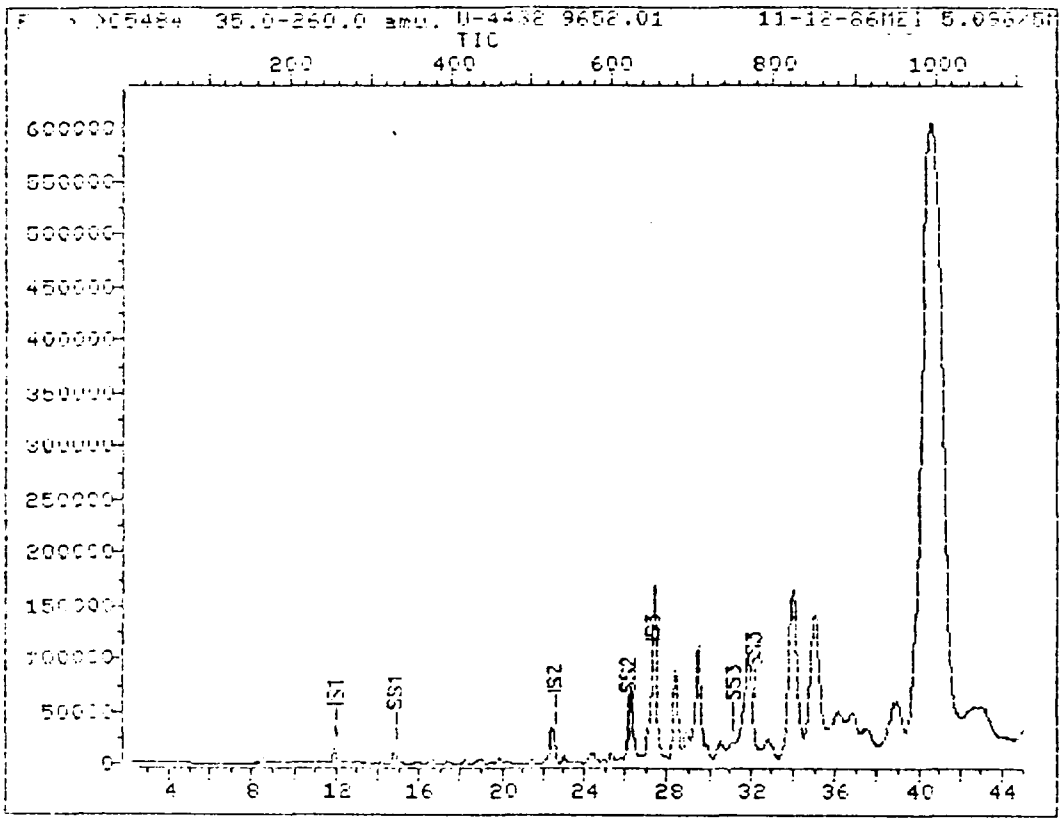
File: VOACRS::D2
tle: VOA 10 FILE FOR HP-5995 (CONT. CAL.)
st Calibration: 861112 16:53

	Compound	M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE (IS)	128	11.92	254	19455	250.00	NGS	100
4)	METHYLENE CHLORIDE	84	8.55	166	55976	448.39	NGS	100
2)	ACETONE	43	9.60	193	6999	164.71	NGS	100
3)	1,2-DICHLOROETHANE-D4(SURR)	65	14.80	327	50799	271.16	NGS 108	85
6)	*1,4-DIFLUOROBENZENE (IS)	114	22.52	526	80511	250.00	NGS	100
7)	2-BUTANONE	72	14.95	331	2685	103.09	NGS	100
8)	BENZENE	78	19.92	459	7248	17.52	NGS	100
9)	*CHLOROBENZENE-D5 (IS)	117	27.48	651	54913	250.00	NGS	100
10)	~~2-HEXANONE~~	~~43~~	~~24.53~~	~~579~~	~~9735~~	~~72.97~~	~~NGS~~	100
10)	2-HEXANONE	43	25.00	590	5799	43.47	NGS	100
11)	~~1,1,2,2-TETRACHLOROETHANE~~	~~83~~	~~24.46~~	~~577~~	~~2616~~	~~1[illegible].67~~	~~NGS~~	100
12)	TOLUENE-D8 (SURR)	98	26.20	621	96487	328.86	NGS 132	89
13)	TOLUENE	92	26.40	626	37410	161.86	NGS HIGH	99
14)	CHLOROBENZENE	112	27.49	654	289456	1049.04	NGS	97
15)	ETHYLBENZENE	91	29.59	709	334180	734.51	NGS	96
16)	4-BROMOFLUOROBENZENE(SURR)	95	31.34	753	5407	29.32	NGS 98	100
17)	4-BROMOFLUOROBENZENE(SURR)	95	32.19	775	41592	21[illegible].76	NGS	100
18)	~~O-XYLENE~~	~~104~~	~~32.70~~	~~790~~	~~[illegible]526~~	~~[illegible].03~~	~~NGS~~	100
19)	~~O-XYLENE~~	~~106~~	~~32.11~~	~~775~~	~~2[illegible]~~	~~[illegible].97~~	~~NGS~~	100
20)	~~O-XYLENE~~	~~104~~	~~34.21~~	~~827~~	~~[illegible]421~~	~~2[illegible].92~~	~~NGS~~	100
21)	~~O-XYLENE~~	~~104~~	~~35.06~~	~~847~~	~~10524~~	~~3[illegible].83~~	~~NGS~~	100
22)	~~TOTAL XYLENES~~	~~91~~	~~32.97~~	~~792~~	~~19[illegible]47~~	~~3[illegible].77~~	~~NGS~~	100
23)	TOTAL XYLENES	91	34.21	827	3[illegible]152	88[illegible].64	NGS	100
24)	TOTAL XYLENES	91	35.02	853	467224	110[illegible].04	NGS	100
25)	~~TOTAL XYLENES~~	~~91~~	~~37.85~~	~~90[illegible]~~	~~1[illegible]979~~	~~24[illegible].29~~	~~NGS~~	100

Compound is 1510

NO CW
NO CW
NO CW
NO CW

TOTAL ION CHROMATOGRAM



Data File: >C5484::03
Name: U-4432 9652.01 DC-SD-14
Misc: 11-12-86MEI 5.096/5MLS DI + 10UL IS/SS

IS File: VOA-CRS::02
Title: VOA ID FILE FOR HP-5995 (COMM. CAL.)
Last Calibration: 861112 16:53

Operator ID: USER8
Count Time: 861112 20:03
Injected at: 861112 19:17

QUANT REPORT

erator ID: USER8 Quant Rev: 4 Quant Time: 861112 20:03
tput File: ^C5484::D2 Injected at: 861112 19:17
ta File: >C5484::D3 Dilution Factor: 1.00
me: U-4432 9652.01 DC-SD-14
ec: 11-12-86MEI 5.09G/MLS DI + 10UL IS/SS

File: VOACRS::D2
tle: VOA ID FILE FOR HP-5995 (CONT. CAL.)
st Calibration: 861112 16:53

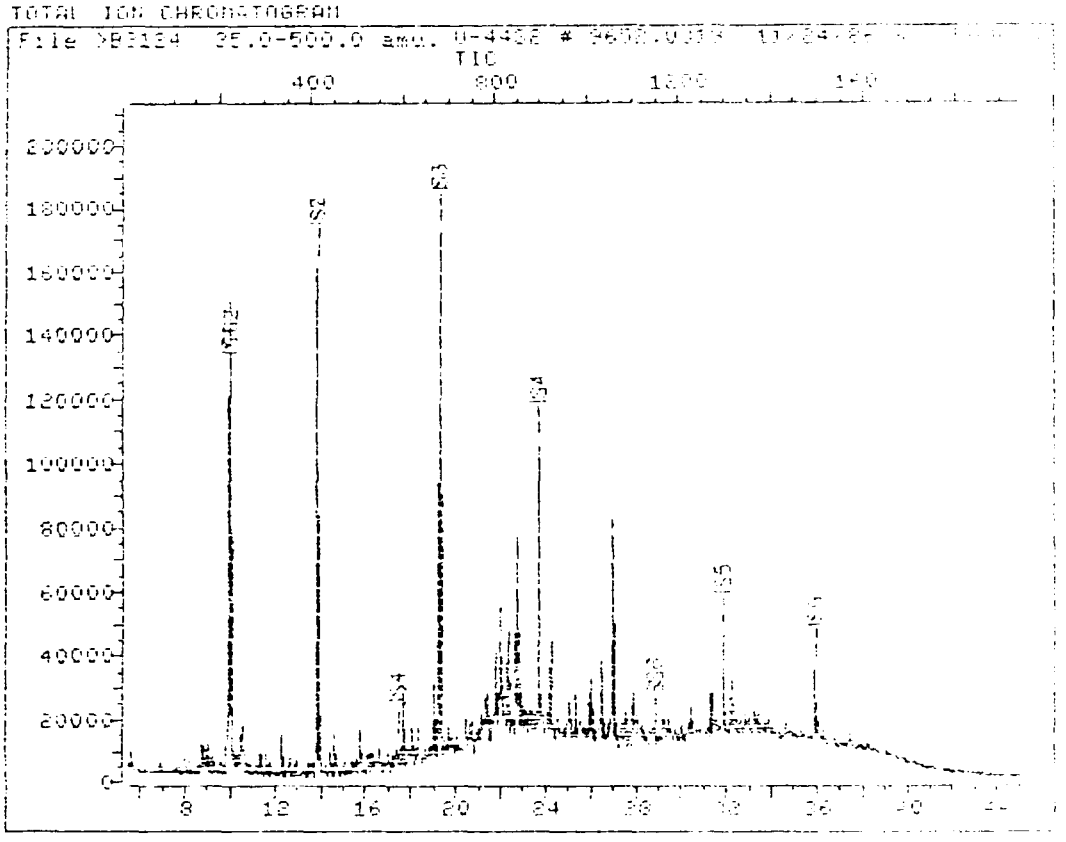
	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS) 128	11.94	255	19344	250.00	NGS	100
2)	METHYLENE CHLORIDE	84	8.56	168	17988	104.64	NGS	100
2)	ACETONE	43	9.49	190	5233	135.69	NGS	100
5)	1,2-DICHLOROETHANE-D4(SURR)	65	14.81	329	44721	240.35	NGS 96	84
6)	*1,4-DIFLUOROBENZENE	(IS) 114	22.53	528	73916	250.00	NGS	100
)	2-BUTANONE	72	14.96	333	2732	127.61	NGS	100
)	BENZENE	78	19.93	461	17439	45.93	NGS	100
)	*CHLOROBENZENE-D5	(IS) 117	27.31	651	39779	250.00	NGS	100
)	4-METHYL-2-PENTANONE	43	23.23	546	7215	55.66	NGS	70
)	2-HEXANONE	43	24.51	579	17719	180.43	NGS	100
)	2-HEXANONE	43	24.97	591	13302	139.39	NGS	100
)	2-HEXANONE	43	25.40	602	3115	32.64	NGS	100
)	1,1,2,2-TETRACHLOROETHANE	83	24.43	577	3028	23.75	NGS	100
)	1,1,2,2-TETRACHLOROETHANE	83	25.67	609	2523	19.79	NGS	100
)	TOLUENE-D8	(SURR) 98	26.13	621	68420	325.02	NGS 130 High	
)	TOLUENE	92	26.53	626	121799	239.23	NGS	95
)	CHLOROBENZENE	112	27.42	654	517891	2650.63	NGS	99
)	ETHYLBENZENE	91	29.48	707	602178	1847.85	NGS	94
)	4-BROMOFLUOROBENZENE(SURR)	95	31.15	759	12729	93.19	NGS 115	100
)	4-BROMOFLUOROBENZENE(SURR)	95	32.12	785	26790	196.14	NGS	100
)	STYRENE	104	31.81	767	3136	13.96	NGS	100
)	STYRENE	104	31.93	770	4823	21.70	NGS	100
)	STYRENE	104	33.99	821	23539	104.80	NGS	100
)	STYRENE	104	35.03	850	26885	119.70	NGS	100
)	TOTAL XYLENES	91	34.02	824	1043635	3468.68	NGS	100
)	TOTAL XYLENES	91	35.00	849	1217794	4026.62	NGS	100
)	TOTAL XYLENES	91	36.82	896	279878	768.89	NGS	100

Compound is 1910

Too Concentrated

Reanalyzed: see >C 5491

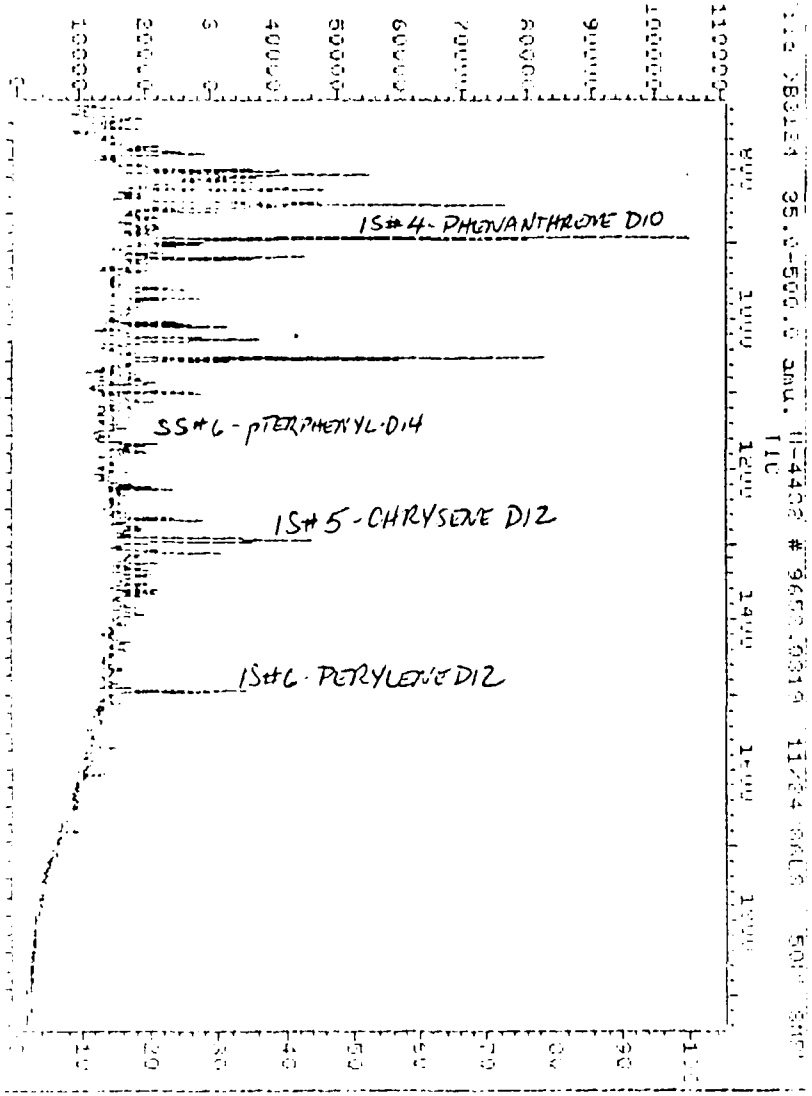
TOTAL ION CHROMATOGRAM

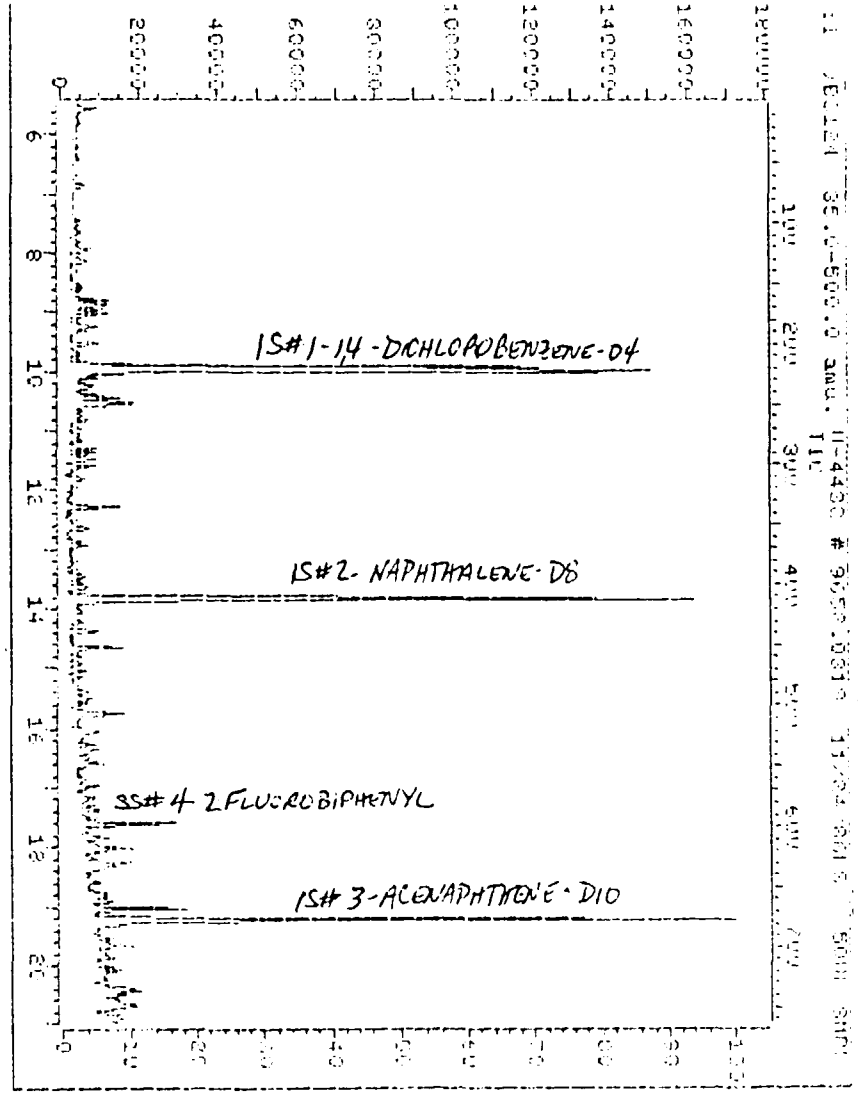


Data File: >B3124::04
Name: U-4432 # 9652.0319 DC-SD-14
Misc: 11/24/86LS 500UL SMPL + 45UUL [illegible]

Id File: BNABR::02
Title: BNA ID FILE FOR THE HP 5970 [illegible]
Last Calibration: 861124 18:05

Operator ID: USER6
Quant Time: 861124 23:09
Injected at: 861124 22:21


IS#4-PHENANTHRENE D10
SS#6-pTERPHENYL-D14
IS#5-CHRYSENE D12
IS#6-PERYLENE D12


IS#1-1,4-DICHLOROBENZENE-D4
IS#2-NAPHTHALENE-D8
SS#4 2FLUOROBIPHENYL
IS#3-ACENAPHTHENE-D10

DC-SD-14

QUANT REPORT

erator ID: USER6 Quant Meth: 4 [illegible]
tput File: ^B3124::D2 [illegible]
ta File: >B3124::D4 Dilution Factor: 10.00
ame: U-4432 # 9652.0719 DC-SD-14
ise: 11/24/86LS 500UL SMPL + 450UL DEIO + 50 [illegible]

FINAL VOLUME = 5.0 ml

D File: BNA8R::D2
itle: BNA ID FILE FOR THE HP 5970 (B)
ast Calibration: 861124 18:05

	Compound	M/E	R.T.	Scan#	Area	Conc	Units	Q
1)	*1,4-DICHLOROBENZENE-D4 (IS)	152	9.93	223	65064	40.00	UG/L	88
2)	PHENOL-D5 (SURR)	99	9.90	223	187	.50	UG/L	28
3)	~~1,2-DICHLOROBENZENE~~	146	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	97
4)	1,4-DICHLOROBENZENE	146	9.97	222	101[illegible]	48.[illegible]	UG/L	[illegible]
5)	~~1,2-DICHLOROBENZENE~~	146	10.11	[illegible]	[illegible]	[illegible]	UG/L	67
6)	1,2-DICHLOROBENZENE	146	10.52	249	79[illegible]6	36.80	UG/L	94
7)	~~N-NITROSO-DI-N-PROPYLAMINE~~	70	11.29	[illegible]	[illegible]	[illegible]	UG/L	67
8)	~~N-NITROSO-DI-N-PROPYLAMINE~~	70	11.49	[illegible]	[illegible]	[illegible]	UG/L	[illegible]
9)	~~N-NITROSO-DI-N-PROPYLAMINE~~	70	11.64	[illegible]	[illegible]	[illegible]	UG/L	3
10)	~~N-NITROSO-DI-N-PROPYLAMINE~~	70	11.96	[illegible]	[illegible]	[illegible]	UG/L	94
11)	*NAPHTHALENE-D8 (IS)	136	13.84	412	2[illegible]741	40.00	UG/L	100
12)	1,2,4-TRICHLOROBENZENE	180	13.90	418	22[illegible]4	12.04	UG/L	100
13)	NAPHTHALENE	128	13.98	419	[illegible]	[illegible]	UG/L	100
14)	2-METHYLNAPHTHALENE	142	14.05	[illegible]	[illegible]	[illegible]	UG/L	97
15)	~~2-METHYLNAPHTHALENE~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	[illegible]
16)	~~2-METHYLNAPHTHALENE~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	[illegible]
17)	*ACENAPHTHENE-D10 (IS)	162	17.23	[illegible]	[illegible]	[illegible]	UG/L	[illegible]
18)	2-FLUOROBIPHENYL (SURR)	172	17.49	58[illegible]	[illegible]	[illegible]	UG/L	94
19)	~~DIMETHYL PHTHALATE~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	100
20)	~~DIETHYL PHTHALATE~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	100
21)	~~DIBENZOFURAN~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	100
22)	~~DIPHENYLAMINE~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	100
23)	~~DIBENZOFURAN~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	100
24)	~~4-CHLOROPHENYL-PHENYL ETHER~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	1
25)	FLUORENE	166	18.88	[illegible]	[illegible]	[illegible]	UG/L	98
26)	ACENAPHTHENE	153	19.71	481	[illegible]	[illegible]	UG/L	92
27)	~~4-CHLOROANILINE~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	63
28)	~~2,4-DINITROPHENOL~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	100
29)	~~2,4-DINITROPHENOL~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	[illegible]
30)	~~2,4-DINITROPHENOL~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	[illegible]
31)	~~2,4-DINITROPHENOL~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	[illegible]
32)	~~2,4-DINITROPHENOL~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	[illegible]
33)	~~2,4-DINITROPHENOL~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	[illegible]
34)	~~2,4-DINITROPHENOL~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	[illegible]
35)	~~2,4-DINITROPHENOL~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	[illegible]
36)	~~2,4-DINITROPHENOL~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	[illegible]
37)	~~2,4-DINITROPHENOL~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	[illegible]
38)	*PHENANTHRENE-D10 (IS)	188	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
39)	PHENANTHRENE	178	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	[illegible]
40)	~~[illegible]~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
41)	~~[illegible]~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

No GPC

No GPC

No GPC

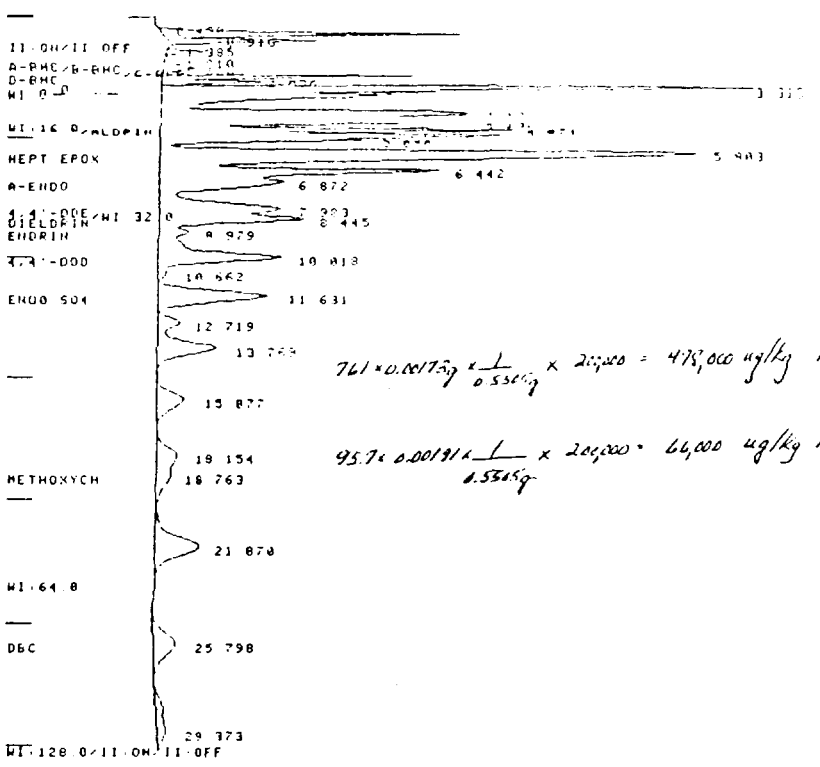
No GPC

NAIC

	Compound		M/E	R.T.	Scan	Area	Conc	Units	Q
	~~BENZIDINE~~		~~184~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~100~~ No Bgk
7)	PYRENE		202	28.02	1100	[illegible]	[illegible]	UG/L	99
8)	TERPHENYL-D14	(SURR)	244	28.87	1154	467	[illegible]	[illegible]	100
	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~47~~ No Bgk
2)	BIS(2-ETHYLHEXYL)PHTHALATE		149	32.81	1344	[illegible]	21.10	UG/L	[illegible]
	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~1~~ No Bgk
4)	*PERYLENE-D12	(IS)	264	35.91	1495	37226	40.00	UG/L	100
	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~100~~ No Bgk
5)	DI-N-OCTYL PHTHALATE		149	34.62	1422	963	5.90	UG/L	100
	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~100~~
	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~100~~ No Bgk
	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~100~~
76)	BENZO(B)FLUORANTHENE		252	34.97	1449	741	2.44	UG/L	100
	~~BENZO(K)FLUORANTHENE~~		~~252~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~100~~ No Bgk
	~~BENZO(A)PYRENE~~		~~252~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~100~~
8)	BENZO(A)PYRENE		252	35.28	1489	587	4.06	UG/L	100

* Compound is ISTD

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



761 × 0.00175g × 1/0.5345g × 200,000 = 478,000 ug/kg 1248

95.7 × 0.00191 × 1/0.5345g × 200,000 = 66,000 ug/kg 1260

RECALCULATE ON FILE: SLY453

CHANNEL: 1A - 1 TITLE: RUN# 18 23:57 18 NOV 86

DC-SD-14

SAMPLE: 9652.03.19A1 METHOD: DAVE CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.385		23626	BB	3.31
2	~~A-BHC~~	709.4493	2.063	0.023	49075	VV	4.75
3	~~B-BHC~~	955.7641	2.769	0.099	[illegible]	VV	5.63
4	~~D-BHC~~	4146.663	2.591	0.141	[illegible]	VV	6.44
5		0.0000	2.856		152055	VV	6.31
6		0.0000	3.318		77290	VV	8.06
7	~~HEPTACHLO~~	9632.797	3.532	-0.258	431855	VV	? 15.69
8		0.0000	4.132		700033	VV	19.44
9	~~ALDRIN~~	10403.34	4.571	-0.099	581959	VV	12.94
10		0.0000	4.685		502029	VV	? 12.19
11		0.0000	5.096		257438	VV	? 12.19
12	~~HEPT EPOX~~	29216.74	5.803	0.133	1536113	VV	21.75
13		0.0000	6.442	761	614621	VV	16.81
14	~~A-ENDO~~	7953.477	6.872 1248	-0.158	397394	VV	? 35.63
15	~~4,4'-DDE~~	6554.293	7.983	-0.107	438523	VV	? 31.50
16	~~DIELDRIN~~	7868.429	8.445	0.255	427014	VV	? 28.50
17	~~ENDRIN~~	1434.383	8.979	-0.151	70939	VV	? 22.25
18	~~4,4'-DDD~~	10576.77	10.018	-0.142	463576	VV	24.31
19	~~ENDO ALD.~~	554.5801	10.662	0.412	[illegible]	VV	? 21.06
20	~~ENDO SO4~~	12187.16	11.631	-0.279	[illegible]	VV	31.13
21		0.0000	12.719		85242	VV	38.25
22	~~4,4'-DDT~~	9169.968	13.769	0.509	267660	VV	32.31
23	~~ENDO METHOX~~	3114.911	15.877	0.607 95.7	161711	VB	46.91
24		0.0000	18.154 1260		136457	BV	? 46.94
25	~~METHOXYCH~~	4822.760	18.763	-0.727	94220	VV	? 81.25
26		0.0000	21.870		206038	VB	43.05
27	~~DBC~~	4336.770	25.798	-0.812	[illegible]	BV	86.31
28		0.0000	29.373		96191	VB	? 23.44
TOTALS:		128649.2		-0.555	9414126		

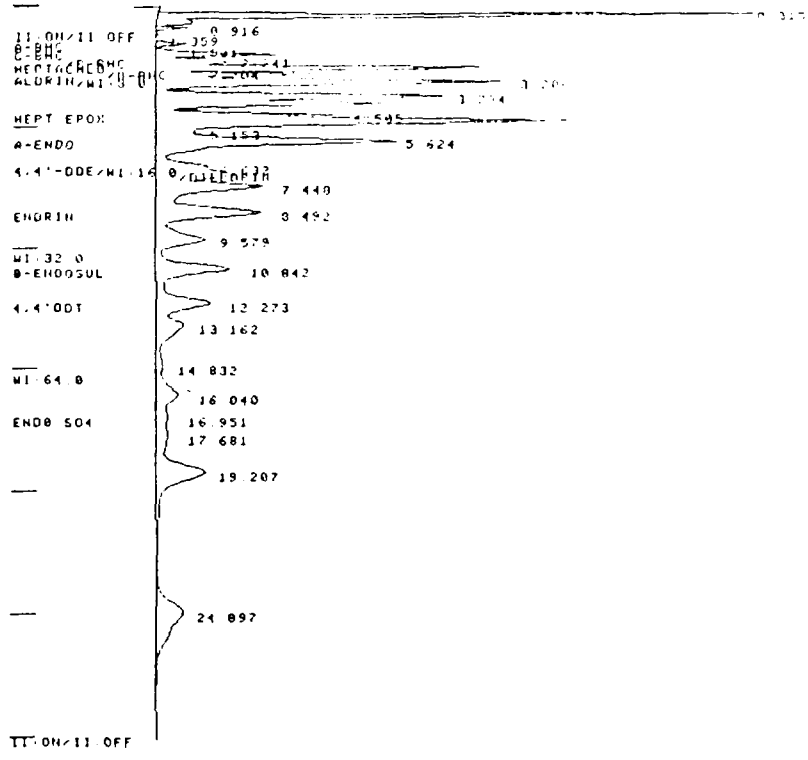
DETECTED PKS: 41 REJECTED PKS: 13

DIVISOR: 0.55952 MULTIPLIER: 200000.000

NOISE: 22.9 OFFSET: -20

NOTES:
NOTEBOOK: 259-41 ANALYST: [illegible]
SECURE AREA: [illegible]
INSTRUMENT: [illegible]
COLUMN: [illegible]
LIQUID PHASE: [illegible]
[illegible]

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



DC-SD-14

CHANNEL: 18 - 1 TITLE: RUN# 12 16:42 21 NOV 86

SAMPLE: 9552 METHOD: PEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	WI/2 (SEC)
1	A-BHC	312.0755	1.579	-0.122	[illegible]	VV	3.81
2	G-BHC	1619.950	1.964	-0.116	314061	VV	4.75
3		0.0000	2.241		190237	VV ?	6.69
4	B-BHC	567.0875	2.415	0.225	40897	VV ?	5.44
5	HEPTACHLO	5050.381	2.548	-0.012	953566	VV	5.69
6	D-BHC	2170.352	2.794	0.014	304625	VV	7.44
7		0.0000	2.990		198633	VV ?	8.38
8	ALDRIN	4845.509	3.206	0.096	1057503	VV	11.75
9		0.0000	3.784		956425	VV	10.63
10		0.0000	4.053		669309	VV	11.59
11	HEPT EPOX	2499.065	4.505	-0.135	480742	VV ?	11.13
12		0.0000	4.781		1596472	VV	15.75
13		0.0000	5.153		52847	VV ?	
14	A-ENDO	7176.714	5.624	-0.216	1268907	VV ?	16.94
15	4,4'-DDE	1232.411	6.632	-0.098	218121	VV ?	16.89
16		0.0000	6.928		461057	VV ?	33.31
17	DIELDRIN	3337.964	7.448	0.318	635844	VV	20.89
18	ENDRIN	5122.405	8.492	-0.208	711768	VV	25.56
19		0.0000	9.579		410568	VV	30.19
20	B-ENDOSUL	3647.094	10.842	0.362	590593	VV	27.19
21	4,4'DDT	9887.577	12.273	-0.087	475372	VV	32.06
22	END. ALD.	2627.506	13.162	-0.658	[illegible]	VV ?	53.50
23		0.0000	14.832		93657	VV ?	67.94
24		0.0000	16.040		262865	VV ?	61.13
25	ENDO SO4	1694.603	16.951	0.161	119362	VV ?	78.00
26		0.0000	17.681		154540	VV ?	93.88
27		0.0000	19.207		132013	VV	49.25
28	METHOXYCH	23572.50	24.897	1.277	644572	VB	94.75

TOTALS: 75363.20 0.511 13695903

DETECTED PKS: 38 REJECTED PKS: 12

DIVISOR: 1.50000 MULTIPLIER: 220000.000

NOISE: 68.6 OFFSET: -14

NOTES:
NOTEBOOK:259-40 ANALYST:RICHARD SAMSON
SECURE AREA: D JOB #U-4432:U-4447
INST: VARIAN 6000#2 B ECD 10:1 A:1:16
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

SAMPLE NUMBER DC-SD-15

481095

Sample Number
DC-SD-15

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No: U-4432/U-4442
Lab Sample ID No: 9653
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: CHojtowicz
Date Sample Received: 11-6-86

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared:
Date Analyzed: 11-13-86
Conc./Dil Factor: 2 pH 6.9
Percent Moisture: (Not Decanted) 34

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	2800u
74-83-9	Bromomethane	2800u
75-01-4	Vinyl Chloride	2800u
75-00-3	Chloroethane	2800u
75-09-2	Methylene Chloride	7800 B
67-64-1	Acetone	4900 B
75-15-0	Carbon Disulfide	1400u
75-35-4	1, 1-Dichloroethene	1400u
75-34-3	1, 1-Dichloroethane	1400u
156-60-5	Trans-1, 2-Dichloroethene	1400u
67-66-3	Chloroform	1400u
107-06-2	1, 2-Dichloroethane	1400u
78-93-3	2-Butanone	11000
71-55-6	1, 1, 1-Trichloroethane	1400u
56-23-5	Carbon Tetrachloride	1400u
108-05-4	Vinyl Acetate	2800u
75-27-4	Bromodichloromethane	1400u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	1400u
10061-02-6	Trans-1, 3-Dichloropropene	1400u
79-01-6	Trichloroethene	1400u
124-48-1	Dibromochloromethane	1400u
79-00-5	1, 1, 2-Trichloroethane	1400u
71-43-2	Benzene	1400u
10061-01-5	cis-1, 3-Dichloropropene	1400u
110-75-8	2-Chloroethylvinylether	2800u
75-25-2	Bromoform	1400u
108-10-1	4-Methyl-2-Pentanone	2800u
591-78-6	2-Hexanone	2800u
127-18-4	Tetrachloroethene	1400u
79-34-5	1, 1, 2, 2-Tetrachloroethane	1400u
108-88-3	Toluene	1400u
108-90-7	Chlorobenzene	1400u
100-41-4	Ethylbenzene	1400u
100-42-5	Styrene	1400u
	Total Xylenes	1400u

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.

aboratory Name ecology and environment, inc.

ase No. V-4432 / V-4442

Sample Number
DC-SD-15

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

oncentration: (Low) Medium (Circle One)

ate Extracted/Prepared: 11-11-86

ate Analyzed: 11-25-86

onc/Dil Factor: 2

ercent 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	500	U
111-44-4	bis(-2-Chloroethyl)Ether	500	U
95-57-8	2-Chlorophenol	500	U
541-73-1	1 3-Dichlorobenzene	500	U
106-46-7	1 4-Dichlorobenzene	500	U
100-51-6	Benzyl Alcohol	500	U
95-50-1	1 2-Dichlorobenzene	500	U
95-48-7	2-Methylphenol	500	U
39638-32-9	bis(2-chloroisopropyl)Ether	500	U
106-44-5	4-Methylphenol	500	U
621-64-7	N-Nitroso-Di-n-Propylamine	500	U
67-72-1	Hexachloroethane	500	U
98-95-3	Nitrobenzene	500	U
78-59-1	Isophorone	500	U
88-75-5	2-Nitrophenol	500	U
105-67-9	2 4-Dimethylphenol	500	U
65-85-0	Benzoic Acid	2400	U
111-91-1	bis(-2-Chloroethoxy)Methane	500	U
120-83-2	2 4-Dichlorophenol	500	U
120-82-1	1 2 4-Trichlorobenzene	500	U
91-20-3	Naphthalene	500	U
106-47-8	4-Chloroaniline	500	U
87-68-3	Hexachlorobutadiene	500	U
59-50-7	4-Chloro-3-Methylphenol	500	U
91-57-6	2-Methylnaphthalene	500	U
77-47-4	Hexachlorocyclopentadiene	500	U
88-06-2	2 4 6-Trichlorophenol	500	U
95-95-4	2 4 5-Trichlorophenol	2400	U
91-58-7	2-Chloronaphthalene	500	U
88-74-4	2-Nitroaniline	2400	U
13 1-3	Dimethyl Phthalate	500	U
208-96-8	Acenaphthylene	500	U
99-09-2	3-Nitroaniline	2400	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	500	U
51-28-5	2 4-Dinitrophenol	2400	U
100-02-7	4-Nitrophenol	2400	U
132-64-9	Dibenzofuran	500	U
121-14-2	2 4-Dinitrotoluene	500	U
606-20-2	2 6-Dinitrotoluene	500	U
84-66-2	Diethylphthalate	500	U
7005-72-3	4-Chlorophenyl-phenylether	500	U
86-73-7	Fluorene	500	U
100-01-6	4-Nitroaniline	2400	U
534-52-1	4 6-Dinitro-2-Methylphenol	2400	U
86-30-6	N-Nitrosodiphenylamine (1)	500	U
101-55-3	4-Bromophenyl-phenylether	500	U
118-74-1	Hexachlorobenzene	500	U
87-86-5	Pentachlorophenol	2400	U
85-01-8	Phenanthrene	500	U
120-12-7	Anthracene	500	U
84-74-2	Di-n-Butylphthalate	580	B
206-44-0	Fluoranthene	500	U
129-00-0	Pyrene	500	U
85-68-7	Butylbenzylphthalate	500	U
91-94-1	3 3'-Dichlorobenzidine	1000	U
56-55-3	Benzo(a)Anthracene	500	U
117-81-7	bis(2-Ethylhexyl)Phthalate	500	U
218-01-9	Chrysene	500	U
117-84-0	Di-n-Octyl Phthalate	120	J
205-99-2	Benzo(b)Fluoranthene	500	U
207-08-9	Benzo(k)Fluoranthene	500	U
50-32-8	Benzo(a)Pyrene	500	U
193-39-5	Indeno(1 2 3-cd)Pyrene	500	U
53-70-3	Dibenzo(a h)Anthracene	500	U
191-24-2	Benzo(g h i)Perylene	500	U

(1) Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No V-4432/V-4442

Sample Number DC-SD-15

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-11-86

Date Analyzed 11-19-86

Conc/Dil Factor: 1 & 2

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)
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	660
11097-69-1	Aroclor-1254	670
11096-82-5	Aroclor-1260	430 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 u-4432 / u-4442

Sample Number DC-SD-15

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.4 min	640 BJ
2.	Unknown Ketone	VOA	19.7 min	340 J
3.	Hexane isomer	VOA	21.4 min	2200 BJ
4.				
5.	UNKNOWN HYDROCARBON	BNA	5.5	1500 J
6.	UNKNOWN HYDROCARBON		5.7	1900 J
7.	UNKNOWN HYDROCARBON		6.8	1700 J
8.	UNKNOWN		8.1	2800 J
9.	UNKNOWN		8.6	970 J
10.	UNKNOWN HYDROCARBON		9.2	7500 J
11.	UNKNOWN HYDROCARBON		10.5	2000 J
12.	UNKNOWN		30.1	1000 BJ
13.	UNKNOWN		39.1	570 J
14.	UNKNOWN		41.1	490 J
15.	UNKNOWN		41.4	720 J
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
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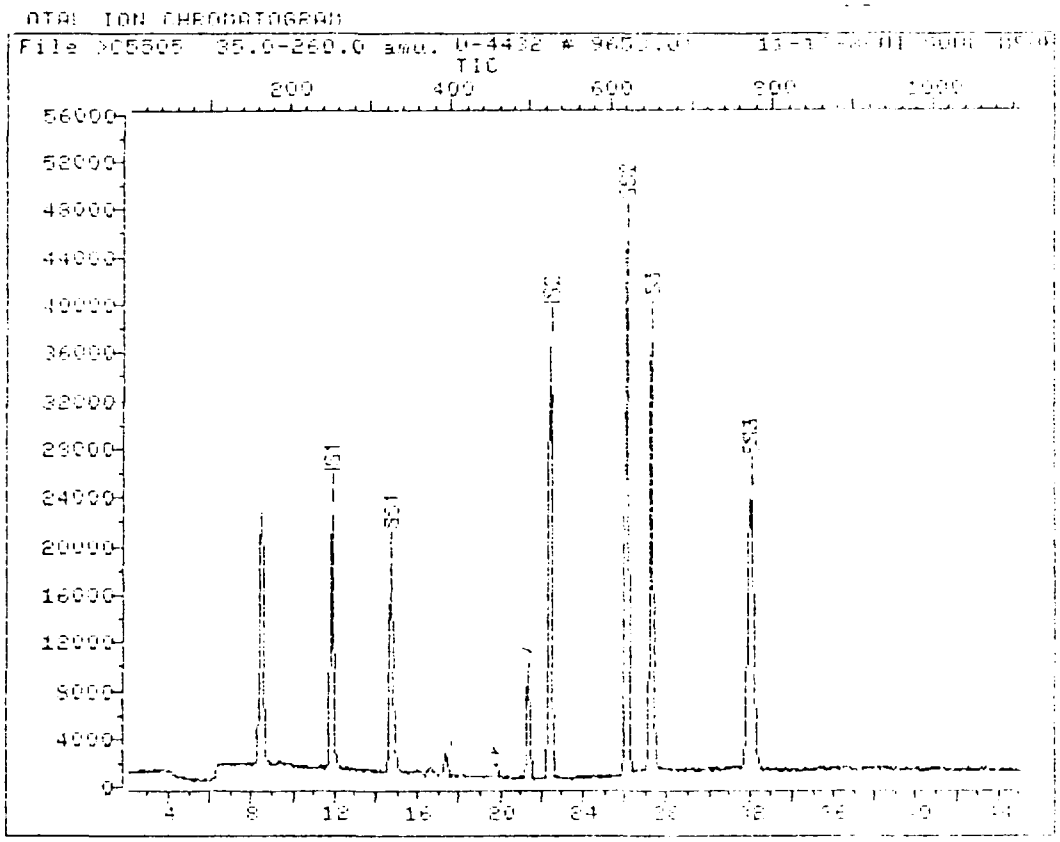
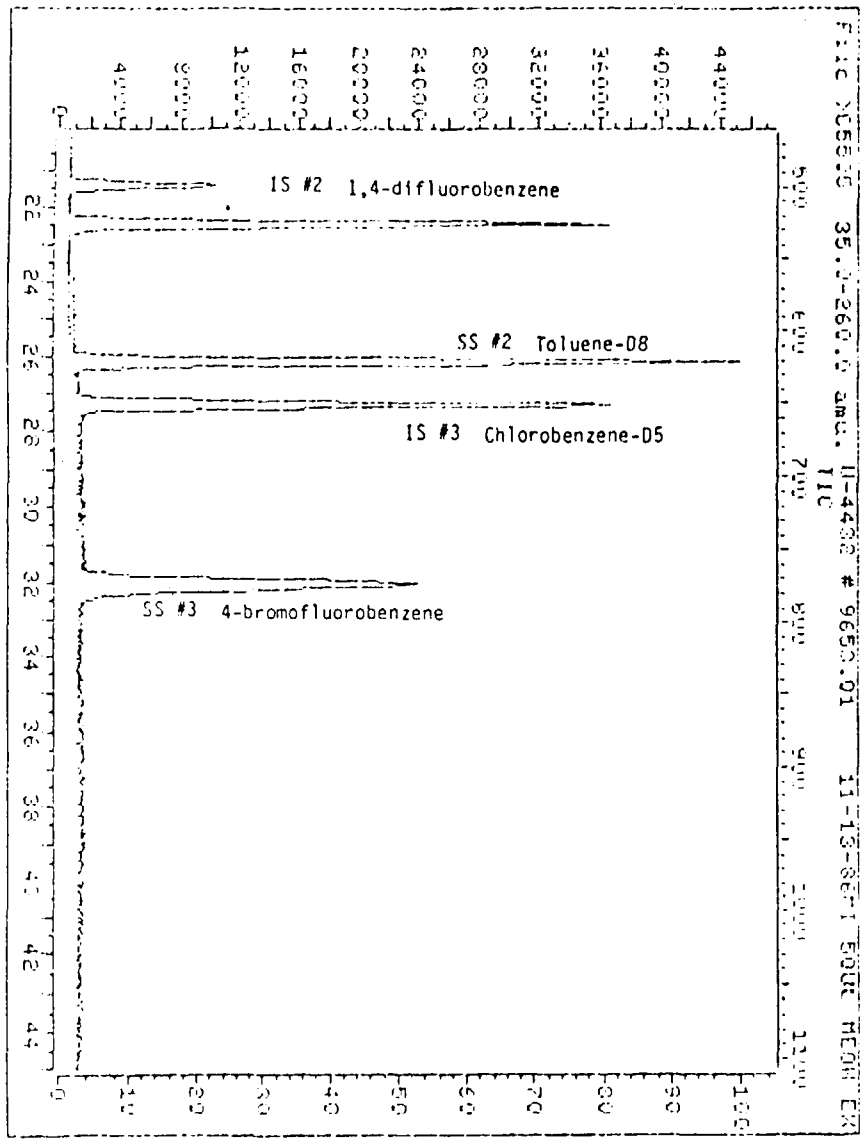
25.				
26.				
27.				
28.				
29.				
30				

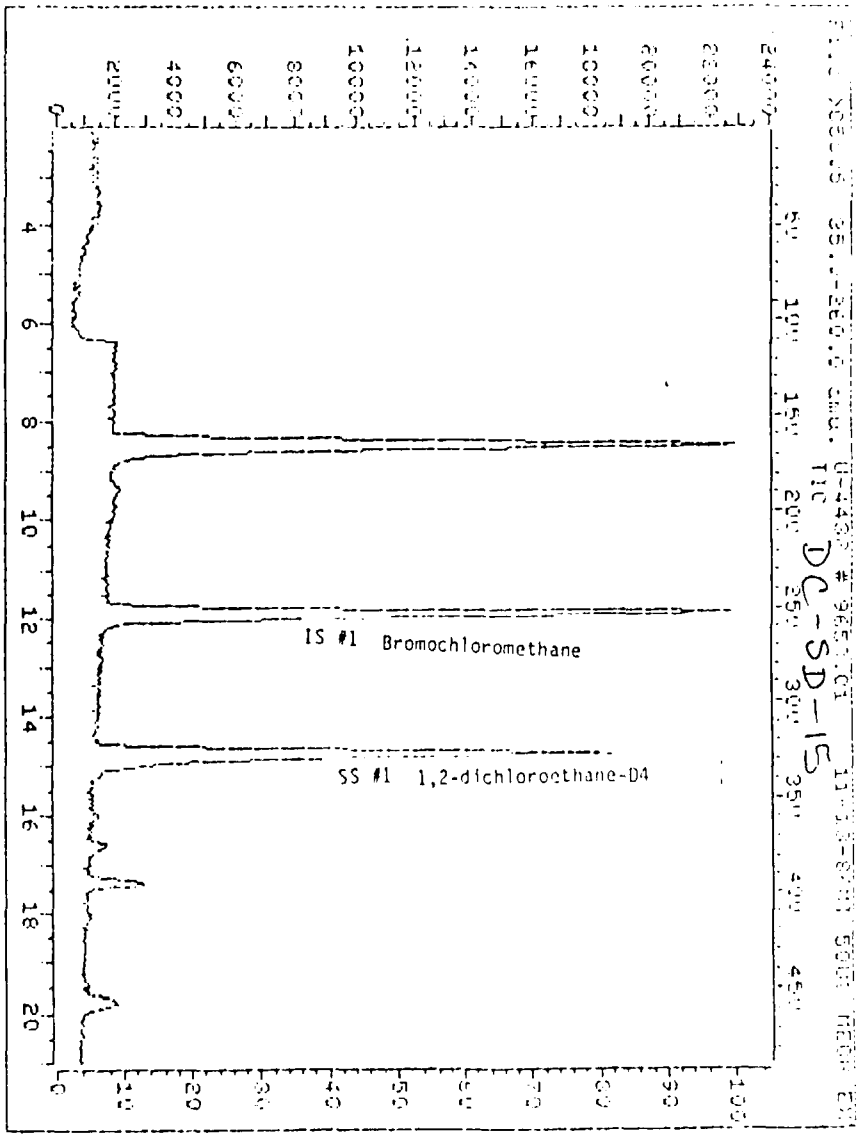


Data File: >C5505::04
Name: U-4432 # 9653.01 DC-SD-15
Misc: 11-13-86 [illegible]

Id File: [illegible]
Title: [illegible]
Last Calibration: 861113 13:[illegible]

Operator ID: [illegible]
Quant Time: 861113 14:28
Injected at: 861113 18:42


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

QUANT REPORT --

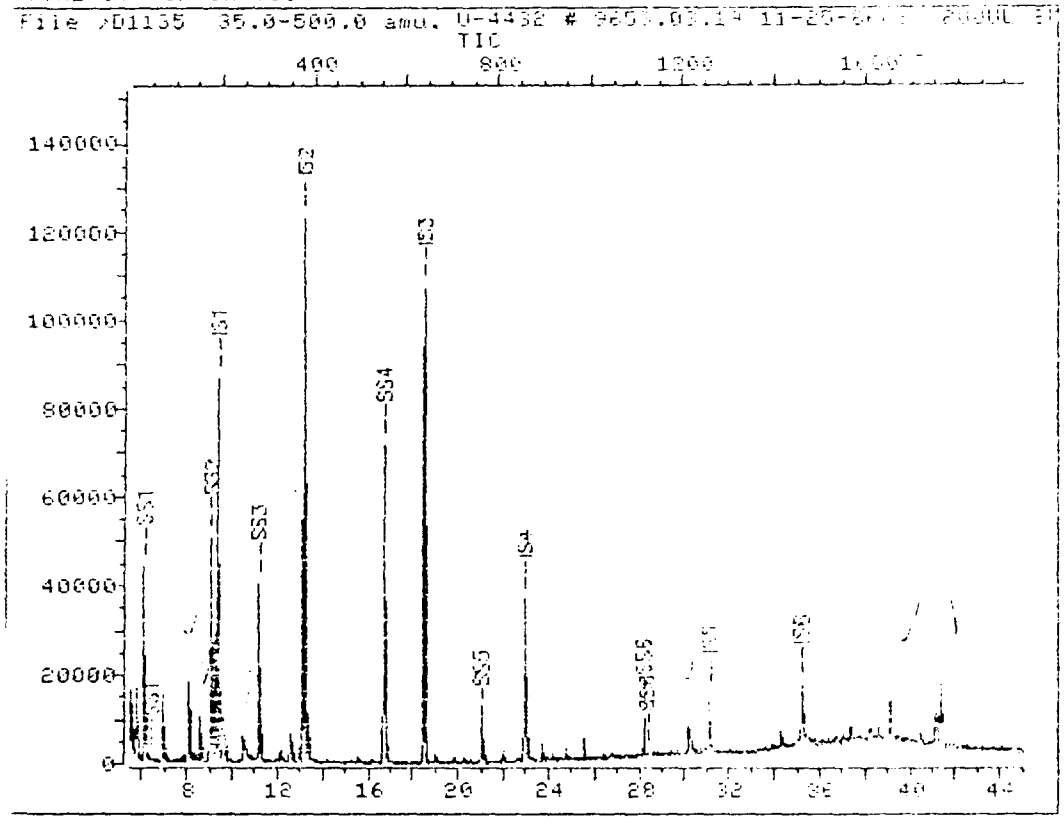
Operator ID: PSEP8 Quant Ver: 4 Quant Time: 861113 19:58
Output File: ^C5505::D2 Injected on: 861114 18:42
Data File: ^C5505::D4 Dilution factor: 1.00
Name: U-4432 # 9653.01 DC-SD-15
Misc: 11-13-86M1 500L MEOH EXT (4.848/10ML) + [illegible]

ID File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861113 13:39

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.87	2[illegible]	32326	50.00	UG/L	100
6)	METHYLENE CHLORIDE		84	8.45	165	58907	25.06	UG/L	100
7)	ACETONE		43	9.38	184	3489	15.55	UG/L	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.70	326	76007	42.25	UG/L	86
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.45	5[illegible]6	154970	50.00	UG/L	100
1[illegible])	2-BUTANONE		72	14.85	3[illegible]0	3963	35.17	UG/L	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.31	65[illegible]	116056	50.00	UG/L	100
36)	TOLUENE-D8	(SURR)	98	26.14	621	182543	51.09	UG/L	94
40)	4-BROMOFLUOROBENZENE	(SURR)	95	32.04	7[illegible]4	87831	46.95	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM

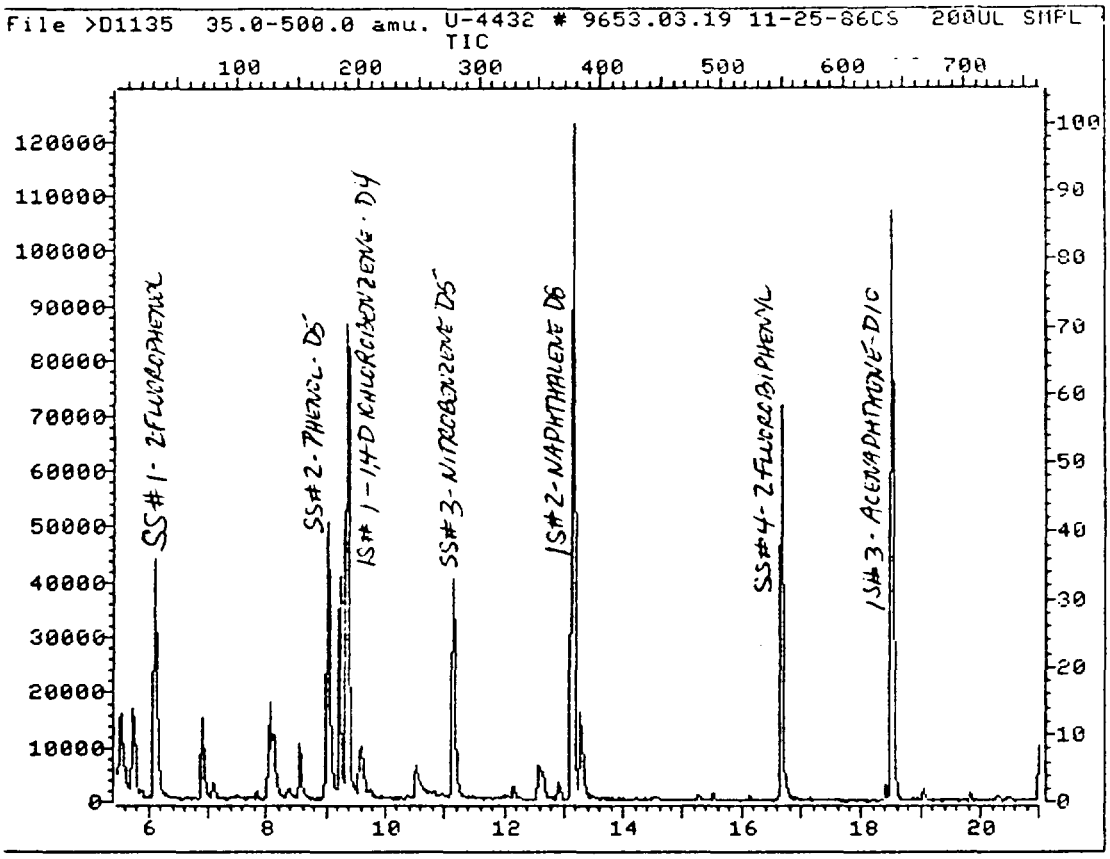


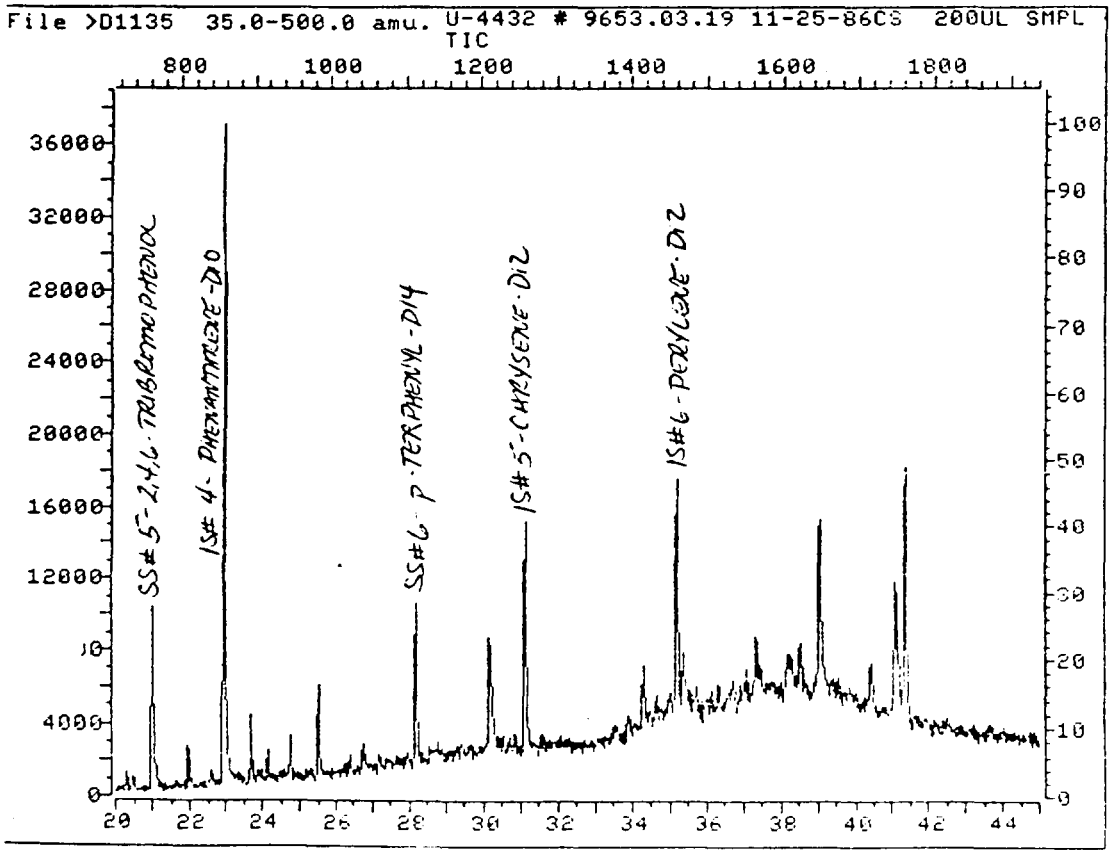
Data File: >D1135::D3
Name: U-4432 # 9653.03.19 DC-SD-15
Misc: 11-25-86CS 200UL SMPL + 200UL MRLS + 50UL IS (2) + BTI # 2

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861125 15:39

Operator ID: USER6
Quant Time: 861125 17:03
Injected at: 861125 16:16

DC-SD-15


File >D1135 35.0-500.0 amu. U-4432 # 9653.03.19 11-25-86CS 200UL SMPL
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 >D1135 35.0-500.0 amu. U-4432 # 9653.03.19 11-25-86CS 200UL 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

erator ID: USER6 Quant Rev: 4 Quant Time: 861125 17:03
t File: ^D1135::D2 Injected at: 861125 16:16
ta File: >D1135::D3 Dilution Factor: 2.000
me: U-4432 # 9653.03.19
sc: 11-25-86CS 200UL SMPL + 200UL MeCl2 + 50UL IS (1X) Bli # 2

File: BNADR::D2
tle: BNA ID FILE FOR THE HP 5970 (B)
st Calibration: 861125 15:39

	Compound		m/z	R.T.	Scan#	Area	Conc	Units	q
)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.35	191	44740	40.00	UG/L	87
)	PHENOL-D5	(SURR)	99	9.02	175	59019	75.04	UG/L	91
5)	2-FLUOROPHENOL	(SURR)	112	6.09	31	36473	67.41	UG/L	96
5)	2-FLUOROPHENOL	(SURR)	112	6.37	45	992	1.83	UG/L	93
~~4)	~~BIS(2-CHLOROISOPROPYL)ETHER~~	~~45~~	~~10.38~~	~~242~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~4)	~~BIS(2-CHLOROISOPROPYL)ETHER~~	~~45~~	~~10.47~~	~~249~~	~~903~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~4)	~~BIS(2-CHLOROISOPROPYL)ETHER~~	~~45~~	~~10.53~~	~~252~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~4)	~~BIS(2-CHLOROISOPROPYL)ETHER~~	~~45~~	~~10.77~~	~~261~~	~~489~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~4)	~~BIS(2-CHLOROISOPROPYL)ETHER~~	~~45~~	~~10.93~~	~~269~~	~~593~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~4)	~~N-NITROSO-DI-N-PROPYLAMINE~~	~~70~~	~~10.75~~	~~260~~	~~140~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~21~~
~~4)	~~N-NITROSO-DI-N-PROPYLAMINE~~	~~70~~	~~11.14~~	~~279~~	~~6300~~	~~19.61~~	~~[illegible]~~	~~UG/L~~	~~99~~
)	*NAPHTHALENE-D8	(IS)	136	13.14	377	164687	40.00	UG/L	100
)	NITROBENZENE-D5	(SURR)	82	11.14	279	34986	50.71	UG/L	98
~~4)	~~1,2,4-TRICHLOROBENZENE~~	~~180~~	~~12.97~~	~~325~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~4)	~~NAPHTHALENE~~	~~128~~	~~13.29~~	~~340~~	~~363~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~4)	~~2-METHYLNAPHTHALENE~~	~~142~~	~~15.36~~	~~406~~	~~142~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~92~~
)	*ACENAPHTHENE-D10	(IS)	162	18.51	641	69420	40.00	UG/L	98
)	2-FLUOROBIPHENYL	(SURR)	172	16.56	550	76838	55.01	UG/L	93
~~4)	~~DIMETHYL PHTHALATE~~	~~163~~	~~10.39~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~4)	~~DIMETHYL PHTHALATE~~	~~163~~	~~10.51~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.98	762	7691	22.52	UG/L	[illegible]
~~4)	~~2,6-DINITROTOLUENE~~	~~165~~	~~10.[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
)	*PHENANTHRENE-D10	(IS)	188	22.93	858	62758	40.00	UG/L	91
)	DI-N-BUTYLPHTHALATE		149	25.50	984	8516	11.49	UG/L	[illegible]
)	*CHRYSENE-D12	(IS)	240	31.11	1299	24902	40.00	UG/L	100
)	TERPHENYL-D14	(SURR)	244	28.15	1114	13284	47.76	UG/L	100
~~4)	~~TERPHENYL-D14~~	~~(SURR)~~	~~244~~	~~28.41~~	~~1122~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
)	*PERYLENE-D12	(IS)	264	35.17	1498	26007	40.00	UG/L	100
~~4)	~~DI-N-OCTYL PHTHALATE~~	~~149~~	~~34.[illegible]~~	~~1[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
)	DI-N-OCTYL PHTHALATE	149	33.99	1396	1027	0.42	UG/L		100
~~4)	~~DI-N-OCTYL PHTHALATE~~	~~149~~	~~34.[illegible]~~	~~1[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~4)	~~DI-N-OCTYL PHTHALATE~~	~~149~~	~~34.97~~	~~1412~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~4)	~~DI-N-OCTYL PHTHALATE~~	~~149~~	~~35.22~~	~~1429~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~

No BPA

No BPA

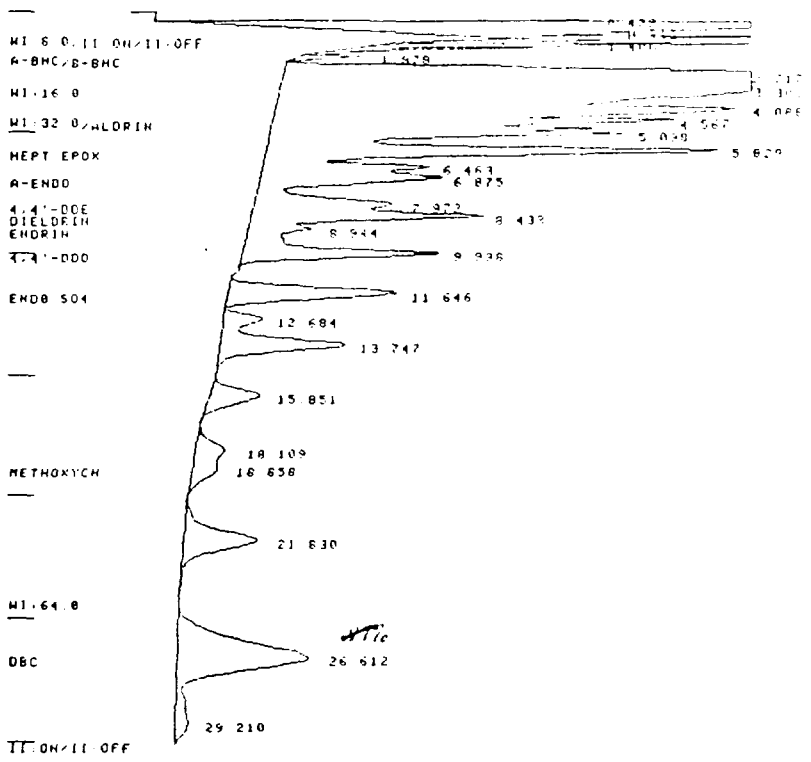
No BPA

No BPA

No BPA

Compound is ISTD

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



CHANNEL: 1A - 1 TITLE: RUN#20 1:04 19 NOV 88

DC-SD-15

SAMPLE: 9653.03.19A1 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		0.0000	1.213		[illegible]	BV	2.44
2		0.0000	1.405		[illegible]	VV	3.19
3		0.0000	1.530		[illegible]	VV	3.19
4	~~A-BHC~~	1.2156	1.878	-0.162	[illegible]	VV	4.91
5		0.0000	2.717		[illegible]	VV	? 18.13
6		0.0000	2.856		[illegible]	VV	? 48.63
7		0.0000	3.308		[illegible]	VV	? 87.94
8		0.0000	4.089		[illegible]	VV	? 34.69
9	~~ALDRIN~~	25.9027	4.557	-0.103	[illegible]	VV	? 21.13
10		0.0000	4.891		[illegible]	VV	? 11.05
11		0.0000	5.098		[illegible]	VV	? 14.81
12	~~HEPT EPOX~~	47.6134	5.929	0.159	[illegible]	VV	21.19
13		0.0000	6.463		[illegible]	VV	? 17.94
14	~~A-ENDO~~	23.4380	6.875	-0.155	[illegible]	VV	? 30.63
15	4,4'-DDE	17.4793	7.972	-0.118	[illegible]	VV	? 30.39
16	DIELDRIN	22.3449	8.439	0.248	[illegible]	VV	21.19
17	ENDRIN	6.2595	8.944	0.186	[illegible]	VV	? 15.91
18	4,4'-DDD	29.2634	9.999	0.162	[illegible]	VB	19.91
19	ENDO SO4	34.0373	11.646	-0.264	[illegible]	BV	31.56
20		0.0000	12.684		[illegible]	VV	28.94
21	4,4'DDT	34.5428	13.747	0.487	[illegible]	VB	31.13
22	END KETON	9.2674	15.851	0.581	[illegible]	BB	30.44
23		0.0000	18.103		[illegible]	BV	? 42.38
24	METHOXYCH	13.6415	[illegible]	-0.632	[illegible]	VV	? 42.75
25		0.0000	21.830		[illegible]	VB	49.75
26	DBC	57.7928	26.612	0.002	[illegible]	BV	74.13
27		0.0000	29.210		[illegible]	VB	83.62

TOTALS: 322.7998 -0.305 17911950

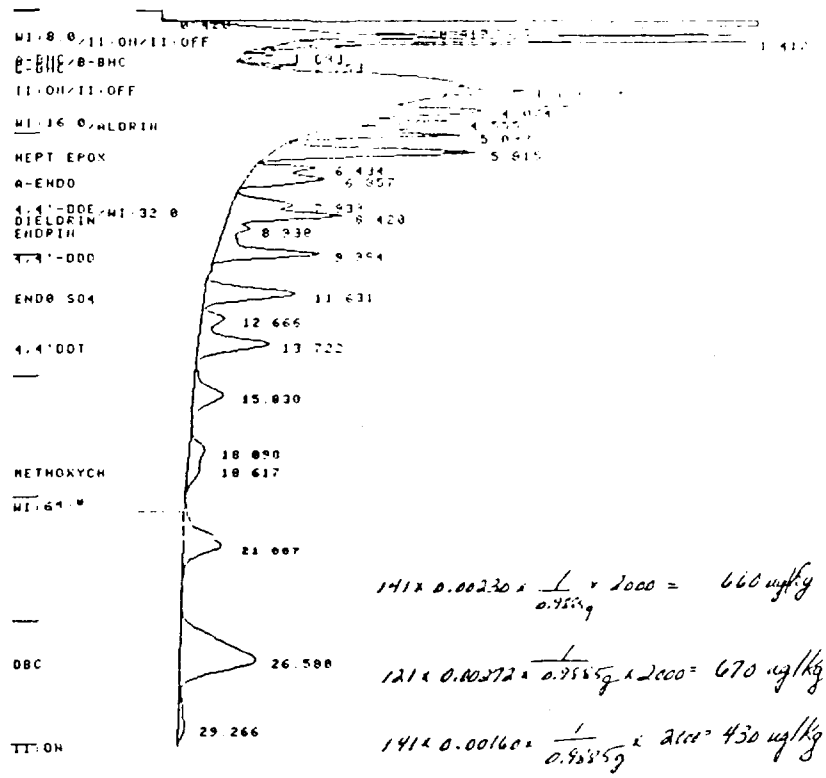
DETECTED PKS: 36 REJECTED PKS: 9

DIVISOR: 1.50000 MULTIPLIER: 1000.00000

NOISE: 22.9 OFFSET: -5

NOTES:
NOTEBOOK: 259-39 ANALYST: K. JUREK / RICHARD SAMSON
SECURE AREA: D JOB#:U-4432,U-4442
INST:VARIAN 6200#2 A ECD 13X1
COLUMN: 6' GLASS 4MM ID 1%/1% SP-LCOPORT
LIQUID PHASE:2% OV-1
CARRIER GAS: N2 @ 60 ML/MIN.
OPT:200 C INJ:220 C
[illegible]

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



141 x 0.00230 x 1/0.9885g x 2000 = 660 ug/kg 1248

121 x 0.00272 x 1/0.9885g x 2000 = 670 ug/kg 1254

141 x 0.00160 x 1/0.9885g x 2000 = 430 ug/kg 1260

RECALCULATE ON FILE: SLY456

CHANNEL: 1A - 1 TITLE: RUN# ~~17~~ ~~20~~ 21 (RS RS) 10:29 19 NOV 86

DC-SD-15

SAMPLE: 9653.03.19A1 METHOD: DAVE CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		W1/2 (SEC)
1		0.0000	1.249		[illegible]	BV		2.44
2		0.0000	1.412		[illegible]	VV		3.25
3		0.0000	1.536		[illegible]	VV		3.13
4	A-BHC	2.4918	1.883	-0.157	[illegible]	VV		5.25
5	B-BHC	9.0552	2.293	0.053	[illegible]	VB	?	7.56
6		0.0000	3.389		[illegible]	BB		7.13
7	HEPTACHLO	27.8476	4.074	0.284	[illegible]	BV		16.31
8	ALDRIN	14.9711	4.555	-0.115	[illegible]	VV		9.38
9		0.0000	4.870		[illegible]	VV		8.50
10		0.0000	5.098 1248		[illegible]	VV		8.31
11	HEPT EPOX	49.9620	5.815	0.145 141	[illegible]	VV		17.56
12		0.0000	6.434		[illegible]	VV	?	13.31
13	A-ENDO	26.5558	6.857	-0.173	[illegible]	VV	?	24.94
14	4,4'-DDE	21.4724	7.939	-0.151	[illegible]	VV	?	29.56
15	DIELDRIN	36.3221	8.420 1254	0.230 121	[illegible]	VV		21.06
16	ENDRIN	7.5954	8.938	-0.192	[illegible]	VV	?	15.81
17	4,4'-DDD	45.1775	9.934	-0.176	[illegible]	VB		20.12
18	ENDO SO4	57.3364	11.631	-0.279	[illegible]	BV		31.50
19		0.0000	12.666		[illegible]	VV		28.19
20	4,4'DDT	60.1124	13.722	0.462	[illegible]	VV		30.31
21	END KETON	20.3517	15.830 1260	0.560 141	[illegible]	VB		43.50
22		0.0000	18.090		[illegible]	BV	?	41.88
23	METHOXYCH	22.2783	18.617	-0.873	[illegible]	VB	?	70.81
24		0.0000	21.007		[illegible]	BV		43.06
25	DBC	104.1541	26.588	-0.030	[illegible]	VV		77.06
26		0.0000	29.266		[illegible]	VB		79.00

TOTALS: 505.6838 -0.382 [illegible]

* DETECTED PKS: 35 REJECTED PKS: 9

DIVISOR: 0.98850 MULTIPLIER: 2000.00000

NOISE: 22.9 OFFSET: 13

NOTES:
NOTEBOOK: 259-41 ANALYST: K.JUREK
SECURE AREA: D JOB#:U-4465
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.
[illegible]

SAMPLE NUMBER DC-SD-16

481095

Sample Number
DC-SD-16

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No. U-4432/U 4442
Lab Sample ID No: 9654
QC Report No.
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: C Stojturica
Date Sample Received: 11-6-86

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-12-86

Conc/Dil Factor: 2 pH 7.0

Percent Moisture: (Not Decanted) 43

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	3800u
74-83-9	Bromomethane	3800u
75-01-4	Vinyl Chloride	3800u
75-00-3	Chloroethane	3800u
75-09-2	Methylene Chloride	10000B
67-64-1	Acetone	5100B
75-15-0	Carbon Disulfide	1900u
75-35-4	1, 1-Dichloroethene	1900u
75-34-3	1, 1-Dichloroethane	1900u
156-60-5	Trans-1, 2-Dichloroethene	1900u
67-66-3	Chloroform	1900u
107-06-2	1, 2-Dichloroethane	1900u
78-93-3	2-Butanone	14000
71-55-6	1, 1, 1-Trichloroethane	1900u
56-23-5	Carbon Tetrachloride	1900u
108-05-4	Vinyl Acetate	3800u
75-27-4	Bromodichloromethane	1900u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	1900u
10061-02-6	Trans-1, 3-Dichloropropene	1900u
79-01-6	Trichloroethene	1900u
124-48-1	Dibromochloromethane	1900u
79-00-5	1, 1, 2-Trichloroethane	1900u
71-43-2	Benzene	1900u
10061-01-5	cis-1, 3-Dichloropropene	1900u
110-75-8	2-Chloroethylvinylether	3800u
75-25-2	Bromoform	1900u
108-10-1	4-Methyl-2-Pentanone	3800u
591-78-6	2-Hexanone	3800u
127-18-4	Tetrachloroethene	1900u
79-34-5	1, 1, 2, 2-Tetrachloroethane	1900u
108-88-3	Toluene	1900u
108-90-7	Chlorobenzene	1900u
100-41-4	Ethylbenzene	1900u
100-42-5	Styrene	1900u
	Total Xylenes	1900u

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.

aboratory Name ecology and environment, inc.

ase No: U-4432 / U-4442

Sample Number
DC-SD-16

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

oncentration: (Low) Medium (Circle One)

ate Extracted/Prepared: 11-11-86

ate Analyzed: 11-21-86

onc/Dil Factor: 10

ercent Moisture (Decanted) 43

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	2800	U
111-44-4	bis(-2-Chloroethyl)Ether	2800	U
5-57-8	2-Chlorophenol	2800	U
41-73-1	1 3-Dichlorobenzene	2800	U
06-46-7	1. 4-Dichlorobenzene	2800	U
00-51-6	Benzyl Alcohol	2800	U
5-50-1	1 2-Dichlorobenzene	2800	U
5-48-7	2-Methylphenol	2800	U
9638-32-9	bis(2-chloroisopropyl)Ether	2800	U
06-44-5	4-Methylphenol	2800	U
21-64-7	N-Nitroso-Di-n-Propylamine	2800	U
7-72-1	Hexachloroethane	2800	U
8-95-3	Nitrobenzene	2800	U
8-59-1	Isophorone	2800	U
8-75-5	2-Nitrophenol	2800	U
05-67-9	2. 4-Dimethylphenol	2800	U
5-85-0	Benzoic Acid	14000	U
11-91-1	bis(-2-Chloroethoxy)Methane	2800	U
20-83-2	2. 4-Dichlorophenol	2800	U
20-82-1	1. 2. 4-Trichlorobenzene	2800	U
1-20-3	Naphthalene	2800	U
06-47-8	4-Chloroaniline	2800	U
7-68-3	Hexachlorobutadiene	2800	U
9-50-7	4-Chloro-3-Methylphenol	2800	U
1-57-6	2-Methylnaphthalene	2800	U
7-47-4	Hexachlorocyclopentadiene	2800	U
8-06-2	2 4 6-Trichlorophenol	2800	U
5-95-4	2. 4 5-Trichlorophenol	14000	U
1-58-7	2-Chloronaphthalene	2800	U
8-74-4	2-Nitroaniline	14000	U
3 -3	Dimethyl Phthalate	2800	U
08-96-8	Acenaphthylene	2800	U
9-09-2	3-Nitroaniline	14000	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	2800	U
51-28-5	2. 4-Dinitrophenol	14000	U
100-02-7	4-Nitrophenol	14000	U
132-64-9	Dibenzofuran	2800	U
121-14-2	2 4-Dinitrotoluene	2800	U
606-20-2	2 6-Dinitrotoluene	2800	U
84-66-2	Diethylphthalate	2800	U
7005-72-3	4-Chlorophenyl-phenylether	2800	U
86-73-7	Fluorene	2800	U
100-01-6	4-Nitroaniline	14000	U
534-52-1	4. 6-Dinitro-2-Methylphenol	14000	U
86-30-6	N-Nitrosodiphenylamine (1)	2800	U
101-55-3	4-Bromophenyl-phenylether	2800	U
118-74-1	Hexachlorobenzene	2800	U
87-86-5	Pentachlorophenol	14000	U
85-01-8	Phenanthrene	2800	U
120-12-7	Anthracene	2800	U
84-74-2	Di-n-Butylphthalate	570	BJ
206-44-0	Fluoranthene	2800	U
129-00-0	Pyrene	2800	U
85-68-7	Butylbenzylphthalate	2800	U
91-94-1	3 3'-Dichlorobenzidine	5600	U
56-55-3	Benzo(a)Anthracene	2800	U
117-81-7	bis(2-Ethylhexyl)Phthalate	540	J
218-01-9	Chrysene	2800	U
117-84-0	Di-n-Octyl Phthalate	270	J
205-99-2	Benzo(b)Fluoranthene	2800	U
207-08-9	Benzo(k)Fluoranthene	2800	U
50-32-8	Benzo(a)Pyrene	2800	U
193-39-5	Indeno(1 2 3-cd)Pyrene	2800	U
53-70-3	Dibenzo(a h)Anthracene	2800	U
191-24-2	Benzo(g h i)Perylene	2800	U

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No U-4432 / U-4442

Sample Number DC-SD-16

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-11-86

Date Analyzed 11-19-86

Conc/Dil Factor 20

Percent Moisture (decanted) 43

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	320 u
319-85-7	Beta-BHC	320 u
319-86-8	Delta-BHC	320 u
58-89-9	Gamma-BHC (Lindane)	320 u
76-44-8	Heptachlor	320 u
309-00-2	Aldrin	320 u
1024-57-3	Heptachlor Epoxide	320 u
959-98-8	Endosulfan I	320 u
60-57-1	Dieldrin	640 u
72-55-9	4,4'-DDE	640 u
72-20-8	Endrin	640 u
33213-65-9	Endosulfan II	640 u
72-54-8	4,4'-DDD	640 u
1031-07-8	Endosulfan Sulfate	640 u
50-29-3	4,4'-DDT	640 u
72-43-5	Methoxychlor	3,200 u
53494-70-5	Endrin Ketone	640 u
57-74-9	Chlordane	3,200 u
8001-35-2	Toxaphene	6,400 u
12674-11-2	Aroclor-1016	3,200 u
11104-28-2	Aroclor-1221	3,200 u
11141-16-5	Aroclor-1232	3,200 u
53469-21-9	Aroclor-1242	3,200 u
12672-29-6	Aroclor-1248	20,000
11097-69-1	Aroclor-1254	8,830
11096-82-5	Aroclor-1260	6,400 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.

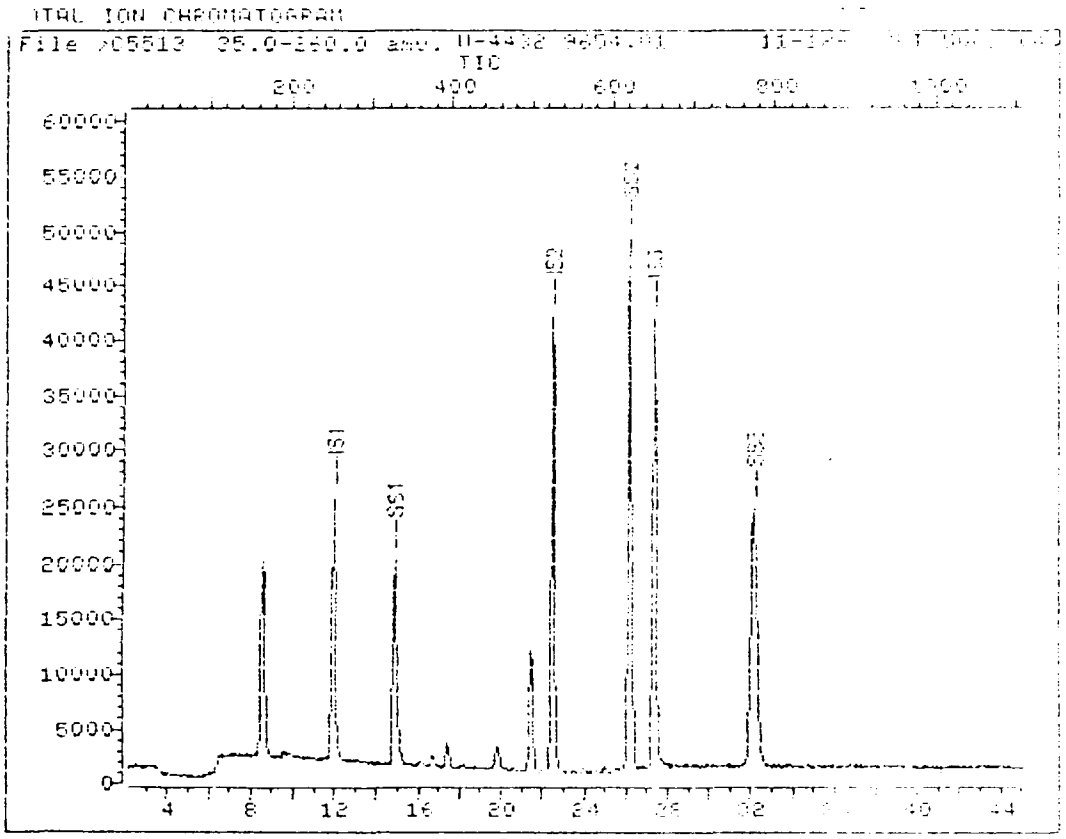
Case No u-4432 / u-4442

Sample Number DC-SD-16

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.4 min	900 BJ
2.	Unknown ketone	VOA	19.8 min	630 J
3.	Hexane isomer	VOA	21.5 min	2800 BJ
4.				
5.	UNKNOWN HYDROCARBON	BNA	22.8	2400 J
6.	UNKNOWN HYDROCARBON		35.4	2600 J
7.	UNKNOWN HYDROCARBON		36.3	5900 J
8.	UNKNOWN HYDROCARBON		36.8	8300 J
9.	UNKNOWN HYDROCARBON		37.4	3400 J
10.	UNKNOWN HYDROCARBON		37.6	7500 J
11.	UNKNOWN HYDROCARBON		38.3	5100 J
12.	UNKNOWN HYDROCARBON		39.4	4400 J
13.	UNKNOWN HYDROCARBON		39.8	6500 J
14.	UNKNOWN HYDROCARBON		40.3	13000 J
15.	UNKNOWN HYDROCARBON		41.5	14000 J
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30				



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Misc: 11-12-86MEI 50UL 14.0[illegible]

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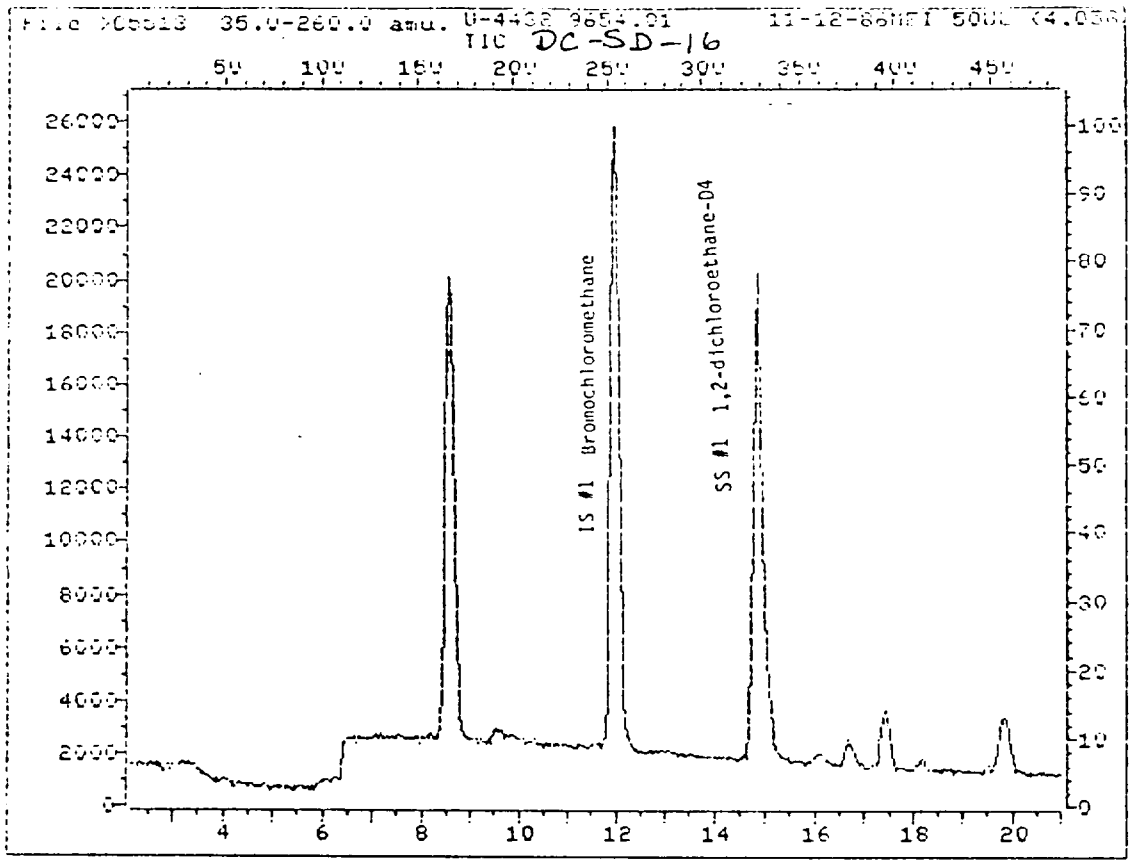
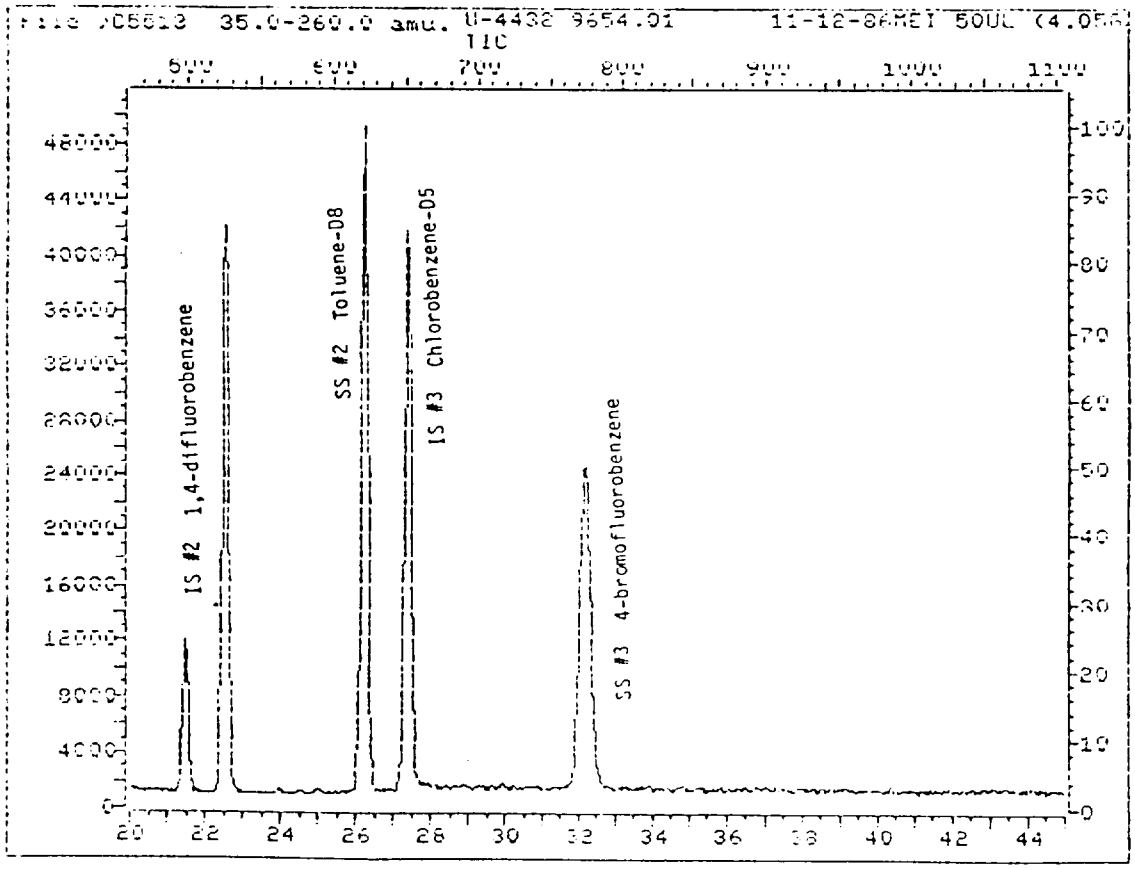
Last Calibration: 861113 22:56

Operator ID: USER8
Quant Time: 861114 03:45
Injected at: 861114 02:59


35.0-260.0 amu.
TIC
DC-SD-16
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


35.0-260.0 amu.
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

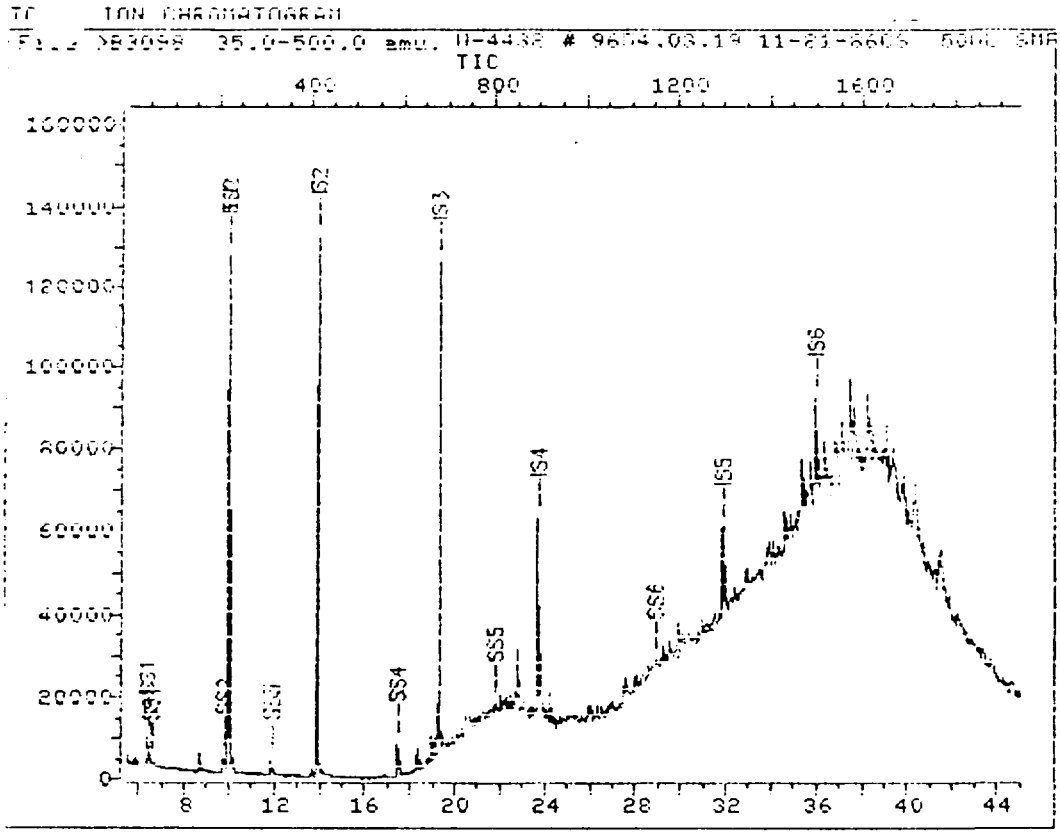
QUANT REPORT --

Operator ID: USER8 Quant Rev: 4 Quant Time: 861114 03:45
Output File: ^C5513::02 Injected at: 861114 02:59
Data File: >C5513::03 Dilution Factor: 1.000
Name: U-4432 9654.01 DC-SD-16
Misc: 11-12-86MEI 500L (4.0G/10MLS MEOH) + [illegible]

ID File: VOACR::02
Title: VOA ID FILE FOR HP-5995 (CURT. CAL.)
Last Calibration: 861113 22:56

	Compound	M/E	R.T.	Scans	Area	Conc	Units	Q
1)	*BROMOCHLOROMETHANE (IS)	128	11.97	[illegible]	[illegible]	[illegible]	UG/L	100
6)	METHYLENE CHLORIDE	84	9.55	[illegible]	[illegible]	[illegible]	UG/L	100
7)	ACETONE	43	9.52	[illegible]	[illegible]	11.86	UG/L	100
15)	1,2-DICHLOROETHANE-D4(SURR)	65	14.84	[illegible]	[illegible]	48.16	UG/L	91
16)	*1,4-DIFLUOROBENZENE (IS)	114	22.52	[illegible]	[illegible]	[illegible]	UG/L	100
17)	2-BUTANONE	72	12.99	[illegible]	[illegible]	72.21	UG/L	100
31)	*CHLOROBENZENE-D5 (IS)	117	27.37	[illegible]	[illegible]	[illegible]	UG/L	100
36)	TOLUENE-D8 (SURR)	98	25.20	[illegible]	196048	48.28	UG/L	94
40)	4-BROMOFLUOROBENZENE(SURR)	95	32.18	[illegible]	[illegible]	[illegible]	UG/L	100

* Compound is ISTD

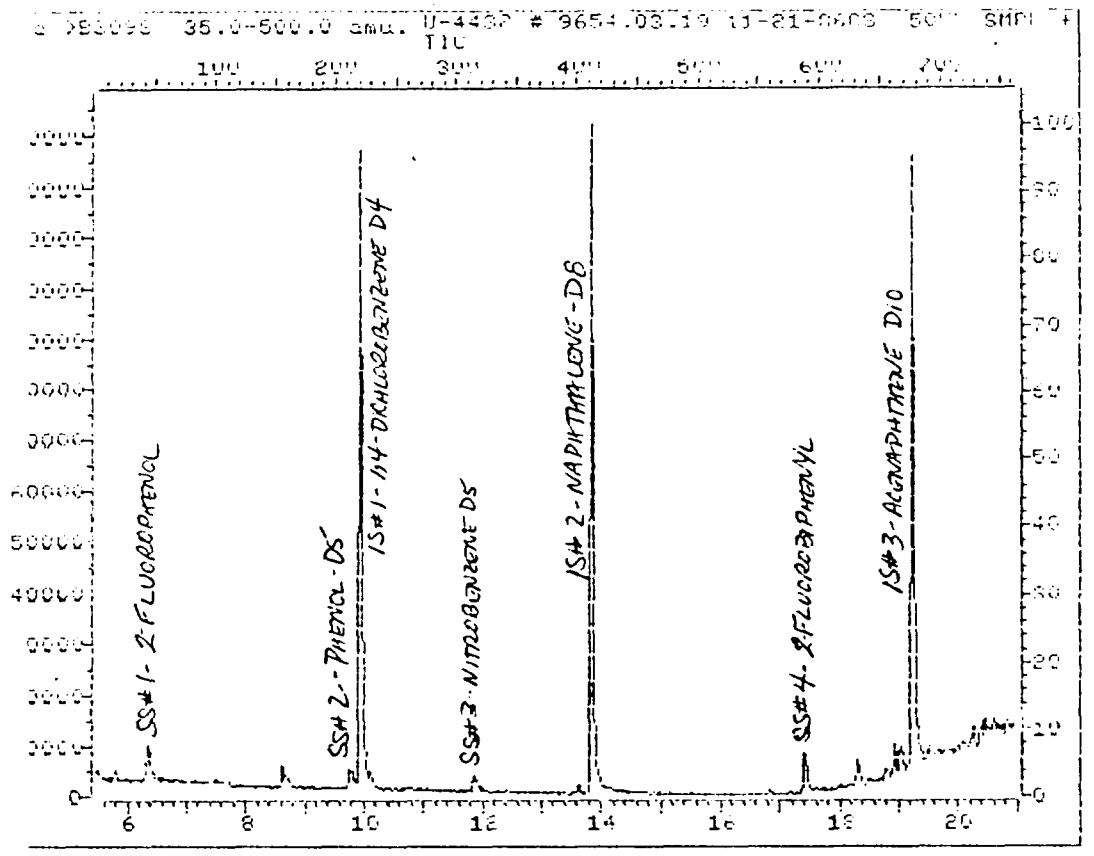


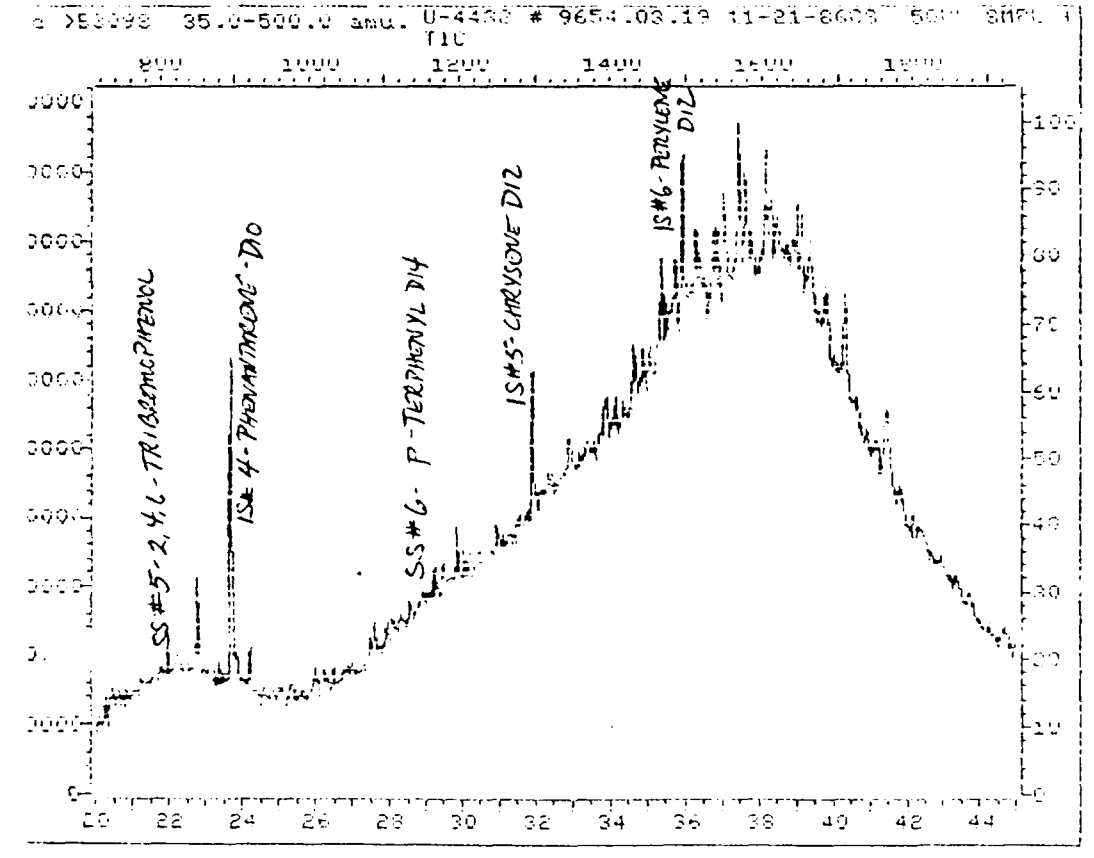
Data File: >B[illegible]98::04
Name: U-4432 # 9654.03.19 DC-SD-16
Misc: 11-21-86[illegible] 500UL SMPL + 4[illegible]UL MEOL2 + [illegible]UL IS

Id File: BNA[illegible]R::02
Title: BNA ID FILE FOR THE HP 59[illegible] (B)
Last Calibration: 861121 14:38

Operator ID: USER8
Quant Time: 861121 20:49
Injected at: 861121 20:01

DC-SD-16


35.0-500.0 amu.
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


35.0-500.0 amu.
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

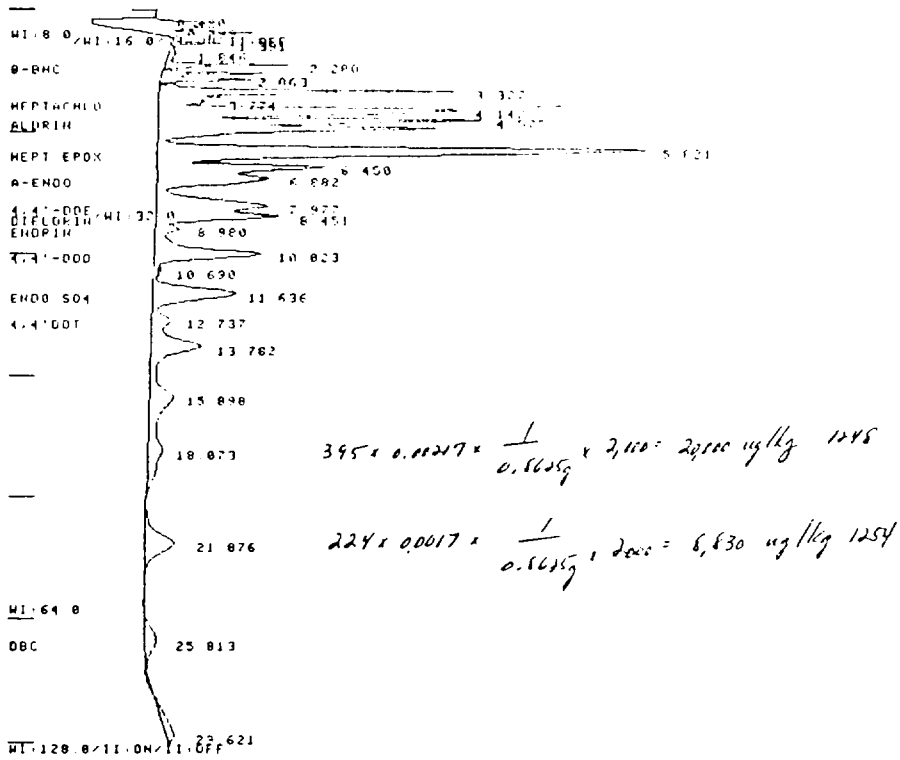
[illegible]erator ID: USER8 Quant Rev: 4 Quant Time: 861121 20:49
[illegible]tput File: ^B[illegible]98::Q[illegible] Injected at: 861121 20:[illegible]
[illegible]ta File: [illegible]B[illegible]98::D4 Dilution Factor: 10.00
[illegible]me: D-4432 # 9654.03.19
[illegible]sc: 11-21-86CS 500UL SMPL + 450UL MEC[illegible]2 + [illegible]UL IS

[illegible] File: BNARR::D2
[illegible]tle: BNA ID FILE FOR THE HP 5970 (B)
[illegible]st Calibration: 861121 14:38

#	Compound		M/E	R.T.	Scan#	Area	Conc	Units		q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.95	221	65431	40.00	UG/L		85
2)	PHENOL-D5	(SURR)	99	9.27	212	6065	26.16	UG/L		94
2)	PHENOL-D5	(SURR)	99	9.95	221	2060	8.88	UG/L		85
[illegible]	2-FLUOROPHENOL	(SURR)	112	6.[illegible]5	44	9162	54.70	UG/L		89
[illegible]	2-FLUOROPHENOL	(SURR)	112	6.51	52	833	4.97	UG/L		91
[illegible]	2-FLUOROPHENOL	(SURR)	112	6.56	54	367	2.19	UG/L	No [illegible]	98
~~[illegible]~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.89~~	~~31[illegible]~~	~~396~~	~~2.49~~	~~UG/L~~		97
[illegible]	*NAPHTHALENE-D8	(IS)	136	13.85	413	20[illegible]20	40.00	UG/L		100
[illegible]	NITROBENZENE-D5	(SURR)	82	11.86	315	6312	36.27	UG/L		91
[illegible]	*ACENAPHTHENE-D10	(IS)	162	19.24	678	71969	40.00	UG/L		98
[illegible]	2-FLUOROBIPHENYL	(SURR)	172	17.41	580	14098	4[illegible].62	UG/L		93
~~[illegible]~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.12~~	~~672~~	~~221~~	~~.76~~	~~UG/L~~	No [illegible]	100
~~[illegible]~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.24~~	~~67[illegible]~~	~~2[illegible]~~	~~76.03~~	~~UG/L~~		100
[illegible]	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.27	802	1376	29.71	UG/L		91
~~[illegible]~~	~~2,4-DINITROTOLUENE~~		~~16[illegible]~~	~~20.40~~	~~7[illegible]~~	~~222~~	~~[illegible].01~~	~~UG/L~~	No [illegible]	100
~~[illegible]~~	~~2,4-DINITROTOLUENE~~		~~165~~	~~20.53~~	~~746~~	~~237~~	~~4.06~~	~~UG/L~~		100
~~[illegible]~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.[illegible]4~~	~~6[illegible]~~	~~[illegible]1~~	~~1[illegible].53~~	~~UG/L~~		100
[illegible]	*PHENANTHRENE-D10	(IS)	188	23.[illegible]8	896	65612	40.00	UG/L		96
~~[illegible]~~	~~DI-N-BUTYLPHTHALATE~~		~~149~~	~~25.99~~	~~10[illegible]~~	~~49[illegible]~~	~~2.6[illegible]~~	~~UG/L~~	No [illegible]	1
[illegible]	DI-N-BUTYLPHTHALATE		149	26.25	1022	1850	9.96	UG/L		65
~~[illegible]~~	~~DI-N-BUTYLPHTHALATE~~		~~149~~	~~26.40~~	~~10[illegible]~~	~~865~~	~~4.6[illegible]~~	~~UG/L~~	No [illegible]	27
~~[illegible]~~	~~DI-N-BUTYLPHTHALATE~~		~~149~~	~~26.50~~	~~1034~~	~~1971~~	~~10.61~~	~~UG/L~~		1
[illegible]	*CHRYSENE-D12	(IS)	240	31.85	129[illegible]	32918	40.00	UG/L		100
[illegible]	TERPHENYL-D14	(SURR)	244	28.88	1151	2958	44.17	UG/L		100
~~[illegible]~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~32.60~~	~~133[illegible]~~	~~224~~	~~[illegible].14~~	~~UG/L~~	No [illegible]	70
[illegible]	BIS(2-ETHYLHEXYL)PHTHALATE		149	32.83	1344	669	9.37	UG/L		99
~~[illegible]~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~32.91~~	~~134[illegible]~~	~~214~~	~~[illegible].00~~	~~UG/L~~	No [illegible]	68
~~[illegible]~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~33.19~~	~~1362~~	~~153~~	~~2.14~~	~~UG/L~~		52
[illegible]	*PERYLENE-D12	(IS)	264	35.94	14[illegible]	32398	40.00	UG/L		100
~~[illegible]~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~34.54~~	~~14[illegible]~~	~~[illegible]85~~	~~4.54~~	~~UG/L~~	No [illegible]	100
[illegible]	DI-N-OCTYL PHTHALATE		149	34.63	143[illegible]	601	4.62	UG/L		100
~~[illegible]~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~34.73~~	~~1437~~	~~712~~	~~[illegible].65~~	~~UG/L~~	No [illegible]	100
~~[illegible]~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~34.89~~	~~14[illegible]~~	~~440~~	~~[illegible].40~~	~~UG/L~~		100
~~[illegible]~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~34.99~~	~~1450~~	~~[illegible]16~~	~~[illegible].53~~	~~UG/L~~		100

* Compound is ISTD

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



RECALCULATE ON FILE: SLY459

DC-SD-16

CHANNEL: 1A - 1 TITLE: RUN# 24 12:22 19 NOV 86

SAMPLE: 9654.03.19A1 METHOD: DAVE CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.391		29736	BV	3.31
2	G-BHC	8.7433	2.280	-0.100	95917	VV	5.00
3	D-BHC	9.6266	2.600	0.150	92229	VV	6.31
4		0.0000	2.053		84700	VV	6.13
5		0.0000	3.327		379561	VV	8.00
6		0.0000	3.545		85058	VV	? 11.75
7	HEPTACHLO	6.3430	3.774	-0.016	91062	VV	? 11.50
8		0.0000	4.142		291696	VV	18.08
9	ALDRIN	51.3748	4.575	-0.095	516047	VV	12.94
10		0.0000	4.888		479801	VV	12.13
11	HEPT EPOX	130.0909	5.821	0.151	1228168	VV	19.13
12		0.0000	6.450		288034	VV	18.06
13	A-ENDO	40.4845	6.882	-0.148	359115	VV	? 31.38
14	4,4'-DDE	43.8107	7.977	-0.113	401442	VV	? 30.96
15	DIELDRIN	35.9395	8.451	0.261	350224	VV	? 24.00
16	ENDRIN	6.5129	8.980	-0.150	57637	VV	? 10.88
17	4,4'-DDD	50.5226	10.023	-0.137	390624	VV	23.25
18	ENDO SO4	54.1125	11.636	-0.274	347911	VV	31.13
19		0.0000	12.737		82682	VV	33.19
20	4,4'DDT	52.5401	13.782	0.522	270276	VV	33.88
21	END KETON	25.7103	15.898	0.628	238674	VV	46.50
22		0.0000	18.073		181190	VB	54.81
23		0.0000	21.876		204665	BB	40.81
24	DBC	12.0212	25.813	-0.797	48523	BV	65.13
25		0.0000	29.621		52278	VB	?144.63

TOTALS: 527.8329 -0.118 7274359

DETECTED PKS: 37 REJECTED PKS: 12

DIVISOR: 0.98850 MULTIPLIER: 2020.02002

NOISE: 22.9 OFFSET: -10

NOTES:
NOTEBOOK: 259-41 ANALYST: K.JUREK
SECURE AREA: D JOB#:U-4465
INST:VARIAN 6000#2 A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE:5% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
OPT:300 C INJ:220 C

SAMPLE NUMBER DC-SD-17

481095

Sample Number
DC-SD-17

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No: U-4432 / U-4442
Lab Sample ID No: 9655
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: [signature]
Date Sample Received: 11-6-86

Volatile Compounds

Concentration: Low (Medium) (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-12-86

Conc/Dil Factor: 2 pH 6.7

Percent Moisture: (Not Decanted) 37

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	3200u
74-83-9	Bromomethane	3200u
75-01-4	Vinyl Chloride	3200u
75-00-3	Chloroethane	3200u
75-09-2	Methylene Chloride	8400 B
67-64-1	Acetone	5600 B
75-15-0	Carbon Disulfide	1600u
75-35-4	1, 1-Dichloroethene	1600u
75-34-3	1, 1-Dichloroethane	1600u
156-60-5	Trans-1, 2-Dichloroethene	1600u
67-66-3	Chloroform	1600u
107-06-2	1, 2-Dichloroethane	1600u
78-93-3	2-Butanone	13000
71-55-6	1, 1, 1-Trichloroethane	1600u
56-23-5	Carbon Tetrachloride	1600u
108-05-4	Vinyl Acetate	3200u
75-27-4	Bromodichloromethane	1600u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	1600u
10061-02-6	Trans-1, 3-Dichloropropene	1600u
79-01-6	Trichloroethene	1600u
124-48-1	Dibromochloromethane	1600u
79-00-5	1, 1, 2-Trichloroethane	1600u
71-43-2	Benzene	1600u
10061-01-5	cis-1, 3 Dichloropropene	1600u
110-75-8	2-Chloroethylvinylether	3200u
75-25-2	Bromoform	1600u
108-10-1	4-Methyl-2-Pentanone	3200u
591-78-6	2-Hexanone	3200u
127-18-4	Tetrachloroethene	1600u
79-34-5	1, 1, 2, 2-Tetrachloroethane	3200u
108-88-3	Toluene	1600u
108-90-7	Chlorobenzene	1600u
100-41-4	Ethylbenzene	1600u
100-42-5	Styrene	1600u
	Total Xylenes	1600u

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.

boratory Name ecology and environment, inc.

se No: U-4432 / U-4442

Sample Number
DC-SD-17

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

ncentration: (Low) Medium (Circle One)

te Extracted/Prepared: 11-11-86

te Analyzed: 11-21-86

nc/Dil Factor: 10

cent Moisture (Decanted) 37

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	2600	U
111-44-4	bis(2-Chloroethyl)Ether	2600	U
-57-8	2-Chlorophenol	2600	U
1-73-1	1 3-Dichlorobenzene	2600	U
6-46-7	1 4-Dichlorobenzene	2600	U
0-51-6	Benzyl Alcohol	2600	U
-50-1	1 2-Dichlorobenzene	2600	U
-48-7	2-Methylphenol	2600	U
638-32-9	bis(2-chloroisopropyl)Ether	2600	U
6-44-5	4-Methylphenol	2600	U
1-64-7	N-Nitroso-Di-n-Propylamine	2600	U
-72-1	Hexachloroethane	2600	U
-95-3	Nitrobenzene	2600	U
-59-1	Isophorone	2600	U
-75-5	2-Nitrophenol	2600	U
5-67-9	2, 4-Dimethylphenol	2600	U
-85-0	Benzoic Acid	13000	U
1-91-1	bis(2-Chloroethoxy)Methane	2600	U
0-83-2	2, 4-Dichlorophenol	2600	U
0-82-1	1, 2, 4-Trichlorobenzene	2600	U
-20-3	Naphthalene	2600	U
6-47-8	4-Chloroaniline	2600	U
-68-3	Hexachlorobutadiene	2600	U
-50-7	4-Chloro-3-Methylphenol	2600	U
-57-6	2-Methylnaphthalene	2600	U
-47-4	Hexachlorocyclopentadiene	2600	U
-06-2	2 4 6-Trichlorophenol	2600	U
-95-4	2, 4, 5-Trichlorophenol	13000	U
-58-7	2-Chloronaphthalene	2600	U
-74-4	2-Nitroaniline	13000	U
1 3	Dimethyl Phthalate	2600	U
8-50-8	Acenaphthylene	2600	U
-09-2	3-Nitroaniline	13000	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	2600	U
51-28-5	2, 4-Dinitrophenol	13000	U
100-02-7	4-Nitrophenol	13000	U
132-64-9	Dibenzofuran	2600	U
121-14-2	2 4-Dinitrotoluene	2600	U
606-20-2	2 6-Dinitrotoluene	2600	U
84-66-2	Diethylphthalate	2600	U
7005-72-3	4-Chlorophenyl-phenylether	2600	U
86-73-7	Fluorene	2600	U
100-01-6	4-Nitroaniline	13000	U
534-52-1	4, 6-Dinitro-2-Methylphenol	13000	U
86-30-6	N-Nitrosodiphenylamine (1)	2600	U
101-55-3	4-Bromophenyl-phenylether	2600	U
118-74-1	Hexachlorobenzene	2600	U
87-86-5	Pentachlorophenol	13000	U
85-01-8	Phenanthrene	2600	U
120-12-7	Anthracene	2600	U
84-74-2	Di-n-Butylphthalate	560	J
206-44-0	Fluoranthene	2600	U
129-00-0	Pyrene	2600	U
85-68-7	Butylbenzylphthalate	2600	U
91-94-1	3 3'-Dichlorobenzidine	5200	U
56-55-3	Benzo(a)Anthracene	2600	U
117-81-7	bis(2-Ethylhexyl)Phthalate	150	J
218-01-9	Chrysene	2600	U
117-84-0	Di-n-Octyl Phthalate	2600	U
205-99-2	Benzo(b)Fluoranthene	2600	U
207-08-9	Benzo(k)Fluoranthene	2600	U
50-32-8	Benzo(a)Pyrene	2600	U
193-39-5	Indeno(1 2, 3-cd)Pyrene	2600	U
53-70-3	Dibenzo(a,h)Anthracene	2600	U
191-24-2	Benzo(g,h,i)Perylene	2600	U

(1) Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No U-4432/U-4442

Sample Number DC-SD-17

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-11-86

Date Analyzed 11-19-86

Conc/Dil Factor: 20

Percent Moisture (decanted) 37

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	320 U
319-85-7	Beta-BHC	320 U
319-86-8	Delta-BHC	320 U
58-89-9	Gamma-BHC (Lindane)	320 U
76-44-8	Heptachlor	320 U
309-00-2	Aldrin	320 U
1024-57-3	Heptachlor Epoxide	320 U
959-98-8	Endosulfan I	320 U
60-57-1	Dieldrin	640 U
72-55-9	4,4'-DDE	640 U
72-20-8	Endrin	640 U
33213-65-9	Endosulfan II	640 U
72-54-8	4,4'-DDD	640 U
1031-07-8	Endosulfan Sulfate	640 U
50-29-3	4,4'-DDT	640 U
72-43-5	Methoxychlor	3200 U
53494-70-5	Endrin Ketone	640 U
57-74-9	Chlordane	3200 U
8001-35-2	Toxaphene	6400 U
12674-11-2	Aroclor-1016	3200 U
11104-28-2	Aroclor-1221	3200 U
11141-16-5	Aroclor-1232	3200 U
53469-21-9	Aroclor-1242	3200 U
12672-29-6	Aroclor-1248	5200
11097-69-1	Aroclor-1254	4200
11096-82-5	Aroclor-1260	2700 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.

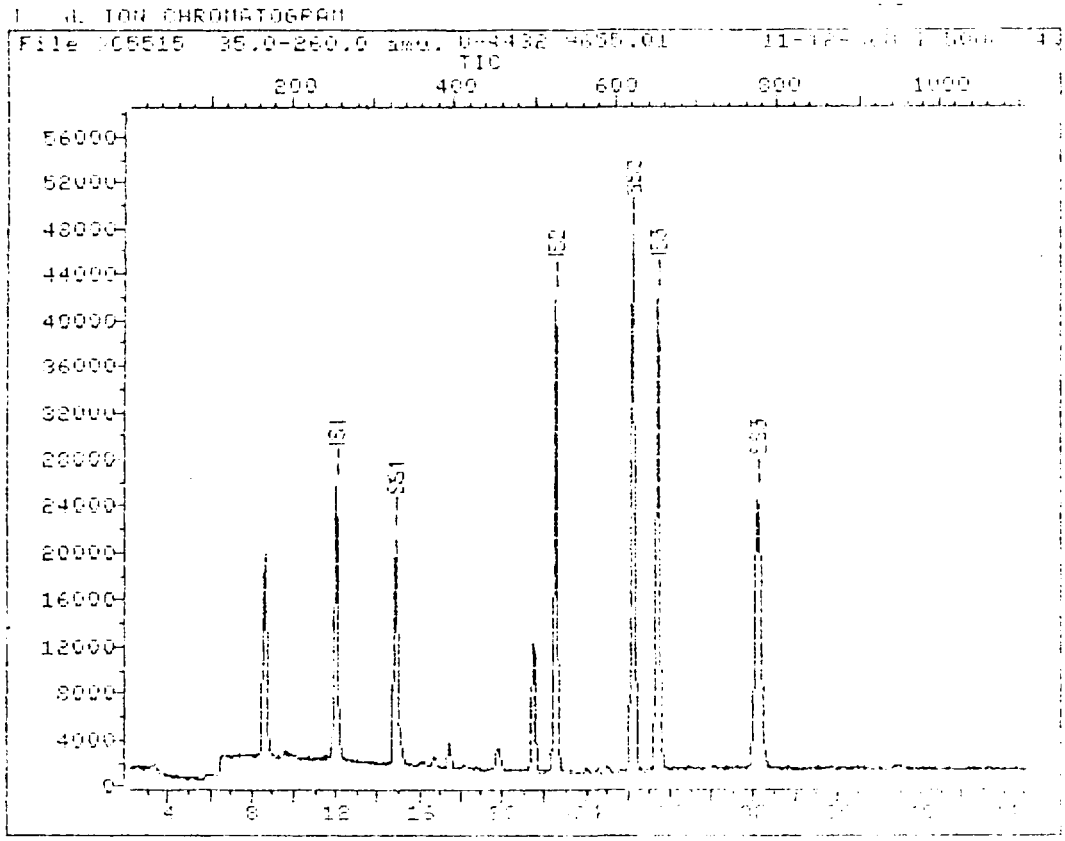
Case No u-4432 / u-4442

Sample Number DC-SD-17

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

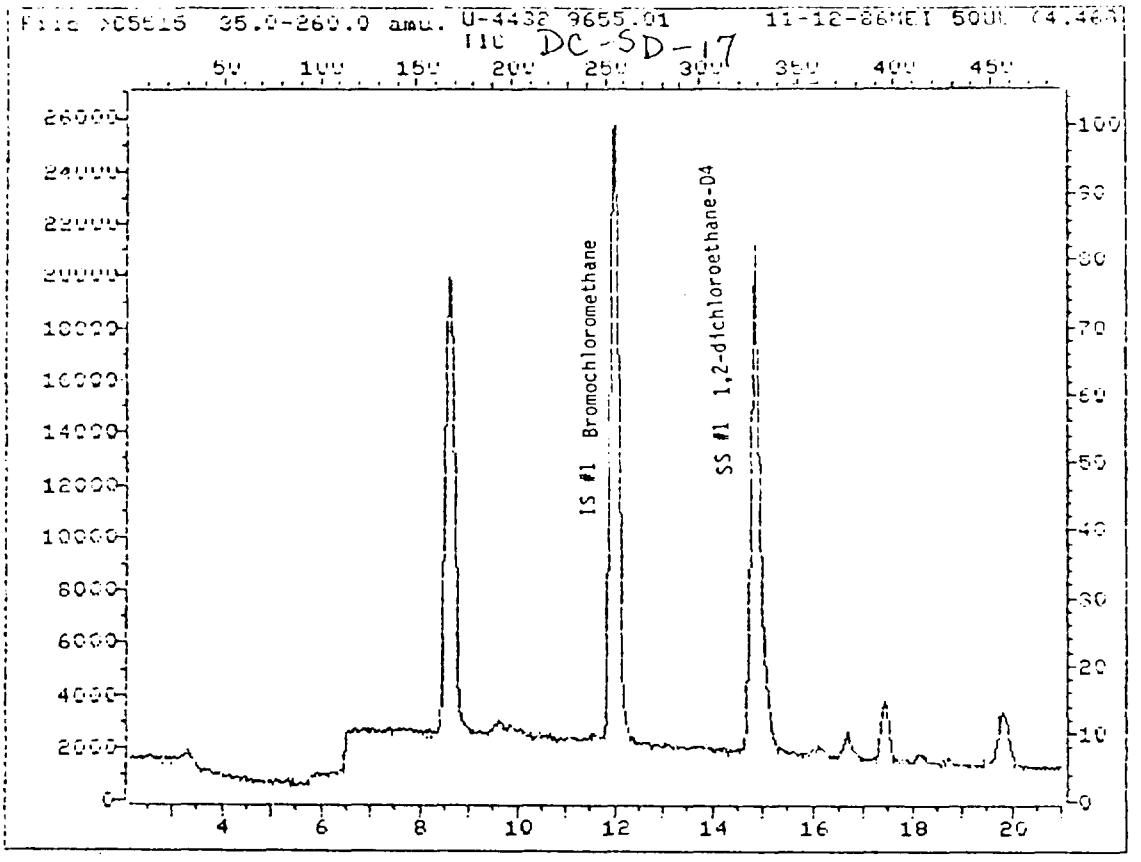
CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.4 min	750 BJ
2.	Unknown Ketone	VOA	19.8 min	510 J
3.	Hexane isomer	VOA	21.5 min	2400 BJ
4.				
5.	UNKNOWN HYDROCARBON	BNA	19.1	1600 J
6.	UNKNOWN HYDROCARBON		22.0	2200 J
7.	UNKNOWN HYDROCARBON		22.8	3100 J
8.	UNKNOWN HYDROCARBON		24.2	1400 J
9.	UNKNOWN HYDROCARBON		24.4	680 J
10.	UNKNOWN HYDROCARBON		29.5	3600 J
11.	UNKNOWN HYDROCARBON		32.3	4400 J
12.	UNKNOWN HYDROCARBON		32.8	4400 J
13.	UNKNOWN HYDROCARBON		33.8	4500 J
14.	UNKNOWN HYDROCARBON		34.6	4900 J
15.	UNKNOWN HYDROCARBON		36.8	5500 J
16.	UNKNOWN HYDROCARBON		37.6	4900 J
17.	UNKNOWN HYDROCARBON		38.3	4100 J
18.	UNKNOWN HYDROCARBON		38.9	5400 J
19.	UNKNOWN HYDROCARBON		39.4	6800 J
20.	UNKNOWN HYDROCARBON		39.8	6900 J
21.	UNKNOWN HYDROCARBON		40.3	8700 J
22.	UNKNOWN HYDROCARBON		41.4	7500 J
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30				

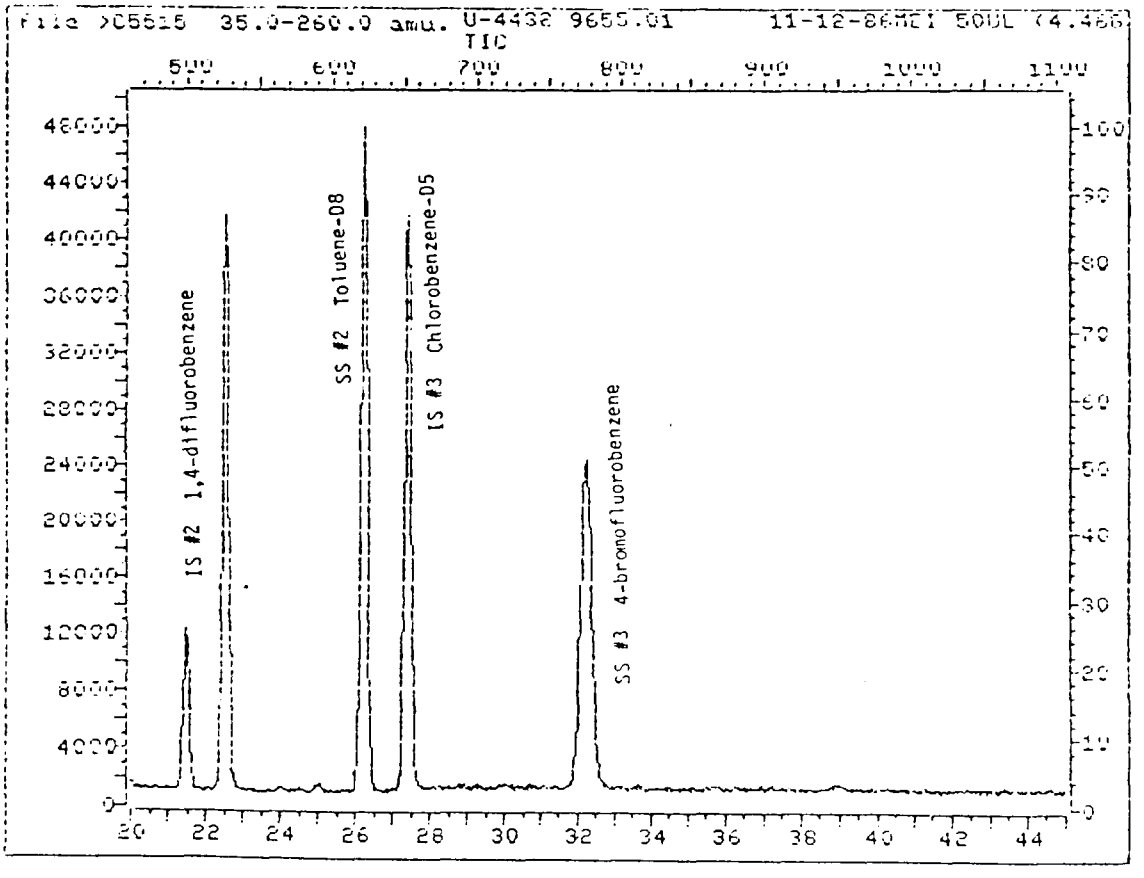


Data File: [illegible]
Name: U-2432 [illegible] DC-SD-17
Misc: 11-12-[illegible] 500UL [illegible]

Id File: VOAOP::02
Title: VOA ID FILE FOR HP-5995 [illegible]
Last Calibration: 861113 20:56

Operator ID: USER8
Quant Time: 861114 05:39
Injected at: 861114 04:53


File >05515 35.0-260.0 amu. U-4432 9655.01 11-12-86MEI 50UL
TIC
DC-SD-17
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File >05515 35.0-260.0 amu. U-4432 9655.01 11-12-86MEI 50UL
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

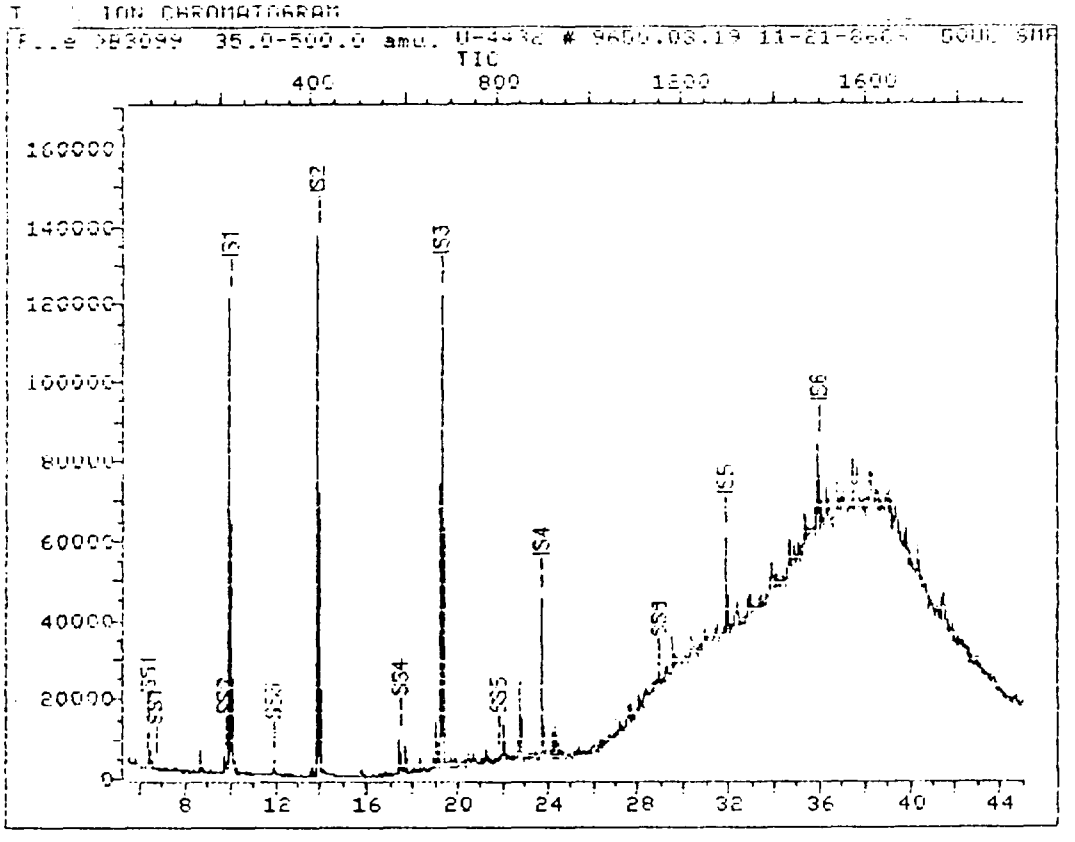
QUANT REPORT

perator ID: USER8 Quant Rev: 4 Quant time: 861114 05:59
utput File: ^C5515::D2 Injected at: 861114 04:53
ata File: ^C5515::D3 Dilution factor: 1.00
ame: U-4432 9655.01 DC-SD-17
isc: 11-12-86MEI 50UL (4.46G/10MLS [illegible] + [illegible] 15 55

U File: VOACR::D2
itle: VOA ID FILE FOR HP-5995 (CUMI. [illegible])
ast Calibration: 861113 22:56

	Compound	M/E	R.T.	Scans	Area	Conc	Units	%
1)	*BROMOCHLOROMETHANE (IS)	128	11.97	264	38132	50.00	UG/L	100
6)	METHYLENE CHLORIDE	84	9.59	167	43558	27.52	UG/L	100
7)	ACETONE	43	9.60	193	5561	15.66	UG/L	100
15)	1,2-DICHLOROETHANE-D4(SURR)	65	14.54	308	29012	49.55	UG/L	98
6)	*1,4-DIFLUOROBENZENE (IS)	114	22.52	594	180394	50.00	UG/L	100
7)	2-BUTANONE	72	14.95	343	5258	26.17	UG/L	100
1)	*CHLOROBENZENE-D5 (IS)	117	27.41	651	152173	50.00	UG/L	100
6)	TOLUENE-D8 (SURR)	98	26.20	611	195332	48.72	UG/L	99
8)	4-BROMOFLUOROBENZENE(SURR)	95	30.22	276	96493	45.68	UG/L	100

* Compound is ISTD

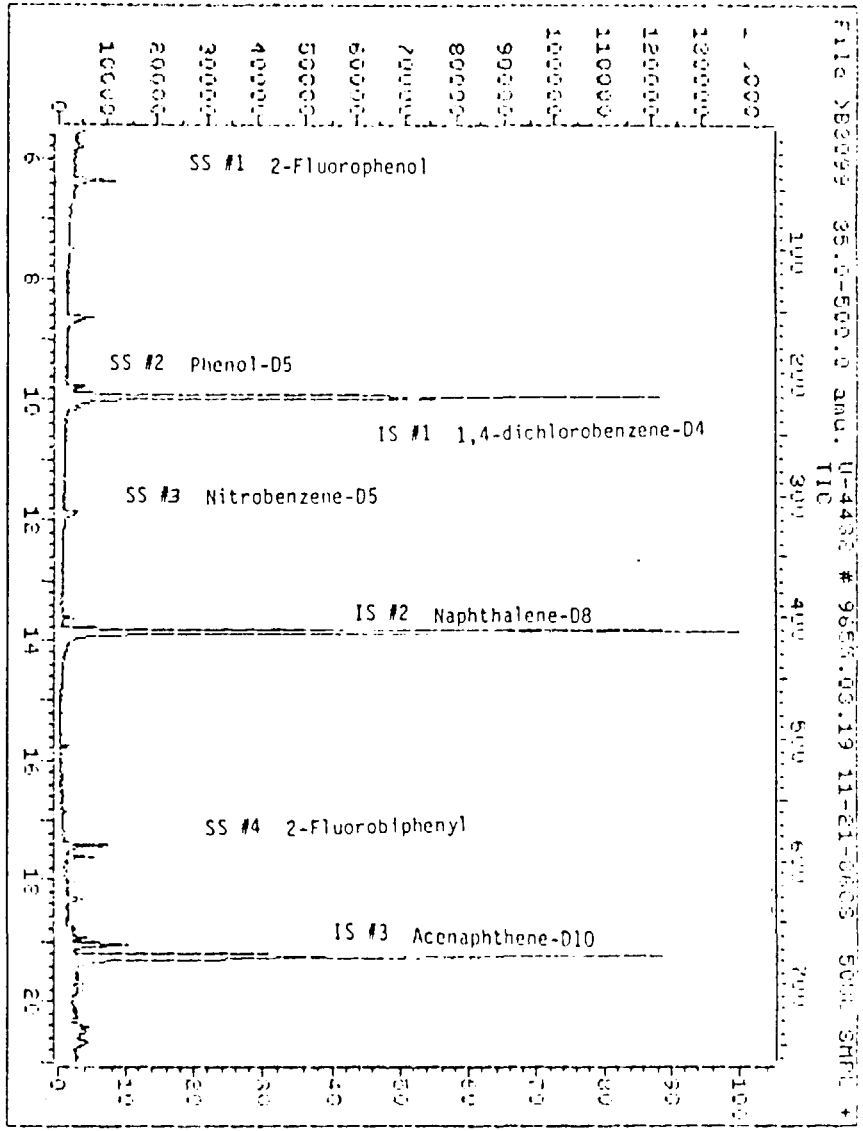


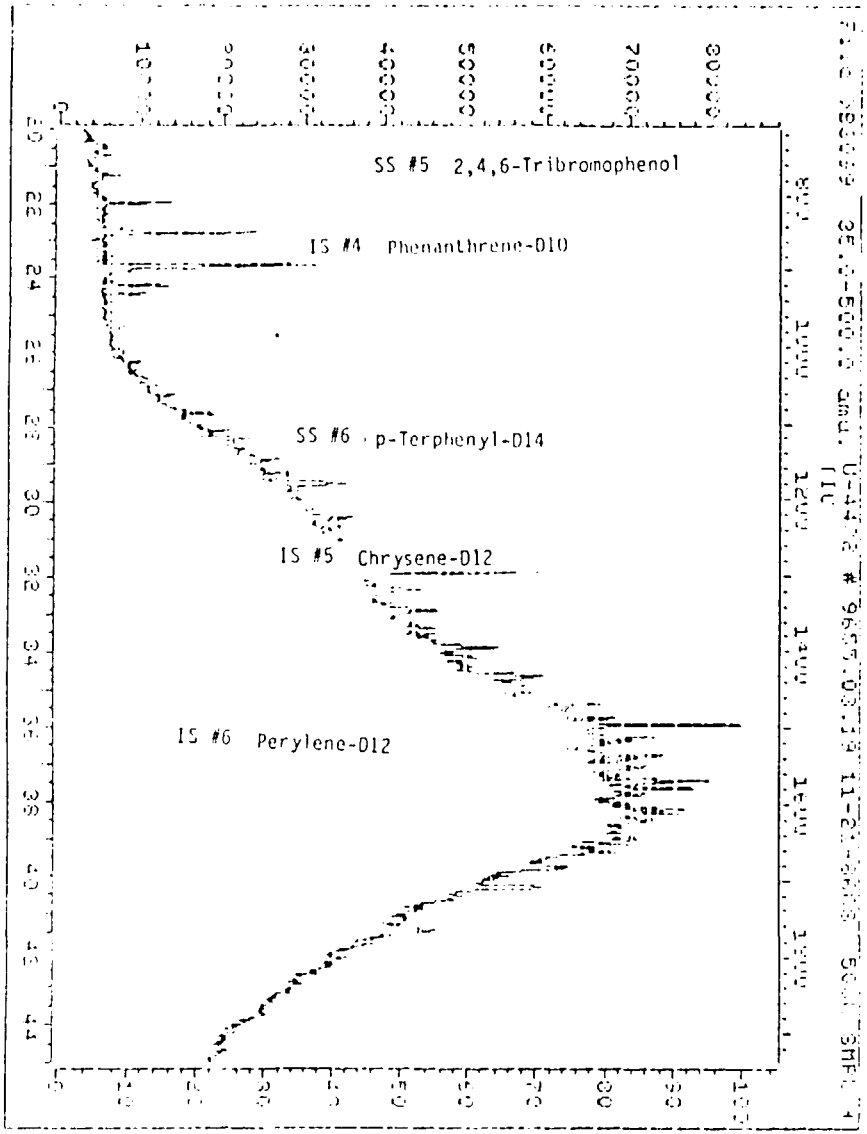
Data File: >B3099::D4 DC-SD 17
Name: U-4432 # 9655.03.19
Misc: 11-21-8605 500UL SMPL + 4000UL MEOH2 + 50UL IS

Id File: BNA9R::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861121 14:38

Operator ID: USER8
Quant Time: 861121 21:40
Injected at: 861121 20:52

DC-SD-17


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


SS #5 2,4,6-Tribromophenol
IS #4 Phenanthrene-D10
SS #6 p-Terphenyl-D14
IS #5 Chrysene-D12
IS #6 Perylene-D12

170A

QUANT REPORT

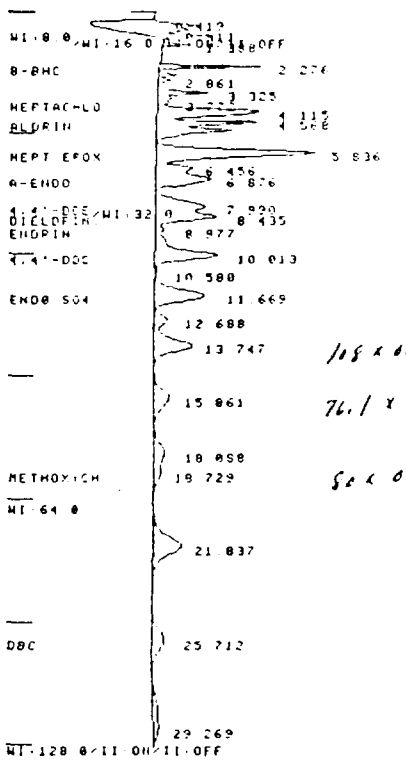
Method ID: USERB Quant Rev: 4 Quant Time: 861121 21:40
Input File: ^B4099::U2 Injected at: 861121 20:52
Data File: >B4099::D4 Dilution Factor: 10.00
Sample: U-4432 # 9655.03.19 DC-SD-17
Date: 11-21-86CS 500UL SMPL + 450UL MEOL2 + 50UL IS

Method File: BNABB::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861121 14:38

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.93	219	65896	40.00	UG/L	89
	PHENOL-D5	(SURR)	99	9.27	211	2781	33.32	UG/L	89
	2-FLUOROPHENOL	(SURR)	112	6.35	43	6877	40.27	UG/L	87
	2-FLUOROPHENOL	(SURR)	112	6.46	58	191	1.13	UG/L	80
	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.86~~	~~314~~	~~208~~	~~1.30~~	~~UG/L~~	92
	*NAPHTHALENE-D8	(IS)	136	13.85	412	223767	40.00	UG/L	100
	NITROBENZENE-D5	(SURR)	82	11.86	314	5840	30.74	UG/L	93
	*ACENAPHTHENE-D10	(IS)	162	19.24	677	74129	40.00	UG/L	95
	2-FLUOROBIPHENYL	(SURR)	172	17.41	587	13823	45.33	UG/L	92
	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.24~~	~~677~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	100
	~~DIETHYL PHTHALATE~~		~~163~~	~~19.45~~	~~6[illegible]~~	~~150~~	~~.50~~	~~UG/L~~	100
	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.79	802	959	20.10	UG/L	92
	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.24~~	~~677~~	~~10053~~	~~150.82~~	~~UG/L~~	100
	*PHENANTHRENE-D10	(IS)	188	23.68	895	68189	40.00	UG/L	93
	DI-N-BUTYLPHTHALATE		149	26.24	1077	2038	10.57	UG/L	79
	*CHRYSENE-D12	(IS)	240	31.85	1796	34700	40.00	UG/L	100
	TERPHENYL-D14	(SURR)	244	28.89	1157	2745	39.88	UG/L	100
	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~32.63~~	~~1420~~	~~192~~	~~2.65~~	~~UG/L~~	92
	BIS(2-ETHYLHEXYL)PHTHALATE		149	32.81	1344	209	2.78	UG/L	1
	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~34.16~~	~~1368~~	~~149~~	~~1.98~~	~~UG/L~~	54
	*PERYLENE-D12	(IS)	264	35.94	1496	33807	40.00	UG/L	100
	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~34.29~~	~~1415~~	~~102~~	~~1.45~~	~~UG/L~~	100
	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~34.3[illegible]~~	~~1419~~	~~299~~	~~2.00~~	~~UG/L~~	100
	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~34.49~~	~~1425~~	~~202~~	~~1.54~~	~~UG/L~~	100
	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~34.70~~	~~1430~~	~~256~~	~~1.90~~	~~UG/L~~	100
	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~35.02~~	~~1441~~	~~418~~	~~3.11~~	~~UG/L~~	100

Compound is ISTD

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



108 x 0.0023 x 1/0.945g x 20,000 = 5,200 ug/kg 1248

76.1 x 0.00279 x 1/0.945g x 20,000 = 4,200 ug/kg 1254

52 x 0.00160 x 1/0.945g x 20,000 = 2,700 ug/kg 1260

RECALCULATE ON FILE: SLY461

CHANNEL: 1A - 1 TITLE: RUN# 26 14:26 19 NOV 86

DC-SD-17

SAMPLE: 9655.19A1 METHOD: DAVE CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1	~~BHC~~	70.1526	2.276	-0.104	68112	BV	5.00
2		0.0000	3.325		57838	VV	7.81
3	~~HEPTACHLO~~	29.6010	3.541	-0.249	22853	VV	? 12.56
4		0.0000	4.115		224622	VV	18.13
5	~~ALDRIN~~	162.9459	4.568	-0.102	156969	VV	12.38
6		0.0000	4.883		134321	VV	11.81
7	~~HEPT EPOX~~	441.2293	5.836	0.166	399491	VV	19.06
8		0.0000	6.455		79911	VV	? 16.25
9	~~A-ENDO~~	218.3416	6.876	-0.154	185743	VV	? 30.69
10	~~4,4'-DDE~~	197.9534	7.990	-0.100	173995	VV	? 31.13
11	~~DIELDRIN~~	193.5284	8.435	0.245	180863	VV	? 28.00
12	~~4,4'-DDD~~	313.1454	10.013	-0.147	236356	VV	24.06
13	~~ENDO SO4~~	331.7412	11.669	-0.241	204551	VV	32.31
14		0.0000	12.688		40620	VV	22.13
15	~~ENDRIN~~	353.0839	13.747	0.487	177478	VV	33.05
16	~~ENDO KETON~~	117.6501	15.861	0.591	105181	VV	47.81
17		0.0000	18.058		80584	VV	? 45.63
18	~~METHOXYCH~~	118.6389	18.729	-0.761	35682	VB	? 72.63
19		0.0000	21.837		200440	BV	49.25
20	~~[illegible]~~	135.2469	25.712	-0.898	[illegible]	VV	62.56
21		0.0000	29.269		66322	VB	?123.44
TOTALS:		2663.058		-1.267	2936234		

DETECTED PKS: 35 REJECTED PKS: 14

DIVISOR: 0.94800 MULTIPLIER: 20000.0000

NOISE: 22.9 OFFSET: -15

NOTES:
NOTEBOOK: 759 41 ANALYST: [illegible]
SECURE AREA: D JOB#:U-4456
INST:[illegible] 6[illegible] A [illegible]
COLUMN: 6' GLASS 4MM [illegible] RECORDER
LIQUID PHASE:[illegible]
CARRIER GAS: N2 @ 62 ML/MIN
[illegible]

SAMPLE NUMBER DC-SD-18

481095

Sample Number
DC-SD-18

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No: U-4432/U-4442
Lab Sample ID No: 9656
QC Report No:
Sample Matrix: Soil
Contract No: EL-3140
Data Release Authorized By: C Slogtowicz
Date Sample Received: 11-6-86

Volatile Compounds

Concentration: Low (Medium) (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-12-86

Conc/Dil Factor: 2 pH 6.9

Percent Moisture: (Not Decanted) 51

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	4400u
74-83-9	Bromomethane	4400u
75-01-4	Vinyl Chloride	4400u
75-00-3	Chloroethane	4400u
75-09-2	Methylene Chloride	12000B
67-64-1	Acetone	4100JB
75-15-0	Carbon Disulfide	2200u
75-35-4	1, 1-Dichloroethene	2200u
75-34-3	1, 1-Dichloroethane	2200u
156-60-5	Trans-1, 2-Dichloroethene	2200u
67-66-3	Chloroform	2200u
107-06-2	1, 2-Dichloroethane	2200u
78-93-3	2-Butanone	14000
71-55-6	1, 1, 1-Trichloroethane	2200u
56-23-5	Carbon Tetrachloride	2200u
108-05-4	Vinyl Acetate	4400u
75-27-4	Bromodichloromethane	2200u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	2200u
10061-02-6	Trans-1, 3-Dichloropropene	2200u
79-01-6	Trichloroethene	2200u
124-48-1	Dibromochloromethane	2200u
79-00-5	1, 1, 2-Trichloroethane	2200u
71-43-2	Benzene	2200u
10061-01-5	cis-1, 3-Dichloropropene	2200u
110-75-8	2-Chloroethylvinylether	4400u
75-25-2	Bromoform	2200u
108-10-1	4-Methyl-2-Pentanone	4400u
591-78-6	2-Hexanone	4400u
127-18-4	Tetrachloroethene	2200u
79-34-5	1, 1, 2, 2-Tetrachloroethane	2200u
108-88-3	Toluene	2200u
108-90-7	Chlorobenzene	2200u
100-41-4	Ethylbenzene	2200u
100-42-5	Styrene	2200u
	Total Xylenes	2200u

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.

oratory Name ecology and environment, inc.

se No: U-4432/U-4442

Sample Number
DC-SD-18

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

icentration: (Low) Medium (Circle One)

e Extracted/Prepared: 11-12-86

e Analyzed: 11-21-86

ic/Dil Factor: 10

cent Moisture (Decanted) 51

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	3400	U
11-44-4	bis(-2-Chloroethyl)Ether	3400	U
-57-8	2-Chlorophenol	3400	U
1-73-1	1 3-Dichlorobenzene	3400	U
6-46-7	1. 4-Dichlorobenzene	3400	U
0-51-6	Benzyl Alcohol	3400	U
-50-1	1 2-Dichlorobenzene	3400	U
-48-7	2-Methylphenol	3400	U
638-32-9	bis(2-chloroisopropyl)Ether	3400	U
6-44-5	4-Methylphenol	3400	U
1-64-7	N-Nitroso-Di-n-Propylamine	3400	U
-72-1	Hexachloroethane	3400	U
-95-3	Nitrobenzene	3400	U
-59-1	Isophorone	3400	U
-75-5	2-Nitrophenol	3400	U
5-67-9	2. 4-Dimethylphenol	3400	U
-85-0	Benzoic Acid	16000	U
1-91-1	bis(2-Chloroethoxy)Methane	3400	U
0-83-2	2 4-Dichlorophenol	3400	U
0-82-1	1. 2. 4-Trichlorobenzene	3400	U
-20-3	Naphthalene	190	J
6-47-8	4-Chloroaniline	3400	U
-68-3	Hexachlorobutadiene	3400	U
-50-7	4-Chloro-3-Methylphenol	3400	U
-57-6	2-Methylnaphthalene	3400	U
-47-4	Hexachlorocyclopentadiene	3400	U
-06-2	2 4 6-Trichlorophenol	3400	U
95-4	2. 4 5-Trichlorophenol	16000	U
-58-7	2-Chloronaphthalene	3400	U
-74-4	2-Nitroaniline	16000	U
1- 3	Dimethyl Phthalate	3400	U
8-96-8	Acenaphthylene	3400	U
-09-2	3-Nitroaniline	16000	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	3400	U
51-28-5	2. 4-Dinitrophenol	16000	U
100-02-7	4-Nitrophenol	16000	U
132-64-9	Dibenzofuran	3400	U
121-14-2	2 4-Dinitrotoluene	3400	U
606-20-2	2 6-Dinitrotoluene	3400	U
84-66-2	Diethylphthalate	3400	U
7005-72-3	4-Chlorophenyl-phenylether	3400	U
86-73-7	Fluorene	3400	U
100-01-6	4-Nitroaniline	16000	U
534-52-1	4. 6-Dinitro-2-Methylphenol	16000	U
86-30-6	N-Nitrosodiphenylamine (1)	3400	U
101-55-3	4-Bromophenyl-phenylether	3400	U
118-74-1	Hexachlorobenzene	3400	U
87-86-5	Pentachlorophenol	16000	U
85-01-8	Phenanthrene	3400	U
120-12-7	Anthracene	3400	U
84-74-2	Di-n-Butylphthalate	300	J
206-44-0	Fluoranthene	3400	U
129-00-0	Pyrene	1400	J
85-68-7	Butylbenzylphthalate	830	J
91-94-1	3 3-Dichlorobenzidine	6800	U
56-55-3	Benzo(a)Anthracene	430	J
117-81-7	bis(2-Ethylhexyl)Phthalate	5300	
218-01-9	Chrysene	1200	J
117-84-0	Di-n-Octyl Phthalate	940	J
205-99-2	Benzo(b)Fluoranthene	3400	U
207-08-9	Benzo(k)Fluoranthene	1500	J
50-32-8	Benzo(a)Pyrene	490	J
193-39-5	Indeno(1 2 3-cd)Pyrene	850	J
53-70-3	Dibenzo(a h)Anthracene	3400	U
191-24-2	Benzo(g h i)Perylene	1400	J

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No U-4432 / U-4442

Sample Number DC-SD-18

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared: 11-12-86

Date Analyzed: 11-19-86

Conc/Dil Factor: 20

Percent Moisture (decanted) 51

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	320 u
319-85-7	Beta-BHC	320 u
319-86-8	Delta-BHC	320 u
58-89-9	Gamma-BHC (Lindane)	320 u
76-44-8	Heptachlor	320 u
309-00-2	Aldrin	320 u
1024-57-3	Heptachlor Epoxide	320 u
959-98-8	Endosulfan I	320 u
60-57-1	Dieldrin	640 u
72-55-9	4,4'-DDE	640 u
72-20-8	Endrin	640 u
33213-65-9	Endosulfan II	640 u
72-54-8	4,4'-DDD	640 u
1031-07-8	Endosulfan Sulfate	640 u
50-29-3	4,4'-DDT	640 u
72-43-5	Methoxychlor	3200 u
53494-70-5	Endrin Ketone	640 u
57-74-9	Chlordane	3200 u
8001-35-2	Toxaphene	6400 u
12674-11-2	Aroclor-1016	3,200 u
11104-28-2	Aroclor-1221	3,200 u
11141-16-5	Aroclor-1232	3,200 u
53469-21-9	Aroclor-1242	3,200 u
12672-29-6	Aroclor-1248	3,200 u
11097-69-1	Aroclor-1254	6,400 u
11096-82-5	Aroclor-1260	7,700

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 1000 V_i 4

Laboratory Name ecology and environment, inc.

Case No u-4432 / u-4442

Sample Number DC-SD-18

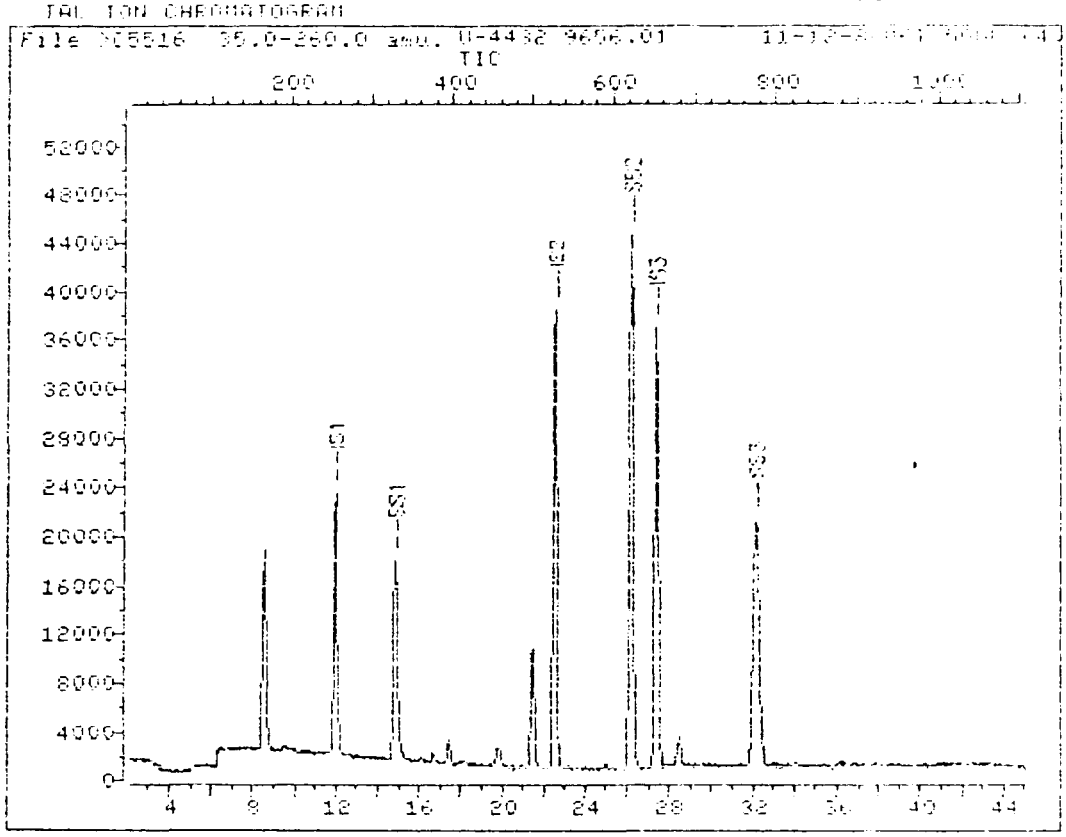
Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.5 min	1100 BJ
2.	Unknown Ketone	VOA	19.8 min	630 J
3.	Hexane isomer	VOA	21.5 min	3300 BJ
4.				
5.	UNKNOWN	BNA	22.7	9700 J
6.	TETRAMETHYL BUTYL PHENOL ISOMER		22.8	26000 J
7.	NONYL PHENOL ISOMER		22.9	14000 J
8.	NONYL PHENOL ISOMER		23.1	14000 J
9.	TETRAMETHYL BUTYL PHENOL ISOMER		23.2	9600 J
10.	NONYL PHENOL ISOMER		23.4	8400 J
11.	TETRAMETHYL BUTYL PHENOL ISOMER		23.5	15000 J
12.	NONYL PHENOL ISOMER		23.6	9000 J
13.	UNKNOWN HYDROCARBON		24.1	1500 J
14.	UNKNOWN HYDROCARBON		24.2	3700 J
15.	UNKNOWN LONG-CHAIN HYDROCARBON ACID		26.3	2400 J
16.	UNKNOWN HYDROCARBON		29.5	4500 J
17.	UNKNOWN		30.9	4600 BJ
18.	UNKNOWN		35.4	3400 J
19.	UNKNOWN HYDROCARBON		36.3	10000 J
20.	UNKNOWN		37.8	9200 J
21.	UNKNOWN HYDROCARBON		40.3	27000 J
22.	UNKNOWN HYDROCARBON		41.5	24000 J
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30				

177

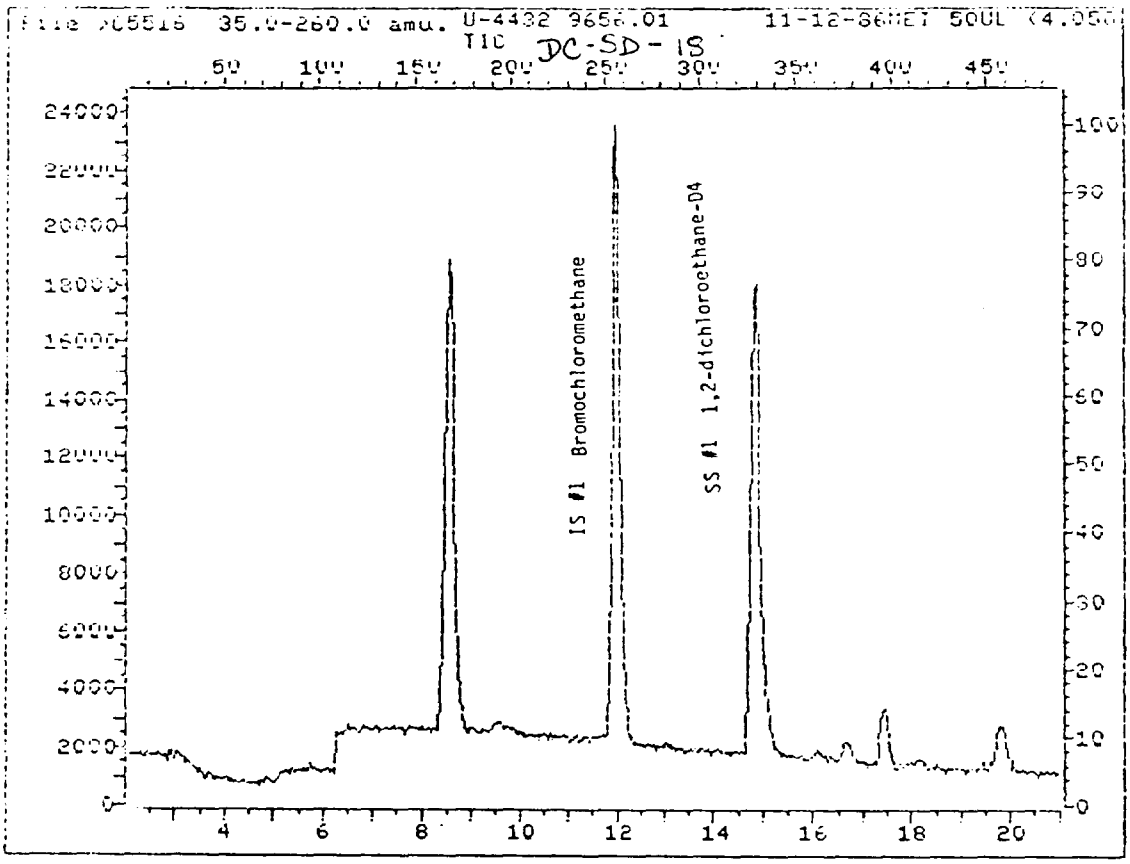
TOTAL ION CHROMATOGRAM

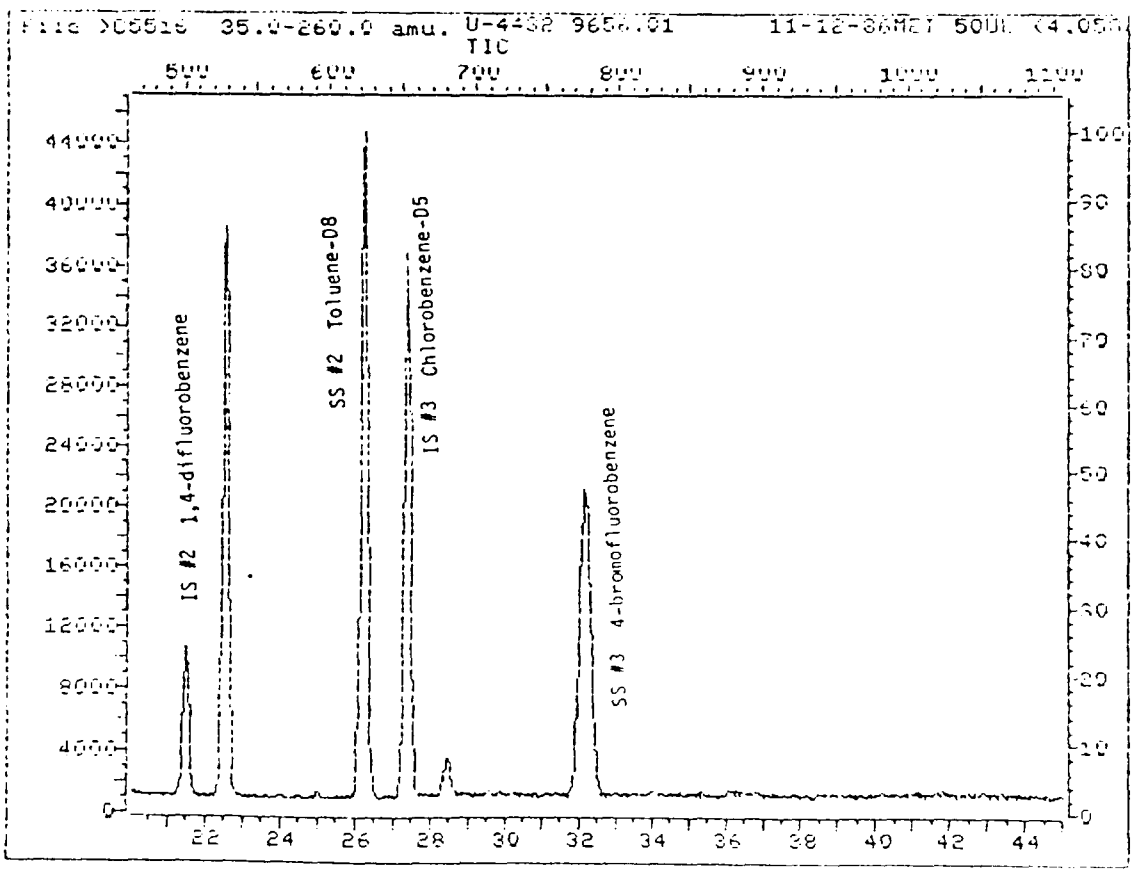


Data File: >DC5516::03
Name: U-4432 9656.01 DC-SD-18
Misc: 11-12-86MEI 50UL (4.056/100ULS MEOH - 100UL

Id File: VOALR::02
Title: VOA ID FILE FOR HP-5995 (CONT. CAP
Last Calibration: 861113 22:56

Operator ID: USER8
Quant Time: 861114 06:36
Injected at: 861114 05:50


File X05516 35.0-260.0 amu. U-4432 9656.01 11-12-86MET 50UL (4.050
TIC
DC-SD-18
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File X05516 35.0-260.0 amu. U-4432 9656.01 11-12-86MET 50UL (4.050
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

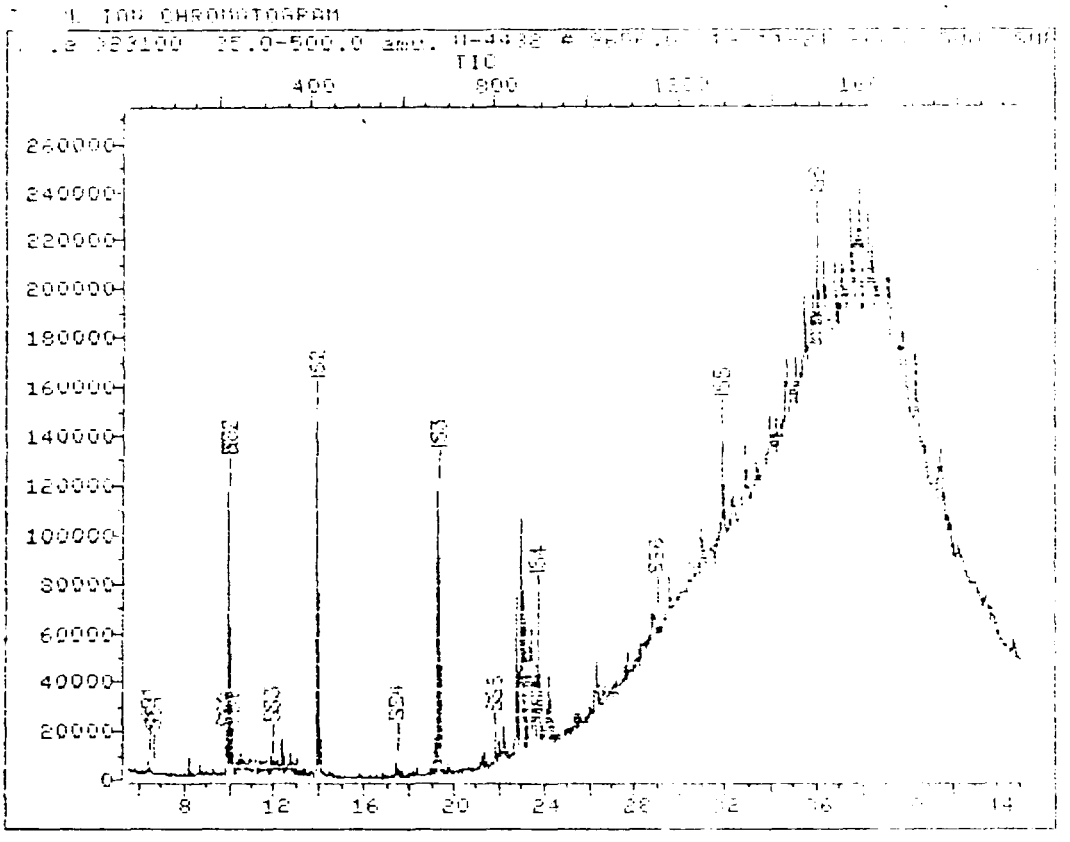
QUANT REPORT --

Operator ID: USER8 Quant Rev: 4 Quant Time: 861114 06:36
Output File: ^C5516::D2 Injected at: 861114 08:50
Data File: >C5516::D3 Dilution Factor: 1.00
Name: U-4432 9656.01 DC-SD-18
Misc: 11-12-86MEI 500UL (4.05G/10MLS MEOH) + 100L IS 55

ID File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861113 22:56

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.99	2[illegible]	[illegible]	[illegible]	UG/L	100
6)	METHYLENE CHLORIDE		84	8.54	1[illegible]	[illegible]	24.28	UG/L	100
7)	ACETONE		43	9.51	1[illegible]	[illegible]	8.07	UG/L	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.86	3[illegible]0	[illegible]	46.78	UG/L	90
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.54	5[illegible]8	[illegible]	[illegible]	UG/L	100
17)	2-BUTANONE		72	14.98	3[illegible]	[illegible]	28.59	UG/L	100
31)	*CHLOROBENZENE-D5	(IS)	117	[illegible].39	[illegible]	120513	[illegible]	UG/L	100
36)	TOLUENE-D8	(SURR)	98	26.22	[illegible]	179495	50.55	UG/L	93
40)	4-BROMOFLUOROBENZENE	(SURR)	95	32.17	[illegible]	[illegible]	[illegible]	UG/L	100

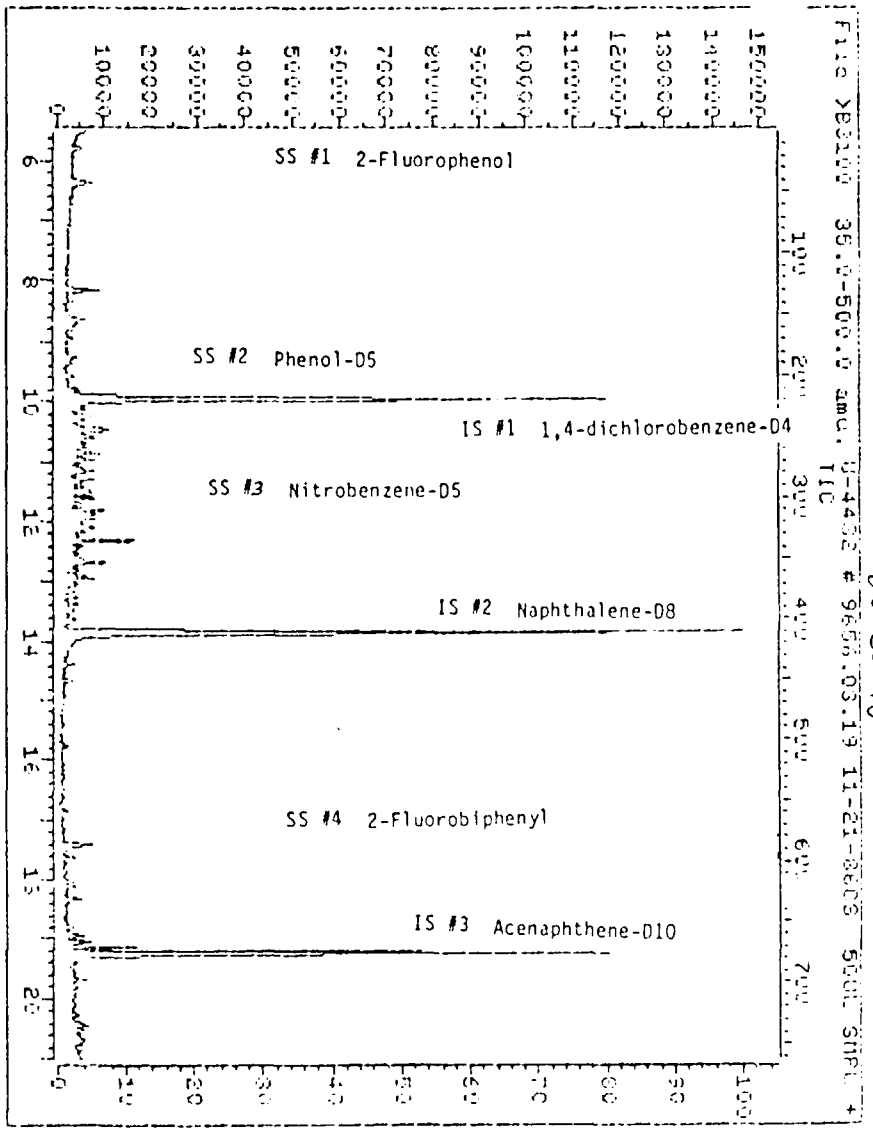
* Compound is ISTD



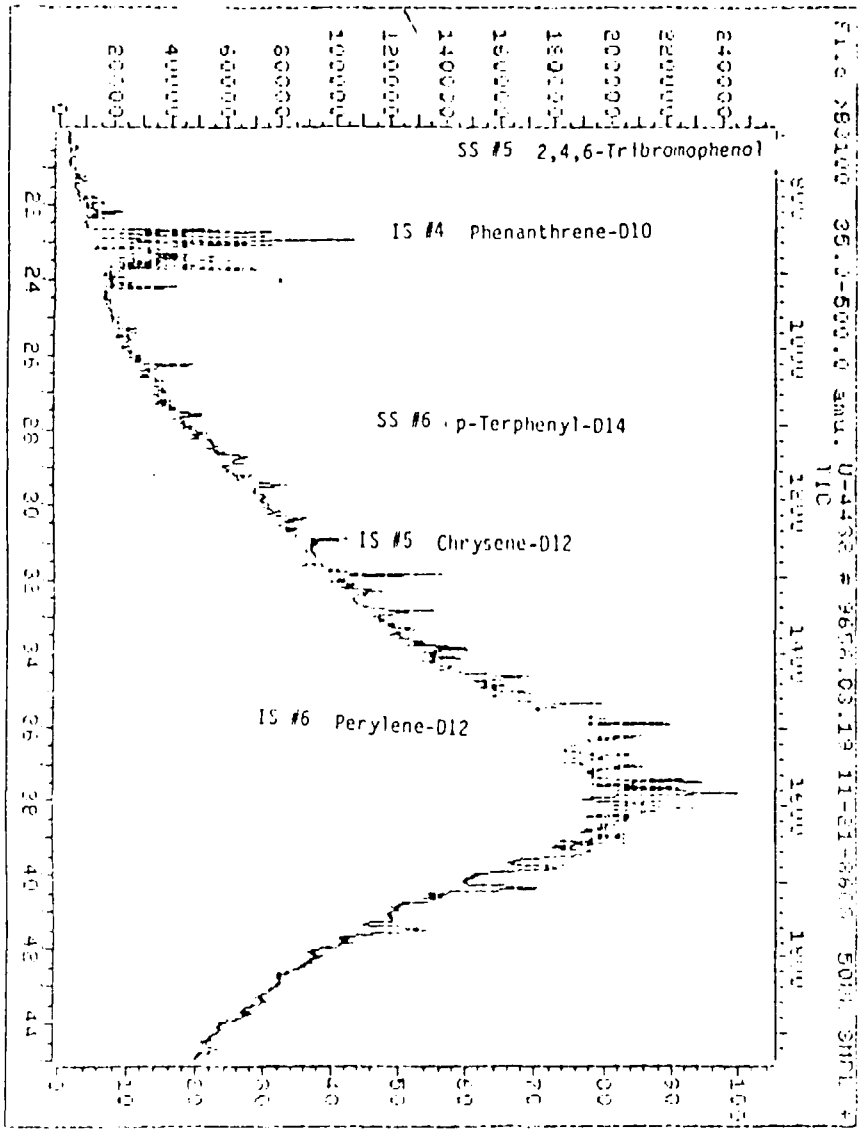
Data File: 083100::D4 DC-SD-18
Name: U-4432 # 9696.03.19
Misc: 11-21-86LS 500UL SMPL [illegible]

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP [illegible]
Last Calibration: 861121 14:38

Operator ID: USER8
Quant Time: 861121 22:31
Injected at: 861121 21:44


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

DC-SD-18


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

erator ID: USER8 Quant Meth: 4 Quant Time: 861121 22:41
utput File: ^B3100::02 Injected at: 861121 21:44
ata File: >B3100::04 Uniform Factor: 10.00
ame: U-4432 # 9656.03.19 DC-SD-18
sc: 11-21-86CS 50UL SMPL + 450UL MEOH + 500 %

) File: BNABP::02
itle: BNA 10 FILE FOR THE HP 5970 MS
ast Calibration: 861121 14:38

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	Q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.94	219	64923	40.00	UG/L	89
2)	PHENOL-D5	(SURR)	99	9.80	212	5748	22.76	UG/L	84
2)	PHENOL-D5	(SURR)	99	9.94	219	1910	8.38	UG/L	65
2)	PHENOL-D5	(SURR)	99	10.10	227	304	1.32	UG/L	71
5)	2-FLUOROPHENOL	(SURR)	112	6.38	44	4565	21.48	UG/L	90
2)	2-FLUOROPHENOL	(SURR)	112	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	[illegible]
2)	N-NITROSO-DI-N-PROPYLAMINE		70	11.32	[illegible]	[illegible]	[illegible]	UG/L	64
2)	N-NITROSO-DI-N-PROPYLAMINE		70	11.48	[illegible]	[illegible]	[illegible]	UG/L	[illegible]
2)	N-NITROSO-DI-N-PROPYLAMINE		70	11.62	[illegible]	[illegible]	[illegible]	UG/L	28
2)	N-NITROSO-DI-N-PROPYLAMINE		70	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	25
2)	N-NITROSO-DI-N-PROPYLAMINE		70	11.88	[illegible]	[illegible]	[illegible]	UG/L	28
2)	*NAPHTHALENE-D8	(IS)	136	11.85	411	204272	40.00	UG/L	100
1)	NITROBENZENE-D5	(SURR)	82	11.87	314	4144	22.82	UG/L	89
2)	NAPHTHALENE		128	12.91	414	1332	1.95	UG/L Y	100
1)	*ACENAPHTHENE-D10	(IS)	162	[illegible]	[illegible]	[illegible]	40.00	UG/L	96
1)	2-FLUOROBIPHENYL	(SURR)	172	13.40	[illegible]	[illegible]	23.06	UG/L	91
2)	DIMETHYL PHTHALATE		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
2)	DIMETHYL PHTHALATE		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
1)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.28	383	1106	[illegible]	UG/L	96
2)	2,6-DINITROTOLUENE		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
1)	*PHENANTHRENE-D10	(IS)	188	17.62	894	[illegible]	40.00	UG/L	99
2)	DI-N-BUTYLPHTHALATE		149	26.24	1020	[illegible]	[illegible]	UG/L	[illegible]
1)	*CHRYSENE-D12	(IS)	240	31.89	1194	[illegible]	40.00	UG/L	100
2)	PYRENE		202	29.04	1105	[illegible]	21.[illegible]	UG/L	92
1)	TERPHENYL-D14	(SURR)	244	28.90	1150	[illegible]	[illegible]	UG/L	100
2)	DIETHYLHEXYL PHTHALATE		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2)	BUTYLBENZYLPHTHALATE		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2)	BUTYLBENZYLPHTHALATE		149	30.76	1241	[illegible]	[illegible]	[illegible]	89
2)	BUTYLBENZYLPHTHALATE		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2)	BUTYLBENZYLPHTHALATE		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	69
2)	3,4-DICHLOROANILINE		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
2)	BENZO(A)ANTHRACENE		228	31.13	1274	[illegible]	[illegible]	[illegible]	44
2)	BENZO(A)ANTHRACENE		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2)	BIS(2-ETHYLHEXYL)PHTHALATE		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2)	BIS(2-ETHYLHEXYL)PHTHALATE		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2)	BIS(2-ETHYLHEXYL)PHTHALATE		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2)	BIS(2-ETHYLHEXYL)PHTHALATE		149	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2)	BIS(2-ETHYLHEXYL)PHTHALATE		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2)	CHRYSENE		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2)	CHRYSENE		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1)	*PERYLENE-D12	(IS)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2)	DI-N-OCTYL PHTHALATE		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2)	DI-N-OCTYL PHTHALATE		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

N. Sgl

N. Sgl

N. Sgl

N. Sgl

N. Sgl

N. Sgl

N. Sgl

N. Sgl

N. Sgl

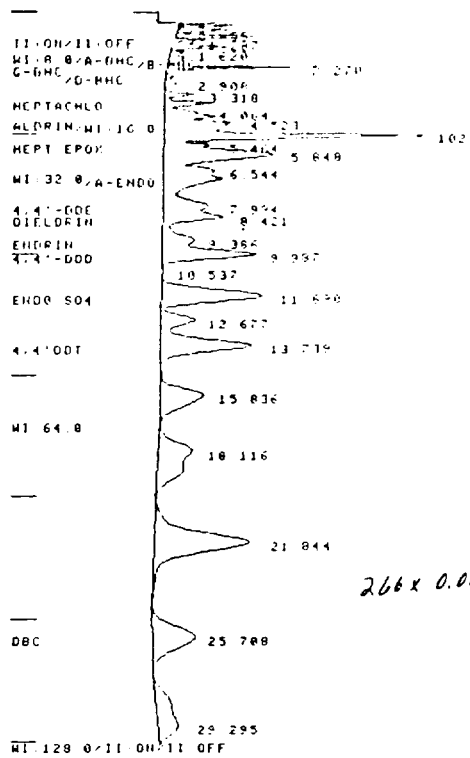
N. Sgl 183

N. Sgl

	Compound	m/z	R.T.	Scan#	Area	Time	Units	Q
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
7)	BENZO(K)FLUORANTHENE	252	34.49	14[illegible]	14[illegible]6	2[illegible].64	[illegible]L	100
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
8)	BENZO(A)PYRENE	252	35.81	14[illegible]	1010	[illegible].54	[illegible]L	100
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
9)	INDENO(1,2,3-CD)PYRENE	276	38.59	162[illegible]	160[illegible]	1[illegible].04	[illegible]L	100
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
1[illegible])	BENZO(G,H,I)PERYLENE	276	[illegible].12	14[illegible]	[illegible]	2[illegible]	[illegible]L	100
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100

* Compound is 1510

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



$266 \times 0.00107 \times \frac{1}{0.735g} \times 20{,}000 = 7{,}900$ ug/kg 1360

RECALCULATE ON FILE: SLY462

CHANNEL: 1A - 1 TITLE: RUN# 27 15:00 19 NOV 86

DC-SD-18

SAMPLE: 9656.03.19A1 METHOD: DAVE CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.380		37293	VV	3.38
2	B-BHC	290.3236	2.270	0.100	60205	VV	5.06
3		0.0000	3.310		28243	VV	7.25
4	HEPTACHLO	113.6624	3.708	-0.082	66275	VV	10.44
5		0.0000	4.064		32225	VV	? 11.66
6		0.0000	4.244		27746	VV	? 15.25
7		0.0000	4.523		103175	VV	? 14.94
8	ALDRIN	163.1298	4.673	0.003	121978	VV	? 41.31
9		0.0000	5.102		372450	VV	11.19
10		0.0000	5.464		64119	VV	? 14.25
11	HEPT EPOX	513.2191	5.848	0.178	360297	VV	26.69
12		0.0000	6.544		129734	VV	? 27.13
13	A-ENDO	355.3212	6.875	-0.155	234266	VV	? 44.52
14	4,4'-DDE	223.5959	7.994	-0.056	152341	VV	? 33.94
15	DIELDRIN	237.2724	8.421	0.231	171777	VV	? 25.94
16	B-ENDO	183.3587	9.386	0.076	116165	VV	? 26.94
17	4,4'-DDD	508.6099	9.987	-0.173	298624	VV	23.44
18	ENDO SO4	868.2451	11.692	-0.222	414977	VV	32.69
19	-	0.0000	12.677		127391	VV	27.94
20	4,4'DDT	1014.452	13.739	0.479	395245	VV	32.69
21	END KETON	388.3735	15.836	0.566	208193	VB	48.63
22		0.0000	18.116		359250	BV	87.56
23		0.0000	21.844		666255	VV	49.19
24	DBC	623.1450	25.708	-0.502	341720	VV	62.19
25		0.0000	29.295		230445	VB	7118.81

TOTALS: 5482.320 0.005 5267105

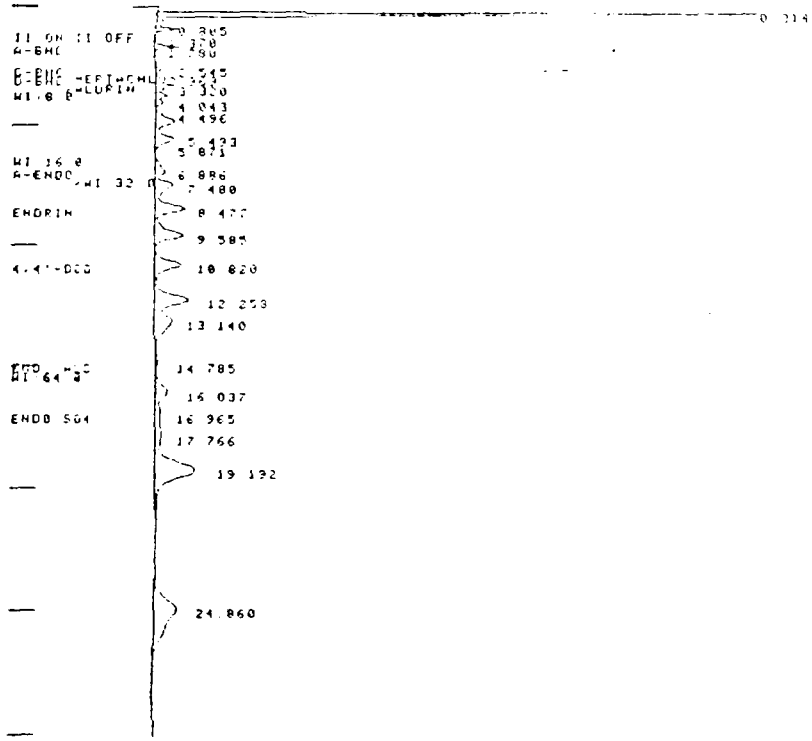
DETECTED PKS: 44 REJECTED PKS: 19

DIVISOR: 0.73500 MULTIPLIER: 20000.0000

NOISE: 22.9 OFFSET: -5

NOTES:
NOTEBOOK: 259-41 ANALYST: K.JUREK
SECURE AREA: D JOB#:9-4455
INST:VARIAN 8200GC 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

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



CHANNEL: 18 - 1 TITLE: RUN# 15 19:13 21 NOV 86

DC-SD-18

SAMPLE: 5656 METHOD: PEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	HT/2 (SEC)
1	A-BHC	0.0000	1.620	-0.060	37020	VV	3.81
2	ALDRIN	0.0000	3.194	0.044	42163	VV	? 12.13
3		0.0000	3.774		46291	VV	? 14.88
4		0.0000	4.043		26253	VV	? 12.00
5		0.0000	4.496		23320	VV	? 10.94
6	HEPT EPOX	0.0000	4.798	-0.302	99623	VV	? 20.44
7		0.0000	5.493		120775	VV	? 23.00
8	4,4'-DDE	0.0000	6.886	0.076	76714	VV	31.00
9	DIELDRIN	0.0000	7.480	-0.400	137747	VV	26.13
10	ENDRIN	0.0000	8.477	-0.333	185479	VV	22.31
11		0.0000	9.595		206198	VV	24.00
12	4,4'-DDD	0.0000	10.620	0.390	166395	VV	26.00
13	B-ENDOSUL	0.0000	12.259	0.618	274495	VV	29.88
14		0.0000	13.140		204203	VV	49.25
15	END. ALD.	0.0000	14.785	-0.045	31051	VV	? 53.81
16		0.0000	16.037		136439	VV	47.56
17	ENDO SO4	0.0000	16.965	-0.095	46135	VV	? 27.31
18		0.0000	17.766		67268	VV	? 91.38
19		0.0000	19.132		57651	VV	48.26
20		0.0000	24.860		455222	BB	75.31
TOTALS:		0.0000		-0.107	2907815		

DETECTED PKS: 35 REJECTED PKS: 15

DIVISOR: 1.50000 MULTIPLIER: 1.00000

NOISE: 58.6 OFFSET: -16

NOTES:
NOTE500K:059-42 ANAL-ST:RICHARD SMITH
SECURE AREA: D JOB #:4432:0-4442
INST: VARIAN 6200#2 B ECD 10X1 ATT:16
COLUMN: 8' 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 2 UL INJECTION
PESTICIDE PCB CONFIRMATIONS
DEAD CREE-

POST RUN:
SAVE FILE: RAW DEFAULT

SAMPLE NUMBER DC-SD-19

481095

Sample Number
DC-SD-19

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No. U-4432/U-4442
Lab Sample ID No: 9657
QC Report No:
Sample Matrix: Soil
Contract No. IL-3140
Data Release Authorized By: C Slojtowicz
Date Sample Received: 11-6-86

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-12-86

Conc/Dil Factor: 2 pH 6.7

Percent Moisture: (Not Decanted) 53

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	4600u
74-83-9	Bromomethane	4600u
75-01-4	Vinyl Chloride	4600u
75-00-3	Chloroethane	4600u
75-09-2	Methylene Chloride	13000B
67-64-1	Acetone	10000B
75-15-0	Carbon Disulfide	2300u
75-35-4	1, 1-Dichloroethene	2300u
75-34-3	1, 1-Dichloroethane	2300u
156-60-5	Trans-1, 2-Dichloroethene	2300u
67-66-3	Chloroform	2300u
107-06-2	1, 2-Dichloroethane	2300u
78-93-3	2-Butanone	14000
71-55-6	1, 1, 1-Trichloroethane	2300u
56-23-5	Carbon Tetrachloride	2300u
108-05-4	Vinyl Acetate	4600u
75-27-4	Bromodichloromethane	2300u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	2300u
10061-02-6	Trans-1, 3-Dichloropropene	2300u
79-01-6	Trichloroethene	2300u
124-48-1	Dibromochloromethane	2300u
79-00-5	1, 1, 2-Trichloroethane	2300u
71-43-2	Benzene	2300u
10061-01-5	cis-1, 3-Dichloropropene	2300u
110-75-8	2-Chloroethylvinylether	4600u
75-25-2	Bromoform	2300u
108-10-1	4-Methyl-2-Pentanone	4600u
591-78-6	2-Hexanone	52000B
127-18-4	Tetrachloroethene	2300u
79-34-5	1, 1, 2, 2-Tetrachloroethane	2300u
108-88-3	Toluene	2300u
108-90-7	Chlorobenzene	2300u
100-41-4	Ethylbenzene	2300u
100-42-5	Styrene	2300u
	Total Xylenes	2300u

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 this 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.

aboratory Name Ecology and Environment, Inc.

ase No: V-4432/V-4442

Sample Number
DC-SD-19

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

oncentration: (Low) Medium (Circle One)

ate Extracted/Prepared: 11-12-86

ate Analyzed: 12-12-86

onc/Dil Factor: 5

ercent Moisture (Decanted) 53

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	1800	U
111-44-4	bis(-2-Chloroethyl)Ether	1800	U
95-57-8	2-Chlorophenol	1800	U
41-73-1	1 3-Dichlorobenzene	1800	U
06-46-7	1 4-Dichlorobenzene	130	J
00-51-6	Benzyl Alcohol	1800	U
5-50-1	1 2-Dichlorobenzene	1800	U
5-48-7	2-Methylphenol	1800	U
9638-32-9	bis(2-chloroisopropyl)Ether	1800	U
06-44-5	4-Methylphenol	1800	U
21-64-7	N-Nitroso-Di-n-Propylamine	1800	U
7-72-1	Hexachloroethane	1800	U
8-95-3	Nitrobenzene	1800	U
8-59-1	Isophorone	1800	U
8-75-5	2-Nitrophenol	1800	U
05-67-9	2 4-Dimethylphenol	1800	U
5-85-0	Benzoic Acid	8500	U
11-91-1	bis(2-Chloroethoxy)Methane	1800	U
20-83-2	2 4-Dichlorophenol	1800	U
20-82-1	1 2 4-Trichlorobenzene	390	J
1-20-3	Naphthalene	120	J
06-47-8	4-Chloroaniline	1800	U
7-68-3	Hexachlorobutadiene	1800	U
9-50-7	4-Chloro-3-Methylphenol	1800	U
1-57-6	2-Methylnaphthalene	1800	U
7-47-4	Hexachlorocyclopentadiene	1800	U
8-06-2	2 4 6-Trichlorophenol	1800	U
5-95-4	2 4 5-Trichlorophenol	8500	U
1-58-7	2-Chloronaphthalene	1800	U
8-74-4	2-Nitroaniline	8500	U
3 -3	Dimethyl Phthalate	1800	U
208-96-8	Acenaphthylene	1800	U
9-09-2	3-Nitroaniline	8500	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	1800	U
51-28-5	2 4-Dinitrophenol	8500	U
100-02-7	4-Nitrophenol	8500	U
132-64-9	Dibenzofuran	1800	U
121-14-2	2 4-Dinitrotoluene	1800	U
606-20-2	2 6-Dinitrotoluene	1800	U
84-66-2	Diethylphthalate	1800	U
7005-72-3	4-Chlorophenyl-phenylether	1800	U
86-73-7	Fluorene	1800	U
100-01-6	4-Nitroaniline	8500	U
534-52-1	4 6-Dinitro-2-Methylphenol	8500	U
86-30-6	N-Nitrosodiphenylamine (1)	1800	U
101-55-3	4-Bromophenyl-phenylether	1800	U
118-74-1	Hexachlorobenzene	1900	
87-86-5	Pentachlorophenol	940	J
85-01-8	Phenanthrene	1800	U
120-12-7	Anthracene	1800	U
84-74-2	Di-n-Butylphthalate	1800	U
206-44-0	Fluoranthene	1800	U
129-00-0	Pyrene	1800	U
85-68-7	Butylbenzylphthalate	1800	U
91-94-1	3 3'-Dichlorobenzidine	3600	U
56-55-3	Benzo(a)Anthracene	1800	U
117-81-7	bis(2-Ethylhexyl)Phthalate	1800	U
218-01-9	Chrysene	1800	U
117-84-0	Di-n-Octyl Phthalate	1800	U
205-99-2	Benzo(b)Fluoranthene	2400	
207-08-9	Benzo(k)Fluoranthene	1800	U
50-32-8	Benzo(a)Pyrene	310	J
193-39-5	Indeno(1 2 3-cd)Pyrene	1400	J
53-70-3	Dibenzo(a h)Anthracene	390	J
191-24-2	Benzo(g h i)Perylene	1800	

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No U-4432 / U-4442

Sample Number DC-SD-19

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-12-86

Date Analyzed 11-19-86

Conc/Dil Factor 200

Percent Moisture (decanted) 53

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	3200 U
319-85-7	Beta-BHC	3200 U
319-86-8	Delta-BHC	3200 U
58-89-9	Gamma-BHC (Lindane)	3200 U
76-44-8	Heptachlor	3200 U
309-00-2	Aldrin	3200 U
1024-57-3	Heptachlor Epoxide	3200 U
959-98-8	Endosulfan I	3200 U
60-57-1	Dieldrin	6400 U
72-55-9	4,4'-DDE	6400 U
72-20-8	Endrin	6400 U
33213-65-9	Endosulfan II	6400 U
72-54-8	4,4'-DDD	6400 U
1031-07-8	Endosulfan Sulfate	6400 U
50-29-3	4,4'-DDT	6400 U
72-43-5	Methoxychlor	32,000 U
53494-70-5	Endrin Ketone	6,400 U
57-74-9	Chlordane	32,000 U
8001-35-2	Toxaphene	64,000 U
12674-11-2	Aroclor-1016	32,000 U
11104-28-2	Aroclor-1221	32,000 U
11141-16-5	Aroclor-1232	32,000 U
53469-21-9	Aroclor-1242	32,000 U
12672-29-6	Aroclor-1248	32,000 U
11097-69-1	Aroclor-1254	141,000 C
11096-82-5	Aroclor-1260	54,000 J 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 u-4432 / u-4442

Sample Number DC-SD-19

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.4min	1100 BJ
2.	Unknown Ketone	VOA	19.9min	1500 J
3.	Hexane isomer	VOA	21.4min	3400 BJ
4.				
5.	UNKNOWN HYDROCARBON	BNA	8.1	5600 J
6.	PCB	BNA	25.0-30.5	-
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
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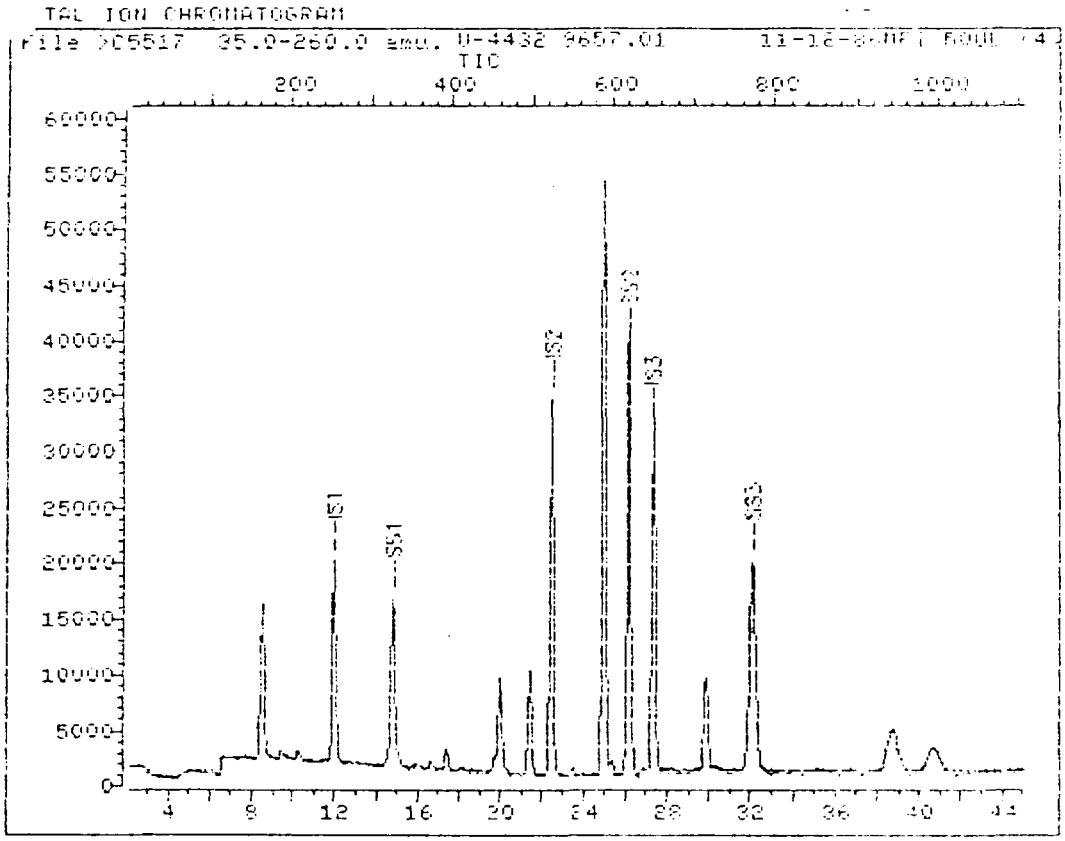
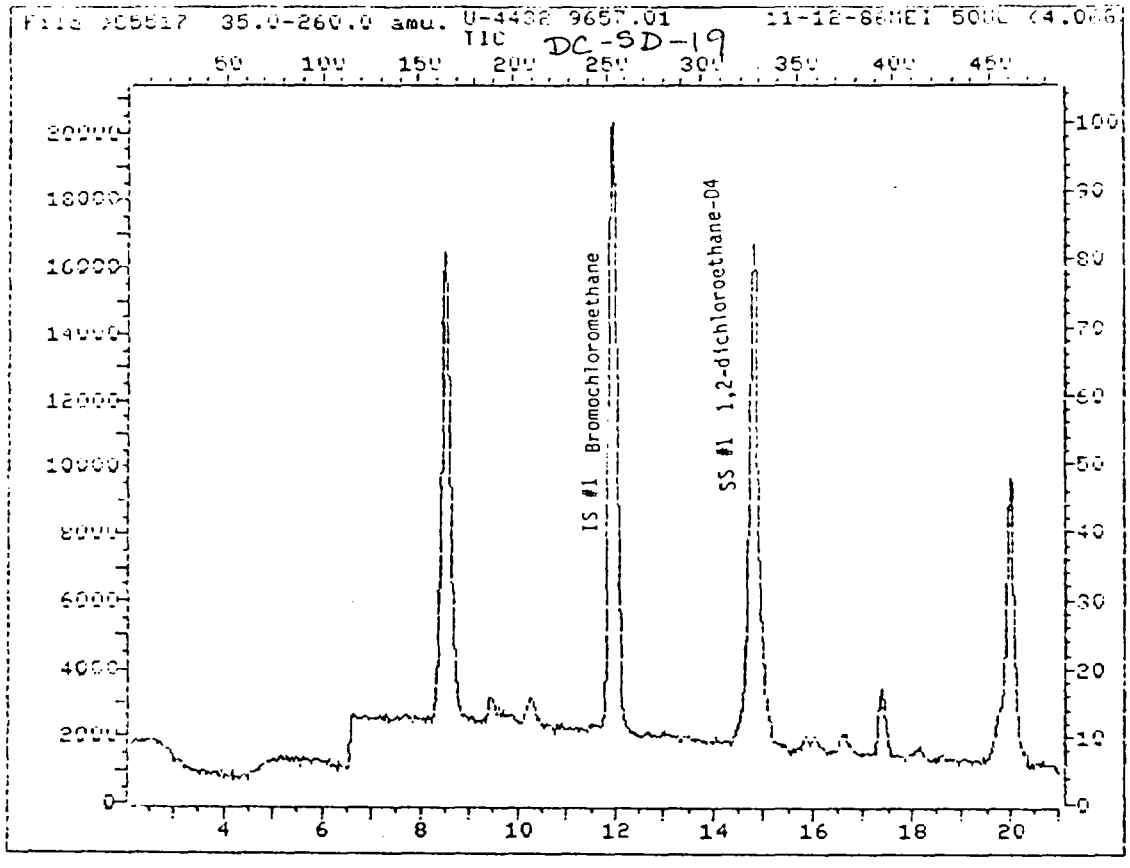
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30				

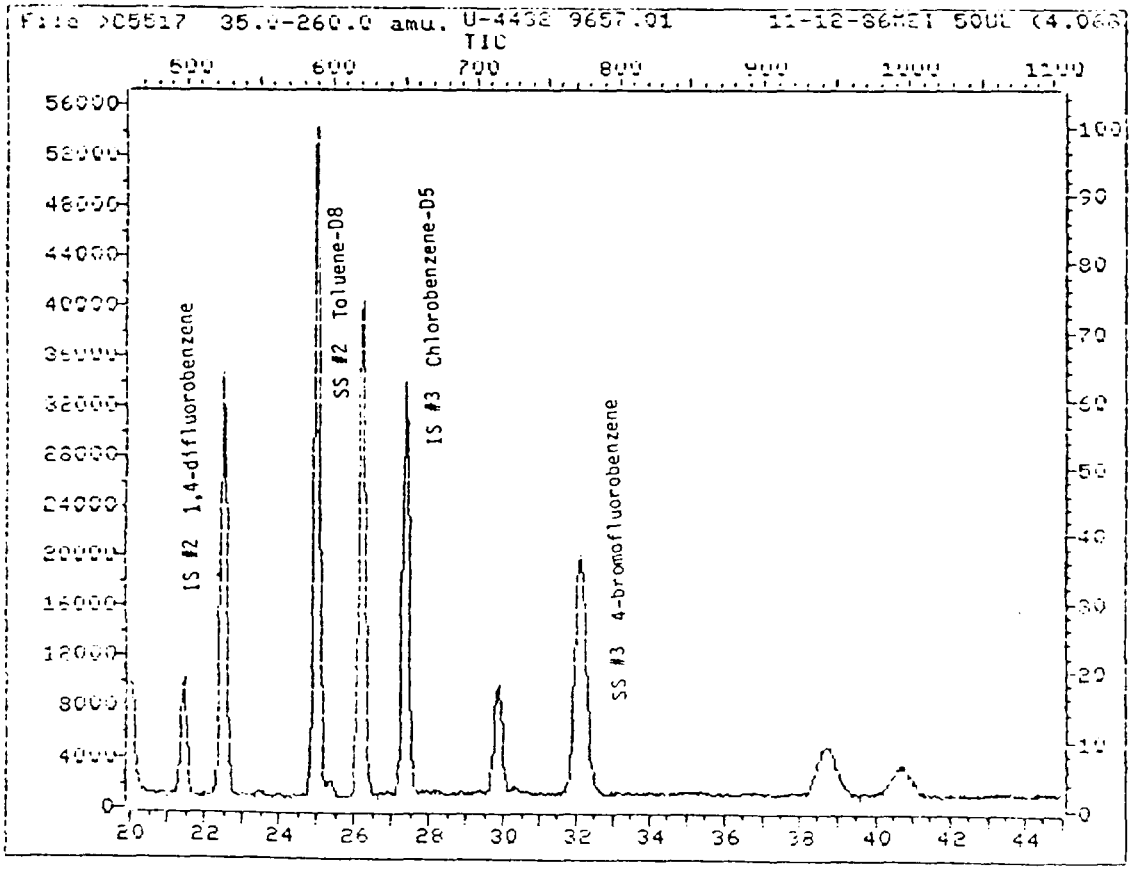


Data File: >D5517::03
Name: U-4432 9657.01 DC-SD-19
Misc: 11-12-86MEI 500UL (4.066/100ULS MEOH) + 100UL

Id File: VOAUR::02
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861113 22:56

Operator ID: USER8
Quant Time: 861114 07:34
Injected at: 861114 06:48


File >C5517 35.0-260.0 amu. U-4432 9657.01 11-12-86MEI 500C (4.066)
TIC
DC-SD-19
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File >C5517 35.0-260.0 amu. U-4432 9657.01 11-12-86MEI 500C (4.066)
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

QUAN REPORT --

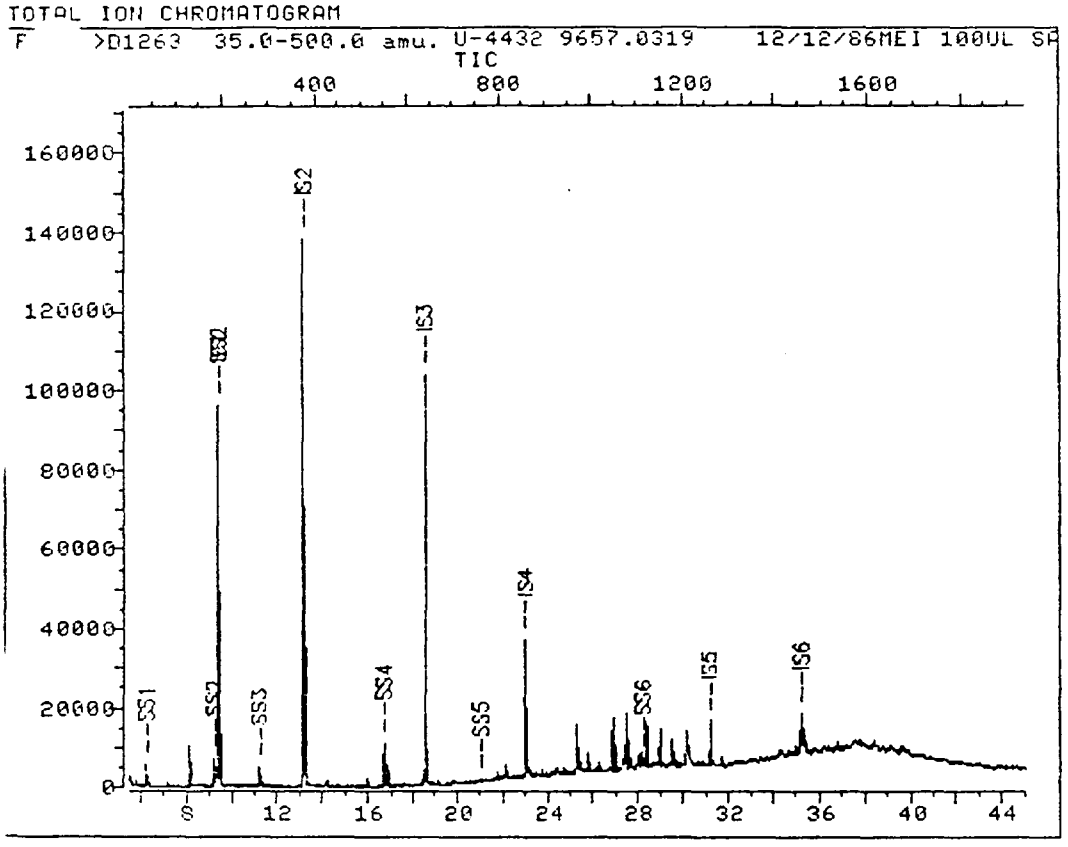
Operator ID: USER8 Quant Rev: 4 Quant Time: 861114 07:34
Output File: ^C5517::D2 Injected at: 861114 06:48
Data File: >C5517::D3 Dilution Factor: 1.00
Name: U-4432 9657.01 DC-SD-19
Misc: 11-12-86MEI 50UL (4.06G/10MLS MEOH) + 100L IS/SS

ID File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861113 22:56

	Compound		M/Z	R.T.	Scan#	Area	Conc	Units	%
1)	*BROMOCHLOROMETHANE	(IS)	128	11.93	254	28026	50.00	UG/L	100
6)	METHYLENE CHLORIDE		84	8.52	165	39147	24.97	UG/L	100
7)	ACETONE		43	9.48	190	6073	22.52	UG/L	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.80	327	60824	50.24	UG/L	89
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.48	525	149918	50.00	UG/L	100
17)	2-BUTANONE		72	14.95	331	3778	27.40	UG/L	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.33	654	108597	50.00	UG/L	100
33)	2-HEXANONE		43	25.00	598	66856	99.06	UG/L	100
36)	TOLUENE-D8	(SURR)	98	26.16	620	161576	50.37	UG/L	95
40)	4-BROMOFLUOROBENZENE	(SURR)	95	32.11	773	75397	44.99	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM

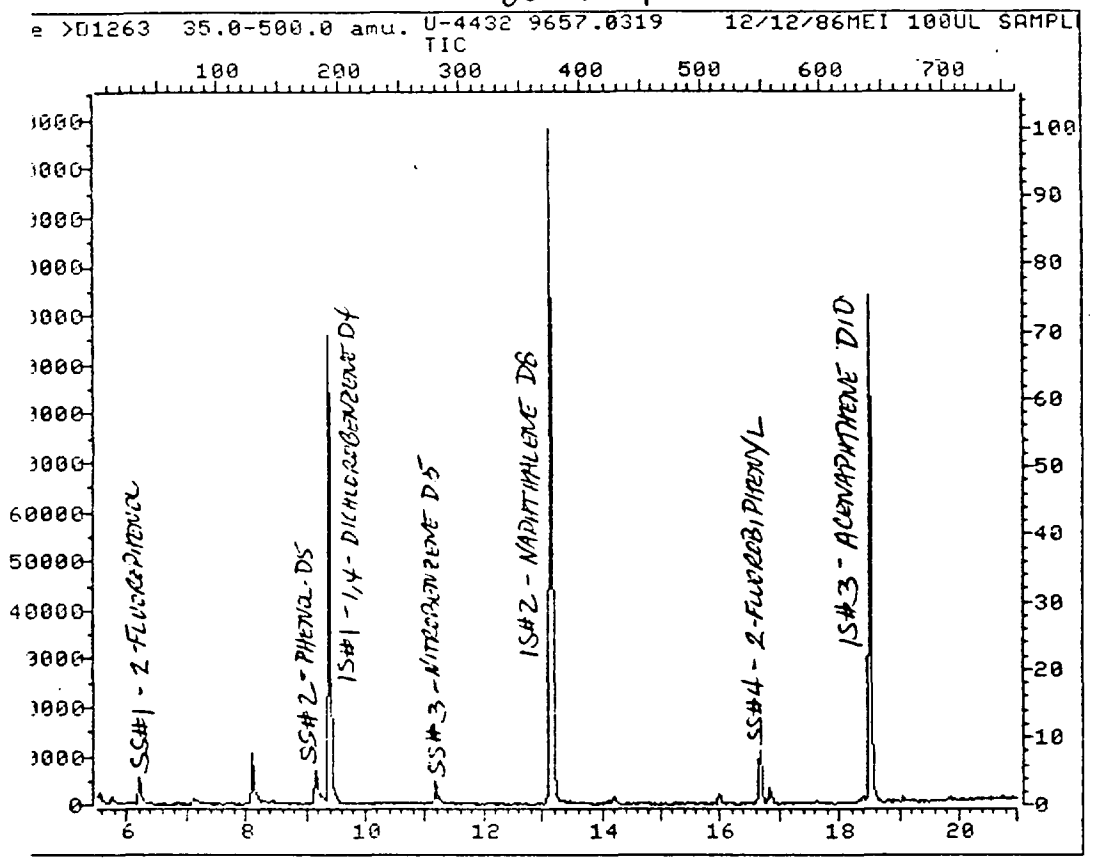


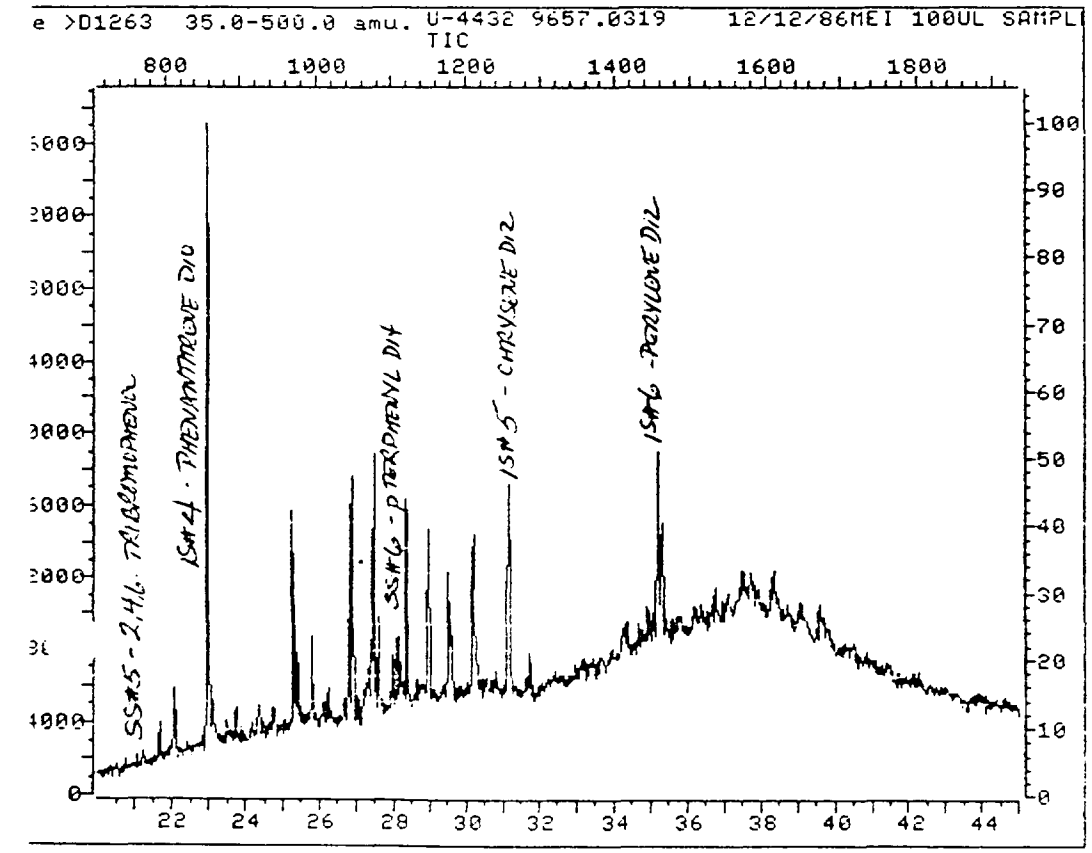
Data File: >D1263::D3
Name: U-4432 9657.0319 DC-SD-19
Misc: 12/12/86MEI 100UL SAMPLE + 400UL MECL2 + 5UL IS (5X) BTL# 1

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861211 15:37

Operator ID: USER8
Quant Time: 861216 09:51
Injected at: 861212 19:13

DC-SD-19


e >D1263 35.0-500.0 amu. U-4432 9657.0319 12/12/86MEI 100UL SAMPL
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


e >D1263 35.0-500.0 amu. U-4432 9657.0319 12/12/86MEI 100UL SAMPL
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

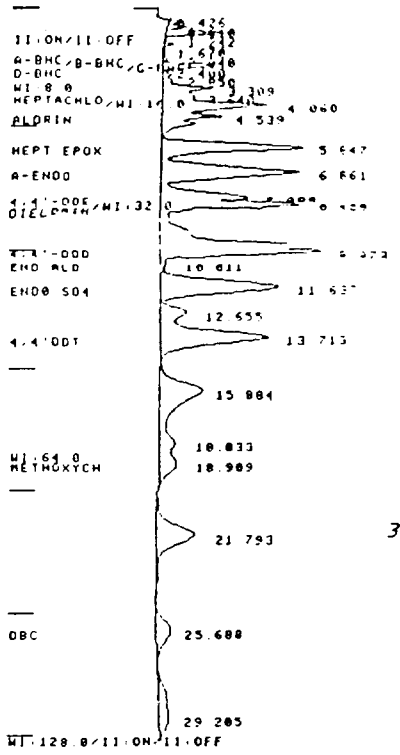
ıerator ID: USER8 Quant Rev: 4 Quant Time: 861216 09:51
ıtput File: ^D1263::Q2 Injected at: 861212 19:13
ıta File: >D1263::D3 Dilution Factor: 5.00
ıme: U-4432 9657.0319 DC-SD-19
sc: 12/12/86MEI 100UL SAMPLE + 400UL MECL2 + 5UL IS (5X) BTL# 1

) File: BNADR::D2
tle: BNA ID FILE FOR THE HP 5970 (B)
ıst Calibration: 861211 15:37

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.39	191	47434	40.00	UG/L	90
2)	PHENOL-D5	(SURR)	99	9.17	180	10083	31.60	UG/L	96
2)	PHENOL-D5	(SURR)	99	9.39	191	972	3.05	UG/L	81
5)	2-FLUOROPHENOL	(SURR)	112	6.21	35	6143	30.66	UG/L	90
~~2)~~	~~1,3-DICHLOROBENZENE~~		~~146~~	~~9.43~~	~~193~~	~~597~~	~~1.70~~	~~UG/L~~ No Bfr	83
1)	1,4-DICHLOROBENZENE		146	9.43	193	597	1.83	UG/L	84
~~2)~~	~~1,2-DICHLOROBENZENE~~		~~146~~	~~9.96~~	~~219~~	~~243~~	~~.68~~	~~UG/L~~ No Bfr	92
~~2)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.18~~	~~279~~	~~789~~	~~2.36~~	~~UG/L~~	93
)	*NAPHTHALENE-D8	(IS)	136	13.16	376	170084	40.00	UG/L	100
)	NITROBENZENE-D5	(SURR)	82	11.18	279	5772	18.01	UG/L	96
)	1,2,4-TRICHLOROBENZENE		180	13.10	373	1616	5.48	UG/L	100
)	NAPHTHALENE		128	13.20	378	1301	1.66	UG/L	100
)	*ACENAPHTHENE-D10	(IS)	162	18.51	639	59813	40.00	UG/L	99
)	2-FLUOROBIPHENYL	(SURR)	172	16.68	549	12631	25.42	UG/L	96
~~)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.39~~	~~633~~	~~156~~	~~.33~~	~~UG/L~~ No Bfr	100
~~)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.51~~	~~639~~	~~18371~~	~~38.05~~	~~UG/L~~	100
)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.02	762	381	6.23	UG/L	94
~~)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.51~~	~~639~~	~~8170~~	~~35.09~~	~~UG/L~~ No Bfr	100
)	*PHENANTHRENE-D10	(IS)	188	22.96	857	43409	40.00	UG/L	96
)	HEXACHLOROBENZENE		284	22.06	813	1598	26.97	UG/L	95
)	PENTACHLOROPHENOL		266	22.80	849	376	13.27	UG/L	100
)	*CHRYSENE-D12	(IS)	240	31.12	1257	15359	40.00	UG/L	100
~~)~~	~~BENZIDINE~~		~~184~~	~~27.45~~	~~1077~~	~~1625~~	~~1625.00~~	~~NO CAL~~ No Bfr	100
~~)~~	~~BENZIDINE~~		~~184~~	~~27.57~~	~~1083~~	~~480~~	~~480.00~~	~~NO CAL~~	100
)	TERPHENYL-D14	(SURR)	244	28.18	1113	1523	18.79	UG/L	100
)	*PERYLENE-D12	(IS)	264	35.20	1457	13427	40.00	UG/L	100
~~)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.59~~	~~1378~~	~~288~~	~~1.50~~	~~UG/L~~	100
~~)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~34.00~~	~~1398~~	~~220~~	~~1.14~~	~~UG/L~~	100
~~)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~34.08~~	~~1402~~	~~608~~	~~3.12~~	~~UG/L~~ No Bfr	100
~~)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~34.18~~	~~1407~~	~~313~~	~~1.63~~	~~UG/L~~	100
~~)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~34.24~~	~~1410~~	~~226~~	~~1.17~~	~~UG/L~~	100
)	BENZO(B)FLUORANTHENE		252	34.24	1410	2834	34.45	UG/L	100
~~)~~	~~BENZO(K)FLUORANTHENE~~		~~252~~	~~34.24~~	~~1410~~	~~2834~~	~~27.51~~	~~UG/L~~ No Bfr	100
~~)~~	~~BENZO(A)PYRENE~~		~~252~~	~~34.92~~	~~1443~~	~~1671~~	~~22.98~~	~~UG/L~~	100
)	BENZO(A)PYRENE		252	35.06	1450	314	4.32	UG/L	100
)	INDENO(1,2,3-CD)PYRENE		276	37.82	1585	826	19.66	UG/L	100
~~)~~	~~DIBENZ(A,H)ANTHRACENE~~		~~278~~	~~37.63~~	~~1576~~	~~215~~	~~5.14~~	~~UG/L~~ No Bfr	100
)	DIBENZ(A,H)ANTHRACENE		278	37.90	1589	229	5.47	UG/L	100
)	BENZO(G,H,I)PERYLENE		276	38.37	1612	1196	25.84	UG/L	100

Compound is ISTD

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



$371 \times 0.00133 \times \frac{1}{0.7005g} \times 200{,}000 = 141{,}000$ ug/kg (1254)

$67.8 \times 0.0005 \times \frac{1}{0.7005g} \times 200{,}000 = 54{,}000$ ug/kg (1260)

RECALCULATE ON FILE: SLY463

DC-SD-19

CHANNEL: 1A - 1 TITLE: RUN# 25 15:37 19 NOV 86

SAMPLE: 9657.03.19A1 METHOD: GAVE CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1	B-BHC	2867.093	2.233	0.078	82830	VV	4.08
2		0.0000	3.233		89437	VV	12.75
3	HEPTACHLO	1505.150	3.830	-0.150	85265	VV	? 17.88
4		0.0000	4.052		259715	VV	17.63
5	ALDRIN	1523.320	4.539	-0.131	109433	VV	15.13
6		0.0000	4.853		69587	VV	? 15.25
7	HEPT EPOX	5672.342	5.647	0.177	379434	VV	20.00
8	A-ENDO	7887.231	6.851	-0.169	495793	VV	26.81
9	4,4'-DDE	4509.314	7.929	-0.161	292800	VV	? 28.38
10	DIELDRIN	5712.550	8.425	0.235	394489	VV	21.89
11	4,4'-DDD	10954.91	9.873	-0.187	610981	VV	23.81
12	ENDO SO4	11355.60	11.637	-0.273	517283	VV	33.19
13		0.0000	12.855		100574	VV	? 26.88
14	4,4'DDT	13819.76	13.713	0.453	513295	VV	33.56
15	END KETON	4964.401	15.884	0.614	327953	VV	53.69
16		0.0000	18.233		81967	VV	? 48.56
17	METHOXYCH	4801.523	18.989	-0.581	106709	VB	? 59.69
18		0.0000	21.793		268487	BV	49.44
19	DBC	2200.293	25.688	-0.922	114921	VV	65.69
20		0.0000	29.225		119363	VB	?130.88

TOTALS: 77773.50 -1.017 5019375

DETECTED PKS: 41 REJECTED PKS: 21

DIVISOR: 0.70050 MULTIPLIER: 200000.000

NOISE: 22.9 OFFSET: -5

NOTES:
NOTEBOOK: 255-41 ANALYST: K.JORE
SECURE AREA: D JOB#:U-4455
INST:VARIAN 6220#2 A ECD 1
COLUMN: 6' GLASS 4MM ID 1
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

SAMPLE NUMBER DC-SD-20

481095

Sample Number
DC-SD-20

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No: U-4432 / U-4442
Lab Sample ID No: 9658
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: C Stojtowicz
Date Sample Received: 11-6-86

Volatile Compounds

Concentration: Low (Medium) (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-14-86

Conc./Dil Factor: 2 pH 6.5

Percent Moisture: (Not Decanted) 42

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	3600u
74-83-9	Bromomethane	3600u
75-01-4	Vinyl Chloride	3600u
75-00-3	Chloroethane	3600u
75-09-2	Methylene Chloride	14000 B
67-64-1	Acetone	6100 B
75-15-0	Carbon Disulfide	1800u
75-35-4	1, 1-Dichloroethene	1800u
75-34-3	1, 1-Dichloroethane	1800u
156-60-5	Trans-1, 2-Dichloroethene	1800u
67-66-3	Chloroform	1800u
107-06-2	1, 2-Dichloroethane	1800u
78-93-3	2-Butanone	10000 B
71-55-6	1, 1, 1-Trichloroethane	1800u
56-23-5	Carbon Tetrachloride	1800u
108-05-4	Vinyl Acetate	3600u
75-27-4	Bromodichloromethane	1800u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	1800u
10061-02-6	Trans-1, 3-Dichloropropene	1800u
79-01-6	Trichloroethene	1800u
124-48-1	Dibromochloromethane	1800u
79-00-5	1, 1, 2-Trichloroethane	1800u
71-43-2	Benzene	1800u
10061-01-5	cis-1, 3-Dichloropropene	1800u
110-75-8	2-Chloroethylvinylether	3600u
75-25-2	Bromoform	1800u
108-10-1	4-Methyl-2-Pentanone	3600u
591-78-6	2-Hexanone	3600u
127-18-4	Tetrachloroethene	1800u
79-34-5	1, 1, 2, 2-Tetrachloroethane	1800u
108-88-3	Toluene	1800u
108-90-7	Chlorobenzene	1800u
100-41-4	Ethylbenzene	1800u
100-42-5	Styrene	1800u
	Total Xylenes	1800u

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.

299

aborat Name Ecology and Environment, Inc.

ase No: V-4432 | V-4442

Sample Number
DC-SD-20

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

oncentration: (Low) Medium (Circle One)

ate Extracted/Prepared: 11-12-86

ate Analyzed: 11-21-86

onc/Dil Factor: 2

rcent Moisture (Decanted) 42

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)	
108-95-2	Phenol	160	J
111-44-4	bis(-2-Chloroethyl)Ether	570	U
95-57-8	2-Chlorophenol	570	U
41-73-1	1 3-Dichlorobenzene	570	U
06-46-7	1, 4-Dichlorobenzene	570	U
00-51-6	Benzyl Alcohol	570	U
5-50-1	1 2-Dichlorobenzene	570	U
5-48-7	2-Methylphenol	570	U
9638-32-9	bis(2-chloroisopropyl)Ether	570	U
06-44-5	4-Methylphenol	570	U
21-64-7	N-Nitroso-Di-n-Propylamine	570	U
7-72-1	Hexachloroethane	570	U
8-95-3	Nitrobenzene	570	U
8-59-1	Isophorone	570	U
8-75-5	2-Nitrophenol	570	U
05-67-9	2, 4-Dimethylphenol	570	U
5-85-0	Benzoic Acid	2800	U
11-91-1	bis(2-Chloroethoxy)Methane	570	U
20-83-2	2, 4-Dichlorophenol	570	U
20-82-1	1, 2, 4-Trichlorobenzene	76	J
1-20-3	Naphthalene	570	U
06-47-8	4-Chloroaniline	570	U
7-68-3	Hexachlorobutadiene	570	U
9-50-7	4-Chloro-3-Methylphenol	570	U
1-57-6	2-Methylnaphthalene	570	U
7-47-4	Hexachlorocyclopentadiene	570	U
8-06-2	2 4 6-Trichlorophenol	570	U
5 95-4	2, 4 5-Trichlorophenol	2800	U
1-58-7	2-Chloronaphthalene	570	U
8-74-4	2-Nitroaniline	2800	U
31 -3	Dimethyl Phthalate	570	U
08-96-8	Acenaphthylene	570	U
9-09-2	3-Nitroaniline	2800	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	570	U
51-28-5	2, 4-Dinitrophenol	2800	U
100-02-7	4-Nitrophenol	2800	U
132-64-9	Dibenzofuran	570	U
121-14-2	2 4-Dinitrotoluene	570	U
606-20-2	2 6-Dinitrotoluene	570	U
84-66-2	Diethylphthalate	570	U
7005-72-3	4-Chlorophenyl-phenylether	570	U
86-73-7	Fluorene	570	U
100-01-6	4-Nitroaniline	2800	U
534-52-1	4, 6-Dinitro-2-Methylphenol	2800	U
86-30-6	N-Nitrosodiphenylamine (1)	570	U
101-55-3	4-Bromophenyl-phenylether	570	U
118-74-1	Hexachlorobenzene	210	J
87-86-5	Pentachlorophenol	370	J
85-01-8	Phenanthrene	570	U
120-12-7	Anthracene	570	U
84-74-2	Di-n-Butylphthalate	280	J
206-44-0	Fluoranthene	570	U
129-00-0	Pyrene	91	J
85-68-7	Butylbenzylphthalate	570	U
91-94-1	3 3'-Dichlorobenzidine	1100	U
56-55-3	Benzo(a)Anthracene	570	U
117-81-7	bis(2-Ethylhexyl)Phthalate	95	J
218-01-9	Chrysene	180	J
117-84-0	Di-n-Octyl Phthalate	96	J
205-99-2	Benzo(b)Fluoranthene	570	U
207-08-9	Benzo(k)Fluoranthene	410	J
50-32-8	Benzo(a)Pyrene	95	J
193-39-5	Indeno(1 2 3-cd)Pyrene	200	J
53-70-3	Dibenz(a h)Anthracene	570	U
191-24-2	Benzo(g h i)Perylene	210	J

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No V-4432 / V-4442

Sample Number DC-SD-20

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-12-86

Date Analyzed 11-19-86

Conc/Dil Factor 25

Percent Moisture (decanted) 42

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	400 U
319-85-7	Beta-BHC	400 U
319-86-8	Delta-BHC	400 U
58-89-9	Gamma-BHC (Lindane)	400 U
76-44-8	Heptachlor	400 U
309-00-2	Aldrin	400 U
1024-57-3	Heptachlor Epoxide	400 U
959-98-8	Endosulfan I	400 U
60-57-1	Dieldrin	800 U
72-55-9	4,4'-DDE	800 U
72-20-8	Endrin	800 U
33213-65-9	Endosulfan II	800 U
72-54-8	4,4'-DDD	800 U
1031-07-8	Endosulfan Sulfate	800 U
50-29-3	4,4'-DDT	800 U
72-43-5	Methoxychlor	4000 U
53494-70-5	Endrin Ketone	800 U
57-74-9	Chlordane	4000 U
8001-35-2	Toxaphene	8000 U
12674-11-2	Aroclor-1016	4000 U
11104-28-2	Aroclor-1221	4000 U
11141-16-5	Aroclor-1232	4000 U
53469-21-9	Aroclor-1242	4000 U
12672-29-6	Aroclor-1248	4000 U
11097-69-1	Aroclor-1254	16,000 C
11096-82-5	Aroclor-1260	5,600 J 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

Case No u-4432 / u-4442

Sample Number

DC-SD-20

Organics Analysis Data Sheet
(Page 4)

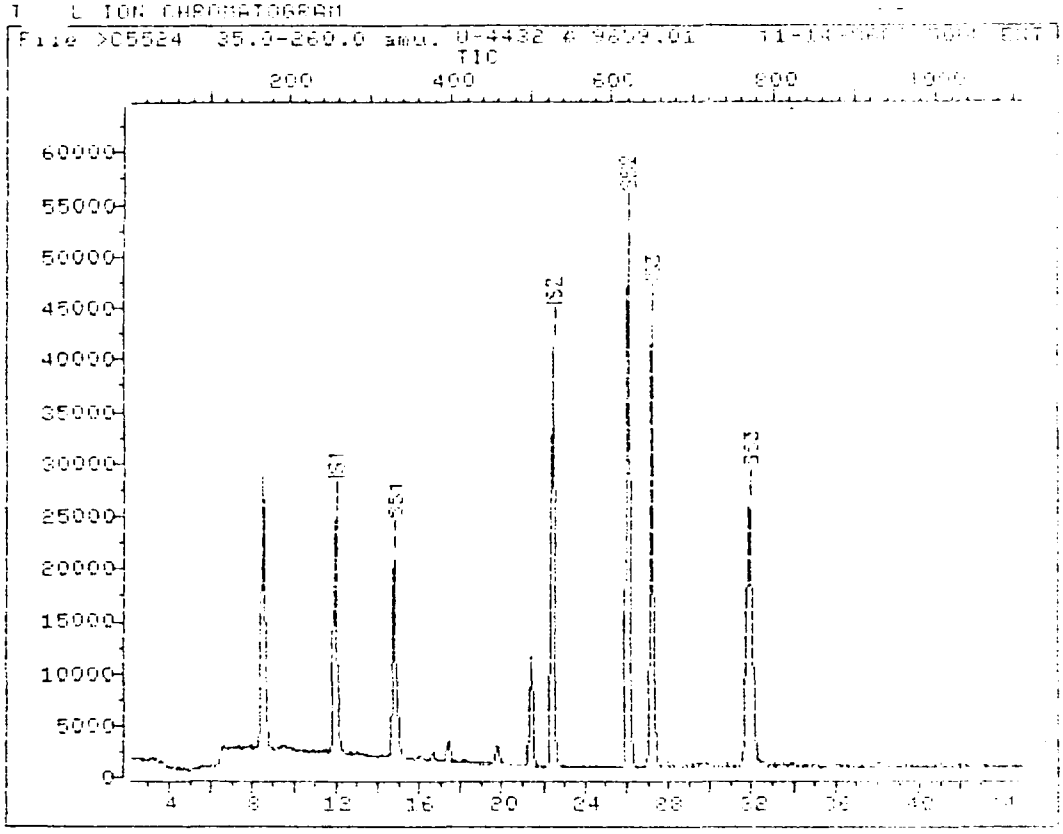
Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.4 min	860 BJ
2.	Unknown Ketone	VOA	19.1 min	500 BJ
3.	Hexane isomer	VOA	21.4 min	2700 BJ
4.				
5.	UNKNOWN HYDROCARBON	BNA	8.6	6200 J
6. 719222	2,6-BIS(1,1-DIMETHYLETHYL)-2,5-CYCLOHEXADIENE			
7.	-1,4-DIONE		19.1	190 J
8.	PCB		25.0-26.1	–
9.	UNKNOWN		26.9	600 J
10.	UNKNOWN HYDROCARBON		27.5	3500 BJ
11.	PCB		27.6-30.2	–
12.	UNKNOWN		30.9	7700 BJ
13.	UNKNOWN		35.0	3100 BJ
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30				

1 L ION CHROMATOGRAM

File >C5524 35.0-260.0 amu. U-4432 # 9659.01 11-14-[illegible] 50UL EXT

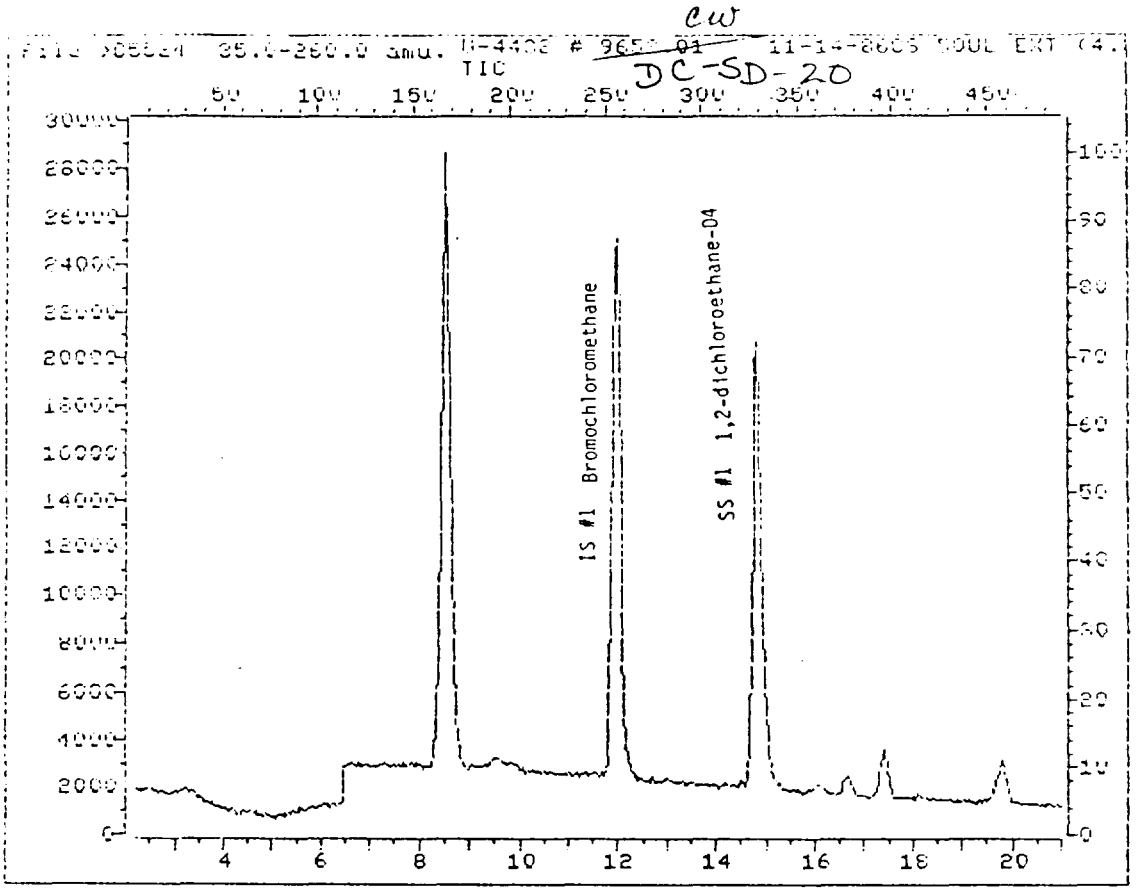
TIC

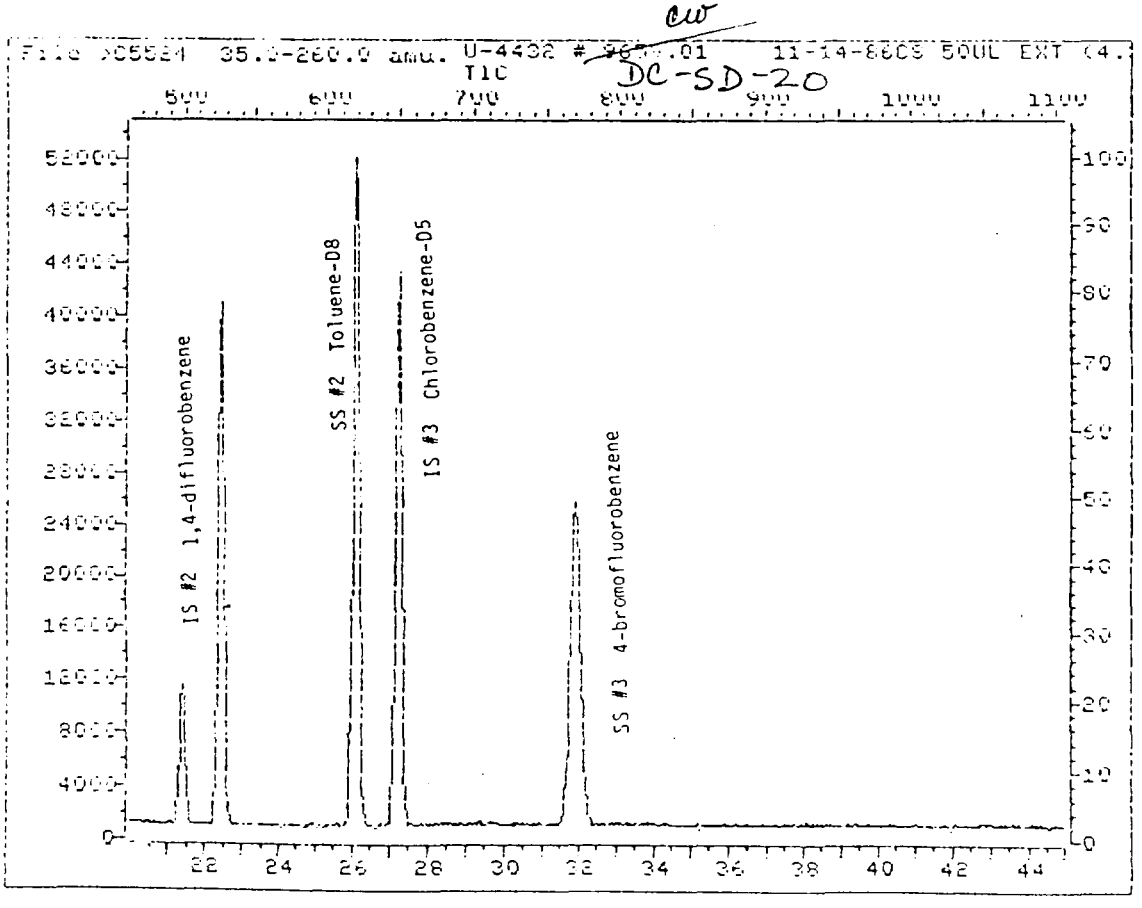


Data File: >C5524::U2 cw 9658.01 DC-SD-20
Name: U-4432 # ~~[illegible]~~ .29 cw
Misc: 11-14-86C5 50UL EXT [illegible]

Id File: VOAC9::D2
Title: VOA ID FILE FOR HP-5995 [illegible]
Last Calibration: 861114 11:38

Operator ID: USER8
Quant Time: 861114 15:08
Injected at: 861114 14:14


cw
File >05524 35.0-260.0 amu. U-4432 # 9655.01 11-14-8809 50UL EXT (4.
TIC
DC-SD-20
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


cw
File >05524 35.0-260.0 amu. U-4432 # 9655.01 11-14-8809 50UL EXT (4.
TIC
DC-SD-20
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

QUANT REPORT

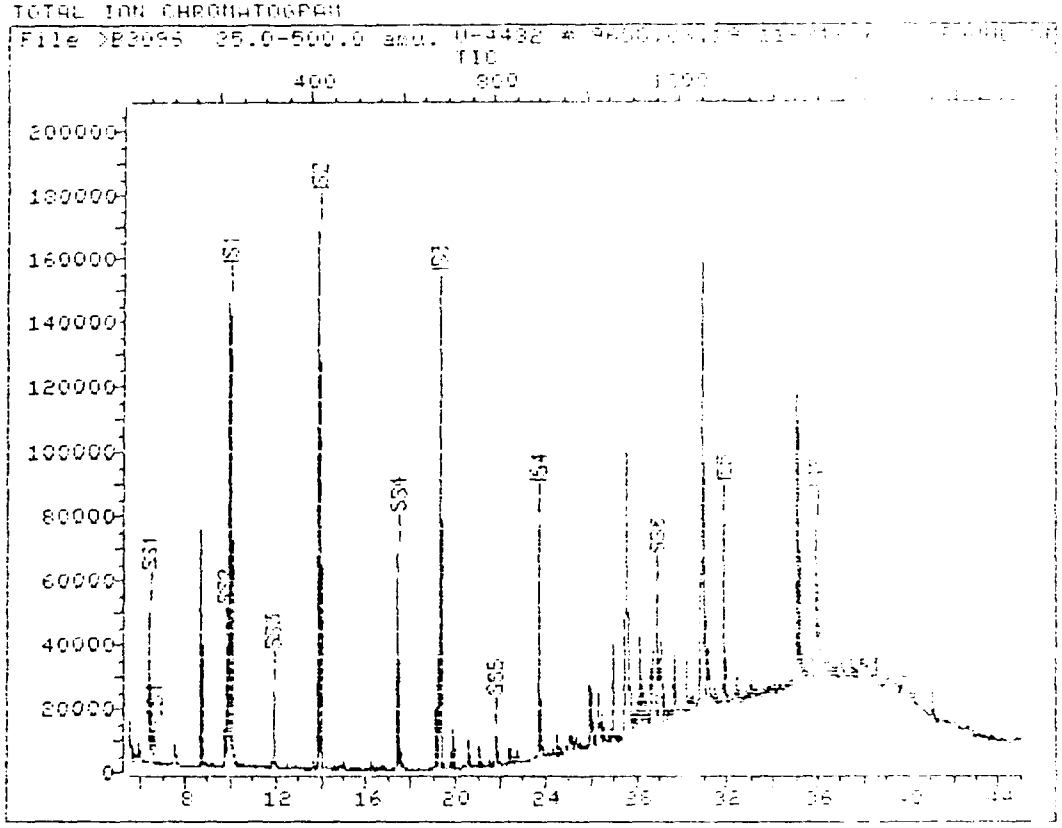
erator ID: USER8 Quant Rev: 4 Quant Time: 861114 [illegible]
tput File: ^C5524::D4 Injected at: 861114 14:14
ta File: ^C5524::D3 Dilution Factor: 1.00
me: U-4432 # ~~9469.01~~ 9603.01 DC-SD-20
ec: 11-14-86CS 50UL EXT (~~4.70G~~/10ML MEOH) + [illegible]
4.87g

File: VOACR::D2
tle: VOA ID FILE FOR HP-5995 (CONT. VAL.)
st Calibration: 861114 11:38

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	C
1)	*BROMOCHLOROMETHANE	(IS)	128	11.94	255	[illegible]	[illegible]	[illegible]	100
6)	METHYLENE CHLORIDE		84	8.53	162	73283	34.58	UG/L	10
2)	ACETONE		43	9.50	192	6031	[illegible]	UG/L	100
5)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.81	377	76378	45.76	UG/L	[illegible]
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.45	526	188691	50.00	UG/L	100
4)	2-BUTANONE		72	14.93	332	5246	25.74	UG/L	100
[illegible]	*CHLOROBENZENE-D5	(IS)	117	27.23	649	[illegible]	[illegible]	UG/L	100
[illegible]	TOLUENE-D8	(SURR)	98	26.86	619	206421	49.65	UG/L	[illegible]
1)	4-BROMOFLUOROBENZENE	(SURR)	95	31.92	770	96689	[illegible]	UG/L	100

Compound is ISTD

TOTAL ION CHROMATOGRAM

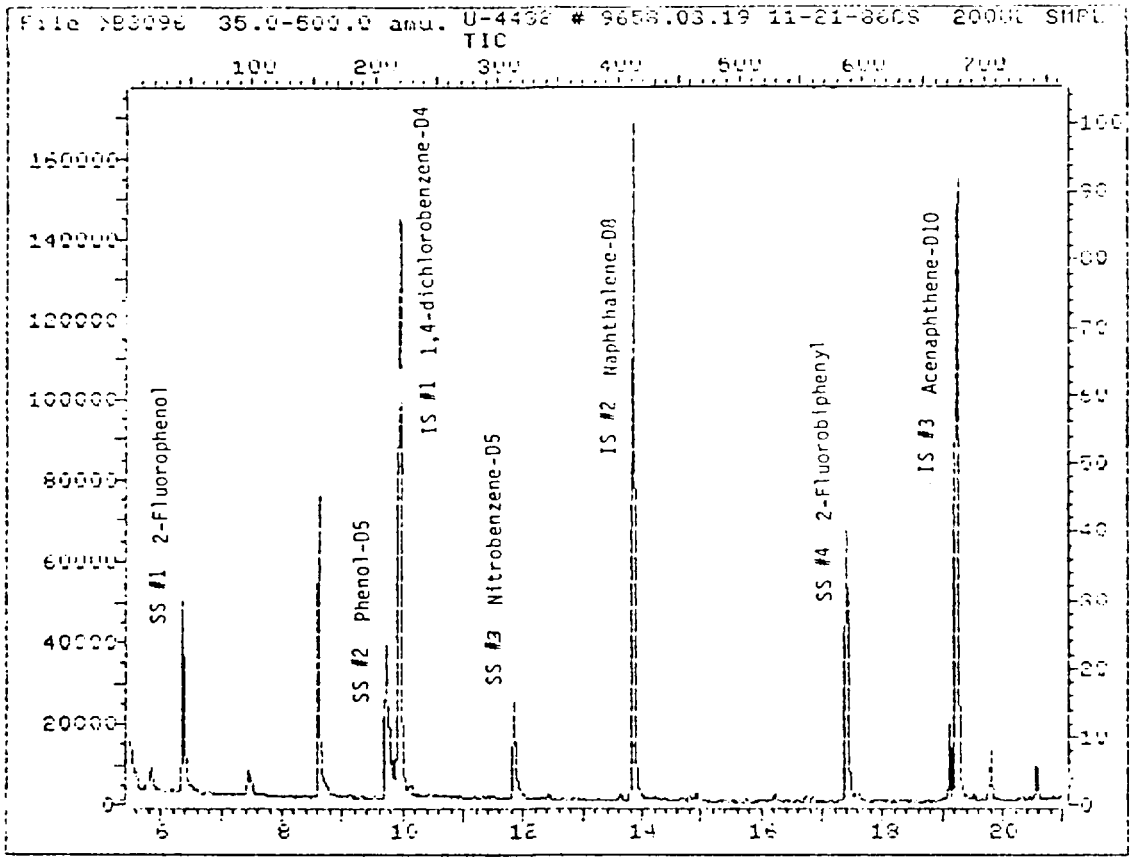


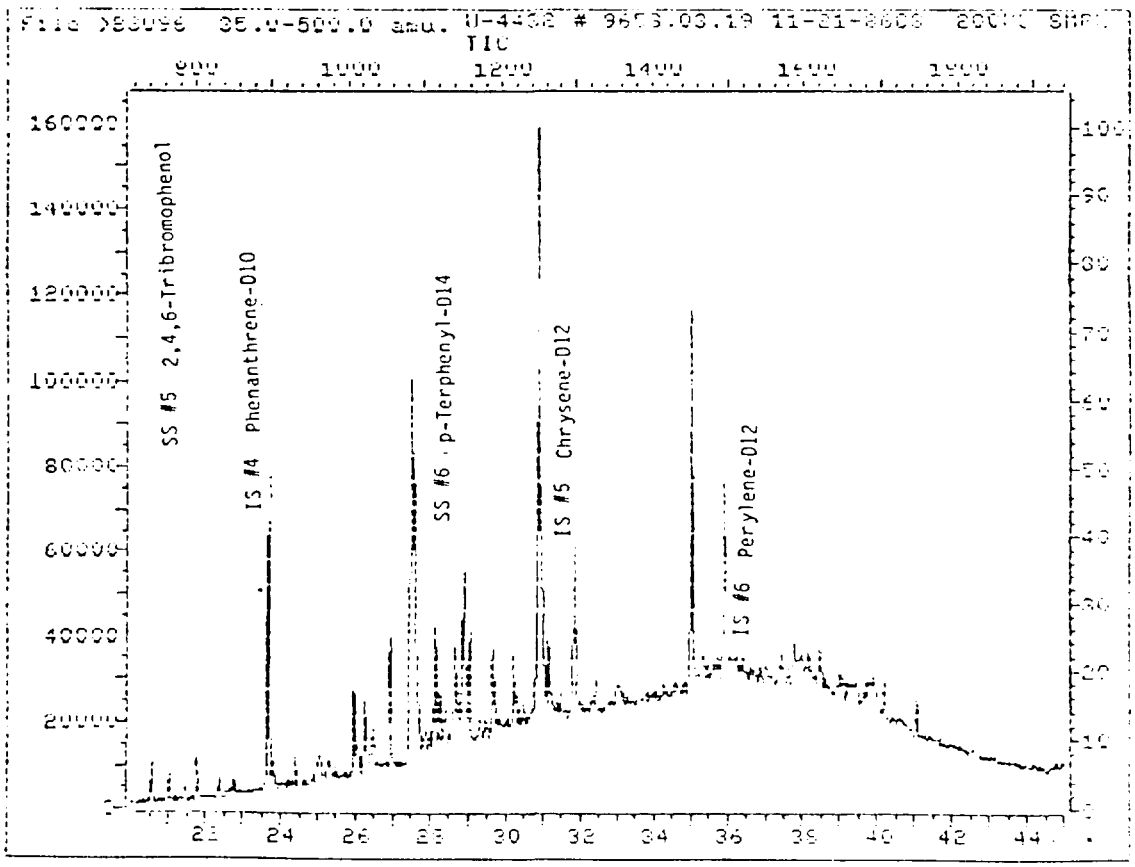
Data File: >B3096::D4
Name: U-4432 # 9658.03.19 DC-SD-20
Misc: 11-21-86CS 200UL SMPL + [illegible]

Id File: BNABP::D2
Title: BNA ID FILE FOR THE HP [illegible]
Last Calibration: 861121 14:49

Operator ID: USER8
Quant Time: 861121 19:06
Injected at: 861121 18:19

DC-SD-20


File X83096 35.0-500.0 amu. U-4432 # 9658.03.19 11-21-88CS 20000 SMPL
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 X83096 35.0-500.0 amu. U-4432 # 9658.03.19 11-21-88CS 20000 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

erator ID: USER8 Quant Meu: 2 Quant Time: [illegible] 19:06
itput File: ^B3096::02 Injected at: [illegible] 18:19
ata File: >B3096::04 Dilution factor: 2.00
ame: U-4432 # 9658.03.19
sc: 11-21-86CS 200UL SMPL + 200UL MELLO + 50UL IS

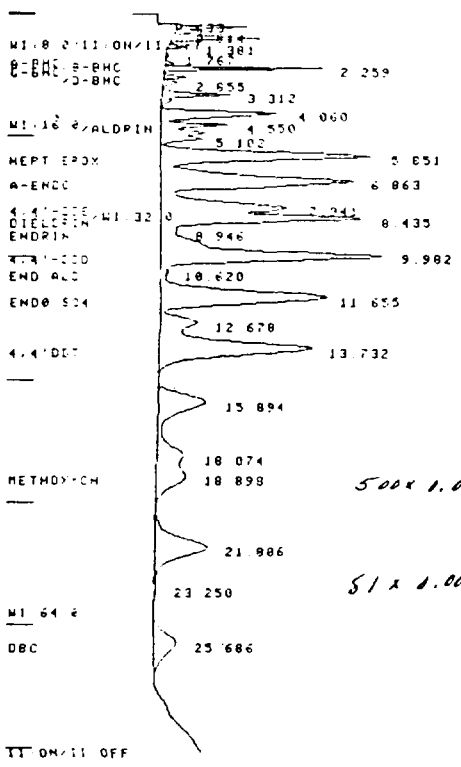
File: BNABR::D2
tle: BNA ID FILE FOR THE HP 5970 (B)
ast Calibration: 861121 14:38

	Compound		m/e	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.94	224	[illegible]	40.00	UG/L	89
2)	PHENOL-D5	(SURR)	99	9.71	209	[illegible]	41.25	UG/L	91
5)	2-FLUOROPHENOL	(SURR)	112	6.36	44	[illegible]	[illegible]	UG/L	79
7)	~~2-FLUOROPHENOL~~	~~(SURR)~~	~~112~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~1~~
8)	PHENOL		94	9.25	211	[illegible]	[illegible]	UG/L	23
9)	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
10)	~~BIS(2-CHLOROETHOXY)ETHER~~		~~93~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
11)	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
12)	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
13)	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
14)	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~88~~
15)	*NAPHTHALENE-D8	(IS)	136	13.84	[illegible]	[illegible]	40.00	UG/L	100
16)	NITROBENZENE-D5	(SURR)	82	11.94	[illegible]	[illegible]	[illegible]	UG/L	90
17)	1,2,4-TRICHLOROBENZENE		180	13.00	[illegible]	[illegible]	[illegible]	UG/L	100
18)	~~NAPHTHALENE~~		~~128~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
19)	*ACENAPHTHENE-D10	(IS)	162	19.13	[illegible]	[illegible]	40.00	UG/L	97
20)	2-FLUOROBIPHENYL	(SURR)	172	17.40	[illegible]	[illegible]	[illegible]	UG/L	97
21)	~~DIMETHYL PHTHALATE~~		~~163~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
22)	~~DIMETHYL PHTHALATE~~		~~163~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
23)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.75	801	[illegible]	[illegible]	UG/L	95
24)	~~2,4-DINITROTOLUENE~~		~~165~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
25)	~~2,6-DINITROTOLUENE~~		~~165~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
26)	*PHENANTHRENE-D10	(IS)	188	21.68	[illegible]	[illegible]	40.00	UG/L	94
27)	HEXACHLOROBENZENE		284	22.79	852	[illegible]	[illegible]	UG/L	98
28)	PENTACHLOROPHENOL		266	23.56	[illegible]	[illegible]	[illegible]	UG/L	100
29)	PENTACHLOROPHENOL		266	23.64	[illegible]	[illegible]	[illegible]	UG/L	100
30)	DI-N-BUTYLPHTHALATE		149	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	96
31)	*CHRYSENE-D12	(IS)	240	31.14	[illegible]	[illegible]	40.00	UG/L	100
32)	~~BENZIDINE~~		~~184~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
33)	~~BENZIDINE~~		~~184~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
34)	~~BENZIDINE~~		~~184~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
35)	~~BENZIDINE~~		~~184~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
36)	PYRENE		202	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	94
37)	TERPHENYL-D14	(SURR)	244	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	100
38)	~~3,3'-DICHLOROBENZIDINE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
39)	~~[illegible]~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
40)	~~BENZO(A)ANTHRACENE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~[illegible]~~
41)	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~[illegible]~~
42)	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~[illegible]~~
43)	CHRYSENE		228	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	[illegible]
44)	*PERYLENE-D12	(IS)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	[illegible]

	Compound	M/E	R.T.	Scan#	Area	Conc	Units	Q
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	BENZO(B)FLUORANTHENE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	BENZO(K)FLUORANTHENE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3)	BENZO(A)PYRENE	252	35.26	1488	1744	1.66	UG/L	100
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	INDENO(1,2,3-CD)PYRENE	276	38.54	1674	1348	3.42	UG/L	100
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1)	BENZO(G,H,I)PERYLENE	276	39.59	1681	2875	3.71	UG/L	100

* Compound is ISTD

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



$500 \times 1.00135 \times \frac{1}{1.01g} \times 25{,}000 = 16{,}000$ ug/kg 1254

$51 \times 1.0028 \times \frac{1}{1.01g} \times 25{,}000 = 5{,}600$ ug/kg 1260

RECALCULATE ON FILE: SLY464

CHANNEL: 1A - 1 TITLE: RUN# 29 16:11 19 NOV 86

DC-SD-20 SAMPLE: 9658.03.1SA1 METHOD: DAVE CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1	B-BHC	307.0457	2.259	0.089	102318	VV	5.00
2	D-BHC	27.2400	2.590	0.140	21000	VV	6.31
3		0.0000	2.312		73563	VV	7.63
4	HEPTACHLO	314.5464	4.050	0.270	206978	VV	14.44
5	ALDRIN	123.4750	4.550	-0.120	101292	VV	11.19
6		0.0000	4.873		62630	VV	? 11.75
7		0.0000	5.102		58735	VV	? 12.44
8	HEPT EPOX	731.0686	5.851	0.181	564162	VV	20.31
9	A-ENDO	969.6381	6.863	-0.167	703054	VV	27.56
10	4,4'-DDE	564.8300	7.941	-0.149	423053	VV	? 29.69
11	DIELDRIN	720.1865	8.435	0.245	573659	VV	22.25
12	4,4'-DDD	1293.030	9.982	-0.178	851922	VV	23.56
13	END SO4	1379.537	11.655	-0.255	725701	VV	33.69
14		0.0000	12.678		143979	VV	? 36.19
15	4,4'DDT	1667.859	13.732	0.472	714544	VB	33.94
16	END KETON	370.9850	15.894	0.624	282686	BV	44.25
17		0.0000	18.074		192532	VV	? 47.00
18	METHOXYCH	753.7181	18.898	-0.592	193012	VV	? 62.56
19		0.0000	21.806		369291	VV	49.88
20	DBC	281.9427	25.686	-0.924	169739	BB	63.88
TOTALS:		9505.102		-0.364	6478549		

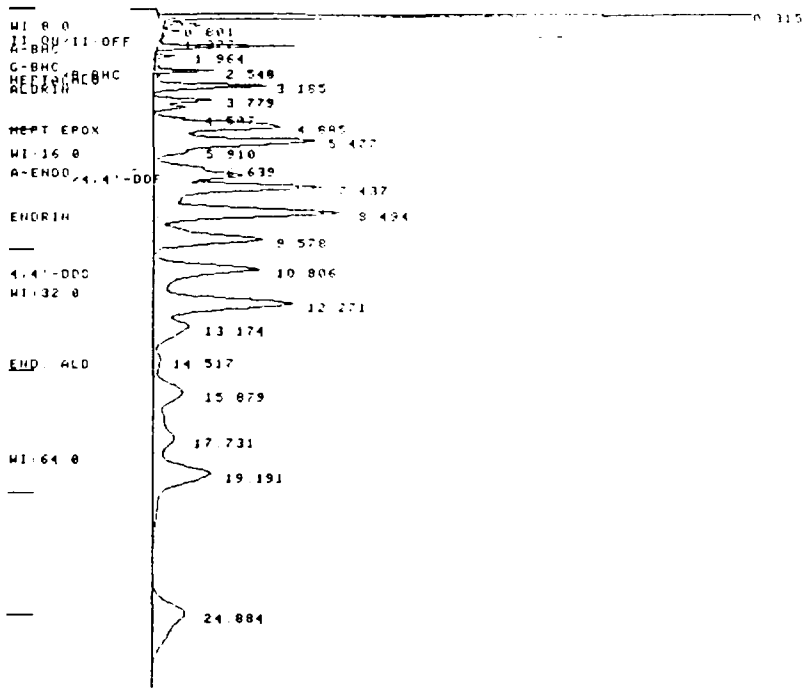
DETECTED PKS: 40 REJECTED PKS: 20

DIVISOR: 1.01000 MULTIPLIER: 25000.0000

NOISE: 22.9 OFFSET: 15

NOTES:
NOTES:: 259-41 ANALYST: K.JUREK
SECURE AREA: D JOB#:U-4465
INST:VARIAN 6000#2 A ECD 10%
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE:3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN.
DET:300 C INJ:200 C
200 C [illegible]

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



CHANNEL: 1B - 1 TITLE: RUN#16 19:50 21 NOV 86

SAMPLE: 9658 METHOD: PEPA CALCULATION: ES - ANALYS

DC-SD-20

PEAK NO	PEAK NAME	RESULT	TIME (MIN)	TIME OFFSET	AREA (COUNTS)	SEP CODE	W1/2 (SEC)
1	A-BHC	0.0000	1.941	-0.139	166633	VB	3.81
2		0.0000	1.964		24054	BV	4.63
3	B-BHC	0.0000	2.549	0.139	98526	VV	5.94
4	ALDRIN	0.0000	3.185	0.035	311154	VB	9.88
5		0.0000	3.779		185622	BV	9.63
6		0.0000	4.847		57201	VV	11.13
7		0.0000	4.987		76229	VV	? 11.63
8	HEPT EPOX	0.0000	4.555	-0.215	698758	VV	? 25.06
9		0.0000	5.477		915747	VV	20.38
10		0.0000	5.910		118776	VV	? 18.63
11	A-ENDO	0.0000	6.639	-0.171	182717	VV	? 20.50
12	4,4'-DDE	0.0000	6.915	0.105	485278	VV	? 26.13
13	DIELDRIN	0.0000	7.437	-0.443	956167	VV	18.88
14	ENDRIN	0.0000	8.494	-0.316	1127905	VV	22.63
15		0.0000	9.578		765850	VV	24.25
16	4,4'-DDD	0.0000	10.805	0.375	852345	VV	27.50
17	B-ENDOSUL	0.0000	12.271	0.631	1170196	VV	30.38
18	4,4'DDT	0.0000	13.174	-0.776	421779	VV	? 49.75
19	END. ALD.	0.0000	14.517	-0.313	75228	VV	? 41.06
20		0.0000	15.879		285866	VV	53.56
21	ENDO SO4	0.0000	17.731	0.671	240743	VV	? 77.81
22		0.0000	19.191		812840	VV	47.31
23		0.0000	24.884		681551	VV	82.50

TOTALS: 0.0000 -0.417 11242110

DETECTED PKS: 35 REJECTED PKS: 12

DIVISOR: 1.50000 MULTIPLIER: 25000.0000

NOISE: 80.0 OFFSET: 20

NOTES:
NOTEBOOK:259-40 ANALYST:RICHARD JAMSON
SECURE AREA: D JOB #U-4432&U-4447
INST: VARIAN 6000&2 B ECD 10&1 A?:16
COLUMN: 6' GLASS 4MM ID 100/120 SP-PELLICOPORT
PHASE:1.5% SP2250/1.95% SP2401
CARRIER GAS: N2 @ 60 ML/MIN.
DET:300 C INJ:220 C
200 C ISOTHERMAL 4.0% [illegible]
PESTICIDE/PCB CONFIRMATIONS
DEAD CREEK

SAMPLE NUMBER DC-SD-21

481095

Sample Number
DC-SD-21

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No: U-4432/U-4442
Lab Sample ID No: 9659
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: C Slotowicz
Date Sample Received: 11-6-86

Volatile Compounds

Concentration: Low (Medium) (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-14-86

Conc/Dil Factor: 2 pH 7.1

Percent Moisture: (Not Decanted) 57

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	4800 u
74-83-9	Bromomethane	4800 u
75-01-4	Vinyl Chloride	4800 u
75-00-3	Chloroethane	4800 u
75-09-2	Methylene Chloride	19000 B
67-64-1	Acetone	6400 B
75-15-0	Carbon Disulfide	2400 u
75-35-4	1, 1-Dichloroethene	2400 u
75-34-3	1, 1-Dichloroethane	2400 u
156-60-5	Trans-1, 2-Dichloroethene	2400 u
67-66-3	Chloroform	2400 u
107-06-2	1, 2-Dichloroethane	2400 u
78-93-3	2-Butanone	11000 B
71-55-6	1, 1, 1-Trichloroethane	2400 u
56-23-5	Carbon Tetrachloride	2400 u
108-05-4	Vinyl Acetate	4800 u
75-27-4	Bromodichloromethane	2400 u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	2400 u
10061-02-6	Trans-1, 3-Dichloropropene	2400 u
79-01-6	Trichloroethene	2400 u
124-48-1	Dibromochloromethane	2400 u
79-00-5	1, 1, 2-Trichloroethane	2400 u
71-43-2	Benzene	2400 u
10061-01-5	cis-1, 3-Dichloropropene	2400 u
110-75-8	2-Chloroethylvinylether	4800 u
75-25-2	Bromoform	2400 u
108-10-1	4-Methyl-2-Pentanone	4800 u
591-78-6	2-Hexanone	4800 u
127-18-4	Tetrachloroethene	2400 u
79-34-5	1, 1, 2, 2-Tetrachloroethane	2400 u
108-88-3	Toluene	2400 u
108-90-7	Chlorobenzene	2400 u
100-41-4	Ethylbenzene	2400 u
100-42-5	Styrene	2400 u
	Total Xylenes	2400 u

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.

aboratory Name ecology and environment, inc.

ase No: V-4432 / V-4442

Sample Number
DC-SD-21

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

oncentration: Low Medium (Circle One)

ate Extracted/Prepared: 11-12-86

ate Analyzed: 11-25-86

onc/Dil Factor: 2

ercent Moisture (Decanted) 57

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	770	U
111-44-4	bis(-2-Chloroethyl)Ether	770	U
5-57-8	2-Chlorophenol	770	U
41-73-1	1 3-Dichlorobenzene	770	U
06-46-7	1 4-Dichlorobenzene	770	U
00-51-6	Benzyl Alcohol	770	U
5-50-1	1 2-Dichlorobenzene	770	U
5-48-7	2-Methylphenol	770	U
9638-32-9	bis(2-chloroisopropyl)Ether	770	U
06-44-5	4-Methylphenol	770	U
21-64-7	N-Nitroso-Di-n-Propylamine	770	U
7-72-1	Hexachloroethane	770	U
8-95-3	Nitrobenzene	770	U
8-59-1	Isophorone	770	U
8-75-5	2-Nitrophenol	770	U
05-67-9	2 4-Dimethylphenol	770	U
5-85-0	Benzoic Acid	3700	U
11-91-1	bis(2-Chloroethoxy)Methane	770	U
20-83-2	2 4-Dichlorophenol	770	U
20-82-1	1 2 4-Trichlorobenzene	770	U
1-20-3	Naphthalene	770	U
05-47-8	4-Chloroaniline	770	U
7-68-3	Hexachlorobutadiene	770	U
9-50-7	4-Chloro-3-Methylphenol	770	U
1-57-6	2-Methylnaphthalene	770	U
7-47-4	Hexachlorocyclopentadiene	770	U
8-06-2	2 4 6-Trichlorophenol	770	U
5-95-4	2 4 5-Trichlorophenol	3700	U
1-58-7	2-Chloronaphthalene	770	U
8-74-4	2-Nitroaniline	3700	U
3 -3	Dimethyl Phthalate	770	U
08-96-8	Acenaphthylene	770	U
9-09-2	3-Nitroaniline	3700	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	770	U
51-28-5	2 4-Dinitrophenol	3700	U
100-02-7	4-Nitrophenol	3700	U
132-64-9	Dibenzofuran	770	U
121-14-2	2 4-Dinitrotoluene	770	U
606-20-2	2 6-Dinitrotoluene	770	U
84-66-2	Diethylphthalate	770	U
7005-72-3	4-Chlorophenyl-phenylether	770	U
86-73-7	Fluorene	770	U
100-01-6	4-Nitroaniline	3700	U
534-52-1	4 6-Dinitro-2-Methylphenol	3700	U
86-30-6	N-Nitrosodiphenylamine (1)	770	U
101-55-3	4-Bromophenyl-phenylether	770	U
118-74-1	Hexachlorobenzene	770	U
87-86-5	Pentachlorophenol	3700	U
85-01-8	Phenanthrene	280	J
120-12-7	Anthracene	770	U
84-74-2	Di-n-Butylphthalate	770	U
206-44-0	Fluoranthene	770	U
129-00-0	Pyrene	440	J
85-68-7	Butylbenzylphthalate	770	U
91-94-1	3 3'-Dichlorobenzidine	1500	U
56-55-3	Benzo(a)Anthracene	380	J
117-81-7	bis(2-Ethylhexyl)Phthalate	740	J
218-01-9	Chrysene	550	J
117-84-0	Di-n-Octyl Phthalate	770	U
205-99-2	Benzo(b)Fluoranthene	770	U
207-08-9	Benzo(k)Fluoranthene	920	
50-32-8	Benzo(a)Pyrene	480	J
193-39-5	Indeno(1 2 3-cd)Pyrene	590	J
53-70-3	Dibenzo(a h)Anthracene	770	U
191-24-2	Benzo(g h i)Perylene	550	J

(1) Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No U-4432 / U-4442

Sample Number DC-SD-21

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-12-86

Date Analyzed 11-19-86

Conc/Dil Factor 10

Percent Moisture (decanted) 57

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

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

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 30 V_t 1000 V_i 4

Laboratory Name ecology and environment, inc.

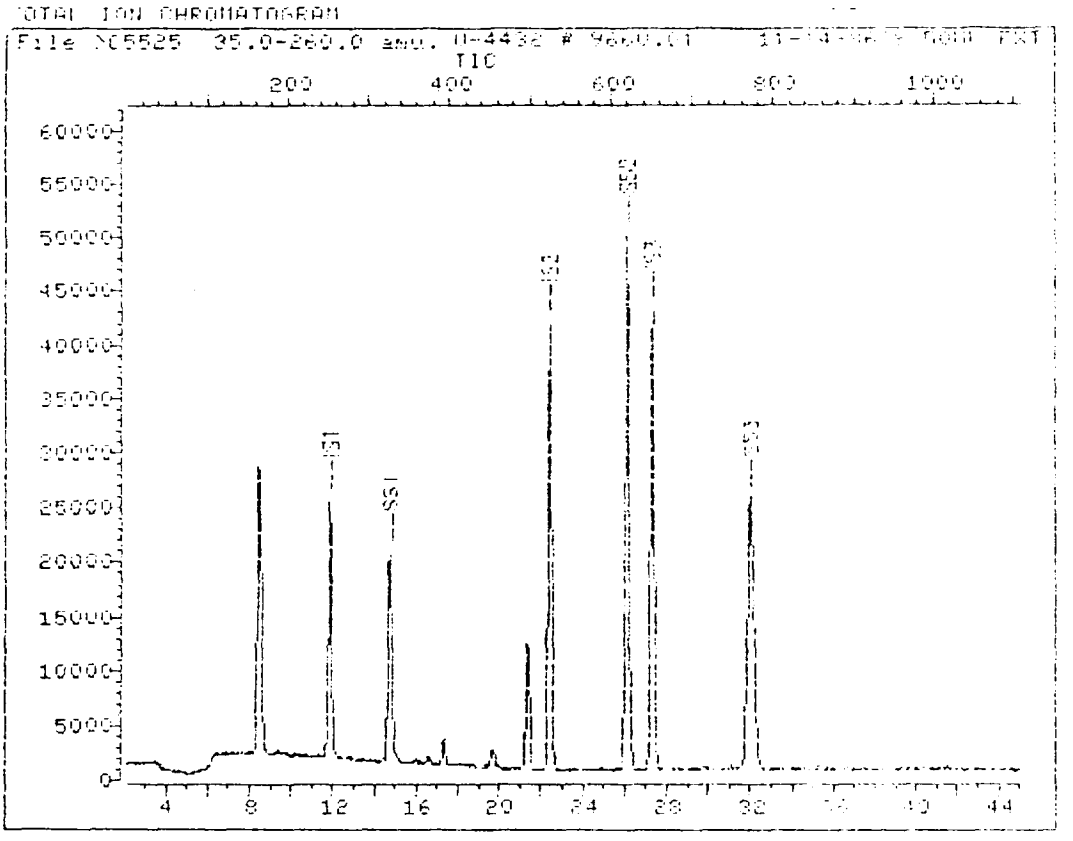
Case No. u-4432 / u-4442

Sample Number DC-SD-21

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

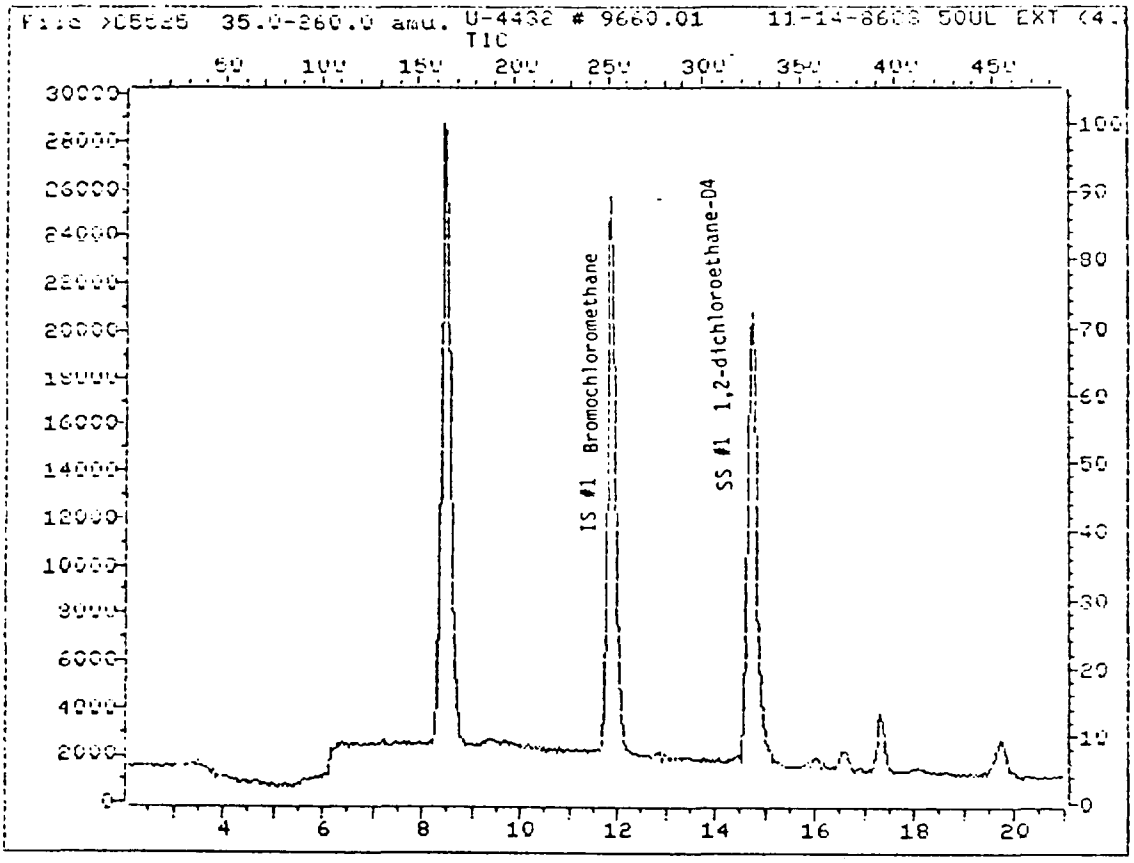
CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.3 min	1200 BJ
2.	unknown ketone	VOA	19.7 min	600 BJ
3.	Hexane isomer	VOA	21.4 min	3900 BJ
4.				
5.	UNKNOWN	BNA	8.1	5800 J
6.	UNKNOWN		9.4	2900 J
7.	UNKNOWN		19.1	990 J
8.	UNKNOWN HYDROCARBON		26.7	1400 BJ
9.	UNKNOWN		27.8	600 J
10.	UNKNOWN		29.9	3700 BJ
11.	UNKNOWN		30.1	6500 J
12.	UNKNOWN		34.3	2300 BJ
13.	UNKNOWN		36.7	360 J
14.	UNKNOWN		37.0	440 J
15.	UNKNOWN		38.2	2800 J
16.	UNKNOWN		38.5	790 J
17.	UNKNOWN		39.0	1700 J
18.	UNKNOWN		40.4	680 J
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30				

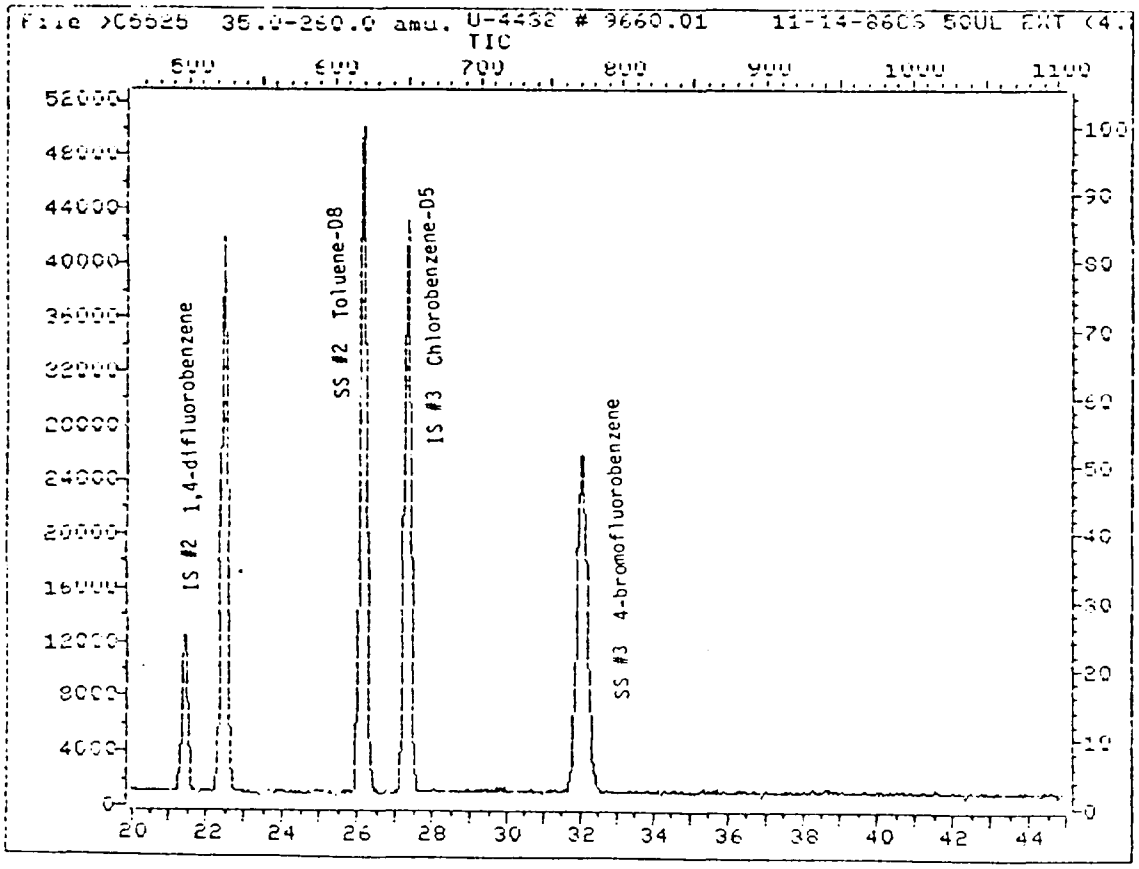


Data File: >C5525::03 ω59 DC-SD-21
Name: U-4432 # 966~~0.01~~
Misc: 11-14-86CS 50UL EXT

Id File: VOHCP::02
Title: VOA ID FILE FOR HP-5995
Last Calibration: 861114 11:38

Operator ID: USEP8
Quant Time: 861114 15:55
Injected at: 861114 15:09


File >C6525 35.0-260.0 amu. U-4432 # 9660.01 11-14-8603 50UL EXT (4.
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File >C6525 35.0-260.0 amu. U-4432 # 9660.01 11-14-8603 50UL EXT (4.
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

QUANT REPORT

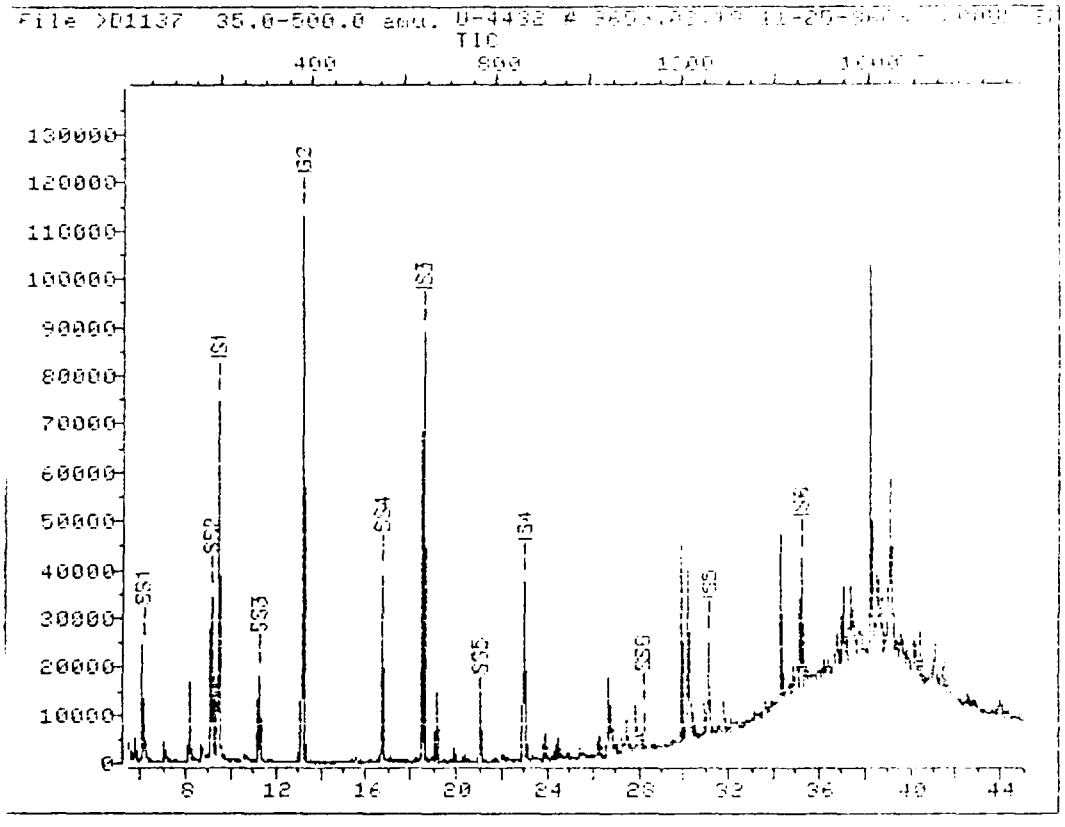
Operator ID: USER8 Quant Rev: 4 Quant Time: 861114 15:55
Output File: ^C5525::D4 Injected at: 861114 15:02
Data File: >C5525::D3 Dilution factor: 1.00
Name: U-4432 # ~~9680.01~~ (9) 9659.0) DC-SD-21
Misc: 11-14-86CS 50UL EXT (~~4.29~~ 4.32 G/100ML MEOH) + 1 UL IS/SS IN 4.3g

ID File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861114 11:38

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS) 128	11.88	[illegible]	30261	50.00	UG/L	100
6)	METHYLENE CHLORIDE	84	8.46	144	24464	34.22	UG/L	100
7)	ACETONE	43	9.43	1[illegible]	4828	11.87	UG/L	100
~~9)~~	~~ACETONE~~	~~43~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~ N.B/R	100
15)	1,2-DICHLOROETHANE-D4	(SURR) 65	14.75	32[illegible]	79385	46.14	UG/L	90
16)	*1,4-DIFLUOROBENZENE	(IS) 114	22.43	5[illegible]4	186814	50.00	UG/L	100
17)	2-BUTANONE	72	14.90	3[illegible]	4396	23.86	UG/L	100
31)	*CHLOROBENZENE-D5	(IS) 117	27.33	6[illegible]	140476	50.00	UG/L	100
36)	TOLUENE-D8	(SURR) 98	26.15	6[illegible]	208135	40.85	UG/L	99
40)	4-BROMOFLUOROBENZENE	(SURR) 95	32.02	[illegible]	98921	47.30	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM

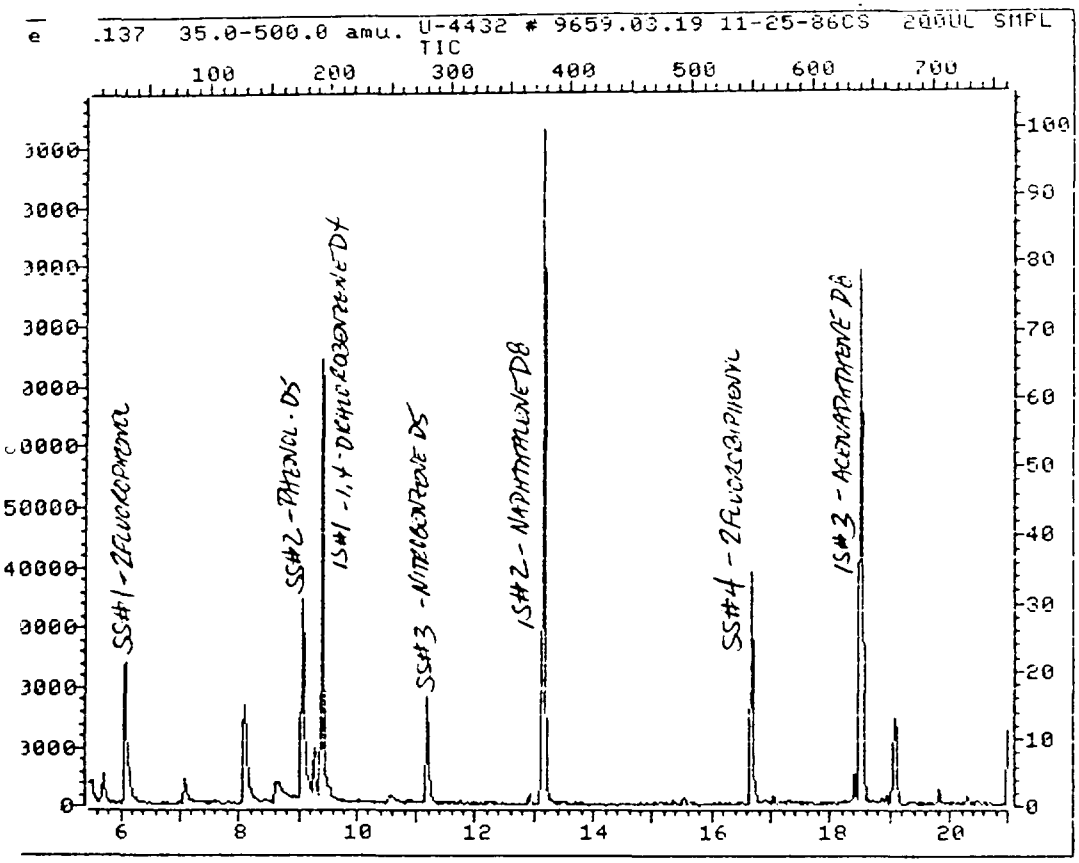


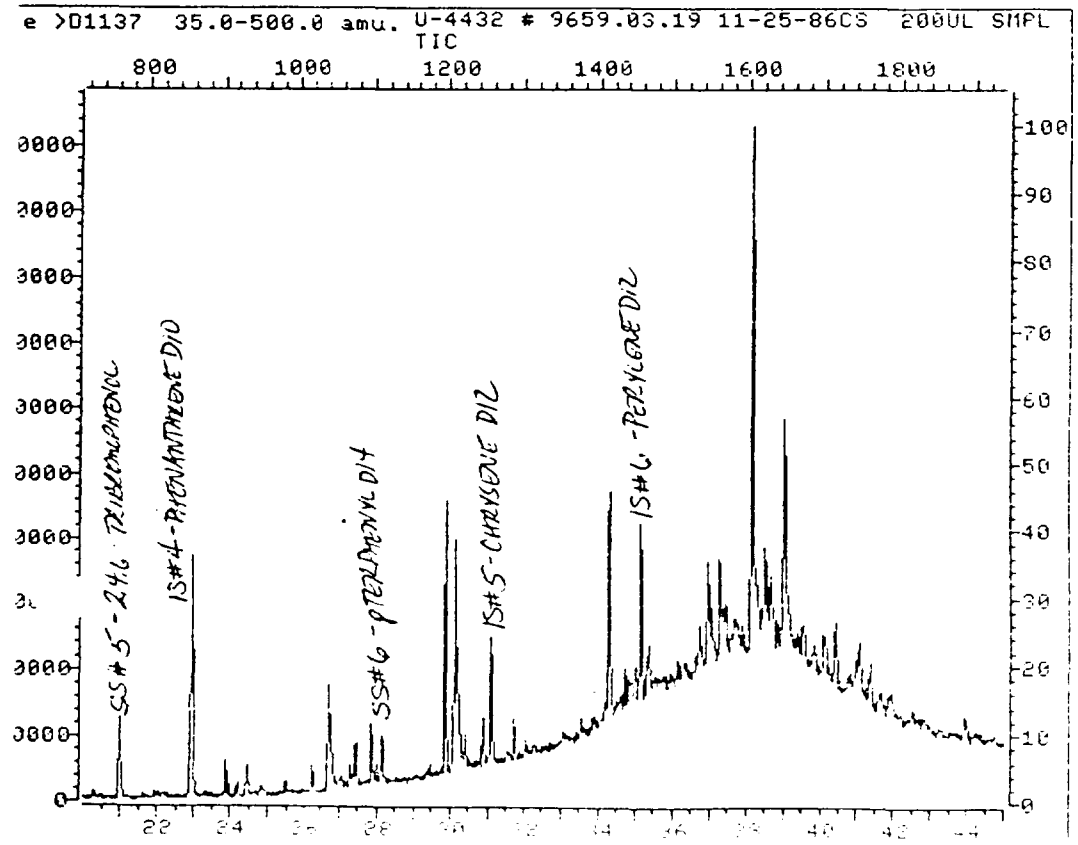
Data File: >D1137::D3
Name: U-4432 # 9659.03.19 DC-SD-21
Misc: 11-25-86CS 200UL SMPL + 200UL [illegible]

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861125 15:39

Operator ID: USER6
Quant Time: 861125 18:49
Injected at: 861125 18:01

DC-SD-21


e .137 35.0-500.0 amu. U-4432 # 9659.03.19 11-25-86CS 200UL SMPL
TIC
SS#1 - 2FLUOROPHENOL
SS#2 - PHENOL-D5
IS#1 - 1,4-DICHLOROBENZENE D4
SS#3 - NITROBENZENE D5
IS#2 - NAPHTHALENE D8
SS#4 - 2FLUOROBIPHENYL
IS#3 - ACENAPHTHENE D10


e >D1137 35.0-500.0 amu. U-4432 # 9659.03.19 11-25-86CS 200UL 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

er for ID: USER5 Quant Rev: 4 Quant Time: 861125 18:49
t. File: ^D1137::Q2 Injected at: 861125 18:01
ta File: >D1137::D3 Dilution Factor: 2.00
me: U-4432 # 9659.03.19
sc: 11-25-86CS 200UL SMPL + 200UL MECL2 + 5UL IS (2X) BIL# 4

File: BNADR::D2
tle: BNA ID FILE FOR THE HP 5970 (B)
st Calibration: 861125 15:39

	Compound	m/z	R.T.	Scan#	Area	Conc	Units	q
)	*1,4-DICHLOROBENZENE-D4(IS)	152	9.39	193	40663	40.00	UG/L	89
)	PHENOL-D5 (SURR)	99	9.06	177	42547	59.52	UG/L	96
5)	2-FLUOROPHENOL (SURR)	112	6.07	30	24956	50.75	UG/L	96
~~4)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~	~~45~~	~~10.57~~	~~251~~	~~314~~	~~.2~~	~~UG/L~~	100
~~4)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~	~~45~~	~~10.69~~	~~257~~	~~128~~	~~.10~~	~~UG/L~~	100
~~4)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~	~~45~~	~~10.81~~	~~263~~	~~390~~	~~.30~~	~~UG/L~~	100
~~4)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~	~~45~~	~~10.96~~	~~270~~	[illegible]	~~.15~~	~~UG/L~~	100
~~)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~	~~70~~	~~11.10~~	[illegible]	[illegible]	~~5.97~~	~~UG/L~~	95
)	*NAPHTHALENE-D8 (IS)	136	13.16	378	190936	40.00	UG/L	100
)	NITROBENZENE-D5 (SURR)	82	11.18	281	18441	28.35	UG/L	95
~~)~~	~~NAPHTHALENE~~	~~128~~	~~13.22~~	~~381~~	[illegible]	[illegible]	~~UG/L~~	100
~~)~~	~~2-METHYLNAPHTHALENE~~	~~142~~	~~15.15~~	[illegible]	~~426~~	~~.40~~	~~UG/L~~	91
)	*ACENAPHTHENE-D10 (IS)	162	18.51	641	93356	40.00	UG/L	92
)	2-FLUOROBIPHENYL (SURR)	172	16.68	551	41445	38.60	UG/L	95
~~)~~	~~DIMETHYL PHTHALATE~~	~~163~~	~~18.39~~	[illegible]	[illegible]	[illegible]	~~UG/L~~	100
~~)~~	~~DIMETHYL PHTHALATE~~	~~163~~	~~18.51~~	[illegible]	[illegible]	[illegible]	~~UG/L~~	100
)	2,4,6-TRIBROMOPHENOL(SURR)	330	20.98	760	2808	29.74	UG/L	94
~~)~~	~~2,4-DINITROTOLUENE~~	[illegible]	[illegible]	[illegible]	[illegible]	~~1.47~~	~~UG/L~~	100
~~)~~	~~2,4-DINITROTOLUENE~~	[illegible]	[illegible]	[illegible]	[illegible]	~~.71~~	~~UG/L~~	100
)	*PHENANTHRENE-D10 (IS)	188	22.93	898	43227	40.00	UG/L	92
)	PHENANTHRENE	178	23.02	902	1838	3.58	UG/L	96
~~)~~	~~ANTHRACENE~~	~~178~~	~~23.02~~	[illegible]	~~1838~~	~~3.57~~	~~UG/L~~	96
~~)~~	~~FLUORANTHENE~~	[illegible]	[illegible]	[illegible]	[illegible]	~~10.70~~	~~UG/L~~	94
)	*CHRYSENE-D12 (IS)	240	31.09	1298	26726	40.00	UG/L	100
~~)~~	~~BENZIDINE~~	[illegible]	[illegible]	[illegible]	[illegible]	~~3.00~~	~~UG/L~~	100
)	PYRENE	202	26.66	1041	3430	5.64	UG/L	88
)	TERPHENYL-D14 (SURR)	244	28.13	1113	7061	21.18	UG/L	100
~~)~~	~~3,3'DICHLOROBENZIDINE~~	~~252~~	[illegible]	[illegible]	[illegible]	~~11.92~~	~~UG/L~~	100
)	BENZO(A)ANTHRACENE	228	31.05	1296	1468	4.92	UG/L	83
~~)~~	~~BENZO(A)ANTHRACENE~~	~~228~~	~~31.19~~	[illegible]	[illegible]	[illegible]	~~UG/L~~	93
)	BIS(2-ETHYLHEXYL)PHTHALATE	149	32.07	1346	2411	9.51	UG/L	8[illegible]
~~)~~	~~CHRYSENE~~	~~228~~	[illegible]	[illegible]	[illegible]	[illegible]	~~UG/L~~	82
)	CHRYSENE	228	31.15	[illegible]	[illegible]	[illegible]	UG/L	94
)	*PERYLENE-D12 (IS)	264	35.16	[illegible]	[illegible]	40.00	UG/L	100
~~)~~	~~DI-N-OCTYL PHTHALATE~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	~~UG/L~~	100
~~)~~	~~DI-N-OCTYL PHTHALATE~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	~~UG/L~~	100
~~)~~	~~DI-N-OCTYL PHTHALATE~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	~~UG/L~~	100
~~)~~	~~DI-N-OCTYL PHTHALATE~~	[illegible]	~~33.~~	[illegible]	[illegible]	[illegible]	~~UG/L~~	100
~~)~~	~~DI-N-OCTYL PHTHALATE~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	~~UG/L~~	100
~~)~~	~~BENZO(B)FLUORANTHENE~~	~~252~~	[illegible]	[illegible]	[illegible]	[illegible]	~~UG/L~~	100
~~)~~	~~BENZO(B)FLUORANTHENE~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	~~UG/L~~	100
)	BENZO(K)FLUORANTHENE	252	34.[illegible]	1410	[illegible]	1.81	UG/L	[illegible]
~~)~~	~~BENZO(K)FLUORANTHENE~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	~~UG/L~~	[illegible]
~~)~~	~~BENZO(A)PYRENE~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	~~UG/L~~	[illegible]
)	BENZO(A)PYRENE	[illegible]	34.[illegible]	[illegible]	[illegible]	[illegible]	UG/L	[illegible]
~~)~~	~~BENZO(A)PYRENE~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	~~UG/L~~	[illegible]

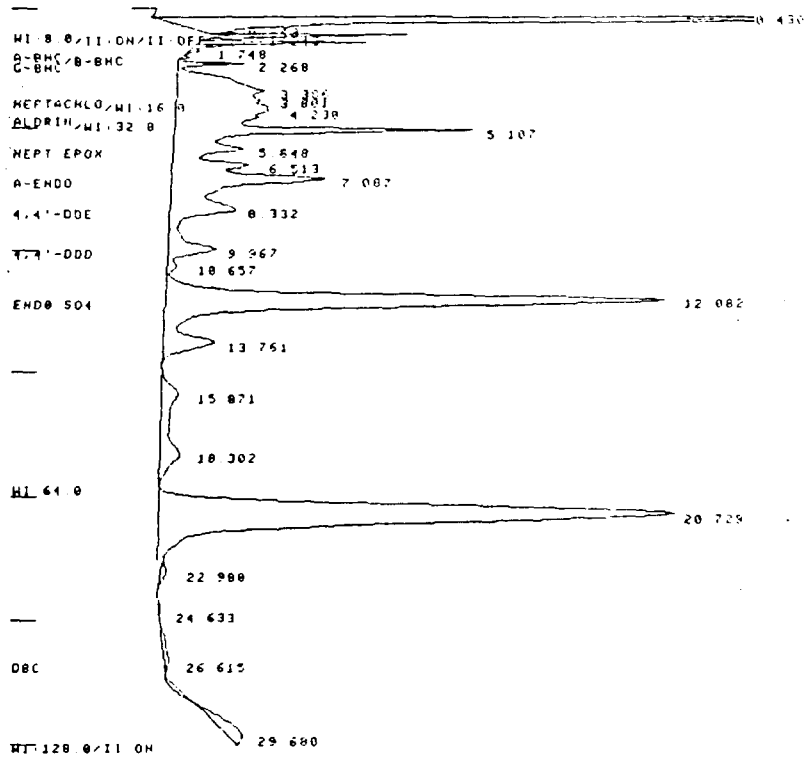
Handwritten beside struck rows: "No BfK" (bis(2-chloroisopropyl)ether / N-nitroso-di-n-propylamine; naphthalene / 2-methylnaphthalene; dimethyl phthalate; 2,4-dinitrotoluene; anthracene / fluoranthene; benzidine; 3,3'-dichlorobenzidine; benzo(a)anthracene; chrysene; di-n-octyl phthalate / benzo(b)fluoranthene; benzo(k)fluoranthene / benzo(a)pyrene; benzo(a)pyrene)

213

	Compound	m/z	R.T.	Scan#	Area	Conc	Units	Q
)	~~INDENO(1,2,3-CD)PYRENE~~	~~276~~	~~37.15~~	~~1[illegible]~~	~~[illegible]~~	~~1.[illegible]~~	~~[illegible]~~	~~100~~
)	INDENO(1,2,3-CD)PYRENE	276	37.26	1584	3683	7.63	[illegible]	100
)	~~INDENO(1,2,3-CD)PYRENE~~	~~276~~	~~38.05~~	~~1[illegible]~~	~~[illegible]~~	~~.35~~	~~[illegible]~~	~~100~~
)	~~INDENO(1,2,3-CD)PYRENE~~	~~276~~	~~38.10~~	~~1[illegible]~~	~~[illegible]~~	~~.[illegible]~~	~~[illegible]~~	~~100~~
)	~~DIBENZ(A,H)ANTHRACENE~~	~~278~~	~~37.51~~	~~1[illegible]~~	~~[illegible]~~	~~1.[illegible]~~	~~[illegible]~~	~~100~~
)	~~DIBENZ(A,H)ANTHRACENE~~	~~278~~	~~37.58~~	~~1[illegible]~~	~~[illegible]~~	~~.[illegible]~~	~~[illegible]~~	~~100~~
)	~~DIBENZ(A,H)ANTHRACENE~~	~~278~~	~~37.[illegible]~~	~~1[illegible]~~	~~[illegible]~~	~~1.[illegible]~~	~~[illegible]~~	~~100~~
)	~~DIBENZ(A,H)ANTHRACENE~~	~~278~~	~~38.05~~	~~1[illegible]~~	~~[illegible]~~	~~1.03~~	~~[illegible]~~	~~100~~
)	~~DIBENZ(A,H)ANTHRACENE~~	~~278~~	~~38.15~~	~~16[illegible]~~	~~[illegible]~~	~~1.[illegible]~~	~~[illegible]~~	~~100~~
)	~~BENZO(G,H,I)PERYLENE~~	~~276~~	~~38.05~~	~~1600~~	~~1[illegible]~~	~~.[illegible]~~	~~[illegible]~~	~~100~~
)	~~BENZO(G,H,I)PERYLENE~~	~~276~~	~~38.10~~	~~16[illegible]~~	~~[illegible]~~	~~.30~~	~~[illegible]~~	~~100~~
)	BENZO(G,H,I)PERYLENE	276	38.31	1611	4369	7.14	[illegible]	100
)	~~BENZO(G,H,I)PERYLENE~~	~~276~~	~~38.62~~	~~1[illegible]~~	~~[illegible]~~	~~.[illegible]~~	~~[illegible]~~	~~100~~

* Compound is ISTD

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



DC-SD-21

CHANNEL: 1A - 1 TITLE: RUN# 30 16:47 19 NOV 95

SAMPLE: 9659.03.19A1 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	1.404		37349	VV	5.44
2	~~B-BHC~~	45.5541	2.268	0.098	56362	VV	6.00
3		0.0000	3.386		494223	VV	? 17.88
4	~~HEPTACHLO~~ ✓	64.3711	3.901	0.011	157229	VV	? 14.03
5		0.0000	4.066		146194	VV	? 16.56
6		0.0000	4.230		187159	VV	? 42.50
7	ALDRIN	62.8431	4.520	-0.150	191576	VV	? 32.31
8		0.0000	5.107		663770	VV	12.50
9	~~HEPT EPOX~~	77.9379	5.848	0.178	222326	VV	? 27.44
10		0.0000	6.513		209222	VV	? 20.75
11	A-ENDO ✓	235.7302	7.087	0.057	634524	VV	26.38
12	~~DIELDRIN~~	111.9037	8.332	0.142	300952	VV	38.25
13	~~4,4'-DDE~~ ✓	85.6245	9.967	-0.193	224517	VV	23.75
14	~~ENDO ALD.~~	13.0354	10.657	0.407	27027	VV	14.44
15	~~ENDO SO4~~ ✓	1089.592	12.092	0.172	2087252	VV	29.59
16	~~4,4'-DDT~~	152.4512	13.761	0.501	228316	VB	31.88
17	~~END KETON~~	61.1329	15.871	0.601	172855	BV	? 44.13
18		0.0000	18.302		152426	VB	57.56
19		0.0000	20.729		319744	BV	46.06
20		0.0000	22.980		2495	T	? 47.25
21	~~DBC~~ ✓	19.2601	26.615	0.025	43024	T	?138.38
22		0.0000	29.680		9443	VB	?146.13
TOTALS:		1997.436		1.829	5501142		

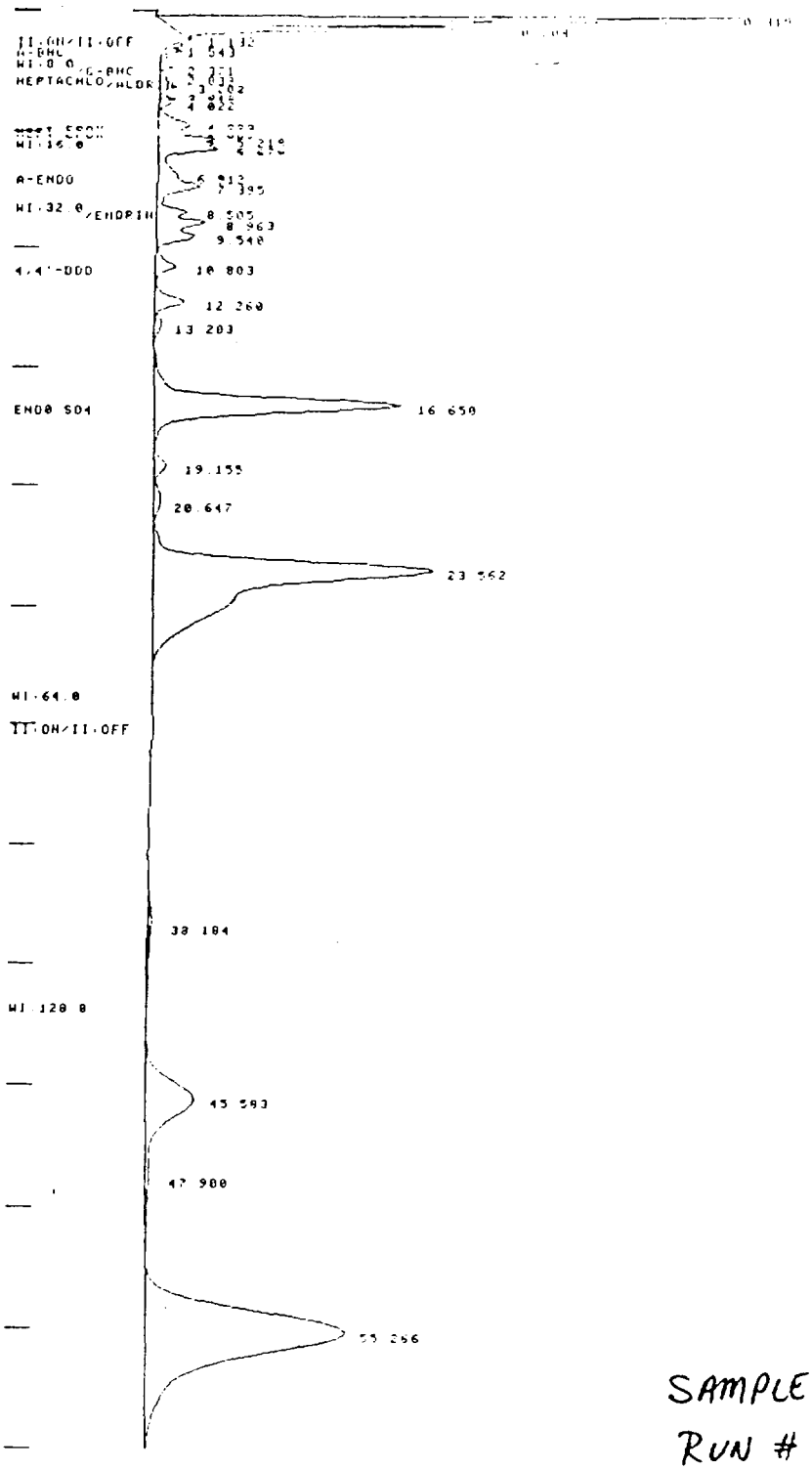
DETECTED PKS: 36 REJECTED PKS: 14

DIVISOR: 1.50000 MULTIPLIER: 10000.0000

NOISE: 34.3 OFFSET: -17

NOTES:
NOTEBOOK: 259-38 ANALYST: K. JUFFER/ RICHARD SAMSON
SECURE AREA: D JOB#:U-4432,U-4442
INST:VARIAN 6000#2 & ECD 1&2
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE:3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN.

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



DC-SD-21

SAMPLE: 9659

RUN #17

NOVEMBER 21, 1986

CHANNEL: 1B - 1 TITLE: RUN# 17 20:23 21 NOV 86

SAMPLE: 9659 METHOD: PEPA CALCULATION: ES - ANALYS

DC-SD-21

PEAK NO	PEAK NAME	RESULT ~~UG/L~~	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1	~~A-BHC~~	0.0000	1.625	-0.054	28472	VV	3.75
2	~~G-BHC~~	0.0000	2.371	-0.029	31668	BV	9.50
3		0.0000	2.985		21387	VV	? 7.56
4	~~ALDRIN~~	0.0000	3.202	0.052	56643	VV	12.25
5		0.0000	3.790		45139	VV	? 11.13
6		0.0000	4.022		33601	VV	? 11.94
7		0.0000	4.889		188817	VV	? 27.81
8	~~HEPT. EPOX~~	0.0000	5.218	0.118	196997	VV	? 15.75
9		0.0000	5.449		167828	VV	? 12.44
10		0.0000	5.679		272065	VV	? 21.56
11	~~4,4' DDE~~	0.0000	6.912	0.102	159263	VV	? 34.06
12	~~DIELDRIN~~	0.0000	7.395	-0.485	328763	VV	28.56
13		0.0000	8.505		167391	VV	? 22.50
14	~~ENDRIN~~	0.0000	8.963	0.153	301320	VV	27.56
15		0.0000	9.540		261955	VV	? 29.69
16	~~4,4' DDD~~	0.0000	10.803	0.373	168234	VV	26.56
17	~~B-ENDOSUL~~	0.0000	12.260	0.620	242956	VV	29.94
18	~~4,4' DDT~~	0.0000	13.203	-0.747	81175	VB	36.69
19	~~ENDO SO4~~	0.0000	16.650	-0.410	2812068	BV	39.38
20		0.0000	19.155		131304	VV	41.50
21		0.0000	20.647		120750	VV	? 55.69
22		0.0000	23.562		6022947	VB	58.13
23		0.0000	38.184		137999	BB	114.00
24		0.0000	45.583		1330231	BV	102.94
25		0.0000	47.900		93575	VV	?207.50
26		0.0000	55.266		6843793	VV	102.38

TOTALS: 0.0000 -0.307 20244342

DETECTED PKS: 40 REJECTED PKS: 14

DIVISOR: 1.50000 MULTIPLIER: 10000.0000

NOISE: 91.4 OFFSET: -25

NOTES:
NOTEBOOK:259-40 ANALYST:RICHARD SAMSON
SECURE AREA: D JOB #U-4432;U-4442
INST: VARIAN 6000#2 B ECD 10X1 ATT:16
COLUMN: 8' GLASS 4MM ID 100/120 SUPELCOPORT
PHASE:1.5% SP2250/1.95% SP2401
CARRIER GAS: N2 @ 60 ML/MIN.
DET:300 C INJ:200 C
200 C ISOTHERMAL 4 UL INJECTION
PESTICIDE/PCB CONFIRMATIONS
DEAD CREEK

POST RUN:
SAVE FILE: RAW CREEKS77

SAMPLE NUMBER DC-SD-22

481095

Sample Number
DC-SD-22

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No: U-4432 / U-4442
Lab Sample ID No: 9660
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: C Slojtowicz
Date Sample Received: 11-6-86

Volatile Compounds

Concentration: Low (Medium) (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-14-86

Conc/Dil Factor: 2 pH 7.2

Percent Moisture: (Not Decanted) 55

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	4600 u
74-83-9	Bromomethane	4600 u
75-01-4	Vinyl Chloride	4600 u
75-00-3	Chloroethane	4600 u
75-09-2	Methylene Chloride	18000 B
67-64-1	Acetone	9900 B
75-15-0	Carbon Disulfide	2300 u
75-35-4	1, 1-Dichloroethene	2300 u
75-34-3	1, 1-Dichloroethane	2300 u
156-60-5	Trans-1, 2-Dichloroethene	2300 u
67-66-3	Chloroform	2300 u
107-06-2	1, 2-Dichloroethane	2300 u
78-93-3	2-Butanone	14000 B
71-55-6	1, 1, 1-Trichloroethane	2300 u
56-23-5	Carbon Tetrachloride	2300 u
108-05-4	Vinyl Acetate	4600 u
75-27-4	Bromodichloromethane	2300 u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	2300 u
10061-02-6	Trans-1, 3-Dichloropropene	2300 u
79-01-6	Trichloroethene	2300 u
124-48-1	Dibromochloromethane	2300 u
79-00-5	1, 1, 2-Trichloroethane	2300 u
71-43-2	Benzene	2300 u
10061-01-5	cis-1, 3-Dichloropropene	2300 u
110-75-8	2-Chloroethylvinylether	4600 u
75-25-2	Bromoform	2300 u
108-10-1	4-Methyl-2-Pentanone	4600 u
591-78-6	2-Hexanone	1200 J
127-18-4	Tetrachloroethene	2300 u
79-34-5	1, 1, 2, 2-Tetrachloroethane	2300 u
108-88-3	Toluene	2300 u
108-90-7	Chlorobenzene	2300 u
100-41-4	Ethylbenzene	2300 u
100-42-5	Styrene	2300 u
	Total Xylenes	2300 u

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.

Laboratory Name: ECOLOGY & ENVIRONMENT INC.

Case No: U-4432/U-4442

Sample Number: DC-SD-22

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 11-12-86

Date Analyzed: 12-12-86

Conc/Dil Factor: 5

Percent Moisture (Decanted): 55

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	1800 U
111-44-4	bis(-2-Chloroethyl)Ether	1800 U
95-57-8	2-Chlorophenol	1800 U
541-73-1	1 3-Dichlorobenzene	110 J
106-46-7	1 4-Dichlorobenzene	690 J
100-51-6	Benzyl Alcohol	1800 U
95-50-1	1 2-Dichlorobenzene	1800 U
95-48-7	2-Methylphenol	1800 U
39638-32-9	bis(2-chloroisopropyl)Ether	1800 U
106-44-5	4-Methylphenol	1800 U
621-64-7	N-Nitroso-Di-n-Propylamine	1800 U
67-72-1	Hexachloroethane	1800 U
98-95-3	Nitrobenzene	1800 U
78-59-1	Isophorone	1800 U
88-75-5	2-Nitrophenol	1800 U
105-67-9	2 4-Dimethylphenol	1800 U
65-85-0	Benzoic Acid	8900 U
111-91-1	bis(2-Chloroethoxy)Methane	1800 U
120-83-2	2 4-Dichlorophenol	1800 U
120-82-1	1 2 4-Trichlorobenzene	260 J
91-20-3	Naphthalene	330 J
106-47-8	4-Chloroaniline	1800 U
87-68-3	Hexachlorobutadiene	1800 U
59-50-7	4-Chloro-3-Methylphenol	1800 U
91-57-6	2-Methylnaphthalene	100 J
77-47-4	Hexachlorocyclopentadiene	1800 U
88-06-2	2 4 6-Trichlorophenol	1800 U
95-95-4	2 4 5-Trichlorophenol	8900 U
91-58-7	2-Chloronaphthalene	1800 U
88-74-4	2-Nitroaniline	8900 U
131-11-3	Dimethyl Phthalate	1800 U
208-96-8	Acenaphthylene	1800 U
99-09-2	3-Nitroaniline	8900 U

CAS Number		ug/l or (ug/Kg) (Circle One)
83-32-9	Acenaphthene	130 J
51-28-5	2 4-Dinitrophenol	8900 U
100-02-7	4-Nitrophenol	8900 U
132-64-9	Dibenzofuran	1800 U
121-14-2	2 4-Dinitrotoluene	1800 U
606-20-2	2 6-Dinitrotoluene	1800 U
84-66-2	Diethylphthalate	1800 U
7005-72-3	4-Chlorophenyl-phenylether	1800 U
86-73-7	Fluorene	370 J
100-01-6	4-Nitroaniline	8900 U
534-52-1	4 6-Dinitro-2-Methylphenol	8900 U
86-30-6	N-Nitrosodiphenylamine (1)	1800 U
101-55-3	4-Bromophenyl-phenylether	1800 U
118-74-1	Hexachlorobenzene	1800 U
87-86-5	Pentachlorophenol	8900 U
85-01-8	Phenanthrene	810 J
120-12-7	Anthracene	500 J
84-74-2	Di-n-Butylphthalate	1800 U
206-44-0	Fluoranthene	4600
129-00-0	Pyrene	4500
85-68-7	Butylbenzylphthalate	1800 U
91-94-1	3 3-Dichlorobenzidine	3600 U
56-55-3	Benzo(a)Anthracene	3300
117-81-7	bis(2-Ethylhexyl)Phthalate	1800 U
218-01-9	Chrysene	4400
117-84-0	Di-n-Octyl Phthalate	190 J
205-99-2	Benzo(b)Fluoranthene	7500
207-08-9	Benzo(k)Fluoranthene	660 J
50-32-8	Benzo(a)Pyrene	4500
193-39-5	Indeno(1 2 3-cd)Pyrene	4300
53-70-3	Dibenz(a h)Anthracene	1500 J
191-24-2	Benzo(g h i)Perylene	4000

(1)-Cannot be separated from diphenylamine

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Laboratory Name ecology and environment, inc.

Case No U-4432 / U-4442

Sample Number DC-SD-22

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-12-86

Date Analyzed 11-19-86

Conc/Dil Factor 25

Percent Moisture (decanted) 55

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	400 U
319-85-7	Beta-BHC	400 U
319-86-8	Delta-BHC	400 U
58-89-9	Gamma-BHC (Lindane)	400 U
76-44-8	Heptachlor	400 U
309-00-2	Aldrin	400 U
1024-57-3	Heptachlor Epoxide	400 U
959-98-8	Endosulfan I	400 U
60-57-1	Dieldrin	800 U
72-55-9	4,4'-DDE	800 U
72-20-8	Endrin	800 U
33213-65-9	Endosulfan II	800 U
72-54-8	4,4'-DDD	800 U
1031-07-8	Endosulfan Sulfate	800 U
50-29-3	4,4'-DDT	800 U
72-43-5	Methoxychlor	4000 U
53494-70-5	Endrin Ketone	800 U
57-74-9	Chlordane	4000 U
8001-35-2	Toxaphene	8000 U
12674-11-2	Aroclor-1016	4000 U
11104-28-2	Aroclor-1221	4000 U
11141-16-5	Aroclor-1232	4000 U
53469-21-9	Aroclor-1242	4000 U
12672-29-6	Aroclor-1248	8,700
11097-69-1	Aroclor-1254	9,300
11096-82-5	Aroclor-1260	5,000 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 u-4432 / u-4442

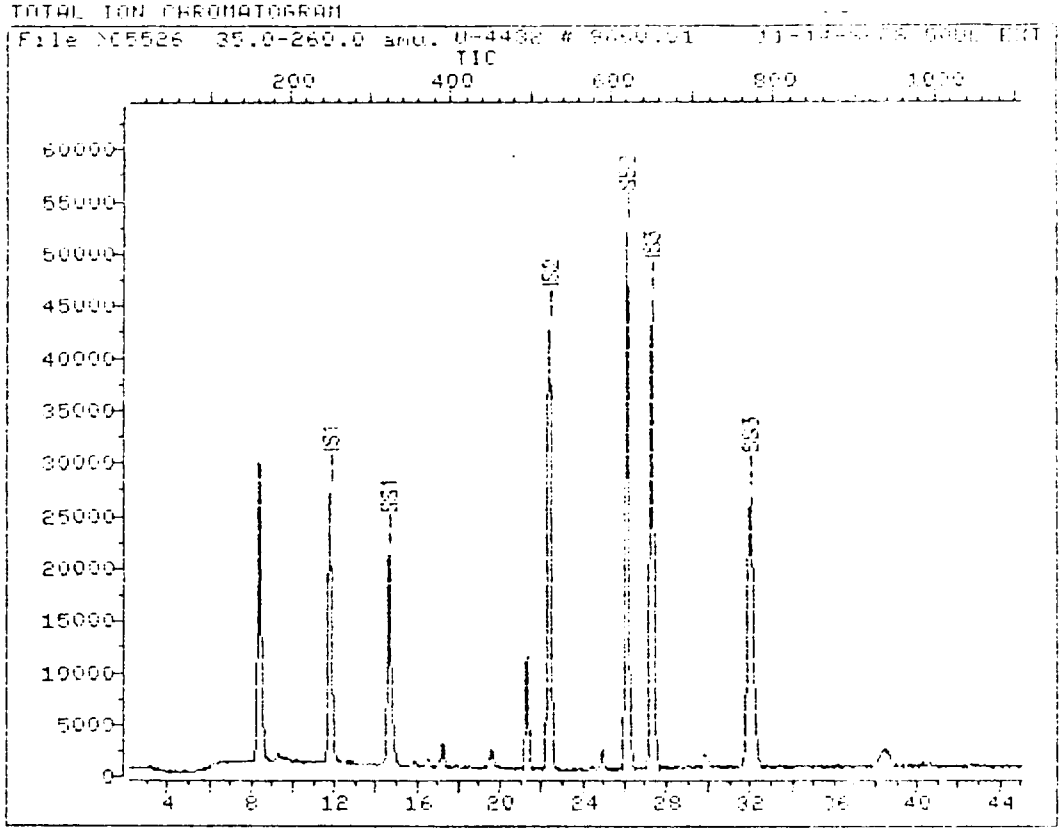
Sample Number DC-SD-22

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.2 min	1100 BJ
2.	Unknown Ketone	VOA	19.6 min	570 BJ
3.	Hexane isomer	VOA	21.3 min	3400 BJ
4.				
5.	UNKNOWN HYDROCARBON	BNA	22.1	1900 J
6.	UNKNOWN HYDROCARBON		23.5	1900 J
7.	UNKNOWN		25.4	1400 J
8.	UNKNOWN LONG CHAIN HYDROCARBON ACID		25.7	4100 J
9.	UNKNOWN		26.2	7500 J
10.	UNKNOWN		37.3	10000 J
11.	UNKNOWN		38.2	3700 J
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30				

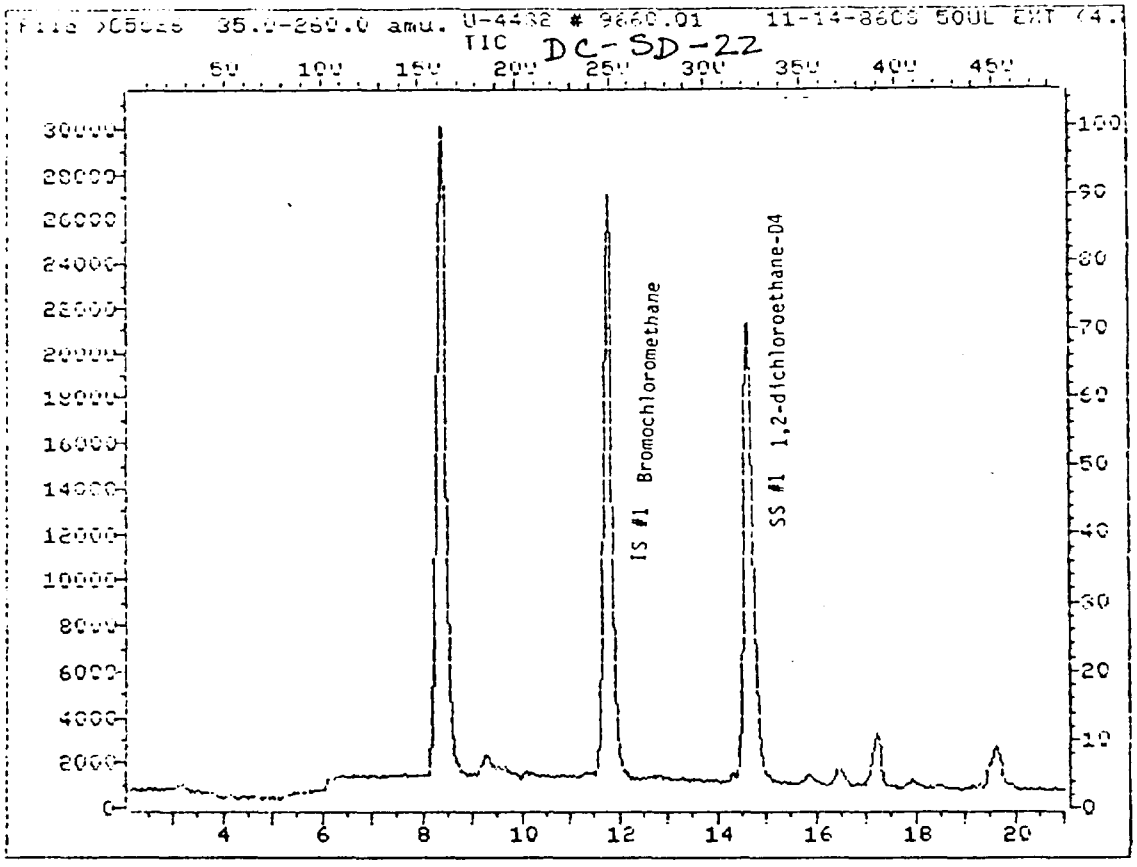
TOTAL ION CHROMATOGRAM

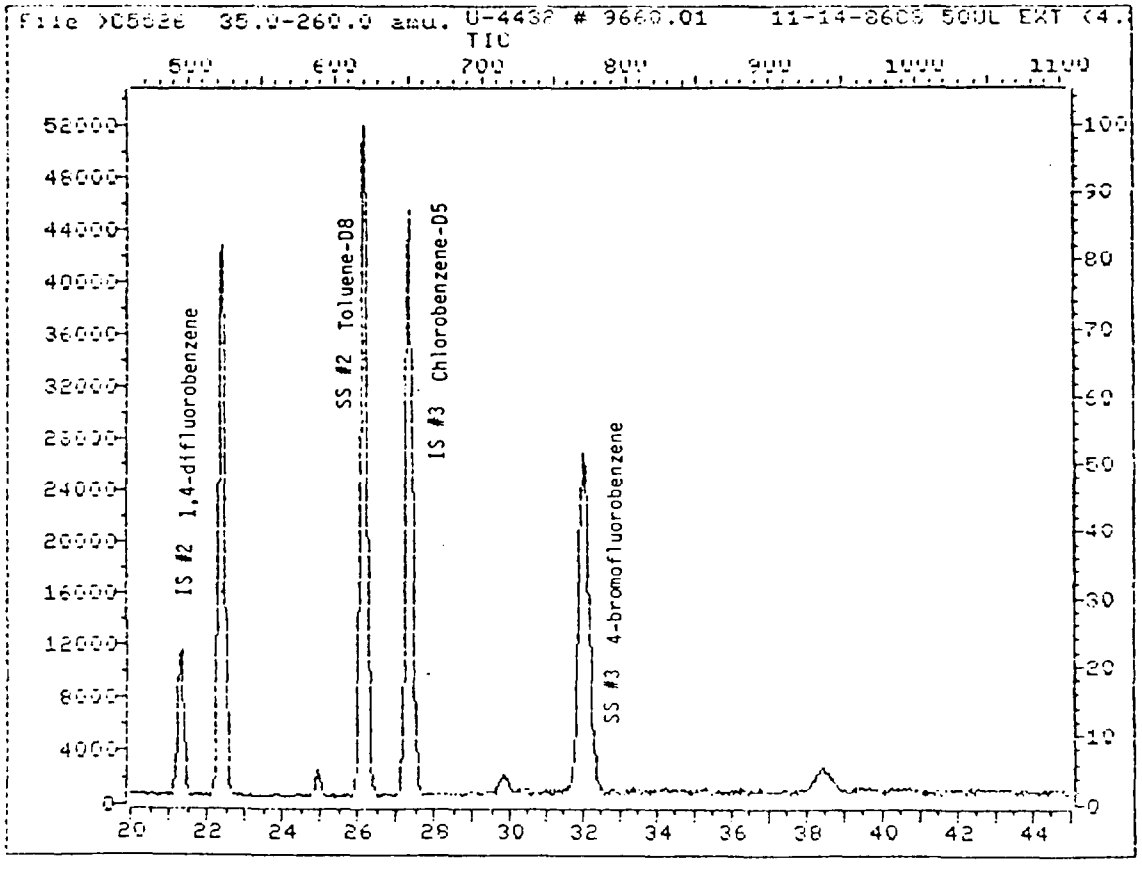


Data File: >C5526::D3
Name: U-4432 # 9660.01 DC-SD-22
Misc: 11-14-86CS 50UL EXT (4.23G/10ML [illegible] + 10UL [illegible]

Id File: VOACR::02
Title: VOA ID FILE FOR HP-5995 (CONT. CH[illegible]
Last Calibration: 861114 11:38

Operator ID: USER8
Quant Time: 861114 16:52
Injected at: 861114 16:06


File >C5026 35.0-260.0 amu. U-4432 # 9660.01 11-14-86C5 50UL EXT (4.
TIC
DC-SD-22
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4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TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

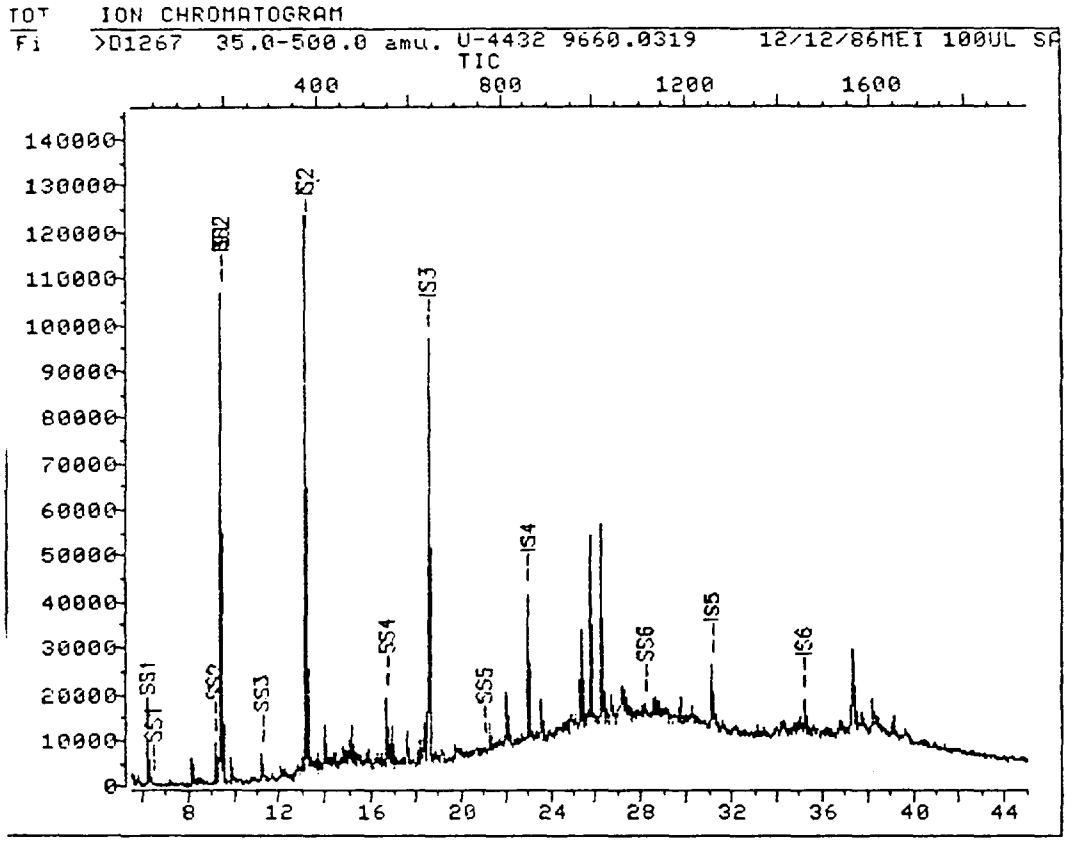
QUANT REPORT

Operator ID: USE98 Quant Rev: 4 Quant Time: 861114 16:52
Output File: >C5526::04 Injected at: 861114 16:06
Data File: >C5526::03 Dilution Factor: 1.00
Name: U-4432 # 9660.01 DC-SD-22
Misc: 11-14-86DS 500UL EXT (4.23G/10ML MEOH) + 10UL IS/SS IN

ID File: VOACR::02
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861114 11:38

	Compound	M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE (IS)	128	11.78	249	41275	50.00	UG/L	100
6)	METHYLENE CHLORIDE	84	8.36	161	81186	34.53	UG/L	100
7)	ACETONE	43	9.29	189	8072	18.85	UG/L	100
15)	1,2-DICHLOROETHANE-D4(SURR)	65	14.61	322	82279	44.90	UG/L	91
16)	*1,4-DIFLUOROBENZENE (IS)	114	22.40	523	196798	50.00	UG/L	100
17)	2-BUTANONE	72	14.76	326	5948	26.80	UG/L	100
31)	*CHLOROBENZENE-D5 (IS)	117	27.34	680	146213	50.00	UG/L	100
33)	2-HEXANONE	43	24.96	589	2871	2.24	UG/L	100
36)	TOLUENE-D8 (SURR)	98	26.16	620	211606	47.72	UG/L	99
39)	CHLOROBENZENE	112	27.48	683	12496	3.02	UG/L	94
40)	4-BROMOFLUOROBENZENE(SURR)	95	32.03	771	94001	49.45	UG/L	100

* Compound is ISTD



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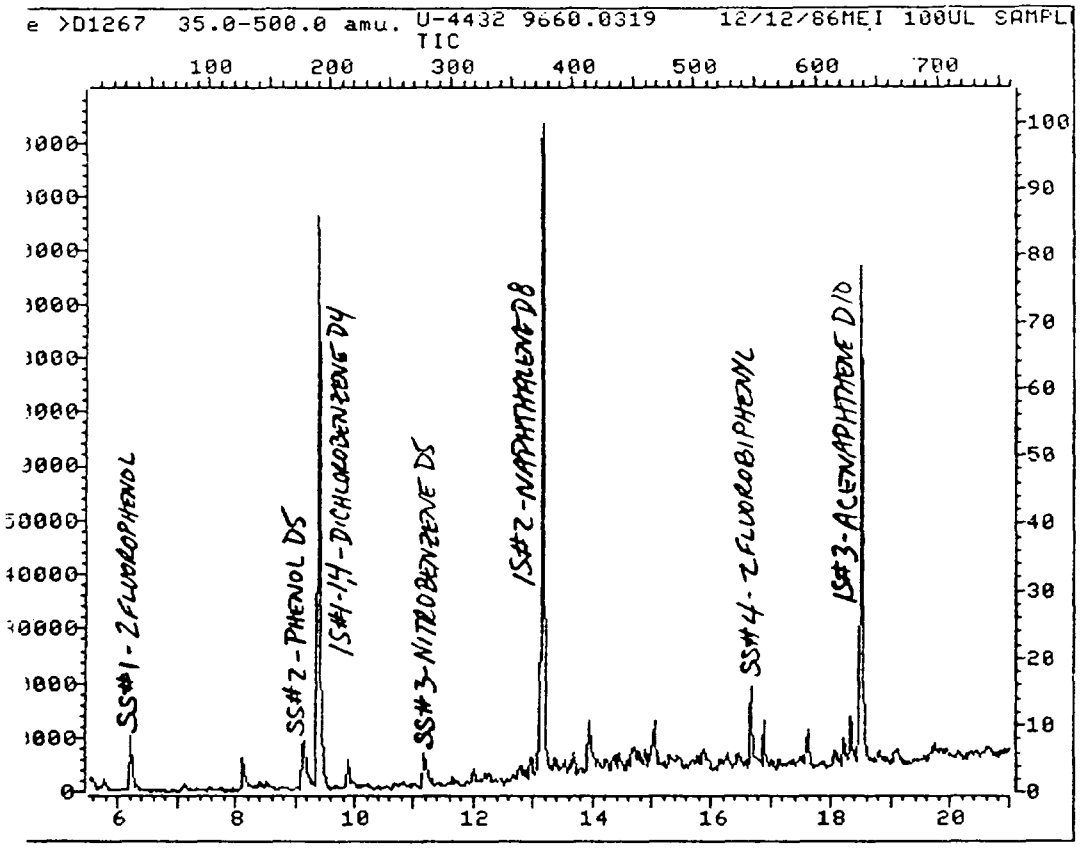
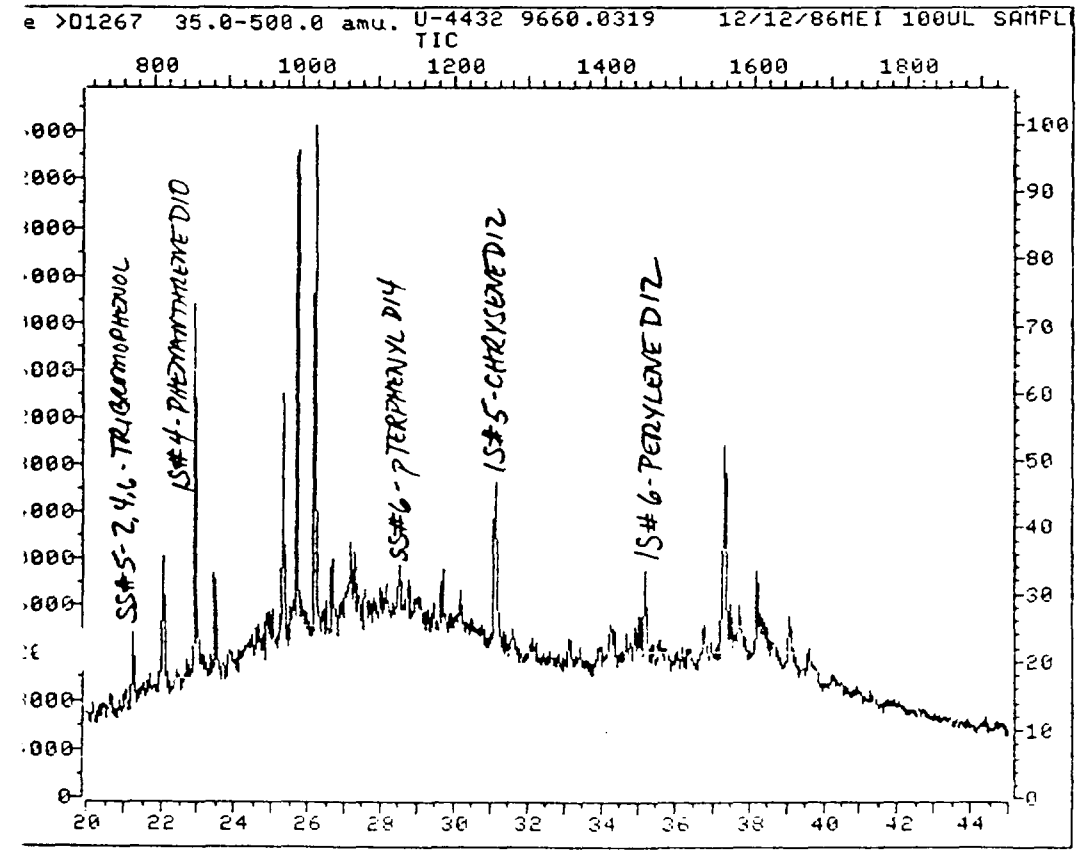
Name: U-4432 9660.0319 DC-SD-22
Misc: 12/12/86MEI 100UL SAMPLE + 400UL MECL2 + 5UL IS (5X) BTL#20

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861211 15:37

Operator ID: USER8
Quant Time: 861215 18:41
Injected at: 861212 23:07

DC-SD-22


e >D1267 35.0-500.0 amu. U-4432 9660.0319 12/12/86MEI 100UL SAMPL
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


e >D1267 35.0-500.0 amu. U-4432 9660.0319 12/12/86MEI 100UL SAMPL
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: 861215 18:41
utput File: ^D1267::Q2 Injected at: 861212 23:07
ata File: >D1267::D1 Dilution Factor: 5.00
ame: U-4432 9660.0319 DC-SD-22
isc: 12/12/86MEI 100UL SAMPLE + 400UL MECL2 + 5UL IS (5X) BTL#20

D File: BNADR::D2
itle: BNA ID FILE FOR THE HP 5970 (B)
ast Calibration: 861211 15:37

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.39	191	51249	40.00	UG/L	86
2)	PHENOL-D5	(SURR)	99	9.14	179	13457	39.03	UG/L	99
2)	PHENOL-D5	(SURR)	99	9.39	191	1167	3.39	UG/L	85
5)	2-FLUOROPHENOL	(SURR)	112	6.19	34	9833	45.42	UG/L	85
~~5)~~	~~2-FLUOROPHENOL~~	~~(SURR)~~	~~112~~	~~6.46~~	~~47~~	~~150~~	~~.69~~	~~UG/L~~ No Eff	66
9)	1,3-DICHLOROBENZENE		146	9.27	185	563	1.55	UG/L	89
~~9)~~	~~1,3-DICHLOROBENZENE~~		~~146~~	~~9.43~~	~~193~~	~~3261~~	~~8.99~~	~~UG/L~~ No Eff	97
0)	1,4-DICHLOROBENZENE		146	9.43	193	3261	9.27	UG/L	94
~~2)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~10.86~~	~~263~~	~~215~~	~~.60~~	~~UG/L~~ No Eff	27
~~2)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.18~~	~~279~~	~~1553~~	~~4.30~~	~~UG/L~~	93
9)	*NAPHTHALENE-D8	(IS)	136	13.14	375	181351	40.00	UG/L	100
0)	NITROBENZENE-D5	(SURR)	82	11.18	279	7566	22.14	UG/L	94
3)	1,2,4-TRICHLOROBENZENE		180	13.10	373	1108	3.52	UG/L	100
9)	NAPHTHALENE		128	13.20	378	3667	4.39	UG/L	100
5)	2-METHYLNAPHTHALENE		142	15.34	483	762	1.36	UG/L	92
~~5)~~	~~2-METHYLNAPHTHALENE~~		~~142~~	~~15.63~~	~~497~~	~~494~~	~~.88~~	~~UG/L~~ No Eff	84
4)	*ACENAPHTHENE-D10	(IS)	162	18.51	638	52346	40.00	UG/L	97
3)	2-FLUOROBIPHENYL	(SURR)	172	16.67	548	13011	29.92	UG/L	94
~~1)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.40~~	~~633~~	~~249~~	~~.60~~	~~UG/L~~	100
~~1)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.51~~	~~638~~	~~15916~~	~~38.22~~	~~UG/L~~ No Eff	100
~~5)~~	~~DIBENZOFURAN~~		~~168~~	~~19.12~~	~~660~~	~~1071~~	~~2.53~~	~~UG/L~~	100
5)	FLUORENE		166	20.16	719	1488	5.02	UG/L	90
7)	ACENAPHTHENE		153	18.59	642	591	1.78	UG/L	87
3)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.02	761	698	13.04	UG/L	97
~~2)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.51~~	~~638~~	~~7421~~	~~88.31~~	~~UG/L~~ No Eff	100
5)	*PHENANTHRENE-D10	(IS)	188	22.96	856	36952	40.00	UG/L	93
1)	PHENANTHRENE		178	23.16	866	1925 ~~1173~~	~~6.65~~	~~UG/L~~ 10.91 ug/L	
2)	ANTHRACENE		178	23.16	866	1173	6.71	UG/L	66
4)	FLUORANTHENE		202	26.68	1038	8490	62.61	UG/L	93
5)	*CHRYSENE-D12	(IS)	240	31.12	1255	13349	40.00	UG/L	100
7)	PYRENE		202	27.29	1068	8087	61.11	UG/L	94
3)	TERPHENYL-D14	(SURR)	244	28.17	1111	1390	19.73	UG/L	100
)	BENZO(A)ANTHRACENE		228	31.07	1253	3005	44.33	UG/L	84
~~)~~	~~BENZO(A)ANTHRACENE~~		~~228~~	~~31.20~~	~~1259~~	~~4012~~	~~59.18~~	~~UG/L~~	93
~~)~~	~~BENZO(A)ANTHRACENE~~		~~228~~	~~31.40~~	~~1269~~	~~512~~	~~7.55~~	~~UG/L~~	10
~~)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~32.44~~	~~1320~~	~~209~~	~~3.00~~	~~UG/L~~ No Eff	70
~~)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~32.48~~	~~1322~~	~~247~~	~~3.54~~	~~UG/L~~	75
~~)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~32.55~~	~~1325~~	~~202~~	~~2.90~~	~~UG/L~~	54
~~)~~	~~CHRYSENE~~		~~228~~	~~31.07~~	~~1253~~	~~3005~~	~~44.53~~	~~UG/L~~	86
)	CHRYSENE		228	31.20	1259	4012	59.45	UG/L	94
~~)~~	~~CHRYSENE~~		~~228~~	~~31.40~~	~~1269~~	~~512~~	~~7.59~~	~~UG/L~~ No Eff	12
4)	*PERYLENE-D12	(IS)	264	35.20	1455	9334	40.00	UG/L	100
~~)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.57~~	~~1375~~	~~317~~	~~2.37~~	~~UG/L~~ No Eff	00
1)	DI-N-OCTYL PHTHALATE		149	33.72	1382	[illegible]	[illegible]	UG/L	[illegible]

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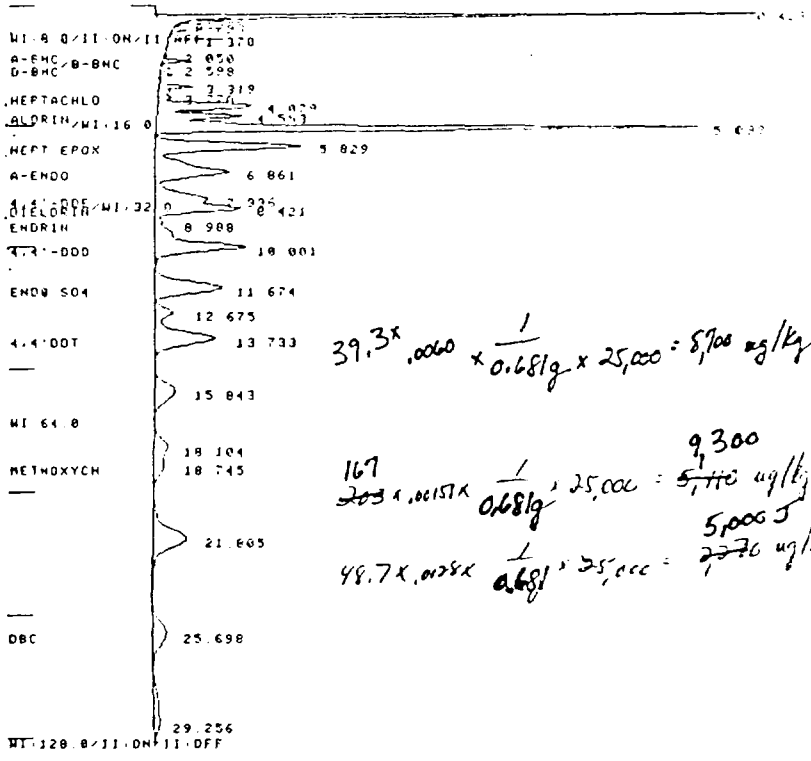
	Compound	M/E	R.T.	Scan#	Area	Conc	Units	q
~~5)~~	~~DI-N-OCTYL PHTHALATE~~	~~149~~	~~34.32~~	~~1412~~	~~736~~	~~5.50~~	~~UG/L~~	~~100~~
6)	BENZO(B)FLUORANTHENE	252	34.22	1407	5773	100.94	UG/L	100
~~6)~~	~~BENZO(B)FLUORANTHENE~~	~~252~~	~~34.51~~	~~1421~~	~~644~~	~~11.26~~	~~UG/L~~	~~100~~
~~7)~~	~~BENZO(K)FLUORANTHENE~~	~~252~~	~~34.22~~	~~1407~~	~~5773~~	~~80.62~~	~~UG/L~~	~~100~~
7)	BENZO(K)FLUORANTHENE	252	34.51	1421	644	8.99	UG/L	100
~~8)~~	~~BENZO(A)PYRENE~~	~~252~~	~~34.92~~	~~1441~~	~~2865~~	~~56.69~~	~~UG/L~~	~~100~~
8)	BENZO(A)PYRENE	252	35.04	1447	3059	60.53	UG/L	100
~~8)~~	~~BENZO(A)PYRENE~~	~~252~~	~~35.26~~	~~1458~~	~~959~~	~~18.98~~	~~UG/L~~	~~100~~
~~9)~~	~~INDENO(1,2,3-CD)PYRENE~~	~~276~~	~~37.59~~	~~1572~~	~~221~~	~~7.56~~	~~UG/L~~	~~100~~
9)	INDENO(1,2,3-CD)PYRENE	276	37.80	1582	1684	57.64	UG/L	100
~~80)~~	~~DIBENZ(A,H)ANTHRACENE~~	~~278~~	~~37.61~~	~~1573~~	~~199~~	~~6.84~~	~~UG/L~~	~~100~~
80)	DIBENZ(A,H)ANTHRACENE	278	37.90	1587	587	20.17	UG/L	100
~~80)~~	~~DIBENZ(A,H)ANTHRACENE~~	~~278~~	~~38.12~~	~~1598~~	~~288~~	~~9.90~~	~~UG/L~~	~~100~~
~~80)~~	~~DIBENZ(A,H)ANTHRACENE~~	~~278~~	~~38.21~~	~~1602~~	~~399~~	~~13.71~~	~~UG/L~~	~~100~~
81)	BENZO(G,H,I)PERYLENE	276	38.35	1609	1726	53.65	UG/L	100
~~81)~~	~~BENZO(G,H,I)PERYLENE~~	~~276~~	~~38.68~~	~~1625~~	~~348~~	~~10.82~~	~~UG/L~~	~~100~~

* Compound is ISTD

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



39.3 x .0060 x 1/0.681g x 25,000 = 8,700 ug/kg 1248

167 ~~203~~ x .00157 x 1/0.681g x 25,000 = ~~5,110~~ 9,300 ug/kg 1254

48.7 x .0038 x 1/0.681 x 25,000 = ~~2370~~ 5,000 ug/kg 1260

CHANNEL: 1A - 1 TITLE: RUN# 3V- 15:50 15 NOV 88

DC-SD-22 SAMPLE: 9660.03.19 METHOD: CEPA CALCULATION: ES - ANAL*S

PEAK NO	PEAK NAME	RESULT ~~NG/KG~~	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	WI/E (SEC)
1		0.0000	1.370		[illegible]	BB	[illegible]
2	~~B-BHC~~	48.4662	2.261	0.091	[illegible]	VV	[illegible]
3		0.0000	3.319		[illegible]	BV	[illegible]
4		0.0000	4.079		21[illegible]361	[illegible]	[illegible]
5	~~ALDRIN~~	116.4900	4.553	-0.117	14[illegible]047	VV	12.75
6		0.0000	5.098		[illegible]	VV	10.81
7	~~HEPT EPOX~~	311.1995	5.829	0.159	35[illegible]	VV	18.55
8	~~A-ENDO~~	261.1872	6.861	-0.169	30[illegible]792	VV	30.89
9	~~4,4'-DDE~~	158.8707	7.996	-0.09[illegible]	17[illegible]722	VV	[illegible]
10	~~DIELDRIN~~	197.5204	8.421	0.231	23[illegible]663	[illegible]	[illegible]
11	~~4,4'-ENO~~	369.3363	10.001	-0.159	35[illegible]671	[illegible]	24.82
12	~~ENDO SO4~~	352.4466	11.674	-0.236	27[illegible]096	[illegible]	32.12
13		0.0000	12.675		6[illegible]143	[illegible]	28.63
14	~~4,4'DDT~~	423.5610	13.733	0.473	26[illegible]	[illegible]	32.81
15	~~END KETON~~	119.9631	15.643	0.573	1[illegible]756	[illegible]	49.26
16		0.0000	18.104		[illegible]111	[illegible]	[illegible]
17	~~METHOXYCH~~	117.0416	~~18.745~~	0.745	[illegible]	[illegible]	64.53
18		0.0000	21.805		25[illegible]463		50.53
19	~~DBC~~	134.6136	25.698	-0.912	1[illegible]358	[illegible]	64.67
20		0.0000	29.256		7[illegible]050	VB	7126.05
TOTALS:		2630.698		-0.905	405[illegible]179		

weathered

1248

1254

1260

DETECTED PKS: 35 REJECTED PKS: 15

DIVISOR: 1.50000 MULTIPLIER: 25000.0000

NOISE: 228.6 OFFSET: 5

NOTES:
NOTEBOOK: 259-38 ANALYST: K. JUREK/ RICHARD SAMSON
SECURE AREA: D JOB#:U-4432,U-4442
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
220 C ISOTHERMAL 4 UL INJECTION
AUTOSAMPLER
PEST/PCB ANALYSIS

SAMPLE NUMBER DC-SD-23

481095

Sample Number
DC-SD-23

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No: U-4432/U-4442
Lab Sample ID No: 9661
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: C Sojtowicz
Date Sample Received: 11-6-86

Volatile Compounds

Concentration: Low (Medium) (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-14-86

Conc./Dil Factor: 2 pH 7.0

Percent Moisture: (Not Decanted) 63

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	5800u
74-83-9	Bromomethane	5800u
75-01-4	Vinyl Chloride	5800u
75-00-3	Chloroethane	5800u
75-09-2	Methylene Chloride	27000 B
67-64-1	Acetone	15000 B
75-15-0	Carbon Disulfide	2900u
75-35-4	1, 1-Dichloroethene	2900u
75-34-3	1, 1-Dichloroethane	2900u
156-60-5	Trans-1, 2-Dichloroethene	2900u
67-66-3	Chloroform	2900u
107-06-2	1, 2-Dichloroethane	2900u
78-93-3	2-Butanone	22000 B
71-55-6	1, 1, 1-Trichloroethane	2900u
56-23-5	Carbon Tetrachloride	2900u
108-05-4	Vinyl Acetate	5800u
75-27-4	Bromodichloromethane	2900u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	2900u
10061-02-6	Trans-1, 3-Dichloropropene	2900u
79-01-6	Trichloroethene	2900u
124-48-1	Dibromochloromethane	2900u
79-00-5	1, 1, 2-Trichloroethane	2900u
71-43-2	Benzene	2900u
10061-01-5	cis-1, 3-Dichloropropene	2900u
110-75-8	2-Chloroethylvinylether	5800u
75-25-2	Bromoform	2900u
108-10-1	4-Methyl-2-Pentanone	5800u
591-78-6	2-Hexanone	5800u
127-18-4	Tetrachloroethene	2900u
79-34-5	1, 1, 2, 2-Tetrachloroethane	2900u
108-88-3	Toluene	2900u
108-90-7	Chlorobenzene	2900u
100-41-4	Ethylbenzene	2900u
100-42-5	Styrene	2900u
	Total Xylenes	2900u

Data Reporting Qualifiers

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

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

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

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

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/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-4432/V-4442

Sample Number DC-SD-23

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 11-12-86

Date Analyzed 11-25-86

Conc/Dil Factor: 2

Percent Moisture (Decanted) 63

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	580	J
111-44-4	bis(-2-Chloroethyl)Ether	890	U
95-57-8	2-Chlorophenol	890	U
541-73-1	1 3-Dichlorobenzene	890	U
106-46-7	1 4-Dichlorobenzene	890	U
100-51-6	Benzyl Alcohol	890	U
95-50-1	1 2-Dichlorobenzene	890	U
95-48-7	2-Methylphenol	890	U
39638-32-9	bis(2-chloroisopropyl)Ether	890	U
106-44-5	4-Methylphenol	890	U
621-64-7	N-Nitroso-Di-n-Propylamine	890	U
67-72-1	Hexachloroethane	890	U
98-95-3	Nitrobenzene	890	U
78-59-1	Isophorone	890	U
88-75-5	2-Nitrophenol	890	U
105-67-9	2 4-Dimethylphenol	890	U
65-85-0	Benzoic Acid	4300	U
111-91-1	bis(-2-Chloroethoxy)Methane	890	U
120-83-2	2 4-Dichlorophenol	890	U
120-82-1	1 2 4-Trichlorobenzene	130	J
91-20-3	Naphthalene	100	J
106-47-8	4-Chloroaniline	890	U
87-68-3	Hexachlorobutadiene	890	U
59-50-7	4-Chloro-3-Methylphenol	890	U
91-57-6	2-Methylnaphthalene	890	U
77-47-4	Hexachlorocyclopentadiene	890	U
88-06-2	2 4 6-Trichlorophenol	890	U
95-95-4	2 4 5-Trichlorophenol	4300	U
91-58-7	2-Chloronaphthalene	890	U
88-74-4	2-Nitroaniline	4300	U
131-11-3	Dimethyl Phthalate	890	U
208-96-8	Acenaphthylene	890	U
99-09-2	3-Nitroaniline	4300	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	890	U
51-28-5	2 4-Dinitrophenol	4300	U
100-02-7	4-Nitrophenol	4300	U
132-64-9	Dibenzofuran	890	U
121-14-2	2 4-Dinitrotoluene	890	U
606-20-2	2 6-Dinitrotoluene	890	U
84-66-2	Diethylphthalate	890	U
7005-72-3	4-Chlorophenyl-phenylether	890	U
86-73-7	Fluorene	890	U
100-01-6	4-Nitroaniline	4300	U
534-52-1	4 6-Dinitro-2-Methylphenol	4300	U
86-30-6	N-Nitrosodiphenylamine (1)	890	U
101-55-3	4-Bromophenyl-phenylether	890	U
118-74-1	Hexachlorobenzene	890	U
87-86-5	Pentachlorophenol	4300	U
85-01-8	Phenanthrene	890	U
120-12-7	Anthracene	890	U
84-74-2	Di-n-Butylphthalate	890	U
206-44-0	Fluoranthene	890	U
129-00-0	Pyrene	890	U
85-68-7	Butylbenzylphthalate	890	U
91-94-1	3 3'-Dichlorobenzidine	1800	U
56-55-3	Benzo(a)Anthracene	650	J
117-81-7	bis(2-Ethylhexyl)Phthalate	660	J
218-01-9	Chrysene	1000	
117-84-0	Di-n-Octyl Phthalate	890	U
205-99-2	Benzo(b)Fluoranthene	2000	
207-08-9	Benzo(k)Fluoranthene	890	U
50-32-8	Benzo(a)Pyrene	940	
193-39-5	Indeno(1 2 3-cd)Pyrene	1700	
53-70-3	Dibenz(a h)Anthracene	640	J
191-24-2	Benzo(g h i)Perylene	1700	

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No V-4432/V-4442

Sample Number DC-SD-23

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-12-86

Date Analyzed 11-19-86

Conc/Dil Factor: 25

Percent Moisture (decanted) 63

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	400 U
319-85-7	Beta-BHC	400 U
319-86-8	Delta-BHC	400 U
58-89-9	Gamma-BHC (Lindane)	400 U
76-44-8	Heptachlor	400 U
309-00-2	Aldrin	400 U
1024-57-3	Heptachlor Epoxide	400 U
959-98-8	Endosulfan I	400 U
60-57-1	Dieldrin	800 U
72-55-9	4,4'-DDE	800 U
72-20-8	Endrin	800 U
33213-65-9	Endosulfan II	800 U
72-54-8	4,4'-DDD	800 U
1031-07-8	Endosulfan Sulfate	800 U
50-29-3	4,4'-DDT	800 U
72-43-5	Methoxychlor	4000 U
53494-70-5	Endrin Ketone	800 U
57-74-9	Chlordane	4000 U
8001-35-2	Toxaphene	8000 U
12674-11-2	Aroclor-1016	4000 U
11104-28-2	Aroclor-1221	4000 U
11141-16-5	Aroclor-1232	4000 U
53469-21-9	Aroclor-1242	4000 U
12672-29-6	Aroclor-1248	4000 U
11097-69-1	Aroclor-1254	11,000
11096-82-5	Aroclor-1260	7,800 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 u-4432 / u-4442

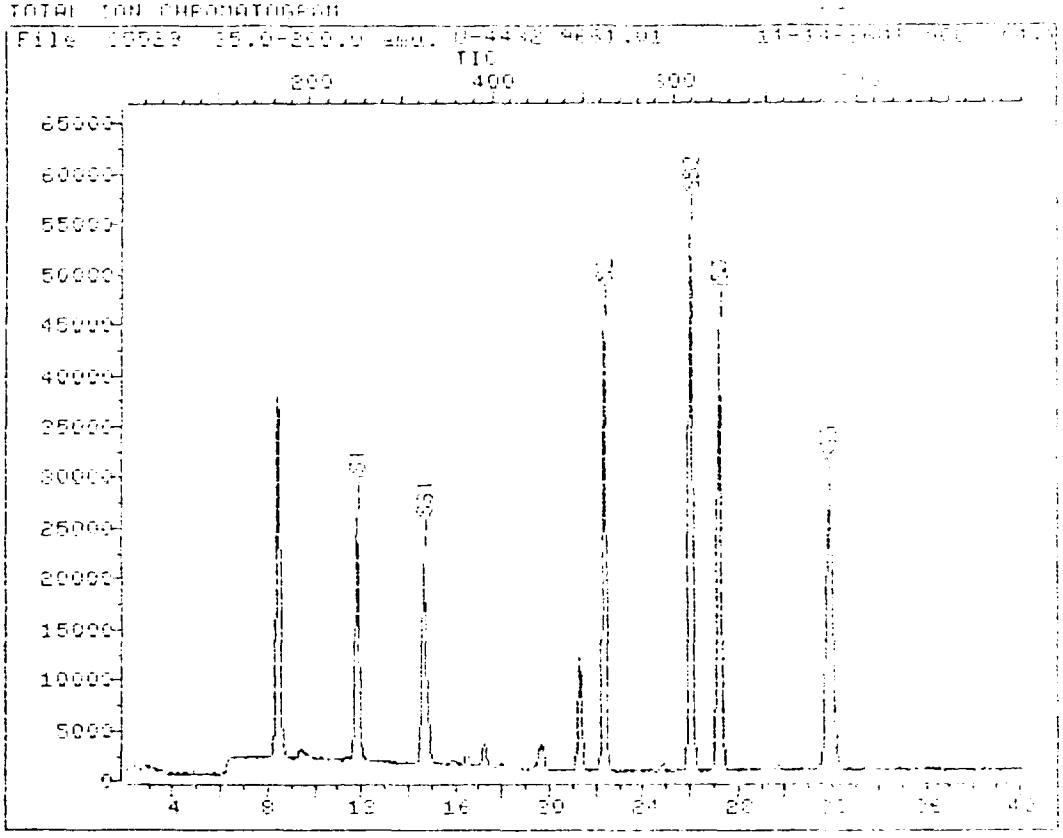
Sample Number DC-SD-23

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.3 min	1300 BJ
2.	Unknown Ketone	VOA	19.6 min	920 BJ
3.	Hexane isomer	VOA	21.3 min	4300 BJ
4.				
5.	UNKNOWN HYDROCARBON	BNA	5.5	1900 J
6.	UNKNOWN HYDROCARBON		5.8	1700 J
7.	UNKNOWN HYDROCARBON		8.1	10000 J
8.	UNKNOWN HYDROCARBON		26.7	4100 BJ
9.	UNKNOWN		30.1	8000 BJ
10.	UNKNOWN		34.3	3900 BJ
11.	UNKNOWN		38.5	1400 J
12.	UNKNOWN		39.0	4600 J
13.	UNKNOWN	BNA	40.5	940 J
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30				

TOTAL ION CHROMATOGRAM



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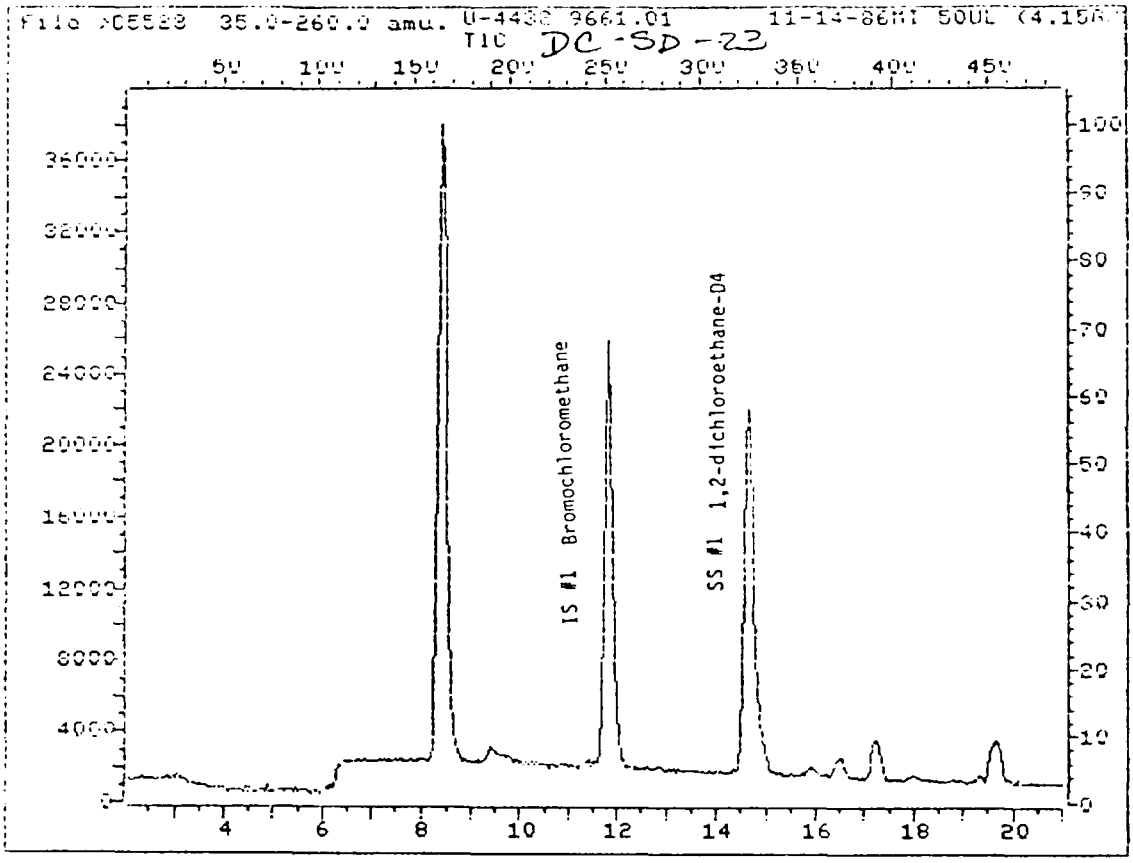
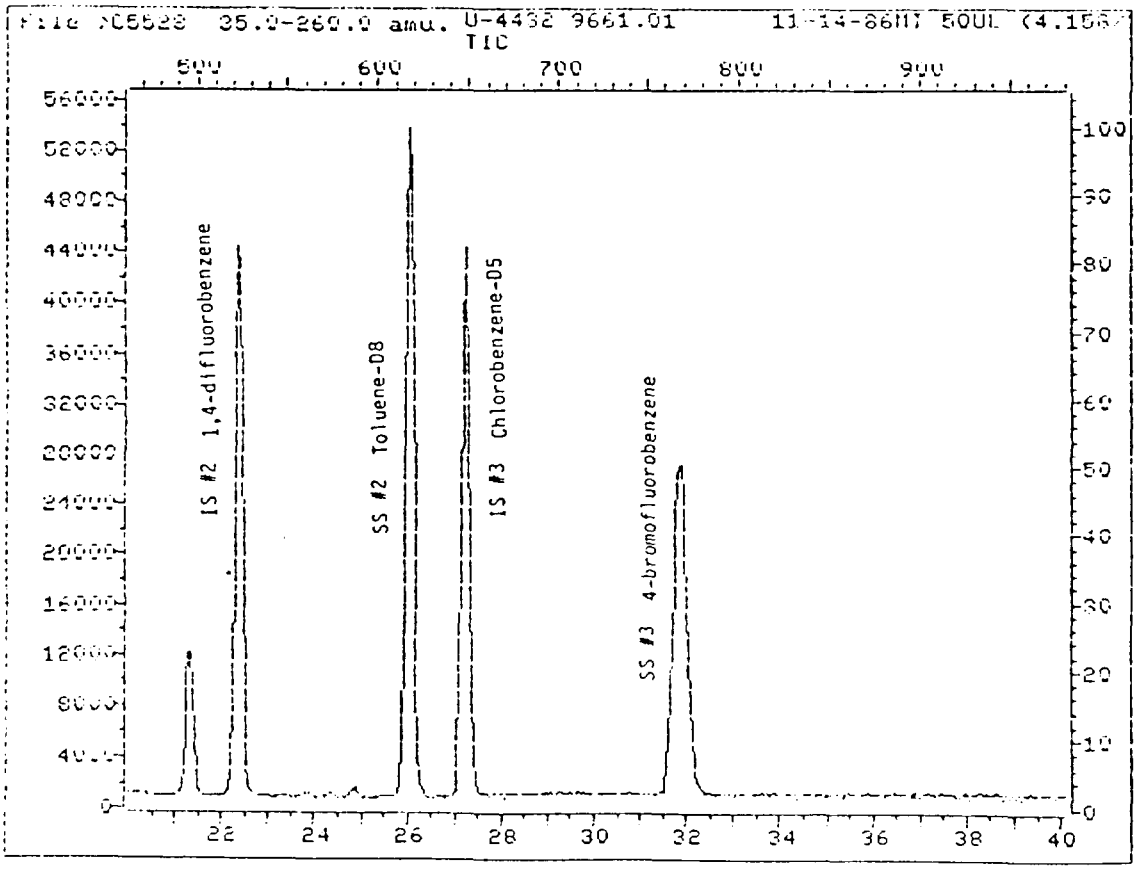
Name: U-4432 4661.01 DC-SD-23
Misc: 11-14-86MI 500UL (4.15E-2)UNR.5) + [illegible]

Id File: VOAC4::D2
Title: VOA ID FILE FOR HP-5995 (CIRI), [illegible]
Last Calibration: 861114 11:48

Operator ID: USER8
Quant Time: 861114 18:32
Injected at: 861114 17:56


File XC5528 35.0-260.0 amu. U-4432 9661.01 11-14-86MT 50UL (4.15
TIC
DC-SD-22
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File XC5528 35.0-260.0 amu. U-4432 9661.01 11-14-86MT 50UL (4.15
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

Operator: D: [illegible]
Output File: [illegible]
Data File: [illegible]
Name: U-4432 9661.01 DC-SD-23
Misc: 11-14-86MI 5ML (4.156/10ML) * 10UL [illegible]

Injection Date: [illegible]
Injected at: [illegible]
Dilution Factor: 1.000

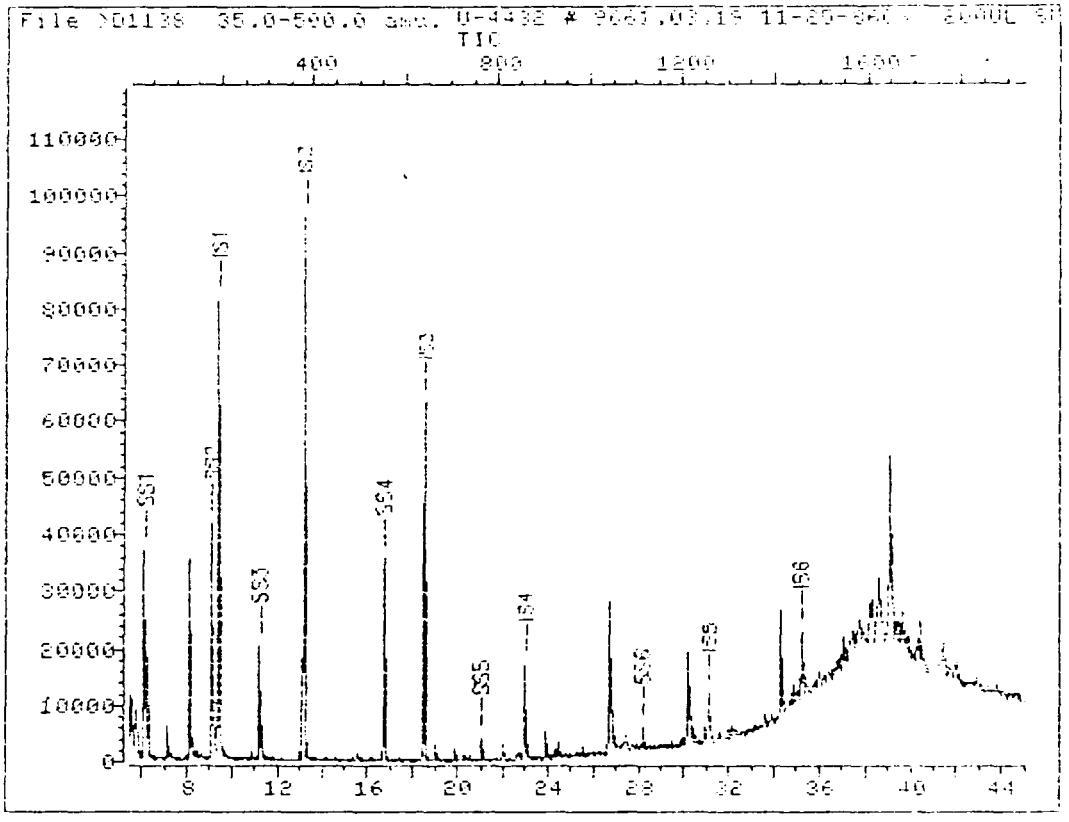
ID File: VOA R::DC
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861114 11:38

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.79	[illegible]	[illegible]	[illegible]	UG/L	100
6)	METHYLENE CHLORIDE		84	8.41	144	94868	41.73	UG/L	100
7)	ACETONE		42	9.42	190	9801	[illegible]	UG/L	100
15)	1,2-DICHLOROETHANE-D4	(SUPR)	65	14.66	475	83740	46.58	UG/L	89
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.34	516	194902	[illegible]	UG/L	100
17)	2-BUTANONE		72	14.77	508	2403	[illegible]	UG/L	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.18	640	144461	[illegible]	UG/L	100
36)	TOLUENE-D8	(SUPR)	98	26.02	618	215474	48.50	UG/L	94
40)	4-BROMOFLUOROBENZENE	(SUPR)	95	31.85	768	107972	[illegible]	UG/L	100

* Compound is ISTD

DC-SD-23

TOTAL ION CHROMATOGRAM



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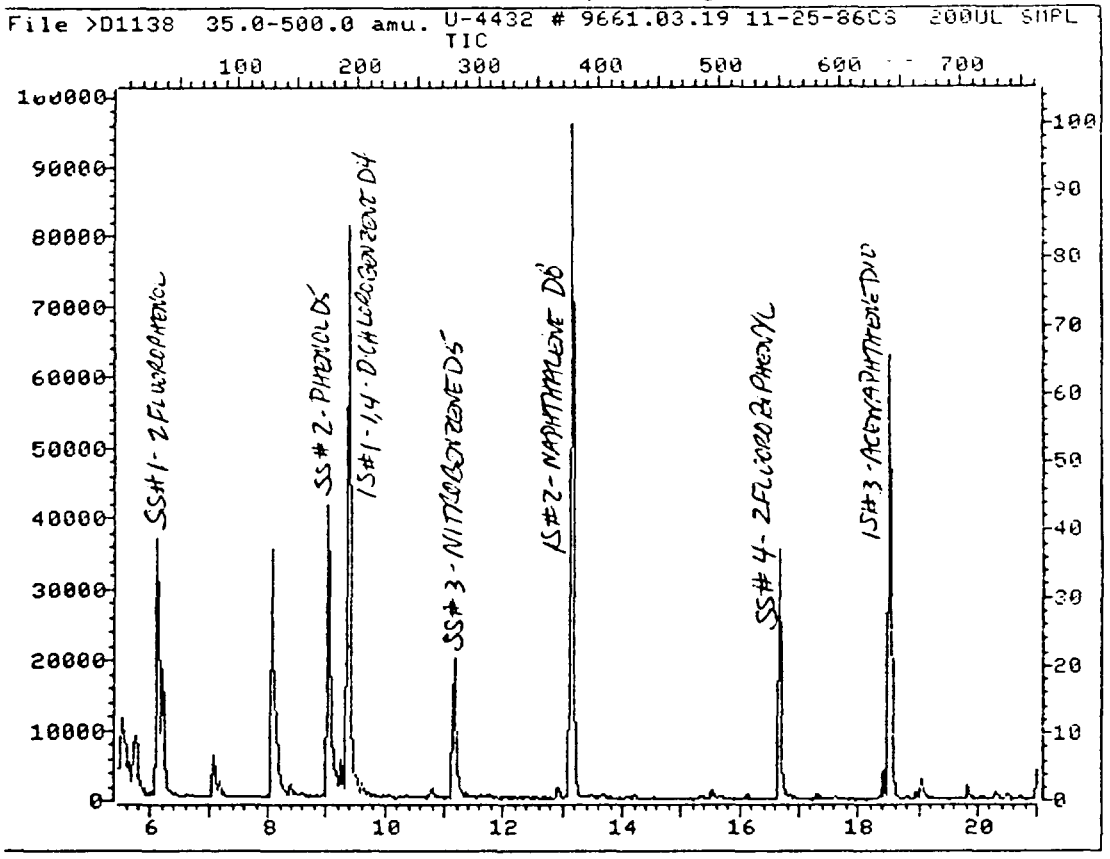
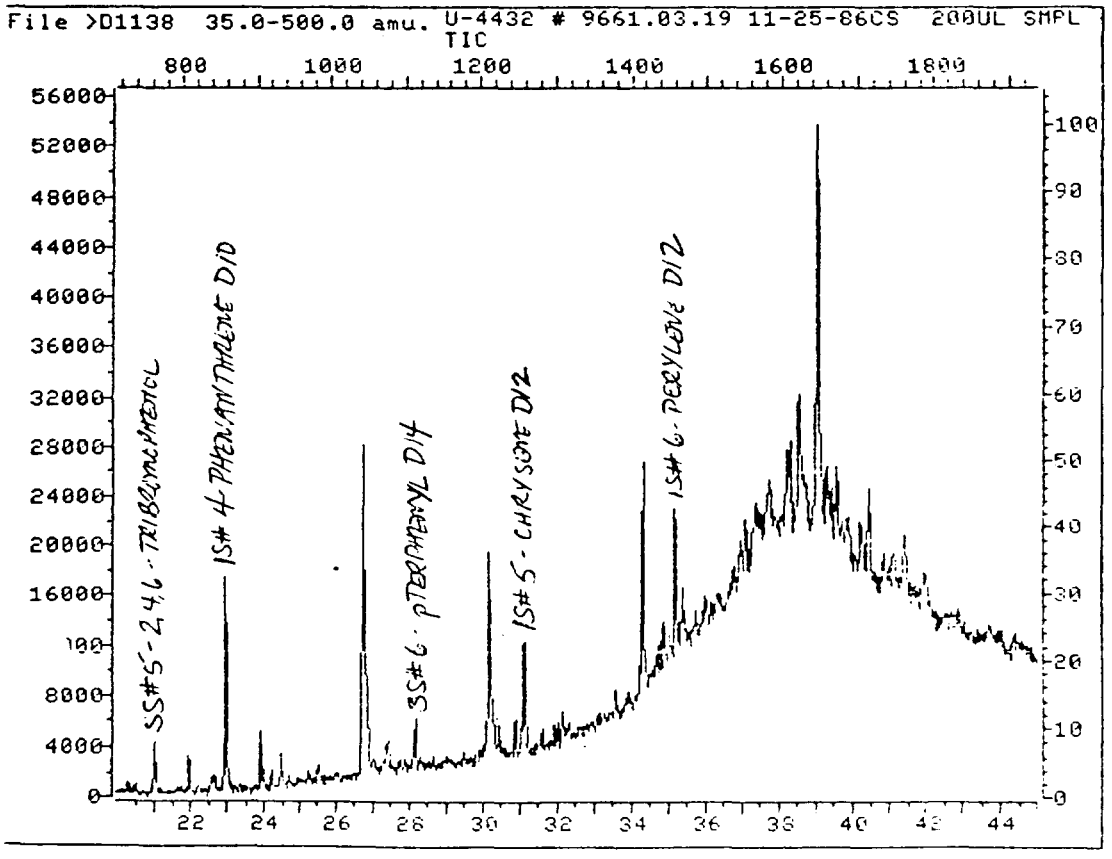
Name: U-4432 # 9661.03.19
Misc: 11-29-86CS 200UL SMPL + 200UL INT.S + [illegible]

Id File: BNADP::02
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861125 15:39

Operator ID: USER6
Quant Time: 861125 20:24
Injected at: 861125 19:36

DC-SD 23


File >D1138 35.0-500.0 amu. U-4432 # 9661.03.19 11-25-86CS 200UL SMPL
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 >D1138 35.0-500.0 amu. U-4432 # 9661.03.19 11-25-86CS 200UL SMPL
TIC
SS#5 - 2,4,6 - TRIBROMOPHENOL
IS# 4 PHENANTHRENE D10
SS#6 - TERPHENYL D14
IS#5 - CHRYSENE D12
IS#6 - PERYLENE D12

[illegible]

[illegible] ID: USER6 Quant Meth: [illegible] Client Name: [illegible]
[illegible] File: [illegible]D1138::02 [illegible]
[illegible] File: [illegible]D1138::03 Dilution Factor: [illegible]
me: U-4432 # 9661.03.19 DC-SD-23
sc: 11-25-86CS 200UL SMPL + 200UL [illegible] + [illegible] UL [illegible] (2%) [illegible] 5

[illegible] File: BNADP::02
tle: BNA ID FILE FOR THE HP 5970 (B)
st Calibration: 861125 15:39

	Compound		m/e	R.T.	Scan#	Area	Conc	Units	q
)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.37	192	43379	40.00	UG/L	89
)	PHENOL-D5	(SURR)	99	9.02	175	48040	63.00	UG/L	99
)	2-FLUOROPHENOL	(SURR)	112	6.11	32	31328	59.72	UG/L	98
6)	PHENOL		94	9.06	177	4604	6.41	UG/L	79
)	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~10.10~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
)	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~10.27~~	~~[illegible]~~	~~[illegible]~~	~~.31~~	~~UG/L~~	~~100~~
)	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~10.37~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
)	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~10.47~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
)	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~10.57~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
)	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.14~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~93~~
)	*NAPHTHALENE-D8	(IS)	136	13.16	378	147003	40.00	UG/L	100
)	NITROBENZENE-D5	(SURR)	82	11.16	280	21613	34.12	UG/L	95
)	1,2,4-TRICHLOROBENZENE		180	13.10	375	950	1.41	UG/L	100
)	NAPHTHALENE		128	13.20	380	1905	1.12	UG/L	100
)	~~2-METHYLNAPHTHALENE~~		~~142~~	~~16.3~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~99~~
)	~~2-METHYLNAPHTHALENE~~		~~142~~	~~17.~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~86~~
)	*ACENAPHTHENE-D10	(IS)	162	18.52	[illegible]	[illegible]	40.00	UG/L	96
)	2-FLUOROBIPHENYL	(SURR)	172	16.[illegible]	[illegible]	40016	34.88	UG/L	93
)	~~DIMETHYL PHTHALATE~~		~~163~~	~~10.1~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
)	~~DIMETHYL PHTHALATE~~		~~163~~	~~10.2~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.00	[illegible]	4003	[illegible]	UG/L	94
)	2,6-DINITROTOLUENE		165	18.32	[illegible]	[illegible]	[illegible]	UG/L	100
)	*PHENANTHRENE-D10	(IS)	188	[illegible]	[illegible]	[illegible]	40.00	UG/L	[illegible]
)	*CHRYSENE-D12	(IS)	240	31.09	1298	12063	40.00	UG/L	100
)	TERPHENYL-D14	(SURR)	244	28.16	1114	4416	38.94	UG/L	100
)	~~BENZO(A)ANTHRACENE~~		~~228~~	~~31.09~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~[illegible]~~
)	~~BENZO(A)ANTHRACENE~~		~~228~~	~~31.1~~	~~[illegible]~~	~~1214~~	~~[illegible]~~	~~UG/L~~	~~72~~
)	BIS(2-ETHYLHEXYL)PHTHALATE		149	32.09	1307	865	2.32	UG/L	85
)	~~CHRYSENE~~		~~228~~	~~31.17~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~[illegible]~~
)	CHRYSENE		228	31.17	1322	1718	11.23	UG/L	79
)	*PERYLENE-D12	(IS)	264	35.18	1[illegible]7	1[illegible]61	40.00	UG/L	100
)	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
)	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
)	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~34.~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
)	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~34.~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
)	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~34.~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
)	BENZO(B)FLUORANTHENE		252	34.19	1410	4916	21.67	UG/L	100
)	~~BENZO(K)FLUORANTHENE~~		~~252~~	~~34.19~~	~~1410~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
)	~~BENZO(A)PYRENE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
)	BENZO(A)PYRENE		252	35.01	1450	2139	18.45	UG/L	100
)	~~BENZO(A)PYRENE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~[illegible]~~
)	~~INDENO(1,2,3-CD)PYRENE~~		~~276~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~[illegible]~~
)	INDENO(1,2,3-CD)PYRENE		276	37.75	1614	41[illegible]	[illegible]	UG/L	100
)	~~INDENO(1,2,3-CD)PYRENE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~[illegible]~~
)	~~INDENO(1,2,3-CD)PYRENE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~[illegible]~~
)	~~DIBENZ(A,H)ANTHRACENE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~

No Bpk

No Bpk

No Bpk

No Bpk

Yes bpk
No Bpk

No Bpk

No Bpk

No Bpk

No Bpk

No Bpk

No Bpk

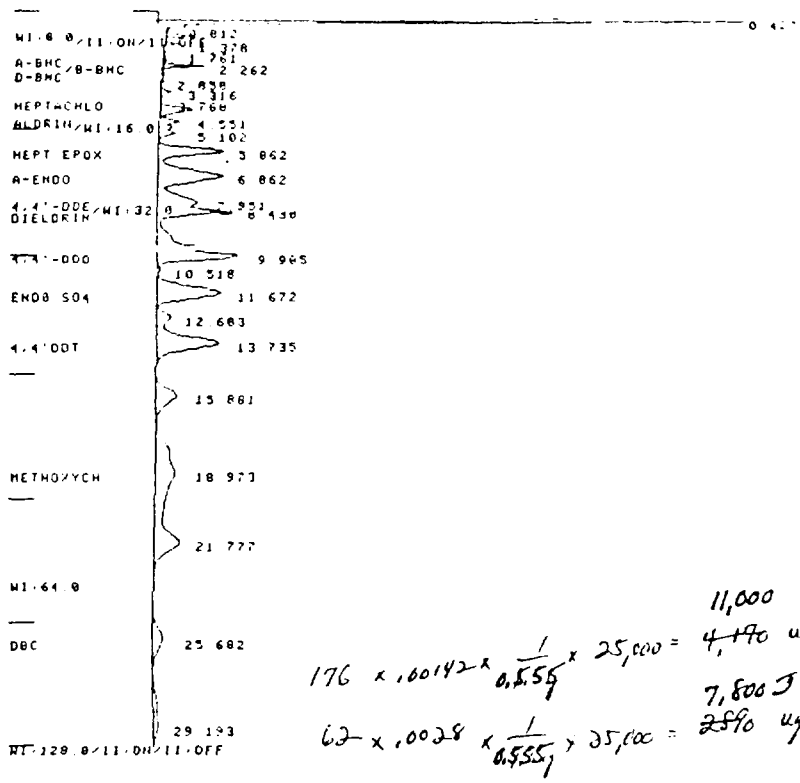
No Bpk

No Bpk

	Compound	M/E	R.T.	Scans	Area	Conc	Units	q
)	DIBENZ(A,H)ANTHRACENE	278	37.86	1599	1508	2.3	UG/L	100
)	~~DIBENZ(A,H)ANTHRACENE~~	~~278~~	~~38.00~~	~~1606~~	~~516~~	~~2.33~~	~~UG/L~~	100
)	~~DIBENZ(A,H)ANTHRACENE~~	~~278~~	~~38.14~~	~~1613~~	~~800~~	~~4.00~~	~~UG/L~~	100
)	~~BENZO(G,H,I)PERYLENE~~	~~276~~	~~38.09~~	~~1600~~	~~179~~	~~.5~~	~~UG/L~~	100
)	~~BENZO(G,H,I)PERYLENE~~	~~276~~	~~38.14~~	~~1613~~	~~413~~	~~1.~~	~~UG/L~~	100
)	BENZO(G,H,I)PERYLENE	276	38.31	1611	5089	18.60	UG/L	100
)	~~BENZO(G,H,I)PERYLENE~~	~~276~~	~~38.53~~	~~1624~~	~~244~~	~~.~~	~~UG/L~~	100
)	~~BENZO(G,H,I)PERYLENE~~	~~276~~	~~38.62~~	~~1628~~	~~343~~	~~1.44~~	~~UG/L~~	100

Compound is ISTD

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



176 x .00142 x 1/0.555 x 25,000 = ~~4,190~~ 11,000 ug/kg 1254

62 x .0028 x 1/0.555 x 25,000 = ~~2590~~ 7,800 J ug/kg 1260

DC-SD-23

CHANNEL: 1A - 1 TITLE: RUN4 19:36 19 NOV 85

SAMPLE: 9661.03.19 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~~	56.6719	2.262	0.092	2[illegible]017	VB	5.00
2	~~HEPTACHLO~~	61.2489	4.061	0.271	5[illegible]550	VV	15.31
3	~~ALDRIN~~	26.6420	4.551	-0.119	3[illegible]487	VV	12.81
4		0.0000	~~5.192~~		~~354[illegible]~~	VV	? 10.[illegible]
5	~~HEPT EPOX~~	141.1671	5.862	0.192	16[illegible]789	VV	[illegible]
6	~~A-ENDO~~	239.2745	6.862	-0.168	29[illegible]650	VV	[illegible]
7	~~4,4'-DDE~~	129.6491	7.951	-0.129	14[illegible]217	VV	? 35.50
8	~~DIELDRIN~~	171.5809	8.430	0.240	20[illegible]377	VV	22.44
9	~~4,4'-DDD~~	314.9169	9.985	-0.175	3[illegible]675	VV	23.38
10	~~ENDO SO4~~	341.1642	11.672	-0.238	26[illegible]200	VV	22.50
11		0.0000	12.683		5[illegible]868	VV	36.50
12	~~4,4'-DDT~~	445.7628	13.735	0.475	2[illegible]	VB	22.06
13	~~ENDO KETONE~~	106.0438	15.881	0.611	1[illegible]	[illegible]	[illegible]81
14	~~METHOXYCH~~	876.9337	18.973	-0.517	3[illegible]958	[illegible]	46.56
15		0.0000	21.777		1[illegible]262	[illegible]	52.31
16	~~DBC~~	93.8899	25.682	-0.928	9[illegible]933	BV	62.56
17		0.0000	29.193		6[illegible]055	VB	?124.69

TOTALS: 3004.965 -0.403 2593793

DETECTED PKS: 34 REJECTED PKS: 17

DIVISOR: 1.50000 MULTIPLIER: 25000.0000

NOISE: 194.2 OFFSET: -14

NOTES:
NOTEBOOK: 259-38 ANALYST: K. JUFTK/ RICHARD SAMSON
SECURE AREA: D JOB#:U-4432,U-4442
INST:VARIAN 5000#2 A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE:3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN.
CET:300 C INJ:220 C
200 C ISOTHERMAL 4 UL INJECTION
AUTOSAMPLER
PEST/PCB ANALYSIS

POST RUN:
SAVE FILE: PHW SL9489

SAMPLE NUMBER DC-SD-24

481095

Sample Number
DC-SD-24

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No: U-4432/U 4442
Lab Sample ID No: 9662
QC Report No:
Sample Matrix: Soil
Contract No. IL-3140
Data Release Authorized By: C Stoztowicz
Date Sample Received: 11-6-86

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-14-86

Conc./Dil Factor: 2 pH 7.4

Percent Moisture: (Not Decanted) 39

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	3200u
74-83-9	Bromomethane	3200u
75-01-4	Vinyl Chloride	3200u
75-00-3	Chloroethane	3200u
75-09-2	Methylene Chloride	17000B
67-64-1	Acetone	7300B
75-15-0	Carbon Disulfide	1600u
75-35-4	1, 1-Dichloroethene	1600u
75-34-3	1, 1-Dichloroethane	1600u
156-60-5	Trans-1, 2-Dichloroethene	1600u
67-66-3	Chloroform	1600u
107-06-2	1, 2-Dichloroethane	1600u
78-93-3	2-Butanone	12000B
71-55-6	1, 1, 1-Trichloroethane	1600u
56-23-5	Carbon Tetrachloride	1600u
108-05-4	Vinyl Acetate	3200u
75-27-4	Bromodichloromethane	1600u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	1600u
10061-02-6	Trans-1, 3-Dichloropropene	1600u
79-01-6	Trichloroethene	1600u
124-48-1	Dibromochloromethane	1600u
79-00-5	1, 1, 2-Trichloroethane	1600u
71-43-2	Benzene	1600u
10061-01-5	cis-1, 3-Dichloropropene	1600u
110-75-8	2-Chloroethylvinylether	3200u
75-25-2	Bromoform	1600u
108-10-1	4-Methyl-2-Pentanone	3200u
591-78-6	2-Hexanone	3200u
127-18-4	Tetrachloroethene	1600u
79-34-5	1, 1, 2, 2-Tetrachloroethane	1600u
108-88-3	Toluene	1600u
108-90-7	Chlorobenzene	1600u
100-41-4	Ethylbenzene	1600u
100-42-5	Styrene	1600u
	Total Xylenes	1600u

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.

255

Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No U-4432/U-4442

Sample Number DC-SD-24

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 11-12-86

Date Analyzed 12-1-86

Conc/Dil Factor: 2

Percent Moisture (Decanted) 39

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	81	J
111-44-4	bis(-2-Chloroethyl)Ether	540	U
95-57-8	2-Chlorophenol	540	U
541-73-1	1 3-Dichlorobenzene	540	U
106-46-7	1 4-Dichlorobenzene	540	U
100-51-6	Benzyl Alcohol	540	U
95-50-1	1 2-Dichlorobenzene	540	U
95-48-7	2-Methylphenol	540	U
39638-32-9	bis(2-chloroisopropyl)Ether	540	U
106-44-5	4-Methylphenol	540	U
621-64-7	N-Nitroso-Di-n-Propylamine	540	U
67-72-1	Hexachloroethane	540	U
98-95-3	Nitrobenzene	540	U
78-59-1	Isophorone	540	U
88-75-5	2-Nitrophenol	540	U
105-67-9	2 4-Dimethylphenol	540	U
65-85-0	Benzoic Acid	2600	U
111-91-1	bis(-2-Chloroethoxy)Methane	540	U
120-83-2	2 4-Dichlorophenol	540	U
120-82-1	1 2 4-Trichlorobenzene	64	J
91-20-3	Naphthalene	540	U
106-47-8	4-Chloroaniline	540	U
87-68-3	Hexachlorobutadiene	540	U
59-50-7	4-Chloro-3-Methylphenol	540	U
91-57-6	2-Methylnaphthalene	540	U
77-47-4	Hexachlorocyclopentadiene	540	U
88-06-2	2 4 6-Trichlorophenol	540	U
95-95-4	2 4 5-Trichlorophenol	2600	U
91-58-7	2-Chloronaphthalene	540	U
88-74-4	2-Nitroaniline	2600	U
131-11-3	Dimethyl Phthalate	540	U
208-96-8	Acenaphthylene	540	U
99-09-2	3-Nitroaniline	2600	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	540	U
51-28-5	2 4-Dinitrophenol	2600	U
100-02-7	4-Nitrophenol	2600	U
132-64-9	Dibenzofuran	540	U
121-14-2	2 4-Dinitrotoluene	540	U
606-20-2	2 6-Dinitrotoluene	540	U
84-66-2	Diethylphthalate	540	U
7005-72-3	4-Chlorophenyl-phenylether	540	U
86-73-7	Fluorene	540	U
100-01-6	4-Nitroaniline	2600	U
534-52-1	4 6-Dinitro-2-Methylphenol	2600	U
86-30-6	N-Nitrosodiphenylamine (1)	540	U
101-55-3	4-Bromophenyl-phenylether	540	U
118-74-1	Hexachlorobenzene	540	U
87-86-5	Pentachlorophenol	2600	U
85-01-8	Phenanthrene	220	J
120-12-7	Anthracene	540	U
84-74-2	Di-n-Butylphthalate	120	J
206-44-0	Fluoranthene	370	J
129-00-0	Pyrene	290	J
85-68-7	Butylbenzylphthalate	540	U
91-94-1	3 3'-Dichlorobenzidine	1100	U
56-55-3	Benzo(a)Anthracene	230	J
117-81-7	bis(2-Ethylhexyl)Phthalate	540	U
218-01-9	Chrysene	300	J
117-84-0	Di-n-Octyl Phthalate	540	U
205-99-2	Benzo(b)Fluoranthene	1000	
207-08-9	Benzo(k)Fluoranthene	540	U
50-32-8	Benzo(a)Pyrene	350	J
193-39-5	Indeno(1 2 3-cd)Pyrene	530	J
53-70-3	Dibenz(a h)Anthracene	110	J
191-24-2	Benzo(g h i)Perylene	470	J

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No U-4432/U-4442

Sample Number DC-SD-24

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-12-86

Date Analyzed 11-19-86

Conc/Dil Factor 10

Percent Moisture (decanted) 39

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	160 U
319-85-7	Beta-BHC	160 U
319-86-8	Delta-BHC	160 U
58-89-9	Gamma-BHC (Lindane)	160 U
76-44-8	Heptachlor	160 U
309-00-2	Aldrin	160 U
1024-57-3	Heptachlor Epoxide	160 U
959-98-8	Endosulfan I	160 U
60-57-1	Dieldrin	320 U
72-55-9	4,4'-DDE	320 U
72-20-8	Endrin	320 U
33213-65-9	Endosulfan II	320 U
72-54-8	4,4'-DDD	320 U
1031-07-8	Endosulfan Sulfate	320 U
50-29-3	4,4'-DDT	320 U
72-43-5	Methoxychlor	1600 U
53494-70-5	Endrin Ketone	320 U
57-74-9	Chlordane	1600 U
8001-35-2	Toxaphene	3200 U
12674-11-2	Aroclor-1016	1600 U
11104-28-2	Aroclor-1221	1600 U
11141-16-5	Aroclor-1232	1600 U
53469-21-9	Aroclor-1242	1600 U
12672-29-6	Aroclor-1248	1600 U
11097-69-1	Aroclor-1254	1,600 J
11096-82-5	Aroclor-1260	3200 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 30 V_t 1000 V_i 4

Laboratory Name ecology and environment, inc.

Case No u-4432 / u-4442

Sample Number DC-SD-24

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.3 min	710 BJ
2.	Unknown Ketone	VOA	19.7 min	490 BJ
3.	Hexane isomer	VOA	21.4 min	2300 BJ
4.				
5.	UNKNOWN HYDROCARBON	BNA	8.6	5700 J
6.	UNKNOWN		19.8	290 J
7.	UNKNOWN		20.5	200 J
8.	UNKNOWN		21.0	180 J
9.	UNKNOWN HYDROCARBON		27.6	1200 BJ
10.	UNKNOWN		30.8	4300 BJ
11.	UNKNOWN		35.0	1800 BJ
12.				
13.				
14.				
15.				
16.				
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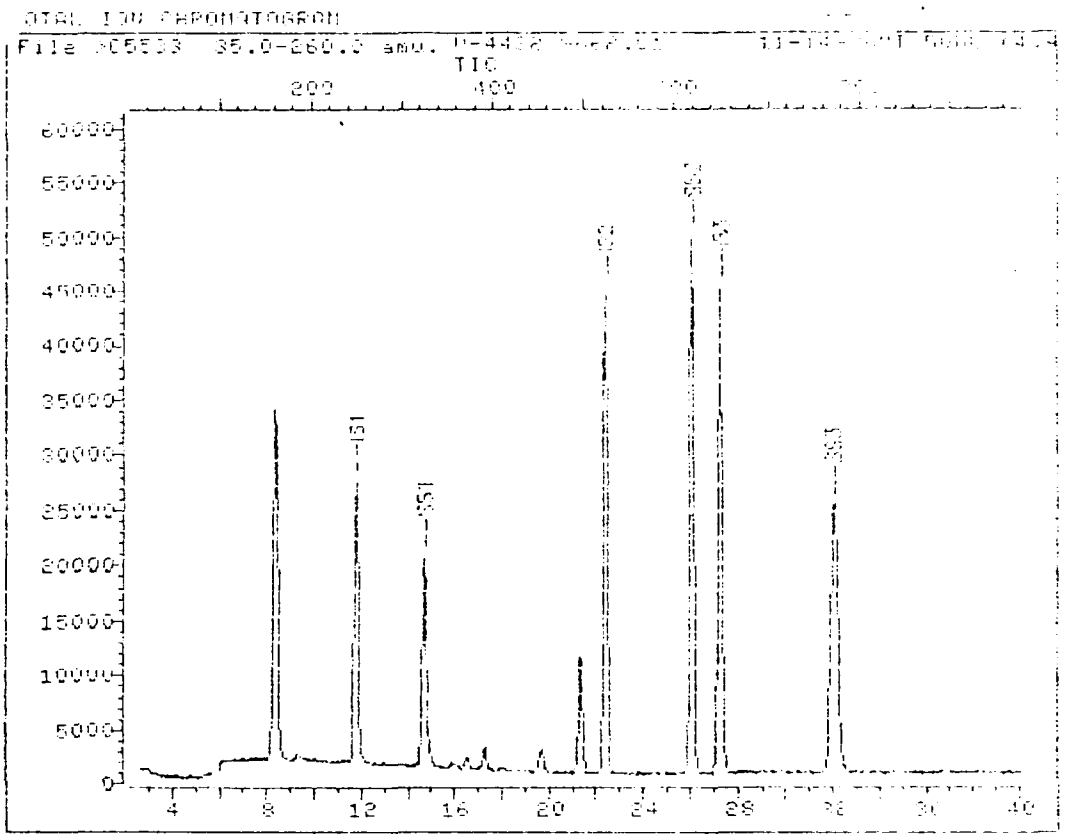
29.				
30				



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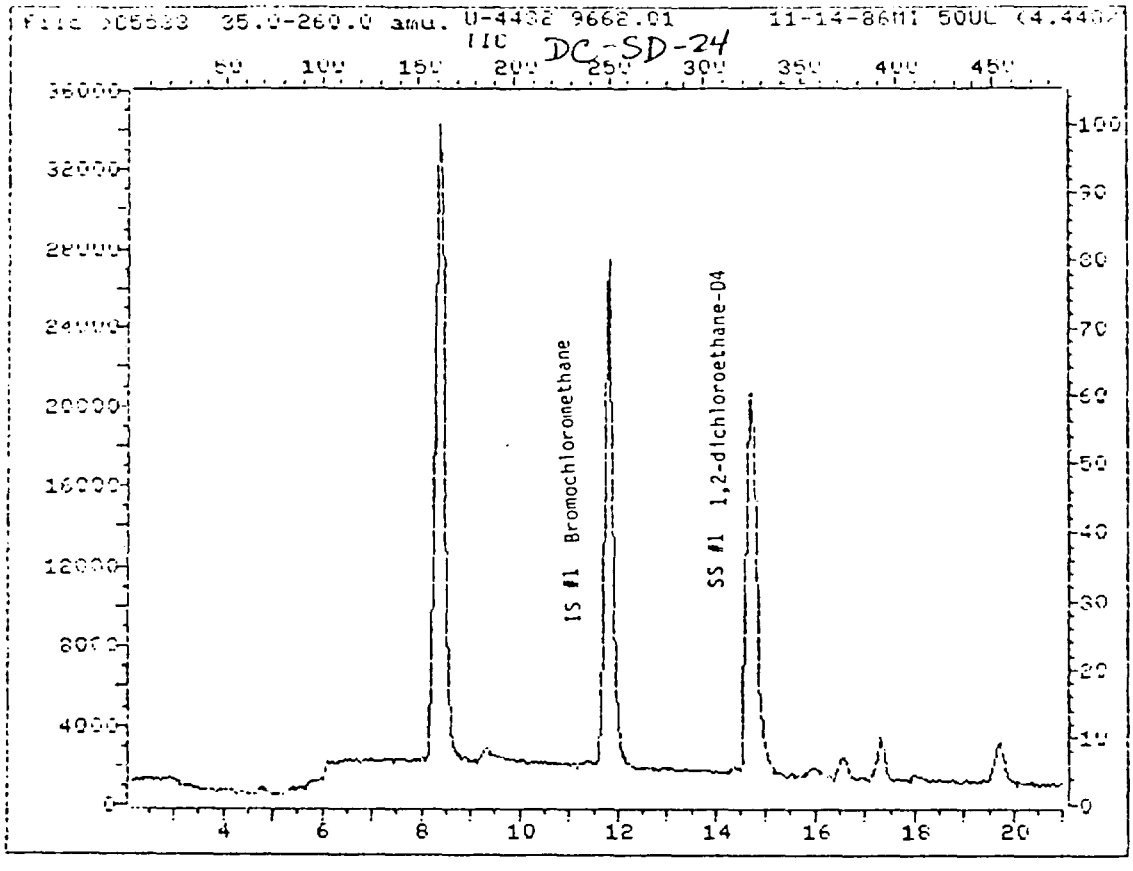
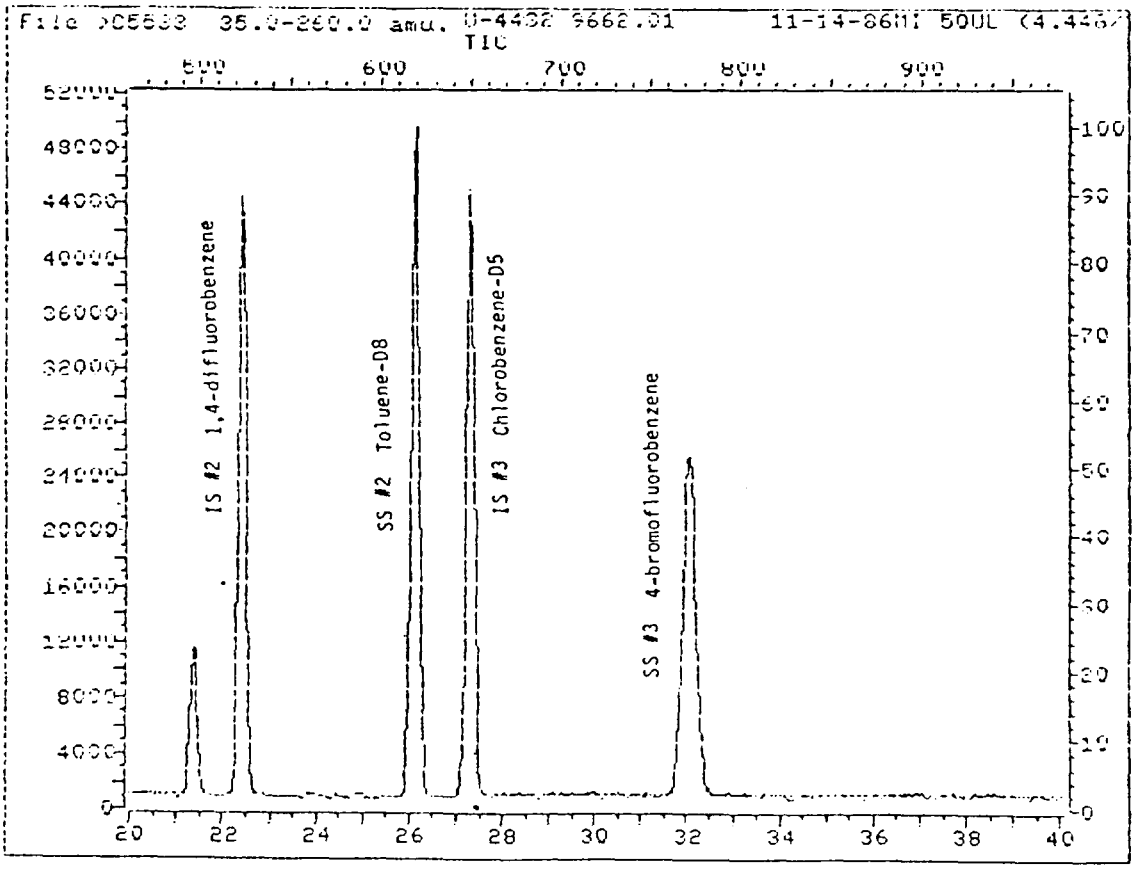
Title: VOA ID FILE FOR HP-5995 [illegible]
Last Calibration: 861114 21:2[illegible]

Operator ID: USER6
Quant Time: 861114 23:03
Injected at: 861114 22:22


File 005633 35.0-260.0 amu. U-4432 9662.01 11-14-86HI 50UL (4.4432)
TIC
DC-SD-24
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File 005633 35.0-260.0 amu. U-4432 9662.01 11-14-86HI 50UL (4.4432)
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

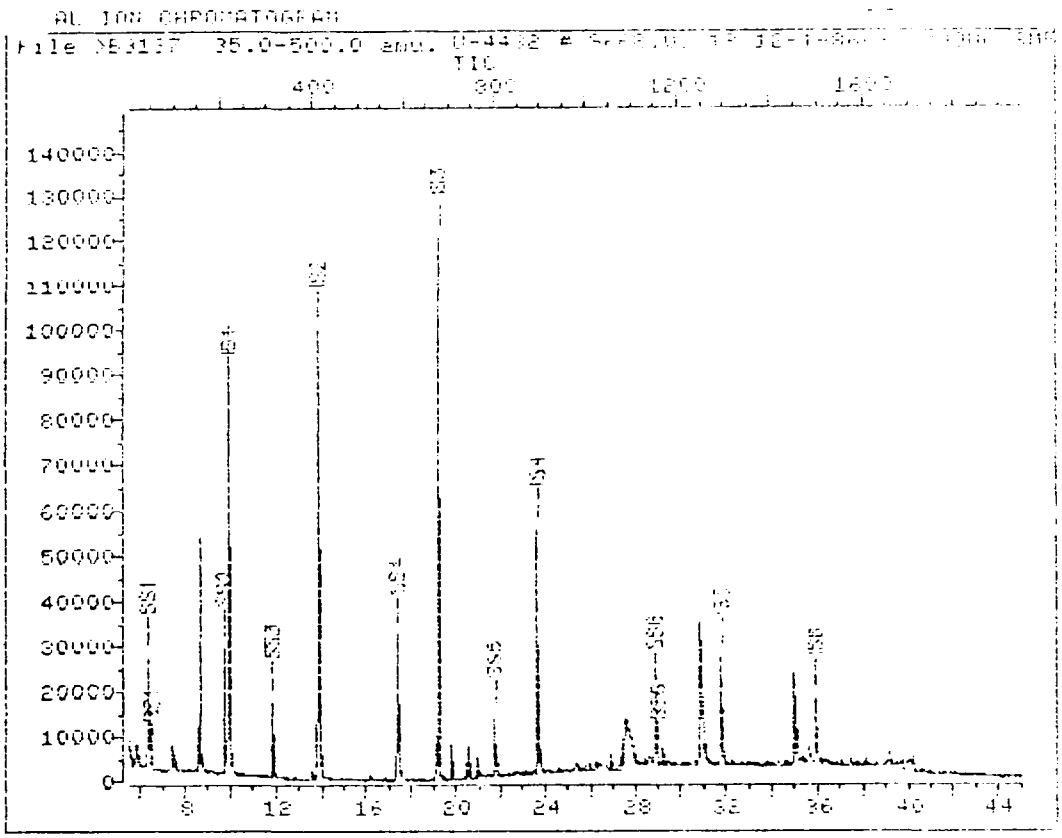
[illegible]

Operator ID: USER8 Quant Rev: [illegible] Quant Time: 861114 22:05
Output File: VC5533::02 Injected at: 861114 22:22
Data File: VC5533::05 Dilution Factor: 1.00
Name: U-4432 9662.01 DC-SD 24
Misc: 11-14-86M1 50UL (4.446/100L) DEUM [illegible] 15/50

ID File: VOACR::02
Title: VOA ID FILE FOR HP-5995 (CPM, CAL.)
Last Calibration: 861114 21:27

	Compound		m/e	R.T.	Scan	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.81	[illegible]	41097	50.00	UG/L	100
6)	METHYLENE CHLORIDE		84	8.36	161	89999	46.10	UG/L	100
7)	ACETONE		43	9.29	185	5552	19.72	UG/L	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.68	524	82580	47.93	UG/L	89
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.40	923	1968.70	50.00	UG/L	100
17)	2-BUTANONE		72	14.84	528	4860	22.17	UG/L	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.30	649	146145	50.00	UG/L	100
36)	TOLUENE-D8	(SURR)	98	26.12	619	201176	47.97	UG/L	94
40)	4-BROMOFLUOROBENZENE	(SURR)	95	32.06	[illegible]	9548	47.80	UG/L	100

* Compound is ISTD

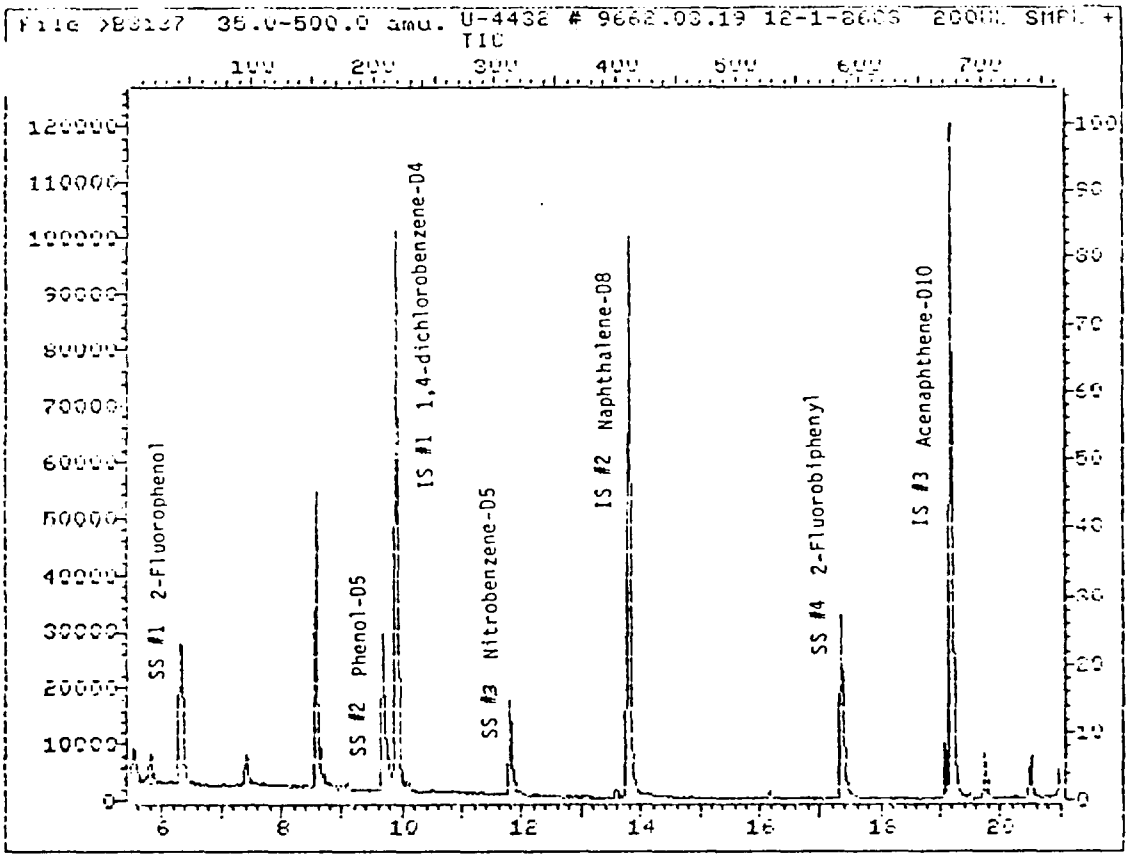


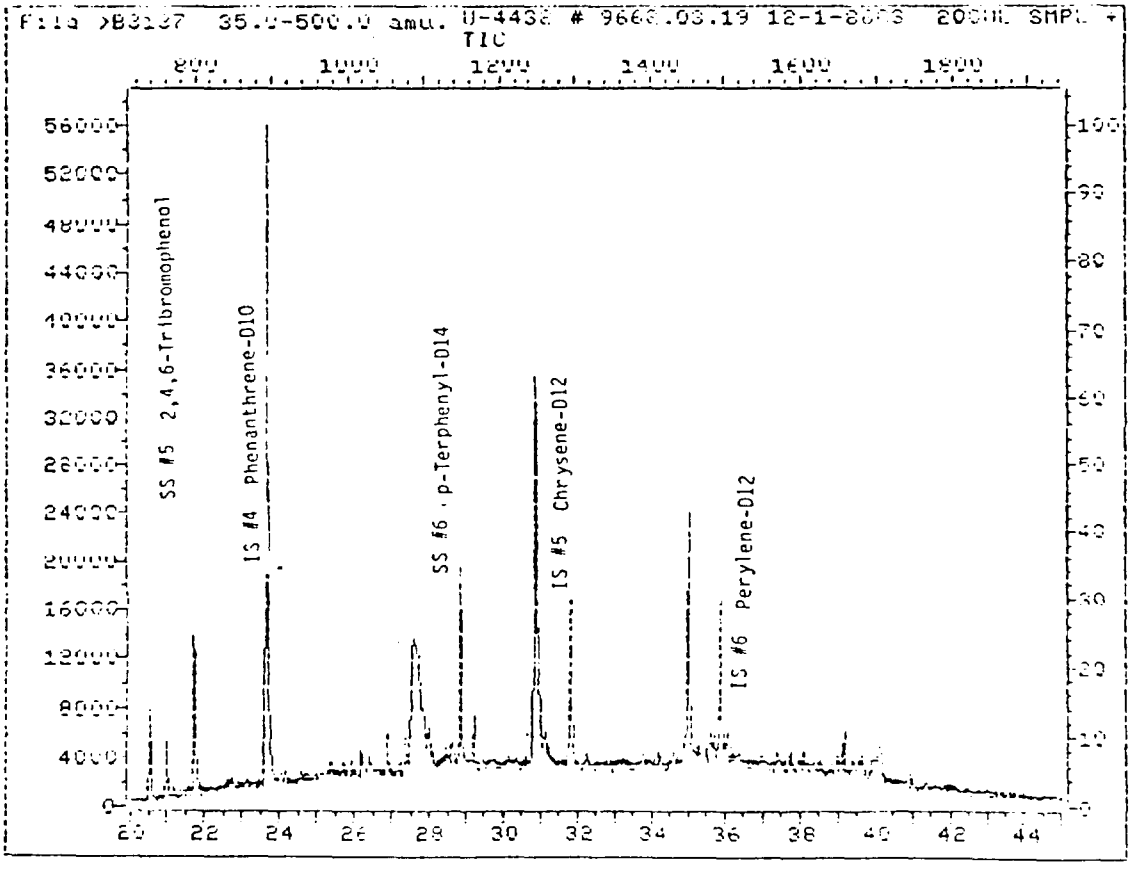
Data File: >B:137::04
Name: U-4432 # 9662.03.19 DC-SD-24
Misc: 12-1-86US 200UL SMPL + 200UL MLCLC + 40U IS [illegible]

Id File: BNABR::02
Title: BNA ID FILE FOR THE HP [illegible] (B)
Last Calibration: 861201 13:31

Operator ID: USER6
Quant Time: 861201 16:26
Injected at: 861201 13:41

DC-SD-24


File >B3127 35.0-500.0 amu. U-4432 # 9662.03.19 12-1-8603 200ML SMPL
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 >B3127 35.0-500.0 amu. U-4432 # 9663.03.19 12-1-8603 200ML 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: USER6 Quant Rev: 4 Quant time: 861201 16:26
utput File: >B3137::D2 Injected at: 861201 12:41
ata File: >B3137::D4 Dilution Factor: 2.00
ame: U-4432 # 9662.03.19 DC-SD-24
isc: 12-1-86CS 200UL SMPL + 200UL DEIUZ + 40UL IS (2X)

D File: BNABR::D2
itle: BNA ID FILE FOR THE HP 5970 (R)
ast Calibration: 861201 13:31

	Compound		m/E	R.T.	Scans	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.89	210	48496	40.00	UG/L	90
2)	PHENOL-D5	(SURR)	99	9.62	282	46584	52.90	UG/L	91
5)	2-FLUOROPHENOL	(SURR)	112	6.31	40	20024	62.73	UG/L	96
5)	2-FLUOROPHENOL	(SURR)	112	6.48	48	2276	5.00	UG/L	61
6)	PHENOL		94	6.75	210	940	1.40	UG/L	71
~~7)~~	~~1,2-DICHLOROBENZENE~~		~~146~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~95~~
~~8)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~9)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~9)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~9)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~9)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~9)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~80~~
9)	*NAPHTHALENE-D8	(IS)	136	13.29	410	162193	40.00	UG/L	100
8)	NITROBENZENE-D5	(SURR)	82	13.80	417	21148	31.55	UG/L	96
8)	1,2,4-TRICHLOROBENZENE		180	13.75	400	976	1.18	UG/L	100
~~8)~~	~~NAPHTHALENE~~		~~128~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
4)	*ACENAPHTHENE-D10	(IS)	162	19.20	678	71518	40.00	UG/L	98
8)	2-FLUOROBIPHENYL	(SURR)	172	17.46	485	50014	36.69	UG/L	94
~~1)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~[illegible]~~
~~1)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~[illegible]~~
~~2)~~	~~ACENAPHTHENE~~		~~153~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~[illegible]~~
8)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.70	299	8426	39.51	UG/L	99
~~1)~~	~~2,4-DINITROTOLUENE~~		~~165~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~[illegible]~~
~~2)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
5)	*PHENANTHRENE-D10	(IS)	188	23.64	894	81584	40.00	UG/L	94
1)	PHENANTHRENE		178	23.70	992	4[illegible]	4.17	UG/L	90
~~1)~~	~~ANTHRACENE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~[illegible]~~
3)	DI-N-BUTYLPHTHALATE		149	26.20	1000	2[illegible]	1.14	UG/L	[illegible]
4)	FLUORANTHENE		202	27.36	10[illegible]	4[illegible]	4.71	UG/L	[illegible]
5)	*CHRYSENE-D12	(IS)	240	31.79	1[illegible]	30[illegible]	40.00	UG/L	[illegible]
2)	PYRENE		202	32.99	1[illegible]	4[illegible]	[illegible]	UG/L	[illegible]
8)	TERPHENYL-D14	(SURR)	244	29.84	1[illegible]	1[illegible]	[illegible]	UG/L	[illegible]
~~8)~~	~~TERPHENYL-D14~~	~~(SURR)~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~[illegible]~~
1)	BENZO(A)ANTHRACENE		[illegible]	31.[illegible]	[illegible]	[illegible]	[illegible]	UG/L	[illegible]
~~1)~~	~~BENZO(A)ANTHRACENE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~[illegible]~~
~~2)~~	~~CHRYSENE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~[illegible]~~
3	CHRYSENE		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	[illegible]
4	PERYLENE-D12	(IS)	[illegible]	[illegible]	[illegible]	[illegible]	40.00	UG/L	[illegible]
~~1)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~[illegible]~~
~~1)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~[illegible]~~
~~1)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~[illegible]~~
6)	BENZO(B)FLUORANTHENE		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
~~[illegible]~~	~~BENZO(B)FLUORANTHENE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~
~~[illegible]~~	~~BENZO(B)FLUORANTHENE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~

No Sph

No Sph

No Sph

No Sph

No Sph

No Sph

No Sph

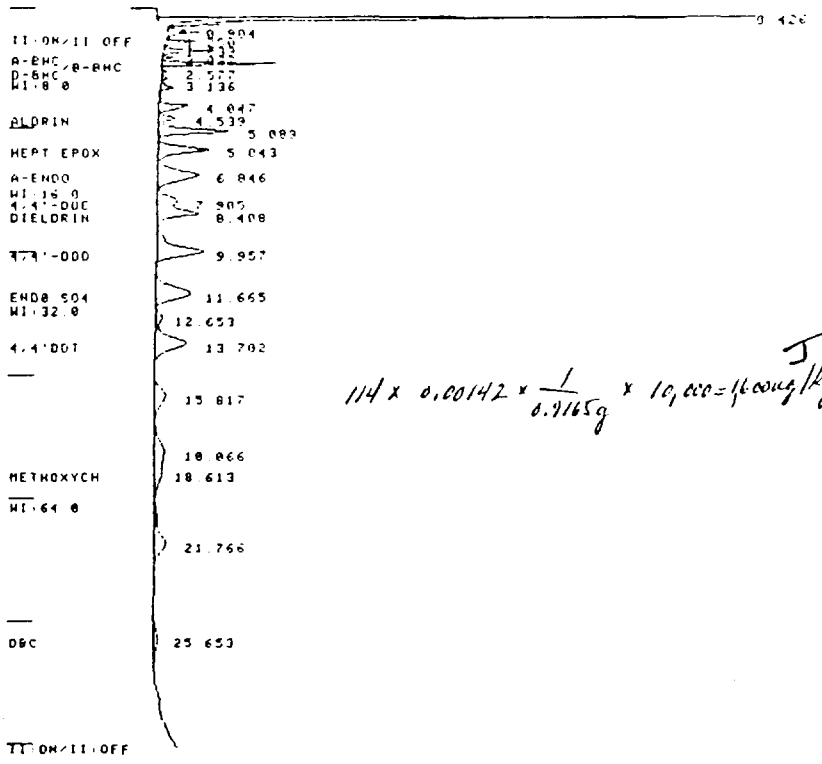
No Sph

No

	Compound	ME	R.T.	Scan#	Area	Conc	Units	Q
[illegible]	BENZO(A)PYRENE	[illegible]	[illegible].24	148[illegible]	1866	[illegible]	[illegible]	[illegible]
~~[illegible]~~	~~BENZO(A)PYRENE~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~
[illegible]	INDENO(1,2,3-CD)PYRENE	2[illegible]6	38.93	16[illegible]6	18[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	DIBENZ(A,H)ANTHRACENE	2[illegible]8	[illegible]8.61	16[illegible]	451	[illegible]	[illegible]	[illegible]
~~[illegible]~~	~~BENZO(G,H,I)PERYLENE~~	~~276~~	~~[illegible].63~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~
[illegible]	BENZO(G,H,I)PERYLENE	276	39.06	1652	2[illegible]75	[illegible]	[illegible]	[illegible]

* Compound is ISTD

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



$114 \times 0.00142 \times \frac{1}{0.9165g} \times 10{,}000 = 1600 ng/kg$ 1254

DC-SD-24

CHANNEL: 1A - 1 TITLE: RUN#34 20:10 19 NOV 86

SAMPLE: 9662.03.19 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT ~~NG/KG~~	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	WI/2 (SEC)
1		0.0000	1.758		33246	VV	3.94
2	~~B-BHC~~	63.5949	2.259	0.083	73063	VB	5.06
3	~~HEPTACHLO~~	22.5124	4.047	0.257	95001	BV	15.13
4	~~ALDRIN~~	7.9053	4.539	-0.131	34099	VV	10.88
5		0.0000	5.089		115464	VB	10.63
6	~~HEPT EPOX~~	43.9759	5.843	0.173	125000	BV	? 12.31
7	~~A-ENDO~~	55.2252	6.846	-0.184	146671	VV	? 7[illegible]
8	~~4,4'-DDE~~	25.1342	7.905	-0.185	8[illegible]896	VV	[illegible]
9	~~DIELDRIN~~	39.0271	8.408	0.218	11[illegible]421	VV	20.08
10	~~4,4'-DDD~~	68.1581	9.957	-0.203	16[illegible]798	VV	22.38
11	~~ENDO SO4~~	77.5350	11.665	-0.245	15[illegible]291	BV	32.56
12		0.0000	12.653		2[illegible]400	BV	29.56
13	~~4,4'DDT~~	91.1227	13.702	0.442	14[illegible]946	VB	32.31
14	~~END ETON~~	24.7713	15.817	0.547	70082	BV	45.31
15		0.0000	18.066		77602	VV	? 54.50
16	~~METHOXYCH~~	56.0100	18.613	-0.877	53309	VV	? 96.69
17		0.0000	21.766		49135	VB	48.00
18	~~DBC~~	16.1494	25.653	-0.957	36092	BB	67.31

114

1254

TOTALS: 591.1215 -1.056 1534156

DETECTED PKS: 37 REJECTED PKS: 19

DIVISOR: 1.52000 MULTIPLIER: 10000.0000

NOISE: 217.1 OFFSET: -3

NOTES:
NOTEBOOK: 259-38 ANALYST: K. JUREK/ RICHARD SAMSON
SECURE AREA; D JOB#:U-4432,U-4442
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

SAMPLE NUMBER DC-SD-25

481095

Sample Number
DC-SD-25

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No: U-4432 / U 4442
Lab Sample ID No: 9663
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: C Bojtowicz
Date Sample Received: 11-6-86

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-14-86

Conc./Dil Factor: 2 pH 7.1

Percent Moisture: (Not Decanted) 52

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	4400u
74-83-9	Bromomethane	4400u
75-01-4	Vinyl Chloride	4400u
75-00-3	Chloroethane	4400u
75-09-2	Methylene Chloride	23000 B
67-64-1	Acetone	18000 B
75-15-0	Carbon Disulfide	2200u
75-35-4	1, 1-Dichloroethene	2200u
75-34-3	1, 1-Dichloroethane	2200u
156-60-5	Trans-1, 2-Dichloroethene	2200u
67-66-3	Chloroform	2200u
107-06-2	1, 2-Dichloroethane	2200u
78-93-3	2-Butanone	21000 B
71-55-6	1, 1, 1-Trichloroethane	2200u
56-23-5	Carbon Tetrachloride	2200u
108-05-4	Vinyl Acetate	4400u
75-27-4	Bromodichloromethane	2200u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	2200u
10061-02-6	Trans-1, 3-Dichloropropene	2200u
79-01-6	Trichloroethene	2200u
124-48-1	Dibromochloromethane	2200u
79-00-5	1, 1, 2-Trichloroethane	2200u
71-43-2	Benzene	2200u
10061-01-5	cis-1, 3-Dichloropropene	2200u
110-75-8	2-Chloroethylvinylether	4400u
75-25-2	Bromoform	2200u
108-10-1	4-Methyl-2-Pentanone	4400u
591-78-6	2-Hexanone	4400u
127-18-4	Tetrachloroethene	2200u
79-34-5	1, 1, 2, 2-Tetrachloroethane	2200u
108-88-3	Toluene	2200u
108-90-7	Chlorobenzene	2200u
100-41-4	Ethylbenzene	2200u
100-42-5	Styrene	2200u
	Total Xylenes	2200u

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-4432/U-4442

Sample Number DC-SD-25

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 11-12-86

Date Analyzed: 12-1-86

Conc/Dil Factor: 2

Percent Moisture (Decanted) 52

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	690	U
111-44-4	bis(-2-Chloroethyl)Ether	690	U
95-57-8	2-Chlorophenol	690	U
541-73-1	1 3-Dichlorobenzene	690	U
106-46-7	1 4-Dichlorobenzene	690	U
100-51-6	Benzyl Alcohol	690	U
95-50-1	1 2-Dichlorobenzene	690	U
95-48-7	2-Methylphenol	690	U
39638-32-9	bis(2-chloroisopropyl)Ether	690	U
106-44-5	4-Methylphenol	690	U
621-64-7	N-Nitroso-Di-n-Propylamine	690	U
67-72-1	Hexachloroethane	690	U
98-95-3	Nitrobenzene	690	U
78-59-1	Isophorone	690	U
88-75-5	2-Nitrophenol	690	U
105-67-9	2 4-Dimethylphenol	690	U
65-85-0	Benzoic Acid	3300	U
111-91-1	bis(-2-Chloroethoxy)Methane	690	U
120-83-2	2 4-Dichlorophenol	690	U
120-82-1	1 2 4-Trichlorobenzene	690	U
91-20-3	Naphthalene	690	U
106-47-8	4-Chloroaniline	690	U
87-68-3	Hexachlorobutadiene	690	U
59-50-7	4-Chloro-3-Methylphenol	690	U
91-57-6	2-Methylnaphthalene	690	U
77-47-4	Hexachlorocyclopentadiene	690	U
88-06-2	2 4 6-Trichlorophenol	690	U
95-95-4	2 4 5-Trichlorophenol	3300	U
91-58-7	2-Chloronaphthalene	690	U
88-74-4	2-Nitroaniline	3300	U
131-11-3	Dimethyl Phthalate	690	U
[illegible]-96-8	Acenaphthylene	690	U
[illegible]-09-2	3-Nitroaniline	3300	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	690	U
51-28-5	2 4-Dinitrophenol	3300	U
100-02-7	4-Nitrophenol	3300	U
132-64-9	Dibenzofuran	690	U
121-14-2	2 4-Dinitrotoluene	690	U
606-20-2	2 6-Dinitrotoluene	690	U
84-66-2	Diethylphthalate	690	U
7005-72-3	4-Chlorophenyl-phenylether	690	U
86-73-7	Fluorene	690	U
100-01-6	4-Nitroaniline	3300	U
534-52-1	4 6-Dinitro-2-Methylphenol	3300	U
86-30-6	N-Nitrosodiphenylamine (1)	690	U
101-55-3	4-Bromophenyl-phenylether	690	U
118-74-1	Hexachlorobenzene	690	U
87-86-5	Pentachlorophenol	3300	U
85-01-8	Phenanthrene	690	U
120-12-7	Anthracene	690	U
84-74-2	Di-n-Butylphthalate	130	J
206-44-0	Fluoranthene	690	U
129-00-0	Pyrene	690	U
85-68-7	Butylbenzylphthalate	690	U
91-94-1	3 3-Dichlorobenzidine	1400	U
56-55-3	Benzo(a)Anthracene	690	U
117-81-7	bis(2-Ethylhexyl)Phthalate	690	U
218-01-9	Chrysene	690	U
117-84-0	Di-n-Octyl Phthalate	690	U
205-99-2	Benzo(b)Fluoranthene	690	U
207-08-9	Benzo(k)Fluoranthene	690	U
50-32-8	Benzo(a)Pyrene	690	U
193-39-5	Indeno(1 2 3-cd)Pyrene	690	U
53-70-3	Dibenz(a h)Anthracene	690	U
191-24-2	Benzo(g h i)Perylene	690	U

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No U-4432/U-4442

Sample Number DC-SD-25

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-12-86

Date Analyzed 11-19-86

Conc/Dil Factor 25

Percent Moisture (decanted) 52

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	400 u
319-85-7	Beta-BHC	400 u
319-86-8	Delta-BHC	400 u
58-89-9	Gamma-BHC (Lindane)	400 u
76-44-8	Heptachlor	400 u
309-00-2	Aldrin	400 u
1024-57-3	Heptachlor Epoxide	400 u
959-98-8	Endosulfan I	400 u
60-57-1	Dieldrin	580
72-55-9	4,4'-DDE	800 u
72-20-8	Endrin	800 u
33213-65-9	Endosulfan II	800 u
72-54-8	4,4'-DDD	800 u
1031-07-8	Endosulfan Sulfate	800 u
50-29-3	4,4'-DDT	800 u
72-43-5	Methoxychlor	4000 u
53494-70-5	Endrin Ketone	800 u
57-74-9	Chlordane	4000 u
8001-35-2	Toxaphene	8000 u
12674-11-2	Aroclor-1016	4000 u
11104-28-2	Aroclor-1221	4000 u
11141-16-5	Aroclor-1232	4000 u
53469-21-9	Aroclor-1242	4000 u
12672-29-6	Aroclor-1248	4000 u
11097-69-1	Aroclor-1254	8000 u
11096-82-5	Aroclor-1260	8000 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-4432 / u 4442

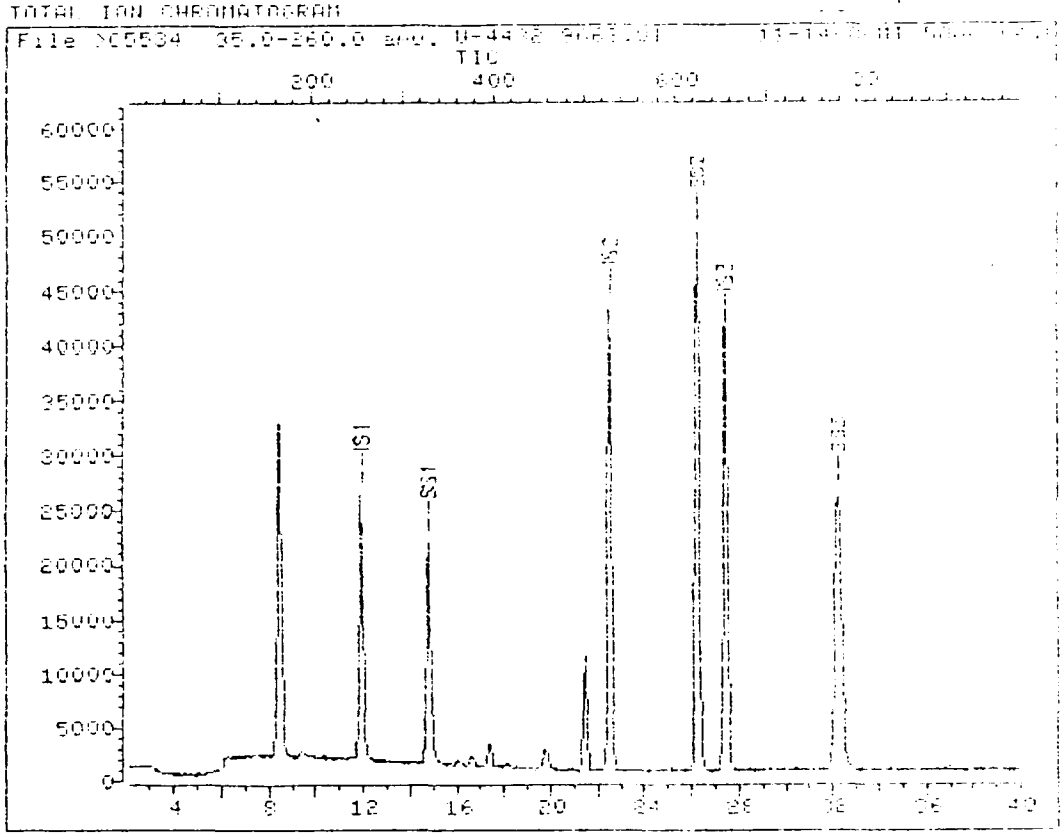
Sample Number DC-SD-25

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.4 min	1000 BJ
2.	Unknown Ketone	VOA	19.7 min	630 BJ
3.	Hexane isomer	VOA	21.4 min	3200 BJ
4.				
5.	UNKNOWN	BNA	8.6	3600 J
6.	UNKNOWN HYDROCARBON	|	27.5	1700 BJ
7.	UNKNOWN	|	30.8	3500 BJ
8.	UNKNOWN	|	35.0	1400 BJ
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

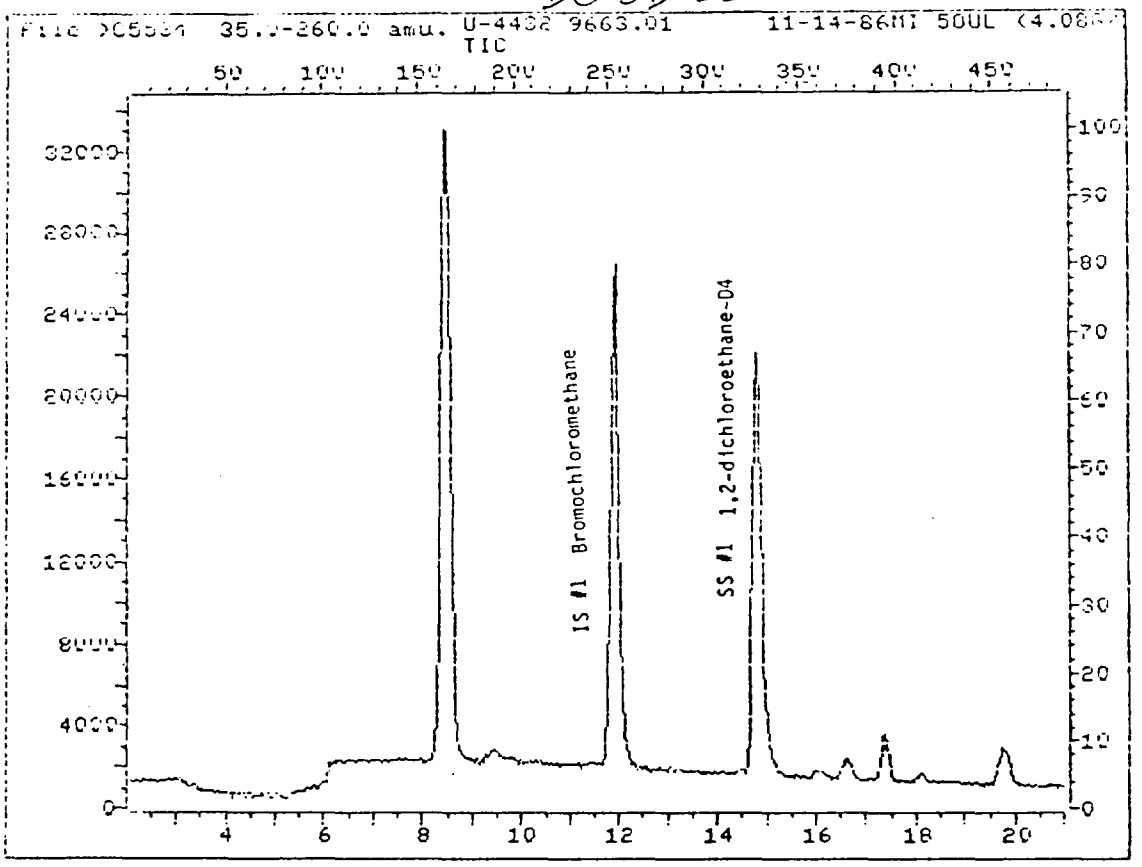


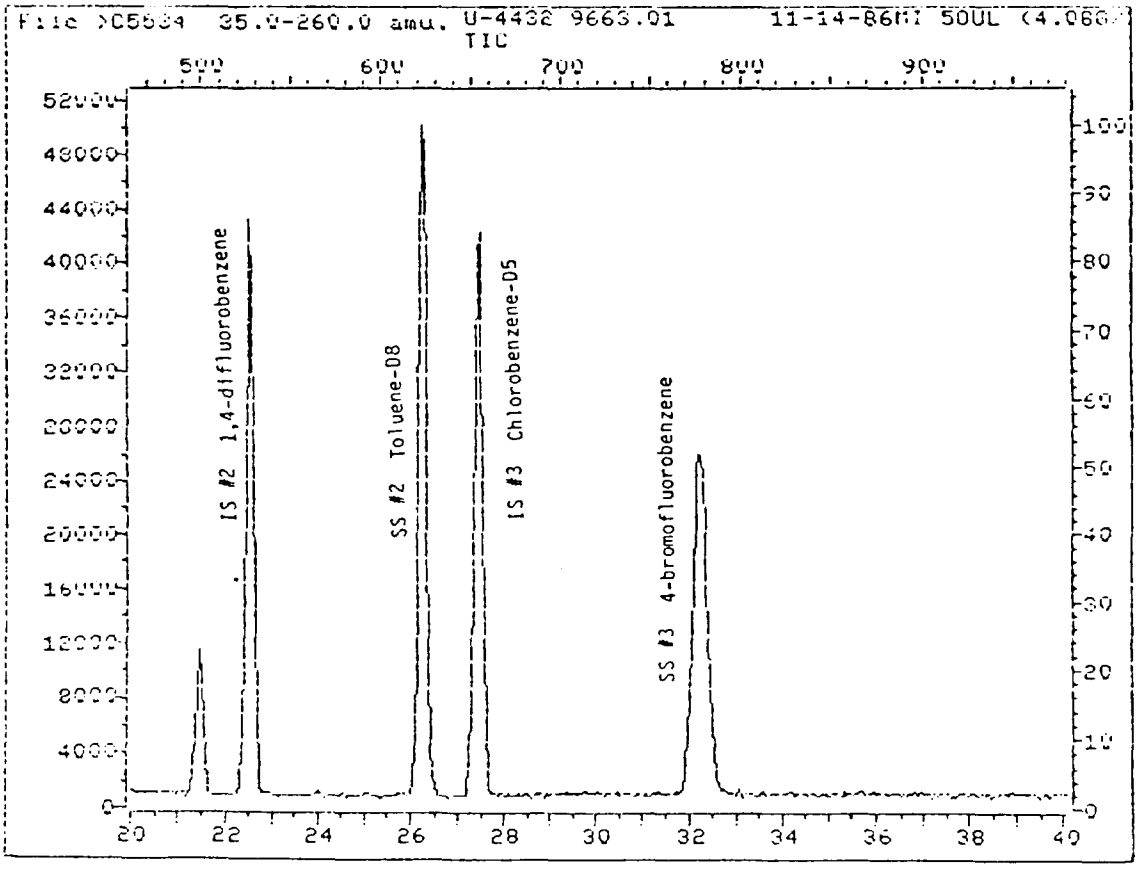
Data File: [illegible]::D3
Name: U-4432 9663.01 JC-SD-25
Misc: 11-14-86HI 500UL [illegible]

Id File: VOAUR::D2
Title: VOA ID FILE FOR [illegible]
Last Calibration: 861114 21:[illegible]

Operator ID: USER8
Quant Time: 861114 23:53
Injected at: 861114 23:12

DC-SD-25


File DC5584 35.0-260.0 amu. U-4432 9663.01 11-14-86MI 50UL (4.068)
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File DC5584 35.0-260.0 amu. U-4432 9663.01 11-14-86MI 50UL (4.068)
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

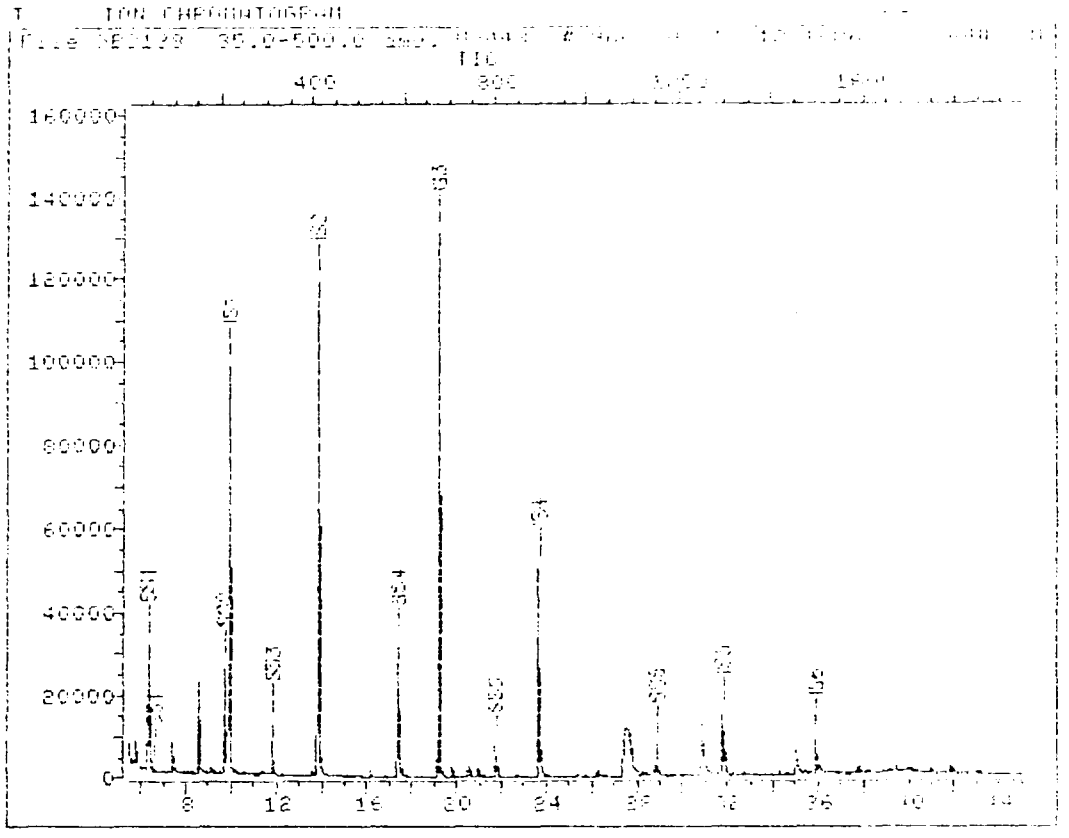
[illegible]

Operator ID: USER8 Unique Mem: [illegible] Acquired Time: 861114 [illegible]
Output File: ^C5534::D2 Injected At: 861114 [illegible]
Data File: >C5534::D3 Dilution Factor: 1.00
Name: U-4432 9663.01 DC-SD-25
Misc: 11-14-86MI 50UL (4.08G/100ML) + 10UL [illegible]

ID File: VOACP::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861114 21:27

	Compound		m/z	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.93	[illegible]	40[illegible]	50.00	UG/L	100
6)	METHYLENE CHLORIDE		84	8.44	164	85880	45.42	UG/L	100
7)	ACETONE		43	9.41	187	9486	34.39	UG/L	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.80	328	84043	49.78	UG/L	89
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.51	522	192220	50.00	UG/L	100
17)	2-BUTANONE		72	14.91	331	5844	40.23	UG/L	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.41	653	143255	50.00	UG/L	100
36)	TOLUENE-D8	(SURR)	98	26.24	622	205146	49.91	UG/L	95
40)	4-BROMOFLUOROBENZENE	(SURR)	95	32.22	777	101858	49.85	UG/L	100

* Compound is ISTD

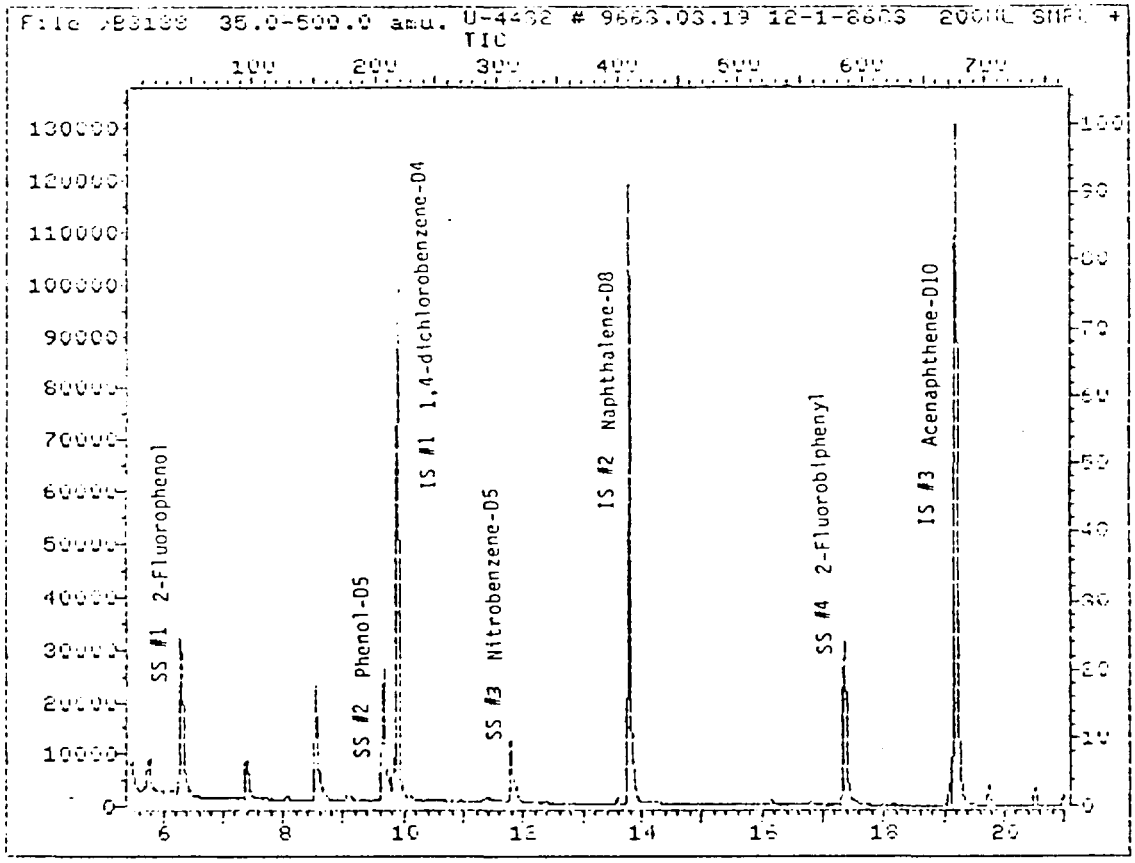


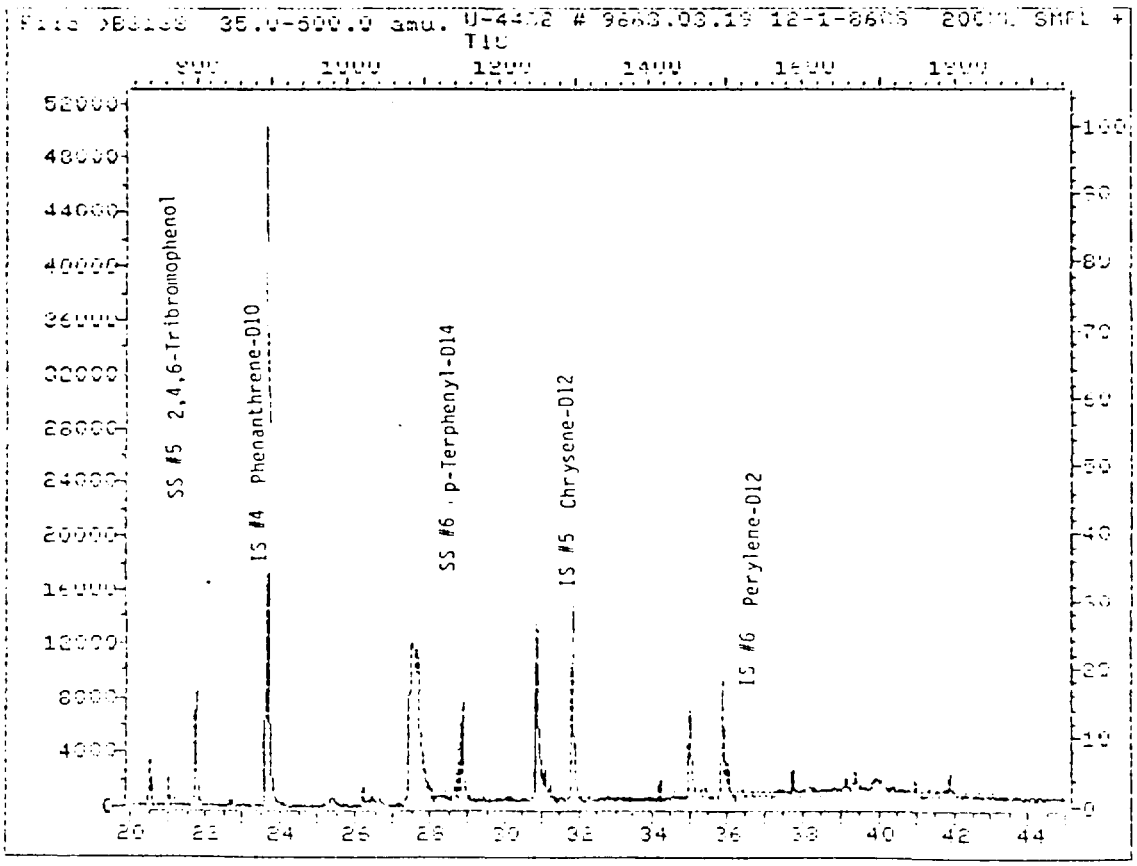
Data File: >D:138::04
Name: U-4432 # 9663.03.19 DC-SD-25
Misc: 12-1-86US 200UL SNPL

Id File: BNABR::02
Title: BNA ID FILE FOR THE HP
Last Calibration: 861201 13:31

Operator ID: USER6
Quant Time: 861201 16:20
Injected at: 861201 14:52

DC-SD-25


File XB3100 35.0-500.0 amu. U-4402 # 9663.03.19 12-1-86DS 200ML SMPL +
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 XB3100 35.0-500.0 amu. U-4402 # 9663.03.19 12-1-86DS 200ML 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

[illegible]

erator ID: USEM6 Quant Meth: 4 Quant Time: 861201 15:20
utput File: ^B3138::U2 Injected at: 861201 14:32
ata File: >B3138::D4 Dilution Factor: 2.00
ame: U-4432 # 9663.03.19 DC-SD-25
isc: 12-1-86CS 200UL SNPL + 200UL MB112 + 40UL IS 1000

D File: BNABR::U2
itle: BNA ID FILE FOR THE HP 5970 (B)
ast Calibration: 861201 13:31

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	11.89	212	494[illegible]	[illegible].00	UG/L	87
2)	PHENOL-D5	(SURR)	99	9.66	187	32054	58.02	UG/L	92
5)	2-FLUOROPHENOL	(SURR)	112	6.29	41	23684	61.[illegible]	UG/L	98
6)	~~2-FLUOROPHENOL~~	~~(SURR)~~	~~112~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~96~~
7)	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
8)	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
9)	~~BIS(2-CHLOROETHYL)ETHER~~		~~93~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
10)	~~BIS(2-CHLOROETHOXY)METHANE~~		~~93~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
11)	~~BIS(2-CHLOROETHYL)ETHER~~		~~93~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
12)	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~85~~
13)	*NAPHTHALENE-D8	(IS)	136	13.79	410	171886	40.00	UG/L	100
14)	NITROBENZENE-D5	(SURR)	82	11.80	312	1[illegible]	54.42	UG/L	97
15)	*ACENAPHTHENE-D10	(IS)	162	17.20	6[illegible]	[illegible]	[illegible].00	UG/L	99
16)	2-FLUOROBIPHENYL	(SURR)	172	17.[illegible]	5[illegible]	[illegible]	[illegible].50	UG/L	99
17)	~~DIMETHYL PHTHALATE~~		~~1[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
18)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.[illegible]	799	[illegible]	[illegible].00	UG/L	93
19)	~~2,4-DINITROTOLUENE~~		~~165~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
20)	~~2,6-DINITROTOLUENE~~		~~165~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
21)	*PHENANTHRENE-D10	(IS)	188	23.63	894	[illegible]	[illegible].00	UG/L	91
22)	DI-N-BUTYLPHTHALATE		149	26.21	1021	[illegible]	[illegible].92	UG/L	99
23)	*CHRYSENE-D12	(IS)	240	41.80	1796	[illegible]	[illegible].00	UG/L	100
24)	TERPHENYL-D14	(SURR)	244	28.35	1151	[illegible]	[illegible].55	UG/L	100
25)	*PERYLENE-D12	(IS)	264	35.89	1[illegible]	[illegible]	[illegible].00	UG/L	100
26)	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~

No GPC

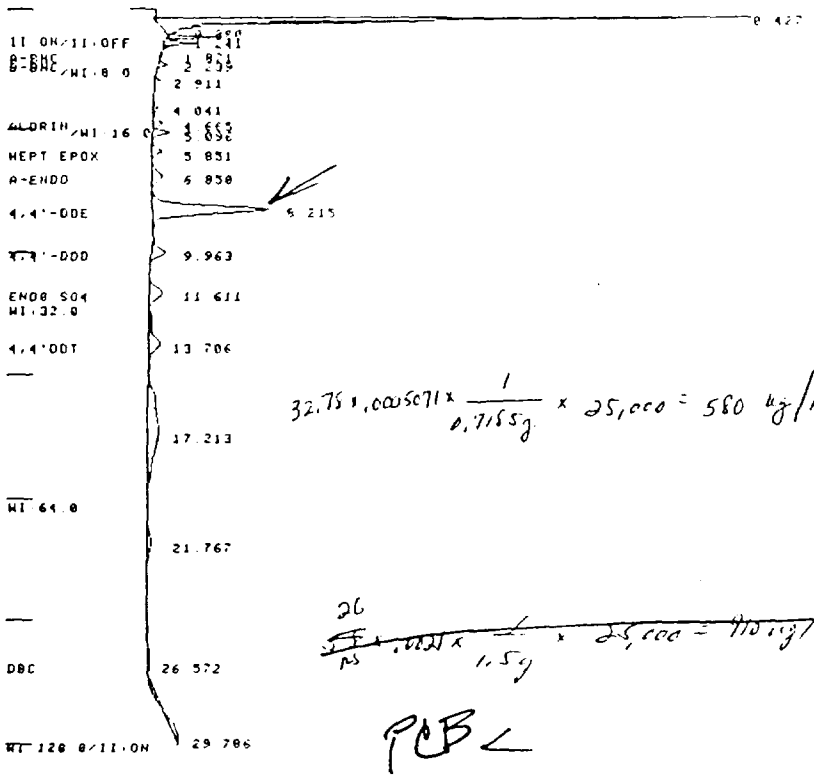
No GPC

No GPC

* Compound is ISTD

2777

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



$32.75 \times 1.0005071 \times \frac{1}{0.7155g} \times 25{,}000 = 580\ \mu g/kg$ DIELDRIN

~~$\frac{26}{15} \times 1.0001 \times \frac{1}{1.5g} \times 25{,}000 = 410\ \mu g/kg$ DIELDRIN~~ NO

PCB

DC-SD-25

CHANNEL: 1A - 1 TITLE: RUN#35 20:46 19 NOV 86

SAMPLE: 9663.03.19A1 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	1.402		22491	VV	3.31
2	~~ALDRIN~~	18.5650	4.565	-0.005	22638	VV	15.06
3		0.0000	4.896		[illegible]	VV	10.94
4	~~HEPT EPOX~~	21.0106	5.851	0.181	[illegible]	VV	17.06
5	~~A-ENDO~~	35.3360	6.850	-0.150	[illegible]	VV	28.31
6	DIELDRIN	277.0897	5.215	0.025	[illegible]	VB	20.13
7	~~4,4'-DDE~~	40.7687	9.963	-0.197	39951	BB	19.75
8	~~ENDO SO4~~	69.6383	11.611	-0.299	[illegible]	BB	31.56
9	~~4,4'DDT~~	109.4037	13.706	0.446	[illegible]	BB	33.13
10		0.0000	17.213		[illegible]	BB	7143.81
11		0.0000	21.767		37905	BB	50.81

TOTALS: 571.8200 -0.029 877297

DETECTED PKS: 26 REJECTED PKS: 15

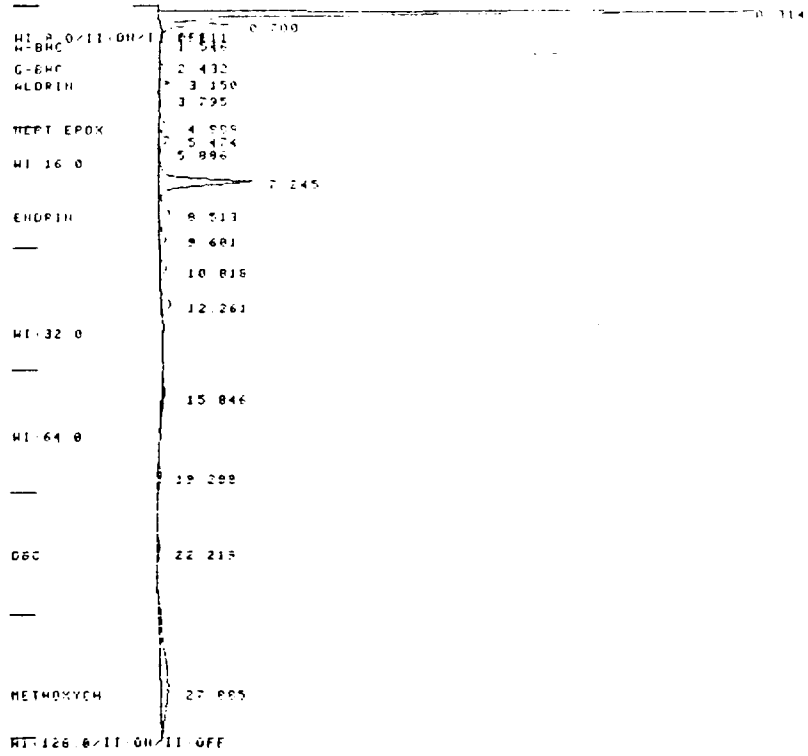
DIVISOR: 1.50000 MULTIPLIER: 25000.0000

NOISE: 251.4 OFFSET: 13

NOTES:
NOTEBOOK: 259-38 ANALYST: K. J PERK/ RICHARD SANCON
SECURE AREA: D JOB#:U-4432,U-4442
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 SL-172

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



DC-SD-25

CHANNEL: 1B - 1 TITLE: RUN# 18 21:31 21 NOV 85

SAMPLE: 9663. METHOD: FEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT ~~UG/KG~~	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1	~~ALDRIN~~	0.0000	3.150	0.000	28424	BB	8.44
2	~~HEPT EPOX~~	0.0000	4.899	-0.211	20787	BV	? 18.19
3	DIELDRIN	0.0000	5.471		59864	VV	18.94
4	~~4,4' DDE~~	0.0000	7.245	0.435	484201	BV	17.81
5	~~ENDRIN~~	0.0000	8.513	-0.297	71026	VV	22.31
6		0.0000	9.601		47729	VV	23.25
7	~~4,4' DDD~~	0.0000	10.816	0.398	48194	VV	23.13
8	~~E ENDOSUL~~	0.0000	12.261	0.621	70859	VB	? 34.94
9		0.0000	15.846		42345	BB	? 74.44
10		0.0000	19.208		27990	BB	37.75
11	~~DDD~~	0.0000	22.219	-0.091	26510	BV	40.00
12	METHOXYCH	0.0000	27.885	0.355	348055	VB	7244.63

TOTALS: 0.0000 1.200 1283803

DETECTED PKS: 29 REJECTED PKS: 17

DIVISOR: 1.50000 MULTIPLIER: 25000.0000

NOISE: 69.6 OFFSET: -16

NOTES:
NOTEBOOK:259-40 ANALYST:RICHARD SAMSON
SECURE AREA: D JOB #U-4422(U-4442
INST: VARIAN 6000#2 @ ECD (ON) ATT:16
COLUMN: 6' GLASS 4MM ID (20/100 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 CREE-5[illegible]

SAMPLE NUMBER DC-SD-26

481095

Sample Number
DC-SD-26

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No: U-4432/U-4442
Lab Sample ID No: 9664
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: [signature]
Date Sample Received: 11-6-86

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-14-86

Conc/Dil Factor: 2 pH 7.4

Percent Moisture: (Not Decanted) 36

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	3400u
74-83-9	Bromomethane	3400u
75-01-4	Vinyl Chloride	3400u
75-00-3	Chloroethane	3400u
75-09-2	Methylene Chloride	19000 B
67-64-1	Acetone	9800 B
75-15-0	Carbon Disulfide	1700u
75-35-4	1, 1-Dichloroethene	1700u
75-34-3	1, 1-Dichloroethane	1700u
156-60-5	Trans-1, 2-Dichloroethene	1700u
67-66-3	Chloroform	1700u
107-06-2	1, 2-Dichloroethane	1700u
78-93-3	2-Butanone	16000 B
71-55-6	1, 1, 1-Trichloroethane	1700u
56-23-5	Carbon Tetrachloride	1700u
108-05-4	Vinyl Acetate	3400u
75-27-4	Bromodichloromethane	1700u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	1700u
10061-02-6	Trans-1, 3-Dichloropropene	1700u
79-01-6	Trichloroethene	1700u
124-48-1	Dibromochloromethane	1700u
79-00-5	1, 1, 2-Trichloroethane	1700u
71-43-2	Benzene	1700u
10061-01-5	cis-1, 3-Dichloropropene	1700u
110-75-8	2-Chloroethylvinylether	3400u
75-25-2	Bromoform	1700u
108-10-1	4-Methyl-2-Pentanone	3400u
591-78-6	2-Hexanone	3400u
127-18-4	Tetrachloroethene	1700u
79-34-5	1, 1, 2, 2-Tetrachloroethane	1700u
108-88-3	Toluene	1700u
108-90-7	Chlorobenzene	1700u
100-41-4	Ethylbenzene	1700u
100-42-5	Styrene	1700u
	Total Xylenes	1700u

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-4432 / V-4442

Sample Number DC-SD-26

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 11-12-86

Date Analyzed 11-21-86

Conc/Dil Factor: 2

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	520	U
111-44-4	bis(-2-Chloroethyl)Ether	520	U
95-57-8	2-Chlorophenol	520	U
541-73-1	1 3-Dichlorobenzene	520	U
106-46-7	1 4-Dichlorobenzene	520	U
100-51-6	Benzyl Alcohol	520	U
95-50-1	1 2-Dichlorobenzene	520	U
95-48-7	2-Methylphenol	520	U
39638-32-9	bis(2-chloroisopropyl)Ether	520	U
106-44-5	4-Methylphenol	520	U
621-64-7	N-Nitroso-Di-n-Propylamine	520	U
67-72-1	Hexachloroethane	520	U
98-95-3	Nitrobenzene	520	U
78-59-1	Isophorone	520	U
88-75-5	2-Nitrophenol	520	U
105-67-9	2 4-Dimethylphenol	520	U
65-85-0	Benzoic Acid	2500	U
111-91-1	bis(-2-Chloroethoxy)Methane	520	U
120-83-2	2 4-Dichlorophenol	520	U
120-82-1	1 2 4-Trichlorobenzene	520	U
91-20-3	Naphthalene	520	U
106-47-8	4-Chloroaniline	520	U
87-68-3	Hexachlorobutadiene	520	U
59-50-7	4-Chloro-3-Methylphenol	520	U
91-57-6	2-Methylnaphthalene	520	U
77-47-4	Hexachlorocyclopentadiene	520	U
88-06-2	2 4 6-Trichlorophenol	520	U
95-95-4	2 4 5-Trichlorophenol	2500	U
91-58-7	2-Chloronaphthalene	520	U
88-74-4	2-Nitroaniline	2500	U
131-11-3	Dimethyl Phthalate	520	U
[illegible]8-96-8	Acenaphthylene	520	U
[illegible]-09-2	3-Nitroaniline	2500	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	520	U
51-28-5	2 4-Dinitrophenol	2500	U
100-02-7	4-Nitrophenol	2500	U
132-64-9	Dibenzofuran	520	U
121-14-2	2 4-Dinitrotoluene	520	U
606-20-2	2 6-Dinitrotoluene	520	U
84-66-2	Diethylphthalate	520	U
7005-72-3	4-Chlorophenyl-phenylether	520	U
86-73-7	Fluorene	520	U
100-01-6	4-Nitroaniline	2500	U
534-52-1	4 6-Dinitro-2-Methylphenol	2500	U
86-30-6	N-Nitrosodiphenylamine (1)	520	U
101-55-3	4-Bromophenyl-phenylether	520	U
118-74-1	Hexachlorobenzene	520	U
87-86-5	Pentachlorophenol	2500	U
85-01-8	Phenanthrene	520	U
120-12-7	Anthracene	520	U
84-74-2	Di-n-Butylphthalate	79	J
206-44-0	Fluoranthene	130	J
129-00-0	Pyrene	120	J
85-68-7	Butylbenzylphthalate	520	U
91-94-1	3 3'-Dichlorobenzidine	1000	U
56-55-3	Benzo(a)Anthracene	520	U
117-81-7	bis(2-Ethylhexyl)Phthalate	72	J
218-01-9	Chrysene	83	J
117-84-0	Di-n-Octyl Phthalate	520	U
205-99-2	Benzo(b)Fluoranthene	200	J
207-08-9	Benzo(k)Fluoranthene	520	U
50-32-8	Benzo(a)Pyrene	86	J
193-39-5	Indeno(1 2 3-cd)Pyrene	100	J
53-70-3	Dibenz(a h)Anthracene	520	U
191-24-2	Benzo(g h i)Perylene	91	J

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No U-4432 / U-4442

Sample Number DC-SD-26

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-12-86

Date Analyzed 11-19-86

Conc/Dil Factor 10

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

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 30 V_t 1000 V_i 4

Laboratory Name ecology and environment, inc.

Case No u-4432 / u-4442

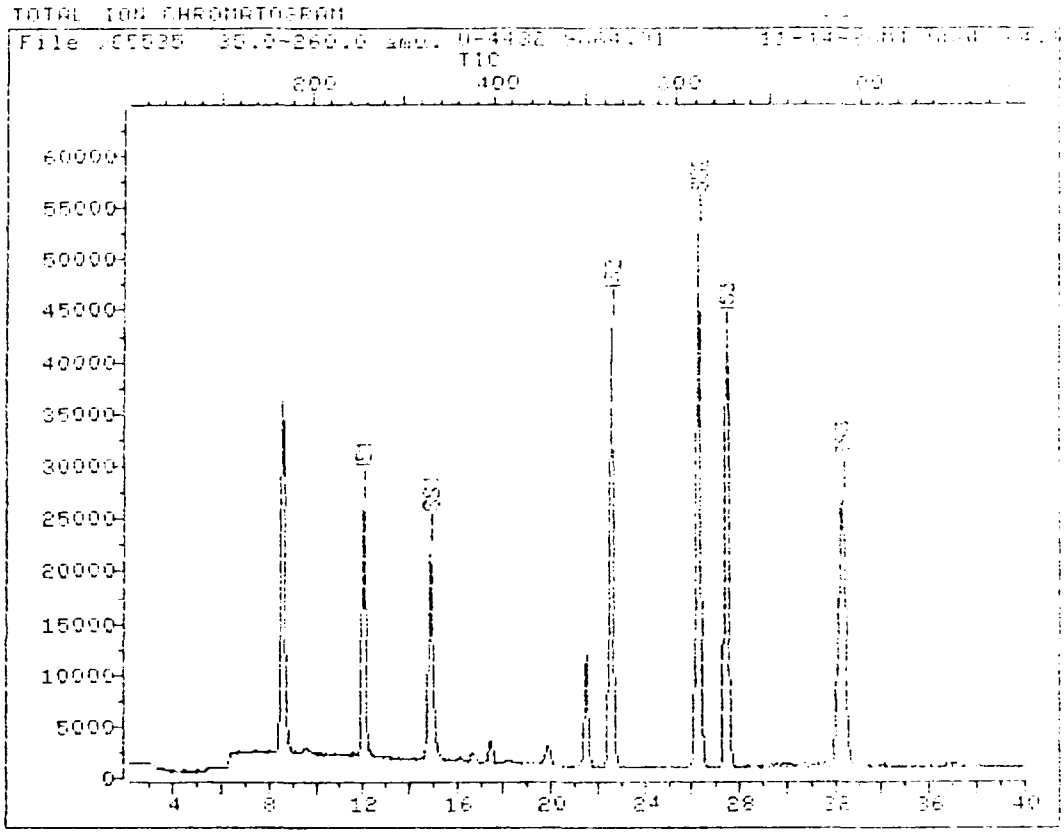
Sample Number DC-SD-26

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.5 min	780 BJ
2.	Unknown Ketone	VOA	19.8 min	520 BJ
3.	Hexane isomer	VOA	21.5 min	2400 BJ
4.				
5.	UNKNOWN	BNA	8.6	2800 J
6.	UNKNOWN HYDROCARBON		27.5	880 BJ
7.	UNKNOWN		30.9	2800 BJ
8.	UNKNOWN		35.0	1500 BJ
9.	UNKNOWN HYDROCARBON		37.8	190 J
10.	UNKNOWN		39.2	100 J
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30				

TOTAL ION CHROMATOGRAM

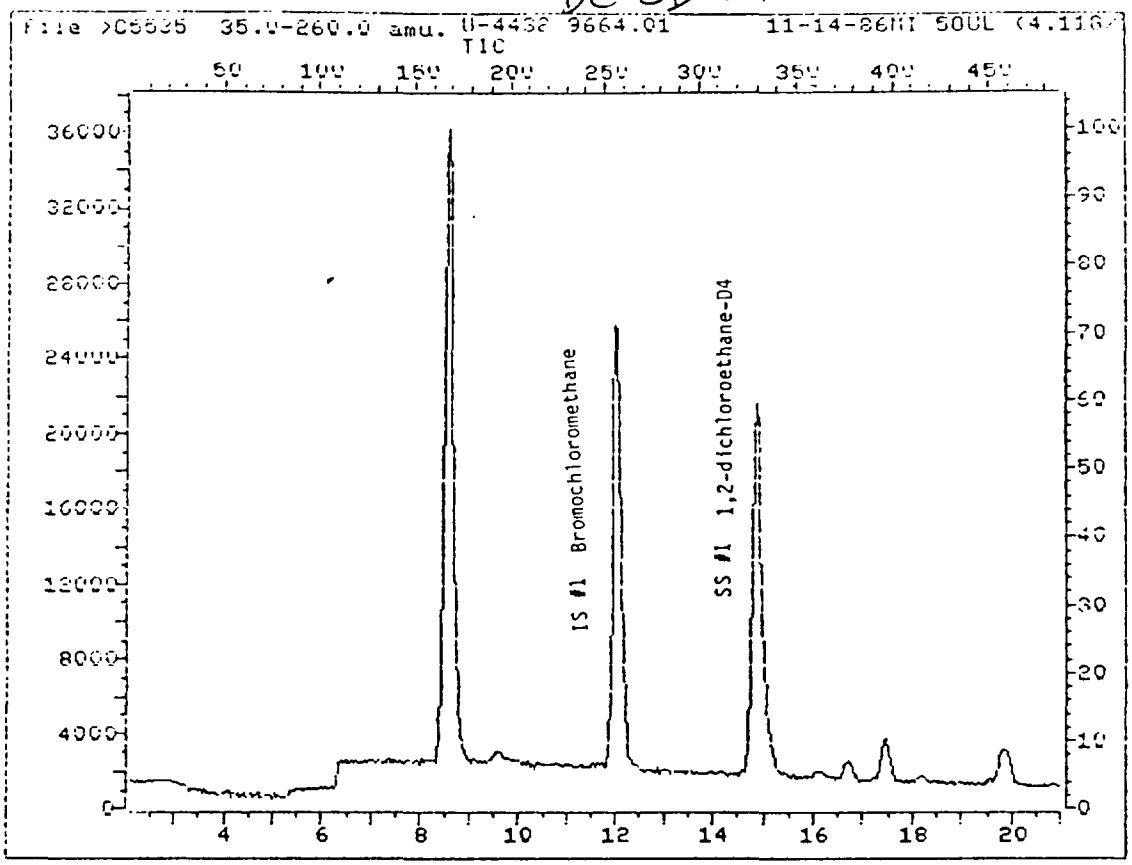


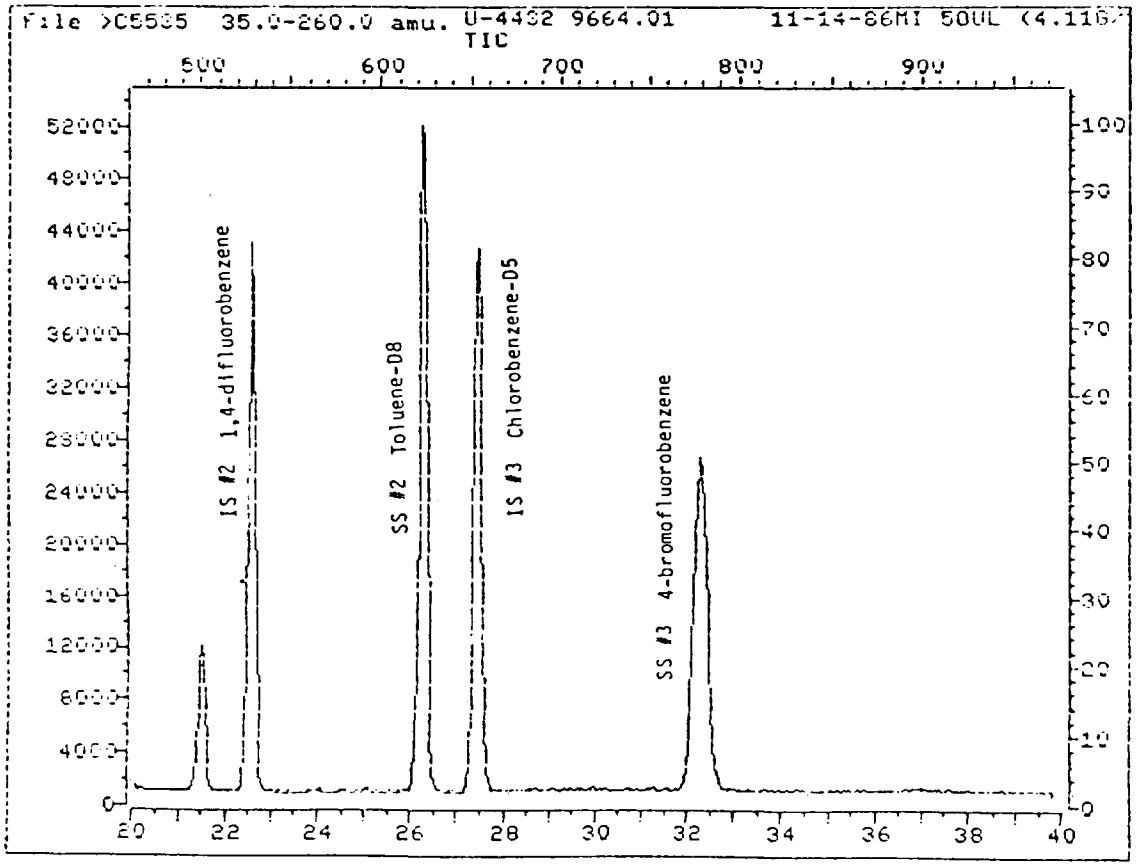
Data File: >C5535::U3
Name: U-4432 9664.01 DC-SD-26
Misc: 11-14-86M! 50UL (4.1% 1MMLS) + 1[illegible]

Id File: VOAUR::U2
Title: VOA ID FILE FOR HP-5[illegible] (CONT. [illegible]
Last Calibration: 861114 21:[illegible]

Operator ID: USEP8
Quant Time: 861115 13:4[illegible]
Injected at: 861115 00:04

DC-SD-26


File >C5535 35.0-260.0 amu. U-4432 9664.01 11-14-86MI 50UL (4.116)
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File >C5535 35.0-260.0 amu. U-4432 9664.01 11-14-86MI 50UL (4.116)
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

QUANT REPORT

Operator ID: USEP8 Quant Rev: 4 Quant Time: 861115 12:49
Output File: ^D5535::D2 Injected at: 861115 00:04
Data File: ^D5535::D3 Dilution Factor: 1.00
Name: U-4432 9664.01 DC-SD-26
Misc: 11-14-86M1 500UL (4.116/100LS) + 100UL IS/SS

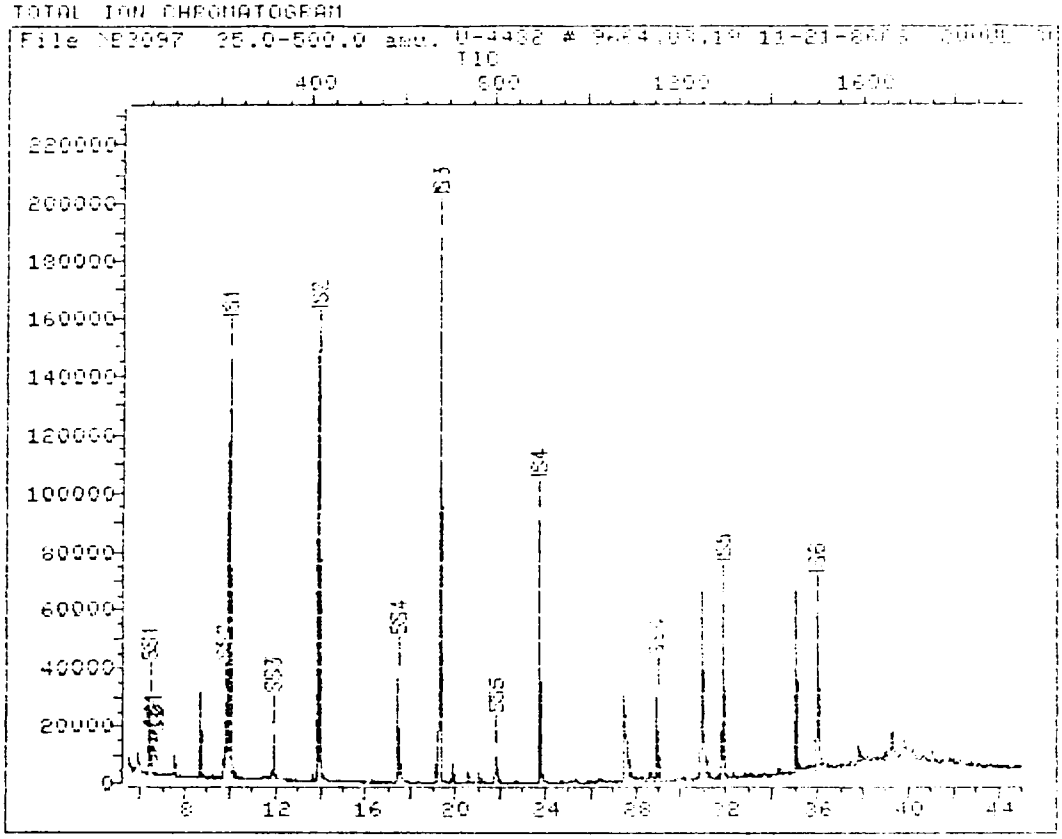
ID File: VOALR::D2
Title: V04 ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861114 21:27

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	12.00	256	39153	50.00	UG/L	100
6)	METHYLENE CHLORIDE		84	8.59	168	92040	49.51	UG/L	100
7)	ACETONE		43	9.60	192	6890	25.70	UG/L	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.87	310	83369	50.29	UG/L	89
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.55	528	189898	50.00	UG/L	100
17)	2-BUTANONE		72	15.93	334	5943	41.55	UG/L	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.41	653	149697	50.00	UG/L	100
36)	TOLUENE-D8	(SURR)	98	26.24	623	215126	51.46	UG/L	96
40)	4-BROMOFLUOROBENZENE	(SURR)	95	32.30	779	103300	49.71	UG/L	100

* Compound is ISTD

* Compound is ISTD

TOTAL ION CHROMATOGRAM

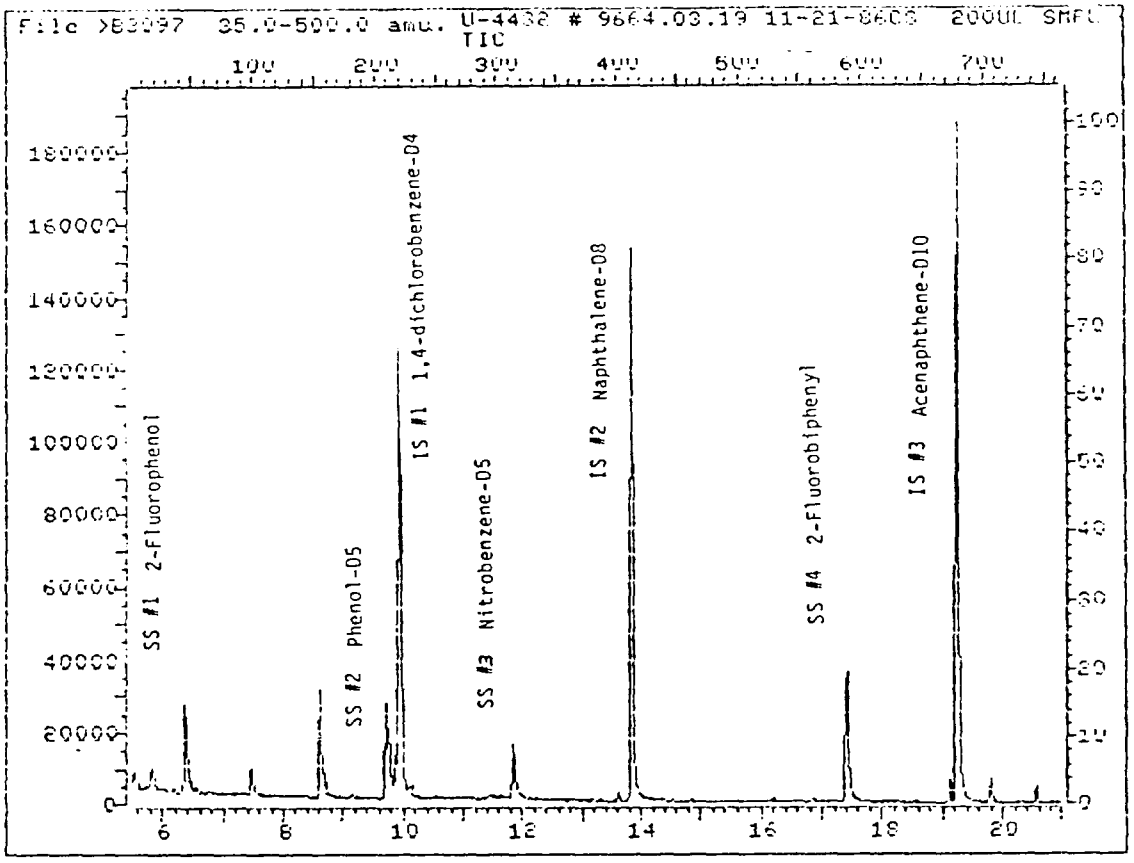


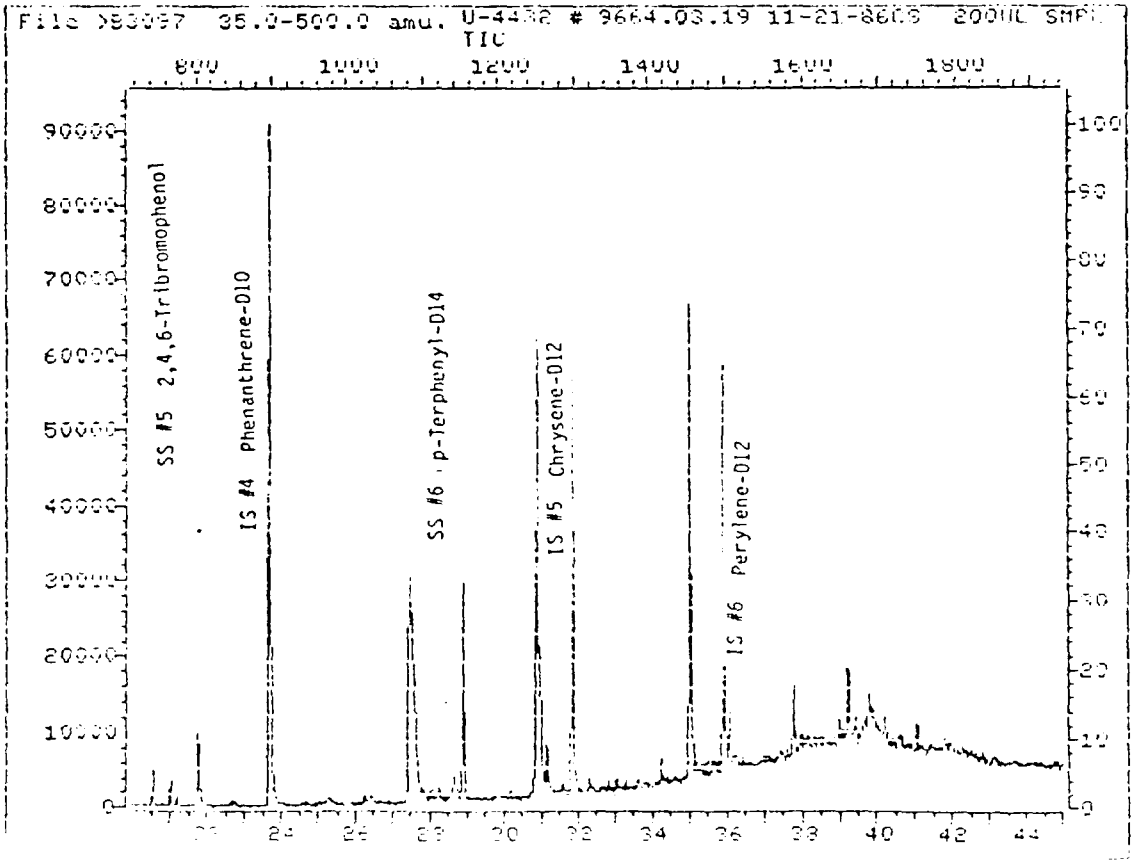
Data File: >B3097::D4
Name: U-4432 # 9664.03.19 DC-SD-26
Misc: 11-21-86CS 200UL SMPL + 200UL MLWL2 + 50L IS

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861121 14:38

Operator ID: USER8
Quant Time: 861121 19:57
Injected at: 861121 19:10

DC-SD-26


File >83097 35.0-500.0 amu. U-4432 # 9664.03.19 11-21-86
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 >83097 35.0-500.0 amu. U-4432 # 9664.03.19 11-21-86
TIC
SS #5 2,4,6-Tribromophenol
IS #4 Phenanthrene-D10
SS #6 p-Terphenyl-D14
IS #5 Chrysene-D12
IS #6 Perylene-D12

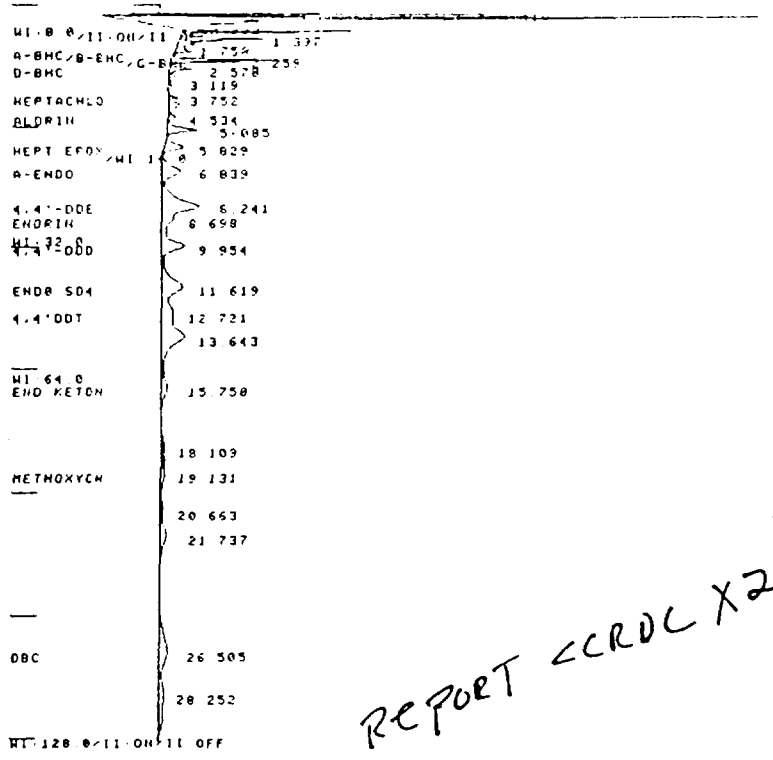
[illegible] REPORT

perator ID: USER8 Quant Pos: 4 Quant Time: 861121 19:5[illegible]
utput File: ^B3092::02 Injected at: 861121 19:10
at File: ^B3092::04 Dilution Factor: 2.00
amp U-4432 # 9664.03.19 DC-SD-26
ec: 11-21-86DS 200UL SMPL + 200UL HEXE + ~~50UL~~ IS 4ul

J File: BNABP::02
itle: BNA ID FILE FOR THE HP 5970 (B)
ast Calibration: 861121 14:38

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.96	221	70388	40.00	UG/L	86
2)	PHENOL-D5	(SURR)	99	9.71	209	46695	37.44	UG/L	89
3)	2-FLUOROPHENOL	(SURR)	112	6.36	44	25028	27.78	UG/L	81
4)	~~2-FLUOROPHENOL~~	~~(SURR)~~	~~112~~	~~6.52~~	~~52~~	~~730~~	~~.02~~	~~UG/L~~	80
5)	~~2-FLUOROPHENOL~~	~~(SURR)~~	~~112~~	~~6.58~~	~~55~~	~~641~~	~~.64~~	~~UG/L~~	89
6)	~~2-FLUOROPHENOL~~	~~(SURR)~~	~~112~~	~~6.70~~	~~61~~	~~433~~	~~.42~~	~~UG/L~~	74
14)	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~10.83~~	~~2[illegible]~~	~~265~~	~~.14~~	~~UG/L~~	100
14)	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~10.99~~	~~262~~	~~661~~	~~.34~~	~~UG/L~~	100
14)	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~10.99~~	~~2[illegible]~~	~~968~~	~~.49~~	~~UG/L~~	100
4)	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~11.12~~	~~281~~	~~[illegible]~~	~~.37~~	~~UG/L~~	100
4)	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~11.54~~	~~292~~	~~402~~	~~.21~~	~~UG/L~~	100
2)	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.05~~	~~314~~	~~2[illegible]~~	~~5.40~~	~~UG/L~~	91
9)	*NAPHTHALENE-D8	(IS)	136	13.84	412	238985	40.00	UG/L	100
1)	NITROBENZENE-D5	(SURR)	82	11.85	314	19966	19.68	UG/L	93
2)	~~1,2,4-TRICHLOROBENZENE~~		~~180~~	~~13.00~~	~~411~~	~~[illegible]~~	~~.40~~	~~UG/L~~	100
4)	*ACENAPHTHENE-D10	(IS)	162	19.25	678	108347	40.00	UG/L	99
3)	2-FLUOROBIPHENYL	(SURR)	172	17.42	588	49772	22.33	UG/L	94
1)	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.13~~	~~6[illegible]~~	~~445~~	~~.21~~	~~UG/L~~	100
1)	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.25~~	~~6[illegible]~~	~~[illegible]~~	~~1[illegible].05~~	~~UG/L~~	100
3)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.77	802	8443	24.22	UG/L	96
1)	~~2,4-DINITROTOLUENE~~		~~165~~	~~20.62~~	~~7[illegible]~~	~~[illegible]~~	~~1.82~~	~~UG/L~~	100
2)	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.25~~	~~6[illegible]~~	~~1[illegible]~~	~~35.08~~	~~UG/L~~	100
5)	*PHENANTHRENE-D10	(IS)	188	23.68	896	153163	40.00	UG/L	91
3)	DI-N-BUTYLPHTHALATE		149	26.24	1022	2862	1.52	UG/L	96
4)	FLUORANTHENE		202	27.42	1080	3085	2.42	UG/L	95
5)	*CHRYSENE-D12	(IS)	240	31.83	1297	80331	40.00	UG/L	100
2)	PYRENE		202	28.05	1111	2869	2.21	UG/L	96
3)	TERPHENYL-D14	(SURR)	244	28.88	1152	25879	31.67	UG/L	100
1)	~~BENZO(A)ANTHRACENE~~		~~228~~	~~31.92~~	~~1301~~	~~1645~~	~~1.64~~	~~UG/L~~	89
2)	BIS(2-ETHYLHEXYL)PHTHALATE		149	32.81	1345	1205	1.38	UG/L	89
3)	CHRYSENE		228	31.92	1301	1645	1.59	UG/L	91
4)	*PERYLENE-D12	(IS)	264	35.92	1498	76455	40.00	UG/L	100
5)	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~34.64~~	~~1[illegible]~~	~~[illegible]~~	~~.52~~	~~UG/L~~	100
1)	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~35.03~~	~~1[illegible]~~	~~[illegible]~~	~~.51~~	~~UG/L~~	100
5)	BENZO(B)FLUORANTHENE		252	34.99	1452	3677	3.77	UG/L	100
7)	~~BENZO(B)FLUORANTHENE~~		~~252~~	~~35.35~~	~~1468~~	~~[illegible]~~	~~.25~~	~~UG/L~~	100
2)	~~BENZO(K)FLUORANTHENE~~		~~252~~	~~34.99~~	~~1452~~	~~[illegible]~~	~~2.26~~	~~UG/L~~	100
3)	~~BENZO(K)FLUORANTHENE~~		~~252~~	~~35.35~~	~~1[illegible]~~	~~[illegible]~~	~~.22~~	~~UG/L~~	100
3)	~~BENZO(A)PYRENE~~		~~252~~	~~36.24~~	~~1[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	100
3)	BENZO(A)PYRENE		252	35.78	1491	1625	1.65	UG/L	100
3	~~BENZO(A)PYRENE~~		~~252~~	~~35.96~~	~~1[illegible]~~	~~461~~	~~[illegible]~~	~~UG/L~~	100
1)	~~INDENO(1,2,3-CD)PYRENE~~		~~276~~	~~38.78~~	~~1[illegible]~~	~~[illegible]~~	~~.08~~	~~UG/L~~	100
9)	INDENO(1,2,3-CD)PYRENE		276	38.57	1608	1830	2.03	UG/L	100
1)	~~DIBENZ(A,H)ANTHRACENE~~		~~278~~	~~38.[illegible]~~	~~1[illegible]~~	~~[illegible]~~	~~.[illegible]~~	~~UG/L~~	100
1)	~~BENZO(G,H,I)PERYLENE~~		~~276~~	~~39.[illegible]~~	~~1[illegible]~~	~~1[illegible]~~	~~1.[illegible]~~	~~UG/L~~	100
1)	BENZO(G,H,I)PERYLENE		276	39.10	16[illegible]	1[illegible]	1.[illegible]	UG/L	100

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



REPORT <CRDL X20

CHANNEL: 1A - 1 TITLE: RUN#36 21:38 19 NOV 86

DC-SD-26 SAMPLE: 9664.03.19 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	1.397		5[illegible]784	VV	3.81
2 ~~B-BHC~~		62.9327	2.259	0.069	[illegible]2938	VV	5.06
3 ~~HEPTACHLO~~		9.8877	4.038	0.248	[illegible]1157	VV	20.00
4		0.0000	5.085		[illegible]773	VB	10.31
5 ~~HEPT EPOX~~		13.9836	5.829	0.159	[illegible]066	BB	? 15.69
6 ~~A-ENDO~~		26.2982	6.839	-0.191	[illegible]797	BV	30.44
7 ~~DIELDRIN~~		56.9104	~~6.241~~	0.051	~~[illegible]~~	VV	31.13
8 ~~ENDRIN~~		10.8537	~~6.698~~	-0.432	~~[illegible]~~	VV	? 43.38
9 ~~4,4'-DDD~~		41.0708	9.954	-0.206	9[illegible]099	VV	25.13
10 ~~ENDO SO4~~		58.7426	11.619	-0.291	11[illegible]622	VV	38.88
11		0.0000	12.721		[illegible]943	VV	? 57.13
12 ~~4,4'-DDT~~		99.2533	13.643	0.383	[illegible]	VV	54.13
13 ~~END KETON~~		13.9214	15.750	0.480	[illegible]386	VB	47.88
14 ~~METHOXYCH~~		35.4264	19.131	-0.359	[illegible]718	VV	? 71.94
15		0.0000	21.737		[illegible]	VB	46.31
16 DBC 65%		43.2156	26.505	-0.105	[illegible]	BV	87.69
17		0.0000	28.252		6[illegible]492	VB	?117.06

TOTALS: 472.5566 -0.174 1226582

DETECTED PKS: 38 REJECTED PKS: 21

DIVISOR: 1.50200 MULTIPLIER: 10000.0000

NOISE: 194.3 OFFSET: -9

NOTES:
NOTEBOOK: 259-38 ANALYST: M. JUREK/ RICHARD SAMSON
SECURE AREA: D JOB#:U-4432,U-4442
INST:VARIAN 6000#2 A ECD 1041
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 SL:471

SAMPLE NUMBER DC-SD-27

481095

Sample Number
DC-SD-27

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No. U-4432/U-4442
Lab Sample ID No: 9665
QC Report No:
Sample Matrix: Soil
Contract No. EL-3140
Data Release Authorized By: C Sojtowicz
Date Sample Received: 11-6-86

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-14-86

Conc./Dil Factor: 2 pH 7.0

Percent Moisture: (Not Decanted) 75

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	8600u
74-83-9	Bromomethane	8600u
75-01-4	Vinyl Chloride	8600u
75-00-3	Chloroethane	8600u
75-09-2	Methylene Chloride	43000 B
67-64-1	Acetone	36000 B
75-15-0	Carbon Disulfide	4300u
75-35-4	1, 1-Dichloroethene	4300u
75-34-3	1, 1-Dichloroethane	4300u
156-60-5	Trans-1, 2-Dichloroethene	4300u
67-66-3	Chloroform	4300u
107-06-2	1, 2-Dichloroethane	4300u
78-93-3	2-Butanone	35000 B
71-55-6	1, 1, 1-Trichloroethane	4300u
56-23-5	Carbon Tetrachloride	4300u
108-05-4	Vinyl Acetate	8600u
75-27-4	Bromodichloromethane	4300u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	4300u
10061-02-6	Trans-1, 3-Dichloropropene	4300u
79-01-6	Trichloroethene	4300u
124-48-1	Dibromochloromethane	4300u
79-00-5	1, 1, 2-Trichloroethane	4300u
71-43-2	Benzene	4300u
10061-01-5	cis-1, 3-Dichloropropene	4300u
110-75-8	2-Chloroethylvinylether	8600u
75-25-2	Bromoform	4300u
108-10-1	4-Methyl-2-Pentanone	8600u
591-78-6	2-Hexanone	8600u
127-18-4	Tetrachloroethene	4300u
79-34-5	1, 1, 2, 2-Tetrachloroethane	4300u
108-88-3	Toluene	4300u
108-90-7	Chlorobenzene	4300u
100-41-4	Ethylbenzene	4300u
100-42-5	Styrene	4300u
	Total Xylenes	4300u

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-4432/U-4442

Sample Number DC-SD-27

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 11-12-86

Date Analyzed 11-25-86

Conc/Dil Factor 2

Percent Moisture (Decanted) 75

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	1300	U
111-44-4	bis(-2-Chloroethyl)Ether	1300	U
95-57-8	2-Chlorophenol	1300	U
541-73-1	1 3-Dichlorobenzene	1300	U
106-46-7	1 4-Dichlorobenzene	1300	U
100-51-6	Benzyl Alcohol	1300	U
95-50-1	1 2-Dichlorobenzene	1300	U
95-48-7	2-Methylphenol	1300	U
39638-32-9	bis(2-chloroisopropyl)Ether	1300	U
106-44-5	4-Methylphenol	1300	U
621-64-7	N-Nitroso-Di-n-Propylamine	1300	U
67-72-1	Hexachloroethane	1300	U
98-95-3	Nitrobenzene	1300	U
78-59-1	Isophorone	1300	U
88-75-5	2-Nitrophenol	1300	U
105-67-9	2, 4-Dimethylphenol	1300	U
65-85-0	Benzoic Acid	6200	U
111-91-1	bis(-2-Chloroethoxy)Methane	1300	U
120-83-2	2, 4-Dichlorophenol	1300	U
120-82-1	1 2, 4-Trichlorobenzene	1300	U
91-20-3	Naphthalene	1300	U
106-47-8	4-Chloroaniline	1300	U
87-68-3	Hexachlorobutadiene	1300	U
59-50-7	4-Chloro-3-Methylphenol	1300	U
91-57-6	2-Methylnaphthalene	1300	U
77-47-4	Hexachlorocyclopentadiene	1300	U
88-06-2	2 4, 6-Trichlorophenol	1300	U
95-95-4	2, 4, 5-Trichlorophenol	6200	U
91-58-7	2-Chloronaphthalene	1300	U
88-74-4	2-Nitroaniline	6200	U
131-11-3	Dimethyl Phthalate	1300	U
208-96-8	Acenaphthylene	1300	U
99-09-2	3-Nitroaniline	6200	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	1300	U
51-28-5	2, 4-Dinitrophenol	6200	U
100-02-7	4-Nitrophenol	6200	U
132-64 9	Dibenzofuran	1300	U
121-14-2	2 4-Dinitrotoluene	1300	U
606-20-2	2, 6-Dinitrotoluene	1300	U
84-66-2	Diethylphthalate	1300	U
7005-72-3	4-Chlorophenyl-phenylether	1300	U
86-73-7	Fluorene	1300	U
100-01-6	4-Nitroaniline	6200	U
534-52-1	4, 6-Dinitro-2-Methylphenol	6200	U
86-30-6	N-Nitrosodiphenylamine (1)	1300	U
101-55-3	4-Bromophenyl-phenylether	1300	U
118-74-1	Hexachlorobenzene	1300	U
87-86-5	Pentachlorophenol	6200	U
85-01-8	Phenanthrene	1300	U
120-12-7	Anthracene	1300	U
84-74-2	Di-n-Butylphthalate	1300	U
206-44-0	Fluoranthene	1300	U
129-00-0	Pyrene	1300	U
85-68-7	Butylbenzylphthalate	1300	U
91-94-1	3 3 -Dichlorobenzidine	2600	U
56-55-3	Benzo(a)Anthracene	1300	U
117-81-7	bis(2-Ethylhexyl)Phthalate	1300	U
218-01-9	Chrysene	1300	U
117-84-0	Di-n-Octyl Phthalate	170	J
205-99-2	Benzo(b)Fluoranthene	500	J
207-08-9	Benzo(k)Fluoranthene	1300	U
50-32-8	Benzo(a)Pyrene	240	J
193-39-5	Indeno(1 2 3-cd)Pyrene	310	J
53-70-3	Dibenz(a h)Anthracene	1300	U
191-24-2	Benzo(g h i)Perylene	360	J

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No U-4432 | U-4442.

Sample Number DC-SD-27

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-12-86

Date Analyzed 11-19-86

Conc/Dil Factor: 10

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)
319-84-6	Alpha-BHC	160 u
319-85-7	Beta-BHC	160 u
319-86-8	Delta-BHC	160 u
58-89-9	Gamma-BHC (Lindane)	160 u
76-44-8	Heptachlor	160 u
309-00-2	Aldrin	160 u
1024-57-3	Heptachlor Epoxide	160 u
959-98-8	Endosulfan I	160 u
60-57-1	Dieldrin	320 u
72-55-9	4,4'-DDE	320 u
72-20-8	Endrin	320 u
33213-65-9	Endosulfan II	320 u
72-54-8	4,4'-DDD	320 u
1031-07-8	Endosulfan Sulfate	320 u
50-29-3	4,4'-DDT	320 u
72-43-5	Methoxychlor	1600 u
53494-70-5	Endrin Ketone	320 u
57-74-9	Chlordane	1600 u
8001-35-2	Toxaphene	3200 u
12674-11-2	Aroclor-1016	1600 u
11104-28-2	Aroclor-1221	1600 u
11141-16-5	Aroclor-1232	1600 u
53469-21-9	Aroclor-1242	1600 u
12672-29-6	Aroclor-1248	1600 u
11097-69-1	Aroclor-1254	7,500
11096-82-5	Aroclor-1260	4,500

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.

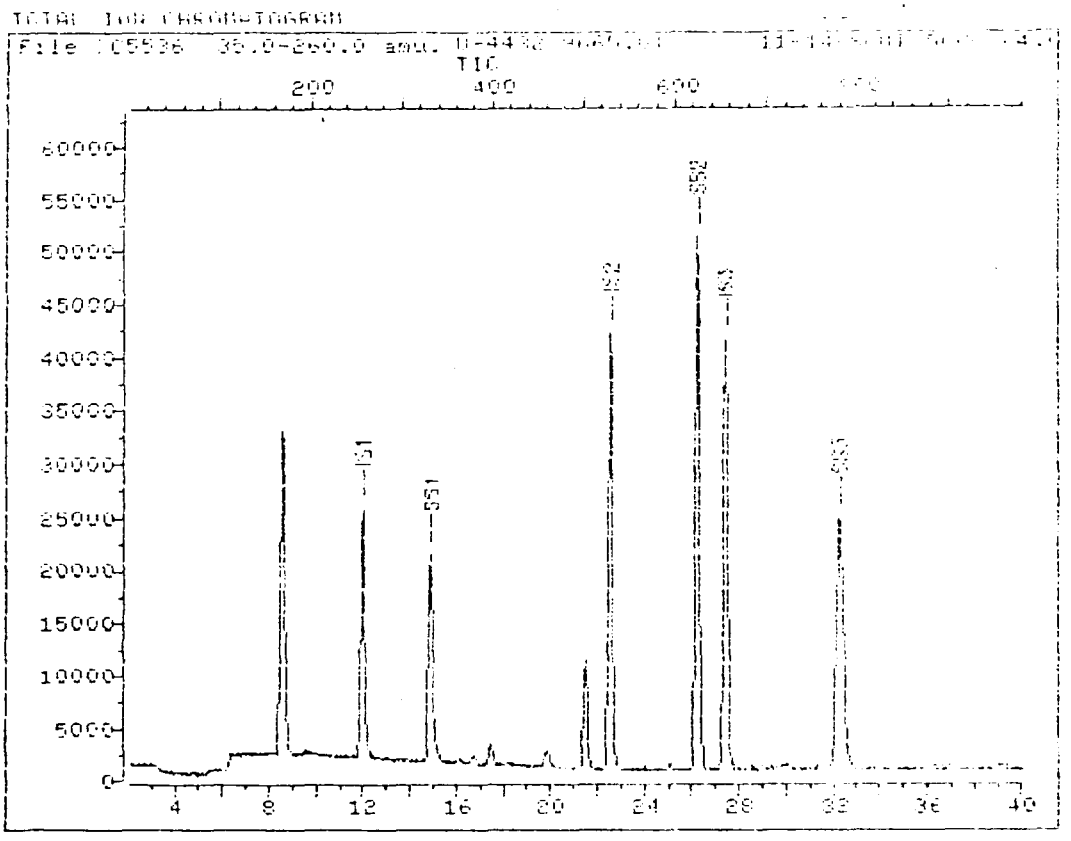
Case No u-4432 / u-4442

Sample Number DC-SD-27

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.5 min	2000 BJ
2.	Unknown Ketone	VOA	19.9 min	1200 BJ
3.	Hexane isomer	VOA	21.5 min	6100 BJ
4.				
5.	UNKNOWN	BNA	8.0	9700 J
6.	UNKNOWN		23.9	360 J
7.	UNKNOWN HYDROCARBON		26.7	950 BJ
8.	UNKNOWN HYDROCARBON		27.0	360 J
9.	UNKNOWN		30.1	7600 BJ
10.	UNKNOWN		34.3	3100 BJ
11.	UNKNOWN		37.3	1700 J
12.	UNKNOWN		39.0	3200 J
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30				

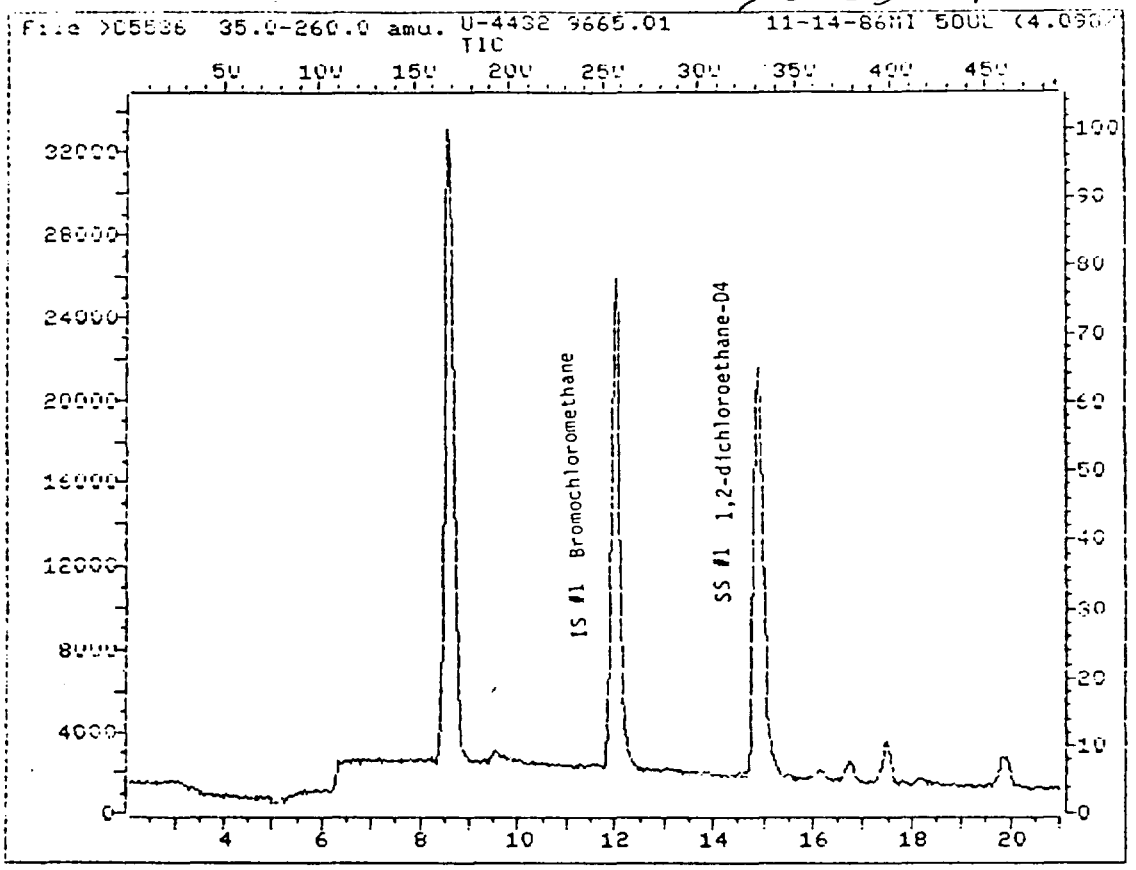


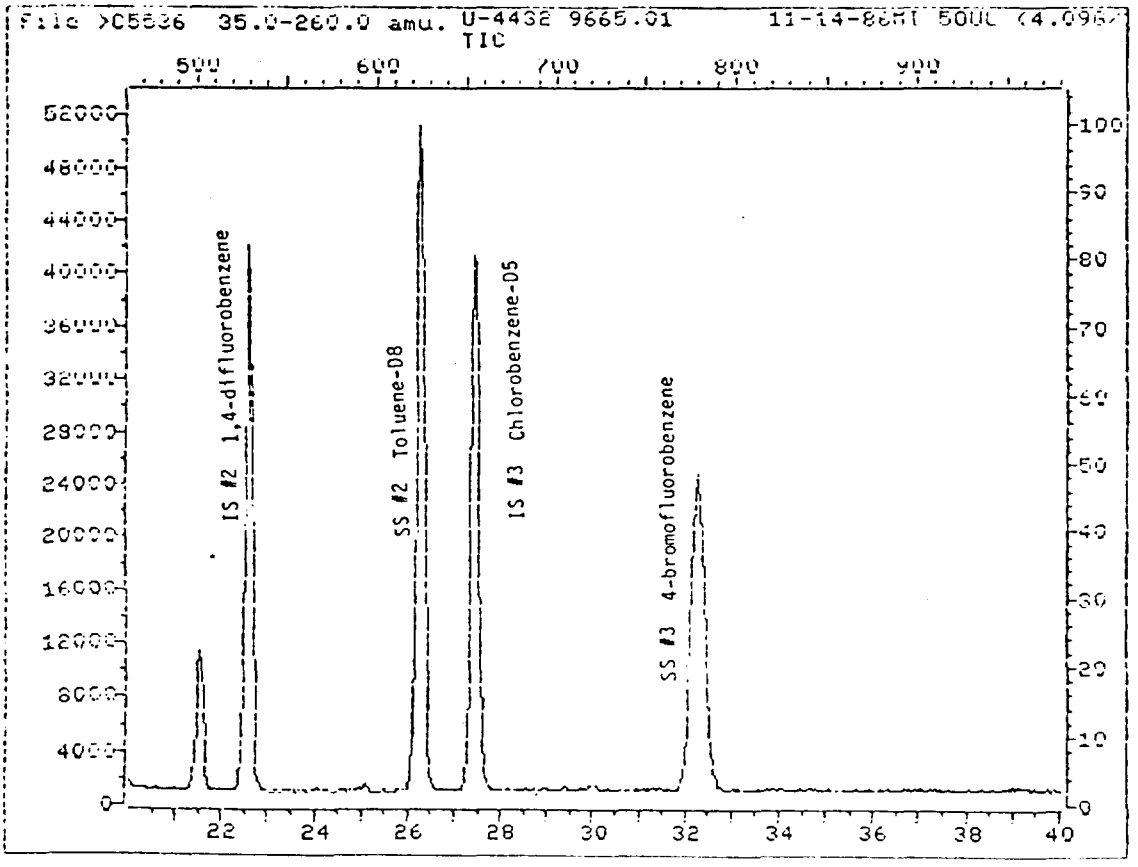
Data File: >C9536::D3
Name: U-4432 9665.01 DC-SD-27
Misc: 11-14-86M1 50UL (4.096/10MLS) + 10P

Id File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT.
Last Calibration: 861114 21:2

Operator ID: USER8
Quant Time: 861115 13:50
Injected at: 861115 00:55

DC-SD-27


File >C5536 35.0-260.0 amu. U-4432 9665.01 11-14-86M1 500L (4.096
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File >C5536 35.0-260.0 amu. U-4432 9665.01 11-14-86M1 500L (4.096
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

QUANT REPORT

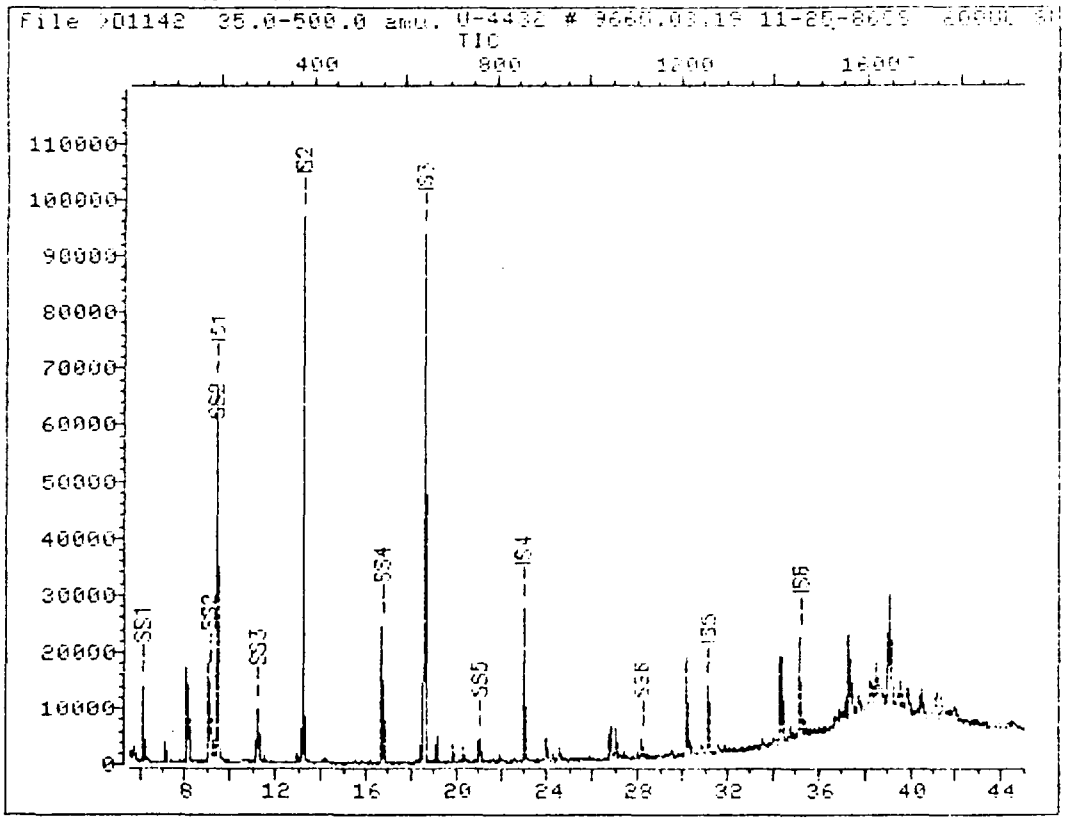
Operator ID: USER8 Quant Par: [illegible] Run Time: 861115 13:50
Output File: ^C5536::D2 Injected at: 861115 00:55
Data File: >C5536::U3 Dilution Factor: 1.00
Name: U-4432 9665.01 DC-SD-27
Misc: 11-14-86M1 50UL (4.0%/100ML) + 10UL [illegible]

ID File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (LIMS. CAL.)
Last Calibration: 861114 21:27

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	Q
1)	*BROMOCHLOROMETHANE	(IS)	128	12.02	[illegible]	[illegible]	50.00	UG/L	100
6)	METHYLENE CHLORIDE		54	8.57	[illegible]	[illegible]	44.75	UG/L	100
7)	ACETONE		43	9.57	[illegible]	[illegible]	36.98	UG/L	[illegible]
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.89	[illegible]	[illegible]	48.47	UG/L	[illegible]
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.57	[illegible]	[illegible]	50.00	UG/L	[illegible]
17)	2-BUTANONE		72	15.04	[illegible]	[illegible]	[illegible]	UG/L	[illegible]
31)	*CHLOROBENZENE-D5	(IS)	[illegible]	27.42	[illegible]	[illegible]	50.00	UG/L	100
36)	TOLUENE-D8	(SURR)	98	26.25	[illegible]	[illegible]	50.21	UG/L	95
48)	4-BROMOFLUOROBENZENE	(SURR)	95	32.27	[illegible]	[illegible]	47.57	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM

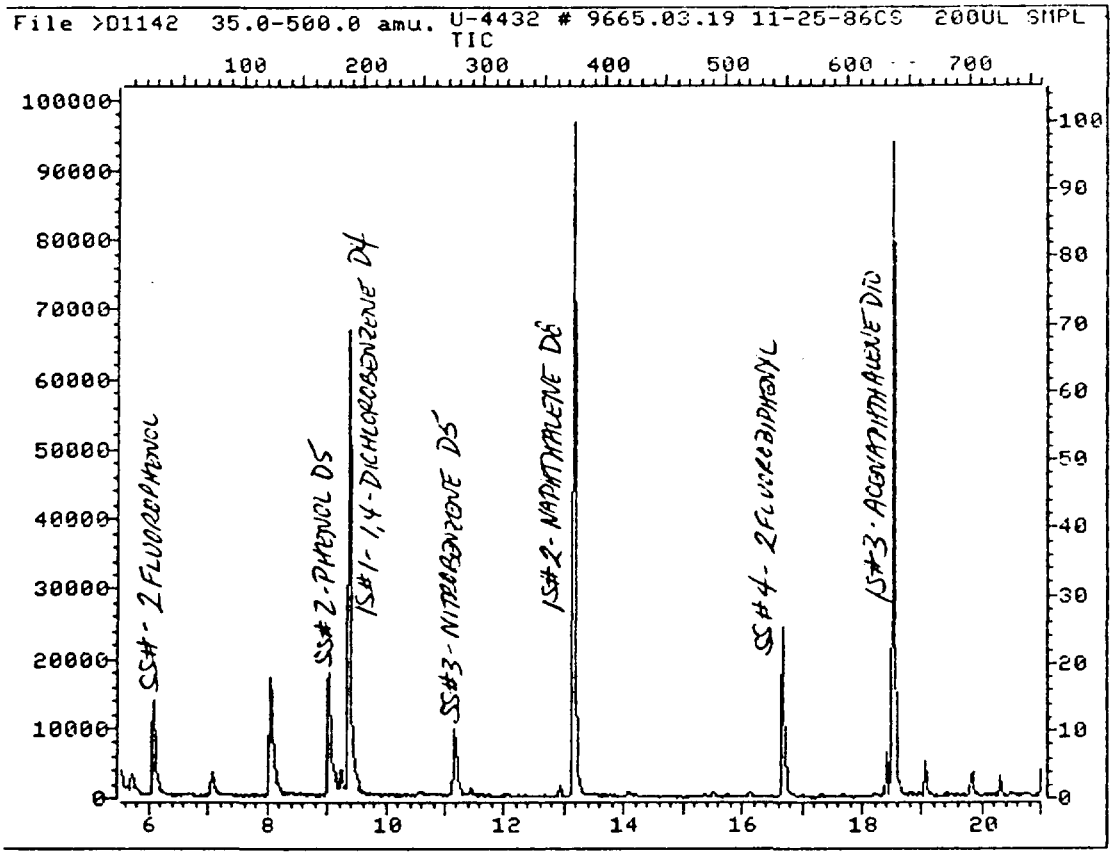


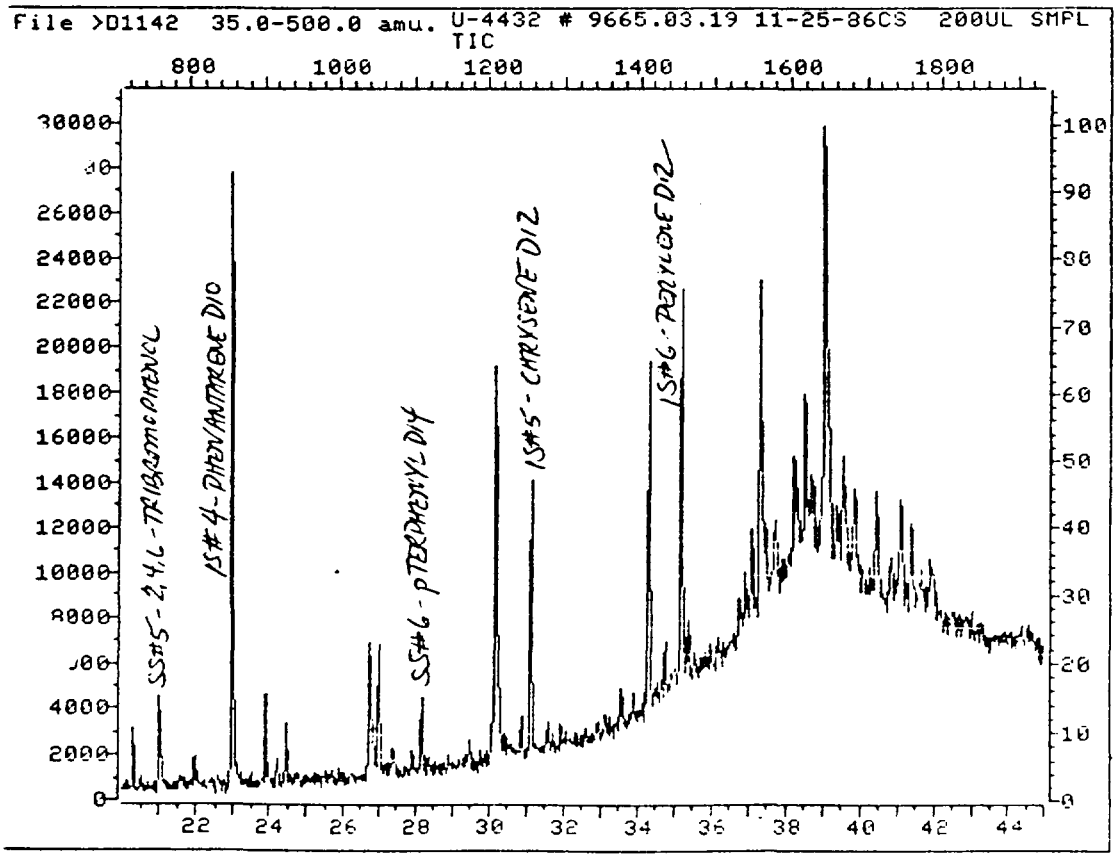
Data File: >D1142::D3
Name: U-4432 # 9665.03.19 DC-SD-27
Misc: 11-25-86CS 200UL SMPL + 200UL MECL2 + 5UL IS (C..) BTL# 9

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 59 0 (B)
Last Calibration: 861125 15:39

Operator ID: USEP6
Quant Time: 861126 00:07
Injected at: 861125 23:20

DC-SD-27


File >D1142 35.0-500.0 amu. U-4432 # 9665.03.19 11-25-86CS 200UL SMPL
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- ACENAPHTHALENE D10


File >D1142 35.0-500.0 amu. U-4432 # 9665.03.19 11-25-86CS 200UL SMPL
TIC
SS#5- 2,4,6-TRIBROMOPHENOL
IS#4- PHEN/ANTHRACENE D10
SS#6- p TERPHENYL D14
IS#5- CHRYSENE D12
IS#6- PERYLENE D12

QUANT REPORT

ie: or ID: USER6 Quant Rev: 4 Quant Time: 861126 00:07
itp_ File: ^D1142::Q2 Injection at: 861125 23:20
ita File: >D1142::D3 Dilution Factor: 2.00
ime: U-4432 # 9665.03.19
sc: 11-25-86CS 200UL SMPL + 200UL MPCL2 + 5UL IS (Cu) RTI # 9

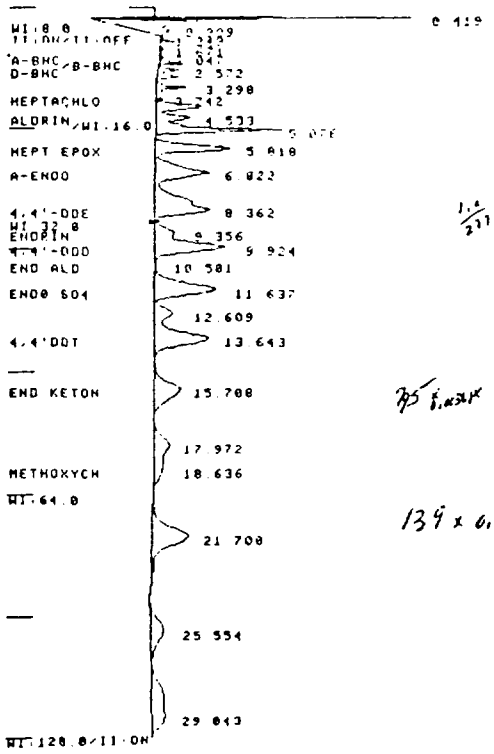
) File: BNADR::D2
tle: BNA ID FILE FOR THE HP 5970 (B)
ist Calibration: 861125 15:39

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.37	189	37094	40.00	UG/L	88
2)	PHENOL-D5	(SURR)	99	9.00	171	28002	42.99	UG/L 44 ✓	98
2)	PHENOL-D5	(SURR)	99	9.35	188	8[illegible]	1.32	UG/L	76
5)	2-FLUOROPHENOL	(SURR)	112	6.07	27	16[illegible]38	37.46	UG/L 37 ✓	98
~~4)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~10.35~~	~~239~~	~~2[illegible]~~	~~.24~~	~~UG/L~~	100
~~4)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~10.53~~	~~246~~	~~151~~	~~.14~~	~~UG/L~~	100
~~4)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~10.61~~	~~250~~	~~1[illegible]~~	~~.16~~	~~UG/L~~	100
~~2)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.16~~	~~277~~	~~1[illegible]~~	~~3.11~~	~~UG/L~~	90
~~2)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.45~~	~~291~~	~~1[illegible]~~	~~.34~~	~~UG/L~~	96
)	*NAPHTHALENE-D8	(IS)	136	13.16	375	144[illegible]62	40.00	UG/L	100
)	NITROBENZENE-D5	(SURR)	82	11.16	277	10880	17.44	UG/L 35 ✓	97
~~)~~	~~NAPHTHALENE~~		~~128~~	~~13.20~~	~~377~~	~~[illegible]~~	~~.16~~	~~UG/L~~	100
)	*ACENAPHTHENE-D10	(IS)	162	18.52	638	54306	40.00	UG/L	96
)	2-FLUOROBIPHENYL	(SURR)	172	16.68	548	28803	26.36	UG/L 53 ✓	94
~~)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~10.41~~	~~633~~	~~[illegible]~~	~~.42~~	~~UG/L~~	100
~~)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~10.52~~	~~636~~	~~17[illegible]~~	~~16.53~~	~~UG/L~~	100
)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.02	761	39[illegible]1	14.82	UG/L 15 ✓	99
~~)~~	~~2,4-DINITROTOLUENE~~		~~165~~	~~18.22~~	~~702~~	~~1[illegible]~~	~~.23~~	~~UG/L~~	100
~~)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.52~~	~~640~~	~~[illegible]~~	~~43.44~~	~~UG/L~~	100
)	*PHENANTHRENE-D10	(IS)	188	22.96	856	42[illegible]	40.00	UG/L	92
)	*CHRYSENE-D12	(IS)	240	31.11	1256	19[illegible]	40.00	UG/L	100
)	TERPHENYL-D14	(SURR)	244	28.15	1111	47[illegible]	17.20	UG/L 35 ✓	100
)	*PERYLENE-D12	(IS)	264	35.17	1455	26[illegible]	40.00	UG/L	100
)	DI-N-OCTYL PHTHALATE		149	33.90	1393	611	1.35	UG/L	100
~~)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~34.32~~	~~1414~~	~~1[illegible]~~	~~.40~~	~~UG/L~~	100
)	BENZO(B)FLUORANTHENE		252	34.21	1408	1445	3.94	UG/L	100
~~)~~	~~BENZO(K)FLUORANTHENE~~		~~252~~	~~34.21~~	~~1408~~	~~1[illegible]~~	~~3.71~~	~~UG/L~~	100
~~)~~	~~BENZO(A)PYRENE~~		~~252~~	~~34.88~~	~~1441~~	~~1[illegible]~~	~~2.97~~	~~UG/L~~	100
)	BENZO(A)PYRENE		252	35.03	1448	6[illegible]	1.87	UG/L	100
~~)~~	~~BENZO(A)PYRENE~~		~~252~~	~~35.25~~	~~1458~~	~~1[illegible]~~	~~.53~~	~~UG/L~~	100
)	INDENO(1,2,3-CD)PYRENE		276	37.78	1583	8[illegible]	2.47	UG/L	100
~~)~~	~~DIBENZ(A,H)ANTHRACENE~~		~~278~~	~~37.96~~	~~1587~~	~~[illegible]~~	~~.61~~	~~UG/L~~	100
)	BENZO(G,H,I)PERYLENE		276	38.33	1610	1[illegible]	2.22	UG/L	100

Compound is ISTD

No Cpd

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



$\frac{1.4}{237} = 0.0591$

75 × 1.031 × $\frac{1}{0.3825g}$ × 10,000 = 7,500 ug/kg 1254

139 × 0.0125 × $\frac{1}{0.3825g}$ × 10,000 = 4,500 ug/kg 1260

CHANNEL: 1A - 1 TITLE: RUN# 38 22:53 19 NOV 86

DC-SD-27

SAMPLE: 9665.03.19 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	16.2525	2.254	0.06	20106	VV	5.06
2		0.0000	2.834		22019	VV	6.25
3		0.0000	3.298		37076	VV	7.69
4	HEPTACHLO	39.3362	4.051	0.261	96109	VV	16.68
5	ALDRIN	19.1800	4.533	-0.137	93470	VV	12.24
6		0.0000	~~5.279~~		~~21235~~	VV	20.35
7	HEPT EPOX	59.6616	5.818	0.146	171000	VV	17.56
8	A-ENDO	75.1937	6.822	-0.208	202428	VV	27.81
9	DIELDRIN	90.5380	8.362	0.172	242352	VV	? 33.94
10	B-ENDO	21.7274	9.356	0.046	95191	VV	? 26.94
11	4,4'-DDD	94.2813	9.924	-0.236	276003	VV	23.50
12	ENDO SO4	130.8600	11.637	-0.273	255381	VV	31.41
13		0.0000	12.609		63216	VV	
14	4,4'DDT	149.5762	13.643	0.383	237926	VB	32.63
15	END KETON	59.6281	15.708	0.438	163675	VV	47.75
16		0.0000	17.972		106783	VV	? 44.81
17	METHOXYCH	56.8558	18.636	-0.654	~~4114~~	VB	? 94.31
18		0.0000	21.708		203557	BV	46.69
19	DBC	50.0245	25.554	-1.056	111821	VV	66.56
20		0.0000	29.043		103675	VB	?137.69

TOTALS: 863.0774 -1.232 2624249

DETECTED PKS: 36 REJECTED PKS: 18

DIVISOR: 1.50000 MULTIPLIER: 10000.0000

NOISE: 194.3 OFFSET: -18

NOTES:
NOTEBOOK: 259-38 ANALYST: K. JUREK/ RICHARD SAMSON
SECURE AREA: D JOB#:U-4432,U-4442
INST:VARIAN 6000#2 & ECD 1241
COLUMN: 6' GLASS 4MM ID 102/122 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:
[illegible]

SAMPLE NUMBER DC-SD-28

481095

Sample Number
DC-SD-28

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No: U-4432 / U-4442
Lab Sample ID No: 9666
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: C Jozlowicz
Date Sample Received: 11-6-86

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-14-86

Conc./Dil Factor: 2 pH 7.4

Percent Moisture: (Not Decanted) 33

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	3200u
74-83-9	Bromomethane	3200u
75-01-4	Vinyl Chloride	3200u
75-00-3	Chloroethane	3200u
75-09-2	Methylene Chloride	20000 B
67-64-1	Acetone	7400 B
75-15-0	Carbon Disulfide	1600u
75-35-4	1, 1-Dichloroethene	1600u
75-34-3	1, 1-Dichloroethane	1600u
156-60-5	Trans-1, 2-Dichloroethene	1600u
67-66-3	Chloroform	1600u
107-06-2	1, 2-Dichloroethane	1600u
78-93-3	2-Butanone	15000 B
71-55-6	1, 1, 1-Trichloroethane	1600u
56-23-5	Carbon Tetrachloride	1600u
108-05-4	Vinyl Acetate	3200u
75-27-4	Bromodichloromethane	1600u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	1600u
10061-02-6	Trans-1, 3-Dichloropropene	1600u
79-01-6	Trichloroethene	1600u
124-48-1	Dibromochloromethane	1600u
79-00-5	1, 1, 2-Trichloroethane	1600u
71-43-2	Benzene	1600u
10061-01-5	cis-1, 3-Dichloropropene	1600u
110-75-8	2-Chloroethylvinylether	3200u
75-25-2	Bromoform	1600u
108-10-1	4-Methyl-2-Pentanone	3200u
591-78-6	2-Hexanone	3200u
127-18-4	Tetrachloroethene	1600u
79-34-5	1, 1, 2, 2-Tetrachloroethane	1600u
108-88-3	Toluene	1600u
108-90-7	Chlorobenzene	1600u
100-41-4	Ethylbenzene	1600u
100-42-5	Styrene	1600u
	Total Xylenes	1600u

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 level 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.

Laboratory Name Ecology & Environment Inc.

Case No V-4432 / V-4442

Sample Number DC-SD-28

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared 11-12-86

Date Analyzed: 12-1-86

Conc/Dil Factor: 2

Percent Moisture (Decanted) 33

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	490	U
111-44-4	bis(-2-Chloroethyl)Ether	490	U
95-57-8	2-Chlorophenol	490	U
541-73-1	1 3-Dichlorobenzene	490	U
106-46-7	1 4-Dichlorobenzene	490	U
100-51-6	Benzyl Alcohol	490	U
95-50-1	1 2-Dichlorobenzene	490	U
95-48-7	2-Methylphenol	490	U
39638-32-9	bis(2-chloroisopropyl)Ether	490	U
106-44-5	4-Methylphenol	490	U
621-64-7	N-Nitroso-Di-n-Propylamine	490	U
67-72-1	Hexachloroethane	490	U
98-95-3	Nitrobenzene	490	U
78-59-1	Isophorone	490	U
88-75-5	2-Nitrophenol	490	U
105-67-9	2 4-Dimethylphenol	490	U
65-85-0	Benzoic Acid	2400	U
111-91-1	bis(-2-Chloroethoxy)Methane	490	U
120-83-2	2 4-Dichlorophenol	490	U
120-82-1	1 2 4-Trichlorobenzene	490	U
91-20-3	Naphthalene	490	U
106-47-8	4-Chloroaniline	490	U
87-68-3	Hexachlorobutadiene	490	U
59-50-7	4-Chloro-3-Methylphenol	490	U
91-57-6	2-Methylnaphthalene	490	U
77-47-4	Hexachlorocyclopentadiene	490	U
88-06-2	2 4 6-Trichlorophenol	490	U
95-95-4	2 4 5-Trichlorophenol	2400	U
91-58-7	2-Chloronaphthalene	490	U
88-74-4	2-Nitroaniline	2400	U
131-11-3	Dimethyl Phthalate	490	U
208-96-8	Acenaphthylene	490	U
99-09-2	3-Nitroaniline	2400	U

CAS Number		ug/l or (ug/Kg) (Circle One)	
83-32-9	Acenaphthene	490	U
51-28-5	2 4-Dinitrophenol	2400	U
100-02-7	4-Nitrophenol	2400	U
132-64-9	Dibenzofuran	490	U
121-14-2	2 4-Dinitrotoluene	490	U
606-20-2	2 6-Dinitrotoluene	490	U
84-66-2	Diethylphthalate	490	U
7005-72-3	4-Chlorophenyl-phenylether	490	U
86-73-7	Fluorene	490	U
100-01-6	4-Nitroaniline	2400	U
534-52-1	4 6-Dinitro-2-Methylphenol	2400	U
86-30-6	N-Nitrosodiphenylamine (1)	490	U
101-55-3	4-Bromophenyl-phenylether	490	U
118-74-1	Hexachlorobenzene	490	U
87-86-5	Pentachlorophenol	2400	U
85-01-8	Phenanthrene	490	U
120-12-7	Anthracene	490	U
84-74-2	Di-n-Butylphthalate	490	U
206-44-0	Fluoranthene	490	U
129-00-0	Pyrene	490	U
85-68-7	Butylbenzylphthalate	490	U
91-94-1	3 3-Dichlorobenzidine	980	U
56-55-3	Benzo(a)Anthracene	490	U
117-81-7	bis(2-Ethylhexyl)Phthalate	490	U
218-01-9	Chrysene	490	U
117-84-0	Di-n-Octyl Phthalate	490	U
205-99-2	Benzo(b)Fluoranthene	490	U
207-08-9	Benzo(k)Fluoranthene	490	U
50-32-8	Benzo(a)Pyrene	490	U
193-39-5	Indeno(1 2 3-cd)Pyrene	490	U
53-70-3	Dibenz(a h)Anthracene	490	U
191-24-2	Benzo(g h i)Perylene	490	U

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No U-4432 / U-4442

Sample Number DC-SD-28

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-12-86

Date Analyzed 11-19-86

Conc/Dil Factor: 2

Percent Moisture (decanted) 33

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	3,200 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	1,900
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 1000 V_i 4

Laboratory Name ecology and environment, inc.

Case No u-4432 / u-4442

Sample Number DC-SD-28

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.5 min	750 BJ
2.	Unknown Ketone	VOA	19.8 min	480 BJ
3.	Hexane isomer	VOA	21.5 min	2400 BJ
4.				
5.	UNKNOWN	BNA	8.6	2900 J
6.	UNKNOWN HYDROCARBON		27.6	580 BJ
7.	UNKNOWN		30.9	4400 BJ
8.	UNKNOWN		35.0	1900 BJ
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
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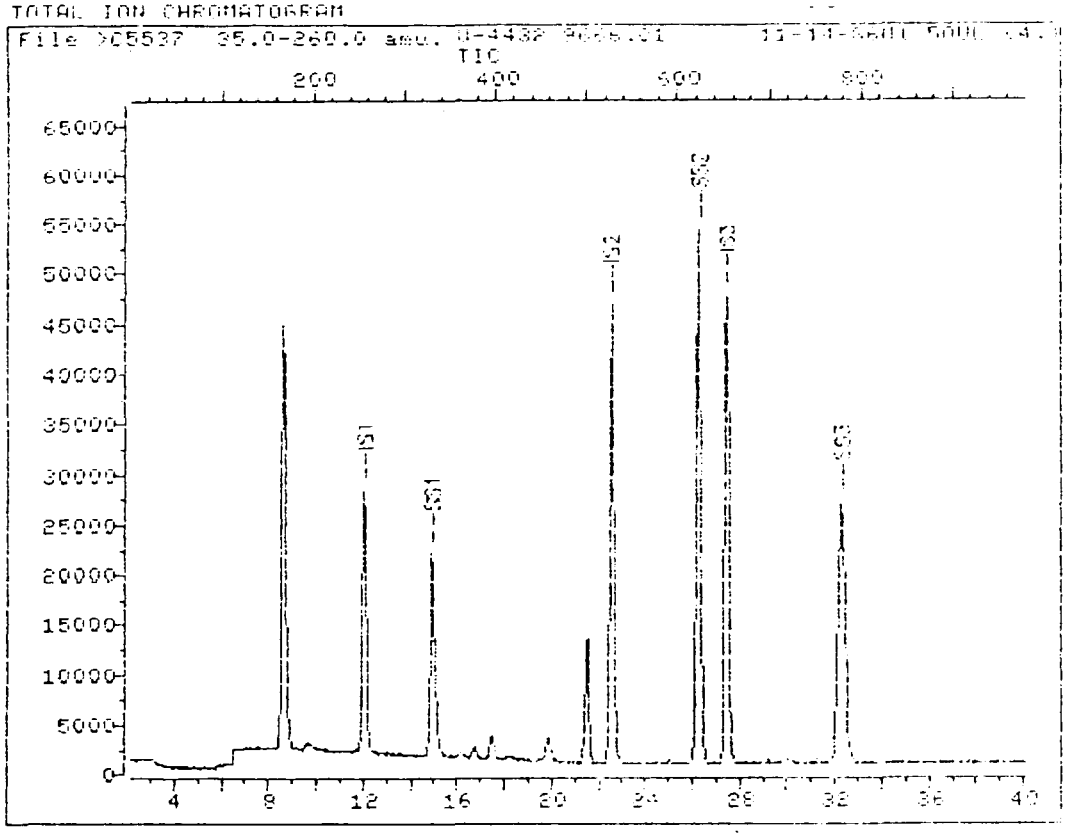
27.				
28.				
29.				
30				

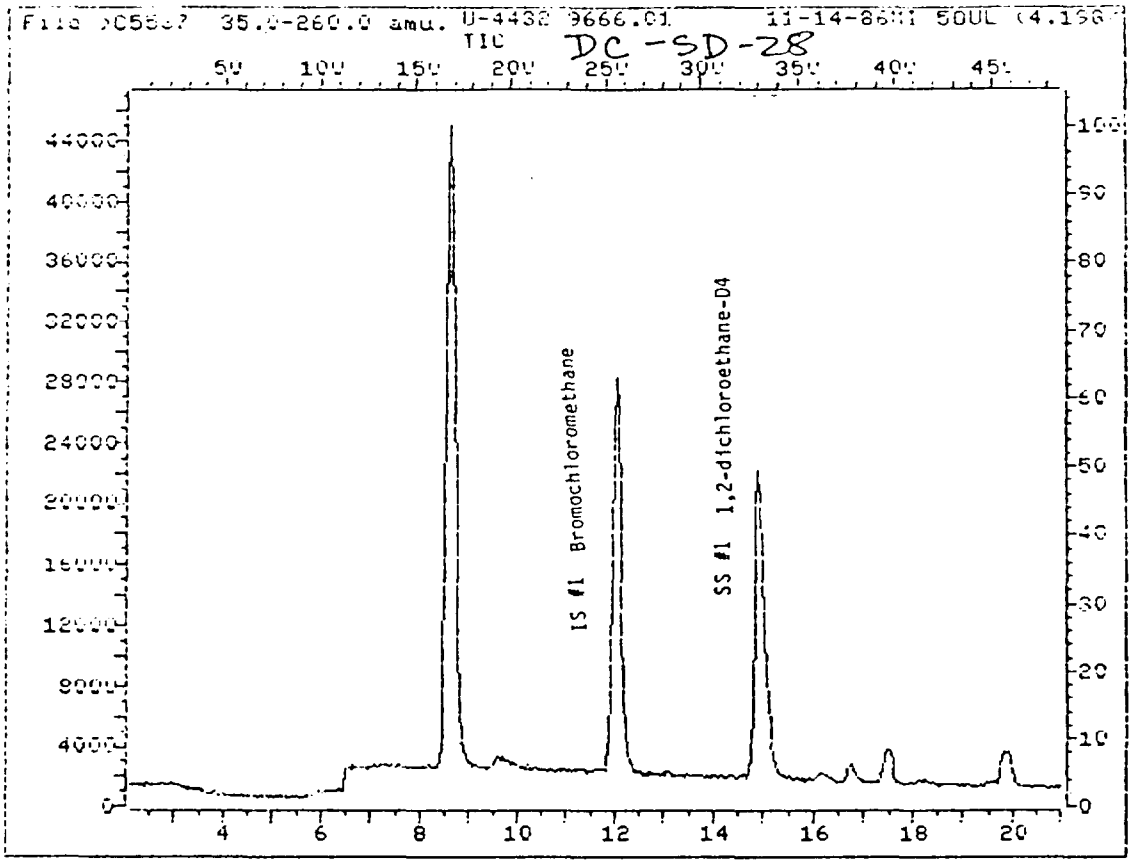
TOTAL ION CHROMATOGRAM

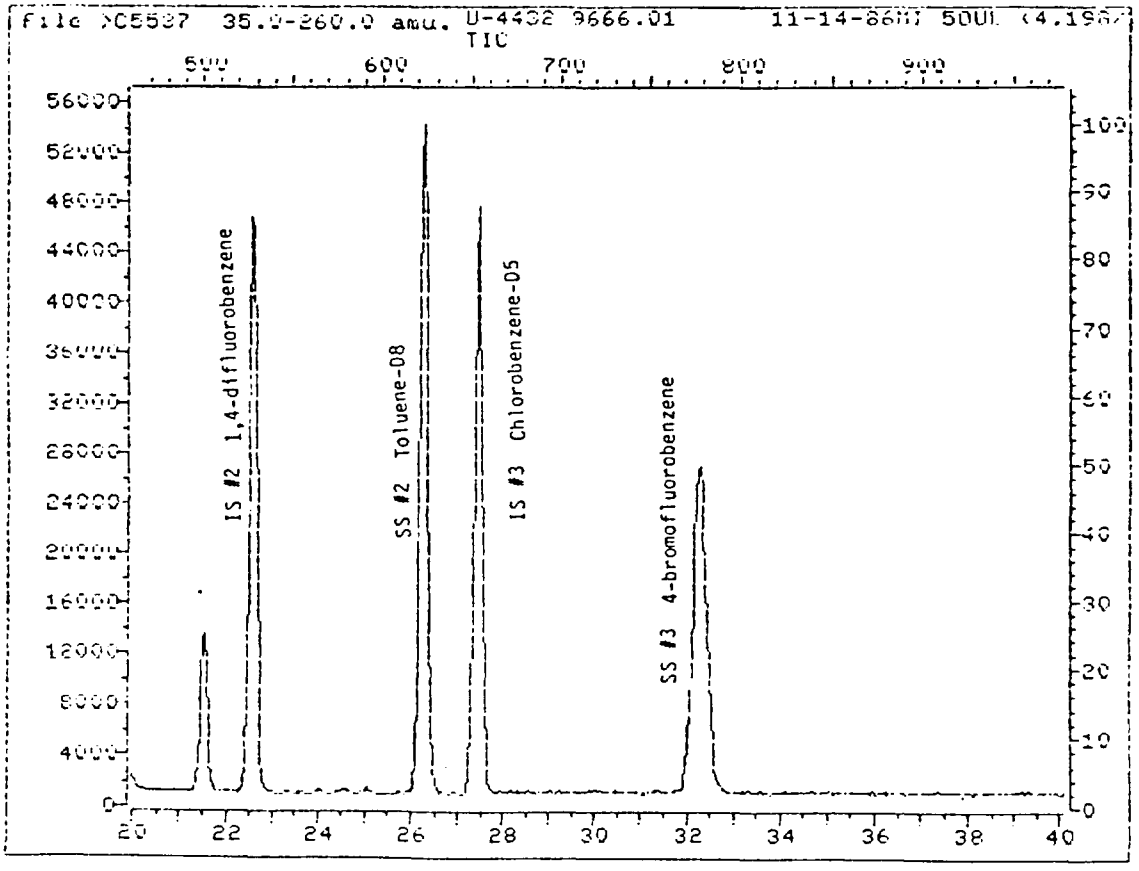


Data File: >C5537::D3
Name: U-4432 9666.01 DC-SD-28
Misc: 11-14-86MI 50UL (4.196-10MLS) + 100UL IS SS

Id File: VOACR::U2
Title: VOA ID FILE FOR HP-5988 (CUMI. CH.)
Last Calibration: 861114 21:2

Operator ID: USER8
Quant Time: 861115 17:52
Injected at: 861115 01:4


File >C5527 35.0-260.0 amu. U-4432 9666.01 11-14-86 50UL (4.196)
TIC
DC-SD-28
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File >C5527 35.0-260.0 amu. U-4432 9666.01 11-14-86 50UL (4.196)
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

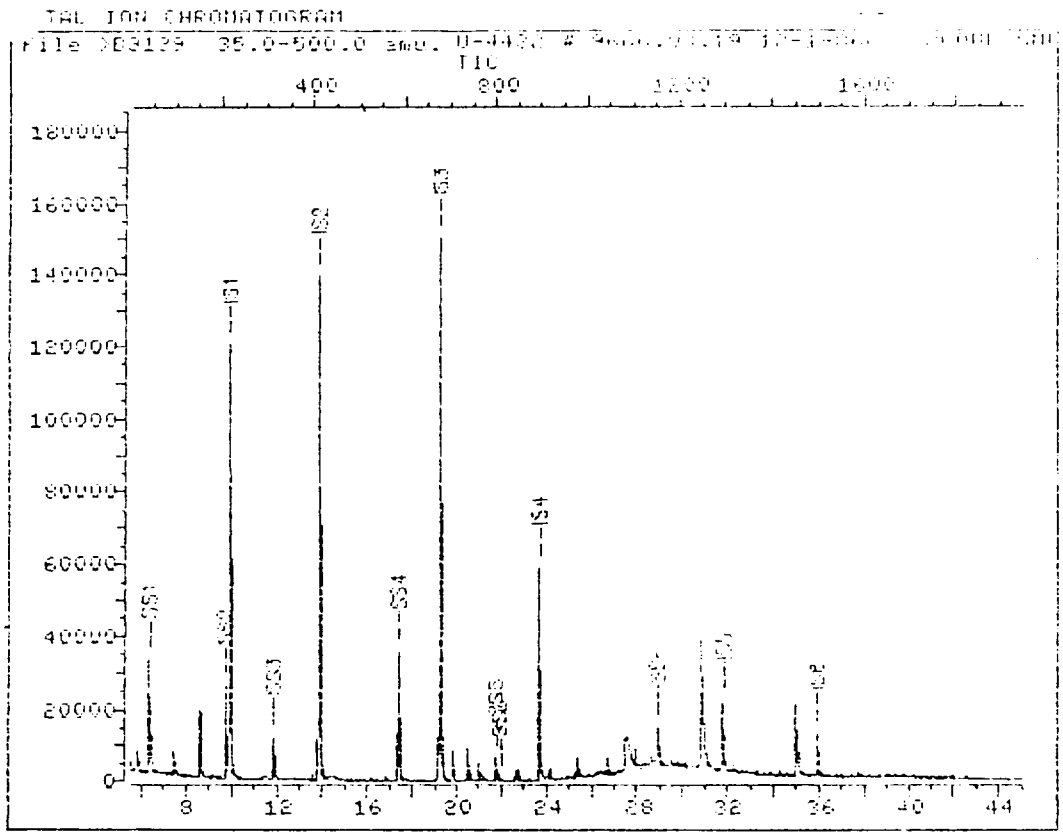
QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861115 17:52
Output File: ^C5537::D2 Injected at: 861115 01:47
Data File: >C5537::D3 Dilution Factor: 1.00
Name: U-4432 9666.01 DC-SD-28
Misc: 11-14-86MI 50UL (4.19G/10ML) + 10UL IS/SS

ID File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861114 21:27

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	12.04	256	42811	50.00	UG/L	100
6)	METHYLENE CHLORIDE		84	8.63	168	113659	55.92	UG/L	100
7)	ACETONE		43	9.64	194	6050	28.64	UG/L	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.91	340	85233	47.49	UG/L	99
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.55	527	208902	50.00	UG/L	100
17)	2-BUTANONE		72	15.07	374	6470	42.89	UG/L	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.45	653	158753	50.00	UG/L	100
36)	TOLUENE-D8	(SURR)	98	26.28	623	218831	48.04	UG/L	99
40)	4-BROMOFLUOROBENZENE	(SURR)	95	32.30	778	104814	46.29	UG/L	100

* Compound is ISTD

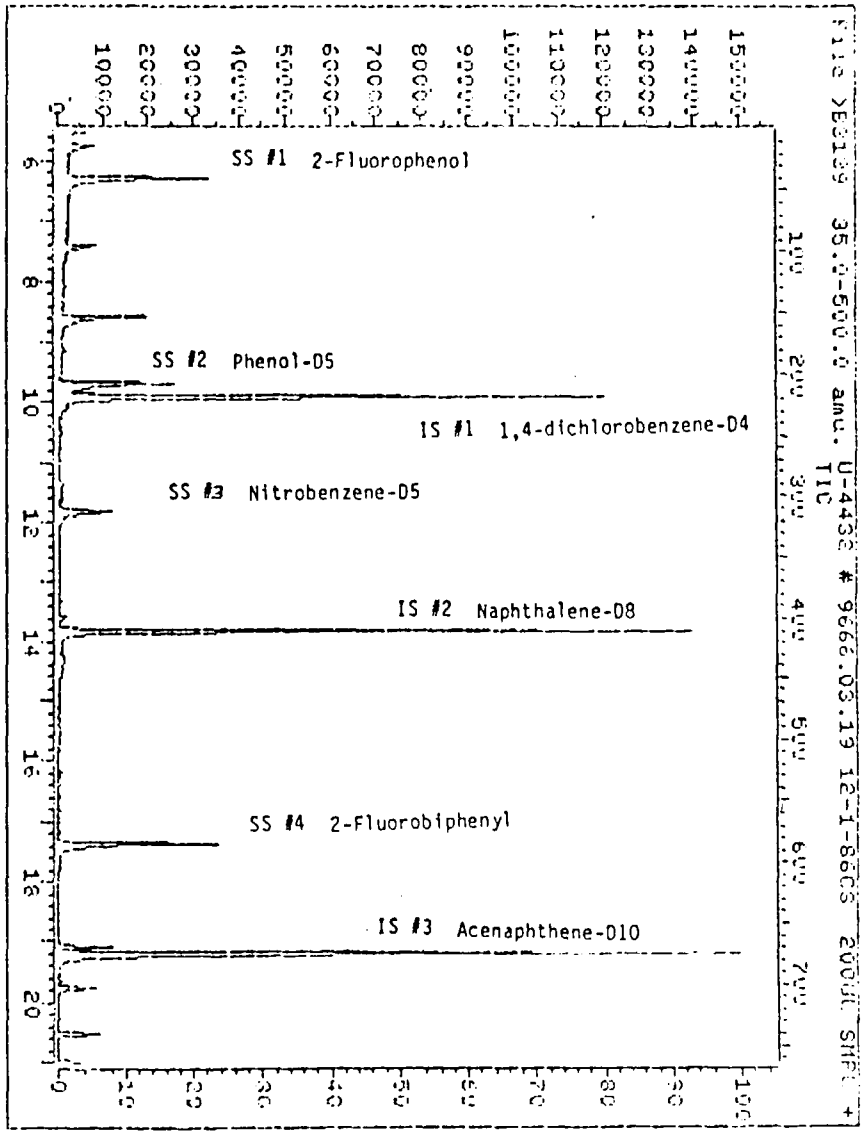


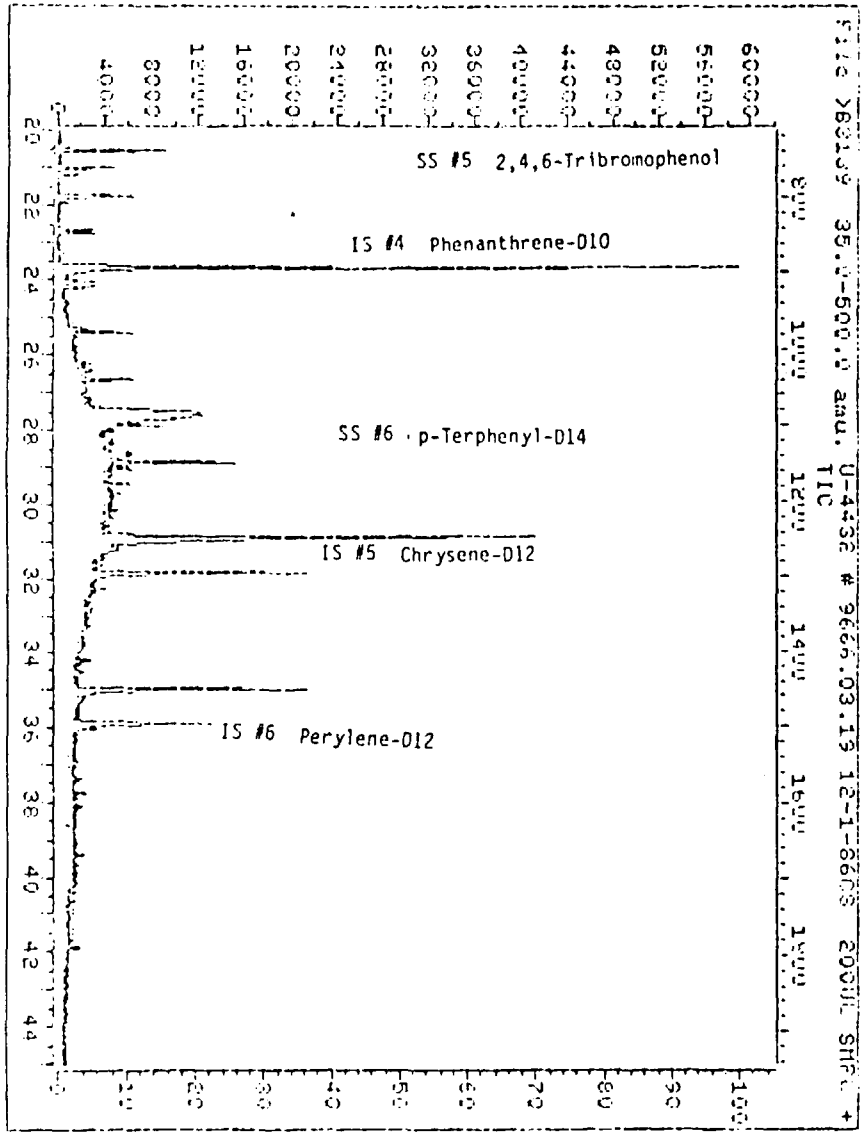
Data File: >B3139::D4
Name: U-4432 # 9666.03.19 DC-SD-28
Misc: 12-1-86CS 200UL SMPL + 2000UL MECL2 + 40UL IS (2X)

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861201 13:31

Operator ID: USER6
Quant Time: 861201 16:34
Injected at: 861201 15:23

DC-SD-28


File >B0139 35.0-500.0 amu. U-4432 # 9666.03.19 12-1-86CS 200UL SHFL +
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 >B0139 35.0-500.0 amu. U-4432 # 9666.03.19 12-1-86CS 200UL SHFL +
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: 861201 16:34
Output File: ^B3139::D2 Injected at: 861201 15:23
Data File: >B3139::D4 Dilution Factor: 2.00
Name: U-4432 # 9666.03.19
Misc: 12-1-86CS 200UL SMPL + 200UL MECL2 + 40UL IS (2X)

ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861201 13:31

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.91	218	54524	40.00	UG/L	98
2)	PHENOL-D5	(SURR)	99	9.68	207	37445	45.87	UG/L	94
5)	2-FLUOROPHENOL	(SURR)	112	6.29	40	27568	55.01	UG/L	93
~~4)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~11.17~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	100
~~4)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~11.17~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	100
~~4)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~11.20~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	100
~~4)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~11.50~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	100
~~4)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~11.58~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	100
~~7)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.02~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	99
9)	*NAPHTHALENE-D8	(IS)	136	13.81	410	185666	40.00	UG/L	100
0)	NITROBENZENE-D5	(SURR)	82	11.82	312	16330	21.51	UG/L	93
4)	*ACENAPHTHENE-D10	(IS)	162	19.20	675	87663	40.00	UG/L	97
8)	2-FLUOROBIPHENYL	(SURR)	172	17.37	595	46156	25.66	UG/L	95
~~1)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~10.10~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	100
~~1)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~10.20~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	100
8)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.72	299	5810	21.16	UG/L	92
~~8)~~	~~2,4,6-TRIBROMOPHENOL~~	(SURR)	~~330~~	~~21.90~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	82
~~1)~~	~~2,4-DINITROTOLUENE~~		~~165~~	~~20.62~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	100
~~2)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.90~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	100
~~2)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.42~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	100
5)	*PHENANTHRENE-D10	(IS)	188	23.65	894	98107	40.00	UG/L	97
5)	*CHRYSENE-D12	(IS)	240	31.91	1295	30562	40.00	UG/L	100
8)	TERPHENYL-D14	(SURR)	244	28.86	1150	12457	32.13	UG/L	100
4)	*PERYLENE-D12	(IS)	264	35.89	1496	23608	40.00	UG/L	100

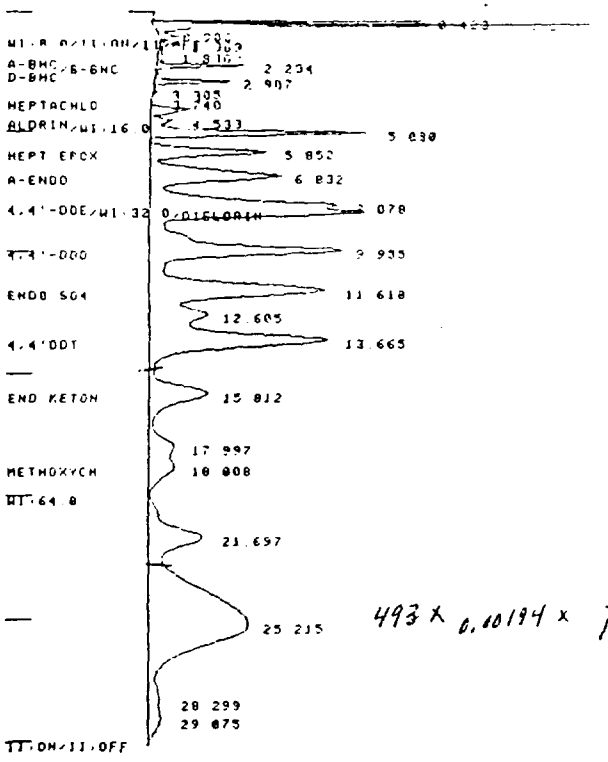
No BNA

No BNA

No BNA

* Compound is ISTD

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



$493 \times 0.00194 \times \frac{1}{1.0035g} \times 2{,}000 = 1{,}900$ ug/kg 1254

CHANNEL: 1A - 1 TITLE: RUN#39 23:33 19 NOV 86

DC-SD-28

SAMPLE: 9666.03.19 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~~	11.4069	2.254	0.084	[illegible]566	VB	5.00
2		0.0000	2.907		[illegible]	VV	6.25
3	~~HEPTACHLO~~	5.7505	4.038	0.248	[illegible]246	V	14.19
4	~~ALDRIN~~	2.3849	4.533	-0.137	[illegible]252	V	14.38
5		0.0000	~~5.030~~		~~[illegible]~~	V	10.56
6	~~HEPT EPOX~~	19.2997	5.852	0.182	27[illegible]458	VV	16.50
7	~~A-ENDO~~	37.3654	6.832	-0.198	50[illegible]954	VV	[illegible]
8	~~4,4'-DDE~~	42.3504	~~8.276~~	-0.012	56[illegible]963	[illegible]	[illegible]
9	~~DIELDRIN~~	37.9666	8.369	0.179	56[illegible]423	VV	? 28.13
10	~~4,4'-DDD~~	71.3633	9.955	-0.205	85[illegible]269	VV	25.69
11	~~ENDO SO4~~	87.7454	11.618	-0.292	85[illegible]070	[illegible]	35.88
12		0.0000	12.605		27[illegible]586	VV	? 42.69
13	~~4,4'DDT~~	114.5467	13.665	0.405	91[illegible]029	VV	35.38
14	~~END KETON~~	26.2244	15.812	~~0.542~~	37[illegible]966	VV	45.06
15		0.0000	17.997		15[illegible]110	VV	? 46.81
16	~~METHOXYCH~~	36.5590	~~18.008~~	-0.682	~~[illegible]~~	VV	? 70.44
17		0.0000	21.697		40[illegible]782	VV	52.81
18	~~DDD~~	171.1265	25.215	-1.395	191[illegible]234	VV	?149.75
19		0.0000	28.299		77341	VV	? 77.94
20		0.0000	29.075		57083	VB	? 76.00

TOTALS: 664.0897 -1.281 8611518

DETECTED PKS: 37 REJECTED PKS: 17

DIVISOR: 1.50000 MULTIPLIER: 2000.00000

NOISE: 228.6 OFFSET: 11

NOTES:
NOTEBOOK: 259-38 ANALYST: K. JUREK/ RICHARD SAMSON
SECURE AREA: D J00#:U-4432,U-4442
INST:VARIAN 6000#2 A ECD 1041
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

SAMPLE NUMBER DC-SD-29

481095

Sample Number
DC-SD-29

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No: U-4432/U-4442
Lab Sample ID No: 9667
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: C Stojowicz
Date Sample Received: 11-6-86

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-14-86

Conc./Dil Factor: 2 pH 7.3

Percent Moisture: (Not Decanted) 21

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	2600u
74-83-9	Bromomethane	2600u
75-01-4	Vinyl Chloride	2600u
75-00-3	Chloroethane	2600u
75-09-2	Methylene Chloride	15000 B
67-64-1	Acetone	6200 B
75-15-0	Carbon Disulfide	1300u
75-35-4	1, 1-Dichloroethene	1300u
75-34-3	1, 1-Dichloroethane	1300u
156-60-5	Trans-1, 2-Dichloroethene	1300u
67-66-3	Chloroform	1300u
107-06-2	1, 2-Dichloroethane	1300u
78-93-3	2-Butanone	11000 B
71-55-6	1, 1, 1-Trichloroethane	1300u
56-23-5	Carbon Tetrachloride	1300u
108-05-4	Vinyl Acetate	2600u
75-27-4	Bromodichloromethane	1300u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	1300u
10061-02-6	Trans-1, 3-Dichloropropene	1300u
79-01-6	Trichloroethene	1300u
124-48-1	Dibromochloromethane	1300u
79-00-5	1, 1, 2-Trichloroethane	1300u
71-43-2	Benzene	1300u
10061-01-5	cis-1, 3-Dichloropropene	1300u
110-75-8	2-Chloroethylvinylether	2600u
75-25-2	Bromoform	1300u
108-10-1	4-Methyl-2-Pentanone	2600u
591-78-6	2-Hexanone	2600u
127-18-4	Tetrachloroethene	1300u
79-34-5	1, 1, 2, 2-Tetrachloroethane	1300u
108-88-3	Toluene	1300u
108-90-7	Chlorobenzene	1300u
100-41-4	Ethylbenzene	1300u
100-42-5	Styrene	1300u
	Total Xylenes	1300u

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-4432 / U-4442

Sample Number DC-SD-29

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 11-12-86

Date Analyzed 11-20-86

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
[illegible]-96-8	Acenaphthylene	420	U
[illegible]-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	420	U
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	420	U
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

Laboratory Name ecology and environment, inc.

Case No V-4432 / V-4442

Sample Number DC-SD-29

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-12-86

Date Analyzed 11-20-86

Conc/Dil Factor 1

Percent Moisture (decanted) 21

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	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-4432 / u-4442

Sample Number DC-SD-29

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.5 min	570 BJ
2.	Unknown Ketone	VOA	19.9 min	400 BJ
3.	Hexane isomer	VOA	21.5 min	1800 BJ
4.				
5.	UNKNOWN HYDROCARBON	BNA	27.6	720 J
6.	UNKNOWN		30.9	2500 BJ
7.	UNKNOWN		35.0	1100 BJ
8.	UNKNOWN HYDROCARBON		37.8	260 BJ
9.				
10.				
11.				
12.				
13.				
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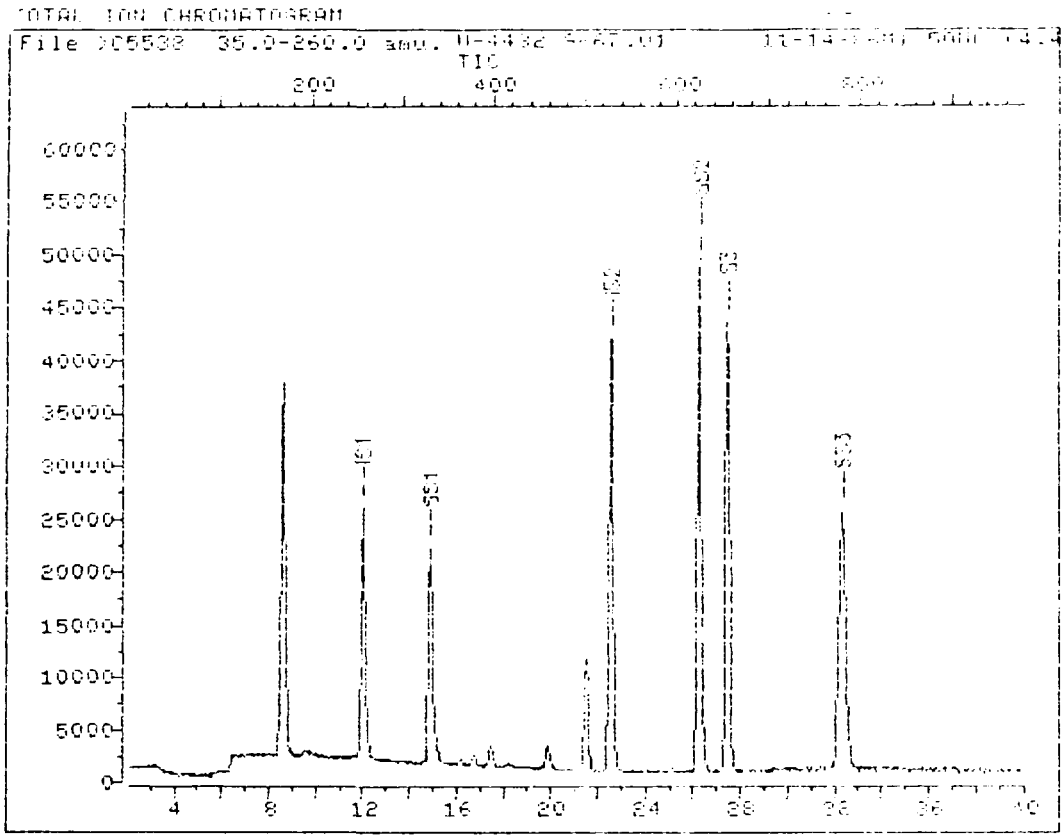
27.				
28.				
29.				
30				

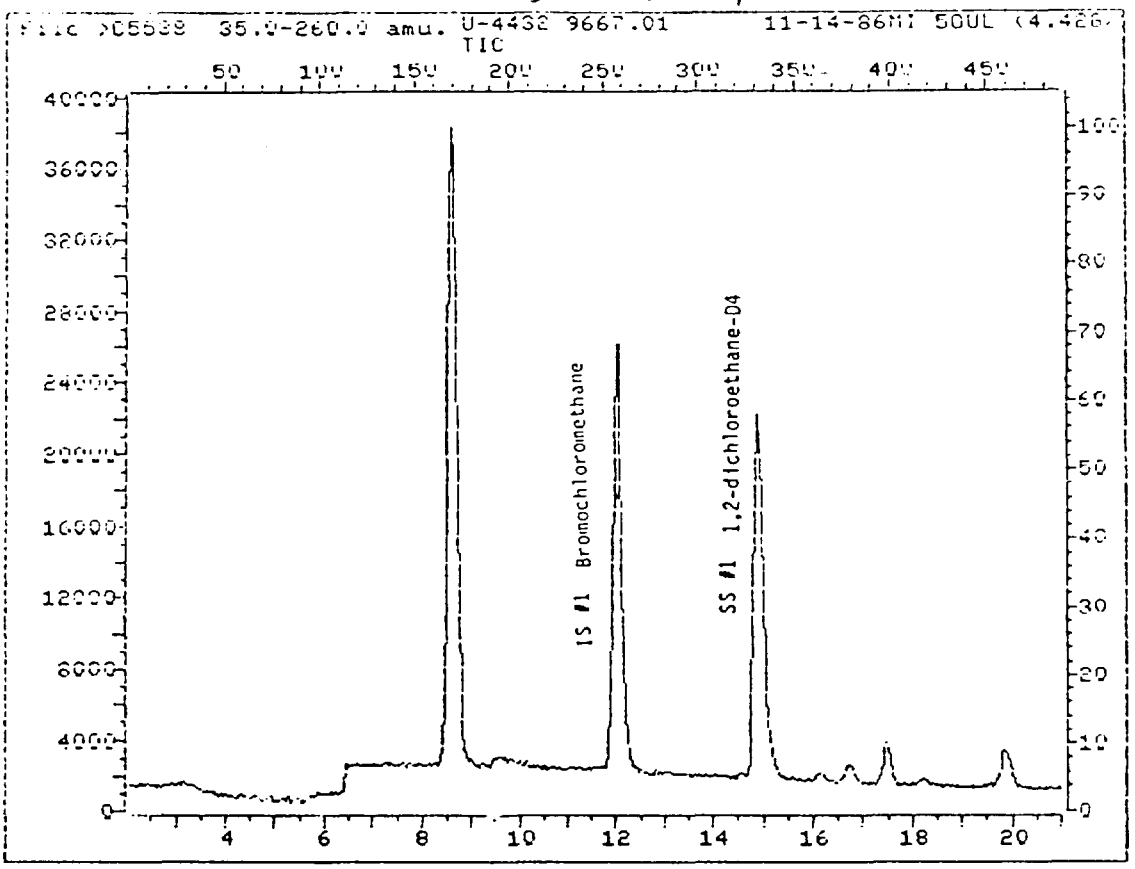


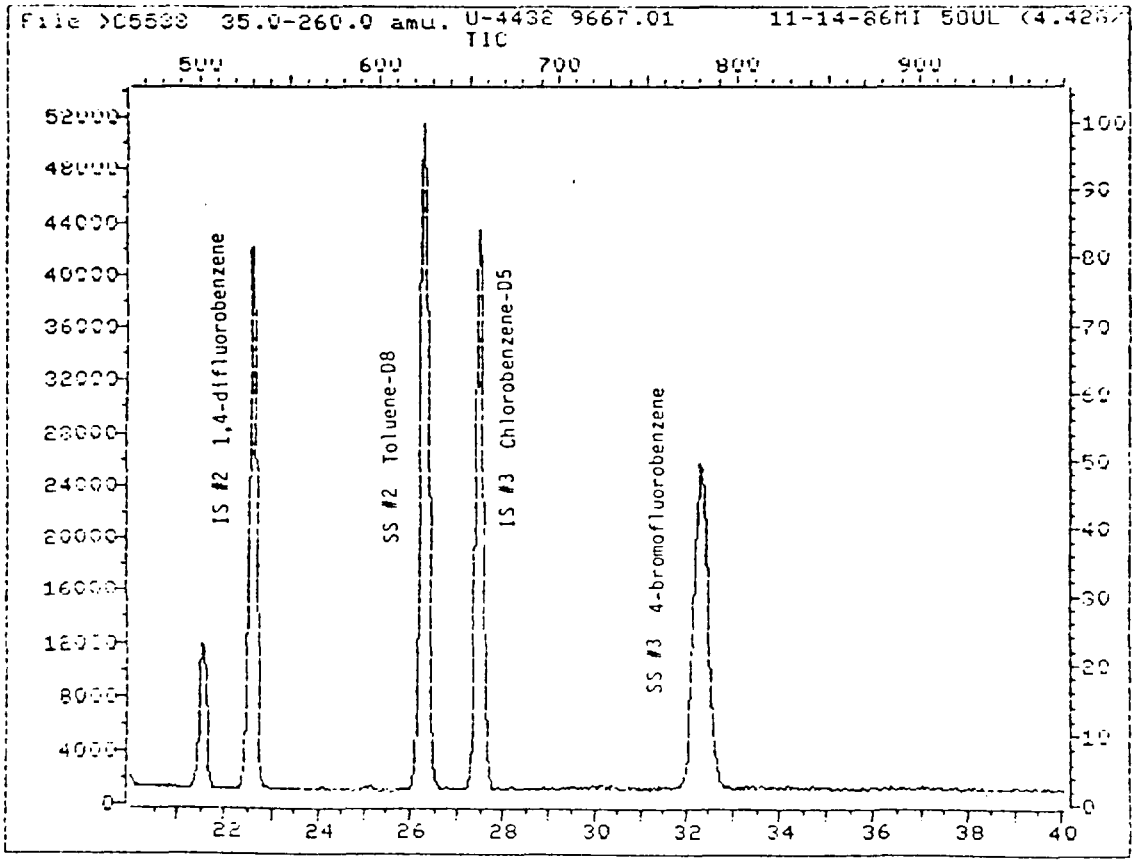
Data File: >C5538::D3
Name: U-4432 9667.01 DC-SD-29
Misc: 11-14-86MI 500UL [illegible]

Id File: VOA-CR::D2
Title: VOA ID FILE FOR HP-5995 [illegible]
Last Calibration: 861114 21:27

Operator ID: USEP8
Quant Time: 861115 13:56
Injected at: 861115 02:38

DC-SD-29


File >C5538 35.0-260.0 amu. U-4432 9667.01 11-14-86MI 50UL (4.426
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File >C5538 35.0-260.0 amu. U-4432 9667.01 11-14-86MI 50UL (4.426
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

QUANT REPORT

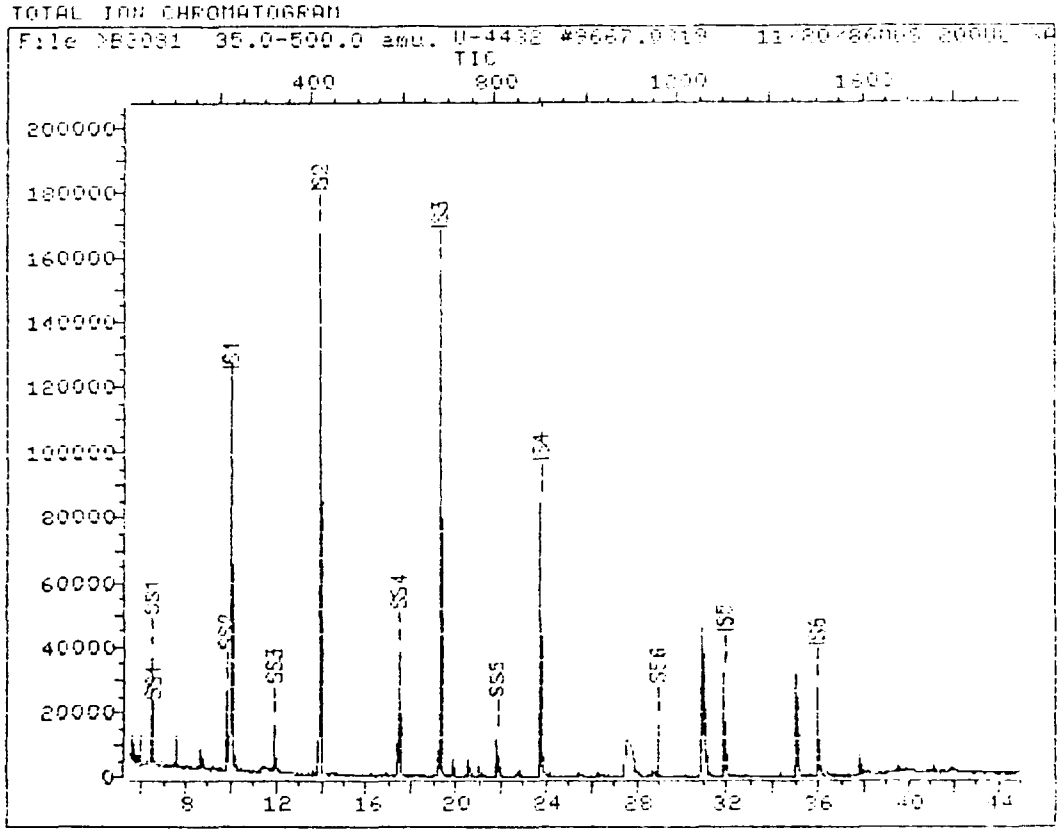
Operator ID: USER8 Quant Rev: 4 Quant Time: 861115 13:46
Output File: ^C5538::D2 Injected at: 861115 02:38
Data File: >C5538::D3 Dilution Factor: 1.00
Name: U-4432 9667.01 DC-SD-29
Misc: 11-14-86MI 50UL (4.42G/10MLS) + 10UL IS/SS

ID File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861114 21:27

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	12.02	[illegible]	[illegible]	50.00	UG/L	100
6)	METHYLENE CHLORIDE		84	8.60	169	[illegible]	[illegible]	UG/L	100
7)	ACETONE		43	9.61	[illegible]	[illegible]	21.63	UG/L	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.89	[illegible]	83889	49.68	UG/L	90
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.56	[illegible]	190942	50.00	UG/L	100
17)	2-BUTANONE		72	15.04	535	5420	37.74	UG/L	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.46	[illegible]	345163	50.00	UG/L	100
36)	TOLUENE-D8	(SURR)	98	26.29	625	208309	49.65	UG/L	96
40)	4-BROMOFLUOROBENZENE	(SURR)	95	32.31	780	100977	48.27	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM

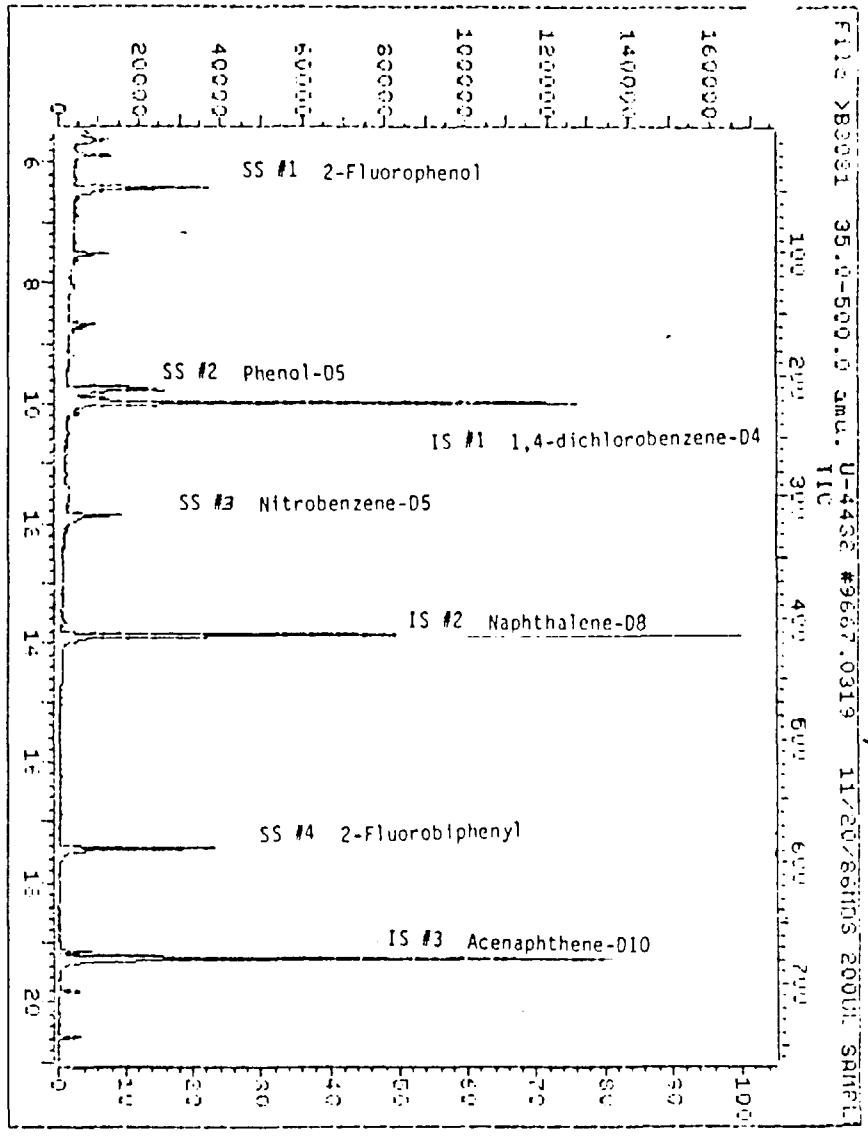


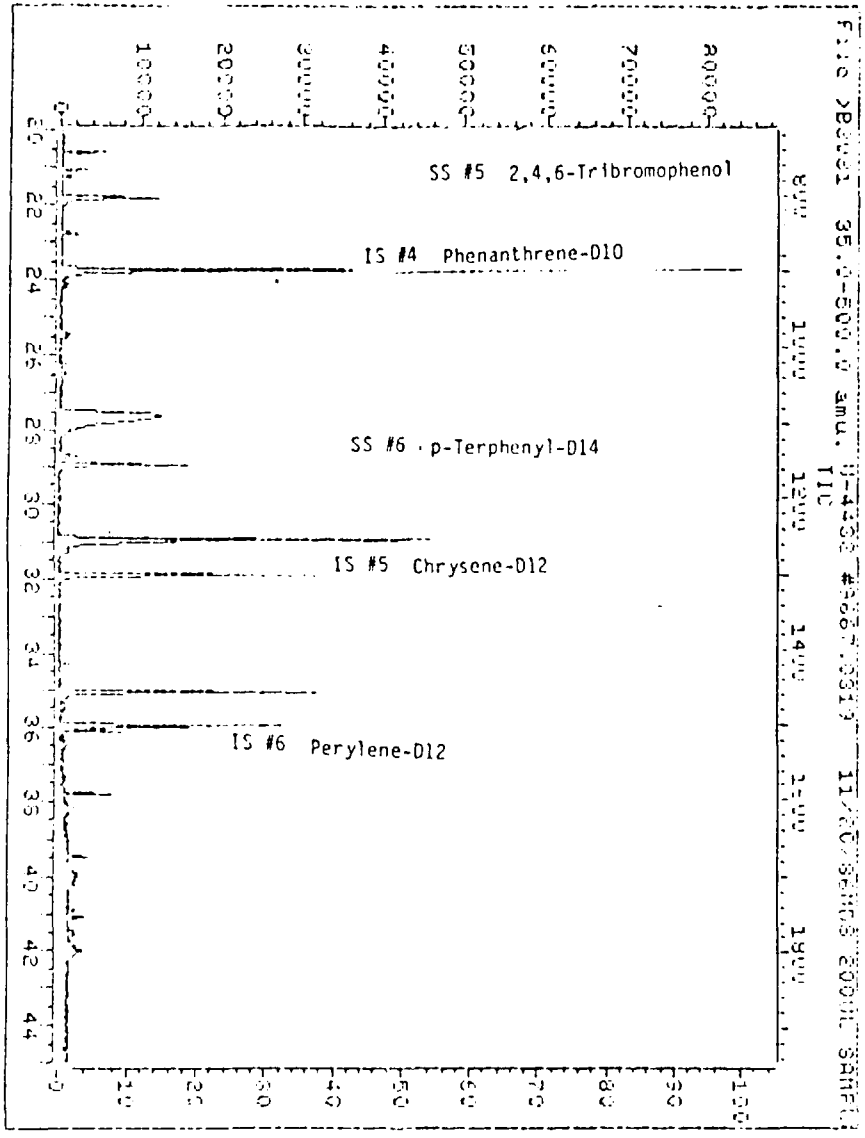
Data File: >B3081::04 DC-SD-29
Name: U-4432 #9667.0319
Misc: 11/20/86MDS 200UL SAMPLE+ 200 UL [illegible]

Id File: BNABR::02
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861120 12:20

Operator ID: USER8
Quant Time: 861120 17:08
Injected at: 861120 16:21

DC-SD-29


File XB0001 35.0-500.0 amu. U-4432 #9607.0319 11/20/86 10:05 200uL SAMPLE
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 XB0001 35.0-500.0 amu. U-4432 #9607.0319 11/20/86 10:05 200uL SAMPLE
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: USER8 Quant Rev: 4 Quant Time: 861120 1[illegible]:08
Output File: ^B3081::02 Injected at: 861120 16:21
Data File: >B3081::04 Dilution Factor: 2.00
Name: U-4432 #9667.0319 DC-SD-29
Misc: 11/20/86MDS 200UL SAMPLE+ 200 UL MECL2 + 4 UL IS (2X)

ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861120 12:20

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.97	2[illegible]	[illegible]	40.00	UG/L	90
2)	PHENOL-D5	(SURR)	99	9.77	212	[illegible]	38.51	UG/L	93
5)	2-FLUOROPHENOL	(SURR)	112	6.43	48	[illegible]	35.20	UG/L	88
5)	2-FLUOROPHENOL	(SURR)	112	6.50	51	2508	3.86	UG/L	96
~~14)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~11.23~~	~~2[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~14)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~11.31~~	~~2[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~14)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~11.42~~	~~2[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~14)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~11.46~~	~~2[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~14)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~11.71~~	~~3[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~17)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.98~~	~~3[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~90~~
~~17)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.99~~	~~3[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~62~~
19)	*NAPHTHALENE-D8	(IS)	136	13.88	414	214083	40.00	UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	11.88	316	13126	19.94	UG/L	93
34)	*ACENAPHTHENE-D10	(IS)	162	19.26	6[illegible]	[illegible]	40.00	UG/L	92
38)	2-FLUOROBIPHENYL	(SURR)	172	17.43	589	[illegible]	21.02	UG/L	93
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.16~~	~~6[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.26~~	~~5[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
49)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.78	803	9476	28.13	UG/L	93
~~51)~~	~~2,4-DINITROTOLUENE~~		~~165~~	~~20.50~~	~~7[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.26~~	~~6[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
55)	*PHENANTHRENE-D10	(IS)	188	23.71	893	[illegible]	40.00	UG/L	93
65)	*CHRYSENE-D12	(IS)	240	31.87	1299	64[illegible]	40.00	UG/L	100
68)	TERPHENYL-D14	(SURR)	244	28.92	1154	18441	33.27	UG/L	100
74)	*PERYLENE-D12	(IS)	264	35.95	1500	[illegible]	40.00	UG/L	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~[illegible]~~	~~1[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~76)~~	~~BENZO(B)FLUORANTHENE~~		~~252~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~77)~~	~~BENZO(K)FLUORANTHENE~~		~~252~~	~~36.84~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~78)~~	~~BENZO[a]PYRENE~~		~~252~~	~~[illegible]~~	~~3[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~79)~~	~~BENZO[k]PYRENE~~		~~252~~	~~[illegible]~~	~~3[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~81)~~	~~BENZO(G,H,I)PERYLENE~~		~~276~~	~~[illegible]~~	~~3[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~

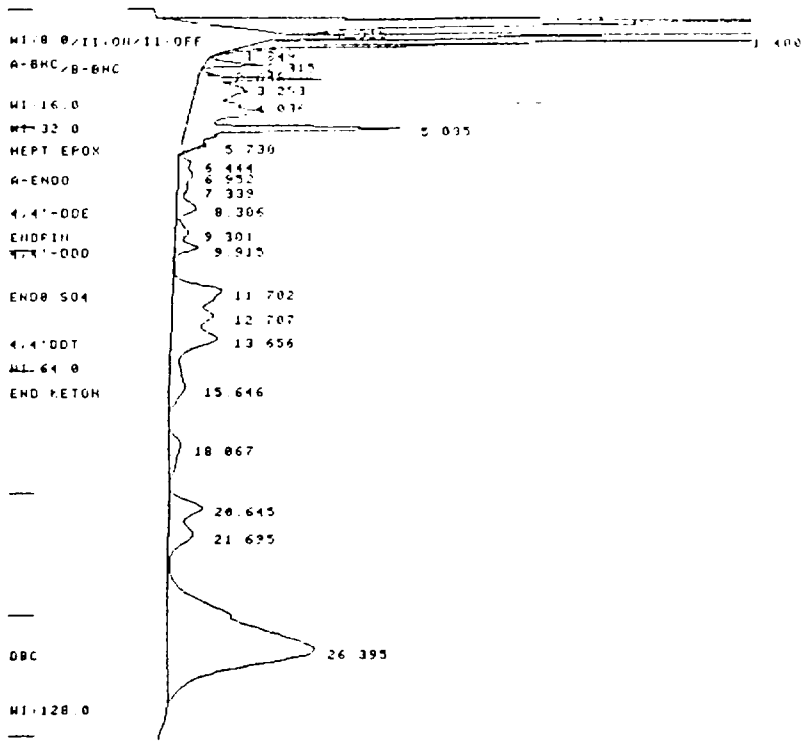
NS 8/11

NS 8/11

NS 8/11

* Compound is ISTD

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



CHANNEL: 1A - 1 TITLE: RUN# 40 0:12 20 NOV 86

DC-SD-29

SAMPLE: 9667.03.19 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	1.238		10[illegible]	BV	2.38
2		0.0000	1.400		4[illegible]	VV	3.25
3		0.0000	1.523		1[illegible]	VV	3.56
4		0.0000	1.674		[illegible]	VV	3.44
5	~~A-BHC~~	2.2531	2.315	-0.065	6[illegible]	VV	9.31
6		0.0000	2.910		1[illegible]	VV	6.61
7		0.0000	3.253		[illegible]	VV	? 17.94
8		0.0000	3.396		14[illegible]	VV	? 50.69
9	~~HEPTACHLOR~~	3.9607	4.036	0.246	9[illegible]	VV	? 25.94
10		0.0000	4.297		25[illegible]	VV	? 26.75
11		0.0000	5.085		44[illegible]	VV	10.81
12	~~HEPT EPOX~~	0.7307	5.730	0.060	2[illegible]	T	? 10.50
13		0.0000	6.444		3[illegible]	VV	? 20.94
14	~~A-ENDO~~ ✓	2.3291	6.952	-0.078	6[illegible]	VV	? 45.25
15		0.0000	7.339		3[illegible]	VV	?
16	~~DIELDRIN~~ ✓	2.8218	8.306	0.116	8[illegible]	VV	31.50
17	~~B-ENDO~~ ✓	2.0073	9.301	-0.009	5[illegible]	VV	32.38
18	~~4,4'-DDD~~	3.0968	9.915	-0.245	7[illegible]	VV	20.75
19	ENDO SO4 ✓	16.3002	11.702	-0.208	31[illegible]	VV	? 34.63
20		0.0000	12.707		21[illegible]	VV	? 57.88
21	~~4,4'-DDT~~	18.8474	13.656	0.396	29[illegible]	VV	? 53.81
22	~~END KETON~~	5.1838	15.646	0.376	14[illegible]	VB	? 78.25
23		0.0000	18.067		1[illegible]	BV	75.63
24		0.0000	20.645		19[illegible]	VV	49.06
25		0.0000	21.695		15[illegible]	VV	? 54.21
26	DBC	~~[illegible]~~	26.395	-0.215	227[illegible]	VB	109.06

TOTALS: 159.4433 0.374 6015417

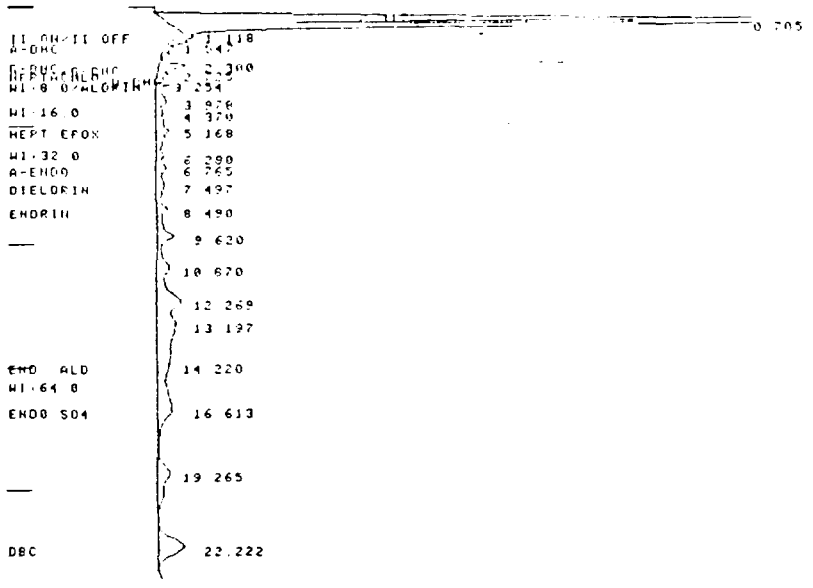
DETECTED PKS: 36 REJECTED PKS: 10

DIVISOR: 1.50000 MULTIPLIER: 1000.00000

NOISE: 388.6 OFFSET: -3

NOTES:
NOTEBOOK: 259-38 ANALYST: K. JUFFRY RICHARD SAMSON
SECURE AREA: D JOB#:U-4432,U-4442
INST:VARIAN 600#2 A ECD 104!
COLUMN: 6'-GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE:3% OV-1
CARRIER GAS: N2 @ 50 ML/MIN.
DET:300 C INJ:220 C
220 C ISOTHERMAL 4 UL INJECTION
AUTOSAMPLER

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



CHANNEL: 1B - 1 TITLE: RUN# 19 22:14 21 NOV 86

DC-SD-29

SAMPLE: 9567 METHOD: FEFA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT ~~UG/KG~~	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.355		42796	BV	5.25
2	~~A-BHC~~	0.0000	2.320	-0.100	34419	BV	5.91
3	~~B-BHC~~	0.0000	2.436	0.026	53235	VV	5.75
4	~~HEPTACHLO~~	0.0000	2.726	-0.075	33474	VV	6.69
5	~~G-BHC~~	0.0000	2.951	0.151	22930	VB	6.13
6	~~ALDRIN~~	0.0000	3.254	0.104	33020	BV	? 7.88
7		0.0000	3.435		20210	VV	? 243.19
8		0.0000	3.578		76924	VV	? 49.83
9		0.0000	4.372		32943	VV	? 15.50
10		0.0000	4.749		26231	VV	? 14.88
11	~~HEPT EPOX~~	0.0000	5.159	0.068	76794	VV	? 35.25
12		0.0000	5.459		63791	VV	? 60.13
13		0.0000	6.232		40588	VV	? 24.69
14	~~A-ENDO~~	0.0000	6.765	-0.045	72261	VV	? 37.31
15	~~DIELDRIN~~	0.0000	7.497	-0.393	91934	VV	? 64.88
16	~~ENDRIN~~	0.0000	8.482	-0.320	79674	VV	? 27.50
17		0.0000	9.622		161757	VV	33.75
18	~~END~~	0.0000	10.872	0.440	152325	VV	? 43.19
19	~~B-ENDOSUL~~	0.0000	12.269	0.629	324752	VV	? 59.69
20		0.0000	13.197		344579	VV	?106.25
21	~~END ALDT~~	0.0000	14.220	0.270	219671	VV	?
22	~~ENDO SO4~~	0.0000	16.613	-0.447	323923	VV	?117.06
23		0.0000	19.265		208824	VV	89.19
24	~~DBC~~	0.0000	22.222	-0.088	295208	VV	51.44
TOTALS:		0.0000		0.230	2832404		

DETECTED PKS: 37 REJECTED P-S: 13

DIVISOR: 1.50000 MULTIPLIER: 2000.00000

NOISE: 68.6 OFFSET: -14

NOTES:
NOTE800#:259-40 ANALYST:RICHARD SIMSON
SECURE AREA: D JOB #U-4432:U-4442
INST: VARIAN 6000#2 B ECD 10X1 ATT:16
COLUMN: 6' GLASS 4MM ID 100/120 S-ELCOPERT
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 CHECK

SAMPLE NUMBER DC-SD-31

481095

Sample Number
DC-SD-31

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No: U-4432 / U-4442
Lab Sample ID No: 9683
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: CSojtowicz
Date Sample Received: 11-7-86

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-14-86

Conc/Dil Factor: 2 pH 7.3

Percent Moisture: (Not Decanted) 20

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	2400u
74-83-9	Bromomethane	2400u
75-01-4	Vinyl Chloride	2400u
75-00-3	Chloroethane	2400u
75-09-2	Methylene Chloride	14000 B
67-64-1	Acetone	4700 B
75-15-0	Carbon Disulfide	1200u
75-35-4	1, 1-Dichloroethene	1200u
75-34-3	1, 1-Dichloroethane	1200u
156-60-5	Trans-1, 2-Dichloroethene	1200u
67-66-3	Chloroform	1200u
107-06-2	1, 2-Dichloroethane	1200u
78-93-3	2-Butanone	5400 B
71-55-6	1, 1, 1-Trichloroethane	1200u
56-23-5	Carbon Tetrachloride	1200u
108-05-4	Vinyl Acetate	2400u
75-27-4	Bromodichloromethane	1200u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	1200u
10061-02-6	Trans-1, 3-Dichloropropene	1200u
79-01-6	Trichloroethene	1200u
124-48-1	Dibromochloromethane	1200u
79-00-5	1, 1, 2-Trichloroethane	1200u
71-43-2	Benzene	1200u
10061-01-5	cis-1, 3-Dichloropropene	1200u
110-75-8	2-Chloroethylvinylether	2400u
75-25-2	Bromoform	1200u
108-10-1	4-Methyl-2-Pentanone	2400u
591-78-6	2-Hexanone	2400u
127-18-4	Tetrachloroethene	1200u
79-34-5	1, 1, 2, 2-Tetrachloroethane	1200u
108-88-3	Toluene	1200u
108-90-7	Chlorobenzene	1200u
100-41-4	Ethylbenzene	1200u
100-42-5	Styrene	1200u
	Total Xylenes	1200u

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.

Form I

Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No U-4432/U-4442

Sample Number DC-SD-31

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared 11-12-86

Date Analyzed 12-1-86

Conc/Dil Factor: 2

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	410	U
111-44-4	bis(-2-Chloroethyl)Ether	410	U
95-57-8	2-Chlorophenol	410	U
541-73-1	1 3-Dichlorobenzene	410	U
106-46-7	1 4-Dichlorobenzene	410	U
100-51-6	Benzyl Alcohol	410	U
95-50-1	1 2-Dichlorobenzene	410	U
95-48-7	2-Methylphenol	410	U
39638-32-9	bis(2-chloroisopropyl)Ether	410	U
106-44-5	4-Methylphenol	410	U
621-64-7	N-Nitroso-Di-n-Propylamine	410	U
67-72-1	Hexachloroethane	410	U
98-95-3	Nitrobenzene	410	U
78-59-1	Isophorone	410	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2 4-Dimethylphenol	410	U
65-85-0	Benzoic Acid	2000	U
111-91-1	bis(2-Chloroethoxy)Methane	410	U
120-83-2	2 4-Dichlorophenol	410	U
120-82-1	1 2 4-Trichlorobenzene	410	U
91-20-3	Naphthalene	410	U
106-47-8	4-Chloroaniline	410	U
87-68-3	Hexachlorobutadiene	410	U
59-50-7	4-Chloro-3-Methylphenol	410	U
91-57-6	2-Methylnaphthalene	410	U
77-47-4	Hexachlorocyclopentadiene	410	U
88-06-2	2 4 6-Trichlorophenol	410	U
95-95-4	2 4 5-Trichlorophenol	2000	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	2000	U
131-11-3	Dimethyl Phthalate	410	U
208-96-8	Acenaphthylene	410	U
99-09-2	3-Nitroaniline	2000	U

CAS Number		ug/l or (ug/Kg) (Circle One)	
83-32-9	Acenaphthene	410	U
51-28-5	2 4-Dinitrophenol	2000	U
100-02-7	4-Nitrophenol	2000	U
132-64-9	Dibenzofuran	410	U
121-14-2	2 4-Dinitrotoluene	410	U
606-20-2	2 6-Dinitrotoluene	410	U
84-66-2	Diethylphthalate	410	U
7005-72-3	4-Chlorophenyl-phenylether	410	U
86-73-7	Fluorene	410	U
100-01-6	4-Nitroaniline	2000	U
534-52-1	4 6-Dinitro-2-Methylphenol	2000	U
86-30-6	N-Nitrosodiphenylamine (1)	410	U
101-55-3	4-Bromophenyl-phenylether	410	U
118-74-1	Hexachlorobenzene	410	U
87-86-5	Pentachlorophenol	2000	U
85-01-8	Phenanthrene	410	U
120-12-7	Anthracene	410	U
84-74-2	Di-n-Butylphthalate	410	U
206-44-0	Fluoranthene	410	U
129-00-0	Pyrene	410	U
85-68-7	Butylbenzylphthalate	410	U
91-94-1	3 3'-Dichlorobenzidine	820	U
56-55-3	Benzo(a)Anthracene	410	U
117-81-7	bis(2-Ethylhexyl)Phthalate	410	U
218-01-9	Chrysene	410	U
117-84-0	Di-n-Octyl Phthalate	410	U
205-99-2	Benzo(b)Fluoranthene	410	U
207-08-9	Benzo(k)Fluoranthene	410	U
50-32-8	Benzo(a)Pyrene	410	U
193-39-5	Indeno(1 2 3-cd)Pyrene	410	U
53-70-3	Dibenz(a h)Anthracene	410	U
191-24-2	Benzo(g h i)Perylene	410	U

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No U-4432 / U-4442

Sample Number DC-SD-31

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-12-86

Date Analyzed 11-20-86

Conc/Dil Factor 2

Percent Moisture (decanted) 20

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	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 1000 V_i 4

Laboratory Name ecology and environment, inc.

Case No u-4432 / u-4442

Sample Number DC-SD-31

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.5 min	520 BJ
2.	Unknown Ketone	VOA	19.8 min	230 BJ
3.	Hexane isomer	VOA	21.5 min	1800 BJ
4.				
5.	UNKNOWN HYDROCARBON	BNA	27.6	360 J
6.	UNKNOWN	|	30.9	2800 BJ
7.	UNKNOWN	|	35.2	2500 BJ
8.	UNKNOWN HYDROCARBON	|	37.8	440 BJ
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
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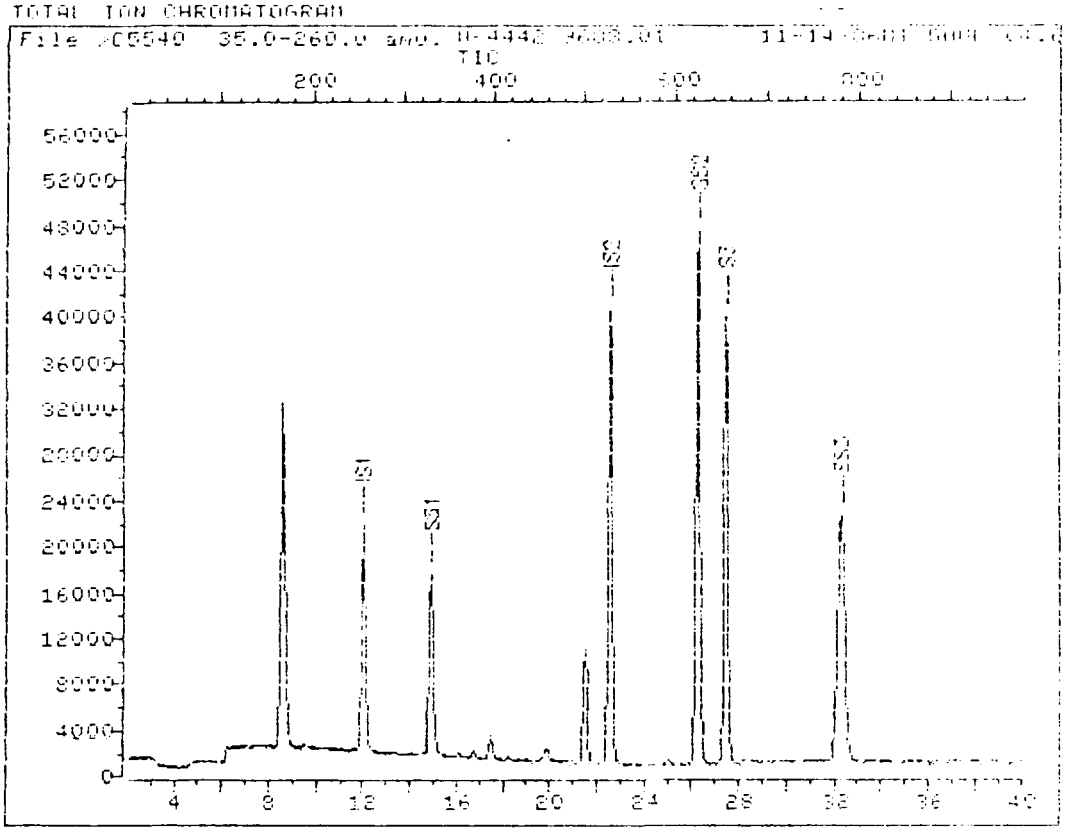
28.				
29.				
30				

TOTAL ION CHROMATOGRAM

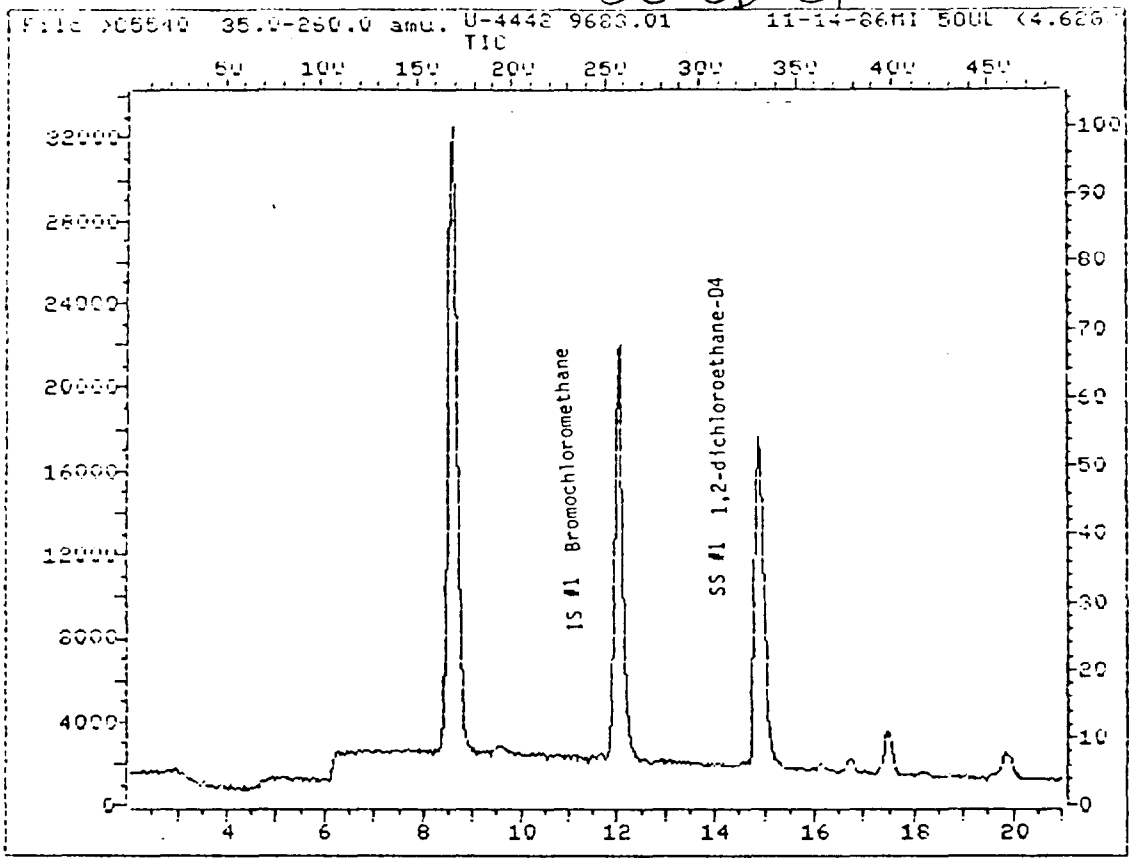


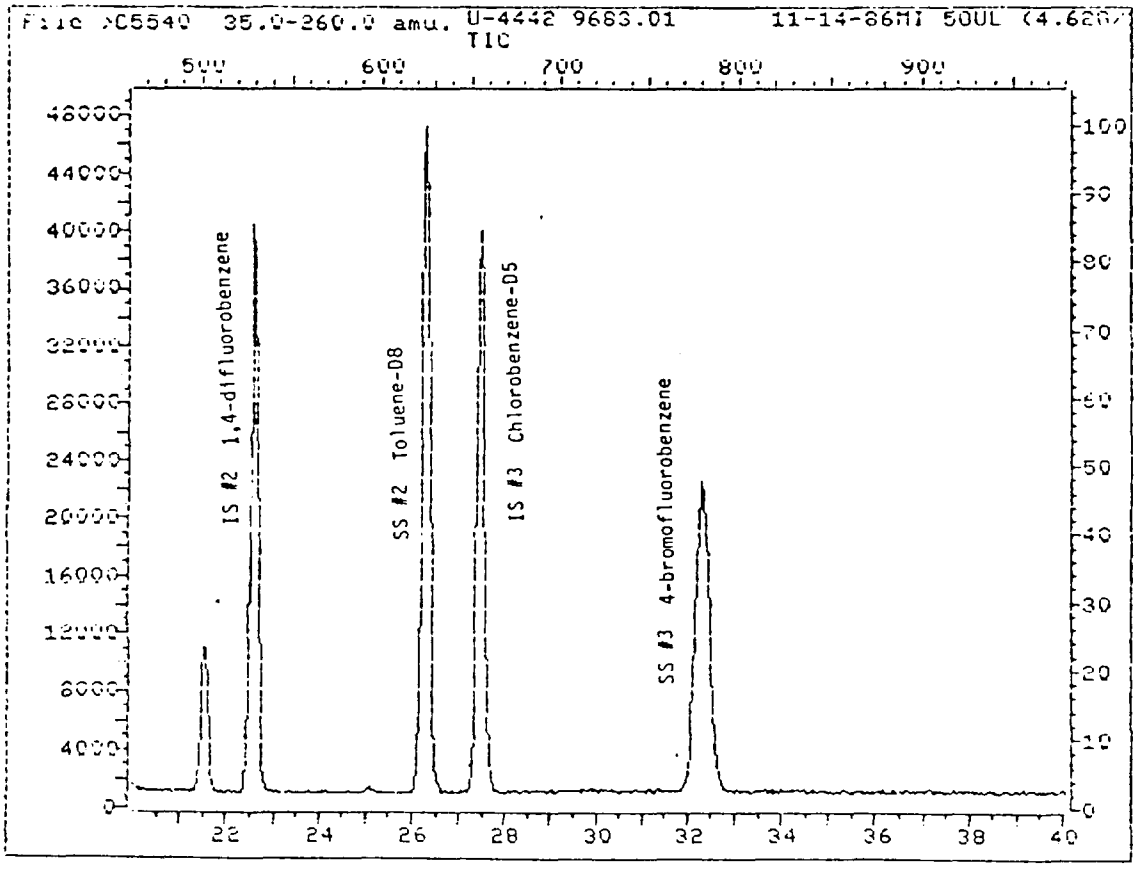
Data File: >C5540::04
Name: U-4442 9683.01 DC-SD-31
Misc: 11-14-86M1 50UL (4.626/100ML) + 10% IS 55

Id File: VOACP::02
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861114 21:27

Operator ID: USER8
Quant Time: 861115 14:06
Injected at: 861115 04:22

DC-SD-31


File >C5540 35.0-260.0 amu. U-4442 9683.01 11-14-86MI 50UL (4.626)
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File >C5540 35.0-260.0 amu. U-4442 9683.01 11-14-86MI 50UL (4.626)
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

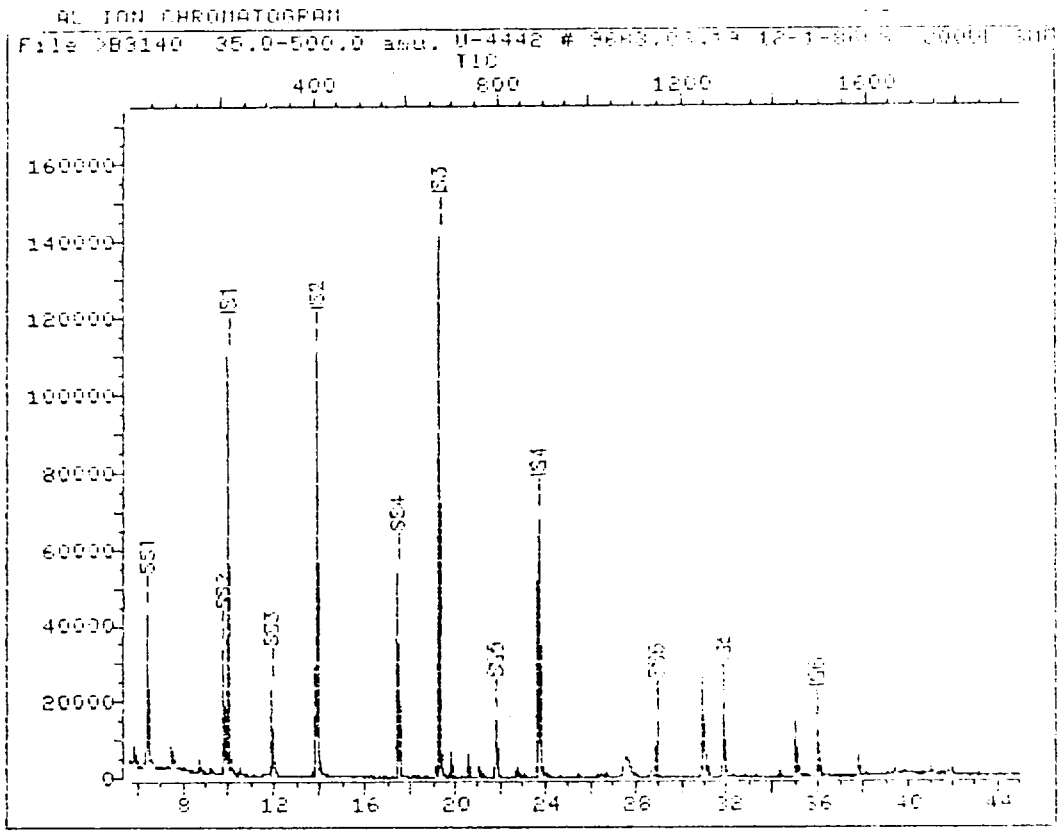
QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861115 14:06
Output File: ^C5540::D2 Injected at: 861115 04:22
Data File: >C5540::D3 Dilution Factor: 1.00
Name: U-4442 9683.01 DC-SD-31
Misc: 11-14-86MI 50UL (4.62G/10MLS) + 10UL IS/SS

ID File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861114 21:27

	Compound	M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE (IS)	128	12.02	257	33151	50.00	UG/L	100
6)	METHYLENE CHLORIDE	84	8.60	169	83550	53.08	UG/L	100
7)	ACETONE	43	9.53	193	3911	12.23	UG/L	100
15)	1,2-DICHLOROETHANE-D4(SURR)	65	14.89	271	65476	47.10	UG/L	89
16)	*1,4-DIFLUOROBENZENE (IS)	114	22.57	529	172819	50.00	UG/L	100
17)	2-BUTANONE	72	15.00	294	2694	20.05	UG/L	100
31)	*CHLOROBENZENE-D5 (IS)	117	27.46	655	154325	50.00	UG/L	100
36)	TOLUENE-D8 (SURR)	98	26.29	625	189966	49.29	UG/L	95
40)	4-BROMOFLUOROBENZENE(SURR)	95	32.31	781	86321	45.06	UG/L	100

* Compound is ISTD

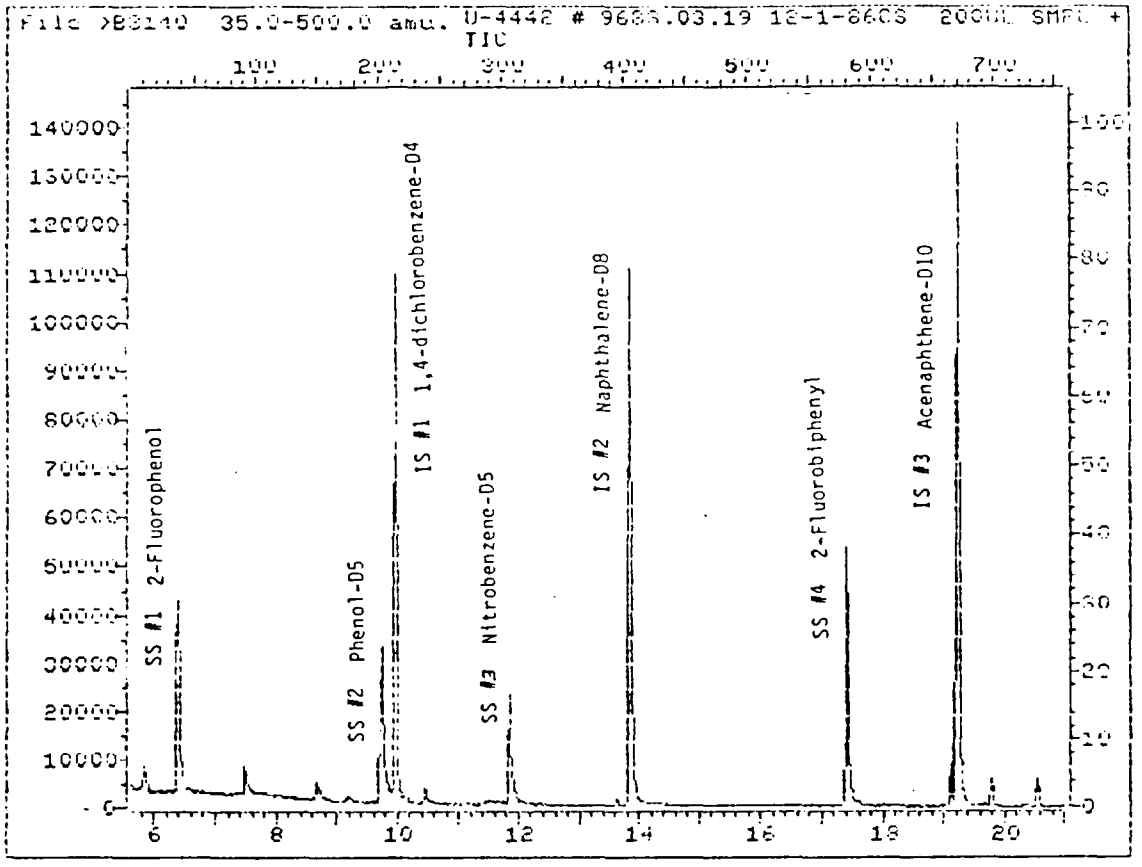


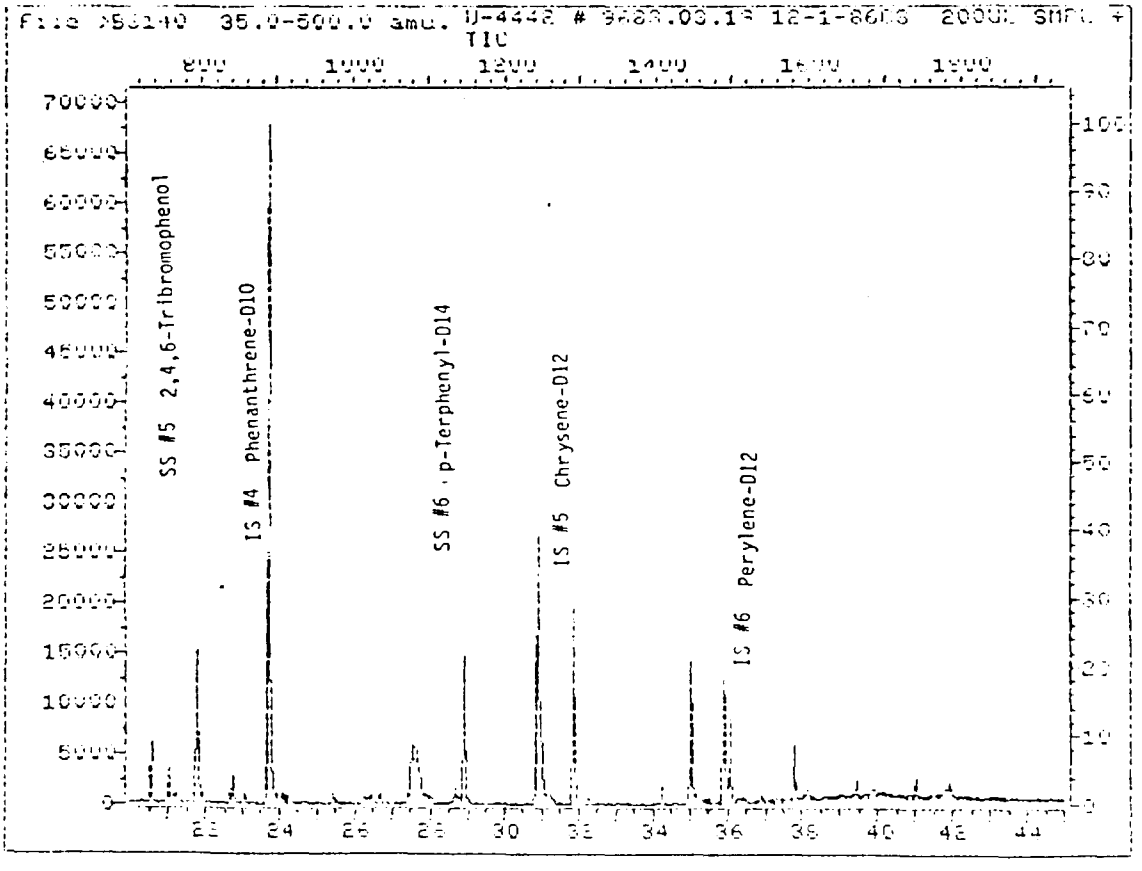
Data File: >B3140::D4
Name: U-4442 # 9683.03.19 DC-SD-31
Misc: 12-1-86CS 200UL SMPL

Id File: BNA8R::D2
Title: BNA ID FILE FOR
Last Calibration: 861201 13:

Operator ID: USER6
Quant Time: 861201 18:
Injected at: 861201 16:20

DC-SD-31


File >83140 35.0-500.0 amu. U-4442 # 9683.03.19 12-1-86CS 200UL SMPL +
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 >83140 35.0-500.0 amu. U-4442 # 9683.03.19 12-1-86CS 200UL 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

erator ID: USER6 Quant Rev: 4 Quant Time: 861201 18:55
utput File: ^B3140::D2 Injected at: 861201 16:28
ata File: >B3140::D4 Dilution Factor: 2.00
ame: U-4442 # 9683.03.19 DC-SD-31
isc: 12-1-86CS 200UL SMPL + 200UL MECL2 + 40L IS (2X)

J File: BNABR::D2
itle: BNA ID FILE FOR THE HP 5970 (B)
ast Calibration: 861201 13:31

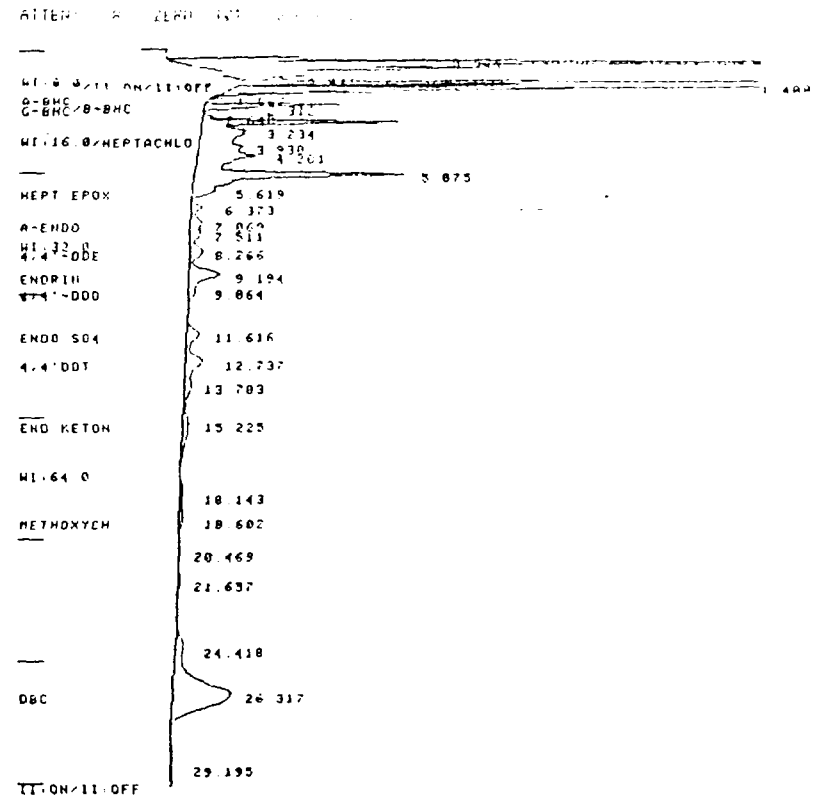
	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.96	214	52856	40.00	UG/L	89
2)	PHENOL-D5	(SURR)	99	9.74	203	46636	58.93	UG/L	92
5)	2-FLUOROPHENOL	(SURR)	112	6.38	38	38543	[illegible]	UG/L	89
~~[illegible]~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~[illegible]~~	~~11.61~~	~~[illegible]~~	~~[illegible]~~	~~.10~~	~~UG/L~~	~~100~~
~~[illegible]~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~[illegible]~~	~~11.69~~	~~[illegible]~~	~~[illegible]~~	~~.17~~	~~UG/L~~	~~100~~
~~[illegible]~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~[illegible]~~	~~11.06~~	~~[illegible]~~	~~[illegible]~~	~~.05~~	~~UG/L~~	~~90~~
9)	*NAPHTHALENE-D8	(IS)	136	13.85	405	184330	40.00	UG/L	100
1)	NITROBENZENE-D5	(SURR)	82	11.85	387	24772	32.87	UG/L	96
~~[illegible]~~	~~NAPHTHALENE~~		~~128~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~.17~~	~~UG/L~~	~~[illegible]~~
~~[illegible]~~	~~2-METHYLNAPHTHALENE~~		~~142~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~.23~~	~~UG/L~~	~~96~~
4)	*ACENAPHTHENE-D10	(IS)	162	19.23	670	70479	40.00	UG/L	92
3)	2-FLUOROBIPHENYL	(SURR)	172	17.40	580	63960	36.61	UG/L	95
~~[illegible]~~	~~DIMETHYL PHTHALATE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~.02~~	~~UG/L~~	~~[illegible]~~
~~[illegible]~~	~~DIMETHYL PHTHALATE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~.01~~	~~UG/L~~	~~100~~
8)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.25	794	105[illegible]78	[illegible].43	UG/L	99
~~[illegible]~~	~~2,4-DINITROTOLUENE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~[illegible]~~	~~2,6-DINITROTOLUENE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
6)	*PHENANTHRENE-D10	(IS)	188	23.68	889	107200	40.00	UG/L	96
7)	*CHRYSENE-D12	(IS)	240	31.83	1290	33042	40.00	UG/L	100
3)	TERPHENYL-D14	(SURR)	244	28.89	1145	17963	42.87	UG/L	100
4)	*PERYLENE-D12	(IS)	264	35.92	1491	24036	40.00	UG/L	100
~~[illegible]~~	~~BENZO(B)FLUORANTHENE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~.06~~	~~UG/L~~	~~100~~
~~[illegible]~~	~~BENZO(K)FLUORANTHENE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~.06~~	~~UG/L~~	~~100~~
~~[illegible]~~	~~BENZO(A)PYRENE~~		~~252~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~.04~~	~~UG/L~~	~~100~~

No GC/MS

No GC/MS

No GC/MS

* Compound is ISTD



CHANNEL: 1A - 1 TITLE: RUN# 42 10:07 20 NOV 86

DC-SD-31

SAMPLE: 9683.03.19A1 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	1.239		78393	BV	2.50
2		0.0000	1.400		295325	VV	3.25
3		0.0000	1.523		89069	VV	3.56
4		0.0000	1.672		25435	VV	3.25
5	~~B-BHC~~	15.2276	2.194	0.024	94202	VV	5.06
6	~~G-BHC~~	1.9686	2.312	-0.068	25355	VB	? 5.69
7		0.0000	2.906		191059	VV	6.63
8		0.0000	3.234		68341	VV	? 18.19
9		0.0000	3.384		57591	VV	? 18.38
10		0.0000	3.551		82034	VV	? 24.00
11	~~HEPTACHLO~~	7.8803	3.930	0.140	98254	VV	? 15.69
12		0.0000	4.281		198614	VV	? 37.75
13		0.0000	5.075		411157	VV	11.06
14	HEPT EPOX	3.1458	5.619	-0.051	45067	VV	? 28.19
15		0.0000	6.373		29219	VV	21.31
16	~~A-ENDO~~	2.6175	7.069	0.039	35233	VV	? 35.38
17		0.0000	7.511		37590	VV	? 38.44
18	~~DIELDRIN~~	3.6097	8.266	0.076	53377	VV	31.31
19	ENDRIN	8.2523	9.194	0.064	111205	VV	25.00
20	~~ENDO SO4~~	5.3962	11.616	-0.284	52647	BV	29.13
21		0.0000	12.737		85489	VV	32.88
22	~~4,4'~~DDT	5.2206	13.703	0.442	41521	VV	? 39.00
23	~~END KETON~~	3.8971	15.225	-0.045	55127	VB	57.63
24	~~METHOXYCH~~	4.4401	18.602	-0.885	21120	VV	7104.20
25		0.0000	24.418		92542	BV	? 54.25
26	DBC 71%	47.3987	26.317	-0.292	523552	VV	64.44

TOTALS: 109.0546 -0.852 2843727

DETECTED PKS: 40 REJECTED PKS: 14

DIVISOR: 1.50000 MULTIPLIER: 2000.22000

NOISE: 182.8 OFFSET: 12

NOTES:
NOTEBOOK: 259-38 ANALYST: K. JUREK/ RICHARD E-MION
SECURE AREA; D JOB#:U-4432,U-4442
INST:VARIAN 600042 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

SAMPLE NUMBER DC-SD-32

481095

Sample Number
DC-SD-32

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No: U-4432 / U-4442
Lab Sample ID No: 9684
QC Report No:
Sample Matrix: Soil
Contract No: IL 3140
Data Release Authorized By: C Stoytowicz
Date Sample Received: 11-7-86

Volatile Compounds

Concentration: Low (Medium) (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-14-86

Conc/Dil Factor: 2 pH 6.4

Percent Moisture: (Not Decanted) 29

CAS Number		ug/l or (ug/Kg) (Circle One)
74-87-3	Chloromethane	2800u
74-83-9	Bromomethane	2800u
75-01-4	Vinyl Chloride	2800u
75-00-3	Chloroethane	2800u
75-09-2	Methylene Chloride	14000 B
67-64-1	Acetone	11000 B
75-15-0	Carbon Disulfide	1400u
75-35-4	1, 1-Dichloroethene	1400u
75-34-3	1, 1-Dichloroethane	1400u
156-60-5	Trans-1, 2-Dichloroethene	1400u
67-66-3	Chloroform	1400u
107-06-2	1, 2-Dichloroethane	1400u
78-93-3	2-Butanone	12000 B
71-55-6	1, 1, 1-Trichloroethane	1400u
56-23-5	Carbon Tetrachloride	1400u
108-05-4	Vinyl Acetate	2800u
75-27-4	Bromodichloromethane	1400u

CAS Number		ug/l or (ug/Kg) (Circle One)
78-87-5	1, 2-Dichloropropane	1400u
10061-02-6	Trans-1, 3-Dichloropropene	1400u
79-01-6	Trichloroethene	1400u
124-48-1	Dibromochloromethane	1400u
79-00-5	1, 1, 2-Trichloroethane	1400u
71-43-2	Benzene	1400u
10061-01-5	cis-1, 3-Dichloropropene	1400u
110-75-8	2-Chloroethylvinylether	2800u
75-25-2	Bromoform	1400u
108-10-1	4-Methyl-2-Pentanone	2800u
591-78-6	2-Hexanone	2800u
127-18-4	Tetrachloroethene	1400u
79-34-5	1, 1, 2, 2-Tetrachloroethane	1400u
108-88-3	Toluene	1400u
108-90-7	Chlorobenzene	1400u
100-41-4	Ethylbenzene	1400u
100-42-5	Styrene	1400u
	Total Xylenes	1400u

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.

Laboratory Name Ecology & Environment Inc.

Case No U-4432 / V-4442

Sample Number DC-SD-32

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 11-12-86

Date Analyzed: 12-1-86

Conc/Dil Factor: 2

Percent Moisture (Decanted) 29

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	160	J
106-46-7	1, 4-Dichlorobenzene	1000	
100-51-6	Benzyl Alcohol	460	U
95-50-1	1, 2-Dichlorobenzene	480	
95-48-7	2-Methylphenol	460	U
39638-32-9	bis(2-chloroisopropyl)Ether	460	U
106-44-5	4-Methylphenol	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	580	
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)	220	J
101-55-3	4-Bromophenyl-phenylether	460	U
118-74-1	Hexachlorobenzene	110	J
87-86-5	Pentachlorophenol	2200	U
85-01-8	Phenanthrene	190	J
120-12-7	Anthracene	460	U
84-74-2	Di-n-Butylphthalate	460	U
206-44-0	Fluoranthene	460	U
129-00-0	Pyrene	110	J
85-68-7	Butylbenzylphthalate	520	
91-94-1	3, 3'-Dichlorobenzidine	920	U
56-55-3	Benzo(a)Anthracene	460	U
117-81-7	bis(2-Ethylhexyl)Phthalate	280	J
218-01-9	Chrysene	110	J
117-84-0	Di-n-Octyl Phthalate	300	J
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	Dibenz(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-4432/U-4442

Sample Number DC-SD-32

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared: 11-12-86

Date Analyzed: 11-20-86

Conc/Dil Factor: 200 50

Percent Moisture (decanted) 29

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	8000 U
53494-70-5	Endrin Ketone	1600 U
57-74-9	Chlordane	8000 U
8001-35-2	Toxaphene	16000 U
12674-11-2	Aroclor-1016	8000 U
11104-28-2	Aroclor-1221	8000 U
11141-16-5	Aroclor-1232	8000 U
53469-21-9	Aroclor-1242	8000 U
12672-29-6	Aroclor-1248	21,000 C
11097-69-1	Aroclor-1254	13,000 J C
11096-82-5	Aroclor-1260	16000 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 V-4432/V-4442

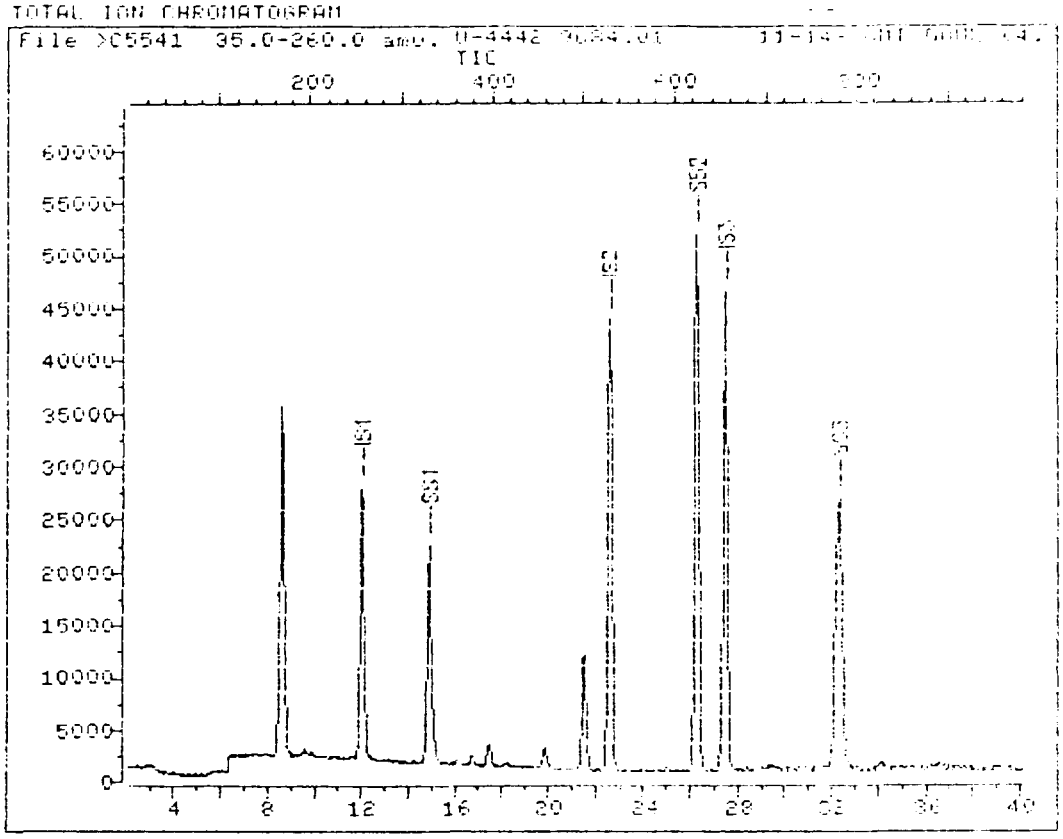
Sample Number DC-SD-32

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	HEXENE ISOMER	VOA	17.5	630 BJ
2.	UNKNOWN KETONE	↓	19.9	370 BJ
3.	HEXANE ISOMER	↓	21.5	2100 BJ
4.				
5.	UNKNOWN	BNA	8.6	5500 J
6.	TETRACHLOROBENZENE ISOMER		17.5	910 J
7	UNKNOWN HYDROCARBON		18.0	780 J
8.	UNKNOWN		19.1	140 J
9.	UNKNOWN		19.6	1400 J
10.	UNKNOWN HYDROCARBON		21.2	580 J
11.	PCB		21.4-22.6	—
12.	UNKNOWN HYDROCARBON		22.8	860 J
13.	UNKNOWN HYDROCARBON		24.2	820 J
14.	PCB		25.0-26.5	—
15.	UNKNOWN HYDROCARBON		28.3	1100 J
16.	UNKNOWN		29.4	1700 J
17.	UNKNOWN HYDROCARBON		30.3	1700 J
18.	UNKNOWN		30.9	2000 BJ
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30				

TOTAL ION CHROMATOGRAM



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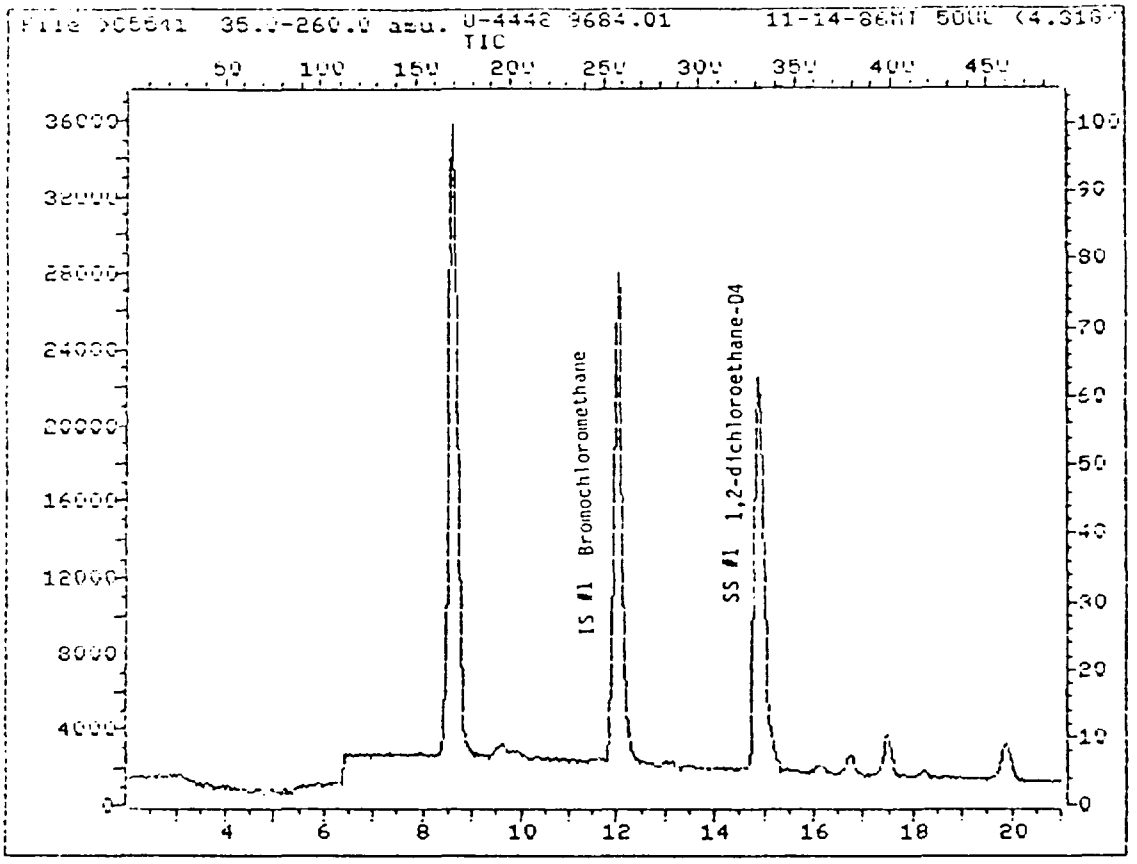
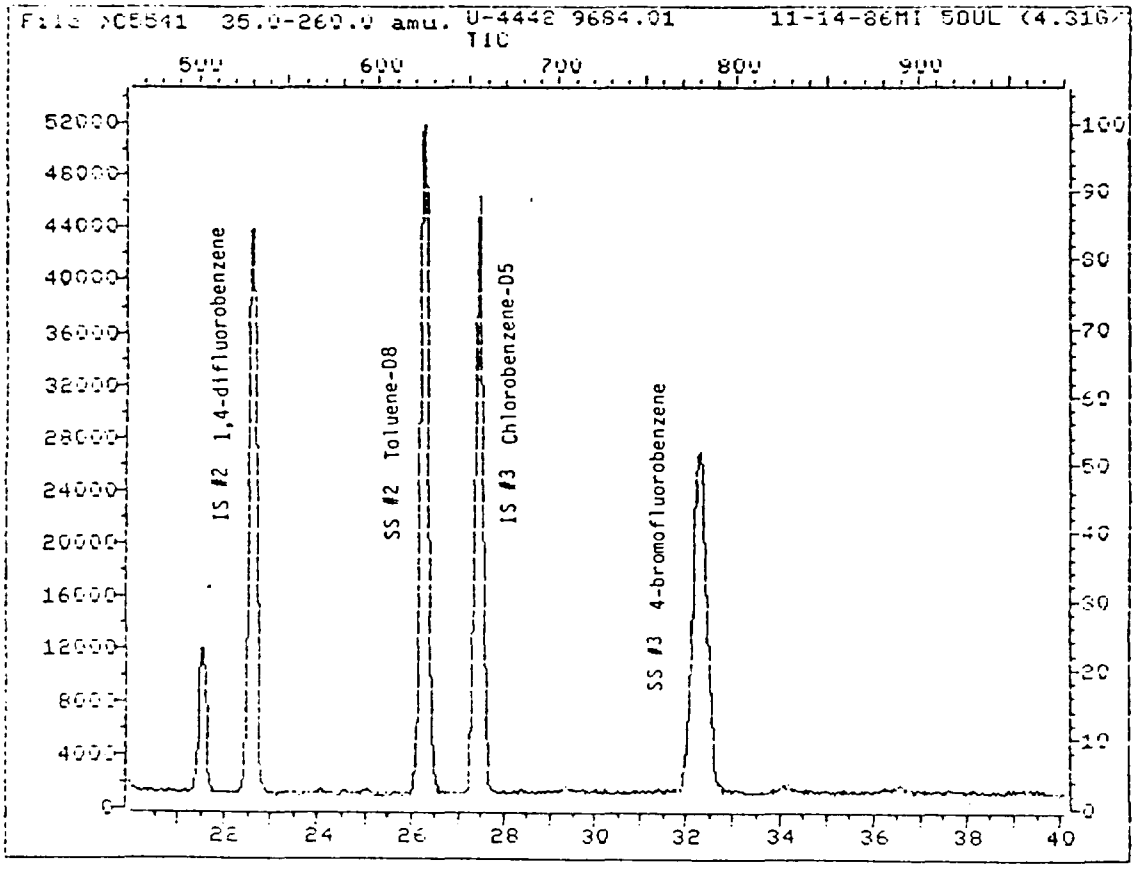
Misc: 11-14-86MI 50UL (4.31G/10MLS) + 10ul IS-50.

Id File: VOACR::02
Title: VOA ID FILE FOR HP-5995 (CONT. [illegible]
Last Calibration: 861114 21:2[illegible]

Operator ID: USER8
Quant Time: 861115 14:08
Injected at: 861115 05:13

DC-SD-32


File >C5541 35.0-260.0 amu. U-4442 9684.01 11-14-86MT 50UL (4.316)
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File >C5541 35.0-260.0 amu. U-4442 9684.01 11-14-86MT 50UL (4.316)
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

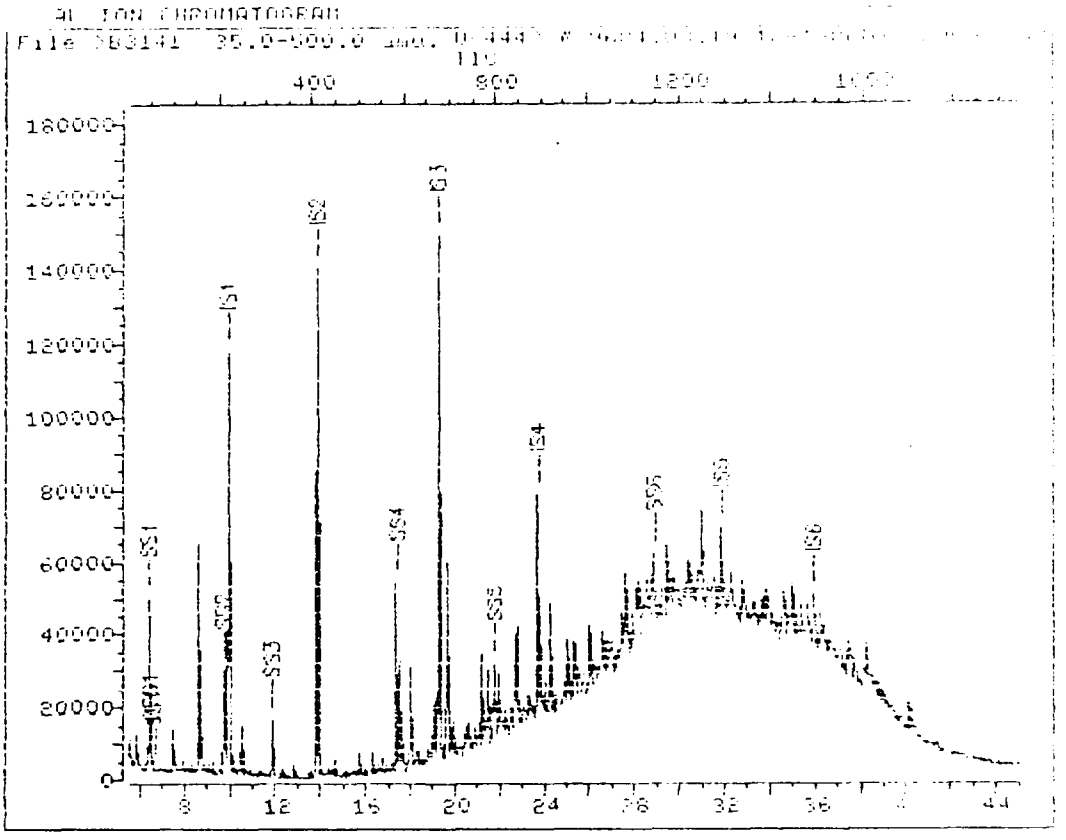
QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861115 14:08
Output File: ^C9541::02 Injected at: 861115 05:13
Data File: >C9541::03 Dilution Factor: 1.00
Name: U-4442 9684.01 DC-SD-32
Misc: 11-14-86MI 50UL (4.31G/10MLS) + 10UL IS/SS

ID File: VOACR::02
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861114 21:27

	Compound	M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE (IS)	128	12.02	297	47253	50.00	UG/L	100
6)	METHYLENE CHLORIDE	84	8.60	169	88504	44.12	UG/L	100
7)	ACETONE	43	9.57	194	9546	32.00	UG/L	100
15)	1,2-DICHLOROETHANE-D4(SURR)	65	14.89	361	86017	48.56	UG/L	90
16)	*1,4-DIFLUOROBENZENE (IS)	114	22.57	529	196742	50.00	UG/L	100
17)	2-BUTANONE	72	15.00	344	5407	36.50	UG/L	100
31)	*CHLOROBENZENE-D5 (IS)	117	27.46	655	154194	50.00	UG/L	100
36)	TOLUENE-D8 (SURR)	98	26.29	625	211261	47.75	UG/L	95
40)	4-BROMOFLUOROBENZENE(SURR)	95	32.31	780	104589	47.56	UG/L	100

* Compound is ISTD

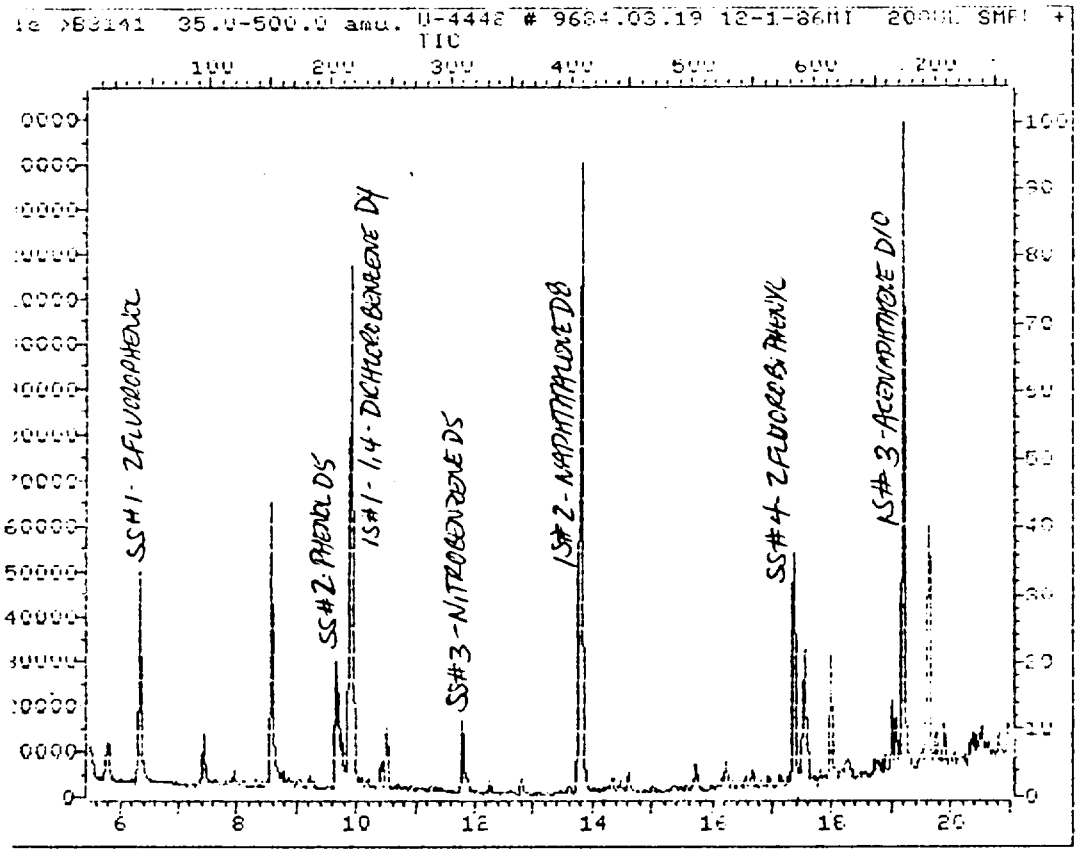


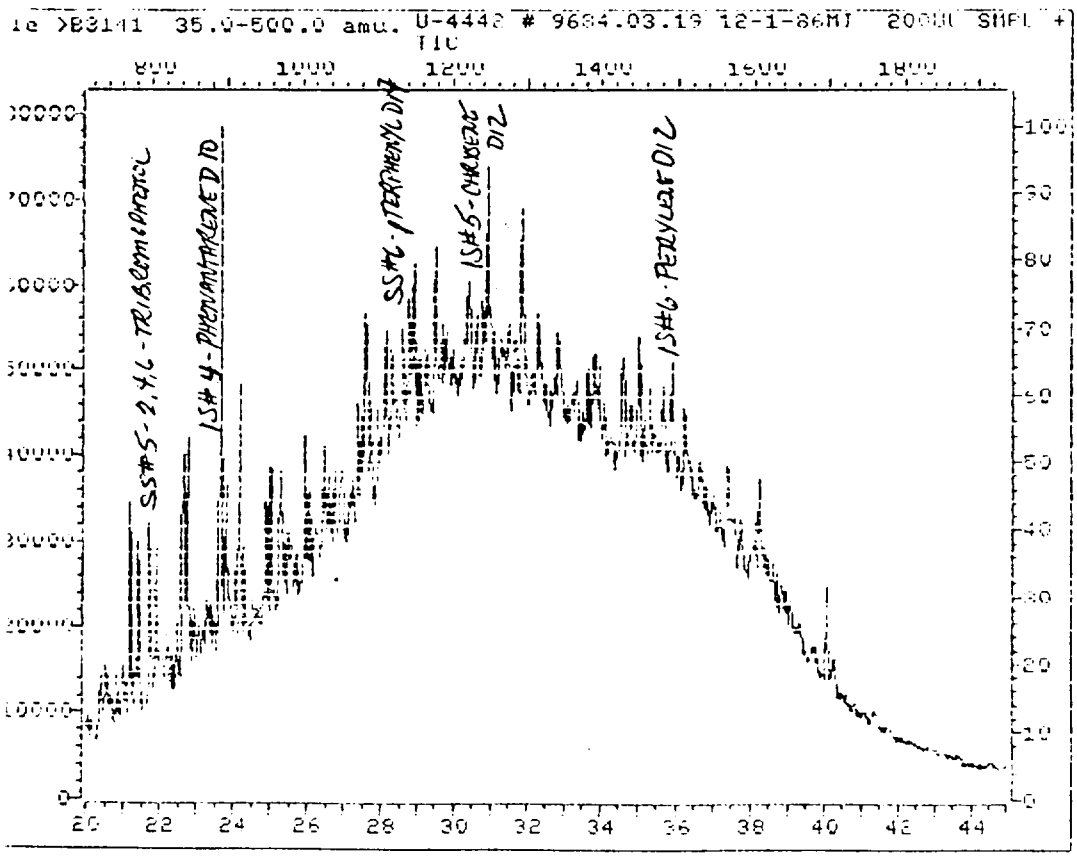
Data File: >B3141::D4
Name: U-4442 # 9684.03.19 DC-SD-32
Misc: 12-1-86M1 200UL SMPL + 200UL [illegible]

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861201 13:31

Operator ID: USER6
Quant Time: 861201 18:10
Injected at: 861201 17:22

DC-SD-32


TIC
SS#1 - 2FLUOROPHENOL
SS#2 PHENOL D5
IS#1 - 1,4 - DICHLOROBENZENE D4
SS#3 - NITROBENZENE D5
IS#2 - NAPHTHALENE D8
SS#4 - 2FLUOROBIPHENYL
IS#3 - ACENAPHTHENE D10


TIC
SS#5 - 2,4,6 - TRIBROMOPHENOL
IS#4 - PHENANTHRENE D10
SS#6 - TERPHENYL D14
IS#5 - CHRYSENE D12
IS#6 - PERYLENE D12

QUANT REPORT

Operator ID: USER6 Quant Rev: 4 Quant Time: 861201 18:10
Output File: ^83141::02 Injected at: 861201 17:17
Data File: >83141::04 Dilution Factor: 2.00
Name: U-4442 # 9684.03.19 DC-SD-32
Misc: 12-1-86MI 200UL SMPL + 200UL MECL2 + 40UL IS (2X)

ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861201 13:31

	Compound	M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4(IS)	152	9.91	217	53325	40.00	UG/L	87
2)	PHENOL-D5 (SURR)	99	9.68	206	43816	54.88	UG/L	90
5)	2-FLUOROPHENOL (SURR)	112	6.35	42	30134	61.49	UG/L	92
5)	2-FLUOROPHENOL (SURR)	112	6.41	45	2275	4.64	UG/L	89
5)	2-FLUOROPHENOL (SURR)	112	6.45	47	2424	4.95	UG/L	79
5)	2-FLUOROPHENOL (SURR)	112	6.52	53	674	1.38	UG/L	86
9)	1,3-DICHLOROBENZENE	146	9.76	218	2801	3.42	UG/L	96
~~9)~~	~~1,3-DICHLOROBENZENE~~	~~146~~	~~9.85~~	~~220~~	~~13001~~	~~27.04~~	~~UG/L~~	~~99~~
~~10)~~	~~1,4-DICHLOROBENZENE~~	~~146~~	~~9.96~~	~~219~~	~~2002~~	~~4.52~~	~~UG/L~~	~~97~~
10)	1,4-DICHLOROBENZENE	146	9.95	219	17821	22.33	UG/L	96
12)	1,2-DICHLOROBENZENE	146	10.50	246	9007	10.24	UG/L	96
~~14)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~	~~45~~	~~10.70~~	~~246~~	~~615~~	~~.43~~	~~UG/L~~	~~100~~
~~14)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~	~~45~~	~~11.06~~	~~254~~	~~522~~	~~.42~~	~~UG/L~~	~~100~~
~~14)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~	~~45~~	~~11.15~~	~~258~~	~~292~~	~~.42~~	~~UG/L~~	~~100~~
~~14)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~	~~45~~	~~11.26~~	~~260~~	~~[illegible]~~	~~.38~~	~~UG/L~~	~~100~~
~~14)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~	~~45~~	~~11.43~~	~~266~~	~~[illegible]~~	~~.19~~	~~UG/L~~	~~100~~
~~15)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~	~~70~~	~~11.00~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~79~~
19)	*NAPHTHALENE-D8 (IS)	136	13.81	439	185108	40.00	UG/L	100
20)	NITROBENZENE-D5 (SURR)	82	11.80	310	17522	27.15	UG/L	91
28)	1,2,4-TRICHLOROBENZENE	180	13.77	402	10202	12.50	UG/L	100
~~29)~~	~~NAPHTHALENE~~	~~128~~	~~13.95~~	~~[illegible]~~	~~[illegible]~~	~~.18~~	~~UG/L~~	~~100~~
~~32)~~	~~2-METHYLNAPHTHALENE~~	~~142~~	~~14.[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~.[illegible]~~	~~UG/L~~	~~87~~
34)	*ACENAPHTHENE-D10 (IS)	162	19.20	674	[illegible]	40.00	UG/L	97
38)	2-FLUOROBIPHENYL (SURR)	172	17.37	584	51409	36.40	UG/L	94
~~41)~~	~~DIMETHYL PHTHALATE~~	~~163~~	~~15.[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~.20~~	~~UG/L~~	~~100~~
~~41)~~	~~DIMETHYL PHTHALATE~~	~~163~~	~~15.[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~.21~~	~~UG/L~~	~~100~~
~~41)~~	~~DIMETHYL PHTHALATE~~	~~163~~	~~15.[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~1.[illegible]~~	~~UG/L~~	~~100~~
~~43)~~	~~DIBENZOFURAN~~	~~168~~	~~15.[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~.20~~	~~UG/L~~	~~100~~
~~43)~~	~~DIBENZOFURAN~~	~~168~~	~~15.[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~.1[illegible]~~	~~UG/L~~	~~100~~
49)	2,4,6-TRIBROMOPHENOL(SURR)	330	21.71	[illegible]	[illegible]	41.00	UG/L	[illegible]
~~50)~~	~~2,4-DINITROPHENOL~~	~~184~~	~~21.[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~1.[illegible]~~	~~UG/L~~	~~100~~
~~51)~~	~~2,4-DINITROPHENOL~~	~~184~~	~~21.[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~52)~~	~~2,4-DINITROPHENOL~~	~~184~~	~~21.[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~2.04~~	~~UG/L~~	~~100~~
~~53)~~	~~2,4-DINITROPHENOL~~	~~184~~	~~21.[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~54)~~	~~2,4-DINITROPHENOL~~	~~184~~	~~21.[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~55)~~	~~2,4-DINITROPHENOL~~	~~184~~	~~21.[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~56)~~	~~2,4-DINITROPHENOL~~	~~184~~	~~21.[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~57)~~	~~2,4-DINITROPHENOL~~	~~184~~	~~21.[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~58)~~	~~2,4-DINITROPHENOL~~	~~184~~	~~21.[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
59)	*PHENANTHRENE-D10 (IS)	188	27.[illegible]	[illegible]	[illegible]	40.00	UG/L	[illegible]
62)	N-NITROSODIPHENYLAMINE	169	21.[illegible]	[illegible]	[illegible]	[illegible]	UG/L	[illegible]
63)	HEXACHLOROBENZENE	284	22.[illegible]	[illegible]	[illegible]	[illegible]	UG/L	[illegible]
64)	PHENANTHRENE	178	24.[illegible]	[illegible]	[illegible]	[illegible]	UG/L	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

No GC/MS

No GC/MS

No GC/MS

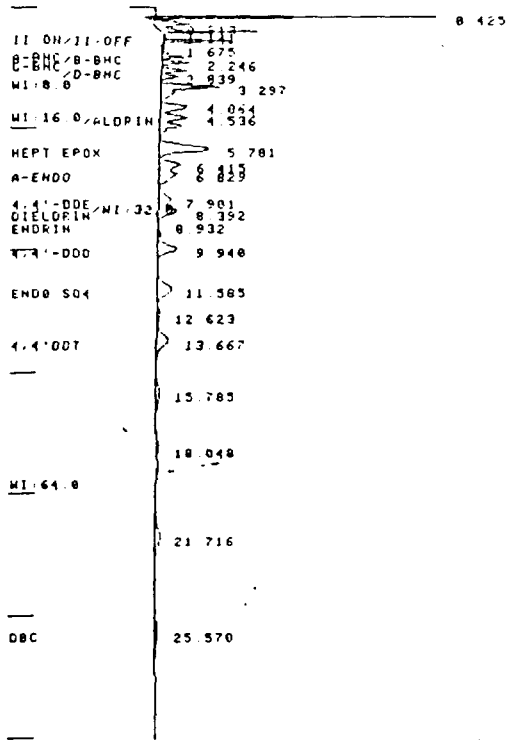
No GC/MS

No GC/MS

	Compound		m/e	R.T.	Scan#	Area	Conc	Units	q
~~56)~~	~~BENZIDINE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~100~~
~~57)~~	~~BENZIDINE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~100~~
~~58)~~	~~BENZIDINE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~100~~
~~59)~~	~~BENZIDINE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~100~~
67)	PYRENE		202	27.99	1195	1534	2.26	UG/L	87
68)	TERPHENYL-D14	(SUPR)	244	28.85	1142	11970	36.64	UG/L	100
69)	BUTYLBENZYLPHTHALATE		149	30.73	1259	2625	11.14	UG/L	90
~~70)~~	~~BENZO(A)ANTHRACENE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~
~~71)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~
72)	BIS(2-ETHYLHEXYL)PHTHALATE		149	32.28	1339	1964	6.07	UG/L	89
~~73)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~
~~74)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~
~~75)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~
73)	CHRYSENE		228	31.88	1295	848	2.34	UG/L	70
74)	*PERYLENE-D12	(IS)	264	35.88	1491	19255	40.00	UG/L	100
~~75)~~	~~DI-N-BUTYL PHTHALATE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~100~~
75)	DI-N-OCTYL PHTHALATE		149	34.60	1438	2892	6.35	UG/L	100
~~76)~~	~~DI-N-BUTYL PHTHALATE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~100~~
~~77)~~	~~DI-N-BUTYL PHTHALATE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~100~~
~~78)~~	~~DI-N-BUTYL PHTHALATE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~100~~
76)	BENZO(B)FLUORANTHENE		252	34.96	1446	593	1.44	UG/L	100
~~77)~~	~~BENZO(K)FLUORANTHENE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~
~~78)~~	~~BENZO(A)PYRENE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~

* Compound is ISTD

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



See Run 50

DC-SD-32

CHANNEL: 1A - 1 TITLE: RUN# 44 12:01 20 NOV 86

SAMPLE: 9684.03.19A1 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	1.376		27004	VB	2.94
2	~~B-BHC~~	146.6570	2.575	0.125	21321	BV	6.38
3		0.0000	3.297		67671	BV	8.00
4		0.0000	3.502		26350	VV	? 16.75
5	~~HEPTACHLO~~	479.3655	4.064	0.274	58558	VV	17.31
6	~~ALDRIN~~	276.3672	4.536	-0.134	42125	VV	11.69
7		0.0000	4.849		36698	VV	10.88
8	~~HEPT EPOX~~	874.5834	5.781	0.111	125293	VV	19.63
9		0.0000	6.415		45604	VV	? 14.69
10	~~A-ENDO~~	410.8933	6.829	-0.201	55308	VV	? 33.06
11	4,4'-DDE	306.8995	7.901	-0.189	42673	VV	? 32.50
12	DIELDRIN	319.9779	8.392	0.202	47216	VV	20.44
13	4,4'-DDD	534.7881	9.940	-0.220	63868	VV	21.75
14	ENDO SO4	639.5765	11.585	-0.325	62399	VV	31.44
15	4,4'DDT	662.2375	13.667	0.407	52670	VB	31.19
16	END KETON	172.0085	15.785	0.515	24222	BV	45.69
17		0.0000	21.716		37109	BV	49.00
18	DBC	183.4820	25.570	-1.040	20503	VB	66.63
TOTALS:		5006.836		-0.475	856602		

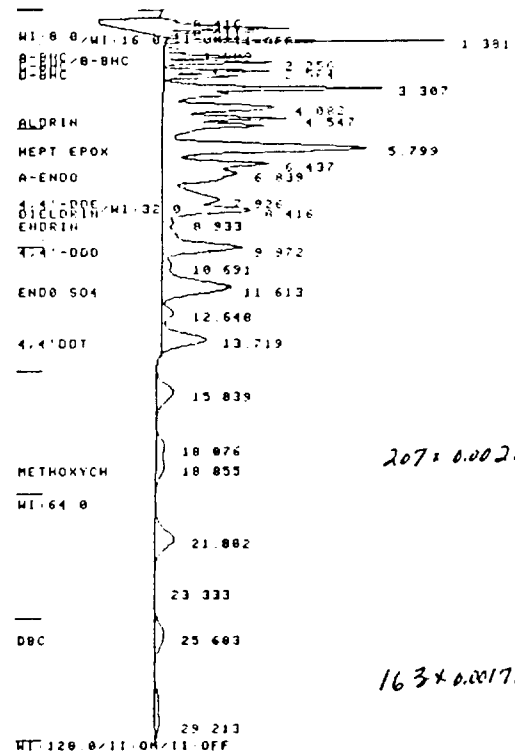
DETECTED PKS: 40 REJECTED PKS: 22

DIVISOR: 1.50000 MULTIPLIER: 200000.000

NOISE: 22.9 OFFSET: -17

NOTES:
NOTEBOOK: 259-38 ANALYST: F. JUREK/ RICHARD SAMSON
SECURE AREA; D JOB#:U-4432,U-4442
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
WITHSAMPLER

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



$207 \times 0.00216 \times \frac{1}{1.0665 g} \times 50{,}000 = 21{,}000$ ug/kg 1248

$163 \times 0.00171 \times \frac{1}{1.0665 g} \times 50{,}000 = 13{,}000$ J ug/kg 1254

DC-SD-32

CHANNEL: 1A - 1 TITLE: RUN# ~~47~~ 50 17:47 20 NOV 86

SAMPLE: 9684.03.19A1 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	1.381		11[illegible]017	BV	3.13
2	~~A-BHC~~	106.0410	2.052	0.012	[illegible]350	VV	5.19
3	~~B-BHC~~	374.6240	2.256	0.086	[illegible]201	VV	5.25
4	~~D-BHC~~	158.7374	2.584	0.134	[illegible]03	VV	6.44
5		0.0000	2.846		[illegible]539	VV	6.50
6		0.0000	3.307		2[illegible]147	VV	8.39
7	~~HEPTACHLO~~	261.0180	3.519	-0.271	1[illegible]541	VV	[illegible]
8		0.0000	4.082		2[illegible]587	VV	18.69
9	~~ALDRIN~~	336.2135	4.547	-0.123	2[illegible]988	VV	12.94
10		0.0000	4.862		2[illegible]671	VV	12.06
11	~~HEPT EPOX~~	980.5427	5.799	0.129	5[illegible]591	VV	20.44
12		0.0000	6.437		2[illegible]	VV	? 16.13
13	~~A-ENDO~~	503.3550	6.839	-0.191	2[illegible]015	VV	? 42.88
14	~~4,4'-DDE~~	398.7040	7.926	-0.164	2[illegible]752	VV	? 37.19
15	~~DIELDRIN~~	405.4839	8.416	0.226	2[illegible]40	VV	22.94
16	~~ENDRIN~~	40.1541	8.933	-0.197	[illegible]644	VV	19.11
17	~~4,4'-DDD~~	611.8269	9.972	-0.188	2[illegible]274	VV	23.39
18	~~ENB.ALD.~~	68.3094	10.691	0.441	[illegible]205	VV	? 23.06
19	~~ENDO SO4~~	812.0599	11.613	-0.297	31[illegible]908	VV	34.06
20		0.0000	12.648		4[illegible]759	VV	26.75
21	~~4,4'DDT~~	600.1159	13.719	0.459	15[illegible]917	VV	30.88
22	~~END KETON~~	181.6474	15.839	0.569	10[illegible]782	BB	44.69
23		0.0000	18.076		4[illegible]304	BV	? 44.13
24	~~METHOXYCH~~	274.5760	18.855	-0.635	5[illegible]067	VB	? 59.50
25		0.0000	21.882		14[illegible]346	BV	49.38
26	~~DBC~~	175.4838	25.603	-0.927	[illegible]427	VV	63.56
27		0.0000	29.213		59150	VB	?127.81
TOTALS:		6288.893		-0.937	4452304		

207 1248

163 1254

DETECTED PKS: 41 REJECTED PKS: 14

DIVISOR: 1.50000 MULTIPLIER: 50000.0000

NOISE: 22.9 OFFSET: -6

NOTES:
NOTEBOOK: 259-38 ANALYST: F. JUREK/ RICHARD SAMSON
SECURE AREA: D JOB#:U-4432,U-4442
INST:VARIAN 6000#2 A ECD 1041
COLUMN: 6' GLASS 4MM ID 120/120 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

SAMPLE NUMBER DC-SD-33

Sample Number
DC-SD-33

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No: U-4432 / U-4442
Lab Sample ID No: 9685
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: [signature]
Date Sample Received: 11-7-86

Volatile Compounds

Concentration: Low (Medium) (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-14-86

Conc./Dil Factor: 2 pH 6.0

Percent Moisture: (Not Decanted) 27

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	2600u
74-83-9	Bromomethane	2600u
75-01-4	Vinyl Chloride	2600u
75-00-3	Chloroethane	2600u
75-09-2	Methylene Chloride	6300 B
67-64-1	Acetone	12000 B
75-15-0	Carbon Disulfide	1300u
75-35-4	1, 1-Dichloroethene	1300u
75-34-3	1, 1-Dichloroethane	1300u
156-60-5	Trans-1, 2-Dichloroethene	1300u
67-66-3	Chloroform	1300u
107-06-2	1, 2-Dichloroethane	1300u
78-93-3	2-Butanone	11000 B
71-55-6	1, 1, 1-Trichloroethane	1300u
56-23-5	Carbon Tetrachloride	1300u
108-05-4	Vinyl Acetate	2600u
75-27-4	Bromodichloromethane	1300u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	1300u
10061-02-6	Trans-1, 3-Dichloropropene	1300u
79-01-6	Trichloroethene	1300u
124-48-1	Dibromochloromethane	1300u
79-00-5	1, 1, 2-Trichloroethane	1300u
71-43-2	Benzene	1300u
10061-01-5	cis-1, 3-Dichloropropene	1300u
110-75-8	2-Chloroethylvinylether	2600u
75-25-2	Bromoform	1300u
108-10-1	4-Methyl-2-Pentanone	2600u
591-78-6	2-Hexanone	2600u
127-18-4	Tetrachloroethene	1300u
79-34-5	1, 1, 2, 2-Tetrachloroethane	1300u
108-88-3	Toluene	1300u
108-90-7	Chlorobenzene	1300u
100-41-4	Ethylbenzene	1300u
100-42-5	Styrene	1300u
	Total Xylenes	1300u

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.

356

Laboratory Name: Ecology & Environment Inc.

Case No: V-4432 / V-4442

Sample Number: DC-SD-33

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 11-12-86

Date Analyzed: 12-13-86

Conc/Dil Factor: 25

Percent Moisture (Decanted): 37

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	6500	U
111-44-4	bis(-2-Chloroethyl)Ether	6500	U
95-57-8	2-Chlorophenol	6500	U
541-73-1	1 3-Dichlorobenzene	6500	U
106-46-7	1 4-Dichlorobenzene	6500	U
100-51-6	Benzyl Alcohol	6500	U
95-50-1	1 2-Dichlorobenzene	270	J
95-48-7	2-Methylphenol	6500	U
39638-32-9	bis(2-chloroisopropyl)Ether	6500	U
106-44-5	4-Methylphenol	6500	U
621-64-7	N-Nitroso-Di-n-Propylamine	6500	U
67-72-1	Hexachloroethane	6500	U
98-95-3	Nitrobenzene	6500	U
78-59-1	Isophorone	6500	U
88-75-5	2-Nitrophenol	6500	U
105-67-9	2. 4-Dimethylphenol	6500	U
65-85-0	Benzoic Acid	32000	U
111-91-1	bis(-2-Chloroethoxy)Methane	6500	U
120-83-2	2. 4-Dichlorophenol	6500	U
120-82-1	1 2. 4-Trichlorobenzene	6500	U
91-20-3	Naphthalene	6500	U
106-47-8	4-Chloroaniline	6500	U
87-68-3	Hexachlorobutadiene	6500	U
59-50-7	4-Chloro-3-Methylphenol	6500	U
91-57-6	2-Methylnaphthalene	6500	U
77-47-4	Hexachlorocyclopentadiene	6500	U
88-06-2	2 4. 6-Trichlorophenol	6500	U
95-95-4	2. 4 5-Trichlorophenol	32000	U
91-58-7	2-Chloronaphthalene	6500	U
88-74-4	2-Nitroaniline	32000	U
131-11-3	Dimethyl Phthalate	6500	U
208-96-8	Acenaphthylene	6500	U
99-09-2	3-Nitroaniline	32000	U

CAS Number		ug/l or (ug/Kg) (Circle One)	
83-32-9	Acenaphthene	6500	U
51-28-5	2. 4-Dinitrophenol	32000	U
100-02-7	4-Nitrophenol	32000	U
132-64-9	Dibenzofuran	6500	U
121-14-2	2 4-Dinitrotoluene	6500	U
606-20-2	2. 6-Dinitrotoluene	6500	U
84-66-2	Diethylphthalate	6500	U
7005-72-3	4-Chlorophenyl-phenylether	6500	U
86-73-7	Fluorene	6500	U
100-01-6	4-Nitroaniline	32000	U
534-52-1	4. 6-Dinitro-2-Methylphenol	32000	U
86-30-6	N-Nitrosodiphenylamine (1)	6500	U
101-55-3	4-Bromophenyl-phenylether	6500	U
118-74-1	Hexachlorobenzene	6500	U
87-86-5	Pentachlorophenol	32000	U
85-01-8	Phenanthrene	6500	U
120-12-7	Anthracene	6500	U
84-74-2	Di-n-Butylphthalate	6500	U
206-44-0	Fluoranthene	6500	U
129-00-0	Pyrene	6500	U
85-68-7	Butylbenzylphthalate	6500	U
91-94-1	3. 3'-Dichlorobenzidine	13000	U
56-55-3	Benzo(a)Anthracene	6500	U
117-81-7	bis(2-Ethylhexyl)Phthalate	2200	J
218-01-9	Chrysene	6500	U
117-84-0	Di-n-Octyl Phthalate	420	J
205-99-2	Benzo(b)Fluoranthene	6500	U
207-08-9	Benzo(k)Fluoranthene	6500	U
50-32-8	Benzo(a)Pyrene	6500	U
193-39-5	Indeno(1 2 3-cd)Pyrene	6500	U
53-70-3	Dibenz(a h)Anthracene	6500	U
191-24-2	Benzo(g h i)Perylene	6500	U

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No V-4432/V-4442

Sample Number DC-SD-33

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-12-86

Date Analyzed 11-20-86

Conc/Dil Factor 10

Percent Moisture (decanted) 37

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	380 U
50-29-3	4,4'-DDT	320 U
72-43-5	Methoxychlor	1600 U
53494-70-5	Endrin Ketone	320 U
57-74-9	Chlordane	1600 U
8001-35-2	Toxaphene	3200 U
12674-11-2	Aroclor-1016	1600 U
11104-28-2	Aroclor-1221	1600 U
11141-16-5	Aroclor-1232	1600 U
53469-21-9	Aroclor-1242	1600 U
12672-29-6	Aroclor-1248	7,900
11097-69-1	Aroclor-1254	4,500
11096-82-5	Aroclor-1260	2,000 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 u-4432 / u-4442

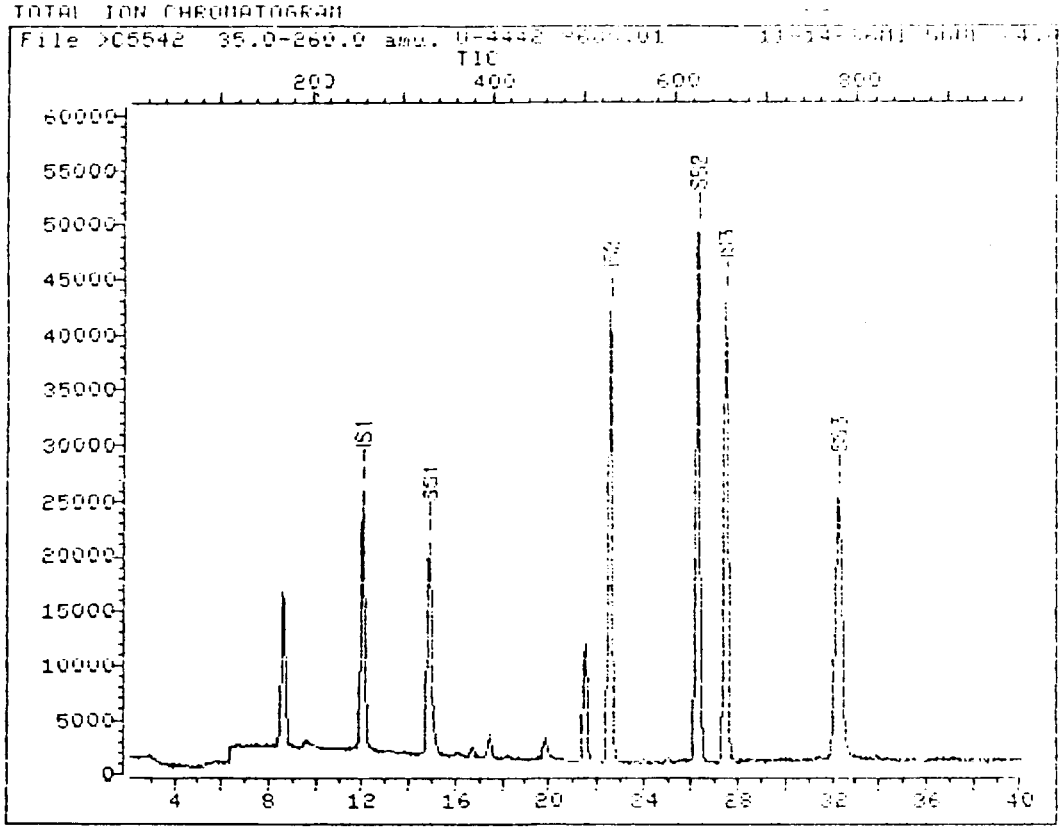
Sample Number DC-SD-33

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.5 min	600 BJ
2.	Unknown Ketone	VOA	19.8 min	360 BJ
3.	Hexane isomer	VOA	21.5 min	2000 BJ
4.				
5.	UNKNOWN HYDROCARBON	BNA	15.5	3900 J
6.	UNKNOWN HYDROCARBON		17.3	70,000 J
7.	UNKNOWN HYDROCARBON		18.3	11000 J
8.	UNKNOWN HYDROCARBON		18.9	120,000 J
9.	UNKNOWN HYDROCARBON		20.5	43000 J
10.	UNKNOWN HYDROCARBON		21.2	14000 J
11.	UNKNOWN HYDROCARBON		21.9	18000 J
12.	UNKNOWN HYDROCARBON		22.0	19000 J
13.	UNKNOWN HYDROCARBON		23.3	9900 J
14.	UNKNOWN HYDROCARBON		23.5	27000 J
15.	UNKNOWN HYDROCARBON		24.6	8900 J
16.	UNKNOWN HYDROCARBON		24.7	14000 J
17.	UNKNOWN HYDROCARBON		26.0	22000 J
18.	UNKNOWN HYDROCARBON		26.9	28000 J
19.	UNKNOWN HYDROCARBON		27.2	16000 J
20.	UNKNOWN HYDROCARBON		28.8	92000 J
21.	UNKNOWN HYDROCARBON		29.7	89000 J
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30				

TOTAL ION CHROMATOGRAM

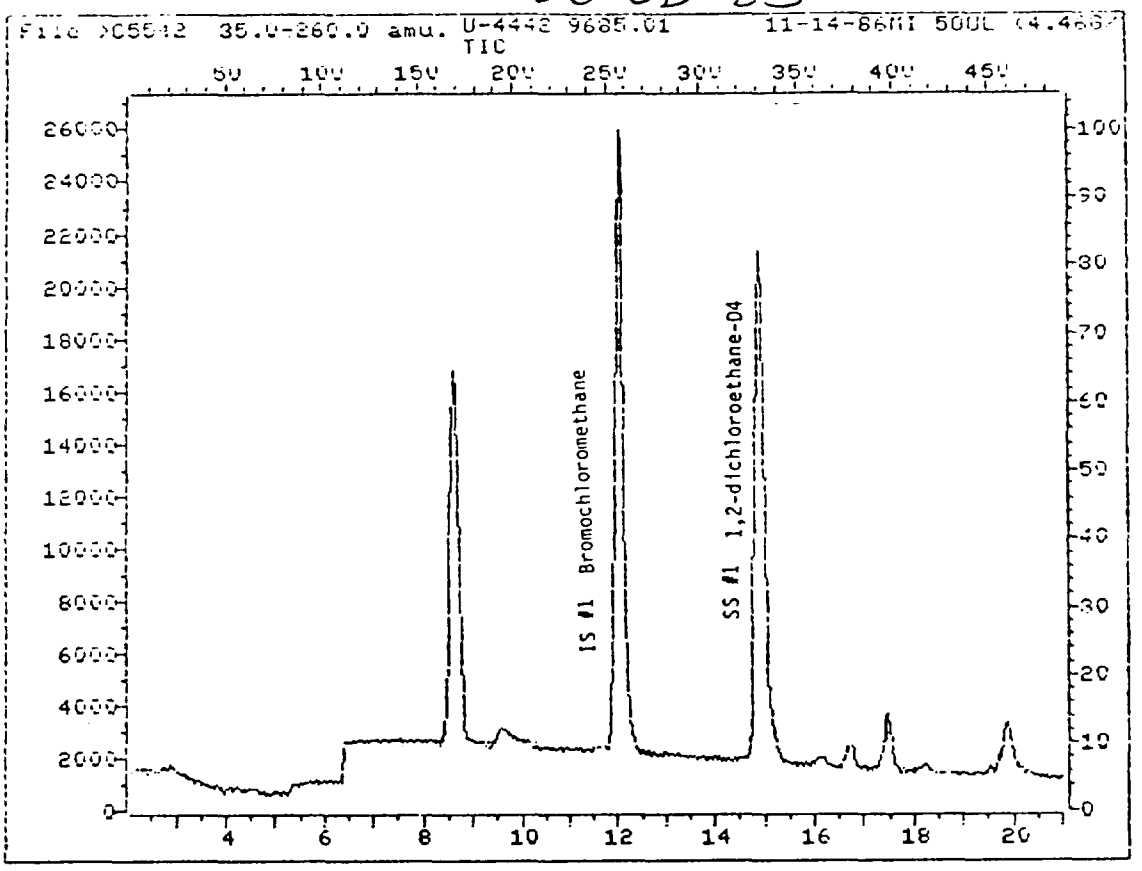


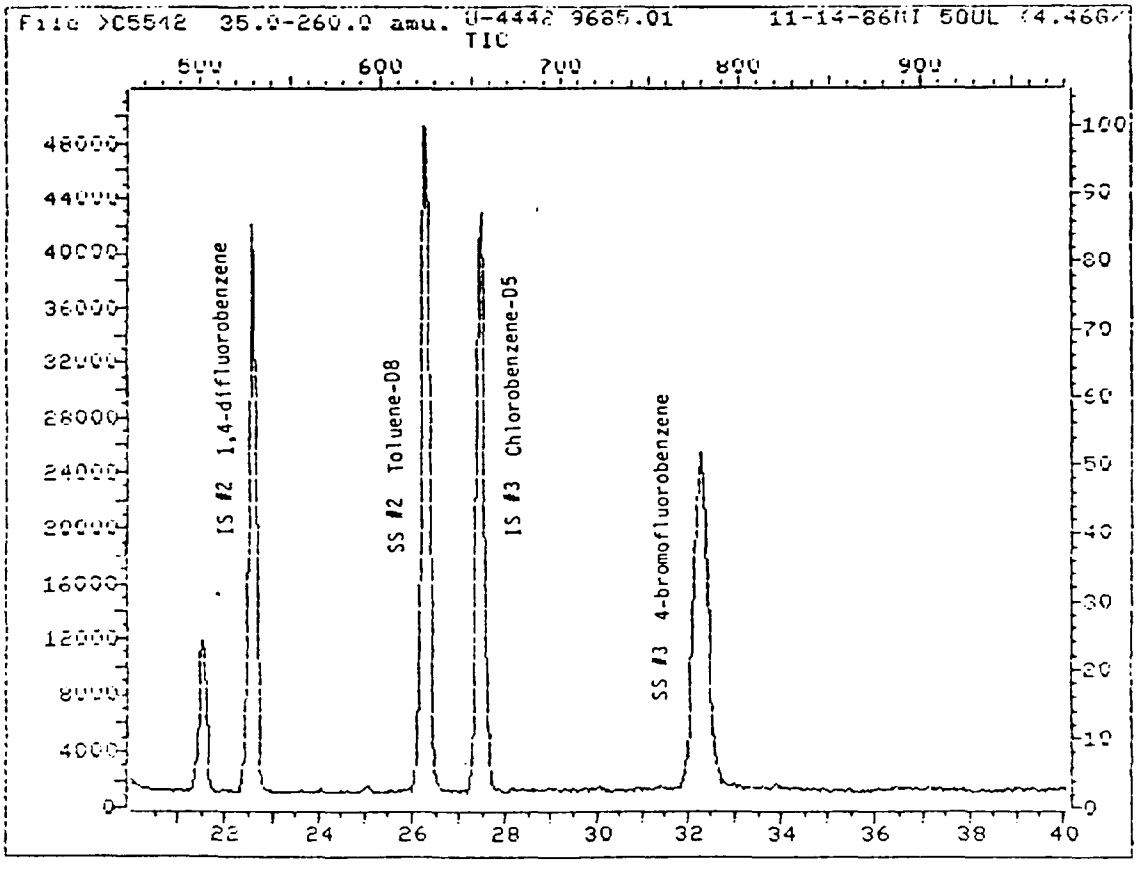
Data File: >C5542::D3
Name: U-4442 9685.01 DC-SD-33
Misc: 11-14-86MI 50UL (4.46L 10MLS) + 100UL 15/50

Id File: VOACR::U2
Title: VOA ID FILE FOR HP-5995 (CONT. CHL.)
Last Calibration: 861114 21:27

Operator ID: USER8
Quant Time: 861115 14:10
Injected at: 861115 06:05

DC-SD-33


File >C5542 35.0-260.0 amu. U-4442 9685.01 11-14-86MI 50UL (4.466)
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File >C5542 35.0-260.0 amu. U-4442 9685.01 11-14-86MI 50UL (4.466)
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

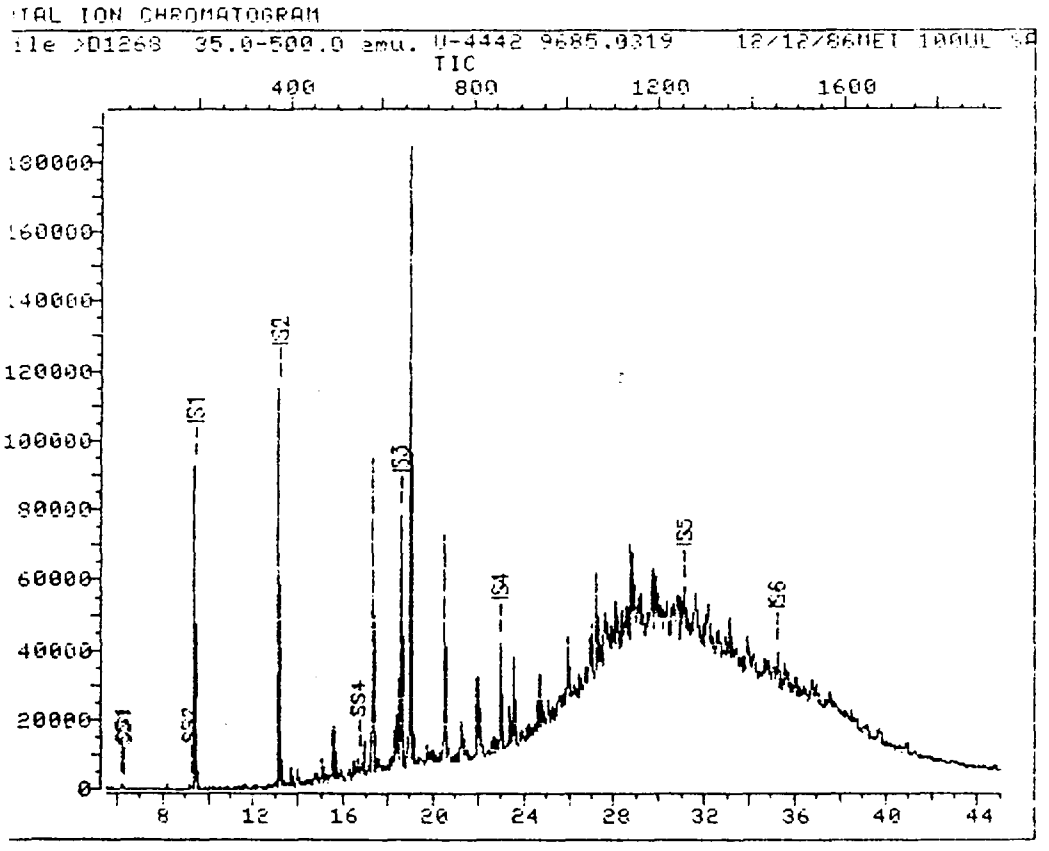
QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861115 14:10
Output File: ^C5542::D2 Injected at: 861115 06:05
Data File: >C5542::D3 Dilution Factor: 1.00
Name: U-4442 9685.01 DC-SD-33
Misc: 11-14-86M1 50UL (4.46G/10ML5) + 10UL IS/SS

ID File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861114 21:27

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	12.02	257	39269	50.00	UG/L	100
6)	METHYLENE CHLORIDE		84	8.60	169	38167	20.45	UG/L	100
7)	ACETONE		43	9.57	194	10507	39.08	UG/L	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.89	331	80479	48.89	UG/L	90
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.57	529	185106	50.00	UG/L	100
17)	2-BUTANONE		72	15.04	335	5020	35.89	UG/L	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.46	655	142453	50.00	UG/L	100
36)	TOLUENE-D8	(SURR)	98	26.25	624	201537	49.31	UG/L	97
40)	4-BROMOFLUOROBENZENE	(SURR)	95	32.27	779	97341	47.91	UG/L	100

* Compound is ISTD

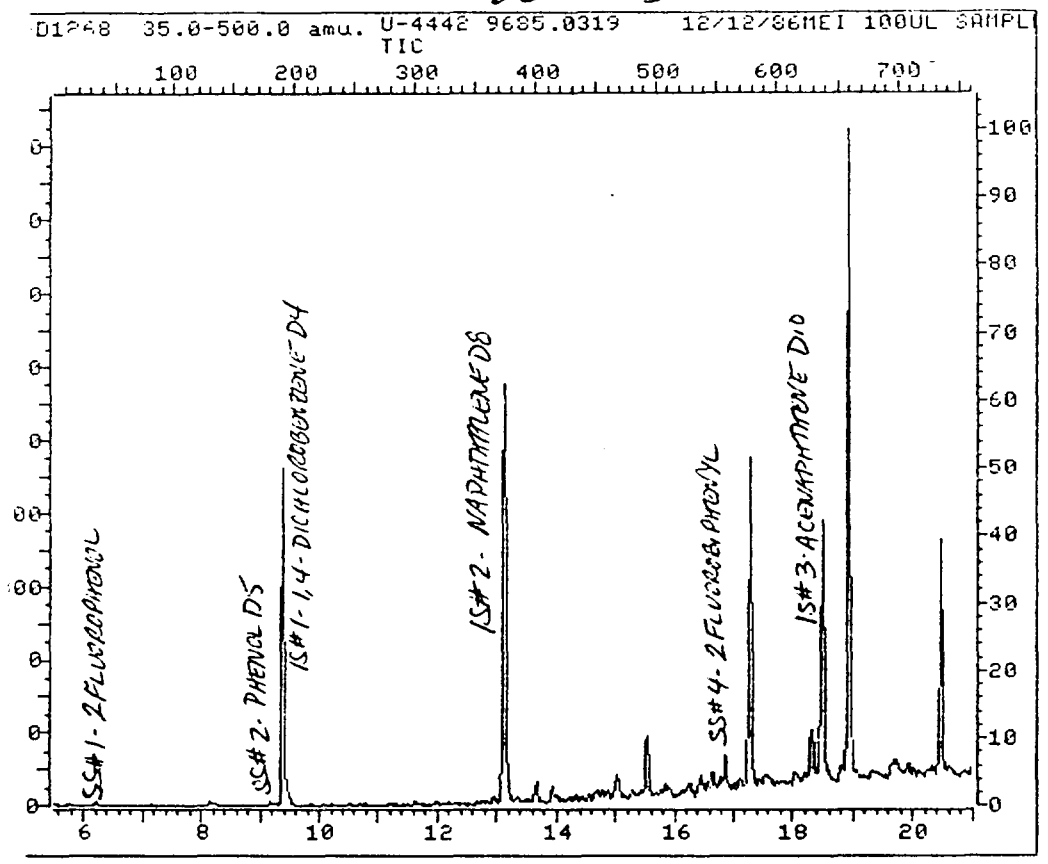


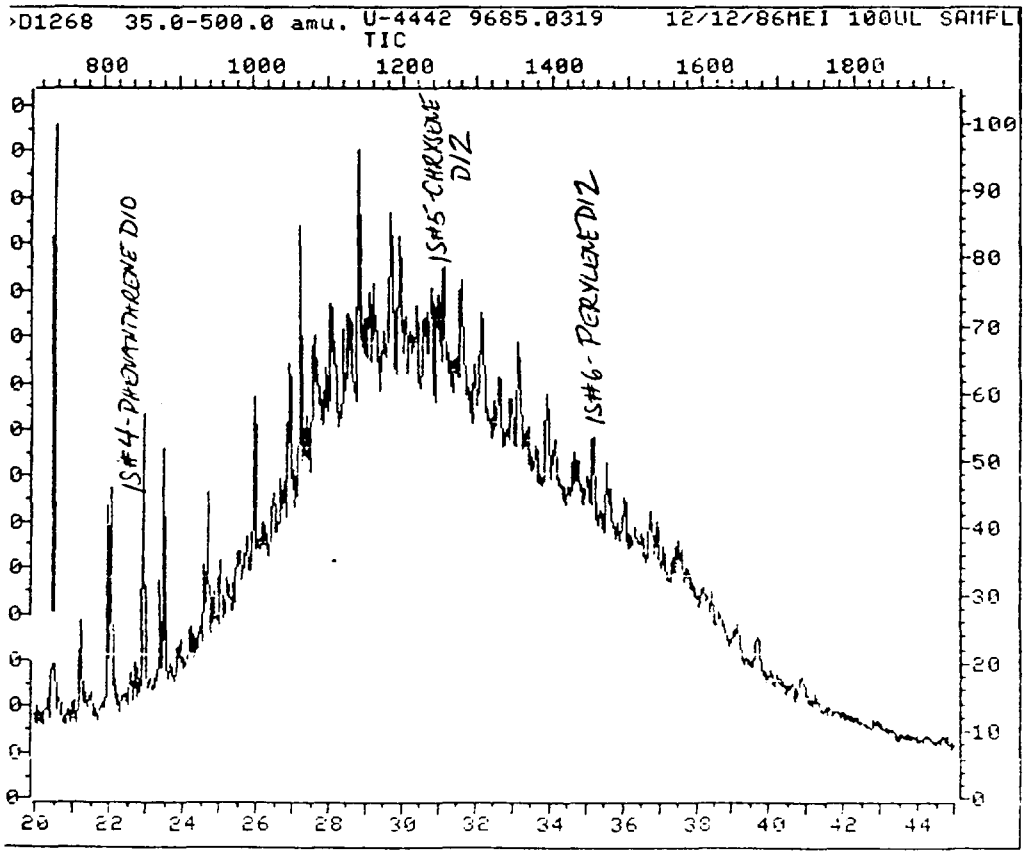
Data File: >D1268::D1 DC-SD-33
Name: U-4442 9685.0319
Misc: 12/12/86MEI 100UL SAMPLE + 400UL MECL2 + 5UL IS (5X) BTL# 1

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861211 15:37

Operator ID: USER8
Quant Time: 861213 00:47
Injected at: 861213 00:00

DC-SD-33


D1268 35.0-500.0 amu. U-4442 9685.0319 12/12/86MEI 100UL SAMPL
TIC
SS#1-2FLUOROPHENOL
SS#2-PHENOL D5
IS#1-1,4-DICHLOROBENZENE-D4
IS#2-NAPHTHALENE D8
SS#4-2FLUOROBIPHENYL
IS#3-ACENAPHTHENE D10


D1268 35.0-500.0 amu. U-4442 9685.0319 12/12/86MEI 100UL SAMPL
TIC
IS#4-PHENANTHRENE D10
IS#5-CHRYSENE D12
IS#6-PERYLENE D12

QUANT REPORT

ɔerator ID: USER8 Quant Rev: 4 Quant Time: 861213 00:47
ɹtput File: ^D1268::Q2 Injected at: 861213 00:00
ɜta File: >D1268::D1 Dilution Factor: 5.00
ɜme: U-4442 9685.0319 DC-SD-33
ɹsc: 12/12/86MEI 100UL SAMPLE + 400UL MECL2 + 5UL IS (5X) BTL# 1

FINAL VOLUME : 5 ml

) File: BNADR::D2
ɪtle: BNA ID FILE FOR THE HP 5970 (B)
ɜst Calibration: 861211 15:37

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.37	190	42553	40.00	UG/L	86
2)	PHENOL-D5	(SURR)	99	9.17	180	1707	5.96	UG/L	99
5)	2-FLUOROPHENOL	(SURR)	112	6.19	34	1025	5.70	UG/L	70
5)	2-FLUOROPHENOL	(SURR)	112	6.27	38	250	1.39	UG/L	72
2)	1,2-DICHLOROBENZENE		146	9.43	193	329	1.03	UG/L	88
3)	*NAPHTHALENE-D8	(IS)	136	13.14	375	147144	40.00	UG/L	100
~~1)~~	~~NAPHTHALENE~~		~~128~~	~~13.18~~	~~377~~	~~194~~	~~.29~~	~~UG/L~~	~~100~~
~~5)~~	~~2-METHYLNAPHTHALENE~~		~~142~~	~~15.62~~	~~497~~	~~200~~	~~.44~~	~~UG/L~~	~~94~~
4)	*ACENAPHTHENE-D10	(IS)	162	18.48	637	42468	40.00	UG/L	98
3)	2-FLUOROBIPHENYL	(SURR)	172	16.64	547	2569	7.28	UG/L	94
~~1)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.50~~	~~638~~	~~13271~~	~~39.52~~	~~UG/L~~	~~100~~
~~2)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.48~~	~~637~~	~~5798~~	~~85.05~~	~~UG/L~~	~~100~~
~~2)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.81~~	~~653~~	~~235~~	~~3.45~~	~~UG/L~~	~~100~~
5)	*PHENANTHRENE-D10	(IS)	188	22.93	855	34069	40.00	UG/L	91
5)	*CHRYSENE-D12	(IS)	240	31.09	1254	13204	40.00	UG/L	100
2)	BIS(2-ETHYLHEXYL)PHTHALATE		149	32.09	1303	588	8.53	UG/L	99
~~2)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~32.28~~	~~1312~~	~~169~~	~~2.45~~	~~UG/L~~	~~84~~
4)	*PERYLENE-D12	(IS)	264	35.18	1454	9322	40.00	UG/L	100
~~5)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.40~~	~~1367~~	~~246~~	~~1.84~~	~~UG/L~~	~~100~~
5)	DI-N-OCTYL PHTHALATE		149	33.85	1389	225	1.68	UG/L	100
~~5)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~34.08~~	~~1400~~	~~246~~	~~1.84~~	~~UG/L~~	~~100~~
~~5)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~34.37~~	~~1414~~	~~287~~	~~2.15~~	~~UG/L~~	~~100~~

No opt

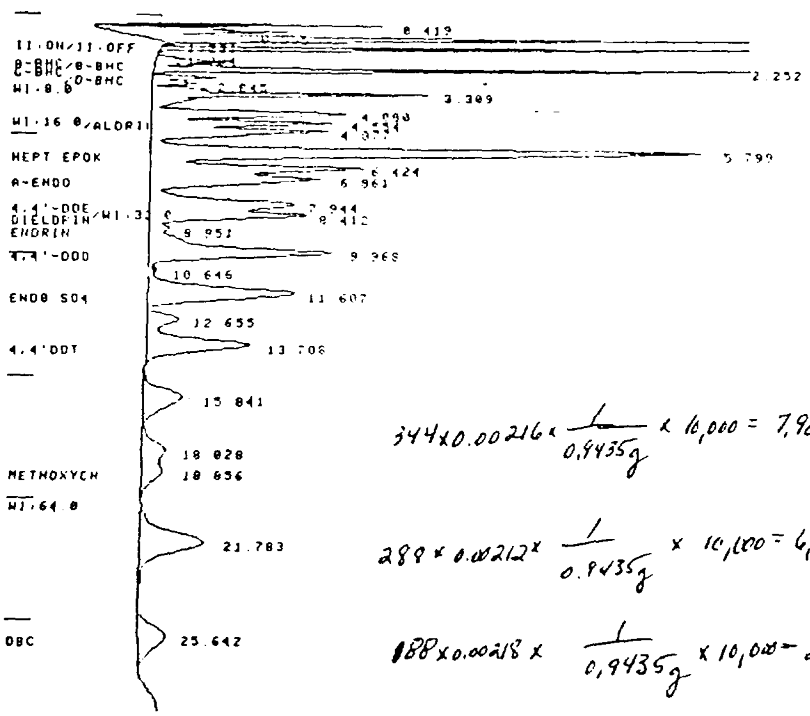
No opt

No opt

No opt

* Compound is ISTD

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



$344 \times 0.00216 \times \frac{1}{0.9435g} \times 10{,}000 = 7{,}900$ ug/kg 1248

$288 \times 0.00212 \times \frac{1}{0.9435g} \times 10{,}100 = 6{,}500$ ug/kg 1254

$188 \times 0.00218 \times \frac{1}{0.9435g} \times 10{,}000 = 2{,}000$ ug/kg J 1260

DC-SD-33

CHANNEL: 1A - 1 TITLE: RUN# 45 12:37 20 NOV 86

SAMPLE: 9685.03.19A1 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	1.321		95[illegible]741	VB	3.19
2		0.0000	1.900		5[illegible]193	VV	4.69
3	~~A-BHC~~	12.3618	2.052	0.012	4[illegible]754	VV	4.50
4	~~B-BHC~~	413.6459	2.252	0.062	51[illegible]785	VB	5.06
5	~~D-BHC~~	19.8287	2.586	0.136	5[illegible]694	[illegible]	6.38
6		0.0000	2.845		4[illegible]894	VV	7.00
7		0.0000	3.072		5[illegible]101	VV	? 7.75
8		0.0000	3.309		31[illegible]307	[illegible]	8.[illegible]9
9	~~HEPTACHLO~~	33.6378	3.515	-0.275	[illegible]	[illegible]	? [illegible]
10		0.0000	4.080 ✓		44[illegible]	[illegible]	18.50
11	~~ALDRIN~~	93.6460	4.554 ✓	-0.116	28[illegible]478	[illegible]	12.63
12		0.0000	4.877 ✓		2[illegible]319	[illegible]	? 12.19
13		0.0000	~~5.070~~		[illegible]	VV	? 13.94
14	~~HEPT EPOX~~	485.1993	5.799 ✓	0.129	139[illegible]195	[illegible]	19.38
15		0.0000	6.424 ✓		47[illegible]570	[illegible]	18.81
16	~~A-ENDO~~	199.0040	6.861 ✓	-0.169	53[illegible]735	VV	? 29.31
17	~~4,4'-DDE~~	185.8730	7.944 ✓	-0.146	51[illegible]896	[illegible]	? [illegible]
18	~~DIELDRIN~~	140.5702	8.412 ✓	0.222	41[illegible]730	VV	? 25.63
19	~~ENDRIN~~	16.1485	8.951 ✓	-0.179	4[illegible]522	VV	? 23.75
20	~~4,4'-DDD~~	289.9962	9.968 ✓	-0.192	69[illegible]666	VV	24.13
21	~~ENDO SO4~~	330.5649	11.607 ✓	-0.303	64[illegible]018	VV	33.44
22		0.0000	12.655 ✓		11[illegible]772	[illegible]	28.19
23	~~4,4'DDT~~	264.3365	13.708 ✓	0.448	45[illegible]285	[illegible]B	32.94
24	~~END KETON~~	92.1746	15.841 ✓	0.571	26[illegible]777	[illegible]	43.19
25		0.0000	18.028 ✓		14[illegible]161	[illegible]	[illegible]
26	~~METHOXYCH~~	128.4429	~~18.656~~	-0.634	[illegible]49	[illegible]	? 57.13
27		0.0000	21.783 ✓		46[illegible]564	B	50.61
28	~~DBC~~	101.2436	25.642	-0.968	22[illegible]267	VV	63.75

Handwritten annotations beside table: Weathered; 1248 (peaks 5–15, 1248, 344); 1254 (peaks 16–23, 1254, 288); 1260 (peaks 24–28, 1260, RS tot 88)

TOTALS: 2826.673 -1.382 9763446

DETECTED PKS: 39 REJECTED PKS: 11

DIVISOR: 1.50000 MULTIPLIER: 10000.0000

NOISE: 34.3 OFFSET: 7

NOTES:
NOTEBOOK: 253-38 ANALYST: K. JUREKY RICHARD SAMSON
SECURE AREA: 3 JOB#:U-4432,U-4442
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

SAMPLE NUMBER DC-SD-34

481095

Sample Number
DC-SD-34

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No: U-4432 / U-4442
Lab Sample ID No: 9686
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: C Sojkowicz
Date Sample Received: 11-7-86

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-17-86

Conc/Dil Factor: 2 pH 5.0

Percent Moisture: (Not Decanted) 34

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	2800u
74-83-9	Bromomethane	2800u
75-01-4	Vinyl Chloride	2800u
75-00-3	Chloroethane	2800u
75-09-2	Methylene Chloride	6600 B
67-64-1	Acetone	5300 B
75-15-0	Carbon Disulfide	1400u
75-35-4	1, 1-Dichloroethene	1400u
75-34-3	1, 1-Dichloroethane	1400u
156-60-5	Trans-1, 2-Dichloroethene	1400u
67-66-3	Chloroform	1400u
107-06-2	1, 2-Dichloroethane	1400u
78-93-3	2-Butanone	9200 B
71-55-6	1, 1, 1-Trichloroethane	1400u
56-23-5	Carbon Tetrachloride	1400u
108-05-4	Vinyl Acetate	2800u
75-27-4	Bromodichloromethane	1400u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	1400u
10061-02-6	Trans-1, 3-Dichloropropene	1400u
79-01-6	Trichloroethene	1400u
124-48-1	Dibromochloromethane	1400u
79-00-5	1, 1, 2-Trichloroethane	1400u
71-43-2	Benzene	1400u
10061-01-5	cis-1, 3-Dichloropropene	1400u
110-75-8	2-Chloroethylvinylether	2800u
75-25-2	Bromoform	1400u
108-10-1	4-Methyl-2-Pentanone	2800u
591-78-6	2-Hexanone	930J B
127-18-4	Tetrachloroethene	1400u
79-34-5	1, 1, 2, 2-Tetrachloroethane	1400u
108-88-3	Toluene	1400u
108-90-7	Chlorobenzene	1400u
100-41-4	Ethylbenzene	1400u
100-42-5	Styrene	1400u
	Total Xylenes	1400u

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-4432/V-4442

Sample Number: DC-SD-34

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 11-12-86
Date Analyzed: 12-12-86
Conc/Dil Factor: 25
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	2500	U
111-44-4	bis(-2-Chloroethyl)Ether	2500	U
95-57-8	2-Chlorophenol	2500	U
541-73-1	1 3-Dichlorobenzene	2500	U
106-46-7	1 4-Dichlorobenzene	410	J
100-51-6	Benzyl Alcohol	2500	U
95-50-1	1 2-Dichlorobenzene	2500	U
95-48-7	2-Methylphenol	2500	U
39638-32-9	bis(2-chloroisopropyl)Ether	2500	U
106-44-5	4-Methylphenol	2500	U
621-64-7	N-Nitroso-Di-n-Propylamine	2500	U
67-72-1	Hexachloroethane	2500	U
98-95-3	Nitrobenzene	2500	U
78-59-1	Isophorone	2500	U
88-75-5	2-Nitrophenol	2500	U
105-67-9	2 4-Dimethylphenol	2500	U
65-85-0	Benzoic Acid	12000	U
111-91-1	bis(-2-Chloroethoxy)Methane	2500	U
120-83-2	2 4-Dichlorophenol	2500	U
120-82-1	1 2 4-Trichlorobenzene	2500	U
91-20-3	Naphthalene	2500	U
106-47-8	4-Chloroaniline	2500	U
87-68-3	Hexachlorobutadiene	2500	U
59-50-7	4-Chloro-3-Methylphenol	2500	U
91-57-6	2-Methylnaphthalene	450	J
77-47-4	Hexachlorocyclopentadiene	2500	U
88-06-2	2 4 6-Trichlorophenol	2500	U
95-95-4	2 4 5-Trichlorophenol	12000	U
91-58-7	2-Chloronaphthalene	2500	U
88-74-4	2-Nitroaniline	12000	U
131-11-3	Dimethyl Phthalate	2500	U
208-96-8	Acenaphthylene	2500	U
99-09-2	3-Nitroaniline	12000	U

CAS Number		ug/l or (ug/Kg) (Circle One)	
83-32-9	Acenaphthene	2500	U
51-28-5	2 4-Dinitrophenol	12000	U
100-02-7	4-Nitrophenol	12000	U
132-64-9	Dibenzofuran	2500	U
121-14-2	2 4-Dinitrotoluene	2500	U
606-20-2	2 6-Dinitrotoluene	2500	U
84-66-2	Diethylphthalate	2500	U
7005-72-3	4-Chlorophenyl-phenylether	2500	U
86-73-7	Fluorene	2500	U
100-01-6	4-Nitroaniline	12000	U
534-52-1	4 6-Dinitro-2-Methylphenol	12000	U
86-30-6	N-Nitrosodiphenylamine (1)	2500	U
101-55-3	4-Bromophenyl-phenylether	2500	U
118-74-1	Hexachlorobenzene	2500	U
87-86-5	Pentachlorophenol	12000	U
85-01-8	Phenanthrene	2500	U
120-12-7	Anthracene	2500	U
84-74-2	Di-n-Butylphthalate	2500	U
206-44-0	Fluoranthene	2500	U
129-00-0	Pyrene	2500	U
85-68-7	Butylbenzylphthalate	2400	J
91-94-1	3 3 -Dichlorobenzidine	5000	U
56-55-3	Benzo(a)Anthracene	2500	U
117-81-7	bis(2-Ethylhexyl)Phthalate	2900	
218-01-9	Chrysene	710	J
117-84-0	Di-n-Octyl Phthalate	2900	
205-99-2	Benzo(b)Fluoranthene	330	J
207-08-9	Benzo(k)Fluoranthene	2500	U
50-32-8	Benzo(a)Pyrene	2500	U
193-39-5	Indeno(1 2 3-cd)Pyrene	2500	U
53-70-3	Dibenz(a h)Anthracene	2500	U
191-24-2	Benzo(g h i)Perylene	2500	U

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No U-4432/U-4442

Sample Number DC-SD-34

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-12-86

Date Analyzed 11-20-86

Conc/Dil Factor: 10

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)
319-84-6	Alpha-BHC	160 U
319-85-7	Beta-BHC	160 U
319-86-8	Delta-BHC	160 U
58-89-9	Gamma-BHC (Lindane)	160 U
76-44-8	Heptachlor	160 U
309-00-2	Aldrin	160 U
1024-57-3	Heptachlor Epoxide	160 U
959-98-8	Endosulfan I	160 U
60-57-1	Dieldrin	320 U
72-55-9	4,4'-DDE	320 U
72-20-8	Endrin	320 U
33213-65-9	Endosulfan II	320 U
72-54-8	4,4'-DDD	320 U
1031-07-8	Endosulfan Sulfate	320 U
50-29-3	4,4'-DDT	320 U
72-43-5	Methoxychlor	1600 U
53494-70-5	Endrin Ketone	320 U
57-74-9	Chlordane	1600 U
8001-35-2	Toxaphene	3200 U
12674-11-2	Aroclor-1016	1600 U
11104-28-2	Aroclor-1221	1600 U
11141-16-5	Aroclor-1232	1600 U
53469-21-9	Aroclor-1242	1600 U
12672-29-6	Aroclor-1248	11,000
11097-69-1	Aroclor-1254	10,600
11096-82-5	Aroclor-1260	2,200 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 u-4432 / u-4442

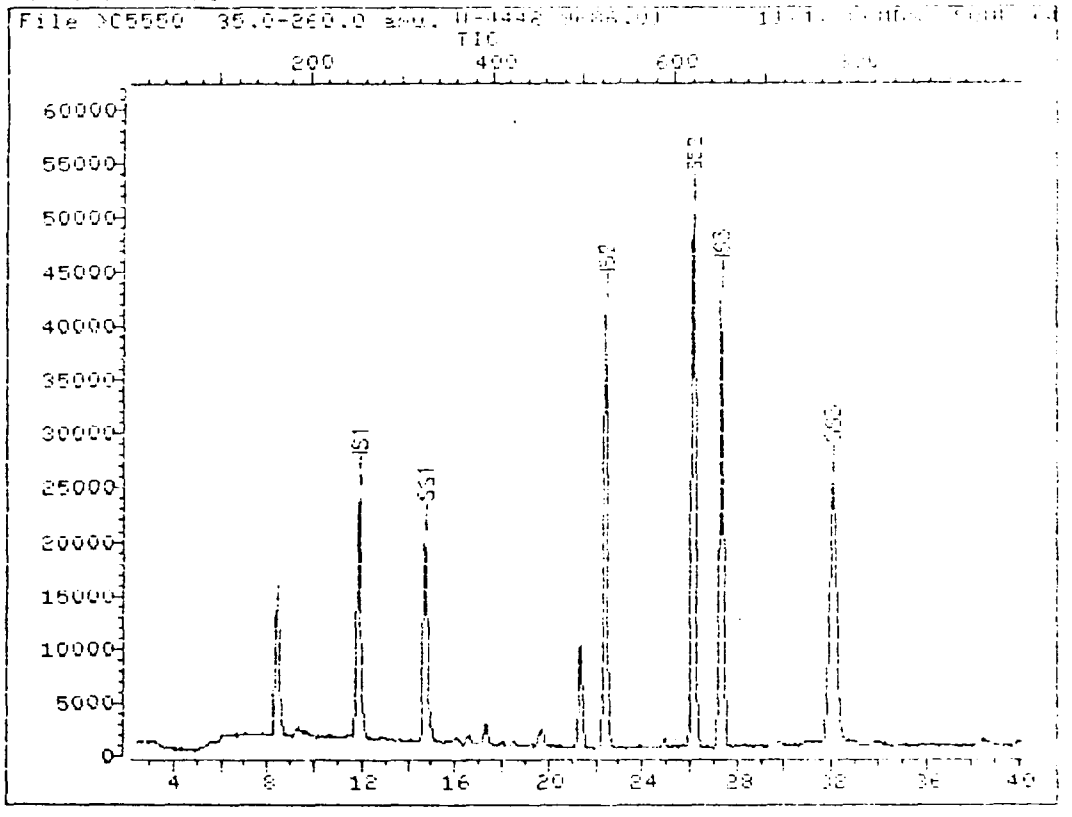
Sample Number
DC-SD-34

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.3 min	580 BJ
2.	Unknown Ketone	VOA	19.7 min	340 BJ
3.	Hexane isomer	VOA	21.3 min	2000 BJ
4.				
5.	UNKNOWN HYDROCARBON	BNA	17.3	120,000 J
6.	UNKNOWN HYDROCARBON		18.3	16000 J
7.	UNKNOWN HYDROCARBON		19.0	210,000 J
8.	UNKNOWN HYDROCARBON		20.5	80000 J
9.	UNKNOWN HYDROCARBON		21.2	20000 J
10.	UNKNOWN HYDROCARBON		21.9	25000 J
11.	UNKNOWN HYDROCARBON		22.1	22000 J
12.	UNKNOWN HYDROCARBON		23.4	12000 J
13.	UNKNOWN HYDROCARBON		23.5	35000 J
14.	UNKNOWN HYDROCARBON		24.6	12000 J
15.	UNKNOWN HYDROCARBON		24.7	16000 J
16.	UNKNOWN HYDROCARBON		26.0	28000 J
17.	UNKNOWN HYDROCARBON		27.2	22000 J
18.	UNKNOWN HYDROCARBON		28.8	92000 J
19.	UNKNOWN HYDROCARBON		31.0	34000 J
20.	UNKNOWN HYDROCARBON		32.2	56000 J
21.	UNKNOWN HYDROCARBON		32.7	42000 J
22.	UNKNOWN HYDROCARBON		32.9	40000 J
23.	UNKNOWN HYDROCARBON		33.2	64000 J
24.	UNKNOWN HYDROCARBON		33.9	61000 J
25.				
26.				
27.				
28.				
29.				
30				

TOTAL ION CHROMATOGRAM

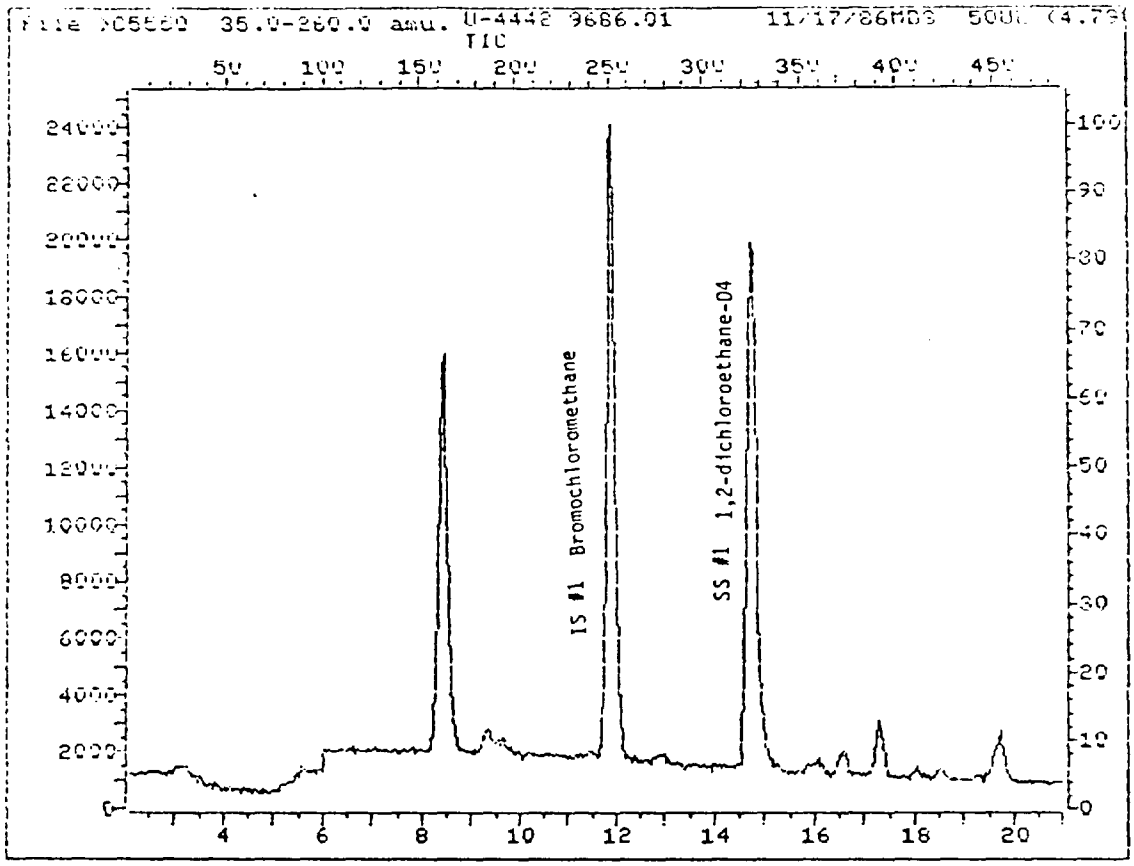


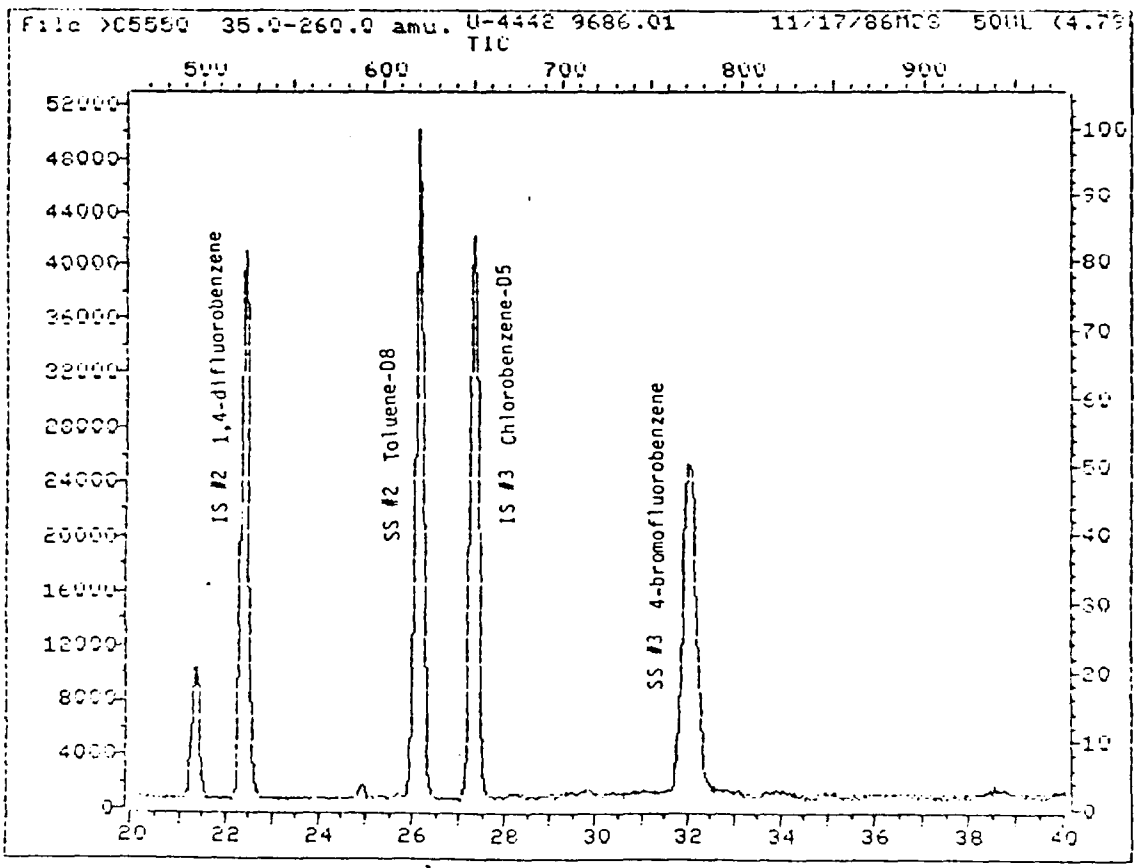
Data File: >C5550::03
Name: U-4442 9686.01 DC-SD-34
Misc: 11/17/86MDS 50UL (4.296/10MLS MEOH) + [illegible]

Id File: VOACR::02
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861117 11:28

Operator ID: USER8
Quant Time: 861117 15:32
Injected at: 861117 14:51

DC-SD-34


File >C5550 35.0-260.0 amu. U-4442 9686.01 11/17/86MDS 500L (4.79
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File >C5550 35.0-260.0 amu. U-4442 9686.01 11/17/86MDS 500L (4.79
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

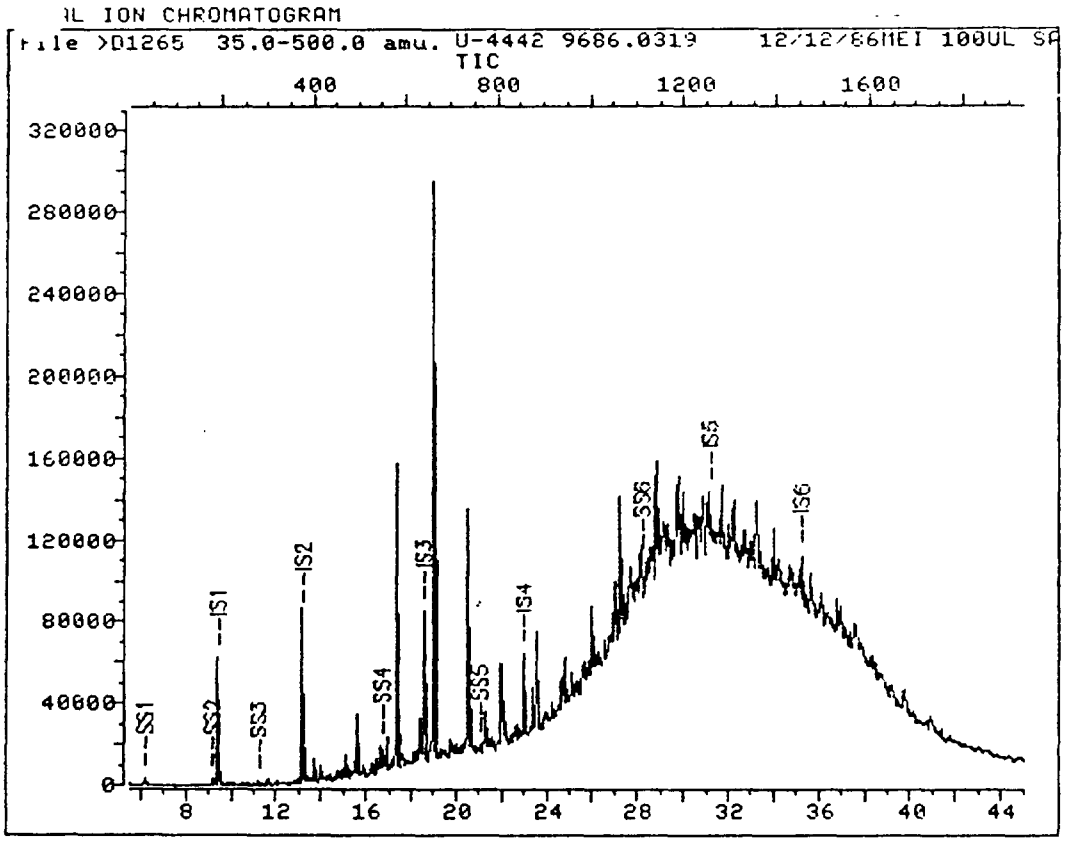
QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861117 15:32
Output File: ^C5550::U2 Injected at: 861117 14:51
Data File: >C5550::U3 Dilution Factor: 1.00
Name: U-4442 9686.01 DC-SD-34
Misc: 11/17/86MUS 50UL (4.79G/100ML MEOH) + 10UL [illegible]

ID File: VOACP::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861117 11:28

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	Q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.88	791	37236	50.00	UG/L	100
6)	METHYLENE CHLORIDE		84	8.43	163	40175	21.01	UG/L	100
7)	ACETONE		43	9.36	187	8481	16.68	UG/L	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.71	325	27345	46.09	UG/L	90
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.43	624	180520	50.00	UG/L	100
17)	2-BUTANONE		72	14.87	329	4391	29.12	UG/L	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.33	650	135938	50.00	UG/L	100
33)	2-HEXANONE		43	24.95	589	2375	2.93	UG/L	100
36)	TOLUENE-D8	(SURR)	98	26.16	620	203743	48.03	UG/L	95
40)	4-BROMOFLUOROBENZENE	(SURR)	95	32.02	771	96128	46.25	UG/L	100

* Compound is ISTD

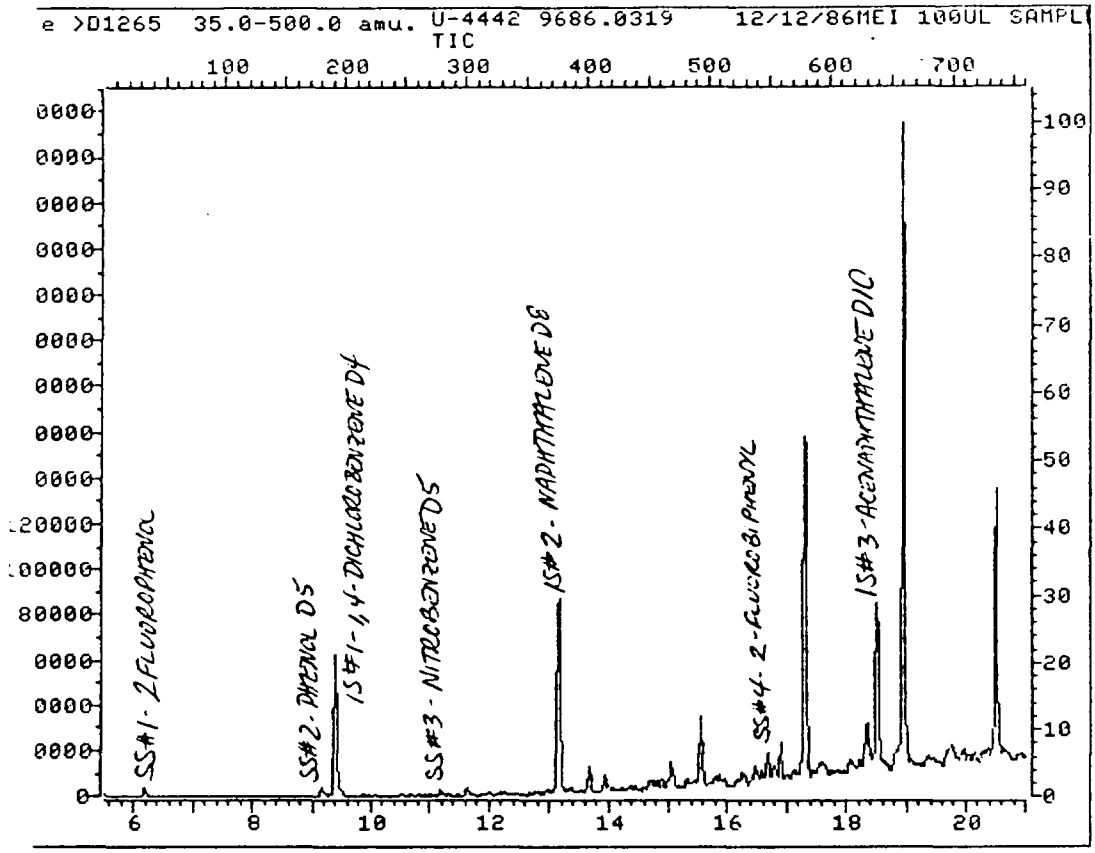


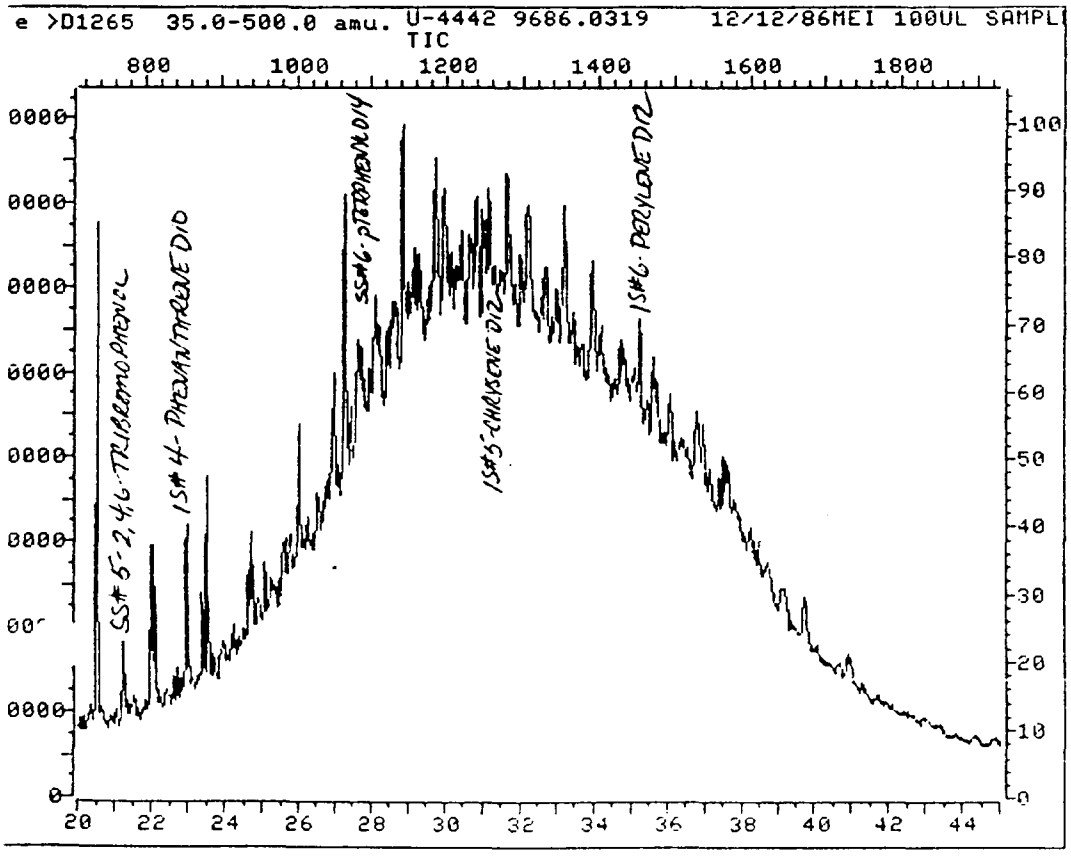
Data File: >D1265::D3 DC-SD-34
Name: U-4442 9686.0319
Misc: 12/12/86MEI 100UL SAMPLE + 400UL MECL2 + 5UL IS (5X) BTL# 3

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861211 15:37

Operator ID: USER8
Quant Time: 861216 09:58
Injected at: 861212 21:20

DC-SD-34


e >D1265 35.0-500.0 amu. U-4442 9686.0319 12/12/86MEI 100UL SAMPL
TIC
SS#1- 2FLUOROPHENOL
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


e >D1265 35.0-500.0 amu. U-4442 9686.0319 12/12/86MEI 100UL SAMPL
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: 861216 09:58
utput File: ^D1265::Q2 Injected at: 861212 21:20
ata File: >D1265::D3 Dilution Factor: 5.00
ame: U-4442 9686.0319 DC-SD-34
isc: 12/12/86MEI 100UL SAMPLE + 400UL MECL2 + 5UL IS (5X) BTL# 3

FINAL VOLUME: 5 ml

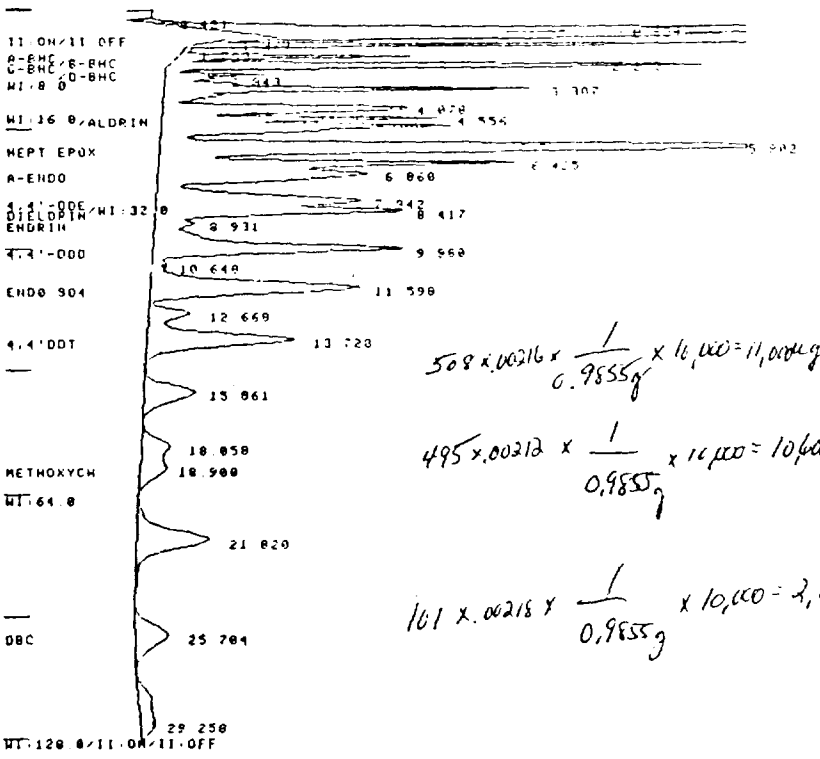
D File: BNADR::D2
itle: BNA ID FILE FOR THE HP 5970 (B)
ast Calibration: 861211 15:37

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.37	190	38105	40.00	UG/L	90
2)	PHENOL-D5	(SURR)	99	9.15	179	5527	21.56	UG/L	98
5)	2-FLUOROPHENOL	(SURR)	112	6.17	33	4469	27.76	UG/L	99
~~9)~~	~~1,3-DICHLOROBENZENE~~		~~146~~	~~9.43~~	~~193~~	~~428~~	~~1.59~~	~~UG/L~~ No Bfl	68
0)	1,4-DICHLOROBENZENE		146	9.43	193	428	1.64	UG/L	70
~~2)~~	~~1,2-DICHLOROBENZENE~~		~~146~~	~~9.43~~	~~193~~	~~428~~	~~1.50~~	~~UG/L~~	71
~~2)~~	~~1,2-DICHLOROBENZENE~~		~~146~~	~~9.96~~	~~219~~	~~281~~	~~.99~~	~~UG/L~~ No Bfl	90
~~2)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.18~~	~~279~~	~~287~~	~~1.07~~	~~UG/L~~	78
9)	*NAPHTHALENE-D8	(IS)	136	13.14	375	128791	40.00	UG/L	100
0)	NITROBENZENE-D5	(SURR)	82	11.18	279	2991	12.33	UG/L	92
~~2)~~	~~NAPHTHALENE~~		~~128~~	~~13.20~~	~~378~~	~~198~~	~~.33~~	~~UG/L~~ No Bfl	100
3)	2-METHYLNAPHTHALENE		142	15.34	483	706	1.77	UG/L	96
~~5)~~	~~2-METHYLNAPHTHALENE~~		~~142~~	~~15.65~~	~~498~~	~~611~~	~~1.54~~	~~UG/L~~ No Bfl	93
4)	*ACENAPHTHENE-D10	(IS)	162	18.51	638	42583	40.00	UG/L	97
3)	2-FLUOROBIPHENYL	(SURR)	172	16.67	548	6866	19.41	UG/L	93
~~1)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.40~~	~~633~~	~~691~~	~~2.05~~	~~UG/L~~	100
~~1)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.51~~	~~638~~	~~14014~~	~~41.63~~	~~UG/L~~	100
~~1)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.69~~	~~647~~	~~250~~	~~.74~~	~~UG/L~~	100
~~3)~~	~~DIBENZOFURAN~~		~~168~~	~~18.67~~	~~646~~	~~451~~	~~1.31~~	~~UG/L~~ No Bfl	100
~~3)~~	~~DIBENZOFURAN~~		~~168~~	~~18.81~~	~~653~~	~~191~~	~~.55~~	~~UG/L~~	100
~~3)~~	~~DIBENZOFURAN~~		~~168~~	~~18.96~~	~~660~~	~~641~~	~~1.86~~	~~UG/L~~	100
~~5)~~	~~FLUORENE~~		~~166~~	~~20.18~~	~~720~~	~~163~~	~~.68~~	~~UG/L~~	20
3)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.02	761	825	18.95	UG/L	99
~~2)~~	~~2,4-DINITROPHENOL~~		~~184~~	~~20.69~~	~~745~~	~~203~~	~~6.42~~	~~UG/L~~	100
~~2)~~	~~2,4-DINITROPHENOL~~		~~184~~	~~20.84~~	~~752~~	~~128~~	~~4.05~~	~~UG/L~~	100
~~2)~~	~~2,4-DINITROPHENOL~~		~~184~~	~~20.88~~	~~754~~	~~208~~	~~6.58~~	~~UG/L~~	100
~~1)~~	~~4-NITROPHENOL~~		~~139~~	~~19.37~~	~~680~~	~~160~~	~~4.63~~	~~UG/L~~ No Bfl	100
~~1)~~	~~2,4-DINITROTOLUENE~~		~~165~~	~~19.02~~	~~663~~	~~289~~	~~4.71~~	~~UG/L~~	100
~~1)~~	~~2,4-DINITROTOLUENE~~		~~165~~	~~19.30~~	~~677~~	~~229~~	~~3.73~~	~~UG/L~~	100
~~1)~~	~~2,4-DINITROTOLUENE~~		~~165~~	~~19.39~~	~~681~~	~~234~~	~~3.81~~	~~UG/L~~	100
~~1)~~	~~2,4-DINITROTOLUENE~~		~~165~~	~~19.94~~	~~708~~	~~183~~	~~2.90~~	~~UG/L~~	100
~~2)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~17.98~~	~~612~~	~~186~~	~~2.72~~	~~UG/L~~	100
~~2)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.34~~	~~630~~	~~420~~	~~6.14~~	~~UG/L~~	100
~~2)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.51~~	~~638~~	~~5866~~	~~85.81~~	~~UG/L~~	100
~~2)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.67~~	~~646~~	~~214~~	~~3.13~~	~~UG/L~~	100
~~2)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.83~~	~~654~~	~~556~~	~~8.13~~	~~UG/L~~	100
3)	*PHENANTHRENE-D10	(IS)	188	22.96	856	45528	40.00	UG/L	93
~~3)~~	~~DI-N-BUTYLPHTHALATE~~		~~149~~	~~25.52~~	~~981~~	~~429~~	~~1.52~~	~~UG/L~~ No Bfl	58
~~3)~~	~~DI-N-BUTYLPHTHALATE~~		~~149~~	~~25.59~~	~~984~~	~~503~~	~~1.78~~	~~UG/L~~	1
5)	*CHRYSENE-D12	(IS)	240	31.15	1255	26475	40.00	UG/L	100
3)	TERPHENYL-D14	(SURR)	244	28.17	1110	1764	12.62	UG/L	100
~~2)~~	~~BUTYLBENZYLPHTHALATE~~		~~149~~	~~29.67~~	~~1183~~	~~265~~	~~2.35~~	~~UG/L~~ No Bfl	89
~~2)~~	~~BUTYLBENZYLPHTHALATE~~		~~149~~	~~29.79~~	~~1189~~	~~478~~	~~4.24~~	~~UG/L~~	35

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
~~1)~~	~~BENZO(A)ANTHRACENE~~		~~228~~	~~31.21~~	~~1258~~	~~376~~	~~2.80~~	~~UG/L~~	1
~~2)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~31.83~~	~~1288~~	~~302~~	~~2.19~~	~~UG/L~~	51
~~2)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~32.03~~	~~1298~~	~~1739~~	~~12.58~~	~~UG/L~~	45
2)	BIS(2-ETHYLHEXYL)PHTHALATE		149	32.12	1302	1590	11.50	UG/L	93
~~2)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~32.28~~	~~1310~~	~~538~~	~~3.89~~	~~UG/L~~	77
~~2)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~32.57~~	~~1324~~	~~560~~	~~4.05~~	~~UG/L~~	90
3)	CHRYSENE		228	31.21	1258	376	2.81	UG/L	3
4)	*PERYLENE-D12	(IS)	264	35.22	1453	22698	40.00	UG/L	100
~~5)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.45~~	~~1367~~	~~840~~	~~2.58~~	~~UG/L~~	100
~~5)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.62~~	~~1375~~	~~593~~	~~1.82~~	~~UG/L~~	100
5)	DI-N-OCTYL PHTHALATE		149	33.95	1391	3695	11.35	UG/L	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~34.31~~	~~1409~~	~~516~~	~~1.59~~	~~UG/L~~	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~34.40~~	~~1413~~	~~723~~	~~2.22~~	~~UG/L~~	100
~~76)~~	~~BENZO(B)FLUORANTHENE~~		~~252~~	~~33.95~~	~~1391~~	~~220~~	~~1.58~~	~~UG/L~~	100
76)	BENZO(B)FLUORANTHENE		252	34.27	1407	183	1.32	UG/L	100
~~77)~~	~~BENZO(K)FLUORANTHENE~~		~~252~~	~~33.95~~	~~1391~~	~~220~~	~~1.26~~	~~UG/L~~	100
~~7)~~	~~BENZO(K)FLUORANTHENE~~		~~252~~	~~34.27~~	~~1407~~	~~183~~	~~1.05~~	~~UG/L~~	100
~~7)~~	~~BENZO(K)FLUORANTHENE~~		~~252~~	~~34.79~~	~~1432~~	~~200~~	~~1.15~~	~~UG/L~~	100
~~8)~~	~~BENZO(A)PYRENE~~		~~252~~	~~34.79~~	~~1432~~	~~200~~	~~1.63~~	~~UG/L~~	100
~~8)~~	~~BENZO(A)PYRENE~~		~~252~~	~~34.93~~	~~1439~~	~~152~~	~~1.24~~	~~UG/L~~	100

* Compound is ISTD

CHART SPEED: [illegible]
ATTEN: 8 ZERO: 10% 5 MIN/TICK



508 x .00216 x 1/0.9855g x 16,000 = 11,000 ug/kg 1248

495 x .00212 x 1/0.9855g x 16,000 = 10,600 ug/kg 1250

101 x .00218 x 1/0.9855g x 10,000 = 2,200 ug/kg 1260

DC-SD-34

CHANNEL: 1A - 1 TITLE: RUN# 46 15:05 20 NOV 86

SAMPLE: 9686.03.19A1 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT ~~UG/L~~	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.379		4[illegible]831	BB	3.05
2		0.0000	1.898		1[illegible]841	VV	4.38
3	~~A-BHC~~	15.1178	2.048	0.008	5[illegible]286	VV	4.19
4	~~B-BHC~~	672.0520	2.255	0.085	5[illegible]499	VV	5.19
5	~~D-BHC~~	39.9567	2.590	0.140	1[illegible]178	VV	7.44
6		0.0000	2.843		5[illegible]065	VV ?	8.13
7		0.0000	~~3.275~~		~~7[illegible]63~~	VV ?	6.38
8		0.0000	3.307		4[illegible]511	VV	[illegible]
9	~~HEPTACHLO~~	51.1525	3.513	0.277	1[illegible]973	VV	[illegible]
10		0.0000	4.078		5[illegible]642	VV	18.75
11	~~ALDRIN~~	147.9505	4.556	-0.114	4[illegible]024	VV	12.88
12		0.0000	4.882		8[illegible]189	VV	20.06
13	~~HEPT EPOX~~	658.6784	5.802	0.132	1[illegible]748	VV	19.25
14		0.0000	6.425		7[illegible]	VV	17.25
15	~~A-ENDO~~	259.5192	6.860	-0.170	[illegible]648	VV ?	[illegible].56
16	~~4,4'-DDE~~	264.8913	7.942	-0.148	7[illegible]639	VV	[illegible].94
17	~~DIELDRIN~~	226.2118	8.417	0.227	8[illegible]011	VV ?	25.00
18	~~ENDRIN~~	34.4052	8.931	-0.199	9[illegible]726	VV ?	23.69
19	~~4,4'-DDD~~	403.8932	9.980	-0.180	9[illegible]713	VV	23.44
20	~~ENDO 904~~	483.0678	11.598	-0.312	9[illegible]591	VV	32.05
21		0.0000	12.668		1[illegible]564	VV	27.50
22	~~4,4'DDT~~	428.6287	13.728	0.468	5[illegible]305	VV	22.56
23	~~END KETON~~	111.0361	15.861	0.591	[illegible]	VV	[illegible].28
24		0.0000	18.058		[illegible]243	VV	[illegible].06
25	~~METHOXYCH~~	178.0669	~~18.900~~	-0.580	[illegible]	VV ?	61.21
26		0.0000	21.820		5[illegible]725	BB	43.83
27	~~DBC~~	120.9256	25.704	-0.906	[illegible]253	BV	64.63
28		0.0000	29.258		[illegible]311	VB	2131.00

TOTALS: 4095.573 -1.245 [illegible]

DETECTED PKS: 39 REJECTED PKS: 11

DIVISOR: 1.50000 MULTIPLIER: 10000.0000

NOISE: 22.9 OFFSET: 4

NOTES:
NOTEBOOK: 259-38 ANALYST: K. JUREK/ RICHARD SAMS[illegible]
SECURE AREA: C JOB#:U-4432,U-4442
INST:VARIAN 6200#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

weathered

1248 1250 1260

SAMPLE NUMBER DC-SD-35

Sample Number
DC - SD - 35

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No: U-4432 / U 4442
Lab Sample ID No: 9687
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: C Slojtowicz
Date Sample Received: 11-7-86

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-17-86

Conc./Dil Factor: 2 pH 7.4

Percent Moisture: (Not Decanted) 45

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	3600u
74-83-9	Bromomethane	3600u
75-01-4	Vinyl Chloride	3600u
75-00-3	Chloroethane	3600u
75-09-2	Methylene Chloride	8800 B
67-64-1	Acetone	23000B
75-15-0	Carbon Disulfide	1800u
75-35-4	1, 1-Dichloroethene	1800u
75-34-3	1, 1-Dichloroethane	1800u
156-60-5	Trans-1, 2-Dichloroethene	1800u
67-66-3	Chloroform	1800u
107-06-2	1, 2-Dichloroethane	1800u
78-93-3	2-Butanone	3600u
71-55-6	1, 1, 1-Trichloroethane	1800u
56-23-5	Carbon Tetrachloride	1800u
108-05-4	Vinyl Acetate	3600u
75-27-4	Bromodichloromethane	1800u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	1800u
10061-02-6	Trans-1, 3-Dichloropropene	1800u
79-01-6	Trichloroethene	1800u
124-48-1	Dibromochloromethane	1800u
79-00-5	1, 1, 2-Trichloroethane	1800u
71-43-2	Benzene	1800u
10061-01-5	cis-1, 3-Dichloropropene	1800u
110-75-8	2-Chloroethylvinylether	3600u
75-25-2	Bromoform	1800u
108-10-1	4-Methyl-2-Pentanone	3600u
591-78-6	2-Hexanone	3600u
127-18-4	Tetrachloroethene	1800u
79-34-5	1, 1, 2, 2-Tetrachloroethane	1800u
108-88-3	Toluene	1800u
108-90-7	Chlorobenzene	1800u
100-41-4	Ethylbenzene	1800u
100-42-5	Styrene	1800u
	Total Xylenes	1800u

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-4432/U-4442

Sample Number
DC-SD-35

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared 11-12-86
Date Analyzed 12-12-86
Conc/Dil Factor 5
Percent Moisture (Decanted) 45

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	1500	U
111-44-4	bis(-2-Chloroethyl)Ether	1500	U
95-57-8	2-Chlorophenol	1500	U
541-73-1	1 3-Dichlorobenzene	1500	U
106-46-7	1 4-Dichlorobenzene	130	J
100-51-6	Benzyl Alcohol	1500	U
95-50-1	1 2-Dichlorobenzene	1500	U
95-48-7	2-Methylphenol	1500	U
39638-32-9	bis(2-chloroisopropyl)Ether	1500	U
106-44-5	4-Methylphenol	1500	U
621-64-7	N-Nitroso-Di-n-Propylamine	1500	U
67-72-1	Hexachloroethane	1500	U
98-95-3	Nitrobenzene	1500	U
78-59-1	Isophorone	1500	U
88-75-5	2-Nitrophenol	1500	U
105-67-9	2 4-Dimethylphenol	1500	U
65-85-0	Benzoic Acid	7300	U
111-91-1	bis(-2-Chloroethoxy)Methane	1500	U
120-83-2	2 4-Dichlorophenol	1500	U
120-82-1	1 2 4-Trichlorobenzene	90	J
91-20-3	Naphthalene	130	J
106-47-8	4-Chloroaniline	1000	J
87-68-3	Hexachlorobutadiene	1500	U
59-50-7	4-Chloro-3-Methylphenol	1500	U
91-57-6	2-Methylnaphthalene	1500	U
77-47-4	Hexachlorocyclopentadiene	1500	U
88-06-2	2 4 6-Trichlorophenol	1500	U
95-95-4	2 4 5-Trichlorophenol	7300	U
91-58-7	2-Chloronaphthalene	1500	U
88-74-4	2-Nitroaniline	7300	U
131-11-3	Dimethyl Phthalate	1500	U
208-96-8	Acenaphthylene	1500	U
99-09-2	3-Nitroaniline	7300	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	1500	U
51-28-5	2 4-Dinitrophenol	7300	U
100-02-7	4-Nitrophenol	7300	U
132-64-9	Dibenzofuran	1500	U
121-14-2	2 4-Dinitrotoluene	1500	U
606-20-2	2 6-Dinitrotoluene	1500	U
84-66-2	Diethylphthalate	1500	U
7005-72-3	4-Chlorophenyl-phenylether	1500	U
86-73-7	Fluorene	1500	U
100-01-6	4-Nitroaniline	7300	U
534-52-1	4 6-Dinitro-2-Methylphenol	7300	U
86-30-6	N-Nitrosodiphenylamine (1)	1500	U
101-55-3	4-Bromophenyl-phenylether	1500	U
118-74-1	Hexachlorobenzene	1100	J
87-86-5	Pentachlorophenol	800	J
85-01-8	Phenanthrene	1500	U
120-12-7	Anthracene	1500	U
84-74-2	Di-n-Butylphthalate	1500	U
206-44-0	Fluoranthene	600	J
129-00-0	Pyrene	1000	J
85-68-7	Butylbenzylphthalate	1500	U
91-94-1	3 3'-Dichlorobenzidine	3000	U
56-55-3	Benzo(a)Anthracene	1500	U
117-81-7	bis(2-Ethylhexyl)Phthalate	130	J
218-01-9	Chrysene	1000	J
117-84-0	Di-n-Octyl Phthalate	8100	
205-99-2	Benzo(b)Fluoranthene	760	J
207-08-9	Benzo(k)Fluoranthene	1500	U
50-32-8	Benzo(a)Pyrene	430	J
193-39-5	Indeno(1 2 3-cd)Pyrene	570	J
53-70-3	Dibenz(a h)Anthracene	1500	U
191-24-2	Benzo(g h i)Perylene	960	J

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No U-4432/U-4442

Sample Number DC-SD-35

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared: 11-12-86

Date Analyzed: 11-20-86

Conc/Dil Factor: 50

Percent Moisture (decanted) 45

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	8000 u
53494-70-5	Endrin Ketone	1600 u
57-74-9	Chlordane	8000 u
8001-35-2	Toxaphene	16000 u
12674-11-2	Aroclor-1016	8000 u
11104-28-2	Aroclor-1221	8000 u
11141-16-5	Aroclor-1232	8000 u
53469-21-9	Aroclor-1242	8000 u
12672-29-6	Aroclor-1248	8000 u
11097-69-1	Aroclor-1254	71,000 c
11096-82-5	Aroclor-1260	24,000 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 U-4432 / U-4442

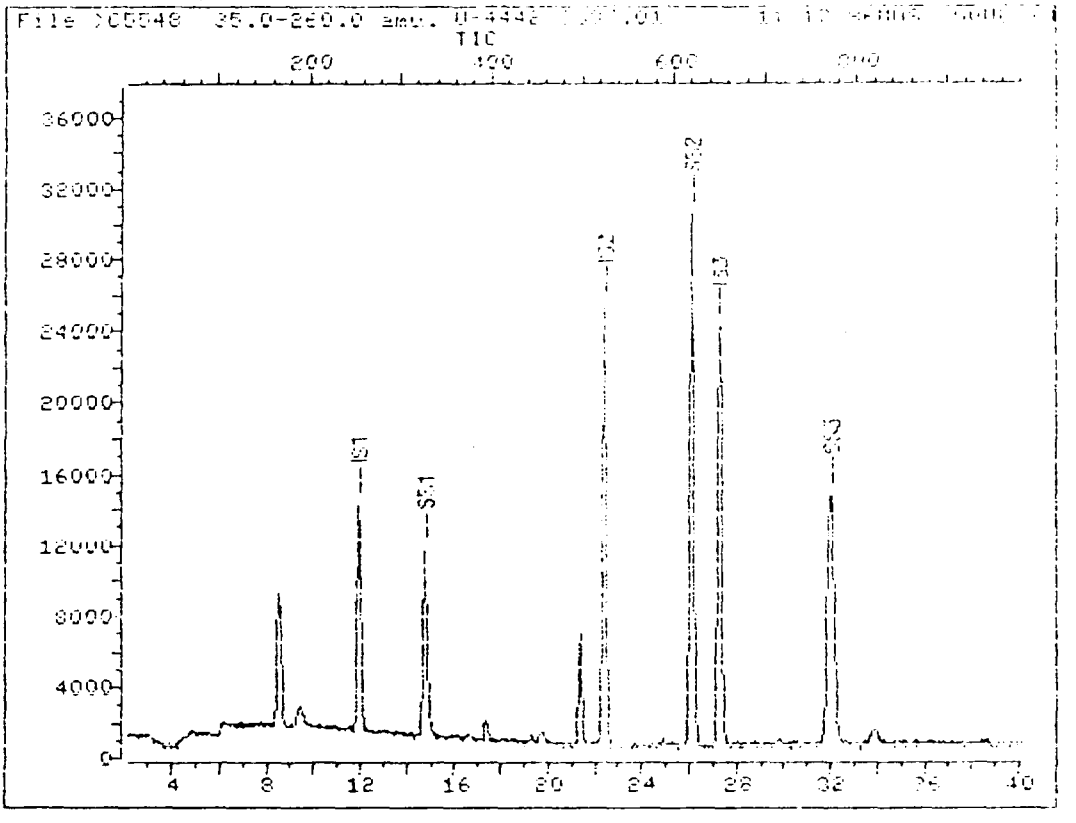
Sample Number DC-SD-35

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.4 min	730 BJ
2.	Unknown Ketone	VOA	19.7 min	320 BJ
3.	Hexane isomer	VOA	21.4 min	2700 BJ
4.				
5. 104121	1-CHLORO-4-ISOCYANATOBENZENE	BNA	12.3	1400 J
6.	TETRACHLOROBENZENE ISOMER		16.8	2800 J
7. 608935	PENTACHLOROBENZENE		19.2	2400 J
8.	PCB		25.3-30.1	-
9.	UNKNOWN PHTHALATE		31.3	5400 J
10.	UNKNOWN PHTHALATE		32.0	12000 J
11.	UNKNOWN PHTHALATE		33.2	6100 J
12.	UNKNOWN PHTHALATE		35.0	12000 J
13.	UNKNOWN PHTHALATE		35.8	28000 J
14.	UNKNOWN PHTHALATE		36.8	3700 J
15.	UNKNOWN PHTHALATE		37.4	13000 J
16.	UNKNOWN PHTHALATE		38.4	2400 J
17.	UNKNOWN PHTHALATE	BNA	39.1	5200 J
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30				

TOTAL ION CHROMATOGRAM

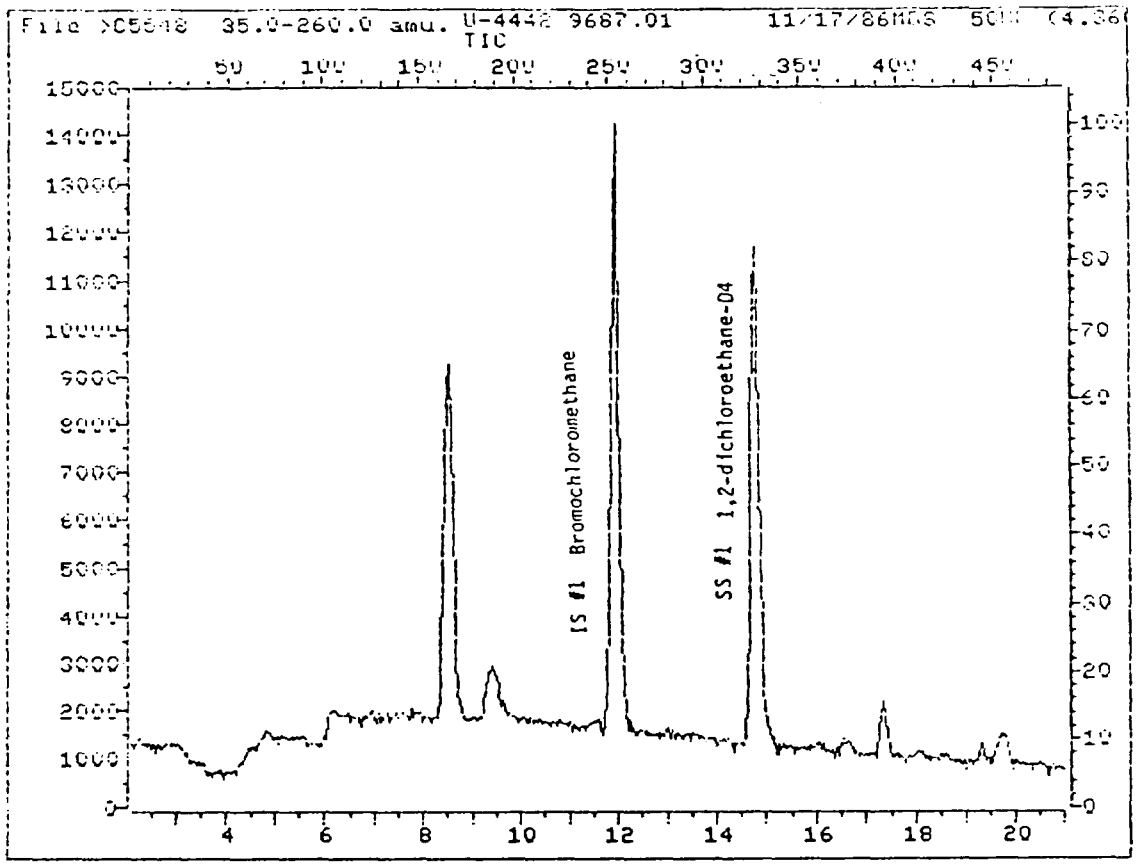


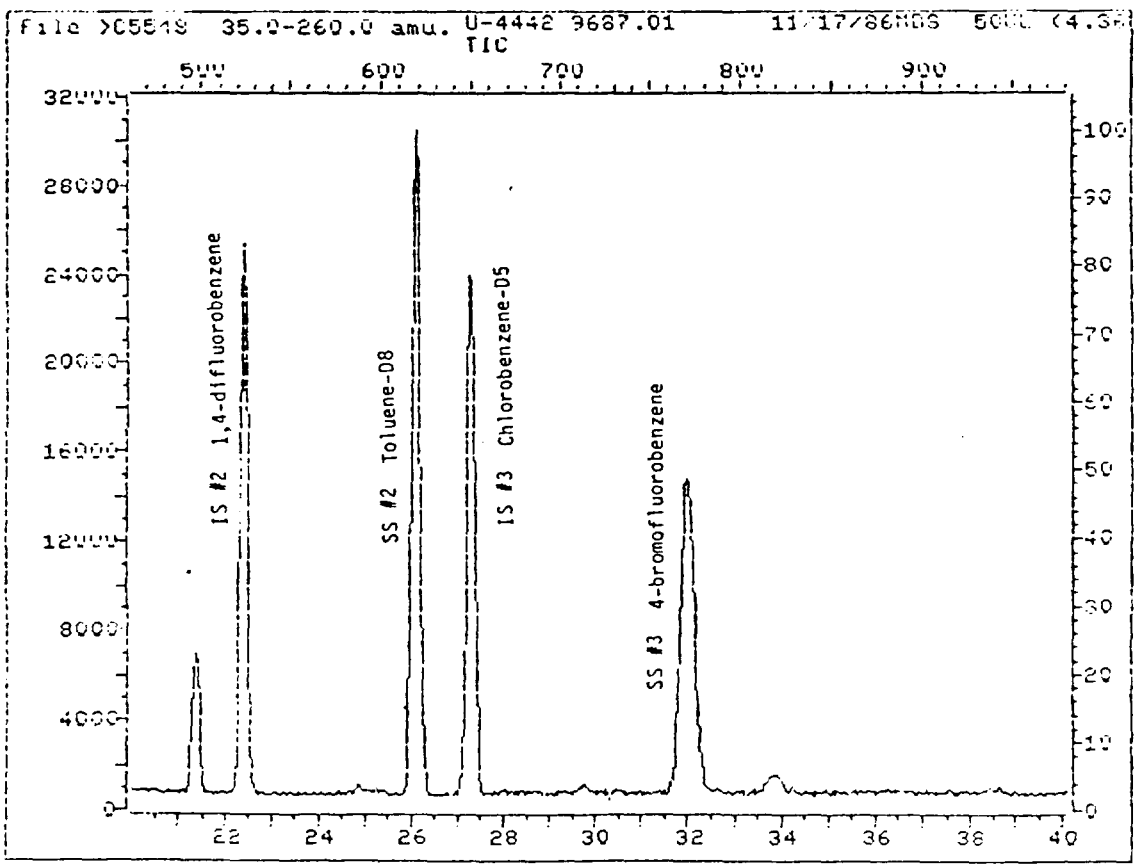
Data File: >C5548::D3
Name: U-4442 9687.01 DC-SD-35
Misc: 11/17/86MDS 500L (4.26L/10MLS METHO) + 10ML 15/55

Id File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861117 11:08

Operator ID: USER8
Quant Time: 861117 13:53
Injected at: 861117 13:12

DC-SD-35


File >C5548 35.0-260.0 amu. U-4442 9687.01 11/17/86RDS
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File >C5548 35.0-260.0 amu. U-4442 9687.01 11/17/86RDS
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

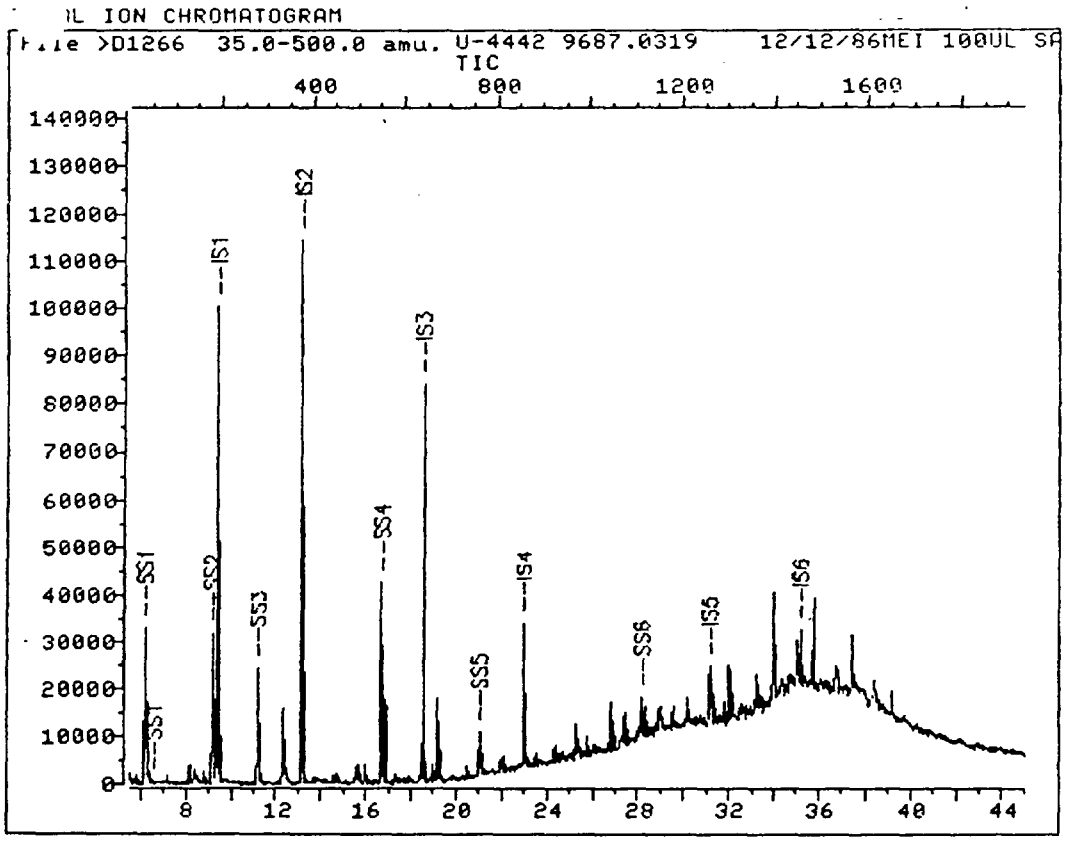
QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861117 13:53
Output File: ^C5548::D2 Injected at: 861117 13:12
Data File: ^C5548::U3 Dilution Factor: 1.00
Name: U-4442 9687.01 DC-SD-35
Misc: 11/17/86MDS 50UL (4.36G/10MLS MEOH) + 10UL IS/SS

ID File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861117 11:28

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.93	254	20040	50.00	UG/L	100
6)	METHYLENE CHLORIDE		84	8.48	165	21643	21.03	UG/L	100
7)	ACETONE		43	9.37	188	14909	54.48	UG/L	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.76	327	42748	47.33	UG/L	92
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.40	524	111144	50.00	UG/L	100
31)	*CHLOROBENZENE-U5	(IS)	117	27.26	649	29354	50.00	UG/L	100
36)	TOLUENE-D8	(SURR)	98	26.09	619	124742	50.37	UG/L	95
40)	4-BROMOFLUOROBENZENE	(SURR)	95	32.03	772	56433	46.51	UG/L	100

* Compound is ISTD

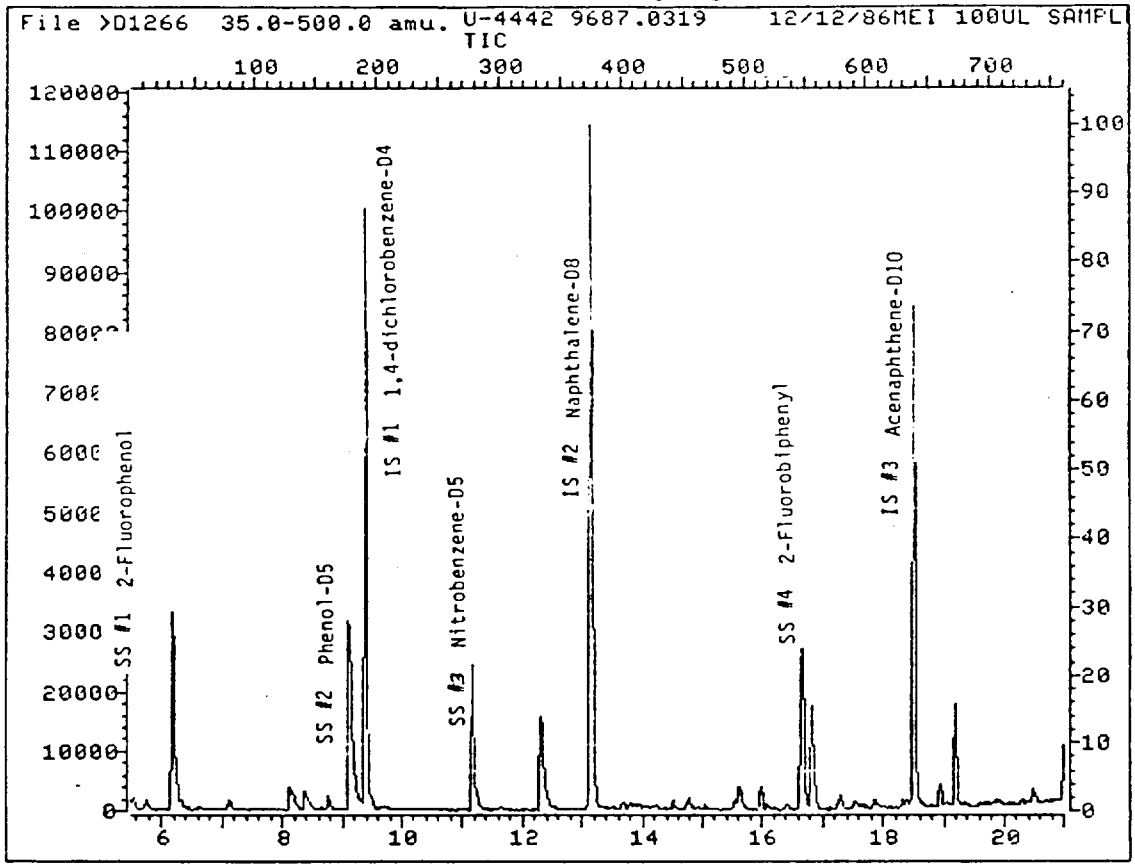


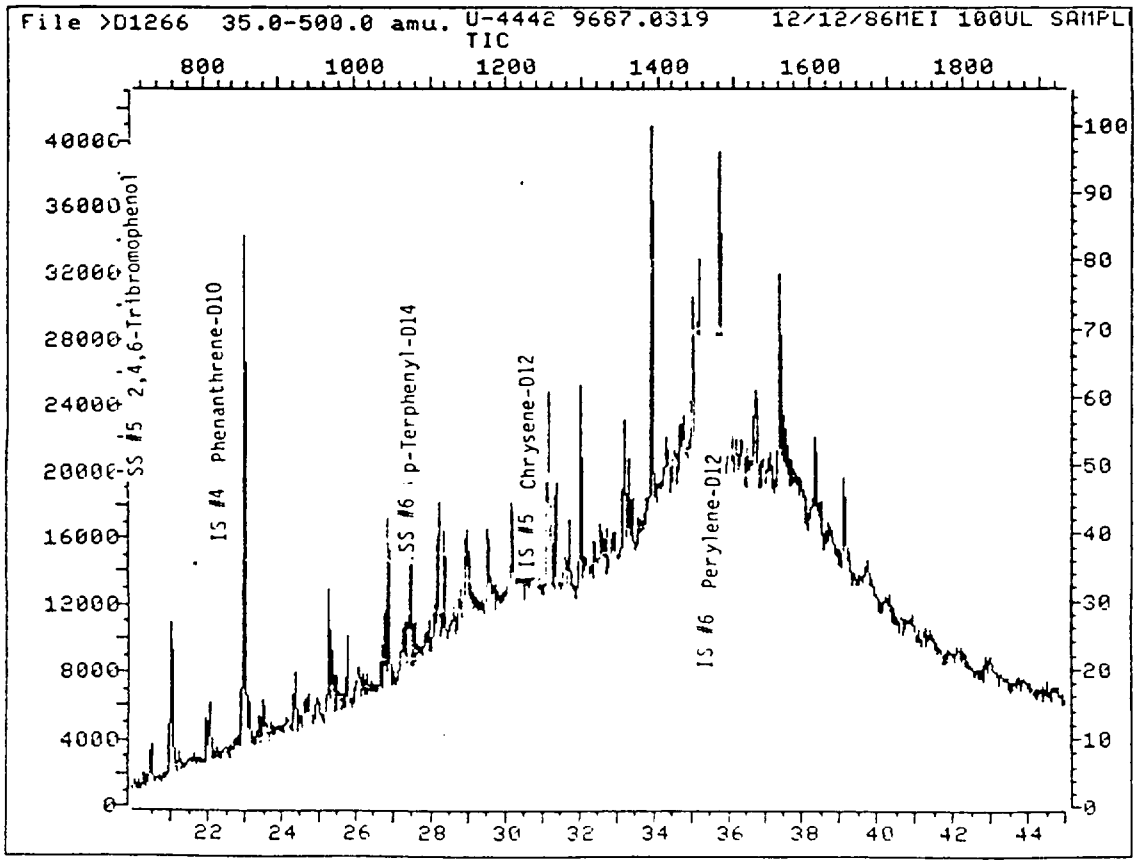
Data File: >D1266::D1
Name: U-4442 9687.0319 DC-SD-35
Misc: 12/12/86MEI 100UL SAMPLE + 400UL MECL2 + 5UL IS (5X) BTL# 4

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861211 15:37

Operator ID: USER8
Quant Time: 861215 18:35
Injected at: 861212 22:13

DC-SD-35


File >D1266 35.0-500.0 amu. U-4442 9687.0319 12/12/86MEI 100UL SAMPL
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 >D1266 35.0-500.0 amu. U-4442 9687.0319 12/12/86MEI 100UL SAMPL
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: 861215 18:35
utput File: ^D1266::Q2 Injected at: 861212 22:13
ata File: >D1266::D1 Dilution Factor: 5.00
ame: U-4442 9687.0319 DC-SD-35
isc: 12/12/86MEI 100UL SAMPLE + 400UL MECL2 + 5UL IS (5X) BTL# 4

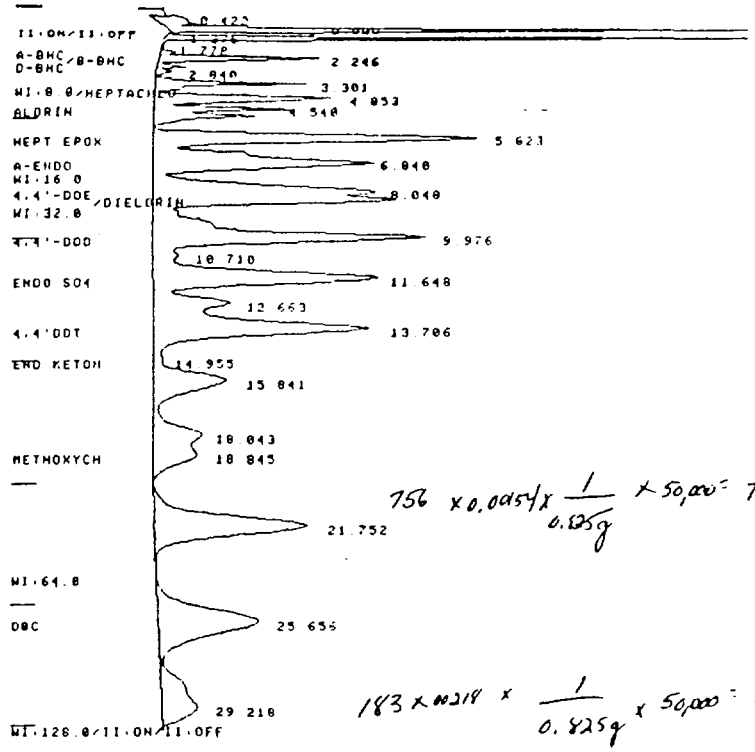
D File: BNADR::D2
itle: BNA ID FILE FOR THE HP 5970 (B)
ast Calibration: 861211 15:37

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.39	191	44615	40.00	UG/L	86
2)	PHENOL-D5	(SURR)	99	9.10	177	43593	145.25	UG/L	99
5)	2-FLUOROPHENOL	(SURR)	112	6.17	33	29582	156.96	UG/L	75
5)	2-FLUOROPHENOL	(SURR)	112	6.54	51	193	1.02	UG/L	53
~~9)~~	~~1,3-DICHLOROBENZENE~~		~~146~~	~~9.43~~	~~193~~	~~651~~	~~2.06~~	~~UG/L~~ NOBPK	~~77~~
0)	1,4-DICHLOROBENZENE		146	9.43	193	651	2.13	UG/L	79
~~7)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.16~~	~~278~~	~~3977~~	~~12.64~~	~~UG/L~~ NOBPK	~~96~~
9)	*NAPHTHALENE-D8	(IS)	136	13.16	376	155281	40.00	UG/L	100
0)	NITROBENZENE-D5	(SURR)	82	11.16	278	24094	82.35	UG/L	94
8)	1,2,4-TRICHLOROBENZENE		180	13.10	373	400	1.48	UG/L	100
9)	NAPHTHALENE		128	13.20	378	1559	2.18	UG/L	100
0)	4-CHLOROANILINE		127	13.81	408	4090	17.19	UG/L	89
~~3)~~	~~2-METHYLNAPHTHALENE~~		~~142~~	~~15.34~~	~~483~~	~~301~~	~~.63~~	~~UG/L~~ NOBPK	~~84~~
~~3)~~	~~2-METHYLNAPHTHALENE~~		~~142~~	~~15.64~~	~~498~~	~~563~~	~~1.17~~	~~UG/L~~	~~90~~
4)	*ACENAPHTHENE-D10	(IS)	162	18.52	639	49220	40.00	UG/L	97
8)	2-FLUOROBIPHENYL	(SURR)	172	16.66	548	41472	101.43	UG/L	93
~~1)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~17.86~~	~~607~~	~~1597~~	~~4.10~~	~~UG/L~~	~~100~~
~~1)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.43~~	~~635~~	~~179~~	~~.46~~	~~UG/L~~	~~100~~
~~1)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.52~~	~~639~~	~~15445~~	~~39.69~~	~~UG/L~~ NOBPK	~~100~~
~~1)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.64~~	~~645~~	~~190~~	~~.49~~	~~UG/L~~	~~100~~
~~3)~~	~~DIBENZOFURAN~~		~~168~~	~~18.66~~	~~646~~	~~262~~	~~.66~~	~~UG/L~~	~~100~~
8)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.00	761	4644	92.27	UG/L	96
~~9)~~	~~2,4-DINITROPHENOL~~		~~184~~	~~20.00~~	~~755~~	~~179~~	~~4.98~~	~~UG/L~~	~~100~~
~~2)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.52~~	~~639~~	~~6915~~	~~87.52~~	~~UG/L~~ NOBPK	~~100~~
5)	*PHENANTHRENE-D10	(IS)	188	22.96	857	38914	40.00	UG/L	93
9)	HEXACHLOROBENZENE		284	22.06	813	947	17.83	UG/L	95
0)	PENTACHLOROPHENOL		266	22.80	849	334	13.14	UG/L	100
4)	FLUORANTHENE		202	26.67	1039	1405	9.84	UG/L	87
5)	*CHRYSENE-D12	(IS)	240	31.13	1257	16455	40.00	UG/L	100
~~6)~~	~~BENZIDINE~~		~~184~~	~~27.45~~	~~1077~~	~~703~~	~~703.00~~	~~NO CALIB~~ NOBPK	~~100~~
~~6)~~	~~BENZIDINE~~		~~184~~	~~27.57~~	~~1083~~	~~214~~	~~214.00~~	~~NO CALIB~~	~~100~~
7)	PYRENE		202	27.31	1070	2722	16.69	UG/L	91
8)	TERPHENYL-D14	(SURR)	244	28.17	1112	5970	68.73	UG/L	100
~~0)~~	~~3,3'DICHLOROBENZIDINE~~		~~252~~	~~31.72~~	~~1286~~	~~333~~	~~36.25~~	~~UG/L~~	~~100~~
~~1)~~	~~BENZO(A)ANTHRACENE~~		~~228~~	~~31.19~~	~~1260~~	~~1445~~	~~17.29~~	~~UG/L~~	~~87~~
~~2)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~31.72~~	~~1286~~	~~180~~	~~2.10~~	~~UG/L~~	~~8~~
~~2~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~32.01~~	~~1300~~	~~16447~~	~~191.48~~	~~UG/L~~ NOBPK	~~41~~
2.	BIS(2-ETHYLHEXYL)PHTHALATE		149	32.15	1307	181	2.11	UG/L	1
~~2)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~32.44~~	~~1321~~	~~300~~	~~3.49~~	~~UG/L~~	~~5~~
~~2)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~32.56~~	~~1327~~	~~1327~~	~~15.45~~	~~UG/L~~ 390	~~94~~
3)	CHRYSENE		228	31.19	1260	1445	17.37	UG/L	89
4)	*PERYLENE-D12	(IS)	264	35.20	1456	13647	40.00	UG/L	100
~~5)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.64~~	~~1380~~	~~482~~	~~2.46~~	~~UG/L~~ NOBPK	~~100~~
5)	DI-N-OCTYL PHTHALATE		149	33.93	1394	26295	134.38	UG/L	100

	Compound	M/E	R.T.	Scan#	Area	Conc	Units	q
~~5)~~	~~DI-N-OCTYL PHTHALATE~~	~~149~~	~~34.38~~	~~1416~~	~~1745~~	~~8.92~~	~~UG/L~~ No Q/h	100
6)	BENZO(B)FLUORANTHENE	252	34.24	1409	1050	12.56	UG/L	100
~~7)~~	~~BENZO(K)FLUORANTHENE~~	~~252~~	~~34.24~~	~~1409~~	~~1050~~	~~10.03~~	~~UG/L~~ No Q/h	100
~~8)~~	~~BENZO(A)PYRENE~~	~~252~~	~~34.91~~	~~1442~~	~~1197~~	~~16.20~~	~~UG/L~~	100
8)	BENZO(A)PYRENE	252	35.06	1449	523	7.08	UG/L	100
~~8)~~	~~BENZO(A)PYRENE~~	~~252~~	~~35.26~~	~~1459~~	~~283~~	~~3.83~~	~~UG/L~~ No Q/h	100
9)	INDENO(1,2,3-CD)PYRENE	276	37.80	1583	400	9.36	UG/L	100
1)	BENZO(G,H,I)PERYLENE	276	38.35	1610	746	15.86	UG/L	100

* Compound is ISTD

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



756 x 0.0054 x 1/0.825g x 50,000 = 71,000 ug/kg 1254

183 x 0.318 x 1/0.825g x 50,000 = 24,000 ug/kg 1260

CHANNEL: 1A - 1 TITLE: RUN# 47 15:44 20 NOV 86

DC-SD-35

SAMPLE: 9687.03.19A1 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	1.376		55[illegible]924	VB		3.05
2	~~A-BHC~~	35.9802	2.047	0.007	2[illegible]866	BV		4.25
3	~~B-BHC~~	886.8954	2.246	0.076	21[illegible]463	VV		4.94
4	~~D-BHC~~	51.4875	2.575	0.125	[illegible]341	VV		6.06
5		0.0000	3.301		16[illegible]072	BV		7.75
6		0.0000	3.515		[illegible]742	VV	?	8.38
7	~~HEPTACHLO~~	61.2182	~~3.600~~	-0.190	[illegible]	VV	?	6.63
8		0.0000	4.053		3[illegible]571	VV		16.00
9	~~ALDRIN~~	346.2513	4.540	-0.130	21[illegible]108	VV		11.63
10		0.0000	4.858		17[illegible]203	VV		11.50
11	~~HEPT EPOX~~	1502.498	5.823	0.153	80[illegible]993	VV	?	20.19
12	~~A-ENDO~~	1650.088	6.840	-0.190	81[illegible]425	VV	?	25.55
13	~~4,4'-DDE~~	1400.696	8.048	-0.042	77[illegible]042	VV	?	[illegible]
14	~~DIELDRIN~~	1054.097	8.395	0.205	67[illegible]489	VV	?	26.31
15	~~4,4'-DDD~~	2425.499	9.976	-0.184	115[illegible]678	VV		25.38
16	~~ENDO.ALD.~~	170.4972	10.710	0.460	7[illegible]648	VV	?	44.88
17	~~ENDO SO4~~	2592.732	11.648	-0.262	101[illegible]813	VV		33.94
18		0.0000	12.663		31[illegible]639	VV	?	32.50
19	~~4,4'DDT~~	3484.903	13.706	0.446	110[illegible]555	[illegible]		35.38
20	~~END KETON~~	43.1170	~~14.955~~	-0.315	[illegible]	[illegible]	?	[illegible]
21		0.0000	15.841		4[illegible]416	[illegible]		[illegible]
22		0.0000	18.043		21[illegible]	[illegible]	?	47.21
23	~~METHOXYCH~~	1359.504	~~18.845~~	-0.645	[illegible]	VV	?	65.19
24		0.0000	21.752		10[illegible]	VV		50.69
25	~~DDC~~	2086.435	25.656	-0.954	9[illegible]	VV		73.94
26		0.0000	29.218		39[illegible]454	VB	?	111.50
TOTALS:		19151.90		-1.440	1204[illegible]231			

1259

1260

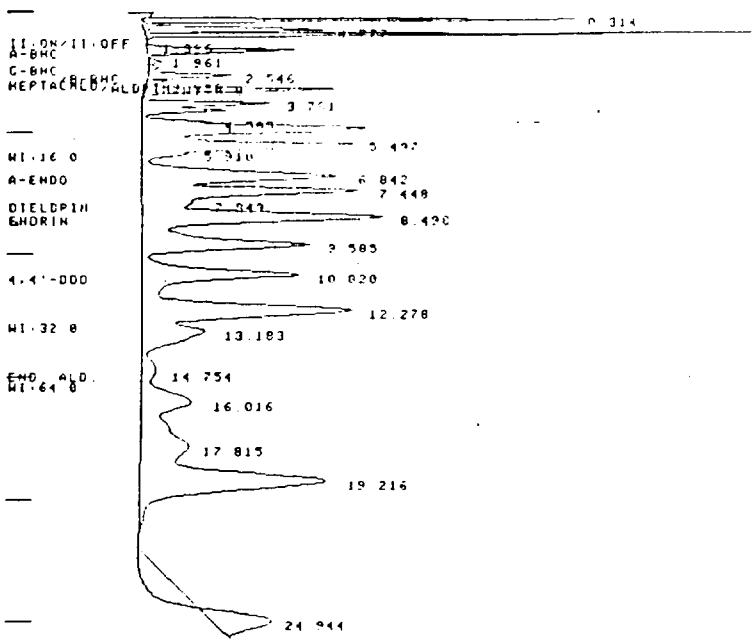
DETECTED PKS: 39 REJECTED PKS: 13

DIVISOR: 1.50000 MULTIPLIER: 50000.0000

NOISE: 22.9 OFFSET: 12

NOTES:
NOTEBOOK: 259-38 ANALYST: F. JUREK/ RICHARD SAMSON
SECURE AREA: D JOB#:U-4432,U-4442
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
BEST/ECD ANALYSIS

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



CHANNEL: 1B - 1 TITLE: RUN#22 23:41 21 NOV 86

DC-SD-35

SAMPLE: 9687 METHOD: PEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	WI/2 (SEC)
1		0.0000	1.306		42274	BV	3.31
2	A-BHC	0.0000	1.538	-0.142	449790	VB	3.44
3		0.0000	1.961		41397	BV	4.44
4	G-BHC	0.0000	2.223	-0.177	21457	VV	5.44
5	B-BHC	0.0000	2.546	0.136	229074	VB	5.69
6	HEPTACHLO	0.0000	2.803	0.003	32627	BV	6.69
7		0.0000	2.988		23917	VV	? 6.81
8	ALDRIN	0.0000	3.188	0.038	532324	VV	10.06
9		0.0000	3.781		329299	VV	9.56
10		0.0000	4.049		222386	VV	10.81
11		0.0000	4.505		162136	VV	? 10.75
12	HEPT EPOX	0.0000	4.798	-0.302	1130342	VV	19.94
13		0.0000	5.497		1241992	VV	21.38
14		0.0000	5.910		136634	VV	? 16.19
15	4,4'-DDE	0.0000	6.842	0.032	1267674	VV	24.38
16		0.0000	7.448		1161862	VV	19.50
17	DIELDRIN	0.0000	7.849	-0.031	162977	VV	?
18	ENDRIN	0.0000	8.498	-0.312	1497896	VV	22.81
19		0.0000	9.585		1171436	VV	23.81
20	4,4'-DDD	0.0000	10.820	0.390	1257255	VV	26.56
21	B-ENDOSUL	0.0000	12.278	0.639	1733794	VV	30.69
22	4,4'DDT	0.0000	13.183	-0.757	711509	VV	? 51.81
23	END. ALD.	0.0000	14.754	-0.076	179163	VV	? 58.13
24		0.0000	16.016		553948	VV	51.06
25	ENDO SO4	0.0000	17.815	0.755	940024	VV	?119.63
26		0.0000	19.216		2236392	VB	45.63

TOTALS: 0.0000 0.185 17658580

DETECTED PKS: 37 REJECTED PKS: 11

DIVISOR: 1.50000 MULTIPLIER: 50000.0000

NOISE: 125.7 OFFSET: -8

NOTES:
NOTEBOOK:259-40 ANALYST:RICHARD SAMSON
SECURE AREA: D JOB #U-4432:U-4442
INST: VARIAN 6200#2 B ECD 10X1 WIT: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 CREF:682

SAMPLE NUMBER DC-SD-36

481095

Sample Number
DC-SD-36

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No. U-4432/U-4442
Lab Sample ID No: 9688
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: [signature]
Date Sample Received: 11-7-86

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-17-86

Conc/Dil Factor: 2 pH 7.7

Percent Moisture: (Not Decanted) 36

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	3200u
74-83-9	Bromomethane	3200u
75-01-4	Vinyl Chloride	3200u
75-00-3	Chloroethane	3200u
75-09-2	Methylene Chloride	7200 B
67-64-1	Acetone	6800 B
75-15-0	Carbon Disulfide	1600u
75-35-4	1, 1-Dichloroethene	1600u
75-34-3	1, 1-Dichloroethane	1600u
156-60-5	Trans-1, 2-Dichloroethene	1600u
67-66-3	Chloroform	1600u
107-06-2	1, 2-Dichloroethane	1600u
78-93-3	2-Butanone	12000 B
71-55-6	1, 1, 1-Trichloroethane	1600u
56-23-5	Carbon Tetrachloride	1600u
108-05-4	Vinyl Acetate	3200u
75-27-4	Bromodichloromethane	1600u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	1600u
10061-02-6	Trans-1, 3-Dichloropropene	1600u
79-01-6	Trichloroethene	1600u
124-48-1	Dibromochloromethane	1600u
79-00-5	1, 1, 2-Trichloroethane	1600u
71-43-2	Benzene	1600u
10061-01-5	cis-1, 3-Dichloropropene	1600u
110-75-8	2-Chloroethylvinylether	3200u
75-25-2	Bromoform	1600u
108-10-1	4-Methyl-2-Pentanone	3200u
591-78-6	2-Hexanone	3200u
127-18-4	Tetrachloroethene	1600u
79-34-5	1, 1, 2, 2-Tetrachloroethane	1600u
108-88-3	Toluene	1600u
108-90-7	Chlorobenzene	480 J
100-41-4	Ethylbenzene	1600u
100-42-5	Styrene	1600u
	Total Xylenes	1600u

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.

395

Laboratory Name Ecology & Environment Inc.

Case No U-4442 / U-4432

Sample Number DC-SD-36

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 11-12-86

Date Analyzed 12-12-86

Conc/Dil Factor 10

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	2600	U
111-44-4	bis(-2-Chloroethyl)Ether	2600	U
95-57-8	2-Chlorophenol	2600	U
541-73-1	1 3-Dichlorobenzene	550	J
106-46-7	1 4-Dichlorobenzene	2900	
100-51-6	Benzyl Alcohol	2600	U
95-50-1	1 2-Dichlorobenzene	2600	U
95-48-7	2-Methylphenol	2600	U
39638-32-9	bis(2-chloroisopropyl)Ether	2600	U
106-44-5	4-Methylphenol	2600	U
621-64-7	N-Nitroso-Di-n-Propylamine	2600	U
67-72-1	Hexachloroethane	2600	U
98-95-3	Nitrobenzene	2600	U
78-59-1	Isophorone	2600	U
88-75-5	2-Nitrophenol	2600	U
105-67-9	2 4-Dimethylphenol	2600	U
65-85-0	Benzoic Acid	12000	U
111-91-1	bis(-2-Chloroethoxy)Methane	2600	U
120-83-2	2 4-Dichlorophenol	2600	U
120-82-1	1 2 4-Trichlorobenzene	1500	J
91-20-3	Naphthalene	2600	U
106-47-8	4-Chloroaniline	2600	U
87-68-3	Hexachlorobutadiene	2600	U
59-50-7	4-Chloro-3-Methylphenol	2600	U
91-57-6	2-Methylnaphthalene	2600	U
77-47-4	Hexachlorocyclopentadiene	2600	U
88-06-2	2 4 6-Trichlorophenol	2600	U
95-95-4	2 4 5-Trichlorophenol	12000	U
91-58-7	2-Chloronaphthalene	2600	U
88-74-4	2-Nitroaniline	12000	U
131-11-3	Dimethyl Phthalate	2600	U
208-96-8	Acenaphthylene	2600	U
99-09-2	3-Nitroaniline	12000	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	170	J
51-28-5	2 4-Dinitrophenol	12000	U
100-02-7	4-Nitrophenol	12000	U
132-64 9	Dibenzofuran	2600	U
121-14-2	2 4-Dinitrotoluene	2600	U
606-20-2	2 6-Dinitrotoluene	2600	U
84-66-2	Diethylphthalate	2600	U
7005-72-3	4-Chlorophenyl-phenylether	2600	U
86-73-7	Fluorene	2600	U
100-01-6	4-Nitroaniline	12000	U
534-52-1	4 6-Dinitro-2-Methylphenol	12000	U
86-30-6	N-Nitrosodiphenylamine (1)	2600	U
101-55-3	4-Bromophenyl-phenylether	2600	U
118-74-1	Hexachlorobenzene	2600	U
87-86-5	Pentachlorophenol	12000	U
85-01-8	Phenanthrene	2600	U
120-12-7	Anthracene	2600	U
84-74-2	Di-n-Butylphthalate	900	J
206-44-0	Fluoranthene	2600	U
129-00-0	Pyrene	1400	J
85-68-7	Butylbenzylphthalate	2600	U
91-94-1	3 3 -Dichlorobenzidine	5200	U
56-55-3	Benzo(a)Anthracene	2600	U
117-81-7	bis(2-Ethylhexyl)Phthalate	2600	U
218-01-9	Chrysene	1700	J
117-84-0	Di-n-Octyl Phthalate	11000	
205-99-2	Benzo(b)Fluoranthene	1000	J
207-08-9	Benzo(k)Fluoranthene	2600	U
50-32-8	Benzo(a)Pyrene	540	J
193-39-5	Indeno(1 2 3-cd)Pyrene	2600	U
53-70-3	Dibenz(a h)Anthracene	2600	U
191-24-2	Benzo(g h i)Perylene	2600	U

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No V-4432/V-4442

Sample Number DC-SD-36

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-12-86

Date Analyzed 11-20-86

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)
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	8000 u
53494-70-5	Endrin Ketone	1600 u
57-74-9	Chlordane	8000 u
8001-35-2	Toxaphene	16000 u
12674-11-2	Aroclor-1016	8000 u
11104-28-2	Aroclor-1221	8000 u
11141-16-5	Aroclor-1232	8000 u
53469-21-9	Aroclor-1242	8000 u
12672-29-6	Aroclor-1248	8000 u
11097-69-1	Aroclor-1254	38,000
11096-82-5	Aroclor-1260	13,000 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.

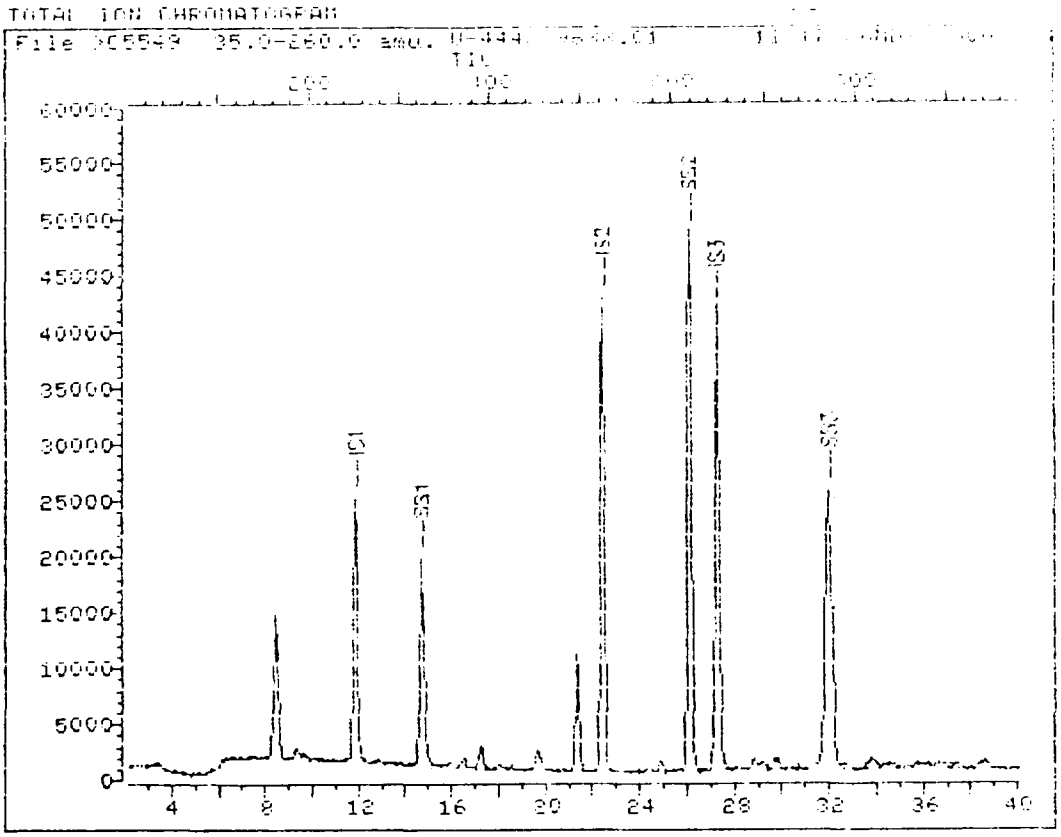
Case No u-4432 / u-4442

Sample Number DC-SD-36

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.3 min	660 BJ
2.	Unknown Ketone	VOA	19.6 min	370 BJ
3.	Hexane isomer	VOA	21.4 min	2200 BJ
4.				
5.	UNKNOWN HYDROCARBON	BNA	9.9	4600 J
6.	UNKNOWN HYDROCARBON		11.7	4400 J
7.	UNKNOWN HYDROCARBON		12.0	1300 J
8.	UNKNOWN HYDROCARBON		12.8	2200 J
9.	UNKNOWN HYDROCARBON		13.0	1600 J
10.	UNKNOWN HYDROCARBON		13.7	5700 J
11.	UNKNOWN HYDROCARBON		14.0	3500 J
12.	UNKNOWN HYDROCARBON		15.1	5600 J
13.	UNKNOWN HYDROCARBON		15.6	3400 J
14.	UNKNOWN HYDROCARBON		15.9	7700 J
15.	TETRACHLOROBENZENE ISOMER		16.8	4900 J
16.	UNKNOWN HYDROCARBON		16.9	12000 J
17.	UNKNOWN HYDROCARBON		17.3	3800 J
18.	UNKNOWN HYDROCARBON		18.4	13000 J
19.	UNKNOWN HYDROCARBON		21.2	15000 J
20.	UNKNOWN HYDROCARBON		22.1	12000 J
21.	UNKNOWN HYDROCARBON		23.5	12000 J
22.	UNKNOWN HYDROCARBON		37.5	9600 J
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30				

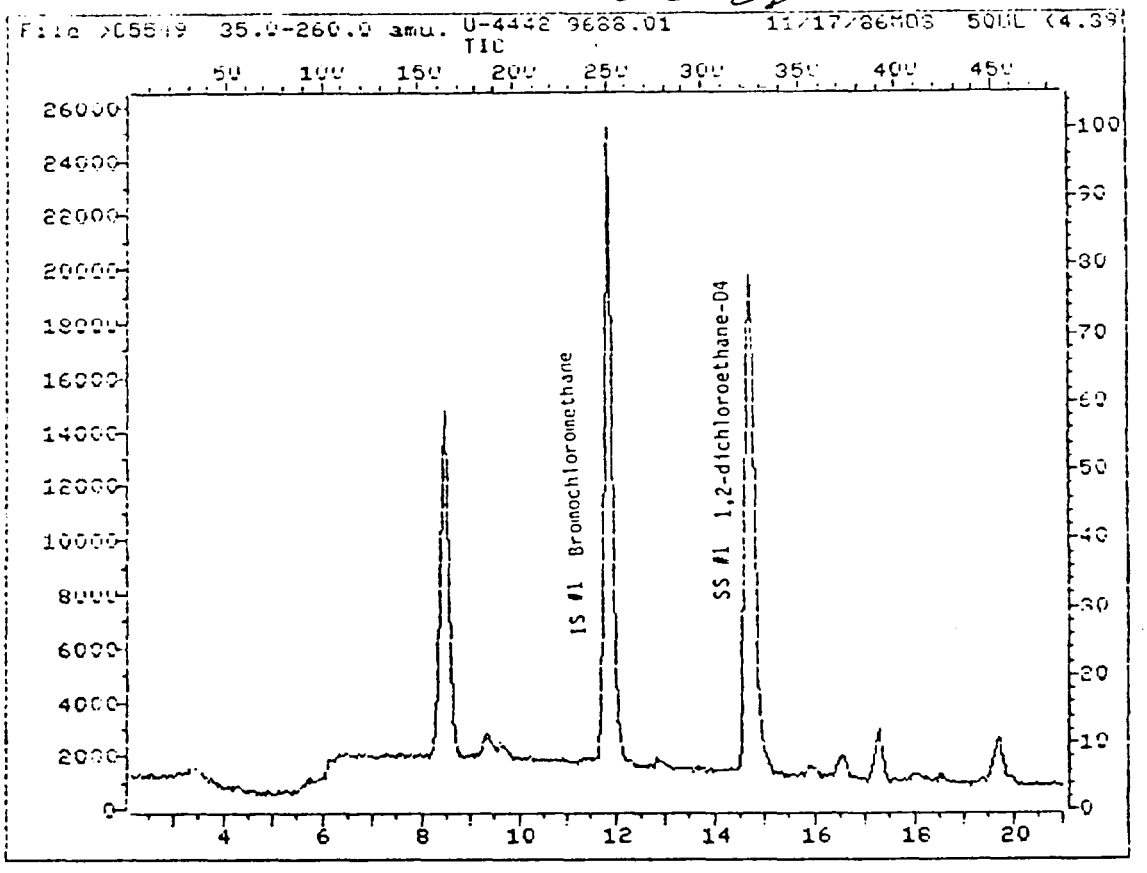


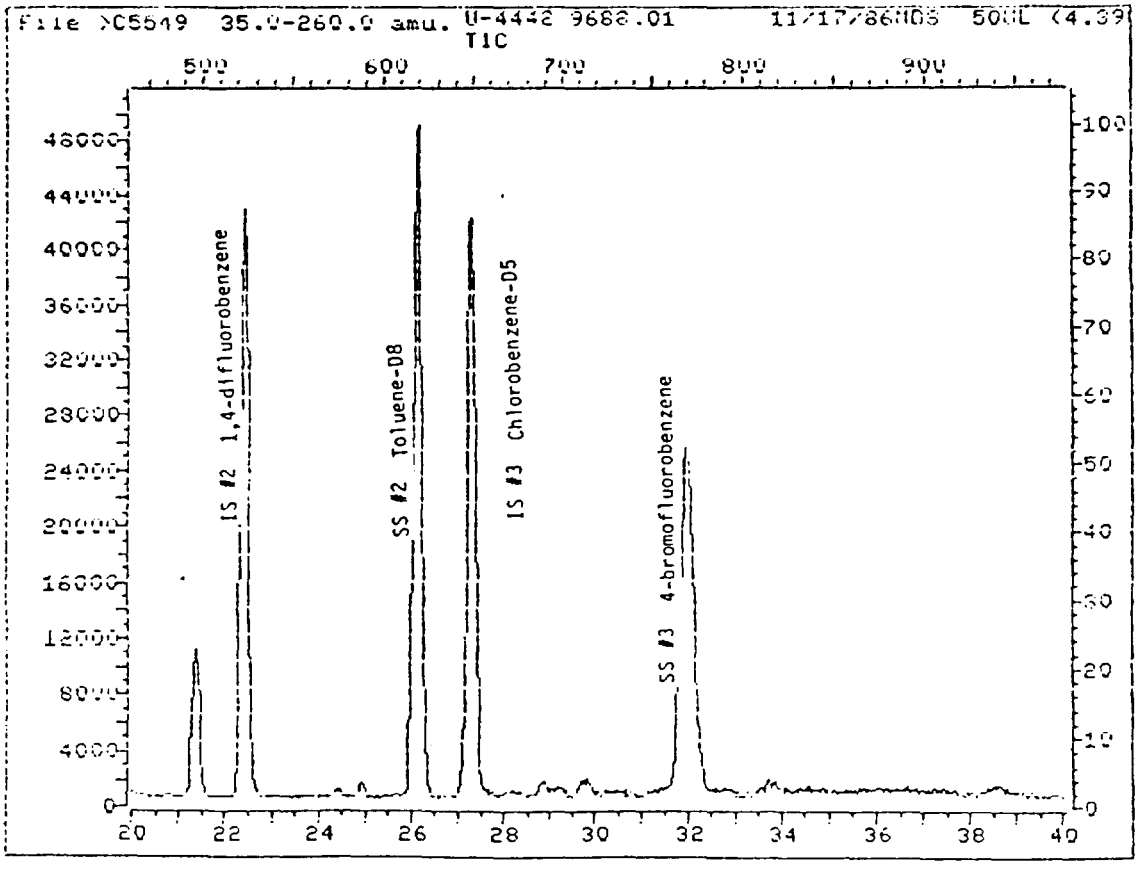
Data File: >C5549::D3
Name: U-4442 9688.01 DC-SD-36
Misc: 11/17/86MD5 50UL (4.396/100ML5 METH) + 100UL IS/SS

Id File: VOAUR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861117 11:28

Operator ID: USER8
Quant Time: 861117 14:43
Injected at: 861117 14:02

DC-SD-36


File >C5549 35.0-260.0 amu. U-4442 9688.01 11/17/86MDS 500L (4.39
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File >C5549 35.0-260.0 amu. U-4442 9688.01 11/17/86MDS 500L (4.39
TIC
IS #2 1,4-difluorobenzene
SS #2 Toluene-D8
IS #3 Chlorobenzene-D5
SS #3 4-bromofluorobenzene

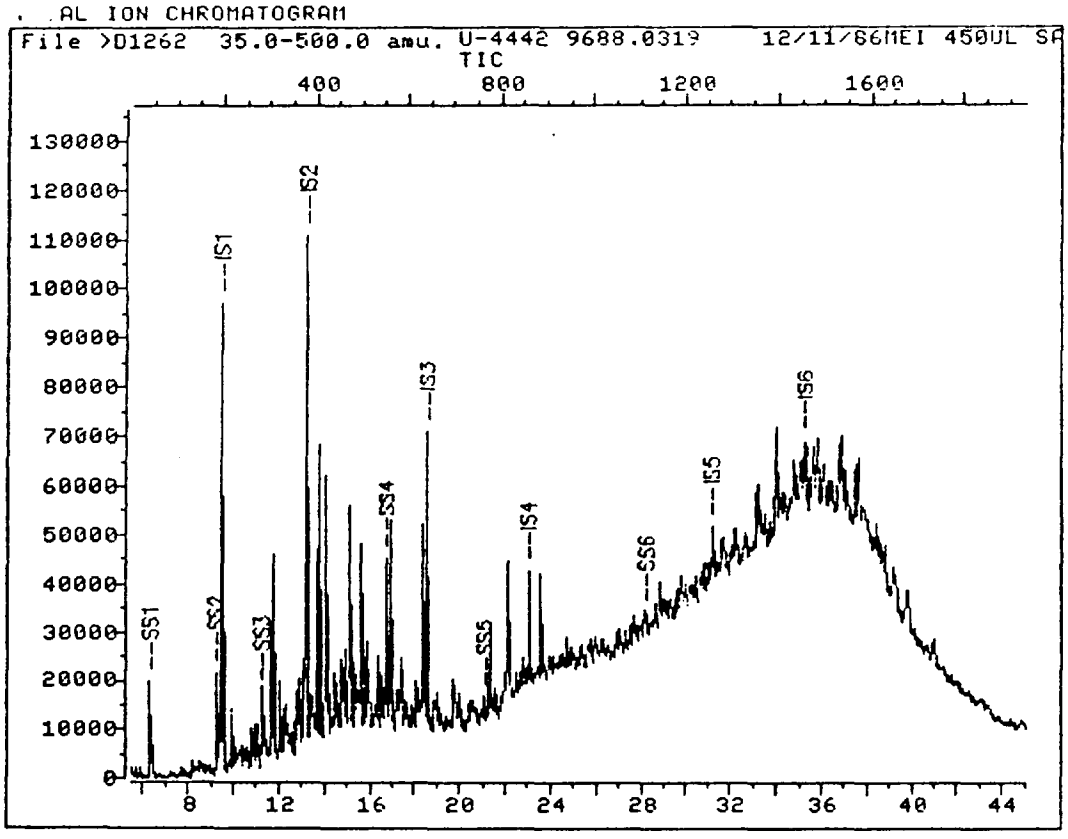
QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 861117 14:43
Output File: >C5549::D2 Injected at: 861117 14:42 cw
Data File: >C5549::D3 Dilution Factor: ~~1.00~~ 100X
Name: U-4442 9688.01 DC-SD-36
Misc: 11/17/86MDS 500UL (4.396/10MLS DEOH) + 10UL IS/SS

ID File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861117 11:28

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.85	291	37495	50.00	UG/L	100
6)	METHYLENE CHLORIDE		84	8.44	163	32659	19.65	UG/L	100
7)	ACETONE		43	9.37	187	9490	18.53	UG/L	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.68	354	26848	45.47	UG/L	90
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.40	523	188082	50.00	UG/L	100
17)	2-BUTANONE		72	14.84	328	5192	33.05	UG/L	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.26	648	137667	50.00	UG/L	100
36)	TOLUENE-D8	(SURR)	98	26.09	618	202450	47.12	UG/L	94
38)	CHLOROBENZENE		112	27.41	652	4481	1.32	UG/L	97
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.99	770	96444	45.79	UG/L	100

* Compound is ISTD

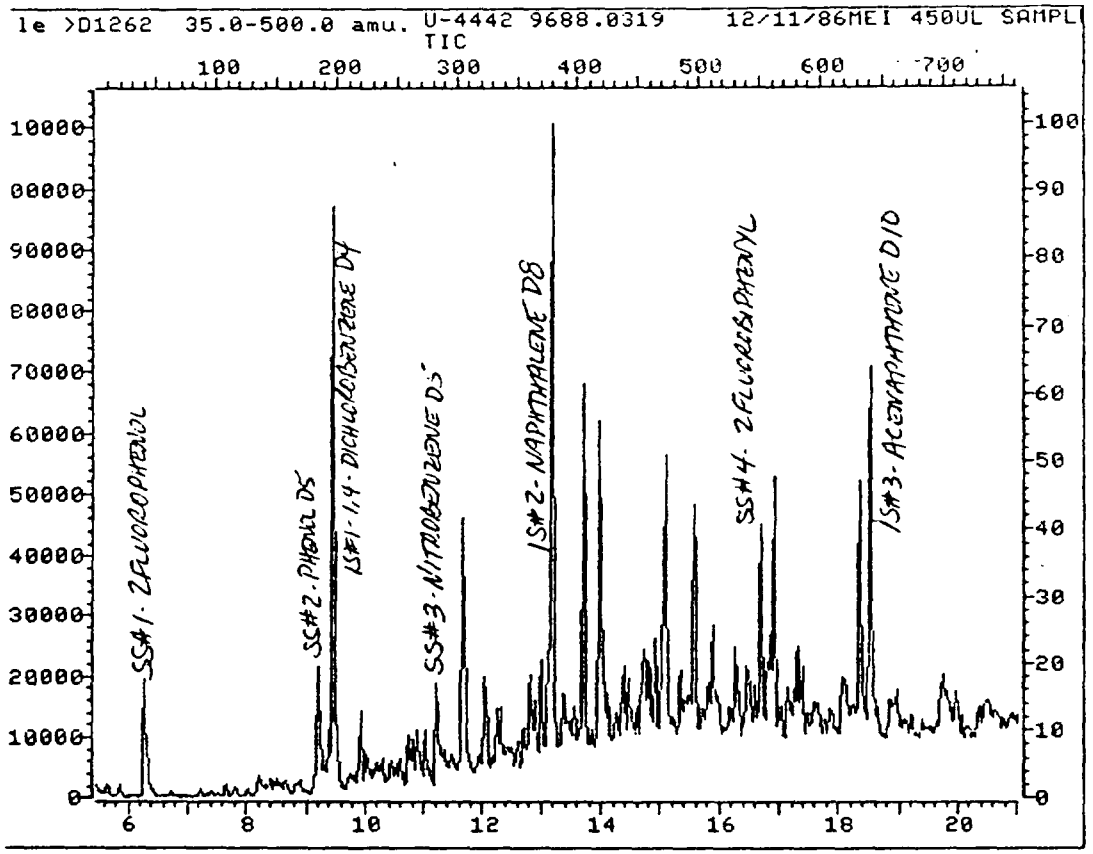


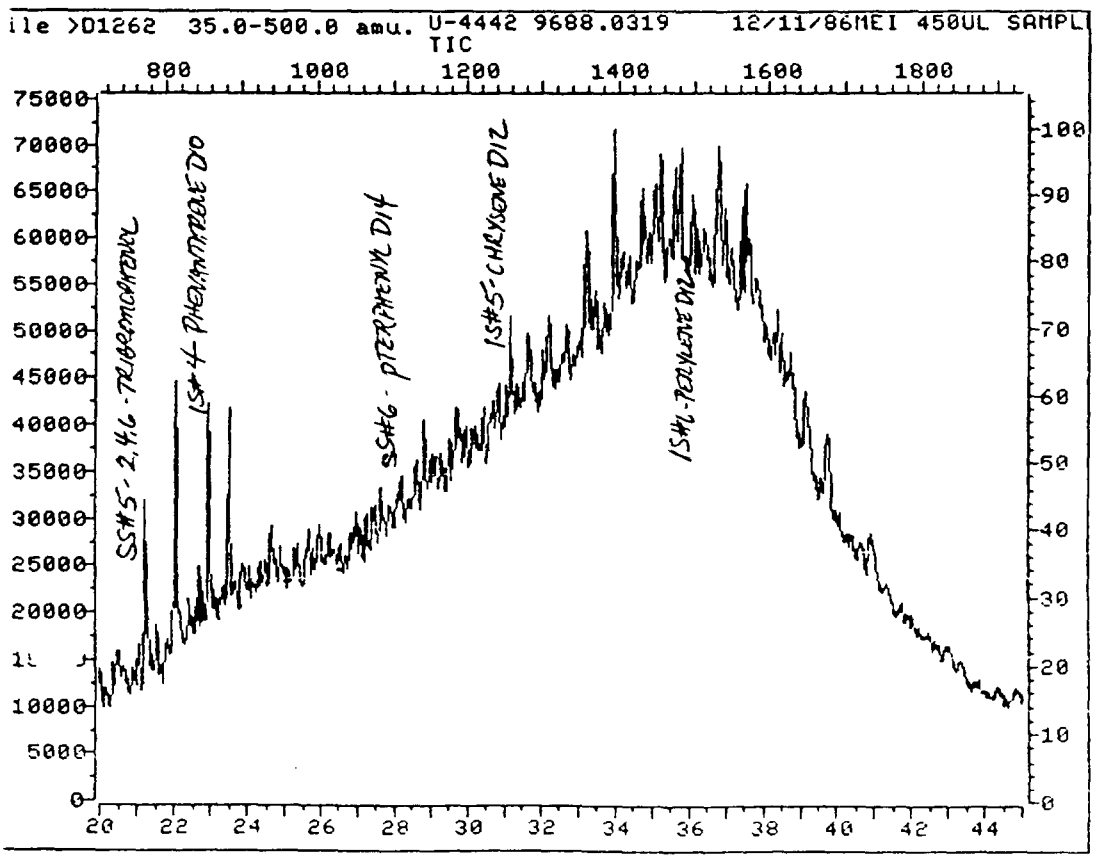
Data File: >D1262::BD DC-SD-36
Name: U-4442 9688.0319
Misc: 12/11/86MEI 450UL SAMPLE + 50UL MECL2 + 5UL IS (10X) BTL# 3

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861211 15:37

Operator ID: USER8
Quant Time: 861212 18:48
Injected at: 861212 18:00

DC-SD-36


le >D1262 35.0-500.0 amu. U-4442 9688.0319 12/11/86MEI 450UL SAMPL
TIC
SS#1- 2FLUOROPHENOL
SS#2- PHENOL D5
IS#1- 1,4-DICHLOROBENZENE D4
SS#3- NITROBENZENE D5
IS#2- NAPHTHALENE D8
SS#4- 2FLUORBIPHENYL
IS#3- ACENAPHTHENE D10


ile >D1262 35.0-500.0 amu. U-4442 9688.0319 12/11/86MEI 450UL SAMPL
TIC
SS#5- 2,4,6-TRIBROMOPHENOL
IS#4- PHENANTHRENE D10
SS#6- PERYLENE D14
IS#5- CHRYSENE D12
IS#6- PERYLENE D12

QUANT REPORT

)perator ID: USER8   Quant Rev: 4   Quant Time: 861212 18:48
)utput File: ^D1262::Q2   Injected at: 861212 18:00
)ata File: >D1262::BD   DC-SD-36   Dilution Factor: 10.00
lame: U-4442 9688.0319
lisc: 12/1~~1~~/86MEI ~~1~~50UL SAMPLE + 450UL MECL2 + 5UL IS (10X) BTL# 3
12 mls   mcg   mcg

D File: BNADR::D2
itle: BNA ID FILE FOR THE HP 5970 (B)   Double Surr
.ast Calibration: 861211 15:37

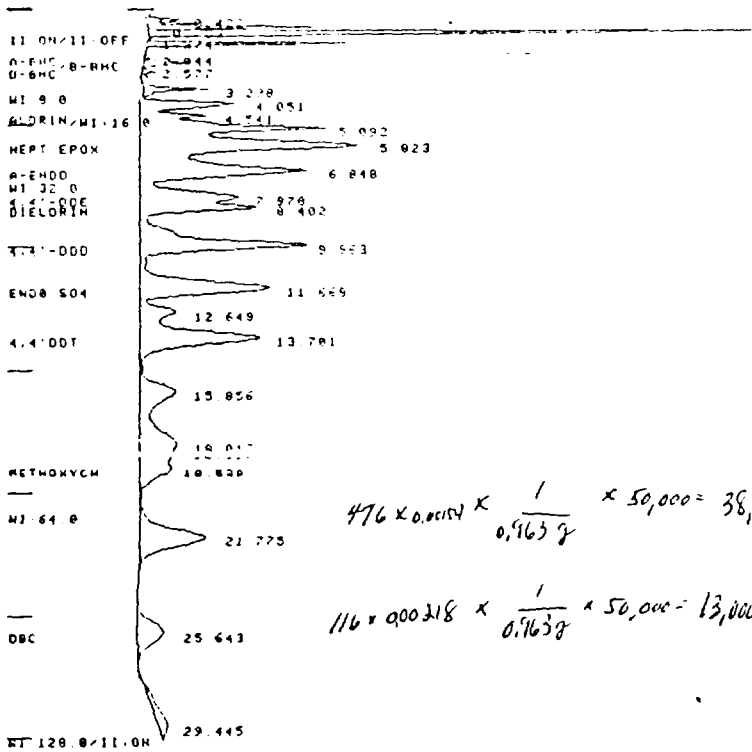
	Compound	M/E	R.T.	Scan#	Area	Conc	Units	q	
1)	*1,4-DICHLOROBENZENE-D4(IS)	152	9.45	196	43129	40.00	UG/L	86	
2)	PHENOL-D5 (SURR)	99	9.18	183	25436	175.34	UG/L	96	
5)	2-FLUOROPHENOL (SURR)	112	6.27	40	19440	213.40	UG/L	84	
9)	1,3-DICHLOROBENZENE	146	9.33	190	1611	10.55	UG/L	94	
~~9)~~	~~1,3-DICHLOROBENZENE~~	~~146~~	~~9.49~~	~~198~~	~~8247~~	~~54.02~~	~~UG/L~~	99	No Bgh
~~.0)~~	~~1,4-DICHLOROBENZENE~~	~~146~~	~~9.33~~	~~190~~	~~1611~~	~~10.09~~	~~UG/L~~	94	No Bgh
.0)	1,4-DICHLOROBENZENE	146	9.49	198	8247	55.74	UG/L	98	
~~.7)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~	~~70~~	~~10.61~~	~~253~~	~~1204~~	~~7.92~~	~~UG/L~~	79	No Bgh
~~.7)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~	~~70~~	~~10.73~~	~~259~~	~~753~~	~~4.95~~	~~UG/L~~	68	No Bgh
~~.7)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~	~~70~~	~~10.79~~	~~262~~	~~741~~	~~4.87~~	~~UG/L~~	32	No Bgh
~~.7)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~	~~70~~	~~11.02~~	~~273~~	~~1111~~	~~7.31~~	~~UG/L~~	1	No Bgh
~~.7)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~	~~70~~	~~11.20~~	~~282~~	~~3696~~	~~24.31~~	~~UG/L~~	75	No Bgh
.9)	*NAPHTHALENE-D8 (IS)	136	13.18	379	132540	40.00	UG/L	100	
:0)	NITROBENZENE-D5 (SURR)	82	11.20	282	14262	114.22	UG/L	98	
~~:1)~~	~~NITROBENZENE~~	~~77~~	~~11.69~~	~~306~~	~~690~~	~~5.60~~	~~UG/L~~	49	No Bgh
:8)	1,2,4-TRICHLOROBENZENE	180	13.14	377	3400	29.58	UG/L	100	
~~:9)~~	~~NAPHTHALENE~~	~~128~~	~~13.22~~	~~381~~	~~417~~	~~1.37~~	~~UG/L~~	100	No Bgh
~~:3)~~	~~2-METHYLNAPHTHALENE~~	~~142~~	~~15.67~~	~~501~~	~~244~~	~~1.19~~	~~UG/L~~	84	No Bgh
:4)	*ACENAPHTHENE-D10 (IS)	162	18.53	641	34905	40.00	UG/L	98	
:8)	2-FLUOROBIPHENYL (SURR)	172	16.69	551	19552	134.86	UG/L	94	
~~:1)~~	~~DIMETHYL PHTHALATE~~	~~163~~	~~18.41~~	~~635~~	~~317~~	~~2.30~~	~~UG/L~~	100	No Bgh
~~:1)~~	~~DIMETHYL PHTHALATE~~	~~163~~	~~18.53~~	~~641~~	~~11200~~	~~81.17~~	~~UG/L~~	100	No Bgh
~~:3)~~	~~DIBENZOFURAN~~	~~168~~	~~18.67~~	~~648~~	~~400~~	~~2.84~~	~~UG/L~~	100	No Bgh
~~:3)~~	~~DIBENZOFURAN~~	~~168~~	~~18.82~~	~~655~~	~~382~~	~~2.71~~	~~UG/L~~	100	No Bgh
:7)	ACENAPHTHENE	153	18.61	645	365	3.29	UG/L	90	
:8)	2,4,6-TRIBROMOPHENOL(SURR)	330	21.02	763	1472	82.48	UG/L	92	
~~:9)~~	~~2,4-DINITROPHENOL~~	~~184~~	~~20.45~~	~~735~~	~~473~~	~~36.49~~	~~UG/L~~	100	No Bgh
~~:9)~~	~~2,4-DINITROPHENOL~~	~~184~~	~~20.71~~	~~748~~	~~328~~	~~25.30~~	~~UG/L~~	100	No Bgh
~~:9)~~	~~2,4-DINITROPHENOL~~	~~184~~	~~20.80~~	~~752~~	~~523~~	~~40.34~~	~~UG/L~~	100	No Bgh
~~:9)~~	~~2,4-DINITROPHENOL~~	~~184~~	~~20.90~~	~~757~~	~~1044~~	~~80.53~~	~~UG/L~~	100	No Bgh
~~:9)~~	~~2,4-DINITROPHENOL~~	~~184~~	~~21.00~~	~~762~~	~~214~~	~~16.51~~	~~UG/L~~	100	No Bgh
~~:0)~~	~~4-NITROPHENOL~~	~~139~~	~~19.39~~	~~683~~	~~223~~	~~15.76~~	~~UG/L~~	100	No Bgh
~~:1)~~	~~2,4-DINITROTOLUENE~~	~~165~~	~~19.41~~	~~684~~	~~176~~	~~6.99~~	~~UG/L~~	100	No Bgh
~~:2)~~	~~2,6-DINITROTOLUENE~~	~~165~~	~~18.53~~	~~641~~	~~4959~~	~~177.00~~	~~UG/L~~	100	No Bgh
~~:2)~~	~~2,6-DINITROTOLUENE~~	~~165~~	~~18.67~~	~~648~~	~~181~~	~~6.46~~	~~UG/L~~	100	No Bgh
:5	*PHENANTHRENE-D10 (IS)	188	22.96	858	25256	40.00	UG/L	96	
~~:7)~~	~~N-NITROSODIPHENYLAMINE~~	~~169~~	~~21.21~~	~~772~~	~~2755~~	~~84.75~~	~~UG/L~~	45	No Bgh
~~:3)~~	~~DI-N-BUTYLPHTHALATE~~	~~149~~	~~25.28~~	~~971~~	~~720~~	~~9.20~~	~~UG/L~~	1	No Bgh
:3)	DI-N-BUTYLPHTHALATE	149	25.52	983	1350	17.25	UG/L	50	
~~:3)~~	~~DI-N-BUTYLPHTHALATE~~	~~149~~	~~25.62~~	~~988~~	~~579~~	~~7.40~~	~~UG/L~~		No Bgh
:5)	*CHRYSENE-D12 (IS)	240	31.14	1257	10902	40.00	UG/L	100	
~~:6)~~	~~BENZIDINE~~	~~184~~	~~27.39~~	~~1074~~	~~163~~	~~163.00~~	~~NO CAL~~	100	No Bgh
:6)	BENZIDINE	184	27.47	1078	282	282.00	NO CAL	100	No Bgh

2104

	Compound		m/z	R.T.	Scan#	Area	Conc	Units	q
~~1)~~	~~BENZO(A)ANTHRACENE~~		~~228~~	~~31.20~~	~~1260~~	~~346~~	~~32.03~~	~~UG/L~~	~~77~~
~~2)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~31.65~~	~~1282~~	~~162~~	~~5.69~~	~~UG/L~~	54
~~2)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~31.89~~	~~1294~~	~~134~~	~~4.71~~	~~UG/L~~	59
~~2)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~32.04~~	~~1301~~	~~8497~~	~~298.62~~	~~UG/L~~	38
~~2)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~32.45~~	~~1321~~	~~173~~	~~6.08~~	~~UG/L~~	70
~~2)~~	~~BIS(2-ETHYLHEXYL)PHTHALATE~~		~~149~~	~~32.57~~	~~1327~~	~~769~~	~~27.03~~	~~UG/L~~	57
3)	CHRYSENE		228	31.20	1260	906	32.88	UG/L	80
4)	*PERYLENE-D12	(IS)	264	35.22	1456	9774	40.00	UG/L	100
~~5)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.45~~	~~1370~~	~~438~~	~~6.25~~	~~UG/L~~	100
~~5)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~33.68~~	~~1381~~	~~923~~	~~13.17~~	~~UG/L~~	100
5)	DI-N-OCTYL PHTHALATE		149	33.95	1394	14683	209.53	UG/L	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~34.29~~	~~1411~~	~~1730~~	~~24.80~~	~~UG/L~~	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~34.42~~	~~1417~~	~~1207~~	~~17.22~~	~~UG/L~~	100
76)	BENZO(B)FLUORANTHENE		252	34.25	1409	577	19.27	UG/L	100
~~77)~~	~~BENZO(K)FLUORANTHENE~~		~~252~~	~~34.25~~	~~1409~~	~~577~~	~~15.39~~	~~UG/L~~	100
~~78)~~	~~BENZO(A)PYRENE~~		~~252~~	~~34.95~~	~~1443~~	~~522~~	~~21.62~~	~~UG/L~~	100
78)	BENZO(A)PYRENE		252	35.07	1449	272	10.28	UG/L	100

* Compound is ISTD

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



476 × 0.00154 × 1/0.1639 × 50,000 = 38,000 116 1254

116 × 0.00218 × 1/0.1639 × 50,000 = 13,000 J 116 1260

CHANNEL: 1A - 1 TITLE: RUN# ~~47~~ 48 16:19 20 NOV 86

DC-SD-36

SAMPLE: 9688.03.19A1 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT ~~NG/M3~~	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.374		205650	BB	3.00
2	~~B-BHC~~	232.4260	2.243	0.073	57514	VB	4.81
3		0.0000	3.298		65172	BV	7.50
4	~~HEPTACHLO~~	385.2430	4.051	0.261	175241	BV	16.56
5	~~ALDRIN~~	184.5954	4.541	-0.129	112541	VV	? 12.88
6		0.0000	5.092		455102	VV	14.50
7	~~HEPT EPOX~~	1426.214	5.823	0.153	812279	VV	25.63
8	~~A-ENDO~~	1202.498	6.848	-0.182	647446	VV	25.58
9	~~4,4'-DDE~~	618.8928	7.970	-0.120	351217	VV	? 32.56
10	~~DIELDRIN~~	518.0182	8.402	0.212	305403	VV	? 24.50
11	~~4,4'-DDD~~	1309.750	9.963	-0.197	625677	VV	23.75
12	~~ENDO SO4~~	1472.939	11.668	-0.242	571841	VV	33.31
13		0.0000	12.648		141018	VV	? 28.06
14	~~4,4'-DDT~~	1761.621	13.701	0.441	540431	VV	33.88
15	~~ENO KETON~~	444.6564	15.856	0.586	251601	VV	56.88
16		0.0000	18.017		306950	VV	1260.00
17	~~METHOXYCH~~	964.6223	~~18.828~~	-0.951	141521	VV	? 94.00
18		0.0000	21.775		471172	VB	48.56
19	~~DBC~~	460.2497	25.643	-0.967	200631	BV	61.81
20		0.0000	29.445		75714	VB	?143.00

476 116 1254 1260

TOTALS: 10951.57 -1.062 6538221

DETECTED PKS: 32 REJECTED PKS: 12

DIVISOR: 1.50000 MULTIPLIER: 50000.0000

NOISE: 91.4 OFFSET: -5

NOTES:
NOTEBOOK: 259-38 ANALYST: K. JUREK/ RICHARD SAMSON
SECURE AREA: D JOB#:U-4432,U-4442
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:

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)

481095

Sample Number
DC-SD-13MS

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc
Case No: U-4432/U-4442
Lab Sample ID No: 9651 MS
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: C Stojtowicz
Date Sample Received: 11-6-86

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-12-86

Conc/Dil Factor: 2 pH 7.2

Percent Moisture: (Not Decanted) 48

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	4000u
74-83-9	Bromomethane	4000u
75-01-4	Vinyl Chloride	4000u
75-00-3	Chloroethane	4000u
75-09-2	Methylene Chloride	10000 B
67-64-1	Acetone	6200 B
75-15-0	Carbon Disulfide	2000u
75-35-4	1, 1-Dichloroethene	SPIKE
75-34-3	1, 1-Dichloroethane	2000u
156-60-5	Trans-1, 2-Dichloroethene	2000u
67-66-3	Chloroform	2000u
107-06-2	1, 2-Dichloroethane	2000u
78-93-3	2-Butanone	13000
71-55-6	1, 1, 1-Trichloroethane	2000u
56-23-5	Carbon Tetrachloride	2000u
108-05-4	Vinyl Acetate	4000u
75-27-4	Bromodichloromethane	2000u

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

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.

Laboratory Name ECOLOGY & ENVIRONMENT INC.
Case No U-4432 / U-4442

Sample Number
DC-SD-15MS

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared 11-11-86
Date Analyzed: 11-21-86
Conc/Dil Factor: 2
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	SPIKE	
111-44-4	bis(-2-Chloroethyl)Ether	500	U
95-57-8	2-Chlorophenol	SPIKE	
541-73-1	1 3-Dichlorobenzene	500	U
106-46-7	1, 4-Dichlorobenzene	SPIKE	
100-51-6	Benzyl Alcohol	500	U
95-50-1	1, 2-Dichlorobenzene	500	U
95-48-7	2-Methylphenol	500	U
39638-32-9	bis(2-chloroisopropyl)Ether	500	U
106-44-5	4-Methylphenol	500	U
621-64-7	N-Nitroso-Di-n-Propylamine	SPIKE	
67-72-1	Hexachloroethane	500	U
98-95-3	Nitrobenzene	500	U
78-59-1	Isophorone	500	U
88-75-5	2-Nitrophenol	500	U
105-67-9	2, 4-Dimethylphenol	500	U
65-85-0	Benzoic Acid	2400	U
111-91-1	bis(-2-Chloroethoxy)Methane	500	U
120-83-2	2, 4-Dichlorophenol	500	U
120-82-1	1, 2, 4-Trichlorobenzene	SPIKE	
91-20-3	Naphthalene	500	U
106-47-8	4-Chloroaniline	500	U
87-68-3	Hexachlorobutadiene	500	U
59-50-7	4-Chloro-3-Methylphenol	SPIKE	
91-57-6	2-Methylnaphthalene	500	U
77-47-4	Hexachlorocyclopentadiene	500	U
88-06-2	2 4, 6-Trichlorophenol	500	U
95-95-4	2, 4, 5-Trichlorophenol	2400	U
91-58-7	2-Chloronaphthalene	500	U
88-74-4	2-Nitroaniline	2400	U
131-11-3	Dimethyl Phthalate	500	U
08-96-8	Acenaphthylene	500	U
99-09-2	3-Nitroaniline	2400	U

CAS Number		ug/l or (ug/Kg) (Circle One)	
83-32-9	Acenaphthene	SPIKE	
51-28-5	2, 4-Dinitrophenol	2400	U
100-02-7	4-Nitrophenol	SPIKE	
132-64-9	Dibenzofuran	500	U
121-14-2	2 4-Dinitrotoluene	SPIKE	
606-20-2	2 6-Dinitrotoluene	500	U
84-66-2	Diethylphthalate	500	U
7005-72-3	4-Chlorophenyl-phenylether	500	U
86-73-7	Fluorene	500	U
100-01-6	4-Nitroaniline	2400	U
534-52-1	4, 6-Dinitro-2-Methylphenol	2400	U
86-30-6	N-Nitrosodiphenylamine (1)	500	U
101-55-3	4-Bromophenyl-phenylether	500	U
118-74-1	Hexachlorobenzene	500	U
87-86-5	Pentachlorophenol	SPIKE	
85-01-8	Phenanthrene	500	U
120-12-7	Anthracene	500	U
84-74-2	Di-n-Butylphthalate	480	J
206-44-0	Fluoranthene	500	U
129-00-0	Pyrene	SPIKE	
85-68-7	Butylbenzylphthalate	500	U
91-94-1	3, 3 -Dichlorobenzidine	1000	U
56-55-3	Benzo(a)Anthracene	500	U
117-81-7	bis(2-Ethylhexyl)Phthalate	500	U
218-01-9	Chrysene	500	U
117-84-0	Di-n-Octyl Phthalate	150	J
205-99-2	Benzo(b)Fluoranthene	500	U
207-08-9	Benzo(k)Fluoranthene	500	U
50-32-8	Benzo(a)Pyrene	500	U
193-39-5	Indeno(1 2, 3-cd)Pyrene	500	U
53-70-3	Dibenz(a h)Anthracene	500	U
191-24-2	Benzo(g h i)Perylene	500	U

(1)-Cannot be separated from diphenylamine

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Laboratory Name ecology and environment, inc.

Case No U-4432/U-4442

Sample Number
DC-SD-15MS

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-11-86

Date Analyzed 11-19-86

Conc/Dil Factor: 2

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)
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)	38.8 S
76-44-8	Heptachlor	29.4 S
309-00-2	Aldrin	29.9 S
1024-57-3	Heptachlor Epoxide	32 u
959-98-8	Endosulfan I	32 u
60-57-1	Dieldrin	96.5 S
72-55-9	4,4'-DDE	64 u
72-20-8	Endrin	75.1 S
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	75.7 S
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	700 u
11097-69-1	Aroclor-1254	700 u
11096-82-5	Aroclor-1260	640 u

V_i = Volume of extract injected (ul)

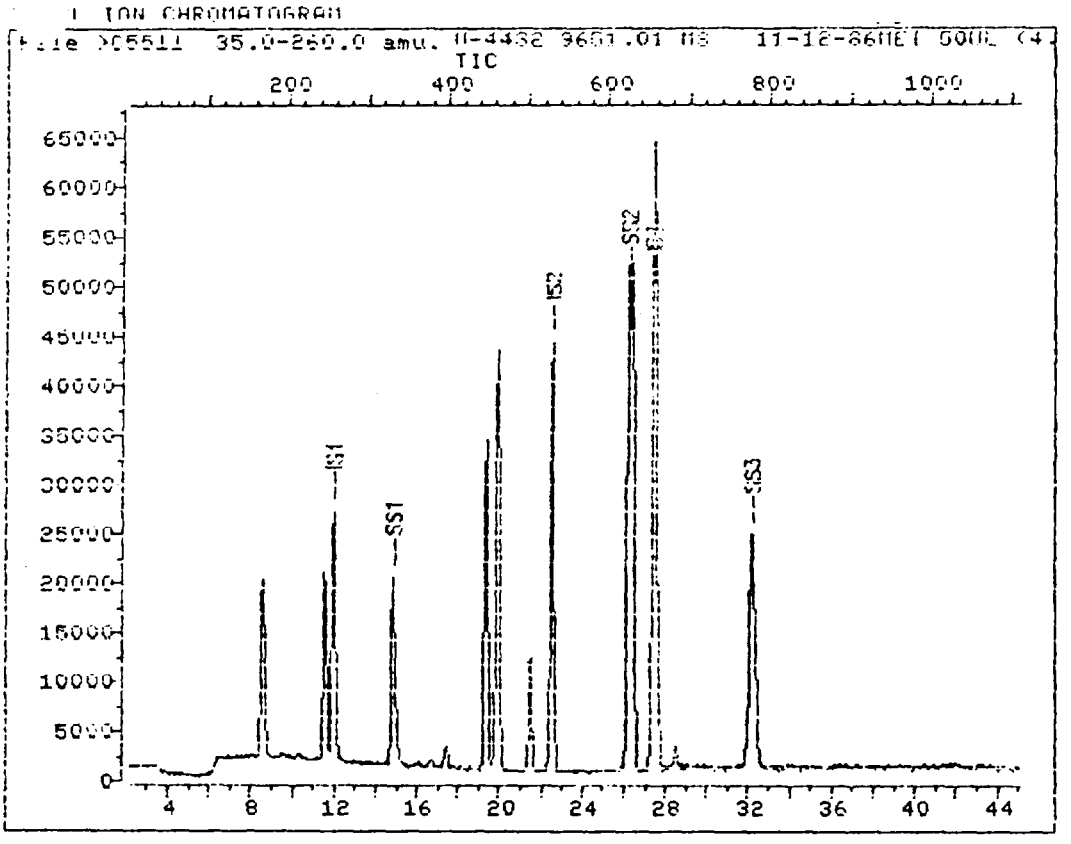
V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 30 V_t 1000 V_i 4

Cold Compound

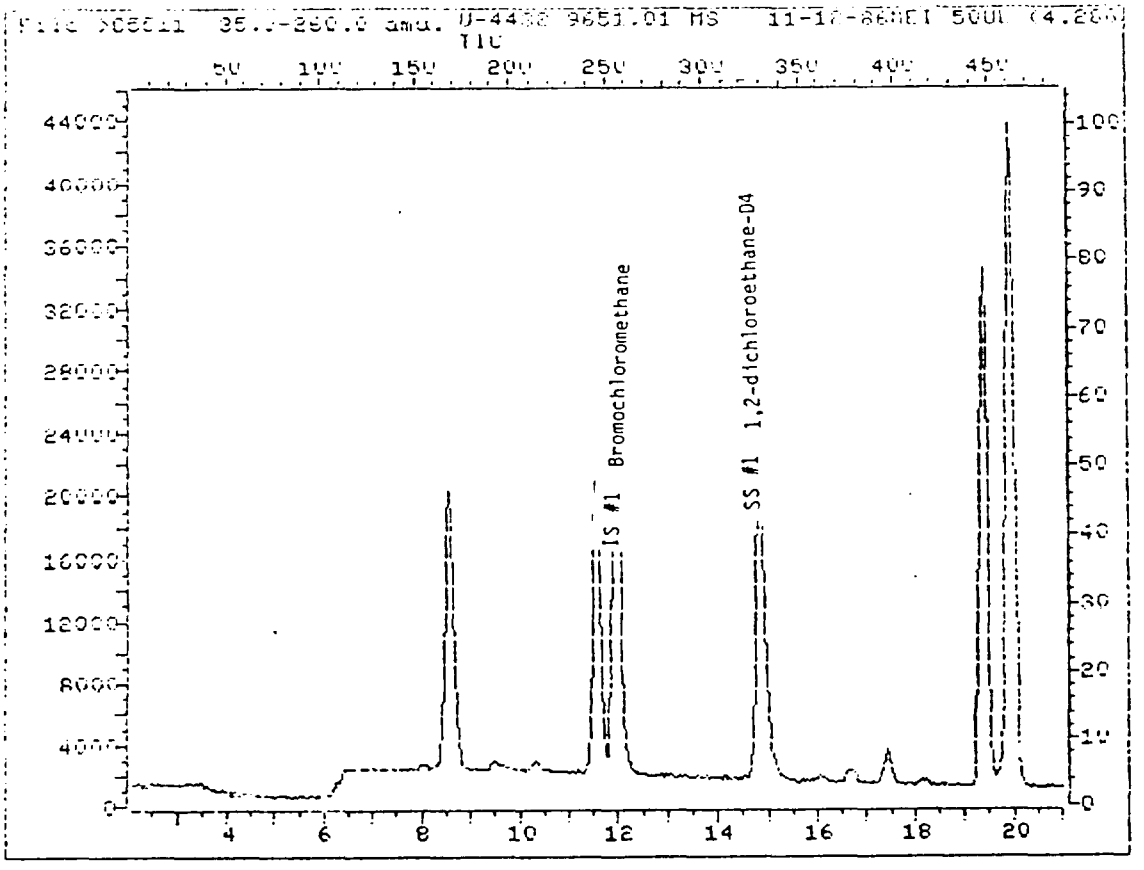


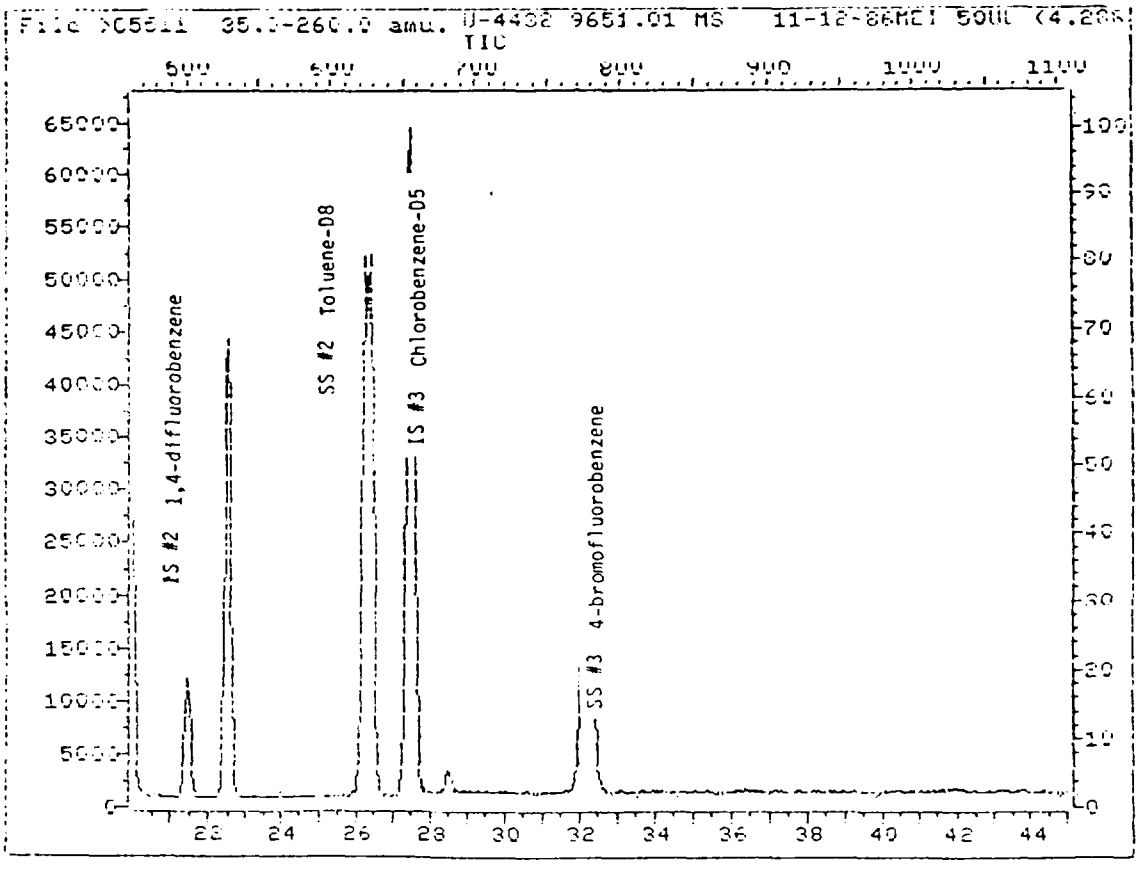
Data File: >C5511::D3
Name: U-4432 9651.01 MS DC-SD-13 MS
Misc: 11-12-86MEI 50UL (4.28G/10MLS MEOH) + 10UL IS/SS/MS

Id File: VUACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861113 22:56

Operator ID: USER8
Quant Time: 861114 01:52
Injected at: 861114 01:06

DC-SD-13-MS


TIC
Bromochloromethane
IS #1
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

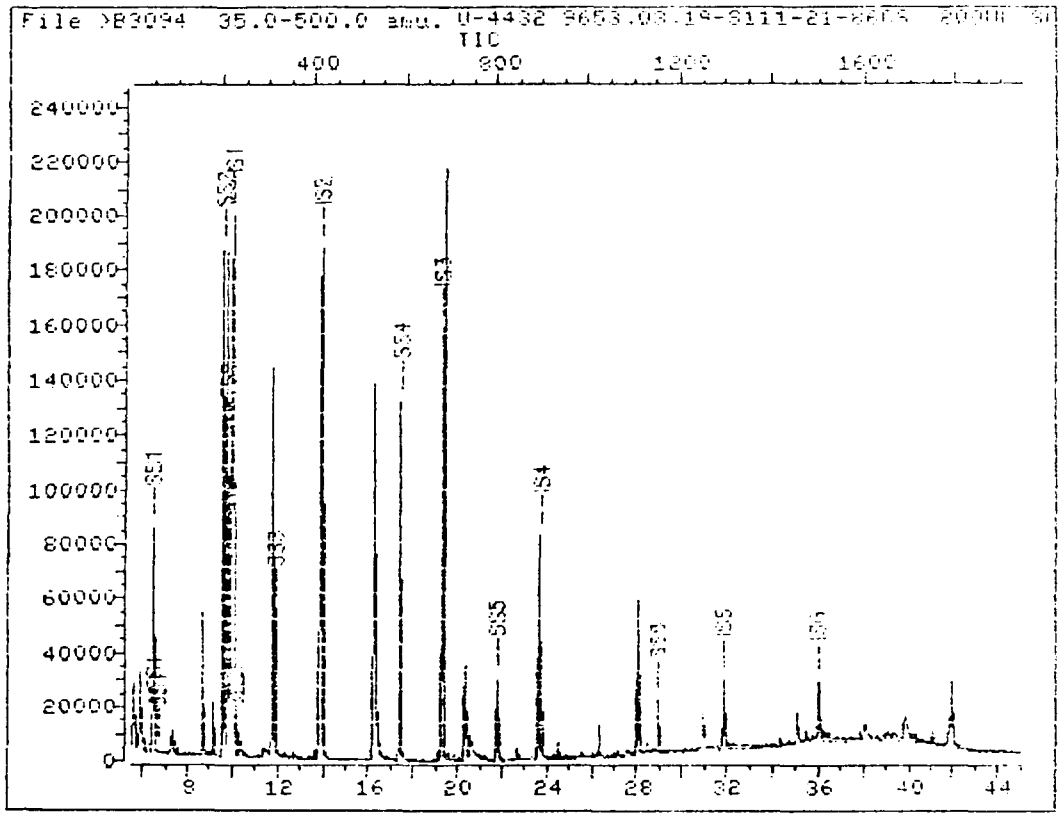
perator ID: USER8 Quant Rev: 4 Quant Time: 861114 01:52
utput File: ^C5511::02 Injected at: 861114 01:06
ata File: >C5511::03 Dilution Factor: 1.00
ame: U-4432 9651.01 MS DC-SD-13 MS
isc: 11-12-86MEI 50UL (4.28G/10MLS MEOH) + 10UL IS/SS/MS

D File: VOACR::02
itle: VOA ID FILE FOR HP-5995 (CONT. CAL.)
ast Calibration: 861113 22:56

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.98	256	41492	50.00	UG/L	100
6)	METHYLENE CHLORIDE		84	8.56	168	49453	22.45	UG/L	100
7)	ACETONE		43	9.53	193	5224	13.81	UG/L	100
7)	~~ACETONE~~		~~43~~	~~9.77~~	~~199~~	~~3194~~	~~8.18~~	~~UG/L~~	~~100~~ no cal
9)	~~CARBON DISULFIDE~~		~~76~~	~~10.27~~	~~212~~	~~6489~~	~~1.42~~	~~UG/L~~	~~100~~ no cal
3)	1,1-DICHLOROETHENE		61	11.55	245	25318	31.27	UG/L 60%	97
5)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.85	330	28886	46.46	UG/L 92%	89
6)	*1,4-DIFLUOROBENZENE	(IS)	114	22.53	528	194636	50.00	UG/L	100
7)	2-BUTANONE		72	14.96	333	5017	28.40	UG/L	100
4)	TRICHLOROETHENE		130	19.39	447	64519	40.68	UG/L 80%	91
7)	BENZENE		78	19.93	461	192120	42.23	UG/L 84%	100
8)	~~CIS-1,3-DICHLOROPROPENE~~		~~75~~	~~19.93~~	~~461~~	~~5806~~	~~2.51~~	~~UG/L~~	~~100~~ no cal
1)	*CHLOROBENZENE-D5	(IS)	117	27.39	653	142705	50.00	UG/L	100
6)	TOLUENE-D8	(SURR)	98	26.21	623	198276	47.04	UG/L 94%	96
7)	TOLUENE		92	26.41	628	121369	41.72	UG/L 84%	95
8)	CHLOROBENZENE		112	27.54	657	144499	41.62	UG/L 84%	98
9)	4-BROMOFLUOROBENZENE	(SURR)	95	32.20	777	99494	45.13	UG/L 90%	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM

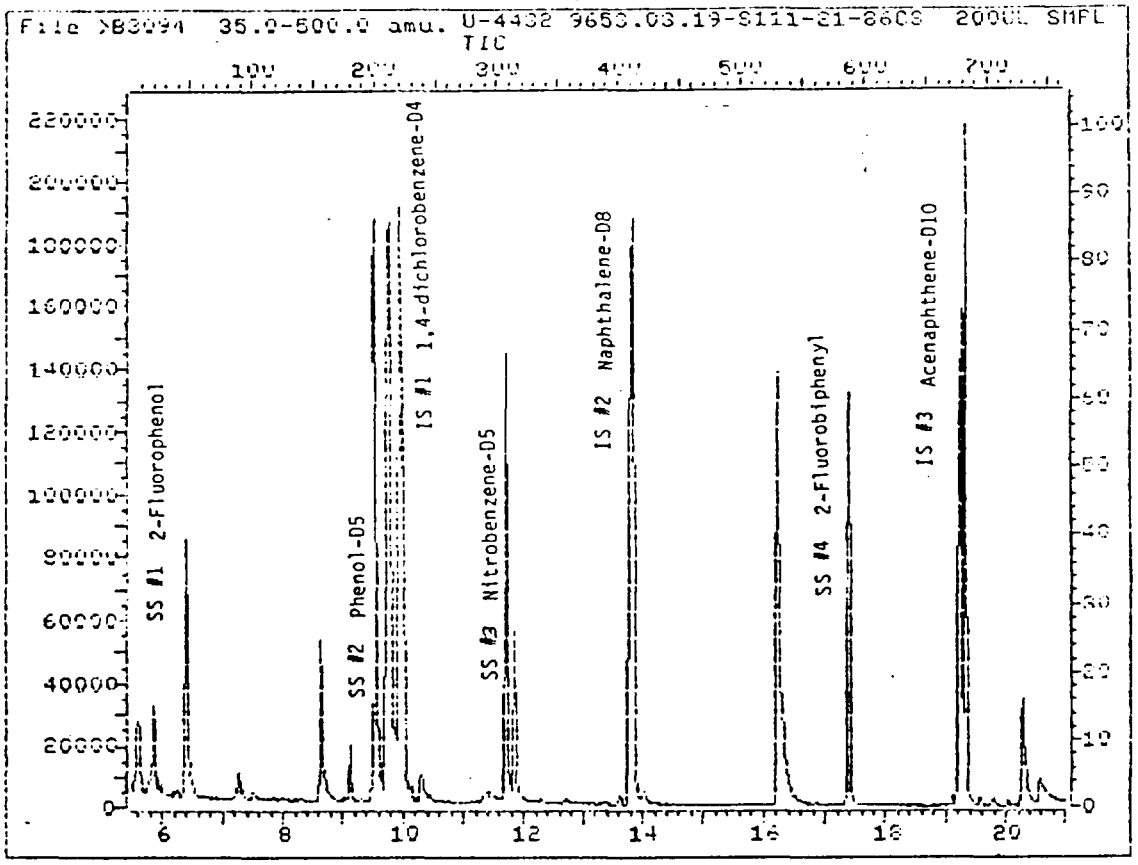


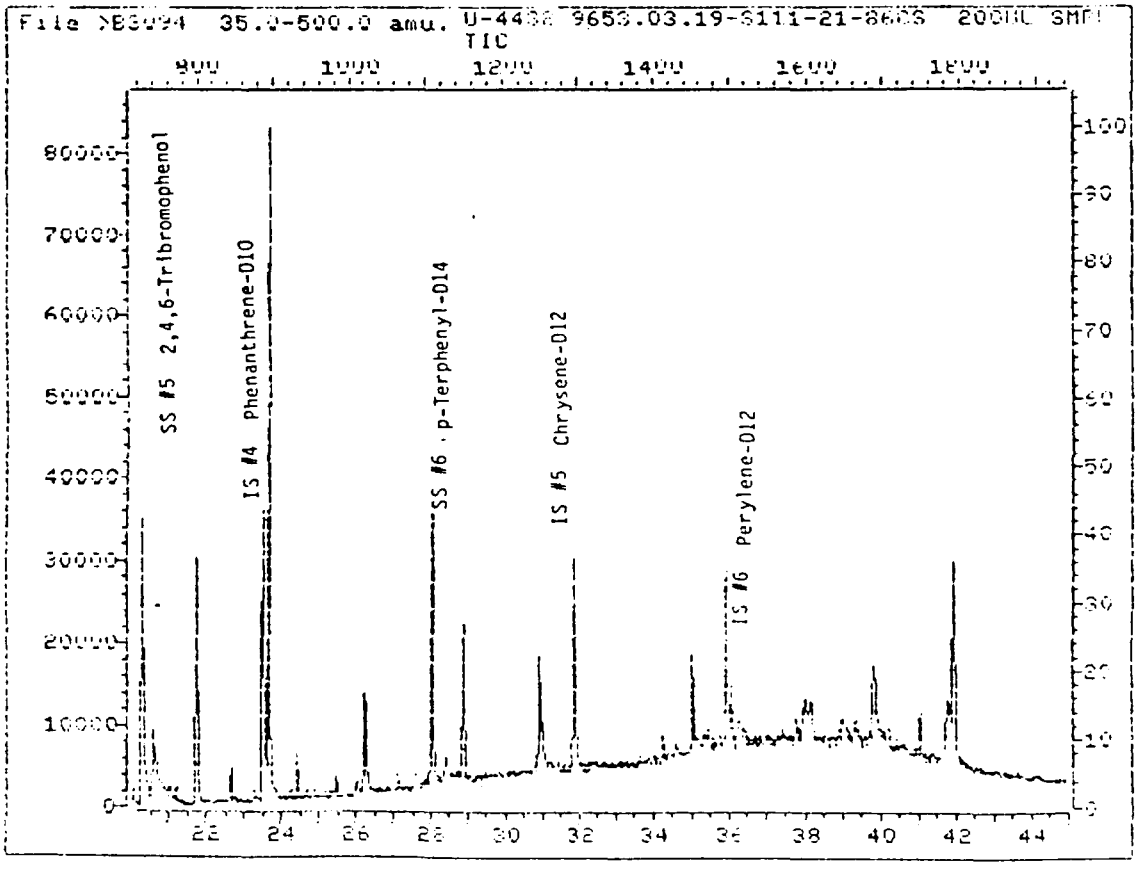
Data File: >B3094::D4
Name: U-4432 9653.03.19-S1 DC-SD-15 MS
Misc: 11-21-86CS 200UL SMPL + 200UL MECL2 + 5UL IS

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861121 14:38

Operator ID: USER8
Quant Time: 861121 17:24
Injected at: 861121 16:36

DC-SD-15 MS


File >B3094 35.0-500.0 amu. U-4432 9653.03.19-S111-21-8608 200UL SMPL
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 >B3094 35.0-500.0 amu. U-4432 9653.03.19-S111-21-8608 200UL 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

Operator ID: USER8 Quant Rev: 4 Quant Time: 861121 17:24
Output File: ^B3094::Q2 Injected at: 861121 16:36
Data File: >B3094::D4 Dilution Factor: 2.00
Name: U-4432 9653.03.19-S1 DC-SD-15 MS
Misc: 11-21-86CS 200UL SMPL + 200UL MECL2 + 50UL IS

ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861121 14:38

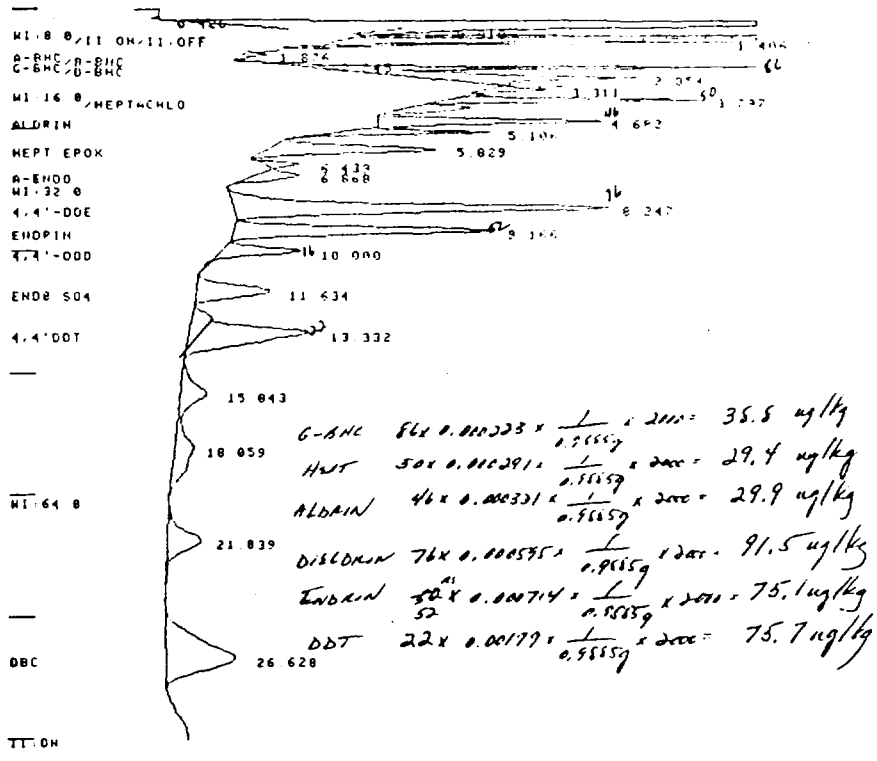
	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q	
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.95	221	68350	40.00	UG/L	88	
2)	PHENOL-D5	(SURR)	99	9.53	200	8529	7.08	UG/L	39	
2)	PHENOL-D5	(SURR)	99	9.73	210	100028	87.60	UG/L	92	
~~2)~~	~~PHENOL-D5~~	~~(SURR)~~	~~99~~	~~10.10~~	~~228~~	~~299~~	~~.25~~	~~UG/L~~	59	No Bfk
~~2)~~	~~PHENOL-D5~~	~~(SURR)~~	~~99~~	~~10.16~~	~~231~~	~~126~~	~~.10~~	~~UG/L~~	65	
5)	2-FLUOROPHENOL	(SURR)	112	6.40	46	68654	78.48	UG/L	83	
5)	2-FLUOROPHENOL	(SURR)	112	6.48	50	5857	6.67	UG/L	93	
5)	2-FLUOROPHENOL	(SURR)	112	6.60	56	1044	1.19	UG/L	71	
~~5)~~	~~2-FLUOROPHENOL~~	~~(SURR)~~	~~112~~	~~6.66~~	~~59~~	~~413~~	~~.47~~	~~UG/L~~	87	No Bfk
~~5)~~	~~2-FLUOROPHENOL~~	~~(SURR)~~	~~112~~	~~6.72~~	~~62~~	~~567~~	~~.65~~	~~UG/L~~	70	
6)	PHENOL		94	9.77	212	201407	169.96	UG/L	58	
~~7)~~	~~ANILINE~~		~~93~~	~~9.67~~	~~208~~	~~4337~~	~~3.10~~	~~UG/L~~	42	No Bfk
~~9)~~	~~1,3-DICHLOROBENZENE~~		~~146~~	~~10.00~~	~~22[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	98	
10)	1,4-DICHLOROBENZENE		146	10.00	223	105683	86.24	UG/L	94	
~~14)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~11.34~~	~~298~~	~~376~~	~~.14~~	~~UG/L~~	100	No Bfk
~~14)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~11.42~~	~~29[illegible]~~	~~[illegible]~~	~~.07~~	~~UG/L~~	100	
~~14)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~11.62~~	~~30[illegible]~~	~~[illegible]~~	~~.10~~	~~UG/L~~	100	
~~14)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~11.70~~	~~307~~	~~1[illegible]~~	~~.69~~	~~UG/L~~	100	
15)	2-CHLOROPHENOL		128	9.53	200	181511	166.15	UG/L	95	
17)	N-NITROSO-DI-N-PROPYLAMINE		70	11.70	307	76787	92.29	UG/L	93	
~~17)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.89~~	~~31[illegible]~~	~~[illegible]~~	~~11.62~~	~~UG/L~~	85	No Bfk
19)	*NAPHTHALENE-D8	(IS)	136	13.86	417	231106	40.00	UG/L	100	
20)	NITROBENZENE-D5	(SURR)	82	11.85	314	51468	52.47	UG/L	98	
~~24)~~	~~2,4-DIMETHYLPHENOL~~		~~122~~	~~13.80~~	~~410~~	~~421~~	~~.34~~	~~UG/L~~	63	No Bfk
28)	1,2,4-TRICHLOROBENZENE		180	13.80	410	108688	103.94	UG/L	100	
~~28)~~	~~1,2,4-TRICHLOROBENZENE~~		~~180~~	~~14.14~~	~~427~~	~~[illegible]~~	~~.20~~	~~UG/L~~	100	No Bfk
~~29)~~	~~NAPHTHALENE~~		~~128~~	~~13.90~~	~~415~~	~~[illegible]~~	~~.16~~	~~UG/L~~	100	
32)	4-CHLORO-3-METHYLPHENOL		107	16.22	529	135191	149.82	UG/L	92	
~~33)~~	~~2-METHYLNAPHTHALENE~~		~~142~~	~~16.10~~	~~52[illegible]~~	~~[illegible]~~	~~.15~~	~~UG/L~~	91	No Bfk
~~43)~~	~~2-METHYLNAPHTHALENE~~		~~142~~	~~1[illegible].92~~	~~6[illegible]~~	~~[illegible]~~	~~[illegible].45~~	~~UG/L~~	18	
34)	*ACENAPHTHENE-D10	(IS)	162	19.25	678	98817	40.00	UG/L	98	
38)	2-FLUOROBIPHENYL	(SURR)	172	17.40	587	103628	50.65	UG/L	93	No Bfk
~~41)~~	~~DIMETHYL PHTHALATE~~		~~[illegible]~~	~~1[illegible].05~~	~~6[illegible]~~	~~[illegible]~~	~~1.62~~	~~UG/L~~	100	OK Bfk
~~47)~~	~~ACENAPHTHENE~~		~~153~~	~~19.43~~	~~682~~	~~1[illegible]~~	~~[illegible]~~	~~UG/L~~	95	
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.75	801	1[illegible]	49.69	UG/L	99	
5[illegible]	4-NITROPHENOL		139	20.59	744	1[illegible]	11[illegible].01	UG/L	100	
51)	2,4-DINITROTOLUENE		165	20.29	729	3[illegible]	[illegible].44	UG/L	100	No Bfk
~~52)~~	~~2,6-DINITROTOLUENE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	100	
55)	*PHENANTHRENE-D10	(IS)	188	[illegible].68	89[illegible]	[illegible]	40.00	UG/L	96	
60)	PENTACHLOROPHENOL		266	[illegible].50	887	2[illegible]14	170.1[illegible]	UG/L	100	
~~6[illegible])~~	~~[illegible]~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	100	No Bfk
63)	DI-N-BUTYLPHTHALATE		149	2[illegible].24	1022	1[illegible]	[illegible].37	UG/L	98	
[illegible]	*[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

416

	Compound	M/E	R.T.	Scan#	Area	Conc	Units	q
~~[illegible]~~	~~DI-N-BUTYL PHTHALATE~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	100
~~[illegible]~~	~~DI-N-BUTYL PHTHALATE~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	100
~~[illegible]~~	~~DI-N-BUTYL PHTHALATE~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	100
[illegible]	DI-N-OCTYL PHTHALATE	[illegible]	34.63	1434	2195	2.97	UG/L	100
~~[illegible]~~	~~DI-N-BUTYL PHTHALATE~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	100

* Compound is ISTD

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



RECALCULATE ON FILE: SLY457

CHANNEL: 1A - 1 TITLE: RUN# 22 11:04 19 NOV 86

DC-SD-15 MS

SAMPLE: 9653.195IA1 METHOD: DAVE CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		WI/2 (SEC)
1		0.0000	1.275		8676205	BV		3.63
2		0.0000	1.406		73526	T	?	3.75
3		0.0000	1.532		24514	T		2.44
4	B-BHC	8.9252	2.245	0.075	36386	VV	?	7.38
5	G-BHC ✓	37.6924	2.394	0.014	370390	VV		6.06
6		0.0000	2.854		464291	VV	?	19.00
7		0.0000	3.311		56423	BB	?	25.50
8		0.0000	3.550		70076	BB	?	35.63
9	HEPTACHLO✓	30.6672	3.797	0.007	246876	BB	?	15.50
10		0.0000	4.085		112505	BB	?	24.38
11	ALDRIN✓	37.0457	4.682	0.012	372115	BB		20.81
12		0.0000	5.106		131228	BB	?	15.00
13	HEPT EPOX	40.4249	5.829	0.159	381645	BB		21.56
14		0.0000	6.439		55885	BB	?	15.88
15	A-ENDO	10.7270	6.868	-0.162	95153	BB	?	29.56
16	DIELDRIN✓	113.7450	8.247	0.057	1100423	BB		21.88
17	ENDRIN ✓	75.9632	9.166	0.036	674584	BB		21.00
18	4,4'-DDD	24.3470	10.000	-0.160	191616	BB		20.31
19	ENDO SO4	46.8625	11.634	-0.276	301298	BB		21.50
20	4,4'DDT✓	136.4733	13.332	0.072	715291	BB		43.81
21	END KETON	20.7960	15.843	0.573	193862	VV		46.19
22		0.0000	18.059		219648	VB		60.13
23		0.0000	21.839		230267	BB		48.50
24	DBC	93.4272	26.628	0.018	687931	BB		78.69

TOTALS: 677.0367 0.425 15490188

DETECTED PKS: 34 REJECTED PKS: 10

DIVISOR: 0.98850 MULTIPLIER: 2000.00000

NOISE: 22.9 OFFSET: 7

NOTES:
NOTEBOOK: 259-41 ANALYST: K.JUREK
SECURE AREA: D JOB#:U-4465
INET:VARIAN 520042 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

MATRIX SPIKE DUPLICATE DATA

1. FORM I OF NON-SPIKED COMPOUNDS

2. RAW DATA (VOA, S-V, PESTICIDES)

   a. GC AND QUANT REPORTS (GC/MS)

   b. CHROMATOGRAMS AND LOGGING (GC)

Sample Number
DC-SD-13-MSD

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc
Case No: U-4432/U-4442
Lab Sample ID No: 9651-MSD
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: C Stojowicz
Date Sample Received: 11-6-86

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-12-86

Conc./Dil Factor: 2 pH 7.2

Percent Moisture: (Not Decanted) 48

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	4000u
74-83-9	Bromomethane	4000u
75-01-4	Vinyl Chloride	4000u
75-00-3	Chloroethane	4000u
75-09-2	Methylene Chloride	9800B
67-64-1	Acetone	6200B
75-15-0	Carbon Disulfide	2000u
75-35-4	1, 1-Dichloroethene	SPIKE
75-34-3	1, 1-Dichloroethane	2000u
156-60-5	Trans-1, 2-Dichloroethene	2000u
67-66-3	Chloroform	2000u
107-06-2	1, 2-Dichloroethane	2000u
78-93-3	2-Butanone	13000
71-55-6	1, 1, 1-Trichloroethane	2000u
56-23-5	Carbon Tetrachloride	2000u
108-05-4	Vinyl Acetate	4000u
75-27-4	Bromodichloromethane	2000u

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

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.

Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No U-4432 / U-4442

Sample Number DC-SD-15MSD

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared 11-11-86

Date Analyzed: 11-21-86

Conc/Dil Factor: 2

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	SPIKE	
111-44-4	bis(-2-Chloroethyl)Ether	500	U
95-57-8	2-Chlorophenol	SPIKE	
541-73-1	1 3-Dichlorobenzene	500	U
106-46-7	1, 4-Dichlorobenzene	SPIKE	
100-51-6	Benzyl Alcohol	500	U
95-50-1	1, 2-Dichlorobenzene	500	U
95-48-7	2-Methylphenol	500	U
39638-32-9	bis(2-chloroisopropyl)Ether	500	U
106-44-5	4-Methylphenol	500	U
621-64-7	N-Nitroso-Di-n-Propylamine	SPIKE	
67-72-1	Hexachloroethane	500	U
98-95-3	Nitrobenzene	500	U
78-59-1	Isophorone	500	U
88-75-5	2-Nitrophenol	500	U
105-67-9	2, 4-Dimethylphenol	500	U
65-85-0	Benzoic Acid	2400	U
111-91-1	bis(-2-Chloroethoxy)Methane	500	U
120-83-2	2, 4-Dichlorophenol	500	U
120-82-1	1, 2, 4-Trichlorobenzene	SPIKE	
91-20-3	Naphthalene	500	U
106-47-8	4-Chloroaniline	500	U
87-68-3	Hexachlorobutadiene	500	U
59-50-7	4-Chloro-3-Methylphenol	SPIKE	
91-57-6	2-Methylnaphthalene	500	U
77-47-4	Hexachlorocyclopentadiene	500	U
88-06-2	2 4, 6-Trichlorophenol	500	U
95-95-4	2, 4, 5-Trichlorophenol	2400	U
91-58-7	2-Chloronaphthalene	500	U
88-74-4	2-Nitroaniline	2400	U
131-11-3	Dimethyl Phthalate	500	U
208-96-8	Acenaphthylene	500	U
99-09-2	3-Nitroaniline	2400	U

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	SPIKE	
51-28-5	2, 4-Dinitrophenol	2400	U
100-02-7	4-Nitrophenol	SPIKE	
132-64-9	Dibenzofuran	500	U
121-14-2	2 4-Dinitrotoluene	SPIKE	
606-20-2	2, 6-Dinitrotoluene	500	U
84-66-2	Diethylphthalate	500	U
7005-72-3	4-Chlorophenyl-phenylether	500	U
86-73-7	Fluorene	500	U
100-01-6	4-Nitroaniline	2400	U
534-52-1	4, 6-Dinitro-2-Methylphenol	2400	U
86-30-6	N-Nitrosodiphenylamine (1)	500	U
101-55-3	4-Bromophenyl-phenylether	500	U
118-74-1	Hexachlorobenzene	500	U
87-86-5	Pentachlorophenol	SPIKE	
85-01-8	Phenanthrene	500	U
120-12-7	Anthracene	500	U
84-74-2	Di-n-Butylphthalate	820	
206-44-0	Fluoranthene	500	U
129-00-0	Pyrene	SPIKE	
85-68-7	Butylbenzylphthalate	500	U
91-94-1	3, 3'-Dichlorobenzidine	1000	U
56-55-3	Benzo(a)Anthracene	500	U
117-81-7	bis(2-Ethylhexyl)Phthalate	500	U
218-01-9	Chrysene	500	U
117-84-0	Di-n-Octyl Phthalate	270	J
205-99-2	Benzo(b)Fluoranthene	500	U
207-08-9	Benzo(k)Fluoranthene	500	U
50-32-8	Benzo(a)Pyrene	500	U
193-39-5	Indeno(1 2, 3-cd)Pyrene	500	U
53-70-3	Dibenz(a h)Anthracene	500	U
191-24-2	Benzo(g h i)Perylene	500	U

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No U-4432 / U-4442

Sample Number DC-SD-15MSD

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-11-86

Date Analyzed 11-19-86

Conc/Dil Factor 2

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)
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)	37.9 S
76-44-8	Heptachlor	25.9 S
309-00-2	Aldrin	25.3 S
1024-57-3	Heptachlor Epoxide	32 u
959-98-8	Endosulfan I	32 u
60-57-1	Dieldrin	130 S
72-55-9	4,4'-DDE	64 u
72-20-8	Endrin	69.3 S
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	72.4 S
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	700 u
11097-69-1	Aroclor-1254	700 u
11096-82-5	Aroclor-1260	640 u

V_i = Volume of extract injected (ul)

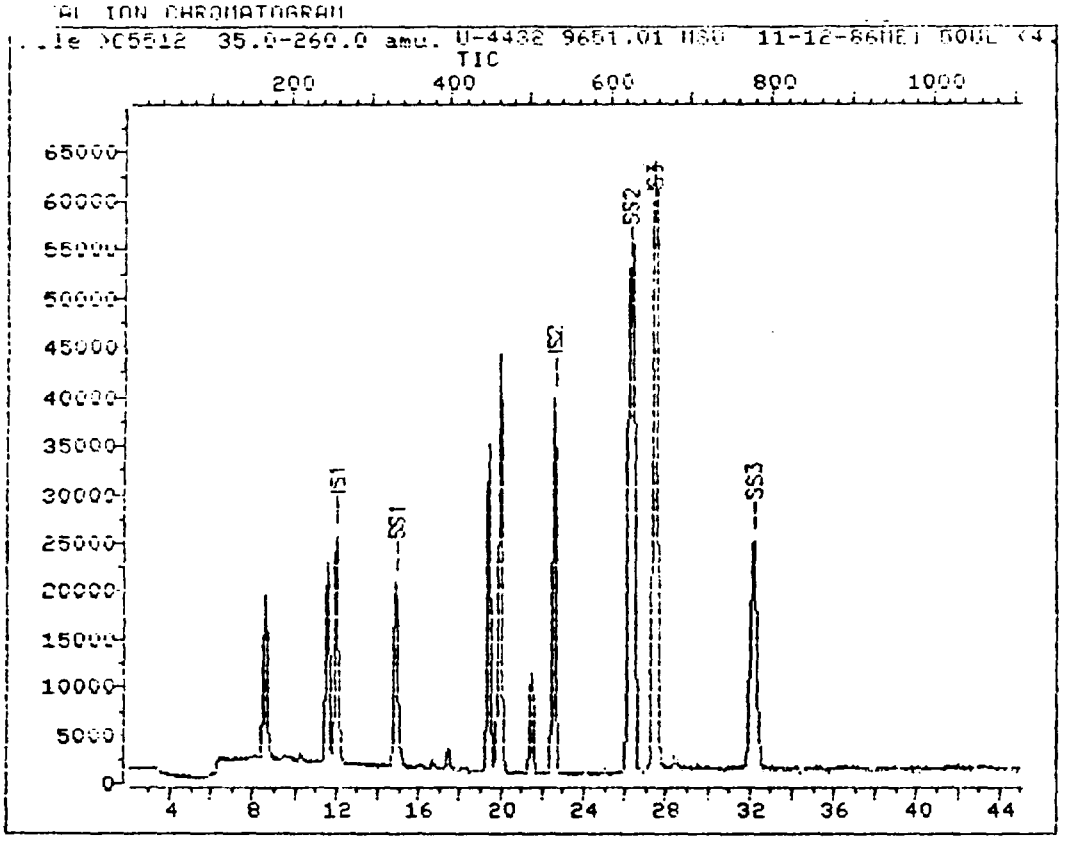
V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 30 V_t 1000 V_i 4

S - Spiked Compound

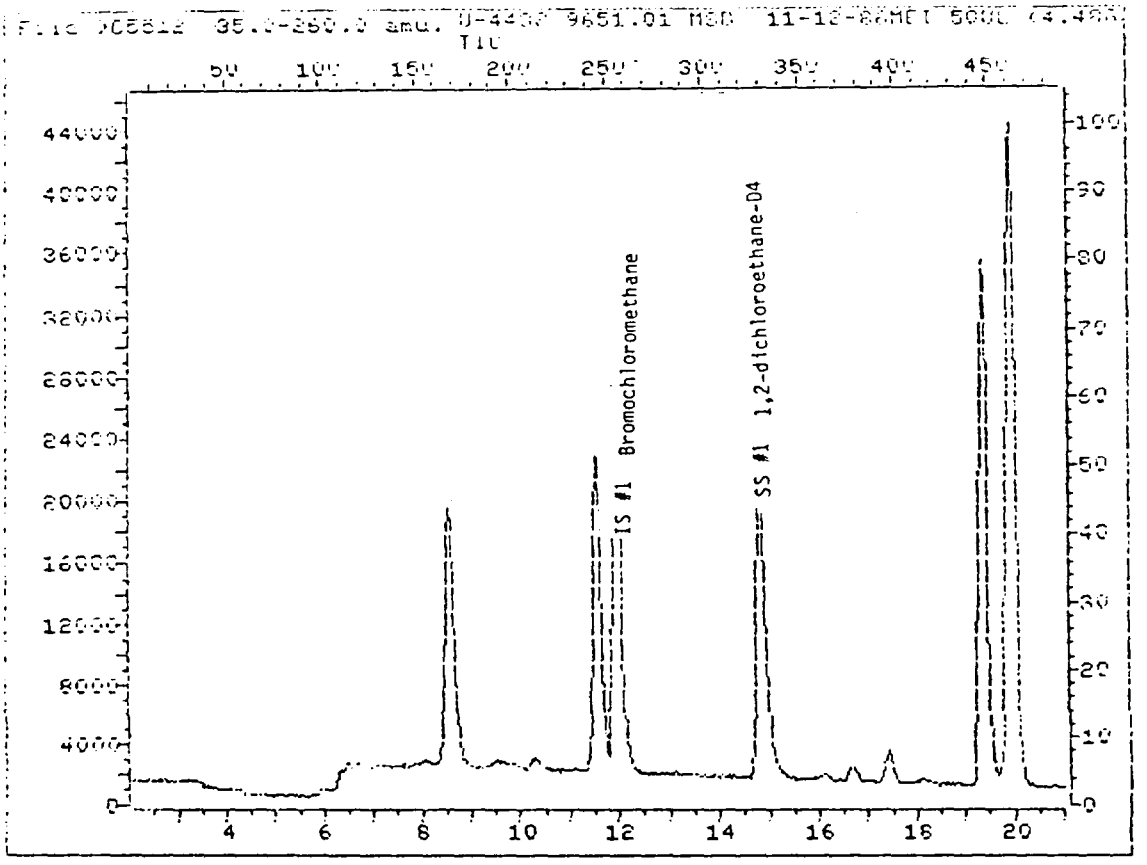


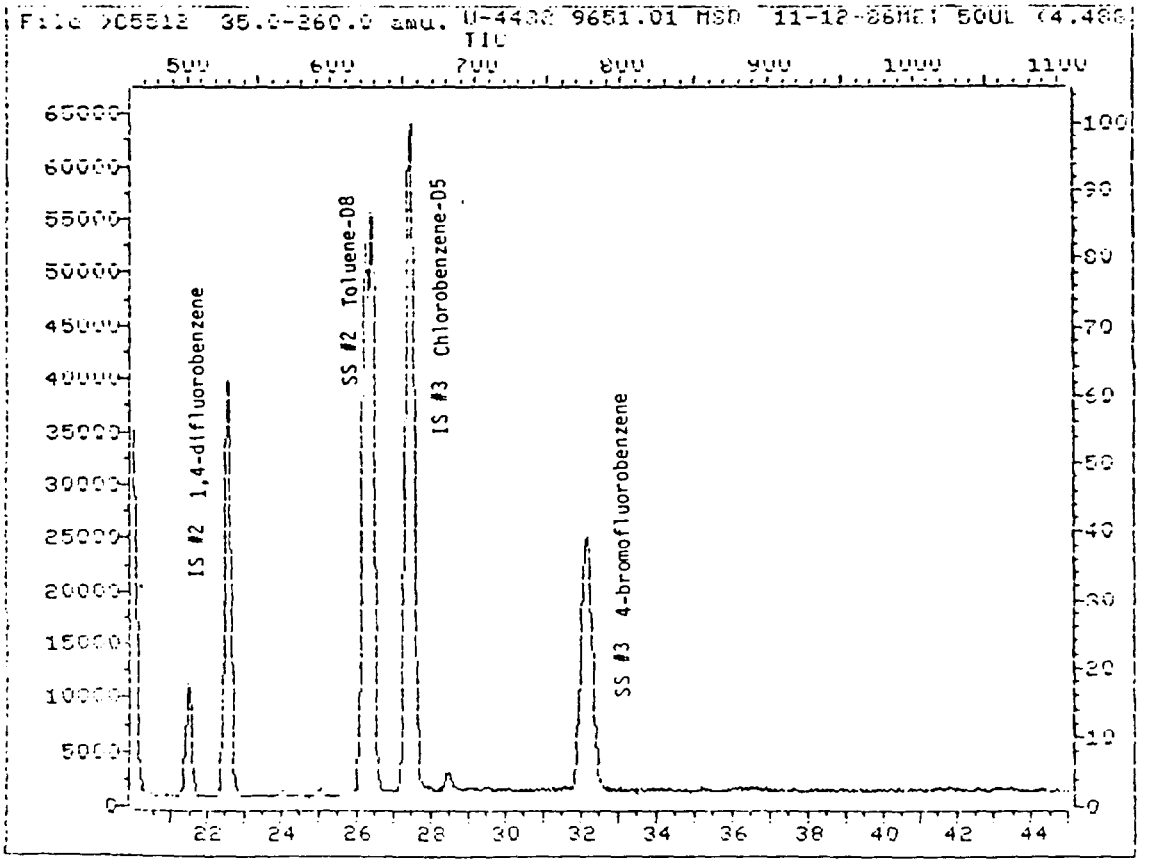
Data File: >C5512::D3
Name: U-4432 9651.01 MSD DC-SD-13 MSD
Misc: 11-12-86MEI 50UL (4.48G/10ML'S MEOH) + 10UL IS/SS/MS

Id File: VOACR::02
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861113 22:56

Operator ID: USER8
Quant Time: 861114 02:49
Injected at: 861114 02:03

DC-SD-13 MSD


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

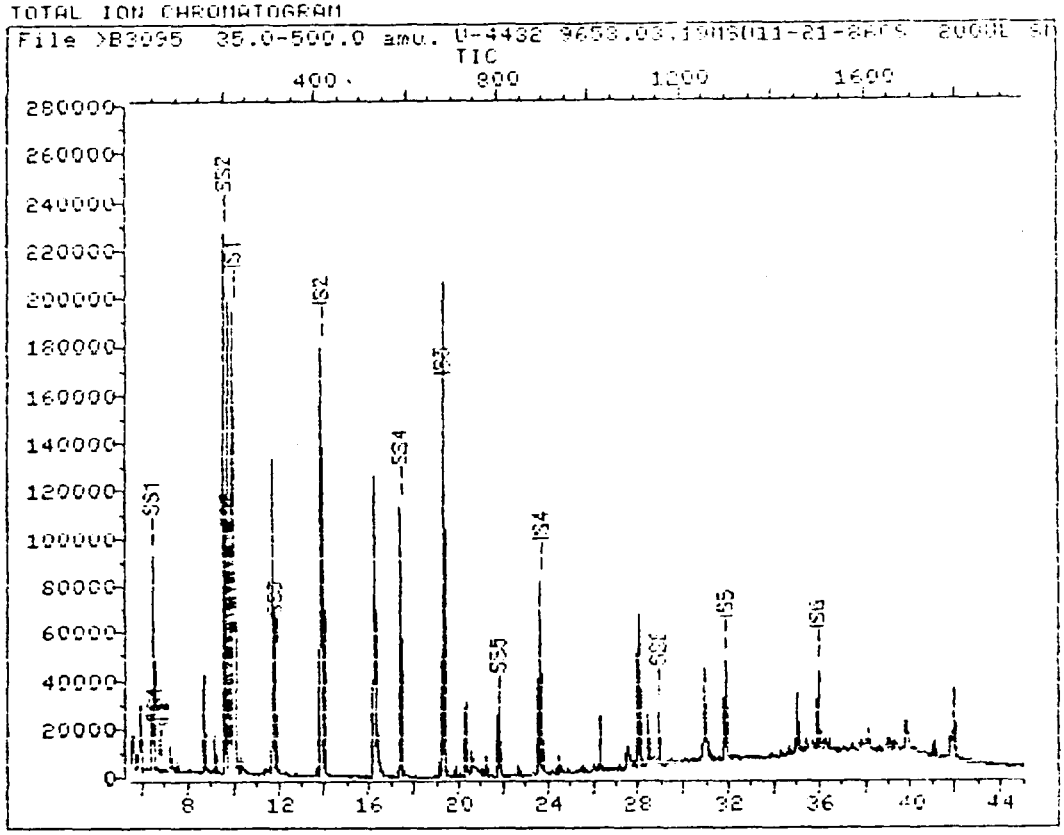
Operator ID: USER8 Quant Rev: 4 Quant Time: 861114 02:49
Output File: ^C5512::D2 Injected at: 861114 02:03
Data File: >C5512::03 Dilution Factor: 1.00
Name: U-4432 9651.01 MSD DC-SD-13 MSD
Misc: 11-12-86MEI 50UL (4.48G/10MLS MEOH) + 10UL IS/SS/MS

ID File: VOAOR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861113 22:56

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.98	254	32953	50.00	UG/L	100
6)	METHYLENE CHLORIDE		84	8.57	168	46883	22.75	UG/L	100
7)	ACETONE		43	9.54	193	5106	14.40	UG/L	100
~~9)~~	~~CARBON DISULFIDE~~		~~76~~	~~10.41~~	~~213~~	~~6631~~	~~1.55~~	~~UG/L~~ no cal	~~100~~
10)	1,1-DICHLOROETHENE		61	11.55	245	86106	38.14	UG/L 76%	97
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.85	330	78936	49.60	UG/L 100	91
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.53	528	178411	50.00	UG/L	100
17)	2-BUTANONE		72	15.01	334	5853	31.21	UG/L	100
24)	TRICHLOROETHENE		130	19.39	447	66357	45.64	UG/L 92%	93
27)	BENZENE		78	19.93	461	196014	47.01	UG/L 94%	100
~~28)~~	~~CIS-1,3-DICHLOROPROPENE~~		~~75~~	~~19.97~~	~~462~~	~~3900~~	~~2.06~~	~~UG/L~~ no cal	~~100~~
31)	*CHLOROBENZENE-D5	(IS)	117	27.39	653	133113	50.00	UG/L	100
36)	TOLUENE-D8	(SURR)	98	26.22	623	199420	50.72	UG/L 102	98
37)	TOLUENE		92	26.41	628	130068	47.93	UG/L 96%	98
38)	CHLOROBENZENE		112	27.50	656	155178	47.92	UG/L 96%	98
40)	4-BROMOFLUOROBENZENE	(SURR)	95	32.20	777	98353	47.88	UG/L 98	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM

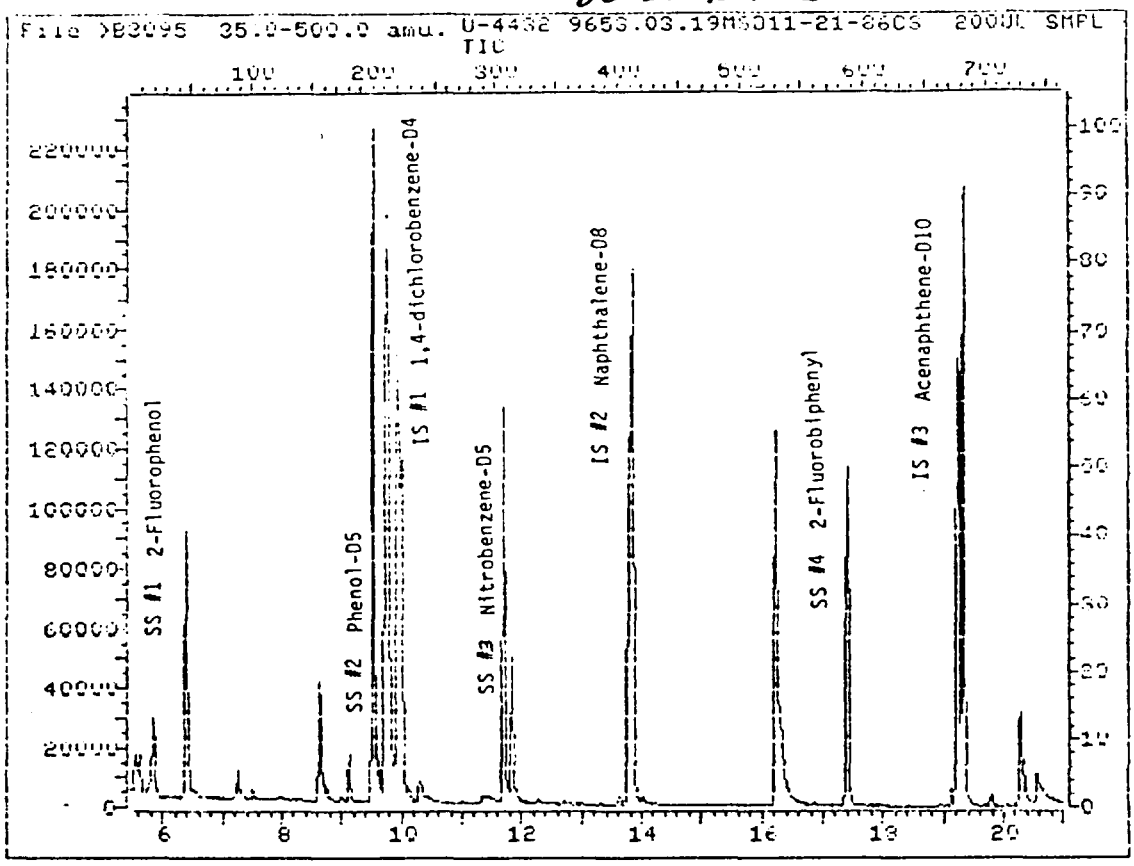


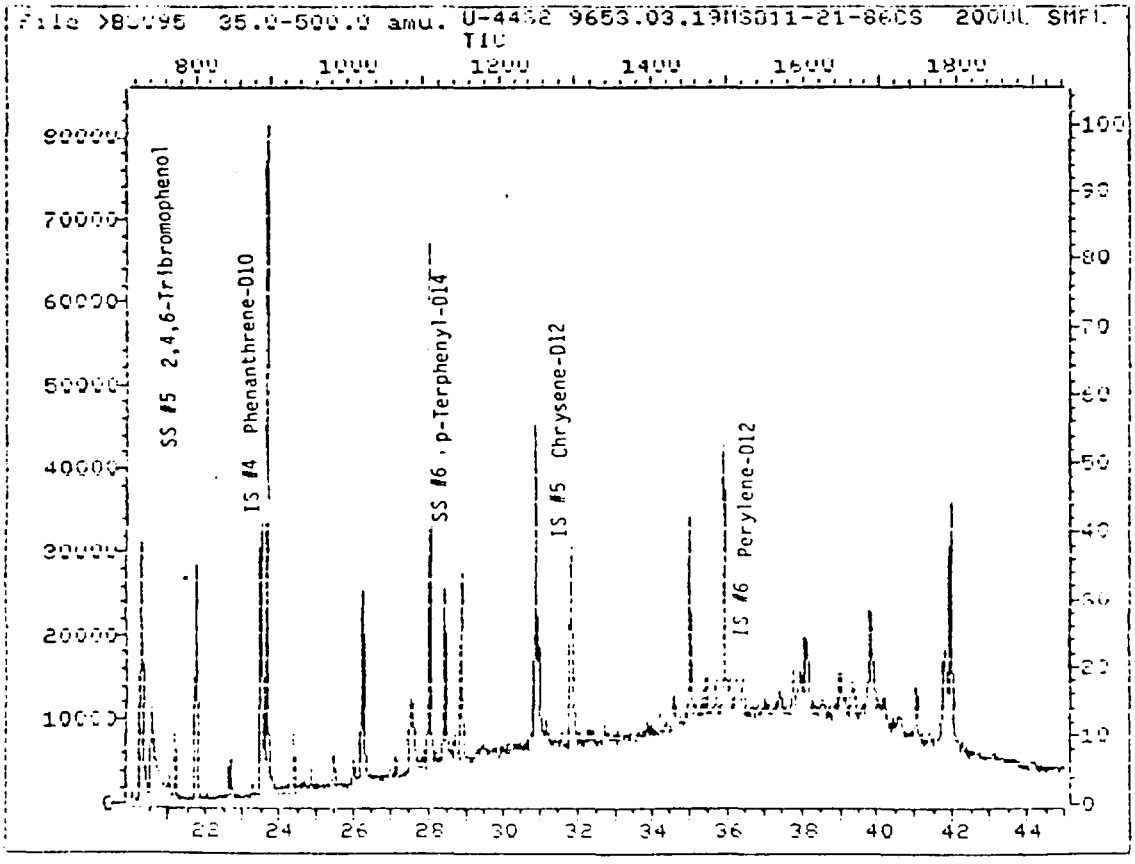
Data File: >B3095::D4
Name: U-4432 9653.03.19MSD DC-SD-15 MSD
Misc: 11-21-86CS 200UL SMPL + 200UL MECL2 + 5UL IS

Id File: BNABR::D2
Title: BNA ID FILE FOR THL HP 5970 (B)
Last Calibration: 861121 14:38

Operator ID: USER8
Quant Time: 861121 18:15
Injected at: 861121 17:27

DC-SD-15 MSD


File >B3095 35.0-500.0 amu. U-4432 9653.03.19MS011-21-86CS 200UL SMPL
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 >B3095 35.0-500.0 amu. U-4432 9653.03.19MS011-21-86CS 200UL 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

Operator ID: USER8 Quant Par: 4 Quant Time: [illegible]
Output File: ^B3095::Q2 Acted at: [illegible]
Data File: >B3095::D4 Dilution Factor: 2.00
Name: U-4432 9653.03.19MSD DC-SD-15 MSD
Misc: 11-21-86CS 200UL SMPL + 200UL MECL2 + [illegible]

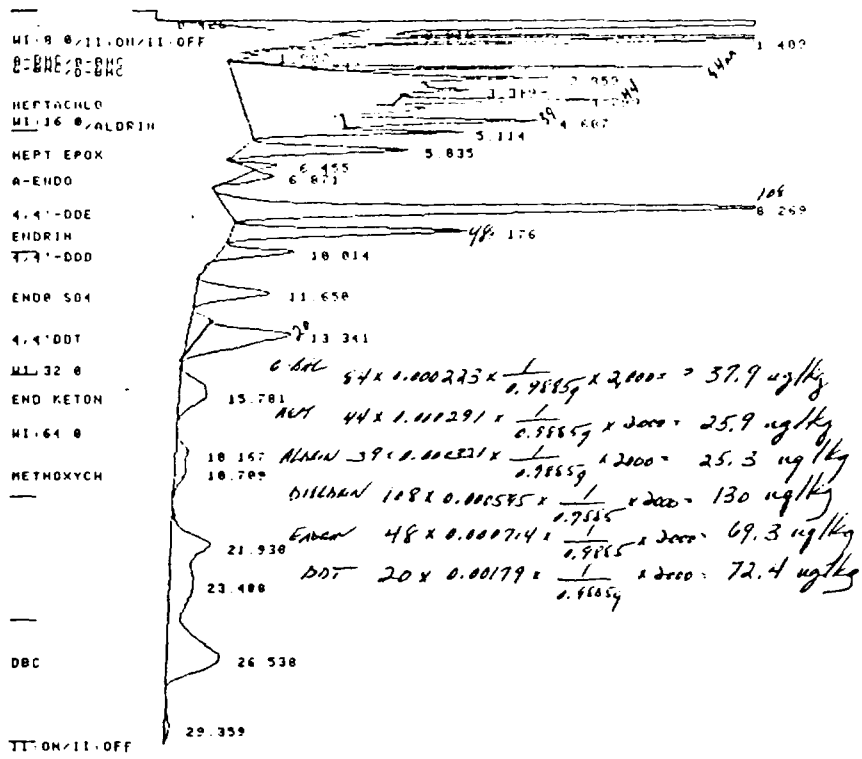
ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861121 14:38

	Compound		M/E	R.T.	Scans	Area	Conc	Units	Q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.94	[illegible]	[illegible]	40.00	UG/L	89
2)	PHENOL-D5	(SURR)	99	9.53	200	8880	6.[illegible]	UG/L	40
2)	PHENOL-D5	(SURR)	99	9.72	200	99401	7[illegible].6[illegible]	UG/L	92
5)	2-FLUOROPHENOL	(SURR)	112	6.38	[illegible]	[illegible]	7[illegible].01	UG/L	73
5)	2-FLUOROPHENOL	(SURR)	112	6.52	52	2364	2.81	UG/L	9
5)	2-FLUOROPHENOL	(SURR)	112	6.64	55	674	.80	UG/L	92
5)	2-FLUOROPHENOL	(SURR)	112	6.71	61	1162	1.38	UG/L	90
~~5)~~	~~2-FLUOROPHENOL~~	~~(SURR)~~	~~112~~	~~6.91~~	~~64~~	~~164~~	~~.19~~	~~UG/L~~	No Gph 88
6)	PHENOL		94	9.76	211	181869	159.63	UG/L	55
~~7)~~	~~ANILINE~~		~~93~~	~~9.93~~	~~200~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	No Gph 26
~~8)~~	~~1,3-DICHLOROBENZENE~~		~~146~~	~~10.00~~	~~200~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	80
10)	1,4-DICHLOROBENZENE		146	10.00	222	85566	72.62	UG/L	97
~~13)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	No Gph 100
~~14)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	100
~~14)~~	~~BIS(2-CHLOROISOPROPYL)ETHER~~		~~45~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	100
15)	2-CHLOROPHENOL		128	9.53	200	166[illegible]	158.6[illegible]	UG/L	94
17)	N-NITROSO-DI-N-PROPYLAMINE		70	11.21	30[illegible]	6[illegible]68	86.[illegible]	UG/L	97
~~18)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~11.6[illegible]~~	~~UG/L~~	No Gph 80
19)	*NAPHTHALENE-D8	(IS)	136	7.84	417	205172	40.00	UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	11.82	311	47470	45.4[illegible]	UG/L	92
28)	1,2,4-TRICHLOROBENZENE		180	13.80	410	90299	89.9[illegible]	UG/L	100
~~28)~~	~~1,2,4-TRICHLOROBENZENE~~		~~180~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	No Gph 100
~~29)~~	~~NAPHTHALENE~~		~~128~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	100
32)	4-CHLORO-3-METHYLPHENOL		107	16.22	5[illegible]	124[illegible]22	141.8[illegible]	UG/L	94
~~33)~~	~~2-METHYLNAPHTHALENE~~		~~142~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	No Gph 91
~~33)~~	~~2-METHYLNAPHTHALENE~~		~~142~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	19
34)	*ACENAPHTHENE-D10	(IS)	162	19.23	6[illegible]	9[illegible]	40.00	UG/L	98
38)	2-FLUOROBIPHENYL	(SURR)	172	17.40	5[illegible]	[illegible]	46.[illegible]	UG/L	9[illegible]
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	No Gph 100
42)	ACENAPHTHENE		153	19.33	[illegible]	1[illegible]514	85.[illegible]	UG/L	9[illegible]
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.25	[illegible]	16804	[illegible]	UG/L	98
50)	4-NITROPHENOL		139	20.57	[illegible]	12[illegible]	[illegible]	UG/L	100
51)	2,4-DINITROTOLUENE		165	20.27	[illegible]	[illegible]	[illegible]	UG/L	100
~~51)~~	~~2,4-DINITROTOLUENE~~		~~165~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	No Gph 100
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	100
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	100
~~53)~~	~~DIETHYLPHTHALATE~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	98
5[illegible]	*PHENANTHRENE-D10	(IS)	188	[illegible]	[illegible]	[illegible]	40.[illegible]	UG/L	
6[illegible]	PENTACHLOROPHENOL		2[illegible]	[illegible]	9[illegible]	[illegible]	[illegible]	[illegible]	10[illegible]
~~[illegible]~~	~~PHENANTHRENE~~		~~178~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	No Gph 88
6[illegible]	DI-N-BUTYLPHTHALATE		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	8[illegible]
~~[illegible]~~	~~*CHRYSENE-D12~~	~~(IS)~~	~~240~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	100
6[illegible]	PYRENE		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
~~[illegible]~~	~~[illegible]~~	~~(SURR)~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	No Gph [illegible]

	Compound		R.T.	Scans	Area	Conc	Units*	c
26	DI-N-BUTYL PHTHALATE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
25)	DI-N-OCTYL PHTHALATE	149	34.64	1454	5149	[illegible]	[illegible]	100
[illegible]	DI-N-BUTYL PHTHALATE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
[illegible]	DI-N-OCTYL PHTHALATE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
[illegible]	BENZO(G,H,I)FLUORANTHENE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
[illegible]	BENZO(K)FLUORANTHENE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100
[illegible]	BENZO(E,H,I)PERYLENE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100

* Compound is ISTD

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



RECALCULATE ON FILE: SLY458

CHANNEL: 1A - 1 TITLE: RUN# 23 11:46 19 NOV 86

DC-SD-15MSD SAMPLE: 9653.195IRIA METHOD: DAVE CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		WI/2 (SEC)
1		0.0000	1.275		7903280	BV		3.50
2		0.0000	1.409		115426	T	?	3.44
3		0.0000	1.535		38975	T		2.69
4	B-BHC	14.5729	2.237	0.067	59410	T	?	6.38
5	G-BHC	40.1884	2.397	0.017	394917	T		5.81
6		0.0000	2.859		755117	T	?	18.19
7		0.0000	3.131		205675	T	?	8.81
8		0.0000	3.319		408652	T	?	22.19
9		0.0000	3.553		183052	T	?	8.50
10	HEPTACHLO	73.6900	3.799	0.009	593217	T		13.63
11		0.0000	4.082		490408	T	?	31.50
12	ALDRIN	72.0870	4.687	0.017	724095	T		19.81
13		0.0000	5.114		304842	T	?	13.44
14	HEPT EPOX	40.9163	5.835	0.165	386285	BB		19.50
15		0.0000	6.455		53010	BB	?	13.38
16	A-ENDO	8.8093	6.871	-0.159	78133	BB	?	28.00
17	DIELDRIN	164.1037	8.269	0.079	1599159	BB		21.13
18	ENDRIN	67.6240	9.176	0.046	600529	BB		21.13
19	4,4'-DDD	24.7129	10.014	-0.146	194496	BB		22.63
20	ENDO SO4	46.6048	11.650	-0.260	299641	BB		30.81
21	4,4'DDT	125.2573	13.341	0.081	656505	BB		45.81
22	END KETON	25.3253	15.781	0.511	236085	BB	?	67.63
23		0.0220	18.167		78174	BV	?	43.94
24	METHOXYCH	18.0479	18.709	-0.781	56600	VV	?	74.19
25		0.0000	21.930		305662	VV		57.88
26		0.0000	23.488		317798	VV	?	155.88
27	DBC	78.9837	26.538	-0.072	581630	VV		83.25
28		0.0000	29.359		35751	VB		82.63

TOTALS: 800.9225 -0.426 17656546

DETECTED PKS: 38 REJECTED PKS: 10

DIVISOR: 0.98850 MULTIPLIER: 2000.00000

NOISE: 22.9 OFFSET: -13

NOTES:
NOTEBOOK: 259-41 ANALYST: K.JUREK
SECURE AREA: D JUBE:U-4465
INST:VARIAN 6000#2 A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT

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)

Sample Number
BLKC5482

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No: U-4432/U-4442
Lab Sample ID No: Method Blank
QC Report No:
Sample Matrix: Water for Soil
Contract No: IL-3150
Data Release Authorized By: CSojowicz
Date Sample Received:

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-12-86

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	3 J
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 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.

Laboratory Name Ecology & Environment, Inc

Case No U-4432/U-4442

Sample Number BLK C5482

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.4 min	2 J
2.	Unknown Ketone	VOA	19.9 min	1 J
3.	Hexane isomer	VOA	21.4 min	8 J
4.				
5.				
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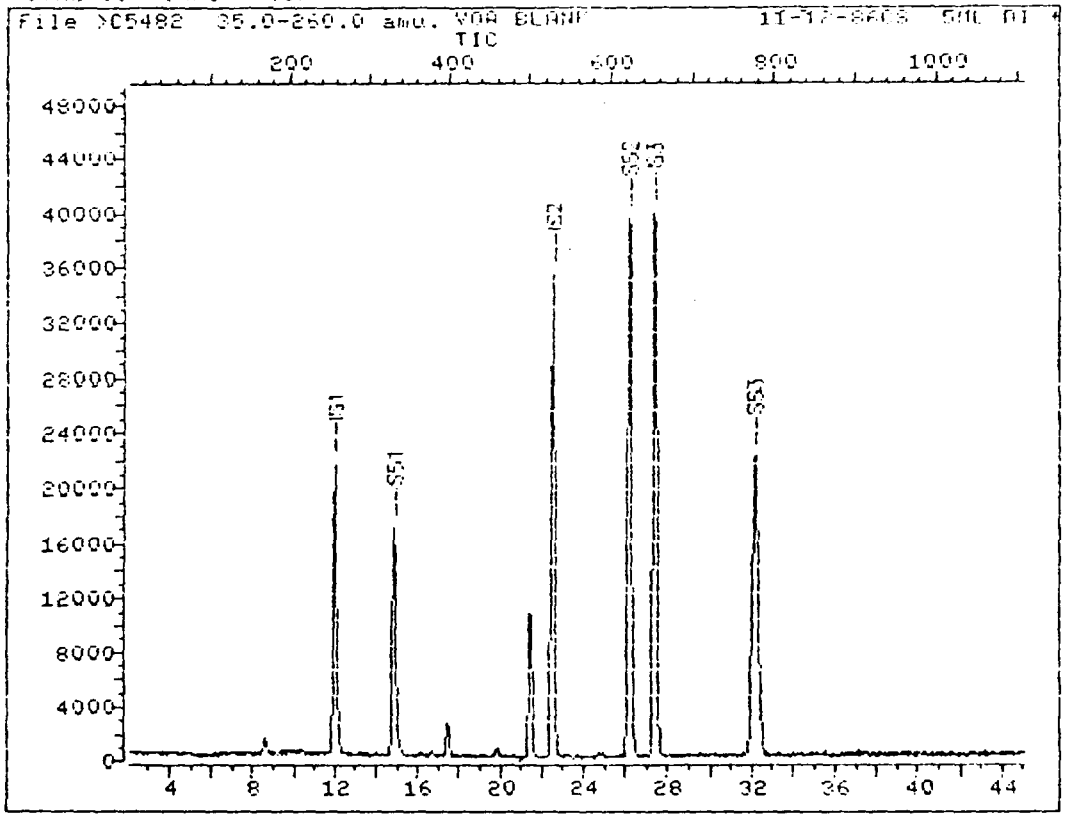
30				

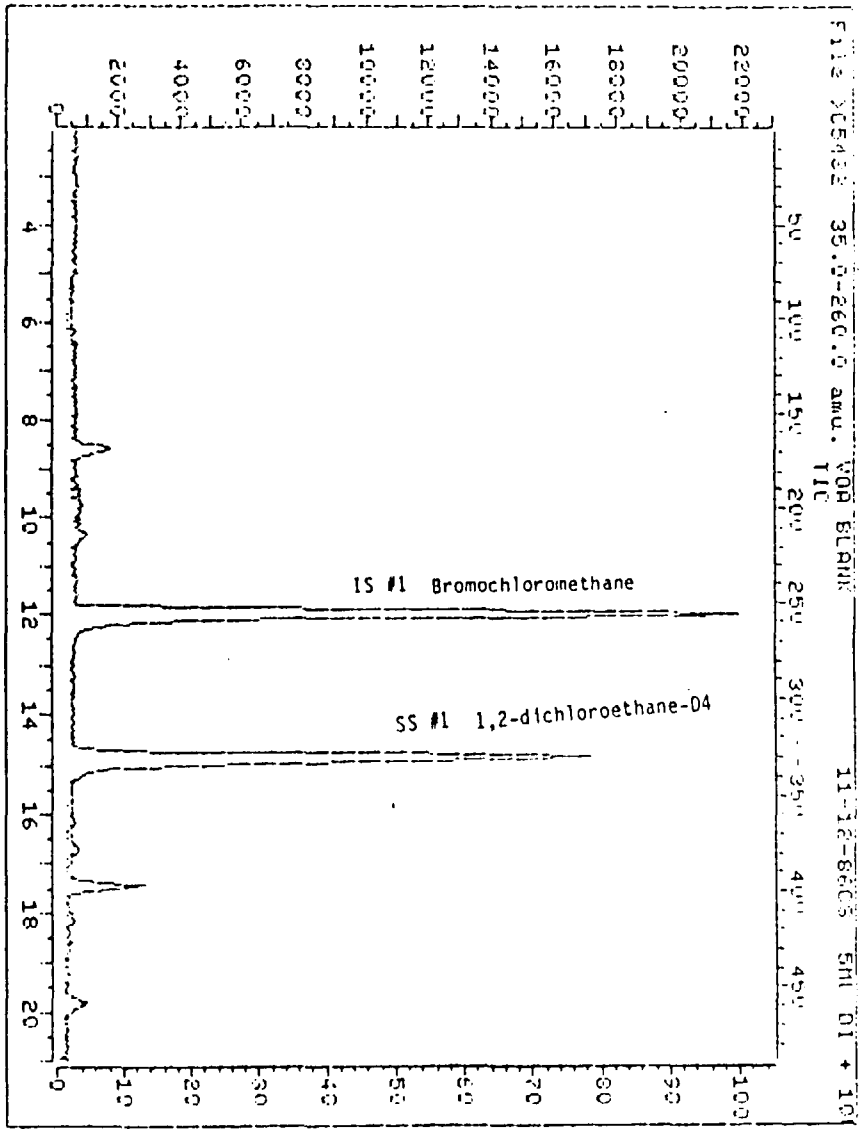
TOTAL ION CHROMATOGRAM

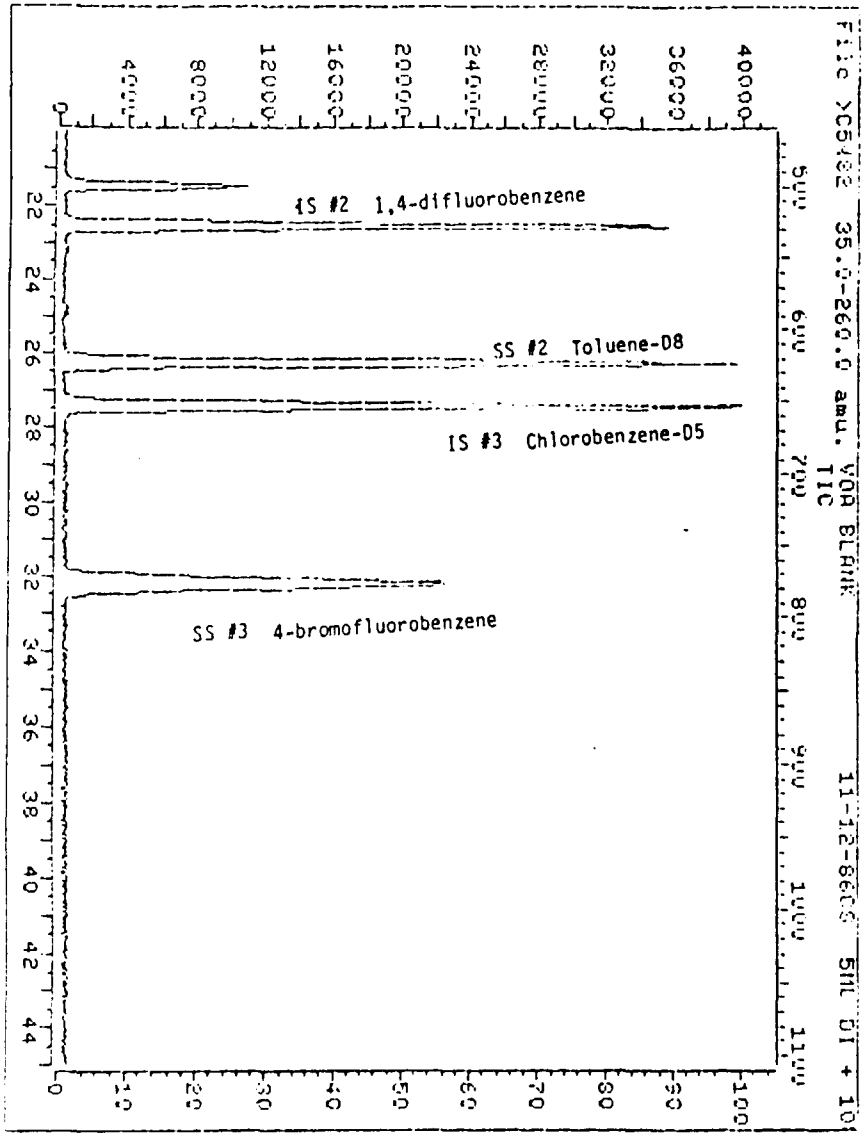


Data File: >C5482::D3
Name: VOA BLANK
Misc: 11-12-86CS 5ML DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861112 16:53

Operator ID: USER8
Quant Time: 861112 18:00
Injected at: 861112 17:14


File XC5482 35.0-260.0 amu. VOA BLANK 11-12-86C5 5ML DI + 10
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File XC5482 35.0-260.0 amu. VOA BLANK 11-12-86C5 5ML DI + 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: 861112 18:00
Output File: ^C5482::D2 Injected at: 861112 17:14
Data File: >C5482::D3 Dilution Factor: 1.00
Name: VOA BLANK
Misc: 11-12-86CS 5ML DI + 10UL IS/SS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861112 16:53

	Compound	M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE (IS)	128	11.98	256	32321	250.00	NGS	100
6)	METHYLENE CHLORIDE	84	8.57	168	3576	17.24	NGS	100
15)	1,2-DICHLORDETHANE-D4(SURR)	65	14.85	330	73022	234.62	NGS	86
16)	*1,4-DIFLUOROBENZENE (IS)	114	22.53	528	152219	250.00	NGS	100
31)	*CHLOROBENZENE-D5 (IS)	117	27.39	653	129432	250.00	NGS	100
36)	TOLUENE-D8 (SURR)	98	26.21	623	160996	232.81	NGS	89
40)	4-BROMOFLUOROBENZENE(SURR)	95	32.16	776	87410	194.21	NGS	100

* Compound is ISTD

Sample Number
BLK C5510

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment, Inc
Case No: U-11432/U 4442
Lab Sample ID No: Methanol 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: 11-14-86

Conc/Dil Factor: 2 pH

Percent Moisture: (Not Decanted)

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	2000u
74-83-9	Bromomethane	2000u
75-01-4	Vinyl Chloride	2000u
75-00-3	Chloroethane	2000u
75-09-2	Methylene Chloride	3800
67-64-1	Acetone	1900 J
75-15-0	Carbon Disulfide	1000u
75-35-4	1, 1-Dichloroethene	1000u
75-34-3	1, 1-Dichloroethane	1000u
156-60-5	Trans-1, 2-Dichloroethene	1000u
67-66-3	Chloroform	1000u
107-06-2	1, 2-Dichloroethane	1000u
78-93-3	2-Butanone	2000u
71-55-6	1, 1, 1-Trichloroethane	1000u
56-23-5	Carbon Tetrachloride	1000u
108-05-4	Vinyl Acetate	2000u
75-27-4	Bromodichloromethane	1000u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	1000u
10061-02-6	Trans-1, 3-Dichloropropene	1000u
79-01-6	Trichloroethene	1000u
124-48-1	Dibromochloromethane	1000u
79-00-5	1, 1, 2-Trichloroethane	1000u
71-43-2	Benzene	1000u
10061-01-5	cis-1, 3-Dichloropropene	1000u
110-75-8	2-Chloroethylvinylether	2000u
75-25-2	Bromoform	1000u
108-10-1	4-Methyl-2-Pentanone	2000u
591-78-6	2-Hexanone	880 J
127-18-4	Tetrachloroethene	1000u
79-34-5	1, 1, 2, 2-Tetrachloroethane	1000u
108-88-3	Toluene	1000u
108-90-7	Chlorobenzene	1000u
100-41-4	Ethylbenzene	1000u
100-42-5	Styrene	1000u
	Total Xylenes	1000u

Data Reporting Qualifiers

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

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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/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-4432/U-4442

Sample Number BLKC5510

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.4 min	360 J
2.	Hexane isomer	VOA	21.5 min	990 J
3.				
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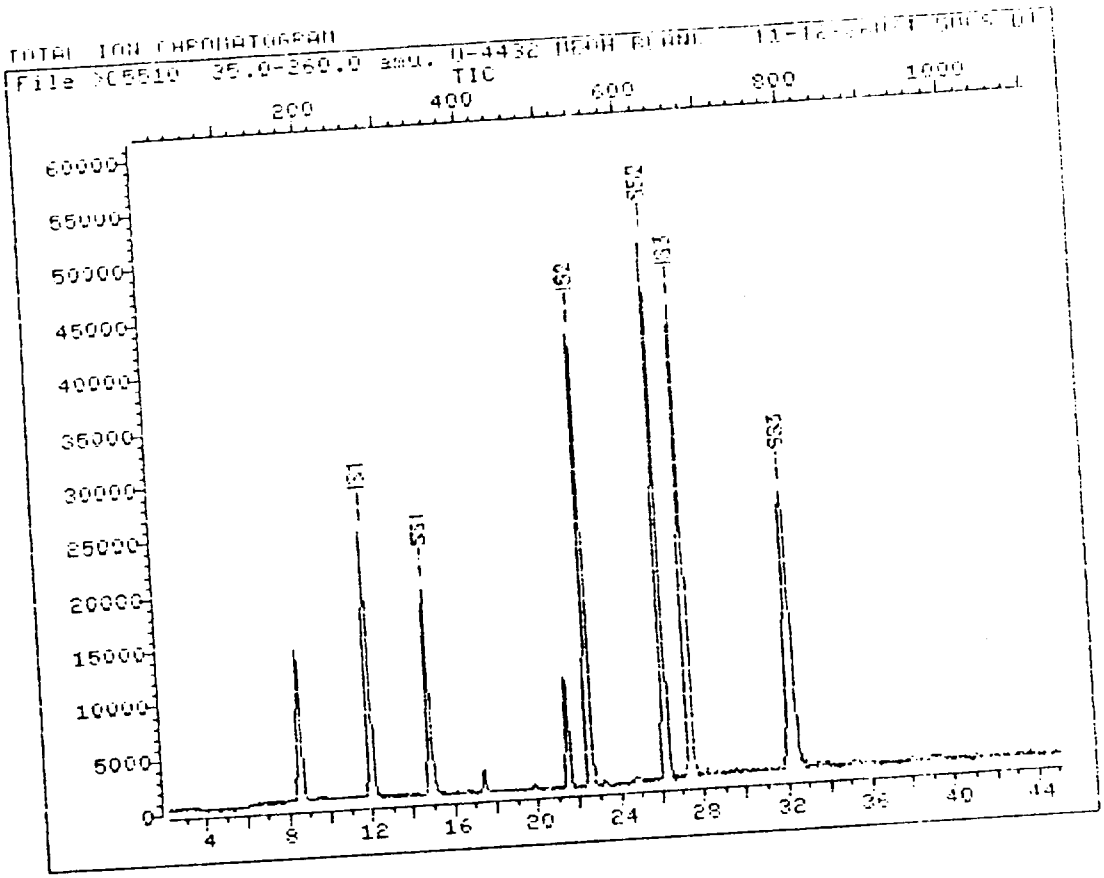
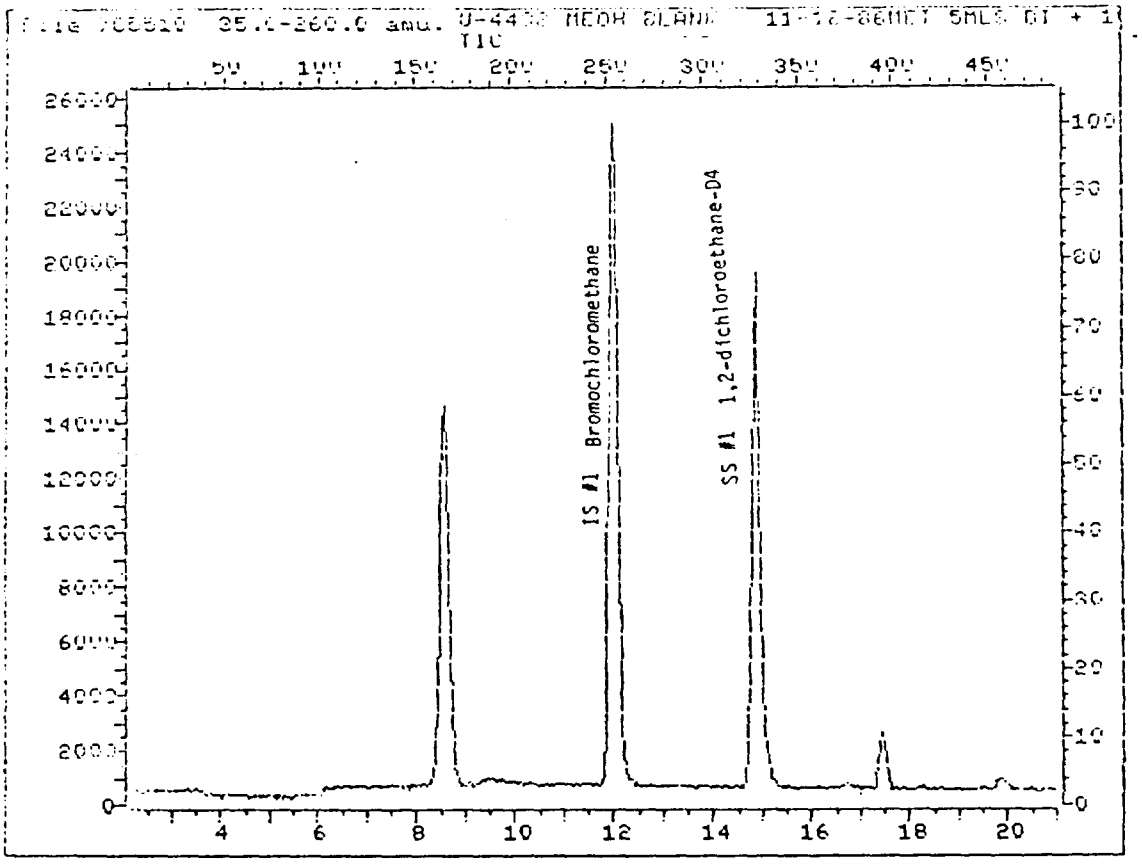
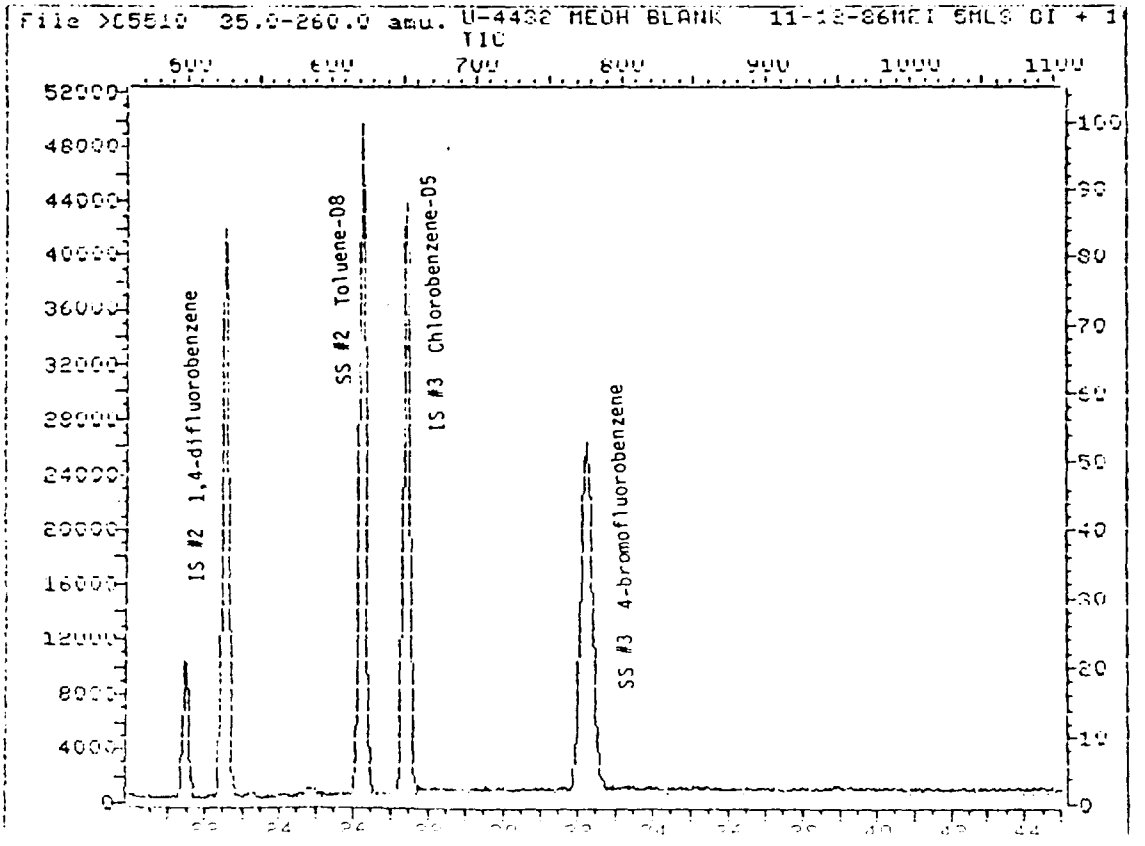


Data File: >C5510::D3
Name: U-4432 MEOH BLANK
Misc: 11-14/cw 86MEI 5MLS DI + 10UL IS/SS + 50UL MEOH

Id File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CP ..)
Last Calibration: 861113 22:56

Operator ID: USER8
Quant Time: 861114 00:56
Injected at: 861114 00:10


File 705810 35.0-260.0 amu. U-4432 MEOH BLANK 11-12-86MCI 5ML3 DI + 1
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File >C5810 35.0-260.0 amu. U-4432 MEOH BLANK 11-12-86MCI 5ML3 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 Per: 4 Quant Time: 861114 00:56
Output File: ^C5510::D2 Injected at: 861114 00:10
Data File: >C5510::D3 Dilution Factor: 1.00
Name: U-4432 MEOH BLANK
Misc: 11-~~12~~ 14-86MEI 5MLS DI + 10UL IS/SS + 5UL MEOH

ID File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861113 22:56

	Compound		M/Z	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.98	254	39377	50.00	UG/L	100
6)	METHYLENE CHLORIDE		84	8.57	186	40958	19.16	UG/L	100
7)	ACETONE		43	9.46	189	3916	9.56	UG/L	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.85	328	77847	47.15	UG/L	91
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.53	526	190161	50.00	UG/L	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.42	642	145151	50.00	UG/L	100
33)	2-HEXANONE		43	24.82	585	3988	4.47	UG/L	100
35)	~~1,1,2,2-TETRACHLOROETHANE~~		~~83~~	~~25.01~~	~~594~~	~~2552~~	~~1.52~~	~~UG/L~~	100
36)	TOLUENE-D8	(SURR)	98	26.25	612	203045	47.36	UG/L	96
40)	4-BROMOFLUOROBENZENE	(SURR)	95	32.23	776	99244	44.30	UG/L	100

* Compound is ISTD

Sample Number
BLKC5527

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No: U 4432/U 4442
Lab Sample ID No: Methanol Blank >C5527
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: 11-14-86

Conc./Dil Factor: 2 pH

Percent Moisture: (Not Decanted)

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	2000u
74-83-9	Bromomethane	2000u
75-01-4	Vinyl Chloride	2000u
75-00-3	Chloroethane	2000u
75-09-2	Methylene Chloride	6900
67-64-1	Acetone	3100
75-15-0	Carbon Disulfide	1000u
75-35-4	1, 1-Dichloroethene	1000u
75-34-3	1, 1-Dichloroethane	1000u
156-60-5	Trans-1, 2-Dichloroethene	1000u
67-66-3	Chloroform	1000u
107-06-2	1, 2-Dichloroethane	1000u
78-93-3	2-Butanone	4600
71-55-6	1, 1, 1-Trichloroethane	1000u
56-23-5	Carbon Tetrachloride	1000u
108-05-4	Vinyl Acetate	2000u
75-27-4	Bromodichloromethane	1000u

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

Data Reporting Qualifiers

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

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

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

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicate 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-4432/U-4442

Sample Number BLKC5527

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.3 min	380 J
2.	Unknown Ketone	VOA	19.6 min	190 J
3.	Hexane isomer	VOA	21.3 min	1300 J
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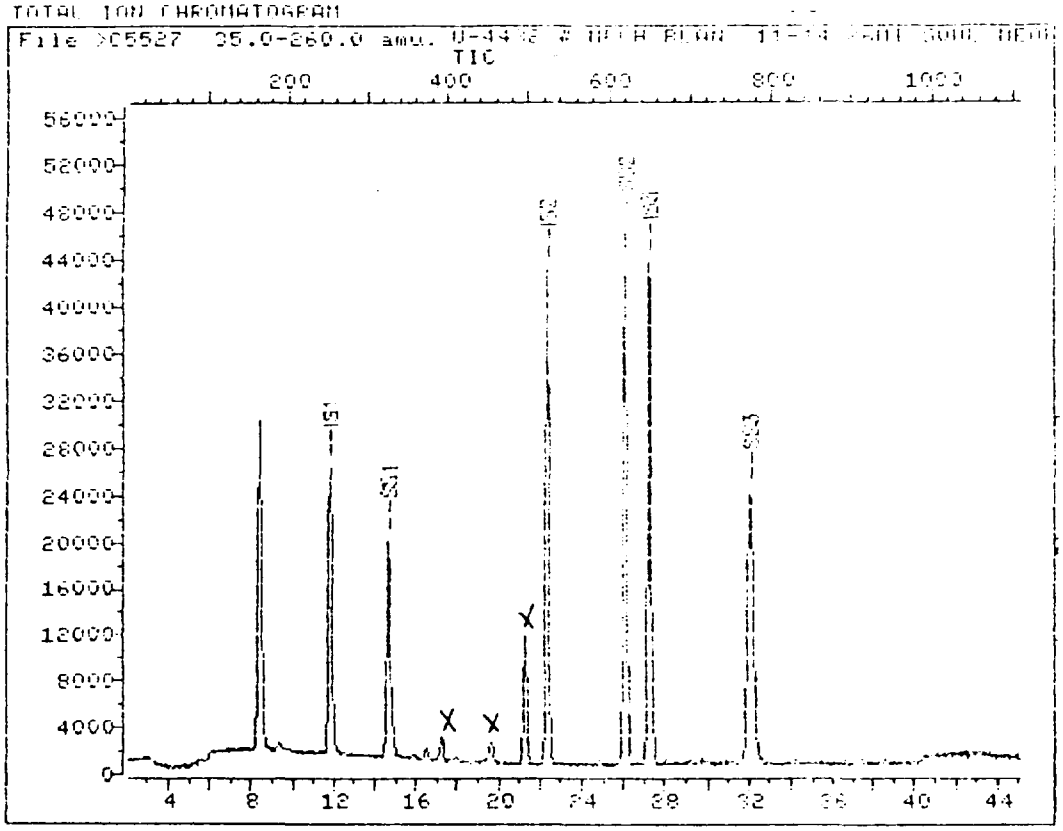
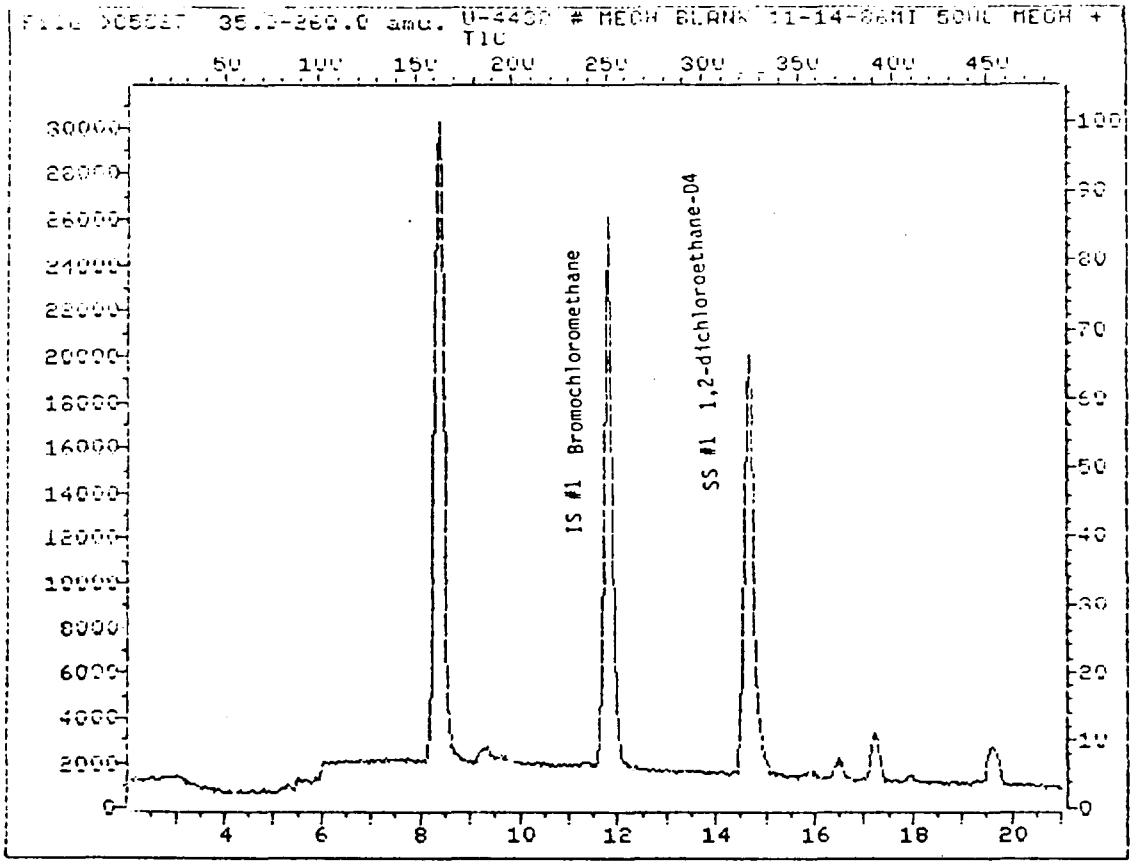
TOTAL ION CHROMATOGRAM

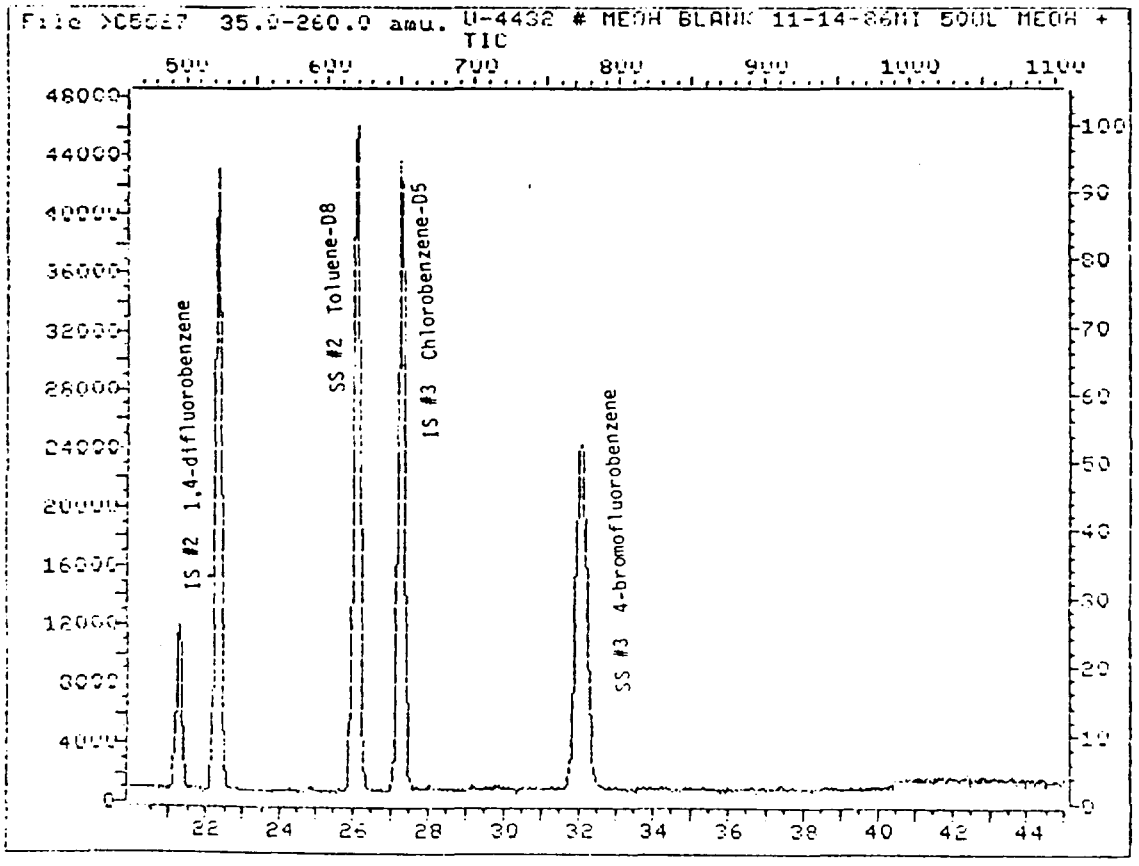


Data File: >C5527::D3
Name: U-4432 # METH BLANK
Misc: 11-14-86M1 500UL METH + SMLS 01 + [illegible]

Id File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. [illegible])
Last Calibration: 861114 11:59

Operator ID: USER8
Quant Time: 861114 17:47
Injected at: 861114 17:01


File >C5027 35.0-260.0 amu. U-4432 # MEOH BLANK 11-14-86MT 50UL MEOH +
TIC
IS #1 Bromochloromethane
SS #1 1,2-dichloroethane-D4


File >C5027 35.0-260.0 amu. U-4432 # MEOH BLANK 11-14-86MT 50UL MEOH +
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: 861114 12:47
Output File: ^C5527::D4 Injected at: 861114 12:01
Data File: >C5527::D3 Dilution Factor: 1.00
Name: U-4432 # MEOH BLANK
Misc: 11-14-86MI 500UL MEOH + 50ULS DI + 100UL IS 58

ID File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861114 11:38

	Compound		m/e	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.78	291	41131	50.00	UG/L	100
6)	METHYLENE CHLORIDE		84	8.37	163	80363	34.39	UG/L	100
7)	ACETONE		43	9.30	187	6866	15.20	UG/L	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.66	325	74437	40.40	UG/L	89
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.33	523	194276	50.00	UG/L	100
17)	2-BUTANONE		72	14.77	328	5067	23.13	UG/L	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.27	650	145928	50.00	UG/L	100
36)	TOLUENE-D8	(SURR)	98	26.10	620	193486	43.71	UG/L	95
40)	4-BROMOFLUOROBENZENE	(SURR)	95	32.08	774	94591	42.54	UG/L	100

* Compound is ISTD

445A

Sample Number
BLK C5539

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No: U-4432/U-4442
Lab Sample ID No: Methanol Method Blank
QC Report No:
Sample Matrix: Water for Soil
Contract No: IL-3140
Data Release Authorized By: D Slogtowicz
Date Sample Received:

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-14-86

Conc./Dil Factor: 2 pH

Percent Moisture: (Not Decanted)

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	2000u
74-83-9	Bromomethane	2000u
75-01-4	Vinyl Chloride	2000u
75-00-3	Chloroethane	2000u
75-09-2	Methylene Chloride	4400
67-64-1	Acetone	4400
75-15-0	Carbon Disulfide	1000u
75-35-4	1, 1-Dichloroethene	1000u
75-34-3	1, 1-Dichloroethane	1000u
156-60-5	Trans-1, 2-Dichloroethene	1000u
67-66-3	Chloroform	1000u
107-06-2	1, 2-Dichloroethane	1000u
78-93-3	2-Butanone	7000
71-55-6	1, 1, 1-Trichloroethane	1000u
56-23-5	Carbon Tetrachloride	1000u
108-05-4	Vinyl Acetate	2000u
75-27-4	Bromodichloromethane	1000u

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

Data Reporting Qualifiers

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

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

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

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J). If limit of detection is 10 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 U4432/V-4442

Sample Number BLKC5539

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene Isomer	VOA	17.5 min	400 J
2.	Unknown Ketone	VOA	19.9 min	630 J
3.	Hexane Isomer	VOA	21.6 min	1300 J
4.				
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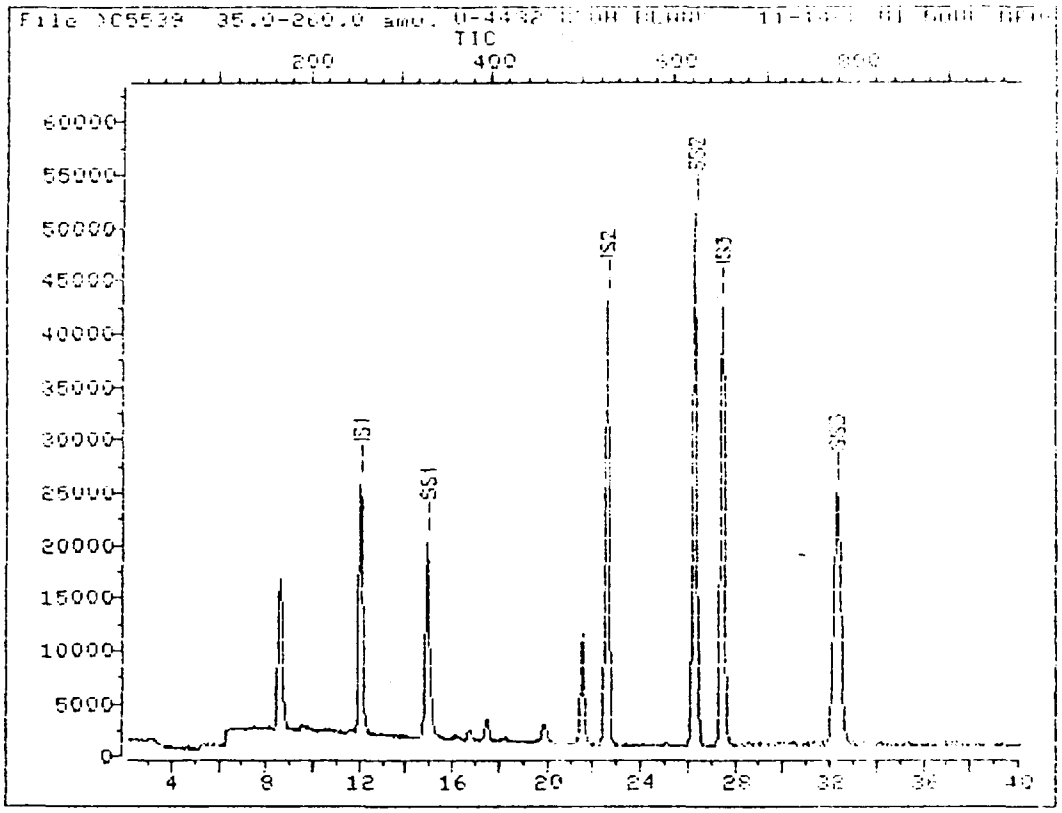
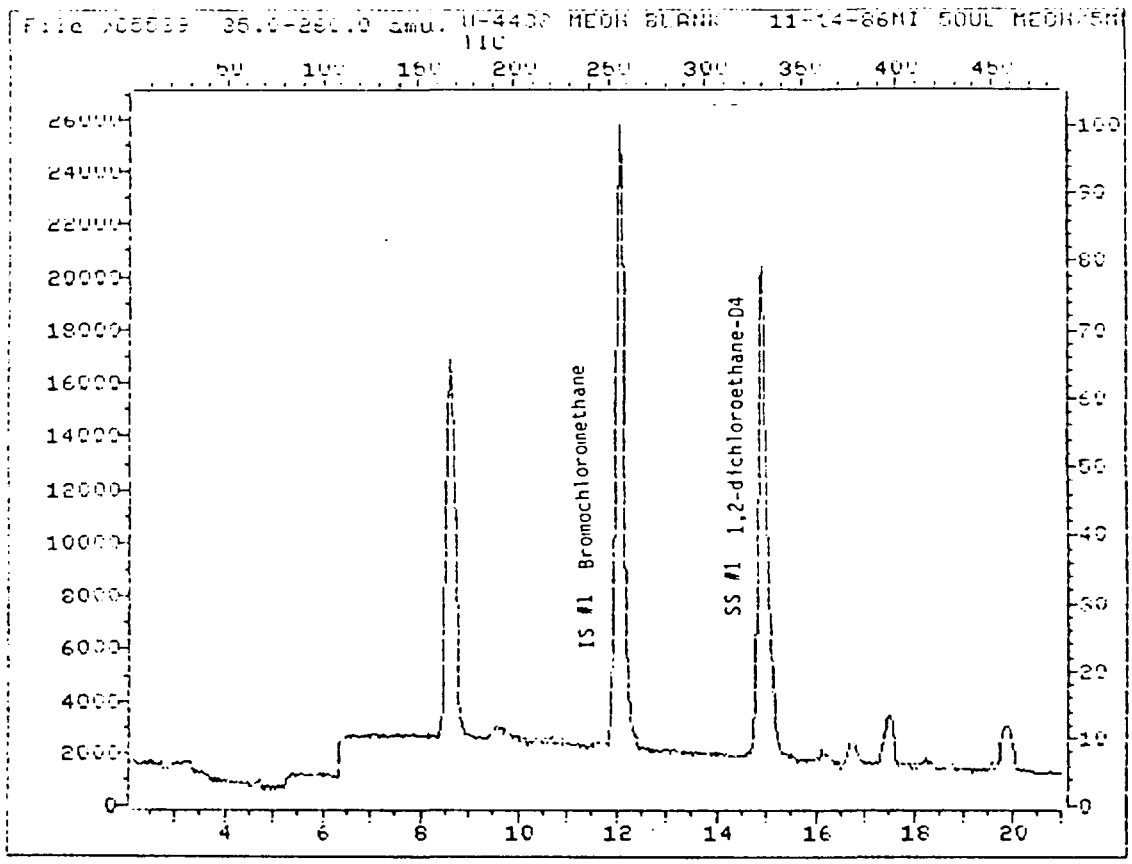
TOTAL ION CHROMATOGRAM

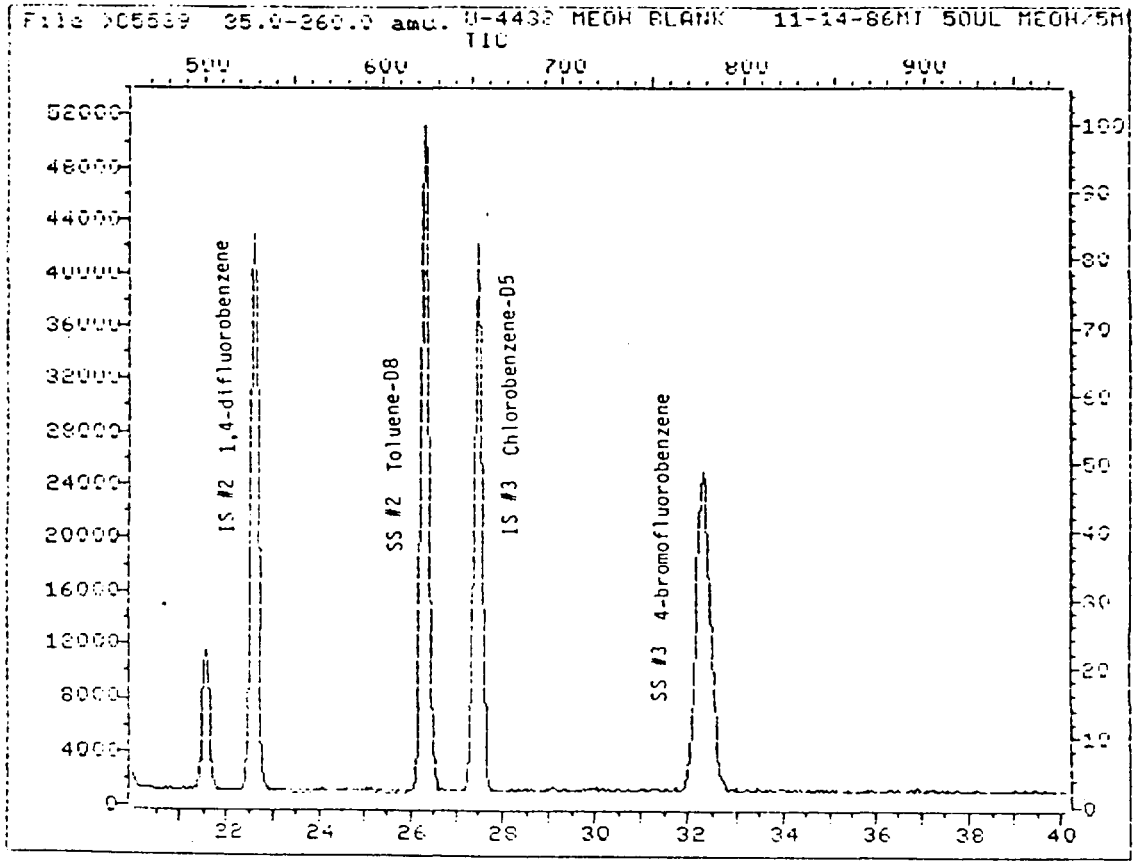


Data File: >C5539::D3
Name: U-4432 MEOH BLANK
Misc: 11-14-86MI 500UL MEOH-5MLS D1 + 1MM IS/SS

Id File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. [illegible]
Last Calibration: 861114 21:27

Operator ID: USER8
Quant Time: 861119 14:05
Injected at: 861115 03:30


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: 861115 14:05
Output File: ^C5539::02 Injected at: 861115 0:30
Data File: >C5539::03 Dilution Factor: 1.00
Name: U-4432 MEOH BLANK
Misc: 11-14-86M1 50UL MEOH/50ULS DI + 100UL IS/SS

ID File: VOACR::02
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861114 21:27

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	12.05	256	37782	50.00	UG/L	100
6)	METHYLENE CHLORIDE		84	8.60	167	39744	22.15	UG/L	100
7)	ACETONE		43	9.52	192	5623	21.93	UG/L	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.92	330	26131	48.07	UG/L	82
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.60	528	189152	50.00	UG/L	100
17)	2-BUTANONE		72	15.04	333	5013	35.07	UG/L	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.46	613	142900	50.00	UG/L	100
36)	TOLUENE-D8	(SURR)	98	26.28	623	207005	50.48	UG/L	95
40)	4-BROMOFLUOROBENZENE	(SURR)	95	32.30	778	97623	47.90	UG/L	100

* Compound is ISTD

Sample Number
BLK . C5546

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Ecology & Environment
Case No: U-4432/U-4442
Lab Sample ID No: Methanol Method Blank
QC Report No:
Sample Matrix: Water (for soil)
Contract No: IL 3140
Data Release Authorized By: [signature]
Date Sample Received:

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 11-17-86

Conc./Dil Factor: 2 pH

Percent Moisture: (Not Decanted)

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	2000u
74-83-9	Bromomethane	2000u
75-01-4	Vinyl Chloride	2000u
75-00-3	Chloroethane	2000u
75-09-2	Methylene Chloride	3700
67-64-1	Acetone	4900
75-15-0	Carbon Disulfide	1000u
75-35-4	1, 1-Dichloroethene	1000u
75-34-3	1, 1-Dichloroethane	1000u
156-60-5	Trans-1, 2-Dichloroethene	1000u
67-66-3	Chloroform	1000u
107-06-2	1, 2-Dichloroethane	1000u
78-93-3	2-Butanone	8000
71-55-6	1, 1, 1-Trichloroethane	1000u
56-23-5	Carbon Tetrachloride	1000u
108-05-4	Vinyl Acetate	2000u
75-27-4	Bromodichloromethane	1000u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	1000u
10061-02-6	Trans-1, 3-Dichloropropene	1000u
79-01-6	Trichloroethene	1000u
124-48-1	Dibromochloromethane	1000u
79-00-5	1, 1, 2-Trichloroethane	1000u
71-43-2	Benzene	1000u
10061-01-5	cis-1, 3-Dichloropropene	1000u
110-75-8	2-Chloroethylvinylether	2000u
75-25-2	Bromoform	1000u
108-10-1	4-Methyl-2-Pentanone	2000u
591-78-6	2-Hexanone	560J
127-18-4	Tetrachloroethene	1000u
79-34-5	1, 1, 2, 2-Tetrachloroethane	1000u
108-88-3	Toluene	1000u
108-90-7	Chlorobenzene	1000u
100-41-4	Ethylbenzene	1000u
100-42-5	Styrene	1000u
	Total Xylenes	1000u

Data Reporting Qualifiers

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

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

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

J — Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 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-4432/U-4442

Sample Number BLK C5546

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.3 min	370 J
2.	Unknown Ketone	VOA	19.7 min	580 J
3.	Hexane isomer	VOA	21.3 min	1200 J
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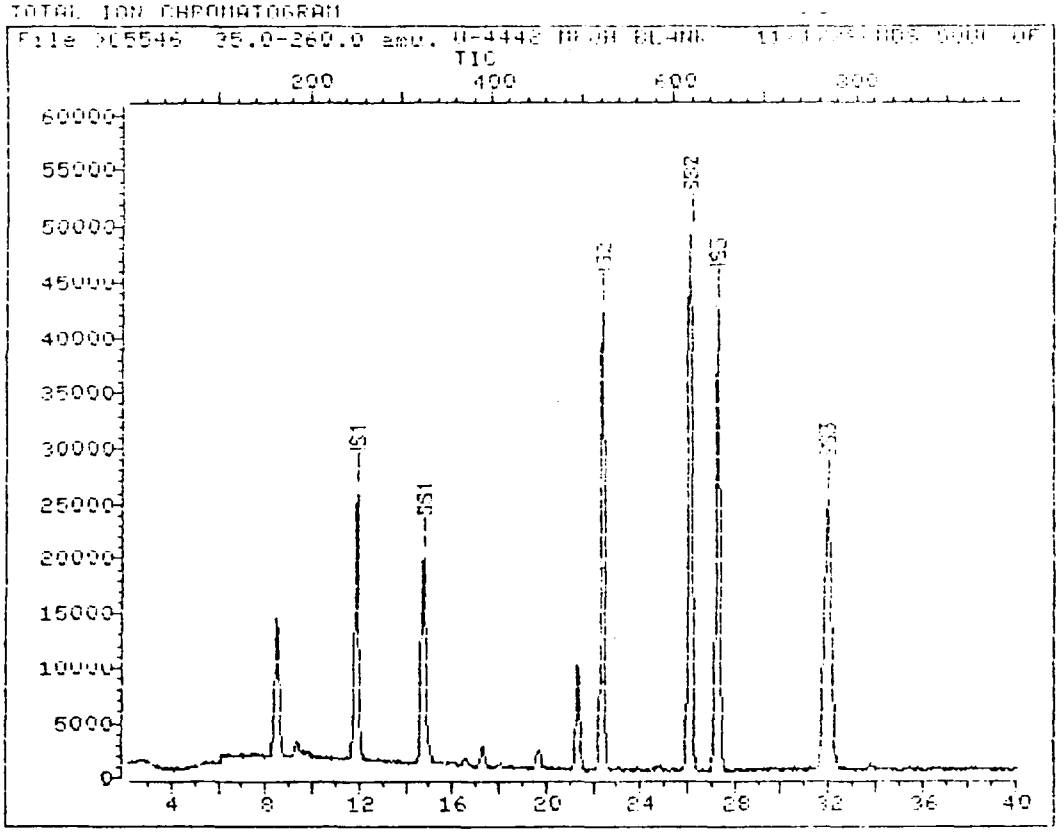
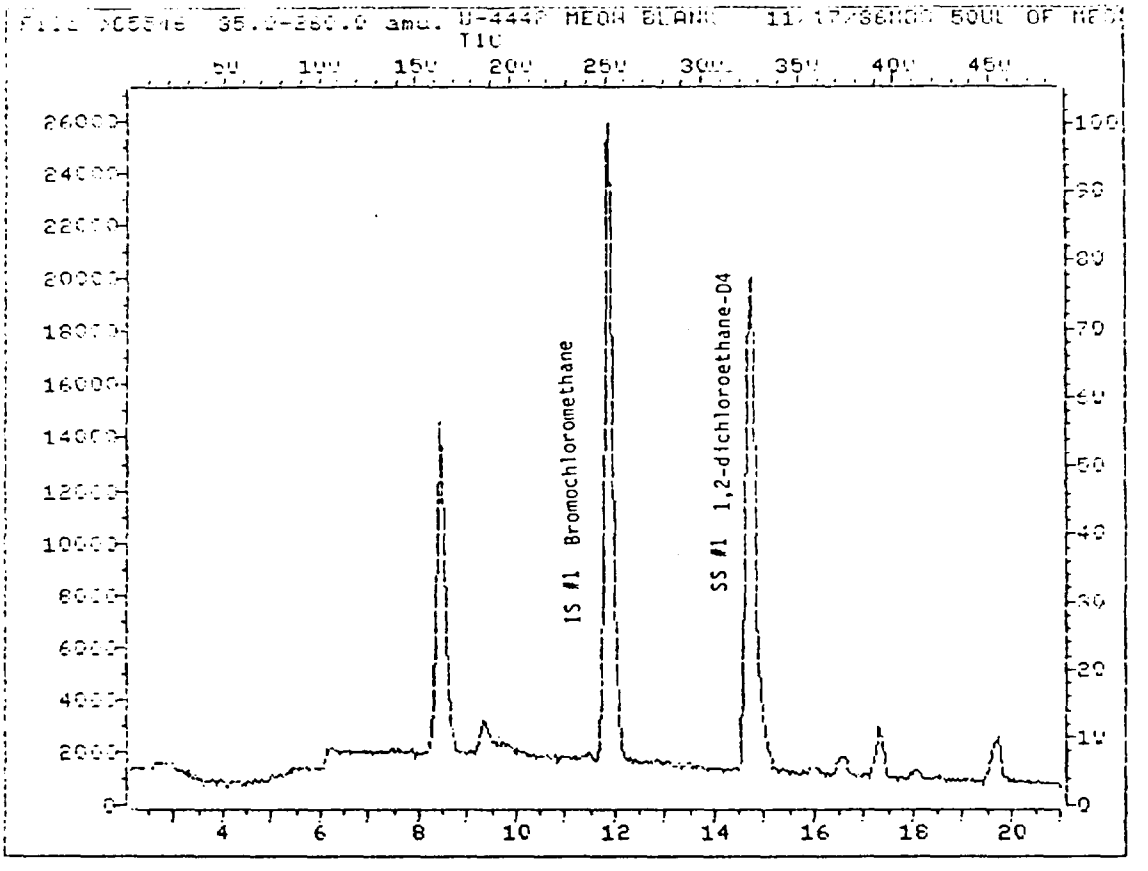
TOTAL ION CHROMATOGRAM

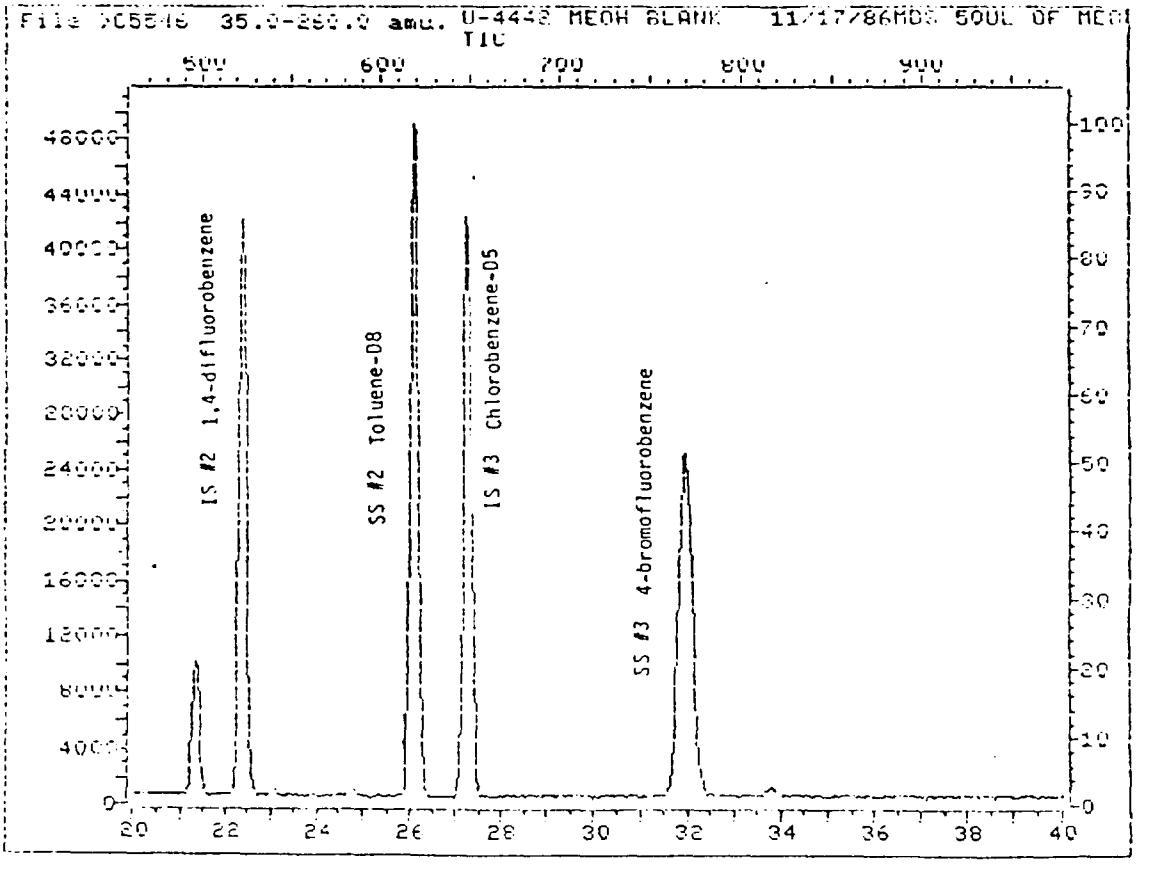


Data File: >C5546::D3
Name: U-4442 MEOH BLANK
Misc: 11/17/86MDS 50UL OF MEOH + 10UL [illegible] IN 5ML5 DI

Id File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861117 11:28

Operator ID: USER8
Quant Time: 861117 11:52
Injected at: 861117 11:11


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: 861117 11:52
Output File: ^C5546::D2 Injected at: 861117 11:11
Data File: >C5546::D3 Dilution Factor: 1.00
Name: U-4442 MEOH BLANK
Misc: 11/17/86MDS 500UL OF MEOH + 100UL IS/SS IN 5MLS DI

ID File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 861117 11:28

	Compound		m/e	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.88	292	39206	50.00	UG/L	100
6)	METHYLENE CHLORIDE		84	8.47	164	37430	18.59	UG/L	100
7)	ACETONE		43	9.32	186	13166	24.59	UG/L	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.75	326	79088	44.76	UG/L	88
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.39	523	186766	50.00	UG/L	100
17)	2-BUTANONE		72	14.87	329	6272	40.20	UG/L	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.25	648	137665	50.00	UG/L	100
33)	2-HEXANONE		43	24.64	581	2331	2.84	UG/L	100
36)	TOLUENE-D8	(SURR)	98	26.08	613	203953	47.47	UG/L	95
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.94	769	97367	46.26	UG/L	100

* Compound is ISTD

Laboratory Name Ecology & Environment Inc.

Case No U-4432 / U-4442

Sample Number BLANK (11/11)

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 11-11-86

Date Analyzed: 11-20-86

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-Methylphenol	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	57	J
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 and environment, inc.

Case No U-4432 / U-4442

Sample Number BLANK (11/11)

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 HYDROCARBON	BNA	27.6	690
2.	UNKNOWN		30.9	2000
3.	UNKNOWN		35.0	550
4.				
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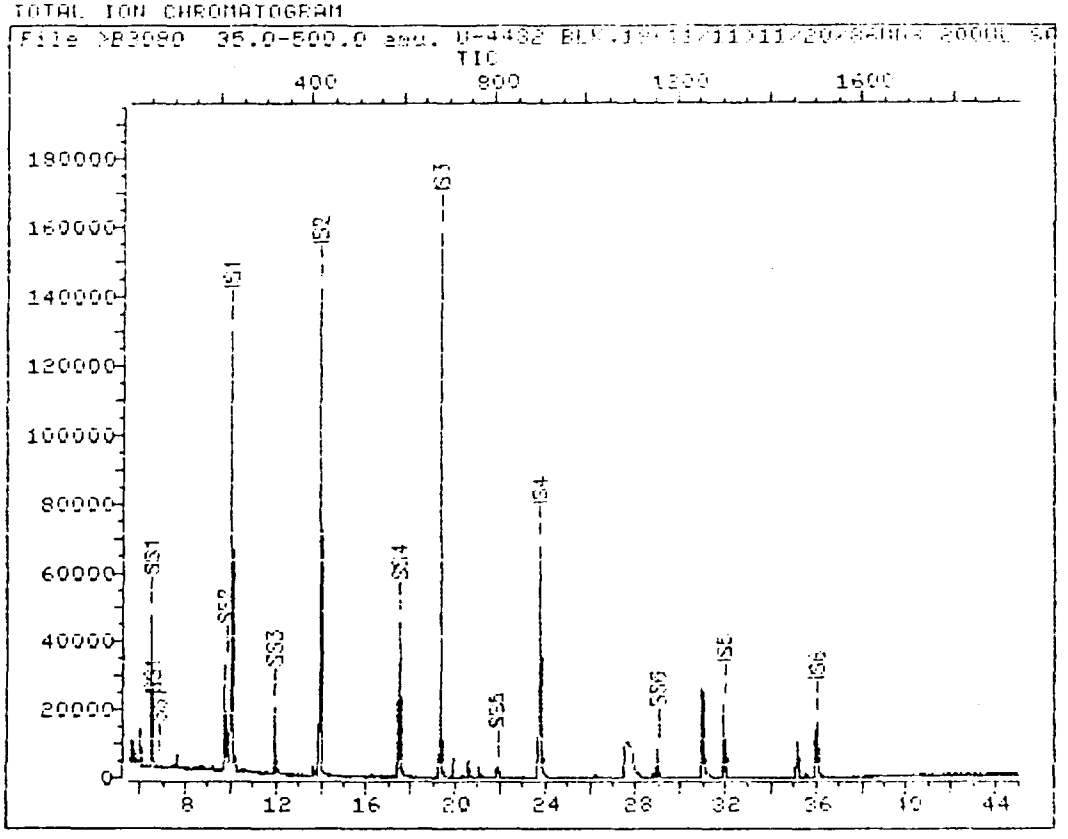
457

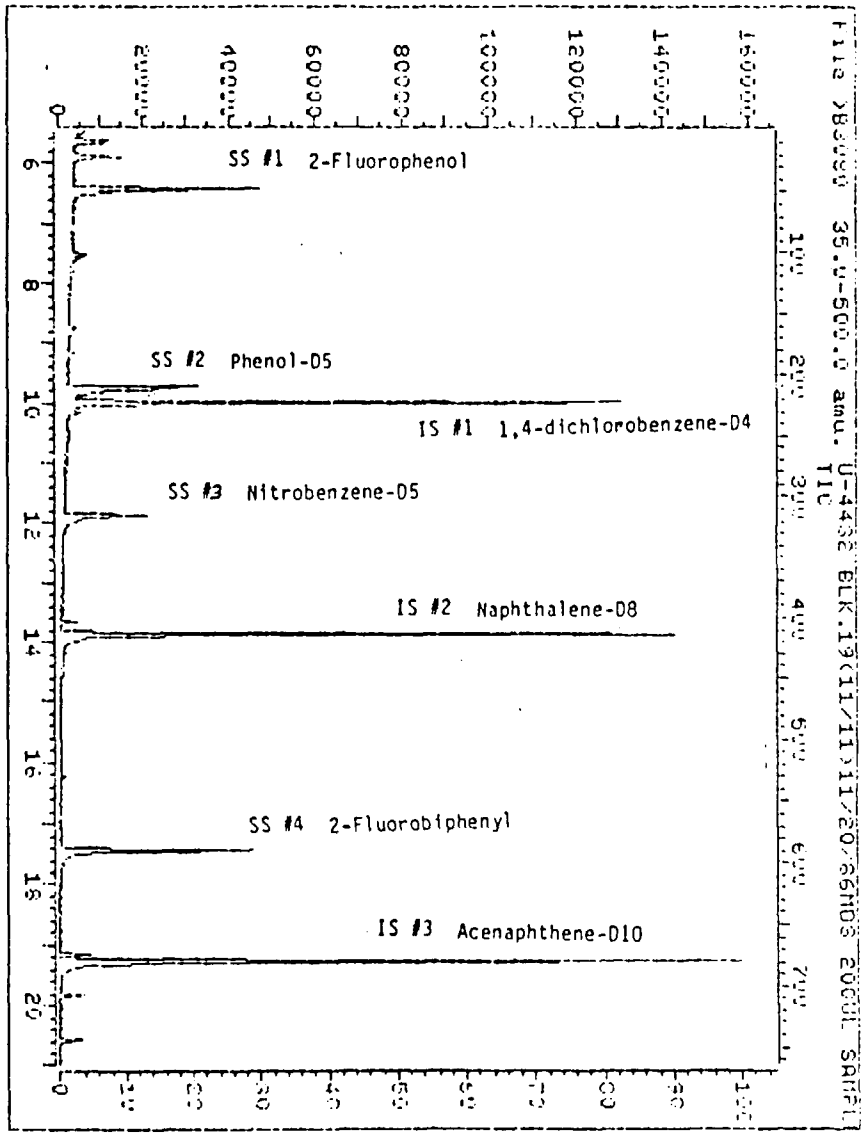
TOTAL ION CHROMATOGRAM

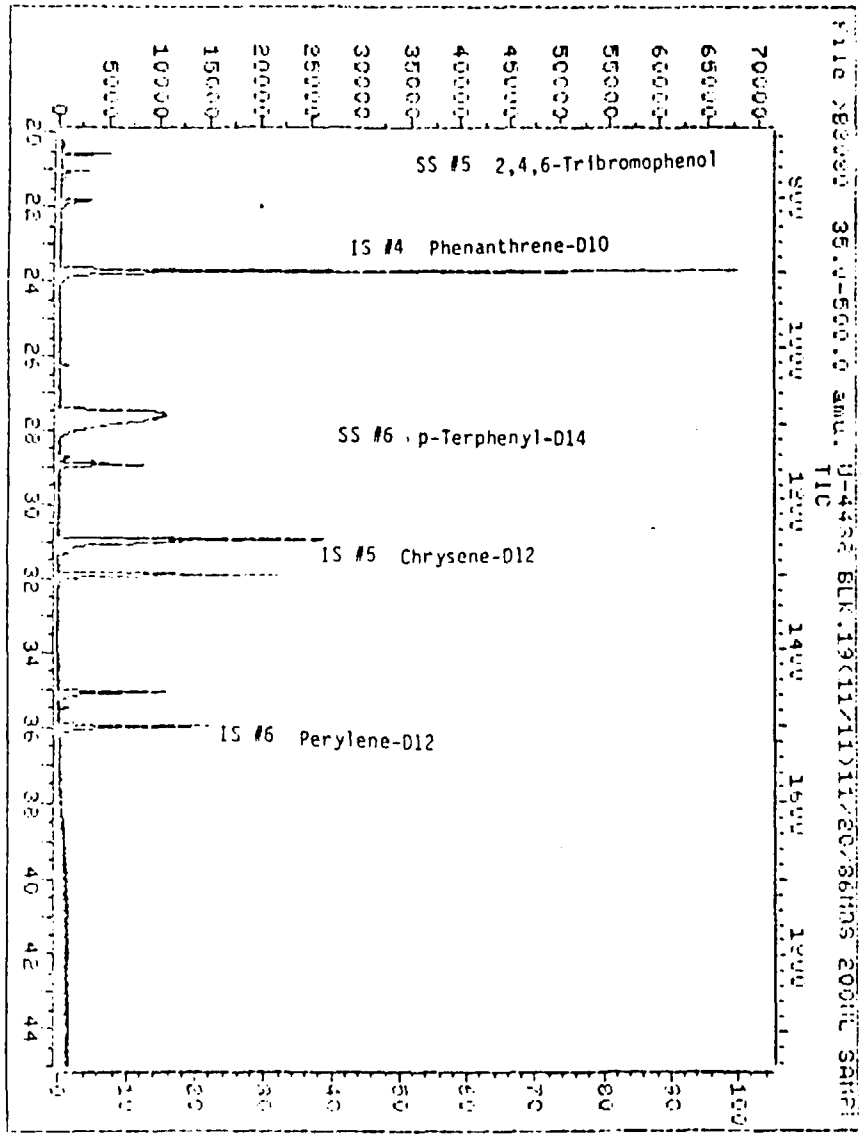


Data File: >B3080::D4
Name: U-4432 BLK.19(11/11)
Misc: 11/20/86MDS 200UL SAMPLE+ 200 UL MEOH + 4 UL IS (2X)

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861120 12:20

Operator ID: USER8
Quant Time: 861120 16:07
Injected at: 861120 15:19


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


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: USER8 Quant Rev: 4 Quant Time: 861120 16:07
Output File: ^B3080::Q2 Injected at: 861120 19:19
Data File: >B3080::D4 Dilution Factor: 2.00
Name: U-4432 BLK.19(11/11)
Misc: 11/20/86MDS 200UL SAMPLE+ 200 UL MECL2 + 4 UL IS (2X)

ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861120 12:20

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.98	222	61118	40.00	UG/L	91
2)	PHENOL-D5	(SURR)	99	9.23	210	39523	38.76	UG/L	90
5)	2-FLUOROPHENOL	(SURR)	112	6.44	48	30148	47.36	UG/L	91
5)	2-FLUOROPHENOL	(SURR)	112	6.50	51	5910	9.28	UG/L	94
5)	2-FLUOROPHENOL	(SURR)	112	6.74	63	753	1.18	UG/L	92
~~13)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.02~~	~~414~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~78~~
19)	*NAPHTHALENE-D8	(IS)	136	13.88	414	213929	40.00	UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	11.87	315	24668	27.16	UG/L	94
34)	*ACENAPHTHENE-D10	(IS)	162	19.27	679	95155	40.00	UG/L	98
38)	2-FLUOROBIPHENYL	(SURR)	172	17.44	589	55790	28.25	UG/L	94
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~10.14~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~10.27~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.81	804	4750	13.82	UG/L	92
~~51)~~	~~2,4-DINITROTOLUENE~~		~~165~~	~~20.60~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.97~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	~~100~~
55)	*PHENANTHRENE-D10	(IS)	188	23.72	898	113100	40.00	UG/L	96
63)	DI-N-BUTYLPHTHALATE		149	26.28	1024	2802	1.72	UG/L	99
65)	*CHRYSENE-D12	(IS)	240	31.89	1300	41658	40.00	UG/L	100
68)	TERPHENYL-D14	(SURR)	244	28.92	1154	13471	32.42	UG/L	100
74)	*PERYLENE-D12	(IS)	264	35.97	1501	35304	40.00	UG/L	100

NO Bph

NO Bph

* Compound is ISTD

Laboratory Name Ecology & Environment Inc.

Case No U-4432 / U-4442

Sample Number BLANK (11/13)

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 11-12-86

Date Analyzed: 11-20-86

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-Methylphenol	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

461

Laboratory Name ecology and environment, inc.

Case No U-4432/U-4442

Sample Number BLANK(11/13)

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 HYDROCARBON	BN/A	27.6	450
2.	UNKNOWN	⊥	30.9	1500
3.	UNKNOWN	⊥	35.1	440
4.				
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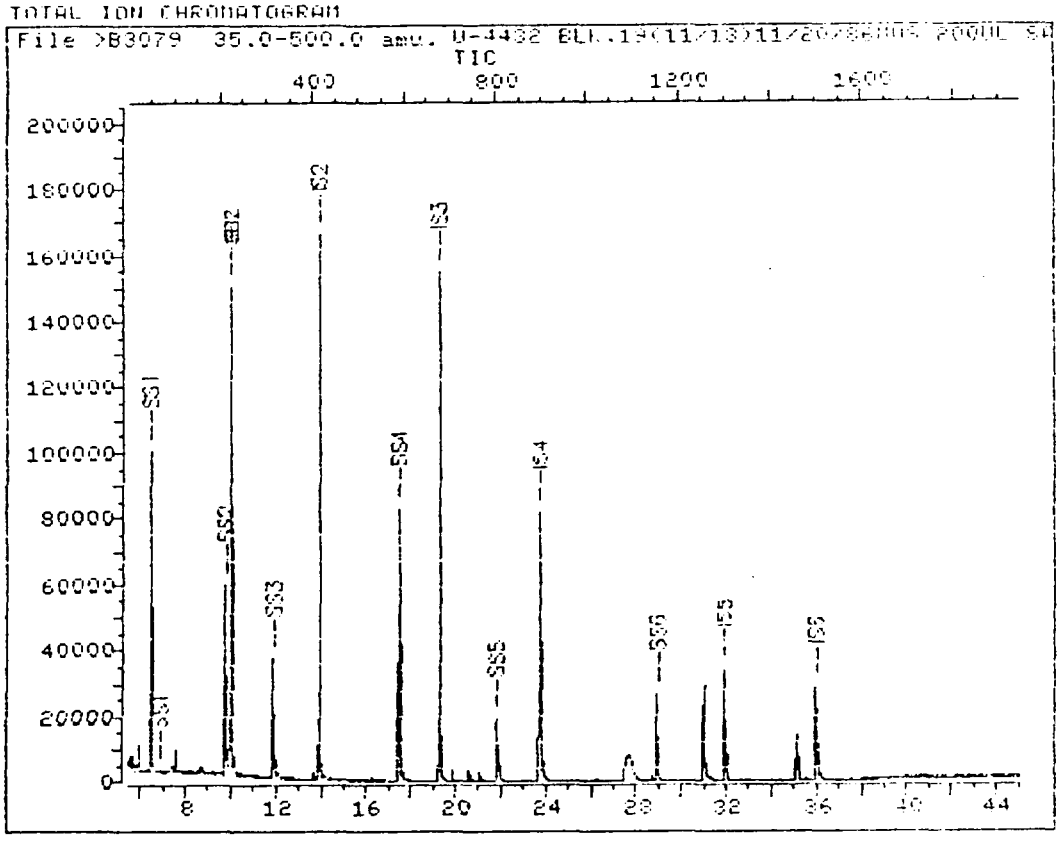
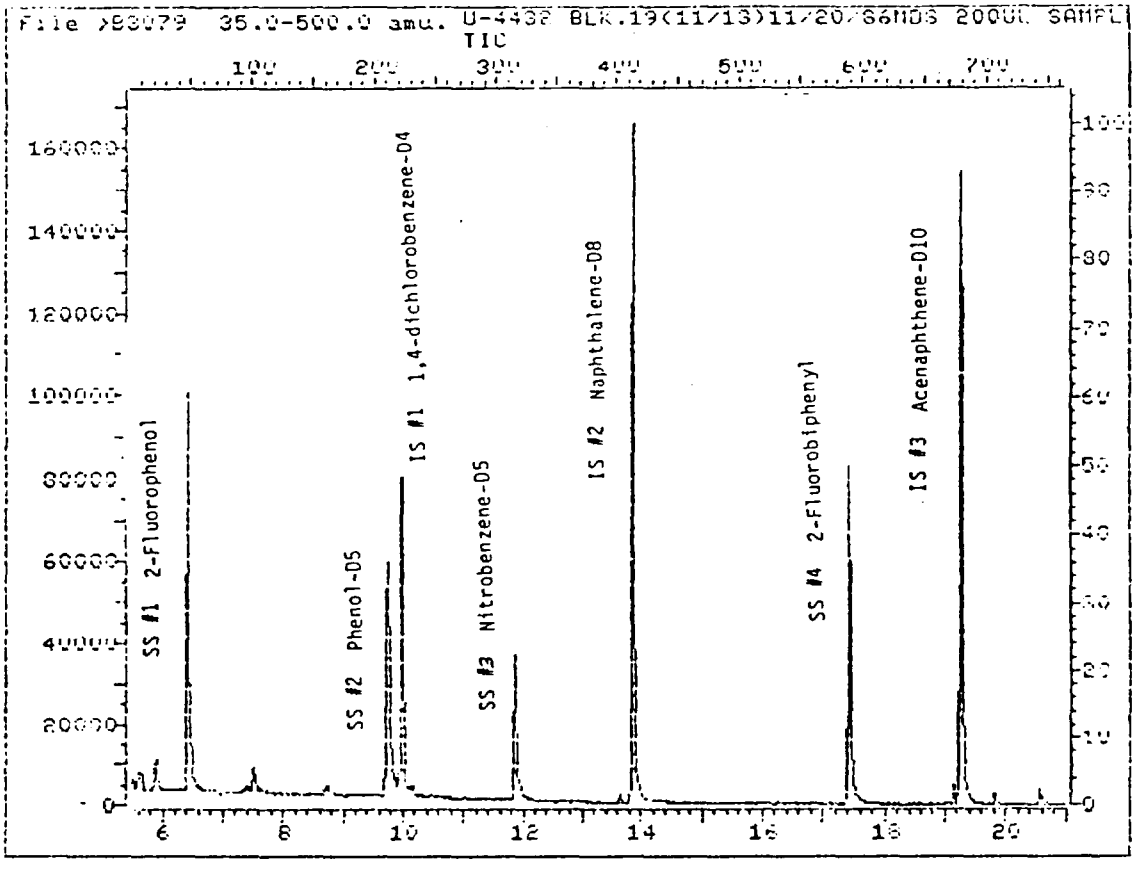
TOTAL ION CHROMATOGRAM



Data File: >B3079::D4
Name: U-4432 BLK.19(11/13)
Misc: 11/20/86MDS 200UL SAMPLE+ 200 UL MECL2 + 4 UL IS (2X)

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861120 12:20

Operator ID: USER8
Quant Time: 861120 15:06
Injected at: 861120 14:18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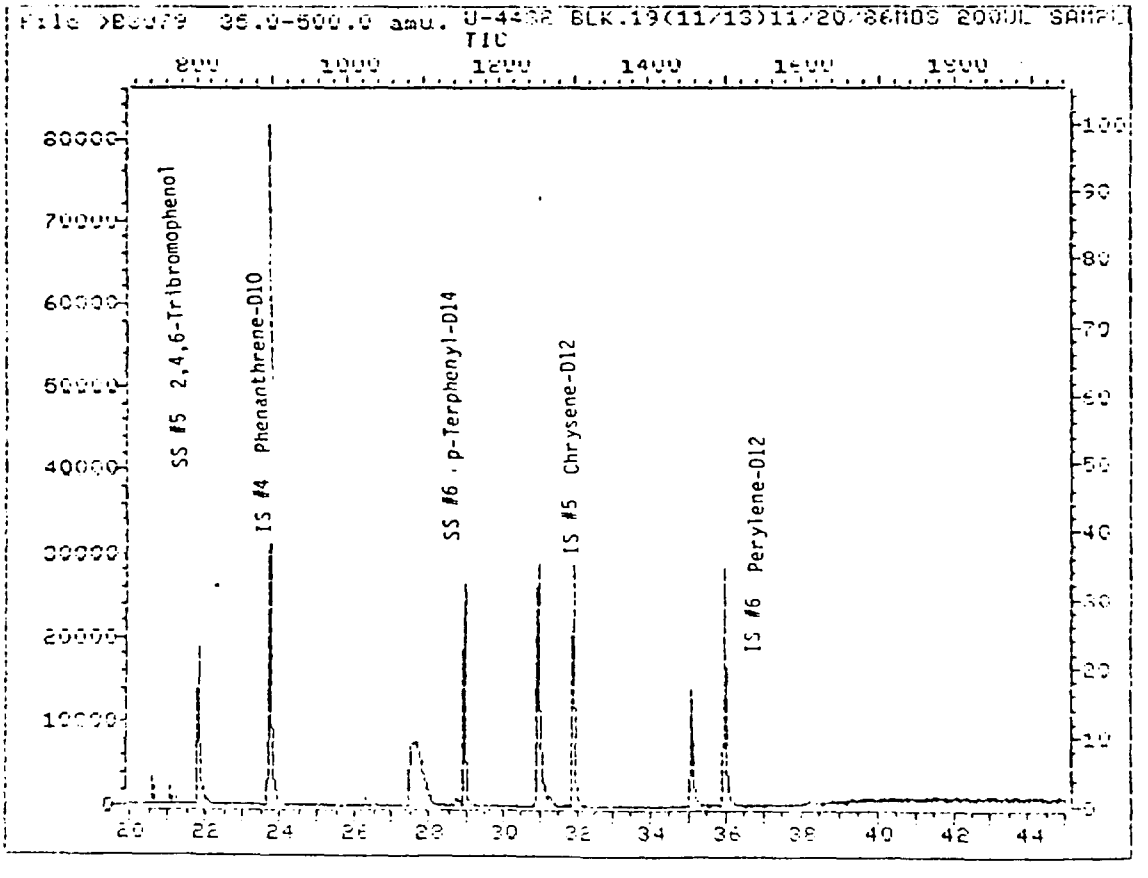
TIC
SS #1 2-Fluorophenol
SS #2 Phenol-D5
IS #1 1,4-dichlorobenzene-D4
SS #3 Nitrobenzene-D5
IS #2 Naphthalene-D8
SS #4 2-Fluorobiphenyl
IS #3 Acenaphthene-D10


File >B0079 35.0-500.0 amu. U-4438 BLK.19(11/13)11/20/86MDS 200UL SAMPL
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: USER8 Quant Rev: 4 Quant Time: 861120 15:06
Output File: ^B3079::02 Injected at: 861120 14:18
Data File: >B3079::D4 Dilution Factor: 2.00
Name: U-4432 BLK.19(11/13)
Misc: 11/20/86MDS 200UL SAMPLE+ 200 UL MECL2 + 4 UL IS (2X)

ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 861120 12:20

	Compound		M/E	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.99	223	63329	40.00	UG/L	86
2)	PHENOL-D5	(SURR)	99	9.75	211	67974	64.34	UG/L	94
~~2)~~	~~PHENOL-D5~~	~~(SURR)~~	~~99~~	~~9.99~~	~~223~~	~~2540~~	~~2.43~~	~~UG/L~~	71
5)	2-FLUOROPHENOL	(SURR)	112	6.41	47	60344	91.48	UG/L	95
~~7)~~	~~2-FLUOROPHENOL~~	~~(SURR)~~	~~112~~	~~6.86~~	~~49~~	~~693~~	~~.09~~	~~UG/L~~	87
~~12)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.46~~	~~414~~	~~[illegible]~~	~~[illegible]~~	~~UG/L~~	78
19)	*NAPHTHALENE-D8	(IS)	136	13.87	414	222196	40.00	UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	11.86	315	38139	40.43	UG/L	93
34)	*ACENAPHTHENE-D10	(IS)	162	19.26	679	95128	40.00	UG/L	97
38)	2-FLUOROBIPHENYL	(SURR)	172	17.43	589	88294	44.71	UG/L	94
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.16~~	~~674~~	~~[illegible]~~	~~.11~~	~~UG/L~~	100
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.26~~	~~679~~	~~[illegible]~~	~~14.[illegible]~~	~~UG/L~~	100
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.78	803	15743	4[illegible].17	UG/L	98
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.26~~	~~679~~	~~14[illegible]~~	~~32.34~~	~~UG/L~~	100
55)	*PHENANTHRENE-D10	(IS)	188	23.71	898	126999	40.00	UG/L	97
65)	*CHRYSENE-D12	(IS)	240	31.86	1299	60910	40.00	UG/L	100
68)	TERPHENYL-D14	(SURR)	244	28.92	1159	35304	56.68	UG/L	100
74)	*PERYLENE-D12	(IS)	264	35.95	1500	53613	40.00	UG/L	100

* Compound is ISTD

Laboratory Name ecology and environment, inc.

Case No U-4432/U-4442

Sample Number BLANK

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-11-86

Date Analyzed 11-18-86

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)

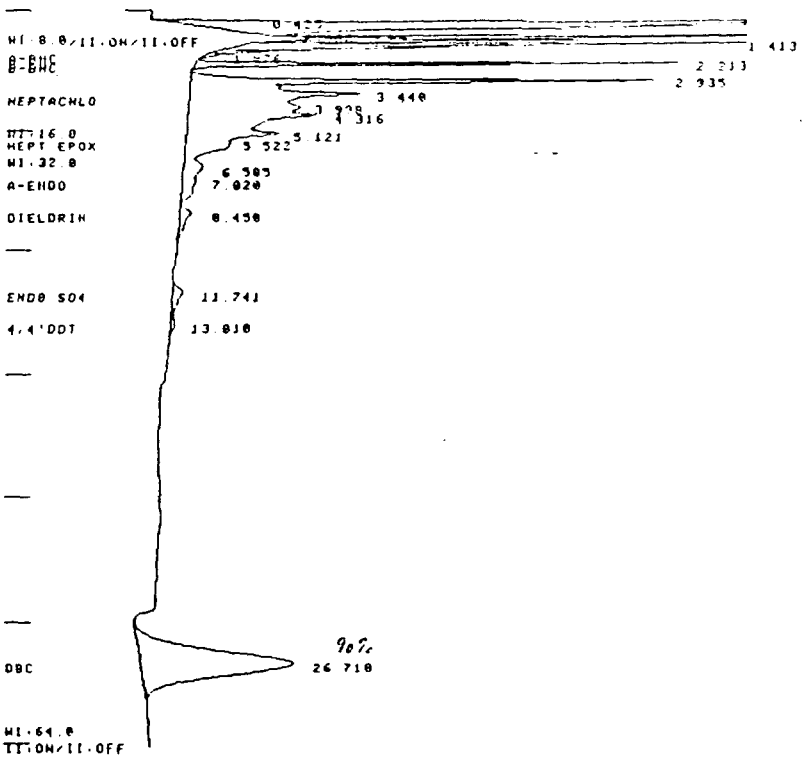
V_s = Volume of water extracted (ml)

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

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



CHANNEL: 1A - 1 TITLE: RUN# 14 20:55 18 NOV 86

SAMPLE: BLANK 11-11 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	WI/2 (SEC)
1		0.0000	1.249		142192	BV	2.56
2		0.0000	1.413		490574	VV	3.25
3		0.0000	1.537		138364	VV	3.56
4		0.0000	1.686		29944	VV	3.31
5	~~0-BHC~~	25.3283	2.213	0.043	313376	BV	4.81
6		0.0000	2.935		540100	VV	6.94
7		0.0000	3.143		93144	VV	? 6.25
8		0.0000	3.440		242730	VV	? 18.88
9	~~HEPTACHLO~~	6.4922	3.598	-0.192	158614	VV	?
10		0.0000	3.998		287974	VV	? 17.81
11		0.0000	4.316		497945	VV	? 74.69
12		0.0000	5.121		238755	VV	? 26.50
13	~~HEPT EPOX~~	5.8812	5.522	-0.148	169507	VV	? 38.63
14		0.0000	6.585		94040	VV	32.13
15	A-ENDO ~~<CRAL~~	2.6684	7.020	-0.010	71835	VV	? 34.88
16	~~DIELDRIN~~	2.0828	8.450	0.260	61597	VB	27.94
17	ENDO SO4	2.8926	11.741	-0.169	56442	BV	37.44
18	~~4,4'DDT~~	1.2883	13.010	-0.250	20492	VB	19.88
19	DBC	60.2359	26.718	0.108	1346200	BB	69.06

TOTALS: 106.8697 -0.358 5282825

DETECTED PKS: 28 REJECTED PKS: 9

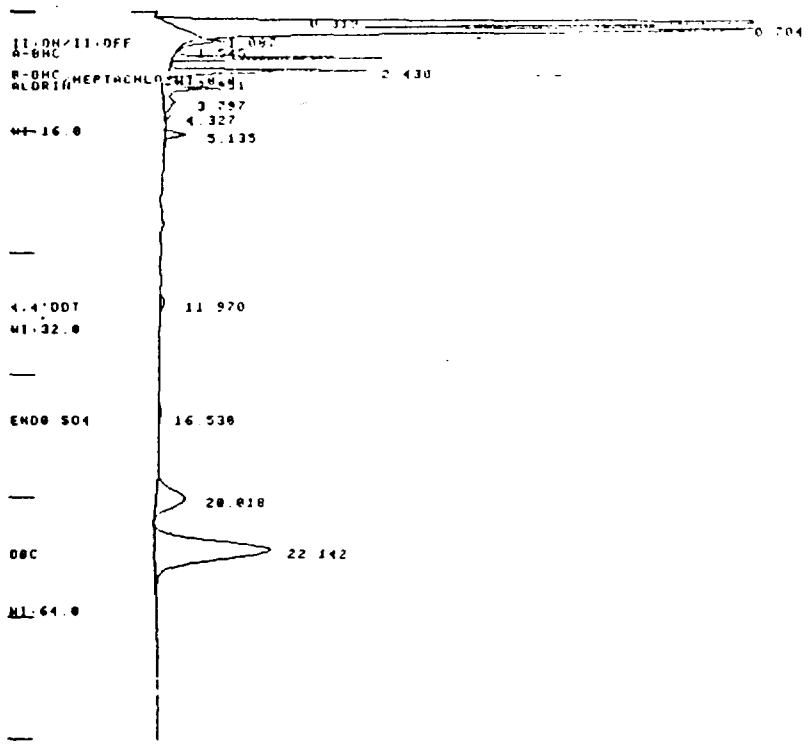
DIVISOR: 1.50000 MULTIPLIER: 1000.00000

NOISE: 217.1 OFFSET: -11

NOTES:
NOTEBOOK: 259-38 ANALYST:K.JUREK
SECURE AREA: D JOB#:U-4432,U-4442
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 SLY449

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



CHANNEL: 1B - 1 TITLE: RUN# 9 14:45 21 NOV 86

SAMPLE: BLANK 11/11 METHOD: PEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/~~DKS~~	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.675		361881	VB	4.06
2	~~B-BHC~~	0.0346	2.430	0.050	380483	BV	5.50
3		0.0000	2.954		32411	BV	7.56
4	~~ALDRIN~~	0.0046	3.191	0.081	136370	VV	7.63
5		0.0000	3.797		65003	VV	? 25.69
6	~~HEPT EPOX~~	0.0008	4.327	-0.313	20443	VB	? 21.94
7		0.0000	5.135		60718	BB	11.31
8	~~4,4'DDT~~	0.0051	11.970	-0.390	32572	BB	26.31
9	~~ENDO SO4~~	0.0024	16.530	-0.260	22236	BB	? 43.94
10		0.0000	20.018		349351	BV	47.06
11	DBC	0.0858	22.142	0.262	1519602	VB	50.31
TOTALS:		0.1333		-0.570	2981070		

DETECTED PKS: 27 REJECTED PKS: 16

DIVISOR: 1.00000 MULTIPLIER: 1.00000

NOISE: 91.4 OFFSET: 9

NOTES:
NOTEBOOK:259-40 ANALYST:RICHARD SAMSON
SECURE AREA: D JOB #U-4432;U-4442
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 CREEK.E68

Laboratory Name ecology and environment, inc.

Case No U-4432/U-4442

Sample Number BLANK

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 11-12-86

Date Analyzed 11-18-86

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)

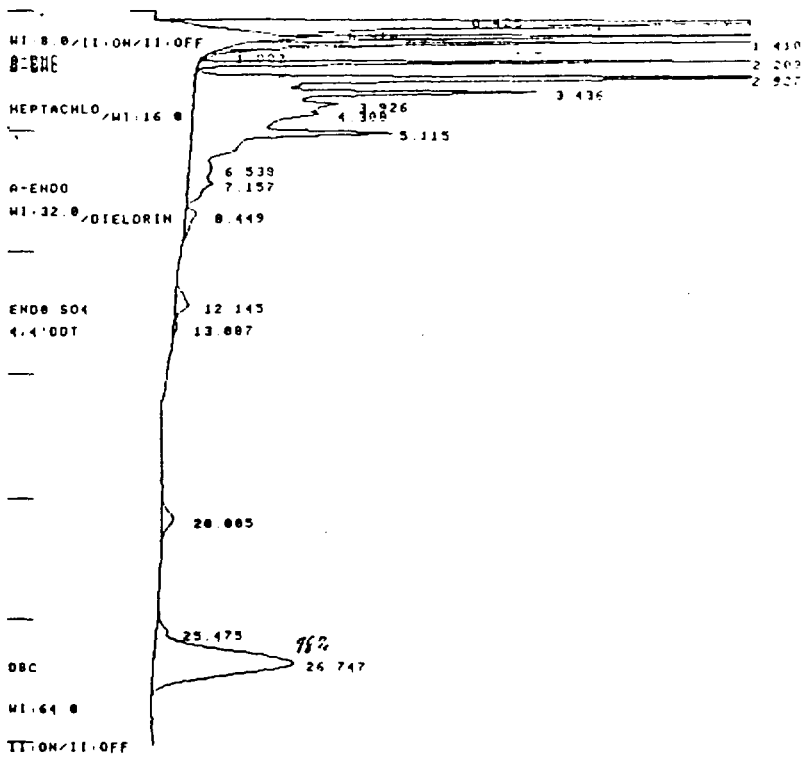
W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 30 V_t 1000 V_i 4

7-85

????CHART SPEED 0.5 CM/MIN
ATTEN: 9 ZERO: 10% 5 MIN/TICK



CHANNEL: 1A - 1 TITLE: RUN# /6 22:49 18 NOV 86

SAMPLE: BLANK 11-12 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	1.247		90138	BV	2.55
2		0.0000	1.410		313122	VV	3.25
3		0.0000	1.534		99466	VV	3.50
4	~~B-BHC~~	45.2828	2.209	0.039	560263	BV	4.88
5		0.0000	2.927		1265185	VV	7.13
6		0.0000	3.131		118355	VV	? 17.50
7		0.0000	3.436		655150	VV	10.06
8	~~HEPTACHLO~~	11.8462	3.926	0.136	299419	VV	? 18.19
9		0.0000	4.108		136939	VV	? 37.88
10		0.0000	4.308		471511	VV	? 28.75
11		0.0000	5.115		627992	VV	13.89
12		0.0000	6.538		115038	VV	? 65.19
13	~~A-ENDO~~	4.4078	7.157	0.127	116661	VB	? 33.75
14	~~DIELDRIN~~	1.9187	8.449	0.259	55745	BB	27.19
15	~~ENDO SO4~~	3.6789	12.145	0.235	71795	BV	45.00
16		0.0000	20.805		69750	BB	43.63
17		0.0000	25.475		38251	BV	? 26.25
18	DBC	51.7389	26.747	0.137	1155302	VB	63.13

TOTALS: 118.8733 0.933 6255072

DETECTED PKS: 28 REJECTED PKS: 10

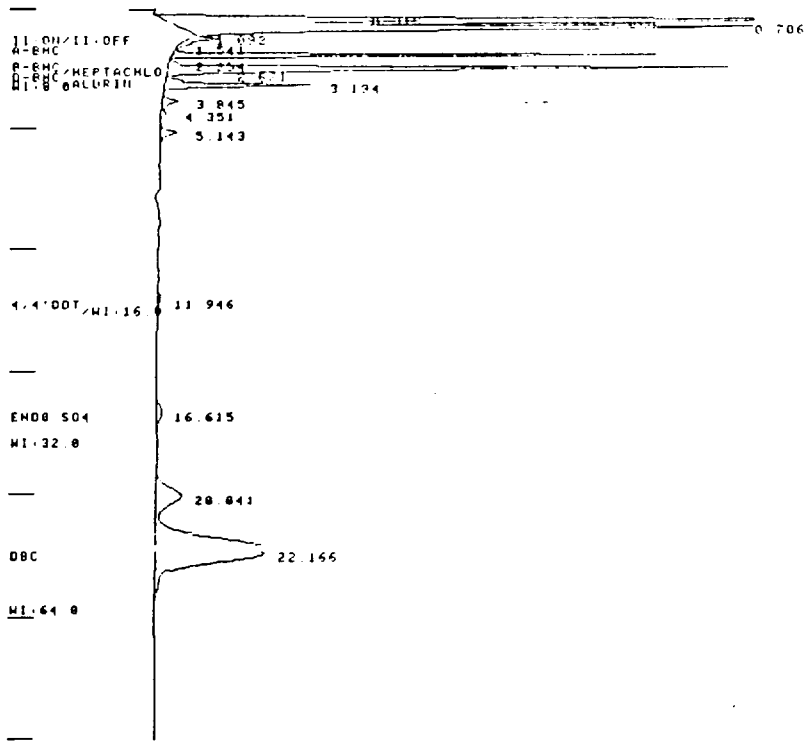
DIVISOR: 1.50000 MULTIPLIER: 1000.00000

NOISE: 22.9 OFFSET: 10

NOTES:
NOTEBOOK: 259-38 ANALYST: K. JUREK/ RICHARD SAMSON
SECURE AREA: D JOB#:U-4432,U-4442
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 SLY451

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



CHANNEL: 1B - 1 TITLE: RUN# 10 15:23 21 NOV 86

SAMPLE: BLANK 11/12 METHOD: PEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/~~LG~~	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		WI/2 (SEC)
1	~~G-BHC~~	0.0284	1.880	-0.200	734103	VB		4.00
2		0.0000	2.254		22964	BV	?	6.13
3	~~B-BHC~~	0.1055	2.436	0.056	1161484	VV		5.25
4	~~HEPTACHLO~~	0.0036	2.621	0.061	91753	VV	?	7.19
5		0.0000	2.951		47208	VV		6.94
6	~~ALDRIN~~	0.0092	3.194	0.084	271533	VB		6.88
7		0.0000	3.845		54819	BV		9.50
8		0.0000	5.143		62945	BB		11.69
9	~~ENDO SO4~~	0.0060	16.615	-0.175	56524	BB	?	40.31
10		0.0000	20.041		322827	BV		47.38
11	DBC	0.0843	22.166	0.286	1492587	VB		50.56
TOTALS:		0.2371		0.112	4318747			

DETECTED PKS: 28 REJECTED PKS: 17

DIVISOR: 1.00000 MULTIPLIER: 1.00000

NOISE: 57.1 OFFSET: -23

NOTES:
NOTEBOOK:259-40 ANALYST:RICHARD SAMSON
SECURE AREA: D JOB #U-4432;U-4442
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 CREEK669

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF

MEMORANDUM:

TO: Tim Polacek/Jimmy Greenlee
Federal Record Center

FROM: Jan Pfundheller, J.P.
U.S. EPA

Superfund Records Manager

DATE: May 11, 2000

SUBJECT: Recall of 7 Boxes

Please send the following boxes: (1)

Accession #412-98-0346 6 Boxes Location 535698-535703BAN

Accession #412-99-0293 1 Box Location 411626BAN

If you have any questions, please call me at (312)353-5821. Thanks!

5/12
G

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ATTACHMENT A

FORMS I

CASE NUMBERS U-4432 AND U-4442

SEDIMENT INORGANICS

Date 1-7-87

COVER PAGE
INORGANIC ANALYSES DATA PACKAGE

Lab Name ECOLOGY & ENVIRONMENT INC. Case No. U-4432/U-4442

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

Sample Numbers

	Lab ID No.		Lab ID No.
DC-SD-13	9651	DC-SD-22	9660
DC-SD-14	9652	DC-SD-23	9661
DC-SD-15	9653	DC-SD-24	9662
DC-SD-16	9654	DC-SD-25	9663
DC-SD-17	9655	DC-SD-26	9664
DC-SD-18	9656	DC-SD-27	9665
DC-SD-19	9657	DC-SD-28	9666
DC-SD-20	9658	DC-SD-29	9667
DC-SD-21	9659	DC-SD-31	9683

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 1-7-87

COVER PAGE
INORGANIC ANALYSES DATA PACKAGE

Lab Name Ecology & Environment Inc. Case No. U-4432/U-4442

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

Sample Numbers

	Lab ID No.			Lab ID No.
DC-SD-32	9684			
DC-SD-33	9685			
DC-SD-34	9686			
DC-SD-35	9687			
DC-SD-36	9688			

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

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

January 8, 1987

Job # U-4432
U-4442

Sample # DC-SD-13 through DC-SD-29
DC-SD-31 through DC-SD-36

CASE NARRATIVE

Enclosed are the inorganic analytical results for sediment samples received on November 6 and November 7, 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, 1986. Cyanide analysis was performed on November 17 and November 18, 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.

Spike recoveries for copper, lead, and zinc were not reported as the sample results for these elements exceeded the spike concentration by four times.

All samples have been flagged "*" for nickel and copper since the relative percent difference determined in the duplicate analysis exceeded the 20% limit. A comparison between the spike sample and duplicate results for these elements indicates that the variability in results may be due to the hetrogeneity of the samples.

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

Gary Hahn, Manager
Analytical Services Center

recycled paper

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

CHAIN-OF-CUSTODY RECORD

Project No.: IL3140
Project Name: DEAD CREEK
Project Manager: M. Miller
Samplers (Signatures): Ronald E Bock
Field Team Leader: Dan Sewall

STATION NUMBER	DATE	TIME	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE TYPE AIR	SAMPLE INFORMATION / EXPECTED COMPOUNDS (Concentration)*	STATION LOCATION	NUMBER OF CONTAINERS	1-8 oz. organics	1-8 oz. cyanide & metals	2-125 ml VOA				REMARKS
DC-SD 13	11-5-86	0955		X		Unknown	DC-SD-13	4	1	1	2				
DC-SD 14		1005		X			DC-SD-14	4	1	1	2				
DC-SD 15		1145		X			DC-SD-15	4	1	1	2				
DC-SD 16		1155		X			DC-SD-16	4	1	1	2				
DC-SD 17		1210		X			DC-SD-17	4	1	1	2				
DC-SD 18		1310		X			DC-SD-18	4	1	1	2				
DC-SD 19		1450		X			DC-SD-19	4	1	1	2				
DC-SD 20		1455		X			DC-SD-20	4	1	1	2				

Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Relinquished By: (Signature)	Date/Time:	Received By: (Signature)
Ronald E Bock	11-5-86 2000	Fed Exp			
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)
Fed Exp	11-6-86 8:00	Joe Chatelle			

Ship Via: Federal Express
BL Airbill Number: 221974 8274
Date: 11-5-86

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*See CONCENTRATION RANGE on back of form.

234055

4

ecology and environment, inc.
195 SUGG ROAD, P.O. BOX D, BUFFALO, N.Y., 14226, 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): Ronald E Bock
Field Team Leader: Dan Sewell

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. Organic	1-8oz. Cyanide + notch	2-120 ml VOA				REMARKS
DC-SD21	11-5-86	1620		X		Unknown	DC-SD-21	4	1	1	2				Metals Preserved with HNO_3 Cyanide Preserved with NaO
DC-SD22		1635		X			DC-SD-22	4	1	1	2				
DC-SD23		1652		X			DC-SD-23	4	1	1	2				
DC-SD24		1655		X			DC-SD-24	4	1	1	2				
DC-SD25		1725		X			DC-SD-25	4	1	1	2				
DC-SD26		1740		X			DC-SD-26	4	1	1	2				
DC-SD27		1750		X			DC-SD-27	4	1	1	2				
DC-SD28		1810		X			DC-SD-28	4	1	1	2				
DC-SD29		1855		X			DC-SD-29	4	1	1	2				

Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Relinquished By: (Signature)	Date/Time:	Received By: (Signature)
Ronald E Bock	11-5-86/2000	Fed Ex			
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)
Fed Ex		Joe Chatelle			

Ship Via: Federal Express
B/L/Airbill Number: 2219748274
Date: 11-5-86

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

2340

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

Page ____ of ____

Project No.: IL3140
Project Name: DEAD CREEK
Project Manager: M. Miller
Samplers: (Signatures) Ronald E Bock
Field Team Leader: Dan Sewall

STATION NUMBER	DATE	TIME	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE TYPE AIR	SAMPLE INFORMATION / EXPECTED COMPOUNDS (Concentration)*	STATION LOCATION	NUMBER OF CONTAINERS	1-5 oz. organics	1-8 oz. metals + cyanide	2-120 ml VOA				REMARKS
DC-SD-31	11-6-86	0955		X			DC-SD-31	4	1	1	2				
DC-SD-32		1245		X			DC-SD-32	4	1	1	2				
DC-SD-33		1230		X			DC-SD-33	4	1	1	2				
DC-SD-34		1235		X			DC-SD-34	4	1	1	2				
DC-SD-35		1320		X			DC-SD-35	4	1	1	2				
DC-SD-36		1330		X			DC-SD-36	4	1	1	2				

Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Relinquished By: (Signature)	Date/Time:	Received By: (Signature)
Ronald E Bock	11/6/86 1600	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)
Fed Express	11-7-86/0930	William H Hamm			

Ship Via: FEDERAL EXPRESS
BL/Airbill Number: 2219748424
Date: 11/6/86

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

2049

Form I

Sample No.
DC-SD-13

Date 1-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

SOW NO. 784

LAB SAMPLE ID. NO. 9651 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	4800			P	13.	Magnesium	NR			
2.	Antimony	22	R	U	P	14.	Manganese	197			P
3.	Arsenic	14	R		F	15.	Mercury	0.73			CV
4.	Barium	410			P	16.	Nickel	56	R	*	P
5.	Beryllium	1.9		U	P	17.	Potassium	NR			
6.	Cadmium	22			P	18.	Selenium	3.3			F
7.	Calcium	NR				19.	Silver	10			P
8.	Chromium	62			P	20.	Sodium	NR			
9.	Cobalt	6.6			P	21.	Thallium	3.6		U	F
10.	Copper	8740	*		P	22.	Tin	32			F
11.	Iron	16400			P	23.	Vanadium	23			P
12.	Lead	853			P	24.	Zinc	3310			P
Cyanide		1.9		U		Percent Solids (%)		52			

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 = NOT REQUESTED

Lab Manager: Bruce Rohrbach

Form I

Sample No.
DC-SD-14

Date 1-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

SOW NO. 784

LAB SAMPLE ID. NO. 9652 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	6380		P	13.	Magnesium	NR		
2.	Antimony	31	R U	P	14.	Manganese	153		P
3.	Arsenic	200	R	F	15.	Mercury	1.3		CV
4.	Barium	1110		P	16.	Nickel	502	R*	P
5.	Beryllium	2.6	U	P	17.	Potassium	NR		
6.	Cadmium	36		P	18.	Selenium	4.1		F
7.	Calcium	NR			19.	Silver	11		P
8.	Chromium	153		P	20.	Sodium	NR		
9.	Cobalt	9.2		P	21.	Thallium	5.3	U	F
10.	Copper	6700	*	P	22.	Tin	28		F
11.	Iron	19500		P	23.	Vanadium	27		P
12.	Lead	931		P	24.	Zinc	6650		P

Cyanide 3.8 Percent Solids (%) 37

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 = NOT REQUESTED

Lab Manager Bruce H Rohrbach

Form I

Sample No.
DC-SD-15

Date 1-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

SOW NO. 784

LAB SAMPLE ID. NO. 9653 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	6560		P	13.	Magnesium	NR		
2.	Antimony	18	R U	P	14.	Manganese	100		P
3.	Arsenic	3.6	R	F	15.	Mercury	0.13		CV
4.	Barium	156		P	16.	Nickel	356	R*	P
5.	Beryllium	1.5	U	P	17.	Potassium	NR		
6.	Cadmium	1.5		P	18.	Selenium	1.5	U	F
7.	Calcium	NR			19.	Silver	3.0	U	P
8.	Chromium	15		P	20.	Sodium	NR		
9.	Cobalt	7.7		P	21.	Thallium	3.0	U	F
10.	Copper	167	*	P	22.	Tin	12	U	F
11.	Iron	11100		P	23.	Vanadium	19		P
12.	Lead	26		F	24.	Zinc	868		P
Cyanide		1.5	U		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 = NOT REQUESTED

Lab Manager Burnett Rotkobel

Form I

Sample No.
DC-SD-16

Date 1-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

SOW NO. 784

LAB SAMPLE ID. NO. 9654 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	2430			P	13.	Magnesium	NR		
2.	Antimony	21	R	U	P	14.	Manganese	97		P
3.	Arsenic	12	R		F	15.	Mercury	0.56		CV
4.	Barium	131			P	16.	Nickel	258	R*	P
5.	Beryllium	1.7		U	P	17.	Potassium	NR		
6.	Cadmium	11			P	18.	Selenium	1.6	U	F
7.	Calcium	NR				19.	Silver	3.5	U	P
8.	Chromium	37			P	20.	Sodium	NR		
9.	Cobalt	7.2			P	21.	Thallium	3.3	U	F
10.	Copper	1270	*		P	22.	Tin	23		F
11.	Iron	26000			P	23.	Vanadium	17	U	P
12.	Lead	65			P	24.	Zinc	872		P
	Cyanide	1.7		U			Percent Solids (%)	58		

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 = NOT REQUESTED

Lab Manager Bruce H Rohrbach

Form I

Sample No.
DC-SD-17

Date 1-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

SOW NO. 784

LAB SAMPLE ID. NO. 9655 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	7510		P	13.	Magnesium	NR		
2.	Antimony	19	R U	P	14.	Manganese	139		P
3.	Arsenic	16	R	F	15.	Mercury	~~0.14~~ 0.16	UCV	
4.	Barium	196		P	16.	Nickel	309	R*	P
5.	Beryllium	1.6	U	P	17.	Potassium	NR		
6.	Cadmium	7.8		P	18.	Selenium	1.5	U	F
7.	Calcium	NR			19.	Silver	3.1	U	P
8.	Chromium	53		P	20.	Sodium	NR		
9.	Cobalt	5.0		P	21.	Thallium	2.9	U	F
10.	Copper	1780	*	P	22.	Tin	12	U	F
11.	Iron	14400		P	23.	Vanadium	19		P
12.	Lead	71		P	24.	Zinc	1010		P
Cyanide		1.6	U		Percent Solids (%)		63		

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 = NOT REQUESTED

Lab Manager Bruce H. Rohrbach

Form I

Sample No.
DC-SD-18

Date 1-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

SOW NO. 784

LAB SAMPLE ID. NO. 9656 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	5380		P	13.	Magnesium	NR		
2.	Antimony	23	R U	P	14.	Manganese	218		P
3.	Arsenic	16	R	F	15.	Mercury	0.90		CV
4.	Barium	467		P	16.	Nickel	82	R*	P
5.	Beryllium	1.9	U	P	17.	Potassium	NR		
6.	Cadmium	24		P	18.	Selenium	4.4		F
7.	Calcium	NR			19.	Silver	14		P
8.	Chromium	79		P	20.	Sodium	NR		
9.	Cobalt	6.3		P	21.	Thallium	3.7	U	F
10.	Copper	8640	*	P	22.	Tin	15	U	F
11.	Iron	16300		P	23.	Vanadium	24		P
12.	Lead	983		P	24.	Zinc	3440		P
Cyanide		2.0	U		Percent Solids (%)		49		

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 = NOT REQUESTED

Lab Manager Bruce H Rotabach

Form I

Sample No.
DC-SD-19

Date 1-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

SOW NO. 784

LAB SAMPLE ID. NO. 9657 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	9750		P	13.	Magnesium	NR		
2.	Antimony	24	R U	P	14.	Manganese	82		P
3.	Arsenic	21	R	F	15.	Mercury	1.68		CV
4.	Barium	17300		P	16.	Nickel	1520	R*	P
5.	Beryllium	2.0	U	P	17.	Potassium	NR		
6.	Cadmium	30		P	18.	Selenium	2.0		F
7.	Calcium	NR			19.	Silver	15		P
8.	Chromium	118		P	20.	Sodium	NR		
9.	Cobalt	11		P	21.	Thallium	4.0		F
10.	Copper	15300	*	P	22.	Tin	16		F
11.	Iron	58200		P	23.	Vanadium	48		P
12.	Lead	1460		P	24.	Zinc	11900		P
Cyanide		2.1	U		Percent Solids (%)		47		

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 = NOT REQUESTED

Lab Manager Bruce H Rotebach

Form I

Sample No.
DC-SD-20

Date 1-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

SOW NO. 784

LAB SAMPLE ID. NO. 9658 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	12900		P	13.	Magnesium	NR		
2.	Antimony	20	R U	P	14.	Manganese	70		P
3.	Arsenic	13	R	F	15.	Mercury	0.89		CV
4.	Barium	3120		P	16.	Nickel	867	R*	P
5.	Beryllium	1.7	U	P	17.	Potassium	NR		
6.	Cadmium	8.2		P	18.	Selenium	1.6	U	F
7.	Calcium	NR			19.	Silver	3.4	U	P
8.	Chromium	113		P	20.	Sodium	NR		
9.	Cobalt	6.9		P	21.	Thallium	3.3	U	F
10.	Copper	2610	*	P	22.	Tin	13	U	F
11.	Iron	21300		P	23.	Vanadium	25		P
12.	Lead	330		P	24.	Zinc	6610		P
Cyanide		1.7	U		Percent Solids (%)		58		

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 = NOT REQUESTED

Lab Manager Bennett Rabstrad

Form I

Sample No.
DC-SD-21

Date 1-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

SOW NO. 784

LAB SAMPLE ID. NO. 9659 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	12600		P	13.	Magnesium	NR		
2.	Antimony	27	R U	P	14.	Manganese	177		P
3.	Arsenic	5.1	R	F	15.	Mercury	0.71		CV
4.	Barium	376		P	16.	Nickel	116	R*	P
5.	Beryllium	2.3	U	P	17.	Potassium	NR		
6.	Cadmium	17		P	18.	Selenium	2.1	U	F
7.	Calcium	NR			19.	Silver	4.5	U	P
8.	Chromium	41		P	20.	Sodium	NR		
9.	Cobalt	7.5		P	21.	Thallium	4.3	U	F
10.	Copper	580	*	P	22.	Tin	17	U	F
11.	Iron	18400		P	23.	Vanadium	32		P
12.	Lead	467		P	24.	Zinc	1370		P
Cyanide		2.3	U		Percent Solids (%)		43		

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 = NOT REQUESTED

Lab Manager Bernett Rohstrach

Form I

Sample No.
DC-SD-22

Date 1-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

SOW NO. 784

LAB SAMPLE ID. NO. 9660 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	7530			P	13.	Magnesium	NR		
2.	Antimony	26	R	U	P	14.	Manganese	98		P
3.	Arsenic	9.0	R		F	15.	Mercury	0.95		CV
4.	Barium	570			P	16.	Nickel	838	R*	P
5.	Beryllium	2.2		U	P	17.	Potassium	NR		
6.	Cadmium	34			P	18.	Selenium	2.1	U	F
7.	Calcium	NR				19.	Silver	4.3	U	P
8.	Chromium	60			P	20.	Sodium	NR		
9.	Cobalt	10			P	21.	Thallium	4.2	U	F
10.	Copper	5910	*		P	22.	Tin	17	U	F
11.	Iron	18000			P	23.	Vanadium	22		P
12.	Lead	593			P	24.	Zinc	15600		P
Cyanide		2.2		U		Percent Solids (%)		45		

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 = NOT REQUESTED

Lab Manager Bruce H Rotstein

Form I

Sample No.
DC-SD-23

Date 1-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

SOW NO. 784

LAB SAMPLE ID. NO. 9661 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	8450		P	13.	Magnesium	NR		
2.	Antimony	30	R U	P	14.	Manganese	161		P
3.	Arsenic	33	R	F	15.	Mercury	1.64		CV
4.	Barium	1700		P	16.	Nickel	1290	R*	P
5.	Beryllium	2.5	U	P	17.	Potassium	NR		
6.	Cadmium	27		P	18.	Selenium	2.7	U	F
7.	Calcium	NR			19.	Silver	5.0	U	P
8.	Chromium	54		P	20.	Sodium	NR		
9.	Cobalt	6.6		P	21.	Thallium	5.3	U	F
10.	Copper	6640	*	P	22.	Tin	21	U	F
11.	Iron	35800		P	23.	Vanadium	27		P
12.	Lead	975		P	24.	Zinc	6880		P
Cyanide		2.7	U		Percent Solids (%)		37		

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 = NOT REQUESTED

Lab Manager Barnett Rohrbach

Form I

Sample No.
DC-SD-24

Date 1-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

SOW NO. 784

LAB SAMPLE ID. NO. 9662 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	12600			P	13.	Magnesium	NR		
2.	Antimony	19	R	U	P	14.	Manganese	151		P
3.	Arsenic	30	R		F	15.	Mercury	2.81		CV
4.	Barium	1010			P	16.	Nickel	748	R*	P
5.	Beryllium	1.6		U	P	17.	Potassium	NR		
6.	Cadmium	42			P	18.	Selenium	2.5		F
7.	Calcium	NR				19.	Silver	3.1	U	P
8.	Chromium	68			P	20.	Sodium	NR		
9.	Cobalt	7.2			P	21.	Thallium	3.2	U	F
10.	Copper	2440	*		P	22.	Tin	13	U	F
11.	Iron	50900			P	23.	Vanadium	36		P
12.	Lead	661			P	24.	Zinc	6430		P
Cyanide		1.6		U		Percent Solids (%)		61		

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 = NOT REQUESTED

Lab Manager Bruce H Calabrese

Form I

Sample No.
DC-SD-25

Date 1-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

SOW NO. 784

LAB SAMPLE ID. NO. 9663 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	11250		P	13.	Magnesium	NR		
2.	Antimony	24	R U	P	14.	Manganese	190		P
3.	Arsenic	3.2	R	F	15.	Mercury	0.79		CV
4.	Barium	239		P	16.	Nickel	174	R*	P
5.	Beryllium	2.0	U	P	17.	Potassium	NR		
6.	Cadmium	12		P	18.	Selenium	2.0	U	F
7.	Calcium	NR			19.	Silver	4.1	U	P
8.	Chromium	33		P	20.	Sodium	NR		
9.	Cobalt	5.2		P	21.	Thallium	4.1	U	F
10.	Copper	379	*	P	22.	Tin	16	U	F
11.	Iron	22800		P	23.	Vanadium	37		P
12.	Lead	146		P	24.	Zinc	1010		P
Cyanide		2.1	U		Percent Solids (%)		48		

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 = NOT REQUESTED

Lab Manager Bruce H Robertson

Form I

Sample No.
DC-SD-26

Date 1-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

SOW NO. 784

LAB SAMPLE ID. NO. 9664 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	12500		P	13.	Magnesium	NR		
2.	Antimony	18	R U	P	14.	Manganese	273		P
3.	Arsenic	7.8	R	F	15.	Mercury	0.89		CV
4.	Barium	622		P	16.	Nickel	665	R*	P
5.	Beryllium	1.5	U	P	17.	Potassium	NR		
6.	Cadmium	42		P	18.	Selenium	1.5	U	F
7.	Calcium	NR			19.	Silver	3.0	U	P
8.	Chromium	48		P	20.	Sodium	NR		
9.	Cobalt	12		P	21.	Thallium	3.0	U	F
10.	Copper	1630	*	P	22.	Tin	12	U	F
11.	Iron	40200		P	23.	Vanadium	32		P
12.	Lead	480		P	24.	Zinc	6590		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 = NOT REQUESTED

Lab Manager Bennett Rabehael

Form I

Sample No.
DC-SD-27

Date 1-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

SOW NO. 784

LAB SAMPLE ID. NO. 9665 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	6400		P	13.	Magnesium	NR		
2.	Antimony	44	R U	P	14.	Manganese	178		P
3.	Arsenic	4.7	R	F	15.	Mercury	0.34		CV
4.	Barium	214		P	16.	Nickel	537	R*	P
5.	Beryllium	3.6	U	P	17.	Potassium	NR		
6.	Cadmium	23		P	18.	Selenium	3.6	U	F
7.	Calcium	NR			19.	Silver	7.3	U	P
8.	Chromium	34		P	20.	Sodium	NR		
9.	Cobalt	7.3	U	P	21.	Thallium	7.2	U	F
10.	Copper	1320	*	P	22.	Tin	29	U	F
11.	Iron	31300		P	23.	Vanadium	36	U	P
12.	Lead	309		P	24.	Zinc	2380		P
Cyanide		3.8	U		Percent Solids (%)		26		

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 = NOT REQUESTED

Lab Manager Bruce H Cokebard

Form I

Sample No.
DC-SD-28

Date 1-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

SOW NO. 784

LAB SAMPLE ID. NO. 9666 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	5870		P	13.	Magnesium	NR		
2.	Antimony	18	R U	P	14.	Manganese	191		P
3.	Arsenic	5.1	R	F	15.	Mercury	0.18		CV
4.	Barium	199		P	16.	Nickel	236	R*	P
5.	Beryllium	1.5	U	P	17.	Potassium	NR		
6.	Cadmium	5.6		P	18.	Selenium	1.5	U	F
7.	Calcium	NR			19.	Silver	3.0	U	P
8.	Chromium	13		P	20.	Sodium	NR		
9.	Cobalt	6.4		P	21.	Thallium	2.9	U	F
10.	Copper	247	*	P	22.	Tin	12	U	F
11.	Iron	15000			23.	Vanadium	17		P
12.	Lead	44		P	24.	Zinc	917		P
Cyanide		1.5	U		Percent Solids (%)		67		

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 = NOT REQUESTED

Lab Manager Burnett Rohrbach

Form I

Sample No.
DC-SD-29

Date 1-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

SOW NO. 784

LAB SAMPLE ID. NO. 9667 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	11800		P	13.	Magnesium	NR		
2.	Antimony	15	R U	P	14.	Manganese	412		P
3.	Arsenic	5.6	R	F	15.	Mercury	0.07	U	CV
4.	Barium	362		P	16.	Nickel	18	R*	P
5.	Beryllium	1.2	U	P	17.	Potassium	NR		
6.	Cadmium	2.5		P	18.	Selenium	1.2	U	F
7.	Calcium	NR			19.	Silver	2.5	U	P
8.	Chromium	15		P	20.	Sodium	NR		
9.	Cobalt	5.8		P	21.	Thallium	2.3	U	F
10.	Copper	35	*	P	22.	Tin	9.3	U	F
11.	Iron	16600		P	23.	Vanadium	27		P
12.	Lead	47		P	24.	Zinc	197		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 = NOT REQUESTED

Lab Manager Bennett Patterson

Form I

Sample No.
DC-SD-31

Date 1-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

SOW NO. 784

LAB SAMPLE ID. NO. 9683 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	10500		P	13.	Magnesium	NR		
2.	Antimony	14	R U	P	14.	Manganese	384		P
3.	Arsenic	5.2	R	F	15.	Mercury	0.08	U	CV
4.	Barium	277		P	16.	Nickel	19	R*	P
5.	Beryllium	1.2	U	P	17.	Potassium	NR		
6.	Cadmium	2.1		P	18.	Selenium	1.1	U	F
7.	Calcium	NR			19.	Silver	2.4	U	P
8.	Chromium	13		P	20.	Sodium	NR		
9.	Cobalt	5.4		P	21.	Thallium	2.3	U	F
10.	Copper	31	*	P	22.	Tin	9.1	U	F
11.	Iron	15700		P	23.	Vanadium	24		P
12.	Lead	30		P	24.	Zinc	172		P
Cyanide		1.3	U		Percent Solids (%)		80		

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: NR = NOT REQUESTED

Lab Manager Burnett Patterson

Form I

Sample No.
DC-SD-32

Date 1-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

SOW NO. 784

LAB SAMPLE ID. NO. 9684 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	8570		P	13.	Magnesium	NR		
2.	Antimony	16	R U	P	14.	Manganese	123		P
3.	Arsenic	18	R	F	15.	Mercury	2.81		CV
4.	Barium	430		P	16.	Nickel	765	R*	P
5.	Beryllium	1.3	U	P	17.	Potassium	NR		
6.	Cadmium	18		P	18.	Selenium	1.4	U	F
7.	Calcium	NR			19.	Silver	6.0		P
8.	Chromium	34		P	20.	Sodium	NR		
9.	Cobalt	8.9		P	21.	Thallium	2.8	U	F
10.	Copper	2620	*	P	22.	Tin	14		F
11.	Iron	25000		P	23.	Vanadium	24		P
12.	Lead	225		P	24.	Zinc	1590		P
Cyanide		1.4	U		Percent Solids (%)		71		

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 = NOT REQUESTED

Lab Manager Bruce H Rotstein

Form I

Sample No.
DC-SD-33

Date 1-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

SOW NO. 784

LAB SAMPLE ID. NO. 9685 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	6720		P	13.	Magnesium	NR		
2.	Antimony	19	R U	P	14.	Manganese	69		P
3.	Arsenic	30	R	F	15.	Mercury	4.06		CV
4.	Barium	287		P	16.	Nickel	310	R*	P
5.	Beryllium	1.6	U	P	17.	Potassium	NR		
6.	Cadmium	25		P	18.	Selenium	3.3		F
7.	Calcium	NR			19.	Silver	26		P
8.	Chromium	102		P	20.	Sodium	NR		
9.	Cobalt	3.2		P	21.	Thallium	3.0	U	F
10.	Copper	4630	*	P	22.	Tin	76		F
11.	Iron	37400		P	23.	Vanadium	20		P
12.	Lead	1900		P	24.	Zinc	1510		P
Cyanide		1.6	U		Percent Solids (%)		63		

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 = NOT REQUESTED

Lab Manager Bruce H Rotstrad

Form I

Sample No.
DC-SD-34

Date 1-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

SOW NO. 784

LAB SAMPLE ID. NO. 9686 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	8310		P	13.	Magnesium	NR		
2.	Antimony	18	R U	P	14.	Manganese	66		P
3.	Arsenic	76	R	F	15.	Mercury	5.62		CV
4.	Barium	287		P	16.	Nickel	255	R*	P
5.	Beryllium	1.5	U	P	17.	Potassium	NR		
6.	Cadmium	22		P	18.	Selenium	7.5	U	F
7.	Calcium	NR			19.	Silver	23		P
8.	Chromium	121		P	20.	Sodium	NR		
9.	Cobalt	3.0	U	P	21.	Thallium	3.0	U	F
10.	Copper	3130	*	P	22.	Tin	412		F
11.	Iron	36100		P	23.	Vanadium	23		P
12.	Lead	2030		P	24.	Zinc	1230		P
Cyanide		1.5	U		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 = NOT REQUESTED

Lab Manager Bruce H Rotstein

Form I

Sample No.
DC-SD-35

Date 1-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

SOW NO. 784

LAB SAMPLE ID. NO. 9687 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	7210		P	13.	Magnesium	NR		
2.	Antimony	21	R U	P	14.	Manganese	296		P
3.	Arsenic	21	R	F	15.	Mercury	3.00		CV
4.	Barium	732		P	16.	Nickel	559	R*	P
5.	Beryllium	1.7	U	P	17.	Potassium	NR		
6.	Cadmium	31		P	18.	Selenium	3.0		F
7.	Calcium	NR			19.	Silver	33		P
8.	Chromium	206		P	20.	Sodium	NR		
9.	Cobalt	27		P	21.	Thallium	3.3	U	F
10.	Copper	11400	*	P	22.	Tin	57		F
11.	Iron	36600		P	23.	Vanadium	25		P
12.	Lead	1600		P	24.	Zinc	3420		P
Cyanide		1.8	U		Percent Solids (%)		55		

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 = NOT REQUESTED

Lab Manager Bruce H Rohrbach

Form I

Sample No.
DC-SD-36

Date 1-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

SOW NO. 784

LAB SAMPLE ID. NO. 9688 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	9180		P	13.	Magnesium	NR		
2.	Antimony	19	R U	P	14.	Manganese	153		P
3.	Arsenic	12	R	F	15.	Mercury	1.18		CV
4.	Barium	328		P	16.	Nickel	307	R*	P
5.	Beryllium	1.6	U	P	17.	Potassium	NR		
6.	Cadmium	17		P	18.	Selenium	1.5	U	F
7.	Calcium	NR			19.	Silver	13		P
8.	Chromium	75		P	20.	Sodium	NR		
9.	Cobalt	11		P	21.	Thallium	3.0	U	F
10.	Copper	10300	*	P	22.	Tin	12	U	F
11.	Iron	21900		P	23.	Vanadium	22		P
12.	Lead	910		P	24.	Zinc	2740		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 = NOT REQUESTED

Lab Manager Bruce H Rotobaul

Form II

Q. C. Report No. _____

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Ecology & Environment Inc.

CASE NO. U-4432 / U-4442

SOW NO. 784

DATE 11-19-86 (CN - 11/17/86)

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	492	98	500	520	104	499	100	P
2. Antimony	500	475	95	500	499	100	542	108	P
3. Arsenic									
4. Barium	500	486	97	500	527	105	550	110	P
5. Beryllium	500	491	98	500	492	98	508	102	P
6. Cadmium	500	505	101	500	525	105	541	108	P
7. Calcium									
8. Chromium	500	492	98	500	498	100	496	99	P
9. Cobalt	500	488	98	500	498	100	532	106	P
10. Copper	500	488	98	500	498	100	524	105	P
11. Iron									
12. Lead									
13. Magnesium									
14. Manganese	500	492	98	500	499	100	522	104	P
15. Mercury									
16. Nickel	500	481	96	500	499	100	515	103	P
17. Potassium									
18. Selenium									
19. Silver	500	490	98	500	507	101	520	104	P
20. Sodium									
21. Thallium									
22. Tin									
23. Vanadium	500	500	100	500	511	102	530	106	P
24. Zinc	500	507	101	500	519	104	533	107	P
Other:									
Cyanide				48	45	94			

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 & Environment Inc.

CASE NO. U-4432 / U-4442

SOW NO. 784

DATE 11-19-86 (CN - 11/17/86)

UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum				500	521	104			P
2. Antimony				500	542	108			P
3. Arsenic									
4. Barium				500	565	113			P
5. Beryllium				500	509	102			P
6. Cadmium				500	546	109			P
7. Calcium									
8. Chromium				500	502	100			P
9. Cobalt				500	529	106			P
10. Copper				500	521	104			P
11. Iron									
12. Lead									
13. Magnesium									
14. Manganese				500	525	105			P
15. Mercury									
16. Nickel				500	515	103			P
17. Potassium									
18. Selenium									
19. Silver				500	516	103			P
20. Sodium									
21. Thallium									
22. Tin									
23. Vanadium				500	540	108			P
24. Zinc				500	536	107			P
Other:									
Cyanide				48	45	94			

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 & Environment Inc.

CASE NO. U-4432 / U-4442

SOW NO. 784

DATE 11-21-86 (CN - 11/18/86)

UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									
2. Antimony									
3. Arsenic									
4. Barium	500	526	105	500	537	107			P
5. Beryllium									
6. Cadmium									
7. Calcium									
8. Chromium									
9. Cobalt									
10. Copper									
11. Iron	500	513	103	500	521	104			P
12. Lead									
13. Magnesium									
14. Manganese									
15. Mercury									
16. Nickel	500	514	103	500	526	105			P
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 & Environment Inc.

CASE NO. U-4432/U-4442

SOW NO. 784

DATE 11-26-86

UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									
2. Antimony									
3. Arsenic									
4. Barium	500	504	101	500	530	106	532	106	P
5. Beryllium									
6. Cadmium									
7. Calcium									
8. Chromium									
9. Cobalt									
10. Copper									
11. Iron	500	517	103	500	527	105	532	106	P
12. Lead									
13. Magnesium									
14. Manganese	500	510	102	500	523	105			P
15. Mercury									
16. Nickel	500	514	103	500	521	104	535	107	P
17. Potassium									
18. Selenium									
19. Silver									
20. Sodium									
21. Thallium									
22. Tin									
23. Vanadium									
24. Zinc	500	502	100	500	525	105	528	106	P
Other:									
Cyanide									

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 & Environment Inc.

CASE NO. U-4432 / U-4442

SOW NO. 784

DATE 11-26-86

UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									
2. Antimony									
3. Arsenic									
4. Barium				500	528	106			P
5. Beryllium									
6. Cadmium									
7. Calcium									
8. Chromium									
9. Cobalt									
10. Copper									
11. Iron				500	525	105			P
12. Lead									
13. Magnesium									
14. Manganese									
15. Mercury									
16. Nickel				500	528	106			P
17. Potassium									
18. Selenium									
19. Silver									
20. Sodium									
21. Thallium									
22. Tin									
23. Vanadium									
24. Zinc									
Other:									
Cyanide									

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 & Environment Inc.

CASE NO. U-4432 / U-4442

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									
2. Antimony									
3. Arsenic									
4. Barium									
5. Beryllium									
6. Cadmium									
7. Calcium									
8. Chromium									
9. Cobalt									
10. Copper									
11. Iron									
12. Lead	500	506	101	500	506	101	493	99	P
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:									
LEAD	500	506	101	500	510	102			P
Cyanide									

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 & Environment Inc.

CASE NO. U-4432/U-4442

SOW NO. 784

DATE 12-16-86

UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									
2. Antimony									
3. Arsenic	50	49	98	50	48	96	49	98	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: Arsenic				50	55	110	53	106	F
Arsenic				50	52	104			F
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 & Environment Inc. CASE NO. V-4432 / V-4442

DATE Sn, Tl - 12/19/86. As - 12/23/86 Se - 12/22/86 SOW NO. 784

UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									
2. Antimony									
3. Arsenic	50	53	106	50	45	90	45	90	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	26	104	25	24	96	24	96	F
19. Silver									
20. Sodium									
21. Thallium	50	50	100	50	52	104	48	96	F
22. Tin	100	96	96	100	98	98	102	102	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 & Environment Inc. CASE NO. U-4432/U-4442

Se - 12/22/86 SOW NO. 784

DATE Sn, Tl - 12/19/86 UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									
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				25	27	108	25	100	F
19. Silver									
20. Sodium									
21. Thallium				50	49	98			F
22. Tin				100	101	101	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 & Environment Inc. CASE NO. U-4432/U-4442

12-21-86 — Hg SOW NO. 784

DATE 12-30-86 UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									
2. Antimony									
3. Arsenic									
4. Barium									
5. Beryllium									
6. Cadmium									
7. Calcium									
8. Chromium									
9. Cobalt									
10. Copper									
11. Iron	500	522	104	500	506	101			P
12. Lead									
13. Magnesium									
14. Manganese	500	530	106	500	496	99			P
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									

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 & Environment Inc.

CASE NO. U-4432/U-4442

SOW NO. 784

DATE 1-5-87

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	50	52	104	50	49	98	52	104	F
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									

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 & Environment Inc. CASE NO. U-4432/U-4442

DATE 11-19-86 UNITS ug/L

CN - 11/17/86 Matrix WATER

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum	200 U	200 U	200 U	200 U		200 U	
2. Antimony	60 U	60 U	60 U	60 U		60 U	
3. Arsenic							
4. Barium	200 U	200 U	200 U	200 U		200 U	
5. Beryllium	5 U	5 U	5 U	5 U		5 U	
6. Cadmium	5 U	5 U	5 U	5 U		5 U	
7. Calcium							
8. Chromium							
9. Cobalt	50 U	50 U	50 U	50 U		50 U	
10. Copper	25 U	25 U	25 U	25 U		25 U	
11. Iron							
12. Lead							
13. Magnesium							
14. Manganese	15 U	15 U	15 U	15 U		15 U	
15. Mercury							
16. Nickel	40 U	40 U	40 U	40 U		40 U	
17. Potassium							
18. Selenium							
19. Silver	10 U	10 U	10 U	10 U		10 U	
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium	50 U	50 U	50 U	50 U		50 U	
24. Zinc	20 U	20 U	20 U	20 U		20 U	
Other:							
Cyanide	10 U					10 U	10 U

Form III

Q. C. Report No. _____

BLANKS

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

DATE 11-21-86 UNITS µg/L

Matrix WATER

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	200 U	200 U					
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron	100 U	100 U					
12. Lead							
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel	40 U	40 U					
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 & Environment Inc. CASE NO. U-4432/U-4442

DATE 12-12-86 UNITS ug/L

CN - 11/18/86 Matrix WATER

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	50 U	50 U	50 U	50 U		50 U	
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide	10 U					10 U	

Form III

Q. C. Report No. _____

BLANKS

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

DATE 12-26-86 UNITS ug/L

Matrix WATER

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	200 U	200 U	200 U			200 U	
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron	100 U	100 U	100 U	100 U		100 U	
12. Lead							
13. Magnesium							
14. Manganese	15 U	15 U				15 U	
15. Mercury							
16. Nickel	40 U	40 U	40 U	40 U		40 U	
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium							
24. Zinc	20 U	20 U	20 U			20 U	
Other:							
Cyanide							

Form III

Q. C. Report No. _____

BLANKS

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

DATE 12-16-86 UNITS ug/L

Matrix WATER

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic	10 U	10 U	10 U	10 U	10 U	10 U	
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead							
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Arsenic		10 U					
Cyanide							

Form III

Q. C. Report No. _____

BLANKS

LAB NAME Ecology & Environment Inc.

CASE NO. U-4432/U-4442

DATE Sn, Tl - 12/19/86
Se - 12/22/86
As - 12/23/86

UNITS ug/L

Matrix WATER

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead							
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium	5 U	5 U	5 U	5 U	5 U	5 U	5 U
19. Silver							
20. Sodium							
21. Thallium	10 U	10 U	10 U	10 U		10 U	10 U
22. Tin	40 U	40 U	40 U	40 U	40 U	40 U	40 U
23. Vanadium							
24. Zinc							
Other:							
Arsenic		10 U					
Cyanide							

Form III

Q. C. Report No. _____

BLANKS

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

DATE 12-30-86 UNITS ug/L

Hg - 12/21/86 Matrix WATER

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	100 U	100 U				100 U	
12. Lead							
13. Magnesium							
14. Manganese	15 U	15 U				15 U	
15. Mercury	0.2 U					0.2 U	
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 & Environment Inc. CASE NO. U-4432/U-4442

DATE 1-5-87 UNITS µg/L

Matrix WATER

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead	5 U	5U	5U			5U	
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide							

Form V

Q. C. Report No. _____

SPIKE SAMPLE RECOVERY

LAB NAME Ecology & Environment Inc.

DATE 1-7-87

CASE NO. U-4432/U-4442

Sample No. DC-SD-36

Lab Sample ID No. 9688

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	"	97	19 U	144	67 R
3. Arsenic	"	18	12	12	50 R
4. Barium	"	877	328	577	95
5. Beryllium	"	15	1.6 U	14	107
6. Cadmium	"	33	17	14	114
7. Calcium	"				
8. Chromium	"	136	75	58	105
9. Cobalt	"	156	11	144	101
10. Copper	"	11100	10300	72	—
11. Iron	"				
12. Lead	"	802	910	166	—
13. Magnesium	"				
14. Manganese	"	313	153	144	111
15. Mercury	"				
16. Nickel	"	525	307	144	151 R
17. Potassium	"				
18. Selenium	"	3.9	1.5 U	3.1	126
19. Silver	"	28	13	14	107
20. Sodium	"				
21. Thallium	"	16	3.0 U	15	107
22. Tin	"				
23. Vanadium	"	169	22	144	102
24. Zinc	"	3060	2740	144	—
Other:					
Cyanide	"	11	1.6 U	10	91

1 %R = [(SSR - SR)/SA] x 100 "R"- out of control

Form V

Q. C. Report No. _____

SPIKE SAMPLE RECOVERY

LAB NAME Ecology & Environment Inc.

CASE NO. V-4432/V-4442

Sample No. DC-SD-31

DATE 1-7-87

Lab Sample ID No. 9683

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	"	0.43	0.08 U	0.40	108
16. Nickel	"				
17. Potassium	"				
18. Selenium	"				
19. Silver	"				
20. Sodium	"				
21. Thallium	"				
22. Tin	"				
23. Vanadium	"				
24. Zinc	"				
Other:					
Cyanide	"				

1 %R = [(SSR - SR)/SA] x 100

"R"- out of control

Form VI

Q. C. Report No. _____

DUPLICATES

LAB NAME Ecology & Environment Inc.

CASE NO. V-4432/V-4442

Sample No. DC-SD-36

DATE 1-7-87

Lab Sample ID No. 9688

Units mg/kg dry weight

Matrix SOIL

Compound	Control Limit[1]	Sample(S)	Duplicate(D)	RPD[2]
Metals:				
1. Aluminum		9180	10200	10
2. Antimony		19 U	18 U	NC
3. Arsenic		12	12	0
4. Barium		328	365	11
5. Beryllium		1.6 U	1.5 U	NC
6. Cadmium		17	19	11
7. Calcium				
8. Chromium		75	84	11
9. Cobalt		11	12	8.7
10. Copper		10300	26000	86 *
11. Iron		21900	25400	15
12. Lead		910	955	4.8
13. Magnesium				
14. Manganese		153	165	7.5
15. Mercury				
16. Nickel		307	418	31 *
17. Potassium				
18. Selenium		1.5 U	1.5 U	NC
19. Silver		13	13	0
20. Sodium				
21. Thallium		3.0 U	2.9 U	NC
22. Tin		12 U	12	NC
23. Vanadium		22	24	8.7
24. Zinc		2740	3160	14
Other:				
Cyanide				

* Out of Control

[1] To be added at a later date.

[2] RPD = [|S - D|/((S + D)/2)] x 100

NC - Non calculable RPD due to value(s) less than CRDL

Form VI

Q. C. Report No. _____

DUPLICATES

LAB NAME Ecology & Environment Inc.

DATE 1-7-87

CASE NO. U-4432/U-4442
Sample No. 9683
Lab Sample ID No. DC-SD-31
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		0.08 U	0.08 U	NC
16. Nickel				
17. Potassium				
18. Selenium				
19. Silver				
20. Sodium				
21. Thallium				
22. Tin				
23. Vanadium				
24. Zinc				
Other:				
Cyanide		1.5 U	1.5 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

CN DUPLICATE : DC-SD-28 (E&E # 9666)

Form VII

Q.C. Report No. _____

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

DATE 11-19-86 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	1070	110
2. Antimony	60	60	5	990	978	99
3. Arsenic	10		5			
4. Barium	200	10		970	1050	108
5. Beryllium	5	5		960	911	95
6. Cadmium	5	5	1	940	895	95
7. Calcium	5000	1000				
8. Chromium	10	10	5	1030	971	94
9. Cobalt	50	10		1000	944	94
10. Copper	25	10		1030	932	90
11. Iron	100	25				
12. Lead	5	50	5			
13. Magnesium	5000	1000				
14. Manganese	15	5		1020	945	93
15. Mercury	0.2	0.2				
16. Nickel	40	15		1020	937	92
17. Potassium	5000	1000				
18. Selenium	5		5			
19. Silver	10	10	5	120	113	94
20. Sodium	5000	1000				
21. Thallium	10		5			
22. Tin	40		5			
23. Vanadium	50	10		1010	949	94
24. Zinc	20	10		1010	978	97
Other:						
Cyanide	10	10				

Form VII

Q.C. Report No. _____

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME Ecology & Environment CASE NO. V-4432/V-4442

DATE 11-26-86 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	60	5			
3. Arsenic	10		5			
4. Barium	200	10		970	956	98
5. Beryllium	5	5				
6. Cadmium	5	5	1			
7. Calcium	5000	1000				
8. Chromium	10	10	5			
9. Cobalt	50	10				
10. Copper	25	10				
11. Iron	100	25		1020	995	98
12. Lead	5	50	5			
13. Magnesium	5000	1000				
14. Manganese	15	5		1020	984	96
15. Mercury	0.2	0.2				
16. Nickel	40	15		1020	989	97
17. Potassium	5000	1000				
18. Selenium	5		5			
19. Silver	10	10	5			
20. Sodium	5000	1000				
21. Thallium	10		5			
22. Tin	40		5			
23. Vanadium	50	10				
24. Zinc	20	10		1010	998	99
Other:						
Cyanide	10	10				

Form VII

Q.C. Report No. _____

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

DATE 12-30-86 12-21-86 (Hg) LCS UNITS ug/L mg/kg

12-12-86 (Pb) (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	60	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	5			
9. Cobalt	50	10				
10. Copper	25	10				
11. Iron	100	25		1020	973	95
12. Lead	5	50	5	1010	933	92
13. Magnesium	5000	1000				
14. Manganese	15	~~9K~~ 5		1020	961	94
15. Mercury	0.2	0.2		4.4	4.45	101
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		5			
23. Vanadium	50	10				
24. Zinc	20	10				
Other:						
Cyanide	10	10				

Form VII

Q.C. Report No. _____

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

DATE As - 12/16/86 Tl - 12/19/86 LCS UNITS (ug/L) mg/kg

12/23/86 Se - 12/22/86 (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	60	5			
3. Arsenic	10		5	20	18	90
4. Barium	200	10				
5. Beryllium	5	5				
6. Cadmium	5	5	1			
7. Calcium	5000	1000				
8. Chromium	10	10	5			
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	8.6	109
19. Silver	10	10	5			
20. Sodium	5000	1000				
21. Thallium	10		5	25	25	100
22. Tin	40		5			
23. Vanadium	50	10				
24. Zinc	20	10				
Other:						
Arsenic		10		20	21	105
Cyanide	10	10				

Form VII

Q.C. Report No. _____

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME Ecology & Environment Inc. CASE NO. U-4432/U-4442

DATE 1-5-87 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					
2. Antimony	60					
3. Arsenic	10					
4. Barium	200					
5. Beryllium	5					
6. Cadmium	5					
7. Calcium	5000					
8. Chromium	10					
9. Cobalt	50					
10. Copper	25					
11. Iron	100					
12. Lead	5			17	16	94
13. Magnesium	5000					
14. Manganese	15					
15. Mercury	0.2					
16. Nickel	40					
17. Potassium	5000					
18. Selenium	5					
19. Silver	10					
20. Sodium	5000					
21. Thallium	10					
22. Tin	40					
23. Vanadium	50					
24. Zinc	20					
Other:						
Cyanide	10					

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Job #4432 (Soils) Dead Creek

Ag, Al, Ba, Be, Cd, Co, Cu, Fe, Mn, Ni, Sb, V, Zn

86/11/19
16:23

Result Name: 8611190834

blank	4432 9652.0401	4432 9659.0401	500 PPB
standard	50 PPM	4432 9660.0401	500 PPB
standard	4432 9653.0401	4432 9661.0401	4442 9683.0401
500 PPB	4432 9654.0401	4432 9662.0401	4442 9684.0401
500 PPB	9654. 1/10	9662. 1/10	9684. 1/10
500 PPB	4432 9655.0401	4432 9663.0401	4442 9685.0401
ICAP-19	4432 9656.0401	4432 9664.0401	9685. 0.1/10
ICAP-7	4432 9657.0401	9664. 1/10	4442 9686.0401
ICAP-7	9657. 1/10	4432 9665.0401	9686. 1/10
EPA 283#2 1/50	CAL BLK	4432 9666.0401	Sample 001
500 PPM ICS	500 PPB	4432 9667.0401	9687. 1/10
CAL BLK	500 PPB	CAL BLK	4442 9688.0401
BLK #911	500 PPB	500 PPB	9688.0401 R1
4432 9651.0401	4432 9658.0401	500 PPB	1/10 9688.0401

Command?

86/11/19

16:24

Result Name: 8611190834

9688.0401 RS	BLK #918
500 PPM ICS	CAL BLK
CAL BLK	BLK #918
500 PPB	CAL BLK
500 PPB	500 PPB
500 PPB	

4422 9614.0201

4425 9617 0306

4425 9617 0801

9617.0801 R

9617.0801 RS

4425 9618 0801

4425 9619.0801

4425 9620.0801

Command?

Conc. As Recd Basis

Cd_VHG_2

blank	52.44	intensity		68.83	cv			
standard	1502.00	intensity		1.52	cv			
500 PPB	475.10	ug/L		12.54	cv			
ICAP-19	977.70	ug/L		5.97	cv 91			
500 PPM ICS	1002.90	ug/L		0.88	cv			
CAL BLK	-3.51	ug/L		-20.57	cv			
BLK #911	-23.91	ug/L	<60.0	-31.61	cv			
4432 9651.0401	18.47	ug/L	<60.0	128.51	cv		<11.8	mg/kg
4432 9652.0401	25.56	ug/L		147.64	cv		<11.5	
4432 9653.0401	17.49	ug/L		130.10	cv	window edge	<11.8	
4432 9654.0401	-20.21	ug/L		-50.14	cv	window edge	<12.0	
4432 9655.0401	17.68	ug/L		18.70	cv		<11.8	
4432 9656.0401	8.57	ug/L		192.20	cv		<11.2	
4432 9657.0401	-7.92	ug/L		-80.46	cv		<11.0	
CAL BLK	41.61	ug/L		148.83	cv			
500 PPB	499.00	ug/L		7.64	cv			
4432 9658.0401	42.66	ug/L	<60.0	107.44	cv		<11.9	mg/kg
4432 9659.0401	-14.33	ug/L		-104.9	cv	window edge	<11.7	
4432 9660.0401	3.31	ug/L		1190.9	cv		<11.8	
4432 9661.0401	11.70	ug/L		268.21	cv		<11.1	
4432 9662.0401	37.54	ug/L		64.30	cv		<11.5	
4432 9663.0401	3.42	ug/L		1519.3	cv		<11.7	
4432 9664.0401	2.37	ug/L		2378.0	cv	window edge	<11.4	
4432 9665.0401	37.35	ug/L		118.97	cv	window edge	<11.1	
4432 9666.0401	-11.02	ug/L		-347.4	cv		<11.9	
4432 9667.0401	2.57	ug/L		2265.3	cv	window edge	<11.5	
CAL BLK	-0.79	ug/L		-6011.	cv			
500 PPB	439.30	ug/L		1.05	cv			
500 PPB	542.40	ug/L		15.72	cv			
500 PPM ICS	1014.70	ug/L		9.10	cv 101			
CAL BLK	-51.01	ug/L	<60.	-115.1	cv	window edge		
500 PPB	542.10	ug/L		7.91	cv			

Zn_VHG

blank	28.32	intensity		0.59	cv			
standard	8288.00	intensity		0.72	cv			
500 PPB	507.45	ug/L		1.96	cv			
ICAP-19	977.75	ug/L		0.32	cv			
500 PPM ICS	976.60	ug/L		0.96	cv 98			
CAL BLK	-0.11	ug/L	<20.0	-629.9	cv			
BLK #911	6.42	ug/L		2.10	cv			
4432 9651.0401	18879.00	ug/L		0.88	cv		1741.0	mg/kg
4432 9652.0401	12760.00	ug/L		0.33	cv		2454.0	
50 PPM	47800.00	ug/L		1.06	cv			
4432 9653.0401	2918.00	ug/L		0.94	cv		572.	mg/kg
4432 9654.0401	2508.50	ug/L		1.21	cv		502.	
4432 9655.0401	3261.50	ug/L		0.10	cv		640.	
4432 9656.0401	8947.50	ug/L		0.02	cv		1672.	
4432 9657.0403	30265.00	ug/L		0.53	cv		5553.	
CAL BLK	-0.27	ug/L	<20.0	-15.66	cv			
500 PPB	519.05	ug/L		1.53	cv			
~~4432 9658.0401~~	~~12905.00~~	~~ug/L~~		0.75	cv	see attached (beyond cal. curve)	~~4496.~~	~~mg/kg~~
4432 9659.0401	3032.50	ug/L		0.56	cv		589.	
4432 9660.0403	36190.00	ug/L		0.37	cv		7096.	
4432 9661.0401	13760.00	ug/L		0.40	cv		2548.	
4432 9662.0402	20425.00	ug/L		0.74	cv		3928.	
4432 9663.0401	2480.50	ug/L		1.00	cv		482.	

90

4432 9664.0401	12235.00	ug/L		0.81	cv			4235. mg/kg
4432 9665.0401	3277.50	ug/L		0.47	cv			607.
4432 9666.0401	3100.50	ug/L		0.07	cv			614.
4432 9667.0401	803.95	ug/L		0.18	cv			155
CAL BLK	-2.49	ug/L	<20.0	-115.1	cv	window edge		
500 PPB	532.80	ug/L		1.57	cv			
500 PPM ICS	1021.50	ug/L		1.00	cv	102		
CAL BLK	-3.41	ug/L	<20.0	-17.03	cv			
500 PPB	536.25	ug/L		1.21	cv			

Cd_VHG

blank	26.11	intensity		3.92	cv			
standard	5934.50	intensity		1.64	cv		384	
500 PPB	505.30	ug/L		1.82	cv			
ICAP-19	894.90	ug/L		0.04	cv			
500 PPM ICS	931.70	ug/L		1.91	cv	93		
CAL BLK	-0.78	ug/L	<5.00	-107.4	cv			
BLK #911	-1.34	ug/L	1	-228.7	cv	window edge		
4432 9651.0401	57.51	ug/L		1.12	cv			11.3 mg/kg
4432 9652.0401	68.38	ug/L		0.65	cv			13.2
4432 9653.0401	5.06	ug/L		40.79	cv	<1.00		0.992
4432 9654.0401	32.43	ug/L		2.09	cv			6.49
4432 9655.0401	25.03	ug/L		2.60	cv			4.91
4432 9656.0401	63.40	ug/L		0.27	cv			11.9
4432 9657.0401	76.72	ug/L		1.33	cv			14.1
CAL BLK	-2.92	ug/L	<5.00	-73.46	cv	window edge		
500 PPB	525.10	ug/L		1.42	cv			
4432 9658.0401	24.08	ug/L		0.34	cv			4.77 mg/kg
4432 9659.0401	38.41	ug/L		1.52	cv			7.46
4432 9660.0401	78.61	ug/L		0.05	cv			15.4
4432 9661.0401	53.18	ug/L		4.48	cv			9.85
4432 9662.0401	133.45	ug/L		1.23	cv			25.7
4432 9663.0401	29.38	ug/L		0.03	cv			5.70
4432 9664.0401	141.30	ug/L		1.00	cv			26.9
4432 9665.0401	31.51	ug/L		3.87	cv			584
4432 9666.0401	18.85	ug/L		19.35	cv			3.73
4432 9667.0401	10.21	ug/L		15.49	cv			1.96
CAL BLK	-2.90	ug/L	<5.00	-96.22	cv	window edge		
500 PPB	541.10	ug/L		2.64	cv			
500 PPM ICS	992.70	ug/L		0.62	cv	99		
CAL BLK	-1.82	ug/L		-130.7	cv	window edge		
500 PPB	546.45	ug/L		0.19	cv			

Co_VHG

blank	13.36	intensity		85.87	cv			
standard	1714.50	intensity		0.04	cv			
500 PPB	487.80	ug/L		1.94	cv			
ICAP-19	940.55	ug/L		1.30	cv	94		
500 PPM ICS	871.75	ug/L	10.6	1.58	cv			
CAL BLK	-2.49	ug/L	<~~50.0~~	-3.28	cv			
BLK #911	-4.08	ug/L		-68.69	cv			
4432 9651.0401	17.75	ug/L		11.69	cv	9.81		<10.0 mg/kg
4432 9652.0401	17.75	ug/L		9.54	cv			
4432 9653.0401	25.76	ug/L		8.06	cv			
4432 9654.0401	30.64	ug/L		36.04	cv			
4432 9655.0401	16.18	ug/L		9.21	cv			
4432 9656.0401	16.46	ug/L		5.85	cv			
4432 9657.0401	36.89	ug/L		32.92	cv			
CAL BLK	-2.47	ug/L		-302.7	cv			

63

< 1.17 LOW

500 PPB	492.15	ug/L		1.69	cv
4432 9658.0401	50.25	ug/L	< 50.6	28.76	cv
4432 9659.0401	16.71	ug/L		21.95	cv
4432 9660.0401	23.17	ug/L		19.30	cv — 9.8W
4432 9661.0401	13.10	ug/L		14.34	cv
4432 9662.0401	22.89	ug/L		8.21	cv
4432 9663.0401	12.92	ug/L		3.58	cv
4432 9664.0401	40.36	ug/L		4.57	cv
4432 9665.0401	2.95	ug/L	< 10.0	33.98	cv
4432 9666.0401	21.51	ug/L		5.51	cv
4432 9667.0401	23.94	ug/L		4.77	cv
CAL BLK	-1.09	ug/L	< 40.0	-304.8	cv
500 PPB	532.10	ug/L		3.05	cv
500 PPM ICS	949.10	ug/L		2.13	cv
CAL BLK	-1.25	ug/L		-153.9	cv
500 PPB	529.40	ug/L		1.64	cv

< 10.0 mg/Kg

Ni_VHG

blank	94.42	intensity		9.69	cv
standard	9653.00	intensity		0.11	cv
500 PPB	491.00	ug/L		1.80	cv
ICAP-19	937.00	ug/L		1.46	cv
500 PPM ICS	845.40	ug/L		0.37	cv
CAL BLK	2.41	ug/L	< 40.0	102.23	cv
BLK #911	3.23	ug/L		4.06	cv
4432 9651.0401	150.70	~~ug/L~~	29.5 mg/Kg	7.62	cv
4432 9652.0401	963.05	~~ug/L~~	185	0.91	cv
3HR ~~4432 9653.0401~~	~~4224.50~~	~~ug/L~~	~~842~~	0.30	cv
4432 9654.0401	741.15	~~ug/L~~	148	0.27	cv
3HR ~~4432 9655.0401~~	~~1040.50~~	~~ug/L~~	~~204~~	1.37	cv
4432 9656.0401	214.85	~~ug/L~~	40.2	5.77	cv
3HR ~~4432 9657.0401~~	~~1034.20~~	~~ug/L~~	~~738~~	0.33	cv
CAL BLK	1.18	ug/L	< 40.0	22.58	cv
500 PPB	498.70	ug/L		0.09	cv
3HR ~~4432 9658.0401~~	~~2672.00~~	~~ug/L~~	~~530 mg/Kg~~	0.53	cv
4432 9659.0401	256.85	~~ug/L~~	49.9	0.74	cv
3HR ~~4432 9660.0401~~	~~2067.50~~	~~ug/L~~	~~400~~	0.26	cv
3HR ~~4432 9661.0401~~	~~2202.50~~	~~ug/L~~	~~301~~	0.61	cv
3HR ~~4432 9662.0401~~	~~2534.50~~	~~ug/L~~	~~488~~	1.36	cv
4432 9663.0401	427.70	~~ug/L~~	83.0	0.66	cv
3HR ~~4432 9664.0401~~	~~2120.50~~	~~ug/L~~	~~161~~	0.72	cv
4432 9665.0401	738.20	~~ug/L~~	137	0.98	cv
4432 9666.0401	796.65	~~ug/L~~	158	1.75	cv
4432 9667.0401	72.08	~~ug/L~~	13.9	21.01	cv
CAL BLK	-2.11	ug/L	< 40.0	-174.8	cv
500 PPB	515.05	ug/L		1.81	cv
500 PPM ICS	937.65	ug/L		1.39	cv
CAL BLK	2.74	ug/L	< 40.0	218.22	cv
500 PPB	513.30	ug/L		5.30	cv

Beyond highest calib std.

Mn_VHG

blank	2.93	intensity		18.40	cv
standard	5942.00	intensity		0.10	cv
500 PPB	492.10	ug/L		0.07	cv
ICAP-19	944.95	ug/L		0.42	cv
500 PPM ICS	884.40	ug/L		0.38	cv
CAL BLK	0.10	ug/L		1115.0	cv
BLK #911	0.24	ug/L	< 15.0	122.99	cv
4432 9651.0401	528.10	~~ug/L~~	104 mg/Kg	0.43	cv

4432 9652.0401	224.10	ug/L → 56.6 mg/Kg		0.34	cv	
4432 9653.0401	336.75	ug/L → 66.0		0.24	cv	
4432 9654.0401	278.50	ug/L → 55.7		0.24	cv	
4432 9655.0401	449.20	ug/L → 88.1		0.63	cv	
4432 9656.0401	570.40	ug/L → 107		0.21	cv	
4432 9657.0401	209.35	ug/L → 38.4		0.79	cv	
CAL BLK	-0.12	ug/L	<15.0	-458.3	cv	
500 PPB	498.90	ug/L		0.40	cv	
4432 9658.0401	206.25	ug/L → 40.8 mg/Kg		0.26	cv	
4432 9659.0401	392.30	ug/L → 76.2		0.32	cv	
4432 9660.0401	227.40	ug/L → 44.6 ✓		1.37	cv	
4432 9661.0401	322.50	ug/L → 59.7		0.65	cv	
4432 9662.0401	480.20	ug/L → 92.3		0.74	cv	
4432 9663.0401	469.10	ug/L → 91.1		0.24	cv	
4432 9664.0401	919.80	ug/L → 175		0.28	cv	
4432 9665.0401	245.30	ug/L → 45.4		0.53	cv	
4432 9666.0401	646.90	ug/L → 128		1.33	cv	
31R ~~4432 9667.0401~~	~~1814.06~~	~~ug/L~~		1.14	cv	
CAL BLK	0.10	ug/L	<15.0	415.64	cv	window edge
500 PPB	522.25	ug/L		0.42	cv	
500 PPM ICS	971.45	ug/L ✓		0.29	cv	
CAL BLK	-1.40	ug/L	<15.0	-81.43	cv	
500 PPB	524.65	ug/L		0.83	cv	

Fe_VHG

blank	57.14	intensity		14.85	cv	
standard	5326.00	intensity		1.33	cv	
500 PPB	494.25	ug/L		0.78	cv	
ICAP-19	935.05	ug/L		1.19	cv	
500 PPM ICS	197050.0	ug/L		0.04	cv	
CAL BLK	4.65	ug/L	<100.0	69.78	cv	
BLK #911	2.44	ug/L	⊥	50.92	cv	
~~4432 9651.0401~~	~~13410.00~~	~~ug/L~~ → ~~[illegible]~~		2.22	cv	
~~4432 9652.0401~~	~~36670.00~~	~~ug/L~~		0.77	cv	
50 PPM	45710.00	ug/L		1.35	cv	
~~4432 9653.0401~~	~~27050.00~~	~~ug/L~~		0.79	cv	
~~4432 9654.0401~~	~~15265.00~~	~~ug/L~~		0.24	cv	
9654. 1/10	7784.50	ug/L		0.96	cv	
~~4432 9655.0401~~	~~16825.00~~	~~ug/L~~		0.30	cv	
~~4432 9656.0401~~	~~43085.00~~	~~ug/L~~		0.31	cv	
~~4432 9657.0401~~	~~42550.0~~	~~ug/L~~		0.72	cv	
9657. 1/10	13620.00	ug/L		1.02	cv	5350
CAL BLK	3.29	ug/L	<100.0	59.69	cv	
500 PPB	491.70	ug/L		1.02	cv	
~~4432 9658.0401~~	~~11680.00~~	~~ug/L~~		0.30	cv	
~~4432 9659.0401~~	~~11780.00~~	~~ug/L~~		0.10	cv	
~~4432 9660.0401~~	~~12145.00~~	~~ug/L~~		0.69	cv	
~~4432 9661.0401~~	~~11680.00~~	~~ug/L~~		0.67	cv	
~~4432 9662.0401~~	~~62100.0~~	~~ug/L~~		0.92	cv	
9662. 1/10	15955.00	ug/L		0.63	cv	
~~4432 9663.0401~~	~~54295.00~~	~~ug/L~~		0.06	cv	
~~4432 9664.0401~~	~~30650.0~~	~~ug/L~~		0.79	cv	
9664. 1/10	12550.00	ug/L		0.70	cv	
~~4432 9665.0401~~	~~11995.00~~	~~ug/L~~		0.61	cv	
~~4432 9666.0401~~	~~16255.00~~	~~ug/L~~ → 9244 mg/Kg		0.41	cv	
~~4432 9667.0401~~	~~29945.00~~	~~ug/L~~ ⊥		0.86	cv	
CAL BLK	4.18	ug/L	<100.0	15.55	cv	
500 PPB	505.60	ug/L		3.28	cv	
500 PPM ICS	196700.0	ug/L		0.00	cv	

CAL BLK	-5.20	ug/L	<100.0	-30.34	cv	
500 PPB	514.55	ug/L		1.53	cv	

'HG

wt wt.

blank	7.24	intensity		588.12	cv	window edge
standard	5663.50	intensity		1.22	cv	
500 PPB	499.75	ug/L		0.61	cv	
ICAP-19	948.70	ug/L		0.61	cv	
500 PPM ICS	900.70	ug/L		0.16	cv	
CAL BLK	0.97	ug/L	<50.0	1.76	cv	
BLK #911	1.79	ug/L		102.05	cv	
4432 9651.0401	61.64	ug/L	12.1mg/Kg	2.16	cv	
4432 9652.0401	53.39	ug/L	10.1	0.10	cv	
4432 9653.0401	62.93	ug/L	12.3	0.85	cv	
4432 9654.0401	20.50	ug/L	<50.0	21.02	cv	<10.0 mg/Kg
4432 9655.0401	60.82	ug/L	11.9mg/Kg	5.52	cv	
4432 9656.0401	64.27	ug/L	12.0	0.60	cv	
4432 9657.0401	122.45	ug/L	22.5	1.25	cv	
CAL BLK	3.38	ug/L	<50.0	44.29	cv	
500 PPB	510.60	ug/L		0.84	cv	
4432 9658.0401	73.07	ug/L	14.5mg/Kg	2.38	cv	
4432 9659.0401	72.10	ug/L	14.0	1.09	cv	
4432 9660.0401	51.04	ug/L	10.0	2.86	cv	
4432 9661.0401	53.85	ug/L	<10.0	2.60	cv	
4432 9662.0401	115.30	ug/L	22.2	1.31	cv	
4432 9663.0401	90.67	ug/L	17.6	7.96	cv	
4432 9664.0401	108.65	ug/L	20.7	5.02	cv	
4432 9665.0401	41.36	ug/L	<50.0	4.64	cv	<10.0 mg/Kg
4432 9666.0401	58.84	ug/L	11.7mg/Kg	1.36	cv	
4432 9667.0401	109.15	ug/L	21.0	1.71	cv	
CAL BLK	0.74	ug/L	<50.0	357.72	cv	
500 PPB	530.55	ug/L		2.68	cv	
500 PPM ICS	981.00	ug/L		0.20	cv	
CAL BLK	4.59	ug/L	<50.0	106.42	cv	
500 PPB	540.40	ug/L		1.74	cv	

Be_VHG

blank	6.87	intensity		15.04	cv	window edge
standard	7169.00	intensity		0.43	cv	
500 PPB	490.65	ug/L		0.81	cv	
ICAP-19	911.45	ug/L		0.41	cv	
500 PPM ICS	923.10	ug/L		0.07	cv	
CAL BLK	-0.31	ug/L	<5.00	-83.19	cv	<1.00 mg/Kg
BLK #911	-0.66	ug/L		-15.46	cv	
4432 9651.0401	2.16	ug/L	0.98u	6.12	cv	
4432 9652.0401	1.50	ug/L		50.18	cv	
4432 9653.0401	1.60	ug/L		6.06	cv	
4432 9654.0401	0.52	ug/L		54.20	cv	
4432 9655.0401	1.11	ug/L		39.94	cv	
4432 9656.0401	2.79	ug/L		3.89	cv	
4432 9657.0401	1.05	ug/L		5.81	cv	
CAL BLK	-0.46	ug/L		-33.67	cv	
500 PPB	491.80	ug/L		1.38	cv	
4432 9658.0401	1.56	ug/L	<5.00	53.92	cv	<1.00 mg/Kg
4432 9659.0401	0.74	ug/L	0.98u	35.69	cv	
4432 9660.0401	0.38	ug/L		79.34	cv	
4432 9661.0401	0.80	ug/L		22.06	cv	
4432 9662.0401	1.42	ug/L		20.27	cv	
4432 9663.0401	1.72	ug/L		59.38	cv	

4432 9664.0401	1.72	ug/L	<5.00	4.23	cv
4432 9665.0401	3.45	ug/L		241.63	cv
4432 9666.0401	1.53	ug/L		64.97	cv
4432 9667.0401	1.64	ug/L		15.67	cv
CAL BLK	-3.71	ug/L		-88.96	cv window edge
500 PPB	507.55	ug/L		1.16	cv
500 PPM ICS	996.95	ug/L		0.37	cv
CAL BLK	-8.90	ug/L	<5.00	-49.27	cv window edge
500 PPB	509.45	ug/L		0.21	cv

Cu_VHG

blank	49.85	intensity		49.91	cv
standard	8643.50	intensity		0.60	cv
500 PPB	487.90	ug/L		0.01	cv
ICAP-19	922.40	ug/L		0.42	cv
500 PPM ICS	923.10	ug/L		1.19	cv
CAL BLK	0.55	ug/L	<25.0	94.27	cv
BLK #911	2.03	ug/L		42.86	cv
4432 9651.0401	23435.00	~~ug/L~~	4593 mg/Kg	0.37	cv
4432 9652.0401	12860.00	~~ug/L~~	2473	1.83	cv
50 PPM	47670.00	ug/L		0.23	cv
4432 9653.0401	562.60	~~ug/L~~	113 mg/Kg	0.20	cv
4432 9654.0401	3650.50	~~ug/L~~	730	0.68	cv
4432 9655.0401	5749.50	~~ug/L~~	1127	0.35	cv
4432 9656.0401	22650.00	~~ug/L~~	4234	0.25	cv
4432 9657.0401	38970.00	~~ug/L~~	7150	0.28	cv
CAL BLK	-1.28	ug/L	<25.0	-20.85	cv
500 PPB	498.20	ug/L		1.65	cv
4432 9658.0401	7625.00	~~ug/L~~	1510 mg/Kg	0.56	cv
4432 9659.0401	1288.50	~~ug/L~~	250	0.61	cv
4432 9660.0401	13665.00	~~ug/L~~	2683	0.50	cv
4432 9661.0401	13285.00	~~ug/L~~	2460	1.16	cv
4432 9662.0401	7740.50	~~ug/L~~	1489	1.36	cv
4432 9663.0401	934.85	~~ug/L~~	182	0.88	cv
4432 9664.0401	5486.50	~~ug/L~~	1045	0.20	cv
4432 9665.0401	1812.50	~~ug/L~~	337	0.44	cv
4432 9666.0401	834.10	~~ug/L~~	165	1.36	cv
4432 9667.0401	143.30	~~ug/L~~	27.6	0.30	cv
CAL BLK	3.03	ug/L	<25.0	56.60	cv
500 PPB	523.90	ug/L		0.00	cv
500 PPM ICS	996.75	ug/L		0.57	cv
CAL BLK	2.08	ug/L	<25.0	24.54	cv
500 PPB	520.75	ug/L		0.09	cv

Ag_VHG

blank	77.82	intensity		13.13	cv
standard	17860.00	intensity		0.45	cv
500 PPB	490.10	ug/L		0.30	cv
EPA 283#2 1/50	113.15	ug/L		3.34	cv
500 PPM ICS	959.20	ug/L		0.34	cv
CAL BLK	-1.91	ug/L	<10.0	-154.9	cv window edge
BLK #911	-2.15	ug/L		-11.93	cv
4432 9651.0401	27.87	~~ug/L~~	5.46 mg/Kg	6.86	cv
4432 9652.0401	21.35	~~ug/L~~	4.20	19.44	cv
4432 9653.0401	-2.47	ug/L	<10.0	-128.9	cv <2.00 mg/Kg
4432 9654.0401	1.75	ug/L		62.30	cv
4432 9655.0401	1.58	ug/L		207.98	cv
4432 9656.0401	35.79	~~ug/L~~	7.02 mg/Kg	6.92	cv
4432 9657.0401	36.24	~~ug/L~~	7.20	2.25	cv

CAL BLK	-4.52	ug/L	<10.0	-37.04	cv	
500 PPB	507.00	ug/L		0.90	cv	
4432 9658.0401	5.16	ug/L	<10.0	63.60	cv	<2.00 mg/Kg
4432 9659.0401	-1.77	ug/L		1.96 cv 117.2	cv	
4432 9660.0401	9.47	ug/L		1.23	cv	
4432 9661.0401	6.97	ug/L		69.72	cv	
4432 9662.0401	4.34	ug/L		30.70	cv	
4432 9663.0401	0.27	ug/L		0.12	cv	
4432 9664.0401	5.61	ug/L		0.61	cv	
4432 9665.0401	-1.73	ug/L		-147.2	cv	window edge
4432 9666.0401	-2.46	ug/L		-25.61	cv	window edge
4432 9667.0401	0.46	ug/L		1213.3	cv	
CAL BLK	-3.39	ug/L		-187.8	cv	window edge
500 PPB	520.55	ug/L		2.35	cv	
500 PPM ICS	1042.50	ug/L		0.52	cv	
CAL BLK	-0.60	ug/L	<10.0	-84.05	cv	window edge
500 PPB	516.20	ug/L		0.09	cv	

AL_VHG

blank	189.51	intensity		170.44	cv	
standard	9852.00	intensity		0.80	cv	
500 PPB	492.50	ug/L		4.42	cv	
ICAP-7	1059.00	ug/L		2.81	cv	
ICAP-7	1071.50	ug/L		1.92	cv	
500 PPM ICS	97940.00	ug/L		0.55	cv	
CAL BLK	8.46	ug/L	<200.0	54.33	cv	
BLK #911	22.28	ug/L		0.19	cv	
4432 9651.0401	12865.00	~~ug/L~~	2523mg/Kg	1.06	cv	
4432 9652.0401	12240.00	~~ug/L~~	2357	0.46	cv	
50 PPM	50740.00	ug/L		2.29	cv	
4432 9653.0401	22040.00	~~ug/L~~	4322mg/Kg	0.04	cv	
4432 9654.0401	6974.00	~~ug/L~~	1395	0.27	cv	
4432 9655.0401	24215.00	~~ug/L~~	4748	0.26	cv	
4432 9656.0401	14085.00	~~ug/L~~	2633	0.05	cv	
4432 9657.0401	24825.00	~~ug/L~~	4555	0.03	cv	
CAL BLK	5.30	ug/L	<200.0	291.08	cv	
500 PPB	520.40	ug/L		0.88	cv	
4432 9658.0401	37625.00	~~ug/L~~	7450mg/Kg	0.05	cv	
4432 9659.0401	28045.00	~~ug/L~~	5446	0.28	cv	
4432 9660.0401	17440.00	~~ug/L~~	3420	0.46	cv	
4432 9661.0401	16895.00	~~ug/L~~	3189	0.28	cv	
4432 9662.0401	40190.00	~~ug/L~~	7729	0.98	cv	
4432 9663.0401	27735.00	~~ug/L~~	5385	0.24	cv	
4432 9664.0401	42130.00	~~ug/L~~	8025	0.24	cv	
4432 9665.0401	8796.50	~~ug/L~~	1629	0.07	cv	
4432 9666.0401	19845.00	~~ug/L~~	3930	0.87	cv	
4432 9667.0401	48430.00	~~ug/L~~	9313	0.58	cv	
CAL BLK	4.59	ug/L	<200.0	367.42	cv	
500 PPB	498.90	ug/L		5.62	cv	
500 PPM ICS	101150.0	ug/L		0.08	cv	
CAL BLK	-2.31	ug/L	<200.0	-1341.	cv	window edge
500 PPB	521.05	ug/L		0.61	cv	

_VHG

blank	9.44	intensity		47.45	cv
standard	12895.00	intensity		0.55	cv
500 PPB	406.00	ug/L		0.35	cv
ICAP-7	1048.00	ug/L		0.65	cv
500 PPM ICS	960.45	ug/L		0.13	cv

	CAL BLK	0.16	ug/L	<200.0	0.60	cv	
	BLK #911	0.09	ug/L		353.51	cv	
5.0	~~4432 9651 0401~~	~~113.00~~	~~ug/L~~	see rerun	1.57	cv	
	~~4432 9652 0401~~	~~132.00~~	~~ug/L~~		0.31	cv	
	50 PPM	53355.00	ug/L		0.25	cv	
	4432 9653 0401	522.53	~~ug/L~~	102 mg/Kg	0.29	cv	
	4432 9654 0401	377.40	~~ug/L~~	75.5	0.39	cv	
	4432 9655.0401	630.85	~~ug/L~~	124	0.91	cv	
BHP	~~4432 9656.0401~~	~~1507.00~~	~~ug/L~~		0.19	cv	
"	~~4432 9657 0401~~	~~15295.00~~	~~ug/L~~		0.11	cv	
	CAL BLK	0.69	ug/L	<200.0	49.58	cv	
	500 PPB	537.40	ug/L		0.35	cv	
BHP	~~4432 9658 0401~~	~~2282.50~~	~~ug/L~~		0.03	cv	
	4432 9659.0401	835.75	~~ug/L~~	162 mg/Kg	1.37	cv	
BHP	~~4432 9660.0401~~	~~1406.50~~	~~ug/L~~		0.44	cv	
BHP	~~4432 9661 0401~~	~~2736.50~~	~~ug/L~~		0.16	cv	
"	~~4432 9662 0401~~	~~2697.50~~	~~ug/L~~		1.45	cv	
	4432 9663.0401	590.00	~~ug/L~~	115 mg/Kg	0.15	cv	
BHP	~~4432 9664 0401~~	~~2566.50~~	~~ug/L~~		0.38	cv	
	4432 9665 0401	294.20	~~ug/L~~	54.4 mg/Kg	0.45	cv	
	4432 9666 0401	673.00	~~ug/L~~	133	0.11	cv	
BHP	~~4432 9667.0401~~	~~1644.00~~	~~ug/L~~		0.02	cv	
	CAL BLK	0.06	ug/L	<200.0	241.53	cv	
	500 PPB	550.10	ug/L		0.72	cv	
	500 PPM ICS	1101.00	ug/L		0.11	cv	
(112)	CAL BLK	-0.01	ug/L	<200.0	-4763.	cv	← ok
	500 PPB	565.35	ug/L		0.11	cv	

Beyond Calibration Std. See attached reruns

Dead Creek

Job #4432
Cr

86/11/19

16:45

Result Name: 8611191501

standard	4432 9657 0401	500 PPB	4425 9619.0306
standard	CAL BLK	4432 9683.0401	4425 9620.0306
blank	500 PPB	4442 9684.0401	9620.0306 R
CAL BLK	4432 9658 0401	4442 9685.0401	BLK #905
500 PPB	4432 9659.0401	4442 9686.0401	4345 9166.0506
ICAP-19	4432 9660 0401	4442 9687.0401	4345 9167.0506
500 PPM ICS	4432 9661 0401	4442 9688.0401	4345 9168.0506
BLK #911	4432 9662 0401	9688.0401 R	4345 9169.0506
4432 9651 0401	4432 9663.0401	9688.0401 RS	4345 9170.0506
4432 9652 0401	4432 9664.0401	500 PPM ICS	BLK #871
4432 9653 0401	4432 9665.0401	CAL BLK	4345 9166.1001
4432 9654 0401	4432 9666.0401	500 PPB	4345 9167.1001
4432 9655.0401	4432 9667 0401	4425 9617.0306	4345 9168.1001
4432 9656 0401	CAL BLK	4425 9618.0306	4345 9169.1001

Command?

Cr_VIC

standard	11040.00	intensity	1.54	cv	
standard	11110.00	intensity	0.40	cv	
blank	38.51	intensity	82.41	cv	
CAL BLK	1.41	ug/L	327.43	cv	
500 PPB	492.15	ug/L	1.85	cv	
ICAP-19	971.25	ug/L	0.19	cv	
500 PPM ICS	883.05	ug/L	0.15	cv	
BLK #911	-0.20	ug/L	<10.0	-737.8	cv	window edge
4432 9651.0401	165.30	~~ug/L~~ 32.4 mg/kg	0.53	cv	
4432 9652.0401	293.10	~~ug/L~~ 56.4	2.59	cv	
4432 9653.0401	49.43	~~ug/L~~ 9.69	14.25	cv	
4432 9654.0401	106.70	~~ug/L~~ 21.3	0.15	cv	
4432 9655.0401	171.75	~~ug/L~~ 33.7	4.11	cv	
4432 9656.0401	207.95	~~ug/L~~ 38.9	1.53	cv	
4432 9657.0401	300.20	~~ug/L~~ 65.2	1.12	cv	
CAL BLK	-0.44	ug/L	-161.5	cv	
500 PPB	497.65	ug/L	0.51	cv	
4432 9658.0401	330.80	~~ug/L~~ 65.5 mg/kg	1.20	cv	
4432 9659.0401	90.78	~~ug/L~~ 17.6	0.22	cv	
4432 9660.0401	139.70	~~ug/L~~ 27.4 ✓	3.52	cv	
4432 9661.0401	107.10	~~ug/L~~ 19.8	4.51	cv	
4432 9662.0401	215.65	~~ug/L~~ 41.5	2.46	cv	
4432 9663.0401	80.32	~~ug/L~~ 15.6	1.17	cv	
4432 9664.0401	162.40	~~ug/L~~ 30.9	3.21	cv	
4432 9665.0401	47.17	~~ug/L~~ 8.74	1.38	cv	
4432 9666.0401	44.40	~~ug/L~~ 8.29	3.47	cv	
4432 9667.0401	60.62	~~ug/L~~ 11.7	3.81	cv	
CAL BLK	1.51	ug/L	88.20	cv	
500 PPB	496.25	ug/L	0.60	cv	
500 PPM ICS	878.95	ug/L	0.37	cv	
CAL BLK	2.16	ug/L	48.76	cv	
500 PPB	501.70	ug/L	1.65	cv	

Dead Creek

Job #4442 Soils

Ag, Al, Ba, Be, Cd, Co, Cu, Fe, Mn, Ni, Sb, V, Zn

86/11/19

16:32

Result Name: 8611190834

blank	4432 9652.0401	4432 9659.0401	500 PPB
standard	50 PPM	4432 9660.0401	500 PPB
standard	4432 9653.0401	4432 9661.0401	4442 9683.0401
500 PPB	4432 9654.0401	4432 9662.0401	4442 9684.0401
500 PPB	9654 1/10	9662. 1/10	9684. 1/10
500 PPB	4432 9655.0401	4432 9663.0401	4442 9685.0401
ICAP-19	4432 9656.0401	4432 9664.0401	9685. 0 1/10
ICAP-7	4432 9657.0401	9664. 1/10	4442 9686.0401
ICAP-7	9657. 1/10	4432 9665.0401	9686. 1/10
EPA 283#2 1/50	CAL BLK	4432 9666.0401	Sample 001
500 PPM ICS	500 PPB	4432 9667.0401	9687. 1/10
CAL BLK	500 PPB	CAL BLK	4442 9688.0401
BLK #911	500 PPB	500 PPB	9688.0401 R1
4432 9651.0401	4432 9658.0401	500 PPB	1/10 9688.0401

Command?

86/11/19

16:32

Result Name: 8611190834

9688.0401 RS	BLK #918
500 PPM ICS	CAL BLK
CAL BLK	BLK #918
500 PPB	CAL BLK
500 PPB	500 PPB
500 PPB	
4422 9614.0201	
4425 9617.0306	
4425 9617.0801	
9617.0801 R	
9617.0801 RS	
4425 9618.0801	
4425 9619.0801	
4425 9620 0801	

Command?

Sb_VHG_2

blank	53.44	intensity		68.83	cv	
standard	1589.00	intensity		1.52	cv	
500 PPB	475.10	ug/L		12.54	cv	
ICAP-19	977.70	ug/L		5.97	cv	
500 PPM ICS	1002.90	ug/L		0.88	cv	
CAL BLK	-3.51	ug/L		-20.57	cv	
BLK #911	-23.91	ug/L	<60.0	-31.61	cv	
4442 9683.0401	-22.52	ug/L		-301.0	cv	window edge
4442 9684 0401	14.82	ug/L		207.00	cv	window edge
4442 9685.0401	46.06	ug/L		12.34	cv	
4442 9686.0401	36.49	ug/L		41.14	cv	
9686. 1/10	4.91	ug/L		1289.7	cv	
87.0401 ~~Sample 001~~	32.27	ug/L	11.4u	5.39	cv	
4442 9688.0401	49.76	ug/L		36.07	cv	
9688 0401 R1	48.33	ug/L		34.16	cv	
1/10 9688.0401	-25.56	ug/L		-130.8	cv	
9688 0401 RS	335.95	ug/L		5.96	cv	
500 PPM ICS	1014.70	ug/L		9.10	cv	
CAL BLK	-51.01	ug/L		-115.1	cv	window edge
500 PPB	542.10	ug/L		7.91	cv	

Zn_VHG

blank	28.32	intensity		0.59	cv
standard	8288.00	intensity		0.72	cv
500 PPB	507.45	ug/L		1.96	cv
ICAP-19	977.75	ug/L		0.32	cv
500 PPM ICS	976.60	ug/L		0.96	cv
CAL BLK	-0.11	ug/L		-629.9	cv
BLK #911	6.42	ug/L	<10.0	2.10	cv
50 PPM	47800.00	ug/L		1.06	cv
4442 9683.0401	730.00	ug/L		0.42	cv
4442 9684.0401	5994.50	ug/L		0.39	cv
4442 9685.0401	4858.50	ug/L		0.17	cv
4442 9686.0401	4073.00	ug/L		0.60	cv
9686. 1/10	446.20	ug/L		0.41	cv
7.0401 ~~Sample 001~~	9888.50	ug/L	188.3	0.21	cv
4442 9688 0401	8810.50	ug/L		0.07	cv
9688.0401 R1	10365.00	ug/L		1.13	cv
1/10 9688.0401	1131.00	ug/L		5.02	cv
9688.0401 RS	10620.00	ug/L		1.29	cv
500 PPM ICS	1021.50	ug/L		1.00	cv
CAL BLK	-3.61	ug/L		-17.03	cv
500 PPB	536.25	ug/L		1.21	cv

Cd_VHG

blank	26.11	intensity		3.72	cv	
standard	5934.50	intensity		1.64	cv	
500 PPB	505.30	ug/L		1.82	cv	
ICAP-19	894.90	ug/L		0.04	cv	
500 PPM ICS	931.70	ug/L		1.91	cv	
CAL BLK	-0.78	ug/L		-107.4	cv	
BLK #911	-1.34	ug/L	<5.00	-228.7	cv	window edge
4442 9683 0401	9.00	ug/L		17.97	cv	
4442 9684 0401	67.39	ug/L		0.46	cv	
4442 9685 0401	81.39	ug/L		4.73	cv	
4442 9686 0401	74.55	ug/L		1.07	cv	
7.0401 ~~Sample 001~~	86.37	ug/L	16.8	0.31	cv	

4442 9688 0401	53.50	ug/L		8.38	cv	
9688.0401 R1	63.0.	ug/L		7.46	cv	
1/10 9688 0401	4.85	ug/L		53.71	cv	
9688.0401 RS	115.35	ug/L		4.60	cv	
500 PPM ICS	992.70	ug/L		0.62	cv	
CAL BLK	-1.82	ug/L		-130.7	cv	window edge
500 PPB	546.45	ug/L		0.19	cv	

Co_VHG

blank	13.36	intensity		85.87	cv	
standard	1719.50	intensity		0.04	cv	
500 PPB	487.80	ug/L		1.94	cv	
ICAP-19	943.55	ug/L		1.30	cv	
500 PPM ICS	871.75	ug/L		1.58	cv	
CAL BLK	-2.45	ug/L		-3.28	cv	
BLK #911	-4.08	ug/L	<10.0	-68.69	cv	
4442 9683 0401	22.93	ug/L		1.94	cv	
4442 9684.0401	33.44 ✓	ug/L		22.84	cv	
4442 9685.0401	10.42 ✓	ug/L		78.45	cv	
4442 9686.0401	6.13	ug/L	<10.0	117.53	cv	
87.0401 ~~Sample 001~~	76.94	ug/L	9.5	1.24	cv	
4442 9688.0401	34.52	ug/L		1.23	cv	
9688.0401 R1	38.58	ug/L		6.76	cv	
1/10 9688.0401	-4.12	ug/L	<10.0	-57.13	cv	
9688.0401 RS	542.30	ug/L		1.85	cv	
500 PPM ICS	949.10	ug/L		2.13	cv	
CAL BLK	-1.25	ug/L		-153.9	cv	
500 PPB	529.40	ug/L		1.64	cv	

Ni_VHG

blank	94.42	intensity		9.69	cv	
standard	8653.00	intensity		0.11	cv	
500 PPB	481.00	ug/L		1.80	cv	
ICAP-19	937.00	ug/L		1.46	cv	
500 PPM ICS	845.40	ug/L		0.37	cv	
CAL BLK	2.41	ug/L		102.23	cv	
BLK #911	3.23	ug/L	<40.0	4.06	cv	
4442 9683.0401	81.79	ug/L		17.14	cv	
~~4442 9684.0401~~	~~[2124.50~~	~~ug/L~~		~~0.26~~	~~cv~~	BHR See Attached
4442 9685 0401	995.65	ug/L		0.06	cv	
4442 9686.0401	845.15 ✓	ug/L		0.60	cv	
9686. 1/10	77.96	ug/L		13.71	cv	
87.0401 ~~Sample 001~~	1616.50	ug/L 308		0.20	cv	
~~4442 9688 0401~~	~~[1165.00~~	~~ug/L~~		~~0.72~~	~~cv~~	BHR See Attached
~~9688.0401 R1~~	~~1315.00~~	~~ug/L~~		0.10	cv	⊥
1/10 9688.0401	136.85	ug/L		0.97	cv	
9688.0401 RS	1820.00	ug/L		0.31	cv	
500 PPM ICS	937.65	ug/L		1.39	cv	
CAL BLK	2.74	ug/L		218.22	cv	
500 PPB	515.30	ug/L		5.30	cv	

Mn_VHG

blank	2.33	intensity		18.40	cv	
standard	5943.00	intensity		0.10	cv	
500 PPB	492.10	ug/L		0.07	cv	
ICAP-19	944.95	ug/L		0.42	cv	
500 PPM ICS	884.40	ug/L		0.38	cv	
CAL BLK	0.10	ug/L		1115.0	cv	
BLK #911	0.24	ug/L	<15.0	123.99	cv	

	~~4442 9683 0401~~	~~[illegible]~~	~~ug/L~~ BR	0.31	cv See Attached
	4442 9684 0401	464.15	ug/L	0.29	cv
	4442 9685 0401	321.85	ug/L	0.16	cv
	4442 9686.0401	219.30	ug/L	0.61	cv
87.0461	~~Sample 001~~	854.10	ug/L 163	1.16	cv
	4442 9688.0401	490.55	ug/L	0.50	cv
	9688 0401 R1	541.40	ug/L	1.39	cv
	1/10 9688 0401	58.86	ug/L	5.23	cv
	9688.0401 RS	1084.50	ug/L	0.73	cv
	500 PPM ICS	971.45	ug/L	0.29	cv
	CAL BLK	-1.40	ug/L	-81.43	cv
	500 PPB	524.65	ug/L	0.83	cv

Fe_VHG

	blank	52.14	intensity	14.85	cv
	standard	5326.00	intensity	1.33	cv
	500 PPB	494.25	ug/L	0.78	cv
	ICAP-19	935.05	ug/L	1.19	cv
	500 PPM ICS	197050.0	ug/L	0.04	cv
	CAL BLK	4.65	ug/L	69.78	cv
	BLK #911	2.44	ug/L	50.92	cv
	50 PPM	45710.00	ug/L	1.35	cv
	~~4442 9683 0401~~	~~67575.00~~	~~ug/L~~	~~0.55~~	~~cv~~ BR. See Attached
	~~4442 9684 0401~~	~~99225.00~~	~~ug/L~~	~~0.36~~	~~cv~~
	~~9684 1/10~~	~~2215.00~~	~~ug/L~~	~~0.07~~	~~cv~~
	~~4442 9685 0401~~	~~130750.0~~	~~ug/L~~	~~0.58~~	~~cv~~
	~~9685 0 1/10~~	~~13875.00~~	~~ug/L~~	~~0.07~~	~~cv~~
	~~4442 9686 0401~~	~~133200.0~~	~~ug/L~~	~~1.61~~	~~cv~~
	~~9686 1/10~~	~~12510.00~~	~~ug/L~~	~~1.94~~	~~cv~~
87.0461	~~Sample 001~~	~~112100.0~~	~~ug/L~~	~~0.62~~	~~cv~~
	~~9687 1/10~~	~~11125.00~~	~~ug/L~~	~~1.19~~	~~cv~~
	~~4442 9688.0401~~	~~73805.00~~	~~ug/L~~	~~1.00~~	~~cv~~
	~~9688.0401 R1~~	~~90160.00~~	~~ug/L~~	~~1.19~~	~~cv~~
	~~1/10 9688.0401~~	~~9021.50~~	~~ug/L~~	~~2.11~~	~~cv~~
	~~9688 0401 RS~~	~~91075.00~~	~~ug/L~~	~~0.53~~	~~cv~~
	500 PPM ICS	196700.0	ug/L	0.00	cv
	CAL BLK	-5.20	ug/L	-30.34	cv
	500 PPB	514.95	ug/L	1.53	cv

V_VHG

	blank	7.24	intensity	588.12	cv	window edge
	standard	5663.50	intensity	1.22	cv	
	500 PPB	499.75	ug/L	0.61	cv	
	ICAP-19	948.70	ug/L	0.61	cv	
	500 PPM ICS	900.70	ug/L	0.16	cv	
	CAL BLK	0.97	ug/L	1.76	cv	
	BLK #911	1.79	ug/L <5.0.	102.05	cv	
	4442 9683.0401	100.64	ug/L	5.60	cv	
	4442 9684.0401	90.68	ug/L	3.16	cv	
	4442 9685.0401	64.29	ug/L	6.67	cv	
	4442 9686.0401	75.28	ug/L	1.21	cv	
	9686 1/10	4.69	ug/L <50.0	2.20	cv	
87.0461	~~Sample 001~~	72.91	ug/L 139	0.43	cv	
	4442 9688.0401	70.28	ug/L	1.66	cv	
	9688.0401 R1	79.58	ug/L	0.17	cv	
	1/10 9688.0401	9.44	ug/L <50.0	10.03	cv	
	9688 0401 RS	584.70	ug/L	0.87	cv	
	500 PPM ICS	981.00	ug/L	0.20	cv	
	CAL BLK	4.52	ug/L	106.42	cv	

500 PPB	540.40	ug/L		1.74	cv	

P_VHG

blank	6.07	intensity		15.04	cv	window edge
standard	7169.00	intensity		0.43	cv	
500 PPB	490.65	ug/L		0.81	cv	
ICAP-19	911.45	ug/L		0.41	cv	
500 PPM ICS	923.10	ug/L		0.07	cv	
CAL BLK	-0.31	ug/L		-83.19	cv	
BLK #911	-0.66	ug/L	<5.00	-15.46	cv	
4442 9683.0401	1.96	ug/L		55.98	cv	
4442 9684.0401	2.25	ug/L		26.05	cv	
4442 9685.0401	3.93	ug/L		12.07	cv	
4442 9686.0401	1.71	ug/L	0.95	72.59	cv	
97.0401 ~~Sample 001~~	2.79	ug/L		13.63	cv	
4442 9688.0401	3.09	ug/L		34.16	cv	
9688.0401 R1	2.86	ug/L		6.88	cv	
1/10 9688.0401	-0.46	ug/L		-26.96	cv	
9688.0401 RS	52.11	ug/L		3.04	cv	
500 PPM ICS	978.95	ug/L		0.37	cv	
CAL BLK	-0.90	ug/L		-49.27	cv	window edge
500 PPB	509.45	ug/L		0.21	cv	

Cu_VHG

blank	49.85	intensity		49.91	cv	
standard	8643.50	intensity		0.60	cv	
500 PPB	487.90	ug/L		0.01	cv	
ICAP-19	932.40	ug/L		0.42	cv	
500 PPM ICS	923.10	ug/L		1.19	cv	
CAL BLK	0.55	ug/L		94.27	cv	
BLK #911	2.33	ug/L	<25.0	42.86	cv	
50 PPM	47670.00	ug/L		0.23	cv	
4442 9683.0401	132.90	ug/L		1.79	cv	
4442 9684.0401	9884.00	ug/L		1.02	cv	
4442 9685.0401	14870.00	ug/L		0.45	cv	
4442 9686.0401	10385.00	ug/L		0.39	cv	
97.0401 ~~Sample 001~~	32935.00	ug/L	6273	0.77	cv	
9687. 1/10	3284.50	ug/L		1.30	cv	
4442 9688.0401	32995.00	ug/L		1.51	cv	
9688.0401 R1	85025.00	ug/L		1.57	cv	
1/10 9688.0401	3890.50	ug/L		2.12	cv	
9688.0401 RS	38555.00	ug/L		1.13	cv	
500 PPM ICS	996.75	ug/L		0.57	cv	
CAL BLK	2.08	ug/L		24.54	cv	
500 PPB	520.75	ug/L		0.09	cv	

Ag_VHG

blank	77.82	intensity		13.13	cv	
standard	17860.00	intensity		0.45	cv	
500 PPB	490.10	ug/L		0.30	cv	
EPA 283#2 1/50	113.15	ug/L		3.34	cv	
500 PPM ICS	959.20	ug/L		0.34	cv	
CAL BLK	-1.91	ug/L		-154.9	cv	window edge
BLK #911	-2.15	ug/L	<10.0	-11.93	cv	
4442 9683.0401	-3.26	ug/L	1	-76.93	cv	window edge
4442 9684.0401	22.53	ug/L		1.70	cv	
4442 9685.0401	83.12	ug/L		4.56	cv	
4442 9686.0401	75.16	ug/L		0.68	cv	
97.0401 ~~Sample 001~~	95.77	ug/L	18.2	2.80	cv	

4442 9688 0401	12.93	ug/L	5.52	cv	
9688 0401 R1	13.58	ug/L	3.34	cv	
1/10 9688.0401	3.15	ug/L <10.0	148.46	cv	
9688.0401 RS	96.58	ug/L	1.55	cv	
500 PPM ICS	1042.50	ug/L	0.52	cv	
CAL BLK	-0.60	ug/L	-84.05	cv	window edge
500 PPB	516.20	ug/L	0.08	cv	

AI_VHG

blank	188.51	intensity	170.44	cv	
standard	9852.00	intensity	0.80	cv	
500 PPB	492.50	ug/L	4.42	cv	
ICAP-7	1099.00	ug/L	2.81	cv	
ICAP-7	1071.50	ug/L	1.92	cv	
500 PPM ICS	97840.00	ug/L	0.55	cv	
CAL BLK	8.46	ug/L	54.33	cv	
BLK #911	22.29	ug/L	0.19	cv	
50 PPM	50740.00	ug/L	2.29	cv	
4442 9683.0401	44850.00	ug/L	0.67	cv	
4442 9684.0401	32300.00	ug/L	0.45	cv	
4442 9685.0401	21585.00	ug/L	1.69	cv	
4442 9686.0401	27590.00	ug/L	0.00	cv	
9686. 1/10	2910.00	ug/L	2.53	cv	
687.0401 ~~Sample 001~~	20840.00	ug/L 3969	0.67	cv	
9687. 1/10	2237.50	ug/L	0.60	cv	
4442 9688.0401	29455.00	ug/L	1.21	cv	
9688.0401 R1	33555.00	ug/L	0.19	cv	
1/10 9688.0401	3535.00	ug/L	0.45	cv	
9688.0401 RS	37270.00	ug/L	0.45	cv	
500 PPM ICS	101150.0	ug/L	0.08	cv	
CAL BLK	-2.31	ug/L	-1341.	cv	window edge
500 PPB	521.05	ug/L	0.61	cv	

Ba_VHG

blank	9.44	intensity	47.45	cv	
standard	12895.00	intensity	0.55	cv	
500 PPB	486.00	ug/L	0.35	cv	
ICAP-7	1048.00	ug/L	0.65	cv	
500 PPM ICS	960.45	ug/L	0.19	cv	
CAL BLK	0.16	ug/L	0.60	cv	
BLK #911	0.09	ug/L	353.51	cv	
50 PPM	53355.00	ug/L	0.25	cv	
~~4442 9683.0401~~	~~1340.00~~	~~ug/L~~	~~0.21~~	~~cv~~	BHR See Attached
~~4442 9684.0401~~	~~1229.50~~	~~ug/L~~	0.74	cv	
~~4442 9685.0401~~	~~1323.00~~	~~ug/L~~	1.19	cv	
~~4442 9686.0401~~	~~1097.50~~	~~ug/L~~	0.29	cv	
P7.0401 ~~Sample 001~~	~~2439.50~~	~~ug/L~~	0.44	cv	
~~4442 9688.0401~~	~~1135.50~~	~~ug/L~~	0.55	cv	
~~9688.0401 R1~~	~~1404.00~~	~~ug/L~~	1.41	cv	
~~1/10 9688.0401~~	~~137.25~~	~~ug/L~~	0.25	cv	
~~9688.0401 RS~~	~~3598.50~~	~~ug/L~~	0.21	cv	
500 PPM ICS	1101.00	ug/L	0.11	cv	
CAL BLK	-0.01	ug/L	-4763.	cv	
500 PPB	565.35	ug/L	0.11	cv	

Job # 4442
Cs

Dead Creek

86/11/19

16:47

Result Name 8611191501

standard	4432 9657.0401	500 PPB	4425 9619.0306
standard	CAL BLK	4432 9683 0401	4425 9620.0306
blank	500 PPB	4442 9684.0401	9620.0306 R
CAL BLK	4432 9658.0401	4442 9685.0401	BLK #905
500 PPB	4432 9659.0401	4442 9686.0401	4345 9166.0506
ICAP-19	4432 9660 0401	4442 9687.0401	4345 9167.0506
500 PPM ICS	4432 9661.0401	4442 9688.0401	4345 9168.0506
BLK #911	4432 9662.0401	9688.0401 R	4345 9169.0506
4432 9651.0401	4432 9663.0401	9688.0401 RS	4345 9170.0506
4432 9652.0401	4432 9664.0401	500 PPM ICS	BLK #871
4432 9653.0401	4432 9665.0401	CAL BLK	4345 9166.1001
4432 9654 0401	4432 9666.0401	500 PPB	4345 9167.1001
4432 9655.0401	4432 9667.0401	4425 9617.0306	4345 9168.1001
4432 9656.0401	CAL BLK	4425 9618.0306	4345 9169.1001

Command?

Cr_VHG

standard	11040.00	intensity	1.54	cv	
standard	11110.00	intensity	0.40	cv	
blank	20.51	intensity	82.41	cv	
CAL BLK	1.61	ug/L	327.43	cv	
500 PPB	492.15	ug/L	1.85	cv	
ICAF-19	971.25	ug/L	0.19	cv	
500 PPM ICS	883.05	ug/L	0.15	cv	
BLK #511	-0.70	ug/L <10.0	-737.8	cv	window edge
4442 9683.0401	56.09	ug/L	7.33	cv	
4442 9684.0401	129.80	ug/L	0.86	cv	
4442 9685.0401	326.85	ug/L	0.19	cv	
4442 9686.0401	400.65	ug/L	0.44	cv	
4442 9687.0401	593.80	ug/L 113	0.05	cv	
4442 9688.0401	240.85	ug/L	1.72	cv	
9688.0401 R	283.05	ug/L	2.83	cv	
9688.0401 RS	471.45	ug/L	0.31	cv	
500 PPM ICS	878.95	ug/L	0.37	cv	
CAL BLK	2.16	ug/L	48.76	cv	
500 PPB	501.70	ug/L	1.65	cv	

Job # 4442 Reruns
Ni, Fe, Ba

Dead Creek

86/11/21

16:21

Result Name: 8611211050

blank	4441 9681.0601	4455 9707.0301	4456 9714.0101
standard	4441 9682.0601	4455 9708.0301	4456 9715.0101
standard	BLK #920	4455 9709.0301	4456 9716.0101
standard	10000 PPB	4455 9710.0301	BLK #920
ICAP-19	500 PPM ICS	4455 9711.0301	10000 PPB
ICAP-7	CAL BLK	BLK #924	CAL BLK
EPA 282#2 1/50	500 PPB	4456 9712.0101	500 PPB
500 PPB	500 PPM ICS	4456 9713.0101	500 PPB
500 PPB	CAL BLK	CAL BLK	500 PPB
500 PPB	500 PPB	500 PPB	50 PPM
500 PPM ICS	500 PPB	500 PPB	4431 9644.0601
4441 9680.0601	500 PPB	500 PPB	4431 9646.0601
9680.0601 R	4452 9703.0101	9713.0101 R	9646. 1/2
9680.0601 RS	4455 9706.0301	9713.0101 RS	4431 9648.0601

Command?

86/11/21

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Result Name: 8611211050

4431 9649 0601	9686 1/10
4431 9650.0601	4442 9687 0401
9650 0601 R	9687 1/10
9650.0601 RS	4442 9688 0401
BLK #908	9689 1/10
CAL BLK	9688.0401 R
500 PPB	9688 R 1/10
4442 9683.0401	9688.0401 RS
9683 1/3	9688.RS 1/10
4442 9684.0401	BLK #911
9684 1/10	500 PPM ICS
4442 9685.0401	CAL BLK
9685 1/10	500 PPB
4442 9686.0401	

Command?

Ni_VHG

blank	131.23	intensity	92.39	cv
standard	10525.00	intensity	2.73	cv
standard	9911.50	intensity	1.86	cv
ICAP-19	986.00	ug/L	0.30	cv
500 PPB	513.85	ug/L	0.10	cv
500 PPM ICS	876.15	ug/L	2.01	cv
10000 PPB	9836.00	ug/L	0.99	cv
~~50 PPM~~	~~53235.00~~	~~ug/L~~	~~1.10~~	~~cv~~
4442 9684.0401	9802.50	ug/L → 544 mg/Kg	0.30	cv
4442 9688.0401	985.50	ug/L → 197 ⊥	2.07	cv
BLK #911	-4.99	ug/L <40.0	-14.62	cv
500 PPM ICS	841.30	ug/L	3.23	cv
CAL BLK	-1.77	ug/L	-184.1	cv
500 PPB	525.95	ug/L	0.67	cv

Sec Raw
Oldata

CAL BLK → -8.75 ug/L 11.4c
B4R 500ppb → 519.40 ug/L 2.15c

Te_VHG

blank	25.28	intensity	31.08	cv
standard	5934.00	intensity	0.81	cv
standard	5868.00	intensity	0.05	cv
ICAP-19	987.80	ug/L	0.06	cv
500 PPB	513.10	ug/L	1.16	cv
500 PPM ICS	177800.0	ug/L	0.00	cv
10000 PPB	9764.50	ug/L	0.70	cv
50 PPM	51350.00	ug/L	0.19	cv
4442 9683.04011570.00		ug/L	1.82	cv
9683. 1/2	33439.00	ug/L → 12617 mg/Kg	0.63	cv
4442 9684.04015490.00		ug/L	1.31	cv
9684. 1/10	9407.50	ug/L → 17750	1.84	cv
4442 9685.040123150.0		ug/L	1.78	cv
9685. 1/10	11990.00	ug/L → 23570	0.36	cv
4442 9686.040122300.0		ug/L	1.24	cv
9686. 1/10	11985.00	ug/L → 23733	0.30	cv
4442 9687.040107950.0		ug/L	0.31	cv
9687. 1/10	10575.00	ug/L → 20143 ✓	0.78	cv
4442 9688.04017035.00		ug/L	0.74	cv
9688 1/10	7017.50	ug/L → 14035	0.27	cv
9688.0401 R	81740.00	ug/L	0.35	cv
9688.R 1/10	8307.50	ug/L → 15976 ⊥	0.20	cv
9688.0401 RS	82935.00	ug/L	0.19	cv
9688.RS 1/10	8438.50	ug/L → NR	0.09	cv
BLK #911	0.41	ug/L <100	770.62	cv
500 PPM ICS	177600.0	ug/L	0.02	cv
CAL BLK	9.72	ug/L	48.47	cv
500 PPB	521.05	ug/L	0.89	cv

CAL BLK → 0.31 ug/L 20.01 cv
500 ppb 532.09 ug/L 1.76 cv

Ba_VHG

blank	15.60	intensity	12.38	cv
standard	16310.00	intensity	0.76	cv
standard	15955.00	intensity	0.90	cv
ICAP-7	958.30	ug/L	0.55	cv
500 PPB	526.00	ug/L	0.99	cv
500 PPM ICS	974.75	ug/L	0.02	cv
10000 PPB	10235.00	ug/L	1.23	cv
50 PPM	59150.00	ug/L	0.19	cv
4442 9683.0401	1172.50	ug/L → 223 mg/Kg	0.41	cv
4442 9684.0401	1623.00	ug/L → 306	0.34	cv
4442 9685.0401	961.20	ug/L → 181 ⊥	0.05	cv

CAL BLK - 0.24 ug/L 112.96 cv
500 ppb 539.43 ⊥ 0.08 ⊥

4442 9686 0101	953.00	ug/L	189mg/kg	0.07	cv
4442 9687 0401	2112.50	ug/L	403 ✓	0.30	cv
4442 9688 0401	1051.50	ug/L	210	0.73	cv
9688.0401 B	1199.00	ug/L	230	1.31	cv
9688.0401 BS	3038.00	ug/L	-99%rec	0.37	cv
BLK #911	-0.15	ug/L	<200	-95.77	cv
500 PPM ICS	978.20	ug/L		0.37	cv
CAL BLK	-0.58	ug/L		-6.33	cv
500 PPB	536.75	ug/L		1.36	cv

Dead Creek

Job # 4432 Rerun
Ba, Fe, Mn, Ni, Zn

86/11/[illegible]

13:06

Result Name: 8611281003

standard	4460 9738.0109	4432 9652.0401	4432 9661.0401
standard	9738 + 1PPM	4432 9653.0401	9661. 1/2
blank	9738 + 2PPM	CAL BLK	4432 9662.0401
CAL BLK	9738 + 3PPM	500 PPB	9662 1/10
500 PPB	9738 [illegible]	4432 9654.0401	4432 9663.0401
ICAP-19	9738 B + 1PPM	9654. 1/2	9663. 1/2
ICAP-2	9738 B + 2PPM	4432 9655.0401	CAL BLK
500 PPM ICS	9738 B + 3PPM	4432 9656.0401	500 PPB
10000 PPB	BLK #931	4432 9657.0401	4432 9664.0401
50 PPM	BLK + 1PPM	9657. 1/10	9664. 1/10
4460 9737.0109	BLK + 2PPM	4432 9658.0401	4432 9665.0401
9737 + 1PPM	BLK + 3PPM	9658. 1/2	4432 9667.0401
9737 + 2PPM	BLK #911	4432 9659.0401	9667. 1/2
9737 + 3PPM	4432 9651.0401	4432 9660.0401	500 PPM ICS

Command?

Fe_VHG

standard	9570.00	intensity	6.41	cv	
standard	7733.00	intensity	6.63	cv	
blank	17.73	intensity	18.93	cv	
CAL BLK	-0.37	ug/L	-43.27	cv	
500 PPB	503.30	ug/L	0.63	cv	
ICAP-19	993.05	ug/L	1.70	cv	
500 PPM ICS	901.25	ug/L	1.86	cv	
10000 PPB	9915.50	ug/L	1.17	cv	
50 PPM	51815.00	ug/L	0.21	cv	
BLK #911	7.86	ug/L <20.0	35.51	cv	
4432 9658.0401	12345.00	ug/L → 3831 mg/Kg	2.08	cv	
CAL BLK	0.44	ug/L	5.93	cv	
500 PPB	525.35	ug/L	0.85	cv	
500 PPM ICS	925.55	ug/L	1.51	cv	
CAL BLK	-0.91	ug/L	-2.22	cv	
500 PPB	522.55	ug/L	0.23	cv	

Ni_VHG

standard	10955.00	intensity	5.30	cv	
standard	10150.00	intensity	0.67	cv	
blank	4.74	intensity	498.46	cv	
CAL BLK	5.49	ug/L	19.63	cv	
500 PPB	513.65	ug/L	0.05	cv	
ICAP-19	988.90	ug/L	0.46	cv	
500 PPM ICS	849.35	ug/L	2.84	cv	
10000 PPB	9579.00	ug/L	0.84	cv	
50 PPM	51160.00	ug/L	0.13	cv	
BLK #911	5.02	ug/L <40.0	131.64	cv	window edge
4432 9653.0401	195.50	ug/L → 234 mg/Kg	1.22	cv	
CAL BLK	0.77	ug/L	250.81	cv	window edge
500 PPB	521.30	ug/L	0.07	cv	
4432 9655.0401	995.75	ug/L → 195	0.48	cv	
4432 9657.0401	1863.50	ug/L → 709	0.82	cv	
4432 9658.0401	1534.00	ug/L → 502	1.35	cv	
4432 9660.0401	1140.00	ug/L → 380	0.43	cv	
4432 9661.0401	1586.50	ug/L → 479	0.25	cv	
4432 9662.0401	1374.00	ug/L → 457	0.99	cv	
CAL BLK	0.39	ug/L	1210.3	cv	
500 PPB	535.20	ug/L	0.23	cv	
4432 9664.0401	1244.50	ug/L → 428 ⊥	0.44	cv	
500 PPM ICS	870.35	ug/L	0.23	cv	
CAL BLK	0.24	ug/L	411.55	cv	window edge
500 PPB	528.45	ug/L	2.55	cv	

Mn_VHG

standard	7451.00	intensity	3.76	cv	
standard	7029.50	intensity	0.10	cv	
blank	4.84	intensity	25.54	cv	window edge
CAL BLK	0.30	ug/L	64.11	cv	
500 PPB	509.50	ug/L	0.59	cv	
ICAP-19	983.95	ug/L	0.92	cv	
500 PPM ICS	886.55	ug/L	1.12	cv	
10000 PPB	9657.00	ug/L	0.39	cv	
50 PPM	50985.00	ug/L	0.05	cv	
BLK #911	-0.85	ug/L <15.0	-90.29	cv	
4432 9667.0401	1637.00	ug/L → 324 mg/Kg	0.58	cv	
500 PPM ICS	916.35	ug/L	1.13	cv	

CAL BLK	-0.00	ug/L	-00811	cv
500 PPB	511.00	ug/L	2.11	cv

Fe_VHG

standard	[illegible]	intensity	2.76	cv
standard	[illegible]	intensity	0.22	cv
blank	11.75	intensity	53.96	cv
CAL BLK	0.36	ug/L	-395.8	cv
500 PPB	517.20	ug/L	0.46	cv
ICAP-19	995.00	ug/L	0.69	cv
500 PPM ICS	174100.0	ug/L	0.02	cv
10000 PPB	9735.00	ug/L	0.51	cv
50 PPM	50360.00	ug/L	0.14	cv
BLK #911	11.39	ug/L <100 /	15.33	cv
4432 9651 04[illegible]	[illegible]	→ 8599 mg/Kg	0.51	cv
4432 9652 04[illegible]	[illegible]	→ 7188.	0.43	cv
4432 9653 04[illegible]	[illegible]	→ 7343.	0.15	cv
CAL BLK	[illegible]	ug/L	85.75	cv
500 PPB	[illegible]	ug/L	1.76	cv
4432 9654 04012589.00		ug/L	0.10	cv
9654 1/2	[illegible]	→ 14,964.	0.08	cv
4432 9655 04[illegible]	[illegible]	→ 9094.	0.13	cv
4432 9656 04[illegible]	[illegible]	→ 8374.	0.25	cv
4432 9657 04[illegible]		ug/L	0.47	cv
9657 1/10	[illegible]	→ 27,183.	2.40	cv
4432 9658 04[illegible]		ug/L	0.41	cv
9658 1/2	[illegible]	→ 12,317.	0.71	cv
4432 9659 04[illegible]	[illegible]	→ 7943.	0.15	cv
4432 9660 04[illegible]	[illegible]	→ 8171. ✓	0.24	cv
4432 9661 04[illegible]		ug/L	0.94	cv
9661 1/2	[illegible]	→ 13,265.	0.14	cv
4432 9662 04[illegible]		ug/L	0.48	cv
9662 1/10	[illegible]	→ 31,087.	0.28	cv
4432 9663 04[illegible]		ug/L	0.07	cv
9663 1/2 ✓	[illegible]	→ 19,891.	0.54	cv
CAL BLK	-1.97	ug/L	-37.55	cv
500 PPB	531.75	ug/L	0.85	cv
4432 9664 04[illegible]		ug/L	0.08	cv
9664 1/10	[illegible]	→ 25,889.	1.31	cv
4432 9665 04[illegible]	[illegible]	→ 7981.	0.66	cv
4432 9667 04[illegible]		ug/L	0.81	cv
9667 1/2	[illegible]	→ 13,077	0.55	cv
500 PPM ICS	174000.0	ug/L	0.01	cv
CAL BLK	5.65	ug/L	39.15	cv
500 PPB	535.25	ug/L	0.15	cv

Ba_VHG

standard	18165.00	intensity	1.97	cv
standard	17105.00	intensity	0.12	cv
blank	3.18	intensity	73.35	cv
CAL BLK	-0.50	ug/L	-131.7	cv
500 PPB	504.30	ug/L	0.07	cv
ICAP-7	956.50	ug/L	0.10	cv
500 PPM ICS	955.35	ug/L	0.84	cv
10000 PPB	10011.00	ug/L	0.70	cv
50 PPM	55900.00	ug/L	0.14	cv
BLK #911	0.53	ug/L <200 /	156.51	cv
4432 9651 0401[illegible]	[illegible]	→ 215 mg/Kg	0.01	cv
4432 9652 0401[illegible]	[illegible]	→ 410	0.32	cv

CAL BLK		-0.63	ug/L	-187.1	ev
500 PPB		522.55	ug/L	0.34	ev
4432 9654 0401		1224.50	ug/L	0.32	ev
4432 9657 0401		3451.30	ug/L	0.01	ev
9657 1/10		4414.30	ug/L	1.97	ev
4432 9658 0401		1131.50	ug/L	0.39	ev
4432 9660 0401		1212.50	ug/L	0.31	ev
4432 9661 0401		3404.10	ug/L	0.47	ev
4432 9662 0401		2208.50	ug/L	0.23	ev
CAL BLK		-0.30	ug/L	-87.75	ev
500 PPB		532.25	ug/L	0.22	ev
4432 9664 0401		100.50	ug/L	0.16	ev
4432 9665 0401		[illegible]	ug/L	0.57	ev
4432 9667 0401		1480.00	ug/L	0.29	ev
500 PPM ICS		997.70	ug/L	0.71	ev
CAL BLK		-0.33	ug/L	-87.33	ev
500 PPB		528.10	ug/L	0.46	ev

240mg/Kg
8099
1804
259 ✓
631
617

400
48.9
285

1.05
1.08
1.04

Job # 4432
PB

Dead Creek

REPORT > SELECT RESULT

MODE > MANUAL MODE

86/10/10

16:50

Result Name: 8610100939

blank	4432 9651.0401	4432 9660.0401	4442 9687.0401
standard	4432 9652.0401	4432 9661.0101	4442 9688.0402
standard	4432 9653.0401	4432 9662.0401	9623.0401 R
standard	4432 9654.0401	4432 9663.0401	9689.0402 RE
500 PPB	4432 9655.0401	4432 9664.0401	500 PPM ICB
500 PPB	4432 9656.0401	4432 9665.0401	CAL BLK
500 PPB	4432 9657.0401	4432 9666.0401	500 PPB
EPA 28360 [illegible]	CAL BLK	4432 9667.0401	500 PPB
ICAP-10	500 PPB	CAL BLK	4475 9814.0101
ICAP-7	500 PPB	500 PPB	4475 9815.0101
EPA 28360 [illegible]	500 PPB	4442 9683.0401	4475 9816.0101
EPA 200.7 ICP	500 PPB	4442 9684.0101	4475 9817.0101
10000 PPB	4432 9658.0401	4442 9685.0401	4475 9818.0101
BLK 4011	4432 9659.0401	4442 9686.0401	9813.0101 R

Comment

PE_VHC

blank	120.90	intensity	90.44	cv	
standard	5246.50	intensity	5.11	cv	
standard	5054.00	intensity	3.33	cv	
500 PPB	439.95	ug/L	6.77	cv	
500 PPB	505.65	ug/L	3.71	cv	
EPA 2838 1/50	81.65	ug/L	0.00	cv	
ICAP-19	932.65	ug/L	9.32	cv	
500 PPM ICB	1073.00	ug/L	2.46	cv	
10000 PPB	10275.00	ug/L	3.72	cv	
BLK #911	-29.29	ug/L	-3.06	cv	window edge
4402 9651.0401	2286.50	ug/L	1.89	cv	
4402 9652.0401	1737.00	ug/L	0.38	cv	
4402 9653.0401	-40.22	ug/L	-283.9	cv	
4402 9654.0401	186.20	ug/L	29.48	cv	
4402 9655.0401	209.50	ug/L	32.19	cv	
4402 9656.0401	2875.00	ug/L	2.59	cv	
4402 9657.0401	3729.00	ug/L	1.98	cv	
CAL BLK	-101.92	ug/L	-11.80	cv	window edge
500 PPB	505.55	ug/L	9.38	cv	
4402 9658.0401	964.70	ug/L	9.43	cv	
4402 9659.0401	1036.00	ug/L	1.65	cv	
4402 9660.0401	1373.00	ug/L	1.13	cv	
4402 9661.0401	1950.50	ug/L	2.19	cv	
4402 9662.0401	2338.50	ug/L	5.49	cv	
4402 9663.0401	159.00	ug/L	14.23	cv	
4402 9664.0401	619.00	ug/L	4.46	cv	
4402 9665.0401	430.30	ug/L	5.48	cv	
4402 9666.0401	148.10	ug/L	3.31	cv	
4402 9667.0401	182.15	ug/L	23.52	cv	
CAL BLK	-33.66	ug/L	-212.6	cv	
500 PPB	112.70	ug/L	11.61	cv	
100 PPM ICB	1112.00	ug/L	3.19	cv	
CAL BLK	-97.47	ug/L	-32.87	cv	
100 PPB	109.95	ug/L	7.42	cv	

JK
~~#8~~

Wt weight

<50.0

432 mg/kg

350

→ TO BERLIN HGA

35.1 mg/kg

42.1

472

691

184

190

264

386.

416

69.7

811

77.1

29.0

35.3

Pt_VHC

blank	401.90	intensity	80.64	cv	
standard	5184.50	intensity	5.11	cv	
standard	7054.50	intensity	5.35	cv	
500 PPB	439.95	ug/L	6.77	cv	
500 PPB	505.65	ug/L	3.71	cv	
DFA 290#2 1/50	81.65	ug/L	0.00	cv	
ICAP-19	932.65	ug/L	9.32	cv	
500 PPM ICS	1073.00	ug/L	2.46	cv	
10000 PPB	10275.00	ug/L	0.72	cv	
BLK #211	-29.29	ug/L <50.0	-3.06	cv	window edge
4442 9693.0401	129.55	→ 24.4 mg/Kg	22.19	cv	
4442 9694.0401	844.70	→ 160	9.33	cv	
4442 9695.0401	6111.50	→ 1198	0.47	cv	
4442 9696.0401	6707.00	→ 1334	1.24	cv	
4442 9697.0401	4522.50	→ 880	0.68	cv	
4442 9698.0401	3920.00	→ 684	3.10	cv	
9698.0402 R	3191.50	→ 614	1.67	cv	
9698.0402 RS	2779.00	ug/L – NA	1.44	cv	
500 PPM ICS	1110.00	ug/L	3.59	cv	
CAL BLK	-97.47	ug/L	-32.87	cv	
500 PPB	509.95	ug/L	7.42	cv	

Dead Creek

REPORT > SELECT RESULT

Job #4432
Fe

96/12/30

A ICP > MANUAL MODE

Result Name: 9612300140

blank	10000 PPB	10614.0401	10462. 1/10
standard	JCE#4610 B-990	10617.0101	10463. 1/10
standard	10460.0401	10618.0401	10464. 1/10
standard	50 PPM	10619.0401	10465. 1/10
standard	10463.0401	10620.0401	10465 R 1/10
500 PPB	10461.0401	10621.0401	10466 1/10
500 PPB	10465.0401	10622.0401	10615. 1/10
ICAP-17	10465.0401 R	10623.0401	10616. 1/10
ICAP-17	10614.0401	10624.0401	10617 1/10
ICAP-17	10615.0401	10625.04012	10100. 1/10
CAL BLK	CAL BLK	500 PPM 100	500 PPM
CAL PPM 100	500 PPB	CAL BLK	500 PPB
10000 PPB	500 PPB	500 PPB	10601. 1/10
CAL BLK	50 PPM	500 PPB	10600. 1/10

PORT > SELECT RESULT

VOB > MANUAL MODE

Result Name: [illegible]

[illegible]	SLM #912
[illegible]	CAL SLM
[illegible]	SCI FFE
[illegible]	
[illegible]	
[illegible]	
CAL SLM	
SCI FFE	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	

[illegible]	[illegible]	Intensity	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	ug/L	[illegible]
[illegible]	[illegible]	ug/L	[illegible]
[illegible]	107700.0	ug/L	[illegible]
CAL BLK	7.03	ug/L	36.10 cv
[illegible]	9601.50	ug/L	[illegible]
[illegible]	49530.00	ug/L	[illegible]
[illegible]	5073.00	ug/L	[illegible]
BLK #911	11.92	ug/L <100	[illegible]
CAL BLK	20.30	ug/L	10.73 cv
[illegible]	[illegible]	ug/L	[illegible]

Dead Creek

Job # 4442
Mn

REPORT : SELECT RESULT

MODE : MANUAL MODE

Result Name

[illegible]	10001 FPE	10611.0401	10462 1/10
[illegible]	[illegible] E-FPP	10617.0401	10460. 1/10
[illegible]	10612.0401	10613.0401	10465. 1/10
[illegible]	50 FPM	10619.0401	10465 1/10
[illegible]	10460.0401	10621.0401	10463.R 1/10
[illegible]	10461.0401	10621.0401	10614 1/10
500 FPE	10435.0401	10622.0401	10615. 1/10
[illegible]	10467.0401 R	10623.0401	10616. 1/10
[illegible]	10614.0401	10624.0401	10617. 1/10
[illegible]	10415.0401	10625.00010	10620 1/10
[illegible]	[illegible]	500 FPM [illegible]	[illegible]
[illegible]	[illegible]	[illegible]	500 FPE
10010 FPE	500 FPE	500 FPE	10621. 1/10
[illegible]	50 FPM	500 FPE	10622. 1/10

[illegible]

REPORT > SELECT RESULT [illegible]

ANALYSE > MANUAL MODE [illegible]

Result Number: 9612000019

10600. 0.1/10	BLK #810
10610. 1/10	CAL BLK
10620. 0.1/10	500 PPB
10624. 1/10	
10624.S 1/10	
500 PPM ICS	
CAL BLK	
500 PPB	
9641.0101	
Pell 1/10	
BLK #811	
CAL BLK	
500 PPB	
9642.0101	

Comment:

[illegible]					
Blank	-2.16	Intensity/	[illegible]	cv	
Standard	[illegible]	[illegible]	[illegible]	[illegible]	
500 PPB	530.25	ug/L	2.52	[illegible]	
ICMB-17	[illegible]	ug/L	0.22	cv	
500 PPM ICB	976.79	ug/L	0.78	cv	
CAL BLK	0.79	ug/L	50.97	cv	
10000 PPB	9798.00	ug/L	1.10	cv	
9600.0401	1100.50	ug/L	0.21	cv	
BLK #910	0.34	ug/L <15.0	5.72	cv	
CAL BLK	0.31	ug/L	266.43	cv	window edge
500 PPB	495.50	ug/L	0.15	cv	

Performed: [illegible]
Received: 12/15/87
Performed By: [illegible]

[illegible] Energy 31 Time [illegible]

See Standard Log # 038 pg 86

ID No.	Custody Seal Intact Yes	No	Secure Storage Area Received From N	C	ppb Batch 1	ppb Batch 2	ppb Avg	CV	20 ppb Spike	% Rec	DF	Sample Wgt	Units	Final Conc.
WS 378 #3					18.0				40.9	112			µg/l	18.0
Cal Blk					0.3				21.9	110				<10.0
50.0 ppb					48.6				69.9	107				48.6
9641.0603					-0.0	0.1	0.1	-	19.9	100				<10.0
9642.0603					2.9	3.4	3.1	-	18.2	91				<10.0
9643.0603					2.6	2.7	2.7	-	20.5	103				<10.0
9644.0603					6.0	6.9	6.9	1.09	21.2	106				<10.0
9645.0603					3.5	3.9	3.7	7.69	17.8	89				<10.0
9646.0603					24.5	26.8	25.6	6.34	[illegible]	/				/
9647.0603					5.5	4.8	5.1	9.61	19.6	98				<10.0
9648.0603					6.8	5.7	6.2	12.45	32.8	164				<10.0
9649.0603					5.4	5.3	5.3	1.32	20.4	102				<10.0
9650.0603					1.7	2.4	2.1	-	19.0	95				<10.0
Cal Blk					-0.7				22.0	110				<10.0
50.0 ppb					48.4				91.0	—				48.4
9650.R1					2.1	2.2	2.2	-	19.2	96				<10.0
9650.R1S1					18.3	18.3	18.3	0.00	37.7	97				92% Rec
Blk 909					-0.2	0.7	0.2	-	15.9	80		µg/l	µg/l	<10.0
9651.0402					37.1	35.5	36.3	3.12	[illegible]	/		1.06	mg/kg	/
9652.0402					37.1	38.2	37.6	2.07	79.1	/	1→10	1.02		/
9653.0402					11.5	11.2	11.4	1.87	26.2	/		1.00		/
9654.0402					35.6	36.7	36.2	2.15	[illegible]	/		1.06		/
9655.0402					59.6	58.0	58.8	1.92	[illegible]	/		1.09		/
9656.0402					42.4	44.8	43.6	3.89	[illegible]	/		1.09		/
9657.0402					61.7	61.5	61.6	0.12	[illegible]	/		1.08	mg/kg	/
Cal Blk					0.6	-0.1	0.2	-	20.9	105			µg/l	<10.0
50.0 ppb					51.2	47.5	49.3	5.30	[illegible]	—			µg/l	49.3
9658.0402					39.5	35.7	37.6	7.15	[illegible]	/		1.05	mg/kg	/
39.0402					12.1	11.2	11.1	5.46	[illegible]	/		1.09		/
9660.0402					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	/		1.04	mg/kg	/

[illegible]

...19

rmed: — As (cont'd)

lved: 12/16/91

or By: [illegible]

ID No.	Custody Seal Intact Yes	No	Secure Storage Area Received From N	C	ppb Batch 1	ppb Batch 2	ppb Avg	CV	Spike ppb Spike	% Rec	DF	Wet Samp Wgt	Units	Day 101. Final Conc.
9661.0402					63.9	61.5	62.7	2.71	130.0	/		1.01	mg/kg	/
9662.0402					19.3	19.1	18.7	3.03	36.0	87	2->10	1.01		30.3 mg/kg
9663.0402					7.7	8.0	7.9	2.70	24.9	110		1.03		< 3.2
9664.0402					20.9	25.3	26.1	4.34	49.0	115		1.04		7.8
9665.0402					6.3	6.5	6.6	5.40	21.4	107		1.09		< 4.7
9666.0402					16.0	16.7	16.3	3.03	[illegible]	/		1.02		/
9667.0402					24.2	23.9	23.5	3.90	31.0	/		1.09	mg/kg	/
Cal Blk					-0.1				19.1	96			µg/l	<10.0
50.0ppb					54.7				69.3	76				54.7
Blk 92.3					-0.9	-1.6	-1.3		16.2	81				<10.0
1680.0603					-1.2	-0.4	-0.8		14.8	74				<10.0
1680.R1					-0.0	-0.3	-0.7		20.6	103				<10.0
1680.RS1					19.8	19.7	19.8	0.36	24.7	/				99% Rec
1681.0603					471.9	549.9	507.3	10.9	[illegible]	/				/
1682.0603					4.2	4.5	4.7	1.66	[illegible]	139			µg/l	<10.0
1683.0402					27.2	25.6	26.4	4.79	[illegible]	/		1.09	mg/kg	/
1684.0402					81.8	79.9	80.9	1.66	78.4	/		1.00		/
1685.0402					27.1	27.9	27.2	0.73	35.3	/	2->10	1.05		/
1686.0402					30.4	30.4	30.4		[illegible]	/	1->10	1.02	mg/kg	/
Cal Blk					-0.7				20.5	103			µg/l	<10.0
50.0ppb					53.0				71.4	96			µg/l	53.0
1687.0402					12.3	12.9	12.6	3.37	30.4	90	2->10	1.09	mg/kg	21.0 mg/kg
1688.0402					414.3	441	414.4	1.11	414.6	/		1.03		/
1688.R1					44.5	42.0	43.3	3.75	40.1	/		1.01		/
1688.RS1					72.4	72.7	[illegible]	0.79	64.3	/		1.01	mg/kg	72% Rec
Blk 912					-0.4	-0.2	-0.3		17.0	85			µg/l	<10.0
Cal Blk					-0.1				[illegible]	[illegible]				<10.0
[illegible] Cal					51.3				70.0	101			µg/l	51.8

Page No.___

Performed: As

Date: December 23, 1986

Reviewed By: [illegible]

See pg. 17

ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From No	C	ppb Burn 1	ppb Burn 2	ppb Avg.	C.V.	20.0 ppb Spike	% Rec.	D.F.	Amt. of Sample	Amt. of Sample ~~Units~~	Final Conc.
WS 378#3				21.1				41.7	103		µg/L		21.1
Cal Blank				-0.7				22.4	112		µg/L		<10.0
50.0 ppb				52.6				70.5	90		µg/L		52.6
9651.0402				38.6	37.7	38.1	1.67	56.3	91		mg/Kg		
9652.0402				37.3	38.2	37.7	1.69	56.7	95	1→10			
9653.0402				12.1	11.7	11.9	2.38	33.2	107				
9654.0402				36.4	37.1	36.8	1.35	57.6	104				
9655.0402				55.7	57.2	56.4	1.88	74.9	93				
9656.0402				41.4	41.6	41.5	0.34	58.7	86				
9657.0402				52.5	52.7	52.6	0.27	74.1	108				
9658.0402				39.7	38.8	39.2	1.62	61.0	109				
9659.0402				12.1	11.9	12.0	1.18	33.5	108				
9660.0402				21.3	21.4	21.3	0.33	43.6	112		mg/Kg		
Cal Blank				-0.8	-0.5	-0.7	/	25.2	/		µg/L		<10.0
50.0 ppb				45.2	45.3	45.2	0.16	73.2	[illegible]		µg/L		45.2
9661.0402				63.0	60.3	61.6	3.10	83.7	111		mg/Kg		
9666.0402				17.9	17.0	17.4	3.65	36.7	97				
9667.0402				24.2	24.0	24.1	0.59	43.7	98				
9683.0402				22.6	22.5	22.6	0.31	41.7	96				
9684.0402				64.3	65.0	64.6	0.77	86.8	111				
9685.0402				99.8	99.1	99.4	0.50	116.9	88				
9686.0402				186.2	181.7	184.0	/	/	/	/	/	/	/
9688.0402				37.7	38.4	38.0	1.30	58.6	103				
9688.R1				39.8	40.6	40.2	1.41	61.6	107				
9688.R1S1				59.7	59.6	59.7	0.12	78.0	92		mg/Kg		
Cal Blank				0.3	1.1	0.7	/	21.0	105		µg/L		
50.0 ppb				44.6	45.7	45.2	1.72	63.3	91		µg/L		
9686.0402				25.2	26.0	25.6	2.21	46.3	104	1→10	mg/Kg		

To Page No.___

Processed & Understood by: [illegible]

Date: 12/24/86

Inventoried by: [illegible]

Date: 12/23/86

HGA FORM #1

ELEMENT: As, DATE: 10/30/86.

S_1 = [illegible] PPB., S_2 = [illegible] PPB.

S_3 = 100 PPB, BOOK NO. 266 pp 12-15

JOB #:

[illegible]

[illegible]

X01	[illegible] = x		
X02	Cal Blk		
X03	50 Cpgb		
X04	[illegible]		
X05	[illegible]		
X06	[illegible]		
X07	[illegible]		
X08	[illegible]		
X09	[illegible]		
X10	[illegible]		
X11	[illegible]		
X12	[illegible]		
X13	[illegible]		
X14	Cal Blk		
X15	50 Cpgb		
X16	[illegible] Cl Blk		
X17	[illegible]	S_2	
X18	[illegible]		
X19	[illegible]		
X20	[illegible]		
X21	[illegible]		
X22	[illegible]		
X23	[illegible]		
X24	[illegible]		
X25	[illegible]		
X26	Cal Blk		
X27	50 Cpgb		
X28	[illegible]		
X29	[illegible]		
X30	[illegible]		
X31	[illegible]		
X32	[illegible] (Q→10)		
X33	[illegible]		
X34	[illegible]		
X35	[illegible]	S_3	

	-0.114	
	0.090	AZ
	0.125	
	25.0	S1
	44.7	C
	50.0	S2
	96.5	C
	100.0	S3
501	18.0	
502	0.3	
503	48.6	
	-0.0	
	0.1	
504	0.1	AV
	06	ER
	2.9	
	3.4	
505	3.1	AV
	11.22	CV
	2.6	
	2.7	
506	2.7	AV
	2.67	CV
	6.0	
	5.9	
507	5.9	AV
	1.19	CV
	3.5	
	3.9	
508	3.7	AV
	7.64	CV
	24.5	
	26.8	
509	25.6	AV
	6.34	CV
	5.5	
	4.8	
510	5.1	AV
	9.61	CV
	6.8	
	5.7	
511	6.2	AV
	12.45	CV
	5.4	
	5.3	
512	5.3	AV
	1.32	CV
	1.7	
	2.4	
513	2.1	AV
	24.15	CV
514	-0.7	
515	48.4	
	2.1	
	2.2	
516	2.2	AV
	3.29	CV
	18.3	
	18.3	
517	18.3	AV

Arsenic - 12/16/86

	-0.035	
	0.030	A2
	0.093	
	25.0	S1
	44.7	C
	50.0	S2
	100.5	C
	100.0	S3
501	18.4	
502	-0.6	
503	48.2	

501	40.3
502	24.5
503	69.9
504	19.4

547	73.6
548	35.3
549	37.8
550	20.5
551	71.4
552	30.6
553	43.6
554	40.6
555	64.8
556	17.0
557	23.5
558	76.0

501	46.0	
502	21.9	
503	71.1	
504	14.5	
505	18.2	
506	20.5	
507	21.2	
508	29.8	
504	19.9	
505	37.0	
508	27.7	
509	35.3	

501	37.5	
502	14.7	
503	68.8	
504	20.6	
505	22.9	
506	31.6	
507	36.1	
506	18.8	
507	30.3	
508	17.8	
509	36.6	
510	19.6	
511	32.8	
512	20.4	
513	19.0	
514	22.0	
515	91.0	
516	19.2	
517	37.7	
518	15.9	
519	49.3	
520	79.1	
521	26.4	
522	45.4	
523	99.1	
524	41.4	
525	66.1	
526	20.9	
527	91.0	
528	76.1	
529	35.1	
530	59.3	
531	136.0	C
532	36.0	
533	21.9	
534	49.0	
535	21.4	
536	28.5	
537	31.0	
538	19.1	
539	69.4	
540	16.2	
541	14.8	
542	20.6	
543	24.9	
544	151.7	C
545	27.7	
546	30.2	

	0.7	
518	0.2	AV
	0.6	EK
	37.1	
	35.5	
519	36.3	AV
	3.12	CV
	37.1	
	36.2	
520	37.6	AV
	2.07	CV
	11.5	
	11.2	
521	11.4	AV
	1.87	CV
	35.6	
	36.7	
522	36.2	AV
	2.15	CV
	59.6	
	58.0	
523	58.8	AV
	1.92	CV
	42.4	
	44.8	
524	43.6	AV
	3.69	CV
	61.7	
	61.6	
525	61.6	AV
	0.12	CV
	0.6	
	-0.1	
526	0.2	AV
	0.6	EK
	51.2	
	47.5	
527	49.3	AV
	5.30	CV
	39.5	
	35.7	
528	37.6	AV
	7.15	CV
	12.1	
	11.2	
529	11.7	AV
	5.46	CV
	22.1	
	21.4	
530	21.7	AV
	2.25	CV
	63.9	
	61.5	
531	62.7	AV
	2.71	CV
	18.3	
	19.1	
532	18.7	AV
	3.05	CV
	7.7	
	8.0	
533	7.9	AV
	2.70	CV
	26.9	
	25.3	
534	26.1	AV
	4.34	CV
	6.3	
	6.6	
535	6.6	AV
	5.40	CV
	16.0	
	16.7	
536	16.3	AV
	3.03	CV
	24.2	
	22.9	
537	23.5	AV
	3.9[illegible]	CV
538	-0.1	

HGA FORM #1

ELEMENT: As, DATE: 12/[illegible]

S_1 = [illegible] PPB., S_2 = [illegible] PPB

S_3 = 100 PPB, BOOK NO. ,

JOB #:
4432
4441
4442

36	9660.0002
37	9660.0002
38	Cal blk
39	50.0 ppb
40	PAL 9[illegible]
41	9690.0003
42	9690.0003R
43	9690.0003R.S.
44	9691.0002
45	9692.0003
46	9692.0002
47	9694.0002
48	9695.0002 (2→10)
49	9696.0002 (1→10)
50	Cal blk
51	50.0 ppb
52	9697.0002 (2→10), S_2
53	9698.0002
54	9698.0002R
55	9698.0002R.S.
56	PAL 9[illegible]
57	Cal blk
58	50.0 ppb

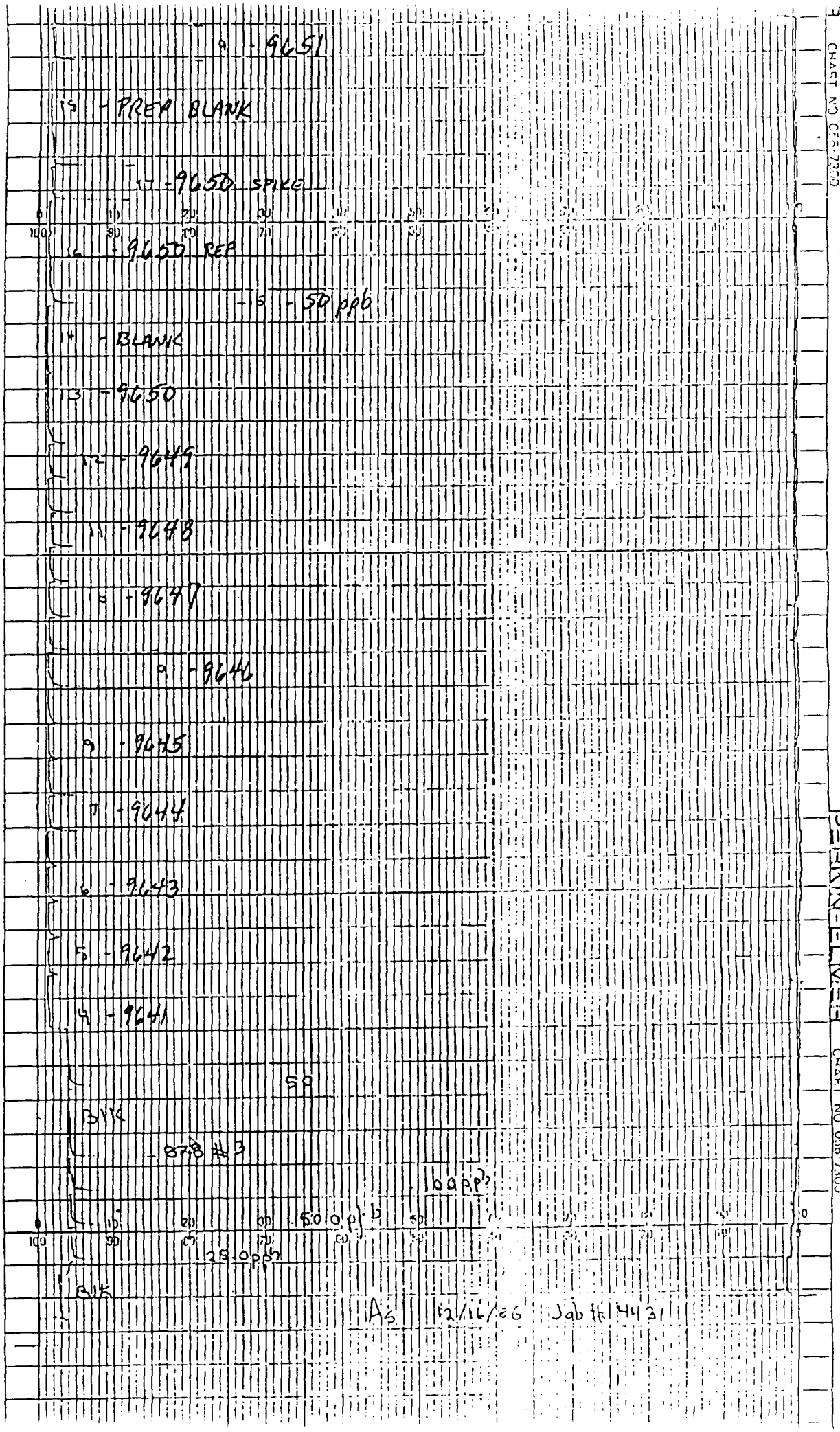
, S_3

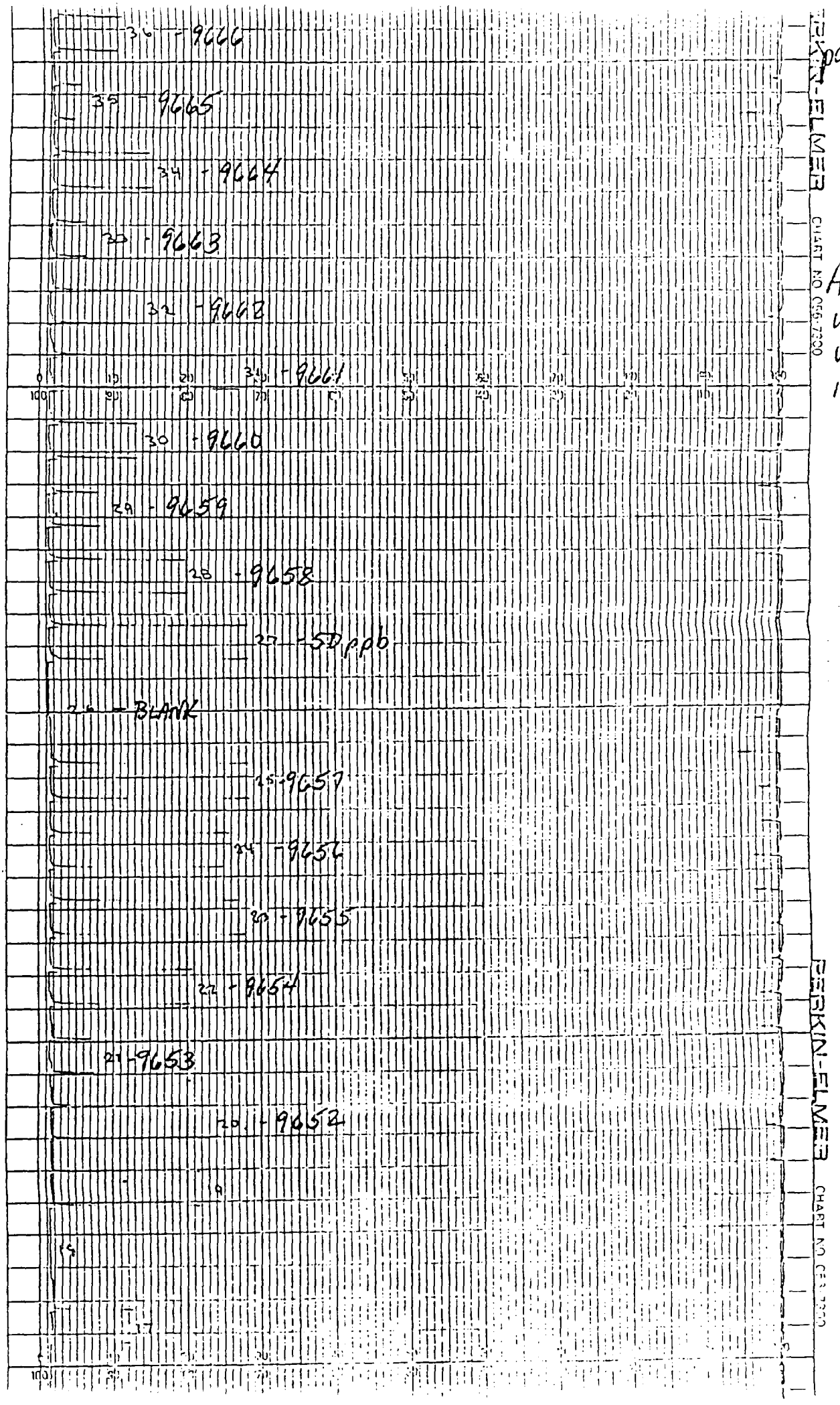
539	-54.7	
	-0.9	
	-1.6	
540	-1.3	AV
	39.60	CV
	-1.2	
	-0.4	
541	-0.8	AV
	70.71	CV
	-0.0	
	-0.3	
542	-0.2	AV
	06	ER
	19.8	
	19.7	
543	19.8	AV
	0.36	CV
	471.3	C
	549.9	C
544	507.3	AV
	10.89	CV
	4.2	
	4.3	
545	4.2	AV
	1.66	CV
	27.2	
	25.6	
546	26.4	AV
	4.29	CV
	81.8	
	79.9	
547	80.9	AV
	1.66	CV
	27.1	
	27.4	
548	27.2	AV
	0.78	CV
	30.4	
	30.4	
549	30.4	AV
	0.00	CV
550	-0.7	
551	53.0	
	12.3	
	12.9	
552	12.6	AV
	3.37	CV
	44.8	
	44.1	
553	44.4	AV
	1.11	CV
	44.5	
	42.2	
554	43.3	AV
	3.75	CV
	72.4	
	72.7	
555	72.5	AV
	0.29	CV
	-0.4	
	-0.2	
556	-0.3	AV
	47.14	CV
557	-0.7	
558	51.8	

recycled paper
recycled paper

page 1 of 3

Arsenic
U-4432
U-4442
12-16-86





Arsenic
V-4432
V-4442
12-16-86

58 50 ppb

57 BLANK

56 BLANK

55 9688 SPIKE

54 9688 REP

53 9688

52 9687

51 50ppb

50 BLANK

49 9686

48 9685

47 9684

46 9682

45 9681

44

43 9680 SPIKE

42 9680 REP

41 9680

40 BLANK

39 50ppb

38 BLANK

37 9667

36

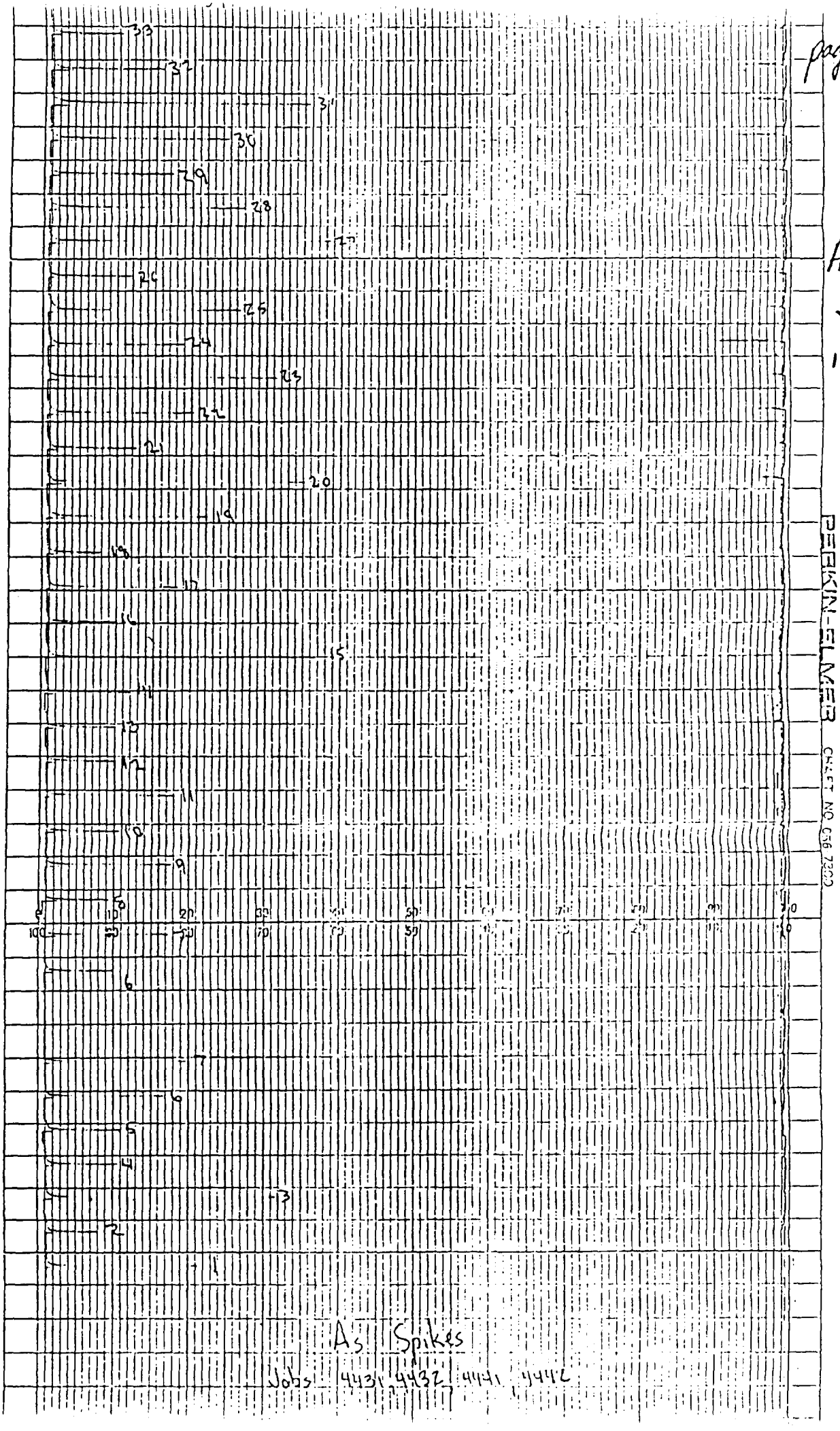
Arsenic
U-4432
U-4442
1216-86

PERKIN-ELMER CHART NO. C56 7300

PERKIN

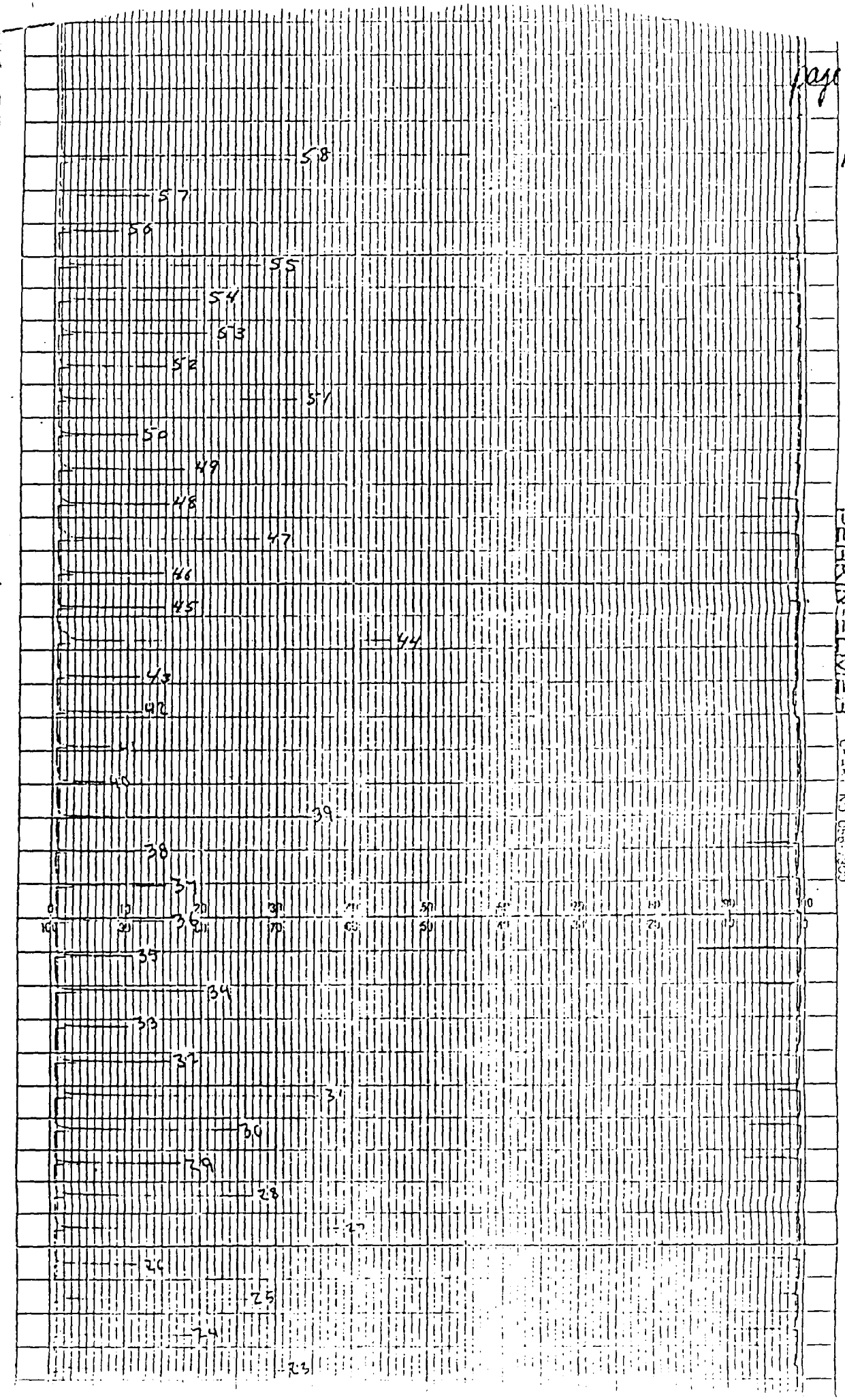
page 1 of 3

Arsenic Spikes 12/16/86



page 2 of 3

Arsenic Spikes 12/16/86



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Arsenic
Spike
12/16/86

50+Spike

BLK+Spk

BLK

29

9

8

2

Spikes

29

9

EPA

50.0 ppb

PERKIN-ELMER CHART NO C56-7300

PERKIN-ELMER

97

HGA FORM #1

ELEMENT: As , DATE: 12/23/86 .

S_1 = 25.0 PPB., S_2 = 50.0 PPB.

S_3 = 100 PPB, BOOK NO. ,

JOB #:

S01	105 375 #43	501	41.7
X02	Cal Blk	502	22.4
X03	50.0ppb	503	70.5
X04	9651.0402	504	56.3
X05	9652.0402 (1>10)	~~505~~	~~61.0~~ xcontam
X06	9653.0402	505	56.7
X07	9654	506	33.2
X08	9655	~~507~~	~~61.1~~ xcontam
X09	9656	507	57.6
X10	9657	508	74.9
X11	9658	509	58.7
X12	9659	~~510~~	~~[illegible]~~ poor INT
X13	9660		
X14	Cal Blk	510	74.1
X15	50.0ppb	511	61.0
X16	9661.0402	~~512~~	~~[illegible]~~ xcontam.
X17	9662.0402 , S_2		
X18	9663.0402	512	33.5
X19	9623.0402	513	43.6
X20	9624	514	25.2
X21	9625	515	73.2
X22	9626		
X23	9628		
X24	9628R1		
X25	9628R2		
X26	Cal Blk	516	63.7
X27	50.0ppb	517	36.7
X28		~~518~~	~~49.2~~
X29			
X30			
X31		518	43.7
X32		519	30.0
X33			
X34			
X35	, S_3	519	41.7

Poor INT.

Arsenic
12/23/86.

	0.020	
	0.000	AZ
	0.110	
	25.0	S1
	49.4	C
	50.0	S2
	100.0	S3
501	52.8	
502		
503	38.6	
	37.7	
504	38.1	AV
	1.67	CV
	37.3	
	38.2	
505	37.7	AV
	1.69	CV
506	[illegible]	AV
507	[illegible]	CV
	57.2	
	54.8	
508	56.0	AV
	3.08	CV
	12.1	
	11.7	
506	11.9	AV
	2.38	CV
	36.4	
	37.1	
507	36.8	AV
	1.35	CV
	55.7	
	57.2	
508	56.4	AV
	1.88	CV
	41.4	
	41.6	
509	41.5	AV
	0.34	CV
	52.5	
	52.7	
510	52.6	AV
	0.27	CV
	39.7	
	38.8	
511	39.2	AV
	1.62	CV
	12.1	
	11.9	
512	12.0	AV
	1.18	CV
	21.3	
	21.4	
513	21.3	AV
	0.33	CV
514	-0.7	AV
	32.64	CV
	45.2	
	45.3	
515	45.2	AV
	0.16	CV
	63.6	
	60.3	
516	61.6	AV
	3.10	CV
	17.9	
	17.0	
517	17.4	AV
	3.65	CV
	24.2	
	24.0	
518	24.1	AV
	0.59	CV
	22.0	
	22.5	
519	22.6	AV
	0.31	CV
	64.3	
	65.0	
520	64.6	AV
	0.77	CV
	99.8	
	99.1	
521	99.4	AV
	0.50	CV
	186.2	C
	181.7	C
522	184.0	AV
	1.73	CV
	37.7	
	38.4	
523	38.0	AV
	1.30	CV
	39.3	
	40.6	
524	40.2	AV
	1.41	CV
	59.7	
	59.6	
525	59.7	AV
	0.12	CV
	0.3	
	1.1	
526	0.7	AV
	80.81	CV
	44.6	
	45.7	
527	45.2	AV
	1.72	CV

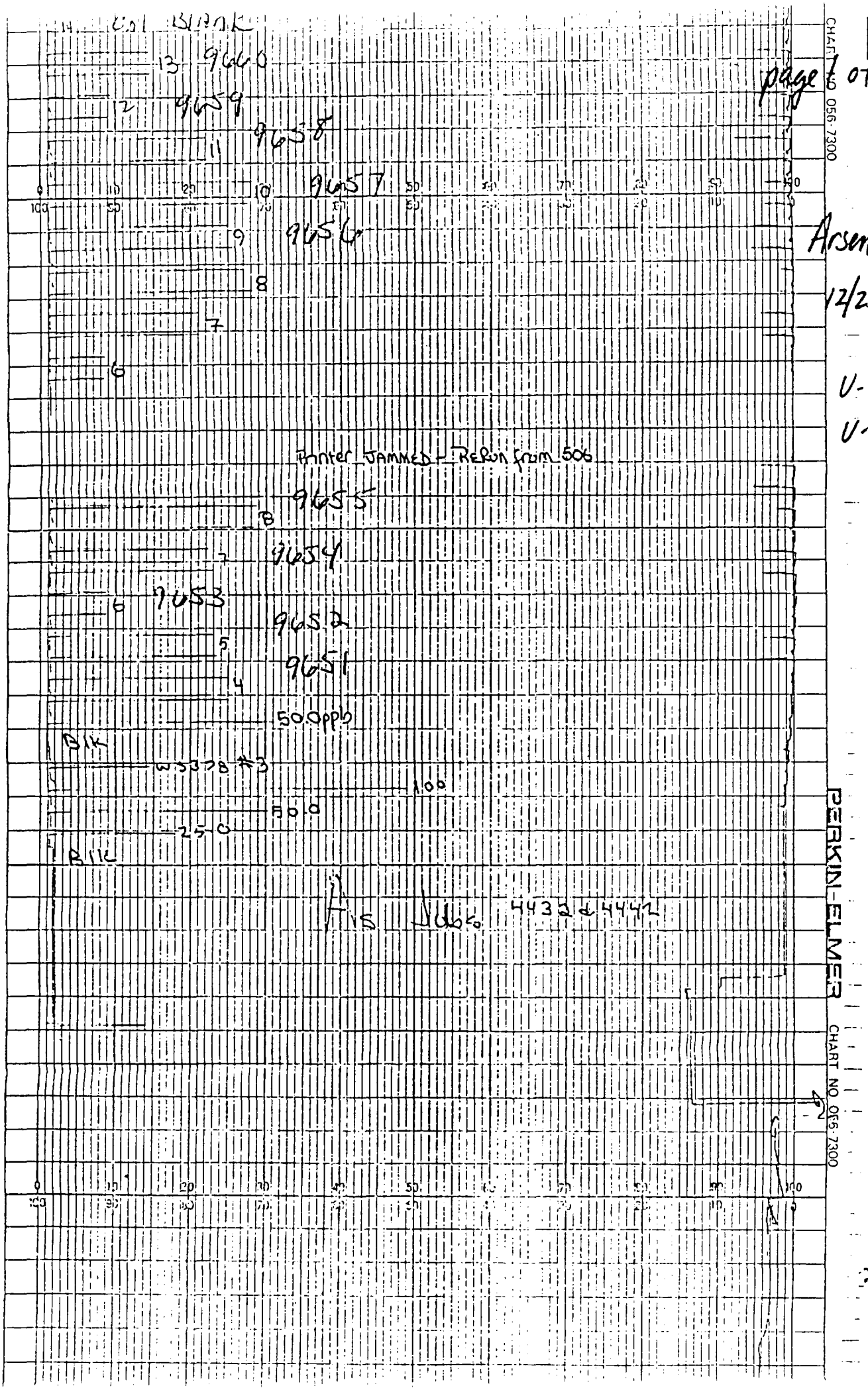
DF = 1 → 10

	25.2	
	26.0	
522	25.6	AV
	2.21	CV

520	86.8	
521	115.9	C
522	46.3	
~~523~~	~~[illegible]~~	

Poor INJ.

523	58.6
524	61.6
525	78.0
526	21.0
527	63.3


page 1 of 4
Arsenic
12/23/86
V-4432
V-4442
Printer JAMMED - Rerun from 506
9660
9659
9658
9657
9656
9655
9654
9653
9652
9651
500ppb
BLK
BLK
4432 & 4442
PERKIN-ELMER
CHART NO 056-7300

Arsenic
12/23/86

V-4432
V-4442

9 9655
8 9654
7 X CONTAM 10 omit
6 9653
5 9652
X CONTAM 50 omit
4 9651
503 50.0 ppb
502 CAL BLANK
501 WS 378 FB

As Spiked

0 10 20 30 40 50 60 70 80 90 100
100 90 80 70 60 50 40 30 20 10 0

omit
22 9686
DFF 1+10

27 50.0 ppb
26 CAL BLANK
25 9688 RIS1
24 9687 R1
23 9688
22 9686
21 9685
20 9684
19 9683
18 9667
17 9666
16 9661
15 500 ppb
14
13

PERKIN-ELMER CHART NO 056-7300
PERKIN-ELMER CHART

Arsenic
12/23/86
V-4432
V-4442

23
24
23 9678

POOR INJECTION 23 (omit)
22 9686
21 9685
20 9684

{POOR INJECTION} 21 (omit)
20 (omit)
19 9683

POOR INJECT 19 (omit) 9683
18 9667
17 9666

0 10 20 30 40 50 60 70 80 90 100
100 90 80 70 60 50 40 30 20 10 0

~~POOR INJECTION~~ 17 (omit)
16 9661
15 50.0 ppb
14 C1 Blank
13 9660
12 9659
11 9658

~~POOR~~ 11 (omit)
10 9657

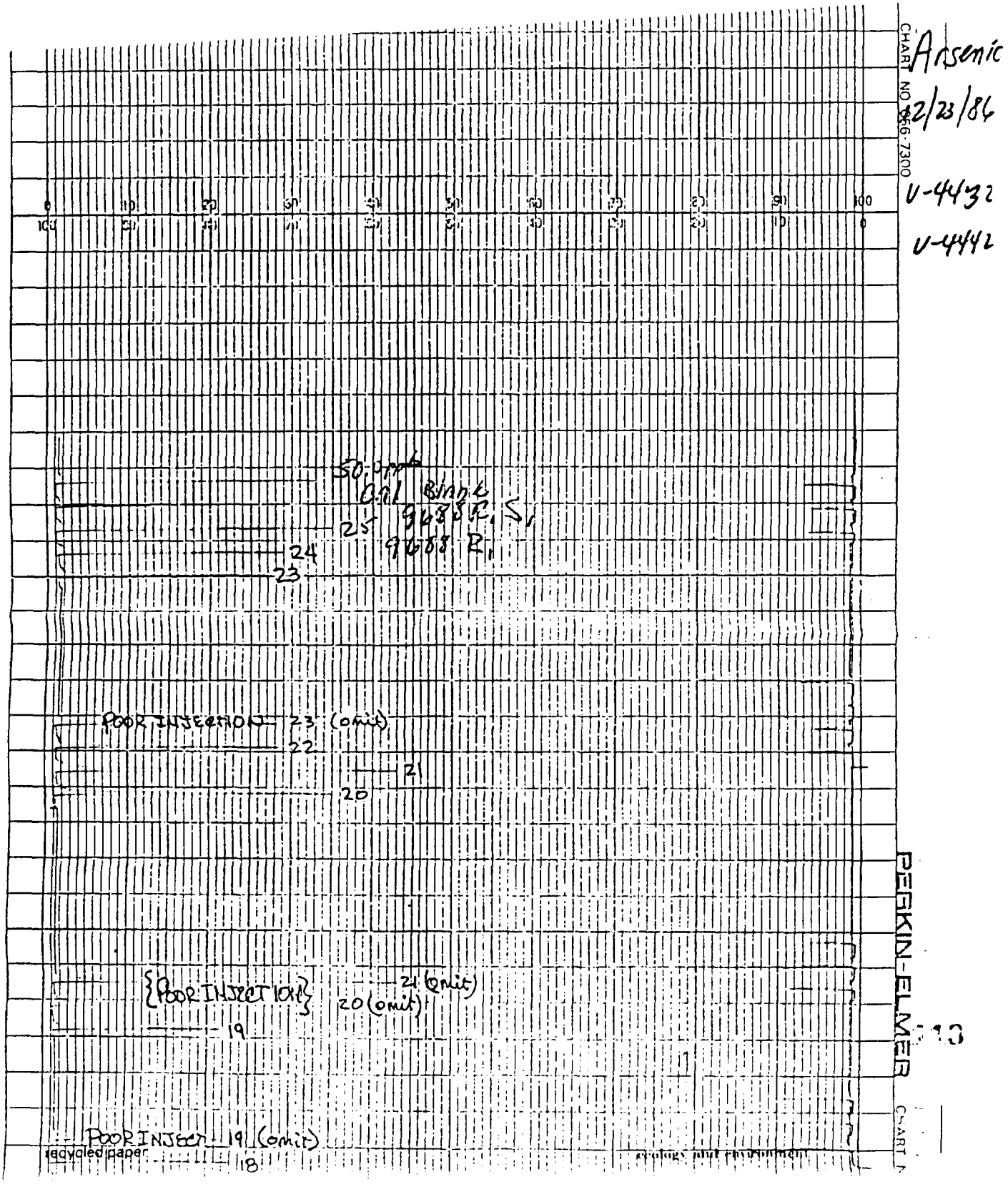
POOR INJ 10 (omit)
9 9656
8
7

recycled paper X CONTAM 7 (omit

ecology and environment

PERKIN-ELMER CHART NO. 056-7300

PERK


Arsenic
2/23/86
V-4432
V-4442
CHART NO. 966-7300
50.4ppb
Oil Blank
25 96888 R1 S1
24
23
POOR INJECTION 23 (omit)
22
21
20
{POOR INJECTION} 21 (omit)
20 (omit)
19
POOR INJECT 19 (omit)
18
PERKIN-ELMER
recycled paper
ecology and environment

TITLE _____

Project No. _____
Book No. _____

COPY

Test Performed No. [illegible]
Received: [illegible]
Work Performed By: [illegible]

See [illegible]

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From IN	C	ppb Blank 1	ppb Blank 2	ppb Avg	CV	10 ppb Spike	% Rec	DF	Sample Wt	Units	Final Conc
										62			µg/l	10.1
	[illegible]				16.1				30.3	66				<5.00
	Cal Blk				0.1				6.1	/				
	50 ppb				51.9				73.0					51.9
4441	9682.0603				0.8	2.3	1.5	-	9.1	11				<5.00
	9682.0603				0.6	-0.2	0.2	-	9.0	10				<5.00
	9682.0603				17.1	17.9	17.5	3.23	36.7	/				68% Rec
	9681.0603				0.5 BK	0.5 BK	0.5 BK	-	/	/				/
	9682.0603				56.4	56.1	57.6	2.9	96.2	/				/
	Blk 425				0.5	6.1	0.0	-	10.7	107			µg/l	<5.00
4465	9653.0302				54.1	53.1	53.3	4.2	96.7	/		1.00	mg/kg	/
	Blk 912				7.4	6.5	6.9	9.6	20.0	/			µg/l	/
4500	10210.0102				46.7				87.1	/		1.02	mg/kg	/
	Blk 9[illegible]				-1.2				[illegible]	[illegible]			µg/l	<5.00
	Cal Blk				-1.9				9.0	90				<5.00
Other Client	50 ppb				49.4				89.4	/				49.4
													µg/l	
	9681.0603				24.0	24.1	24.5	0.29	46.3	/	.1→10		µg/l	/
4441	9681.0603				35.6	37.1	36.4	2.92	40.3	99	.1→10		µg/l	36.40
	9682.0603				85.5	83.8	84.6	1.42	96.2	116			µg/l	84.6
~~4465~~ 4432	9653.0302				86.5	88.8	87.7	1.86	96.7	96		1.00	mg/kg	~~8.7~~ 1/7.5
	Blk 912				3.1	3.0	3.1	2.32	8.8	88			µg/l	<5.00
4500	10210.0102				69.5				80.7	112		1.02	mg/kg	68.1
	Cal Blk				0.4				7.0	70			µg/l	<5.00
Other Client	50 ppb				51.5				84.4	/				51.5

To Page No.

Witnessed/Understood by: Bill Rohrbach
Date: 1/6/87
Presented by: [illegible]
Reviewed by: [illegible]
Date: 1/7/87

HGA FORM #1

ELEMENT: Pb, DATE: 1/5/87.

S_1 = 25.0 PPB., S_2 = 50.0 PPB

S_3 = 100 PPB, BOOK NO. 266, pg 33

	01	WS 378 #3	
	X02	CAL BLANK	
	X03	50.0 ppb	
	X04	9680. 0603	
JOB #:	X05	9680. R,	
	X06	9680. R, S,	
	X07	9681. 0603 (.1 → 10)	
	X08	9682. 0603	
	X09	BLK 923	
	X10	9653. 0402	
	X11	BLK 912	
	X12	10216.0102	— Other Client
	X13	BLK 965	
	X14	CAL BLANK	
	X15	50.0 ppb	
	X16		
	X17		, S_2
	X18		
	X19	4 9681. 0603 (.1 → 10)	
	X20	5 9682. 0603	
	X21	6 9653. 0302	
	X22	7 BLK 912	
	X23	8 10216.0102	— Other Client
	X24		
	X25		
	X26		
	X27		
	X28		
	X29		
	X30		
	X31		
	X32		
	X33		
	X34		
	X35		, S_3

Pb

	-0.164	
	0.000	AV
	0.135	
	25.0	S1
	47.0	C
	50.0	S2
	96.4	C
	100.0	S3
201	16.1	
202	0.1	
203	51.9	
	0.8	
	2.3	
204	1.5	AV
	68.43	CV
	0.6	
	-0.2	
205	0.2	AV
	00	ER
	17.1	
	17.9	
206	17.5	AV
	3.23	CV
	00	ER
	00	ER
207	00	ER
	0.00	CV
	58.4	
	56.7	
208	57.6	AV
	2.09	CV
	0.5	
	0.7	
209	0.6	AV
	23.57	CV
	54.5	
	58.1	
210	56.3	AV
	4.52	CV
	7.4	
	6.5	
211	6.9	AV
	9.16	CV
~~212~~	~~100.3~~	
212	46.7	DF = 1-25
213	-1.2	
214	-1.9	
215	~~48.8~~	
215	~~44.7~~	
215	49.4	

203	49.9	
	35.6	
	37.1	
204	36.4	AV
	2.92	CV
	85.5	
	93.8	
205	84.6	AV
	1.42	CV
	86.5	
	88.8	
206	87.7	AV
	1.86	CV
	3.1	
	3.0	
207	3.1	AV
	2.32	CV
208	69.5	
209	0.4	
210	51.5	

201	38.0	
202	29.3	
203	69.5	
204	23.9	
205	20.8	
206	44.7	
~~207~~	~~[illegible]~~	C
208	78.4	
209	26.0	
210	80.1	
211	31.6	
212	74.6	
213	30.1	
214	28.1	
215	75.7	

207	8.8
208	80.7
209	7.0
210	84.4

DF = .1 → 10

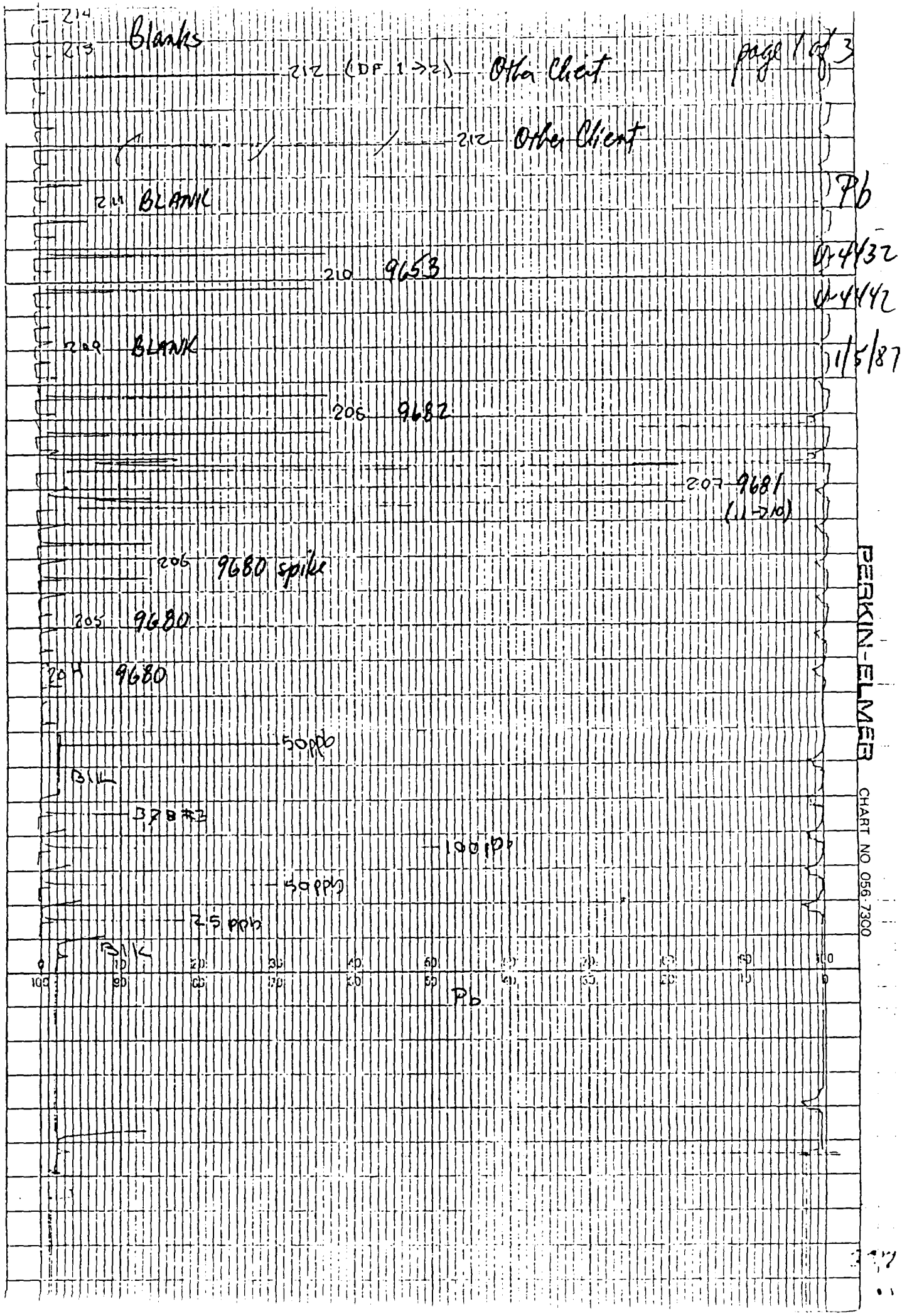
	24.6	
	24.5	
207	24.5	AV
	0.29	CV

201	26.3
202	6.6
203	78.0
204	9.1
205	9.0
206	36.7
207	45.3
208	96.2
209	10.7
210	95.7
211	20.0
212	87.5
213	8.5
214	9.0
215	89.4

~~207 X-Contam. 54.0~~

Re-RUN

207	52.6


page 1 of 3
214
213 Blanks
212 (DF 1->2) Other Client
212 Other Client
211 BLANK
210 9653
209 BLANK
208 9682
207 9681
(1->10)
206 9680 spike
205 9680
204 9680
50ppb
BLK
BB#2
100ppb
50ppb
25 ppb
BLK
Pb
Pb
04432
04442
1/5/87
PERKIN-ELMER
CHART NO 056-7300

page 2 of 3

Pb

U-4432

U-4442

1/5/89

7 (DF 0.1 → 10) 9681

15 50.0 ppb

14 Blanks

13

12 Other Chart

11 BLANK

10 9653

9 BLANK

8 9682

7 Check Pb

6 9680 spike

5 9680

4 9680

3 50.0 ppb

2 BLANK

1 W5378#3 Pb (SPIKED)

215

215

215

214

213

212 (DF 1 → 2)

212

211

210

PERKIN-ELMER CHART NO. 056-7300

page 3 of 3

Pb

V-4432
V-4442
1/87.

10
9 spk
8 spk
7 spk
10
9 spk
8 spk Other Chart
7 spk Blank
6 9653
5 9682
4 9681

PERKIN-ELMER CHART NO. 056-7300

215 50.0 ppb
214 Blanks
213
212 Other Chart
211 Blank
210 9653
209 Blank
208 9682
207 9681
206 9680 spike
205 9680
204 9680
203 50.0 ppb
202 Cal Blank
201 WS 378 #3

Pb Spikes

PERKIN-ELMER CHART NO. 056-7300

TLF

CLP-SOILS: 1 REP +20% QC.

(SEE PAGE 59-60 BOOK 224 – IL VOL. XXII)

(SEE PAGE 1)

All sample volume = 100 mL

From Page No.
Test Performed: Hg
Date Received: NOVEMBER 21, 1986
Work Performed By: [illegible]

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From		Read	(µg/L) Conc.	µg D.F.	Amount of Sample	Units	Final Conc.	
											r = .999982
	Blank				3						y = .048x - .127
	0.2 µg/L				7						
	0.4				11						
	0.8				19						
	2.0				44						
	4.0				85						
	8.0				169						
	WS 348 #14				95	4.45		100 ml.	µg/L	4.45	(Known = 4.40)
1432	9651.04	No	A-4		27	1.17	0.117 µg	0.30 gm	mg/Kg	0.391	
	9652.04	No	A-4		41	1.85	0.185 µg	0.37 gm		0.500	
	9653.04	No	A-4		9	.31	0.031	0.36 gm		<0.10	B# ~~0.886~~
	9654.04	No	A-4		26	1.13	0.113	0.35 gm		0.322	
	9655.04	No	A-4		10	.35	0.035	0.38 gm		<0.10	
	9656.04	No	A-4		38	1.70		0.36 gm		0.473	
	9657.04	No	A-4		72	3.34		0.39 gm		0.860	
	9658.04	No	A-4		45	2.04		0.39 gm		0.524	
	9659.04	No	A-4		26	1.13		0.36 gm		0.313	
	9660.04	No	A-4		33	1.46		0.33 gm		0.443	
	9661.04	No	A-4		52	2.38		0.34 gm		0.700	
	9662.04	No	A-4		136	6.43		0.36 gm		1.79	
	9663.04	No	A-4		31	1.37		0.35 gm		0.391	
	9664.04	No	A-4		46	2.07		0.35 gm		0.600	
	9665.04	No	A-4		10	.35		0.36 gm		<0.10	
	9666.04	No	A-4		11	.40		0.33 gm		0.122	
	9667.04	No	A-4		5	<.20		0.35 gm		<0.10	
	9667.Rep	No	A-4		5	<.20		0.36 gm		<0.10	
	9667 + 1.0 ppb	No	A-4		24	1.03		0.37 gm	mg/Kg		(103% REC)

To Page No. 28

Witnessed & Understood by me: Date 11/21/86 Invented by [illegible] Date 11/21/86

Project No._____

Book No._____ PAGE _____

From Page No. 27

Performed: Hg (CONT'D)

Date Received: NOVEMBER 21, 1986

Work Performed By: [illegible]

Job No.	ID No.	Custody Seal Intact Yes No	Secure Storage Area Received From	Read	Conc.	D.F.	Amount of Sample	Units	Final Conc.	
4442	9683.04	NO	A-L	6	<.20		0.31 gm	mg/Kg	<0.10	
	9683. Rep.	No	A-L	6	<.20		0.36 gm		<0.10	
	9683 +1.0 ppb	No	A-L	25	1.08		0.31 gm			(108% Rec.)
	9684.04	No	A-L	>180	> 8.00		0.35 gm		/	(over-cal → Re Run)
	9685.04	No	A-L	178	8.45		0.33 gm		2.56	
	9686.04	No	A-L	>180	> 8.00		0.32 gm		/	(over-cal → Re Run)
	9687.04	No	A-L	136	6.43		0.39 gm		1.65	
	9688.04	No	A-L	64	2.96		0.39 gm	mg/Kg	0.760	

To Page No. ____

Witnessed & Understood by me. Date 11/21/86 Signature [illegible] Date 11/21/86

Page No: S5
Test Performed:
Date Received: 12/29/91
Work Performed By:

Sampling

Job No.	ID No.	Custody Seal Intact Yes	No	Secure Storage Area Received From		ppb Burn 1	ppb Burn 2	ppb Ave	CV	10.0 ppb Spike	% Rec	DF	Samp Wgt	Units	Final Conc.
														µg/l	8.55
	WS3/3#14					8.45	8.70	8.58	2.06	23.10	145				<5.00
	CalBlk					-0.37	-0.43	-0.40	—	8.12	86			µg/l	26.0
	25.0ppb					25.76	26.24	26.00	1.31	36.13	101		1.06	mg/kg	
1432	9651.0402					8.06	7.69	7.88	3.32	14.12			1.02		
	9652.0402					8.78	9.53	9.15	5.79	14.42			1.00		<
	9653.0402					0.61	0.64	0.63	—	9.05	91		1.06		<
	9654.0402					2.01	1.63	1.86		9.56	80		1.09		<
	9655.0402					2.76	2.40	2.58	9.57	12.04	95		1.09		
	9656.0402					4.87	4.95	9.97	5.82	15.73			1.08		<
	9657.0402					3.75	3.79	3.77	0.75	12.18	90		1.05		<
	9658.0402					1.81	2.42	2.12	17.6	12.05	99		1.09		<
	9659.0402					2.61	2.28	2.45	9.24	12.33	99		1.04	mg/kg	<
	9660.0402					3.74	3.32	3.52	8.41	9.58	61			µg/l	<5.00
	CalBlk					-0.30	-0.29	-0.29	—	9.31	93			µg/l	24.1
	25.0ppb					24.23	23.95	24.09	1.85	33.21	92		1.01	mg/kg	<
	9661.0402					4.77	4.63	4.70	2.11	13.05	84		1.01		
	9662.0402					6.28	6.05	6.17	2.64	13.58			1.03		<
	9663.0402					0.54	0.92	0.73	—	10.39	104		1.04		<
	9664.0402					2.91	2.83	2.87	1.97	10.36	79		1.09		<
	9665.0402					2.59	2.14	2.37	13.5	11.33	95		1.02		<
	9666.0402					1.61	1.24	1.43	13.4	10.31	89		1.09	mg/kg	<
	9667.0402					1.54	1.51	1.53	1.37	10.40	89			µg/l	<5.00
	Blk925					-0.69	-0.73	-0.71	3.93	7.62	76		1.09	mg/kg	<
1442	9683.0402					1.00	1.32	1.16	19.5	9.41	93		1.00	mg/kg	<
	9684.0402					4.56	4.71	4.63	3.45	11.50	67			µg/l	<5.00
	CalBlk					-0.94	-0.36	-0.65	—	9.08	91			µg/l	23.5
	25.0ppb					22.78	23.23	23.01	1.66	23.39			1.05	mg/kg	
	9685.0402					9.43	9.47	9.43	0.28	11.46			1.07	mg/kg	
	9686.0402					19.42	18.00	18.71	5.29	31.68					

To Page No. 372

LE _____ Book No. _____

m Page No. 26 C_{10} (cont'd)
est Performed: _____
ate Received: 12/23/96
/or formed By: L.G.M.P.

Job No.	ID No.	Custody Seal Intact Yes	No	Secure Storage Area Received From		ppb Burn 1	ppb Burn 2	ppb Ave	CV	10.0 ppb Spike	% Rec	DF	Samp Wgt	Units	Final Conc
	9687.0402					9.77	10.03	9.76	3.10	13.48	/		1.09	mg/kg	/
4442	9688.0402					4.19	4.36	4.27	2.31	10.49	62		1.03		<
	9688.K,					4.39	4.40	4.39	0.16	10.38	60		1.06		<
	9688.P,S,					12.39	12.36	12.63	2.03	14.04	/		1.01	mg/kg	83%l
	BLK 912					-0.48	-0.56	-0.52	—	6.83	65			µg/l	<5.0
	Cal BLK					-0.24	-0.015	-0.12	—	7.72	77				<5.0
	25.0 ppb					26.55	30			24.91	/			µg/l	26.6
										17.46					
4432	9651.0402					9.18	8.94	9.06	12.0	18.23	93		1.06	mg/kg	
	9652.0402					7.61	7.73	7.69	1.56	[illegible]	98		1.02		
	9656.0402					11.68	11.61	11.64	0.46	20.54	89		1.09		
	9662.0402					7.61	7.55	7.58	0.55	19.22	116		1.01		
4442	9685.0402					9.15	9.20	9.17	0.39	22.88	/		1.05		/
	9686.0402					18.11	18.17	18.11	0.04	26.45	/		1.06		/
	9687.0402					8.86	9.20	9.03	2.80	20.25	112		1.09	mg/kg	
	Cal BLK					0.10	0.30	0.20	—					<1µg/l	
	25.0ppb					24.3	23.94	23.61	0.95					µg/l	
	9685.0402					11.09	10.67	10.88	2.73	22.06	112				
	9686.0402					9.83	9.98	9.91	1.07	16.07	/	1→2			/
	9686.0402					4.53	4.79	4.66	3.96	10.19	102	2→10		mg/kg	<

To Page No. _____

Witnessed & Understood by me: _____ Date 12/ / Invented by _____ Date _____

HGA FORM #1

ELEMENT: Se, DATE: 12/19/86.

S_1 = 10.00 PPB., S_2 = 25.0 PPB

S_3 = 50.0 PPB, BOOK NO. 206, pg [illegible]

	01	105 373#14	
	X02	Cal BLK	
	X03	25.0 ppb	
	X04	9651.0407	
JOB #:	X05	9652	
	X06	9653	
	X07	9654	
	X08	9655	
	X09	9656	
	X10	9657	
	X11	9658	
	X12	9659	
	X13	9660	
	X14	Cal BLK	
	X15	25.0 ppb	
	X16	9661.0402	
	X17	9662	, S_2
	X18	9663	
	X19	9664	
	X20	9665	
	X21	9666	
	X22	9667	
	X23	BLK 923	
	X24	9683.0402	
	X25	9684	
	X26	Cal BLK	
	X27	25.0 ppb	
	X28	9685.0407	
	X29	9686	
	X30	9687	
	X31	9688	
	X32	9688 K,	
	X33	9688 K, S,	
	X34	CBLK 917	
	X35	Cal BLK 250 ppb	, S_3

	-0.009	
	0.000	AZ
	0.036	
	10.00	S1
	24.74	C
	25.00	S2
	45.24	C
	8.45	
	8.70	
601	8.58	AV
	2.06	CV
	-0.37	
	-0.43	
602	-0.40	AV
	10.61	CV
	25.76	
	26.24	
603	26.00	AV
	1.31	CV
	8.06	
	7.69	
604	7.88	AV
	3.32	CV
	8.78	
	9.53	
605	9.15	AV
	5.79	CV
	0.61	
	0.64	
606	0.63	AV
	3.39	CV
	2.01	
	1.68	
607	1.85	AV
	12.65	CV
	2.76	
	2.40	
608	2.58	AV
	9.87	CV
	9.59	
	10.34	
609	9.97	AV
	5.32	CV
	3.75	
	3.79	
610	3.77	AV
	0.75	CV
	1.87	
	2.39	
611	2.12	AV
	10.97	CV
	2.61	
	2.29	
612	2.45	AV
	9.24	CV
613	3.74	

Se

12/19/86

613	3.52	AV
	8.41	CV
	-0.30	
	-0.29	
614	-0.29	AV
	2.40	CV
	24.28	
	23.82	
615	24.05	AV
	1.35	CV
	4.77	
	4.63	
616	4.70	AV
	2.11	CV
	6.28	
	6.05	
617	6.17	AV
	2.64	CV
	0.54	
	0.92	
618	0.73	AV
	36.81	CV
	2.91	
	2.83	
619	2.87	AV
	1.97	CV
	2.59	
	2.14	
620	2.37	AV
	13.45	CV
	1.61	
	1.24	
621	1.43	AV
	18.36	CV
	1.54	
	1.51	
622	1.53	AV
	1.39	CV
	-0.69	
	-0.73	
623	-0.71	AV
	3.98	CV
	1.00	
	1.32	

624	1.16	AV
	19.51	CV
	4.56	
	4.79	
625	4.68	AV
	3.43	CV
	-0.94	
	-0.36	
626	-0.65	AV
	63.10	CV
	23.78	
	23.23	
627	23.51	AV
	1.66	CV
	9.48	
	9.47	
628	9.48	AV
	0.08	CV
	19.40	
	18.00	
629	18.70	AV
	5.29	CV
	9.27	
	10.25	
630	9.76	AV
	7.10	CV
	4.19	
	4.36	
631	4.27	AV
	2.81	CV
	4.39	
	4.40	
632	4.39	AV
	0.16	CV
	12.39	
	12.86	
633	12.63	AV
	2.63	CV
	-0.48	
	-0.56	
634	-0.52	AV
	10.88	CV
	-0.29	
	-0.08	
635	-0.18	AV
	80.27	CV
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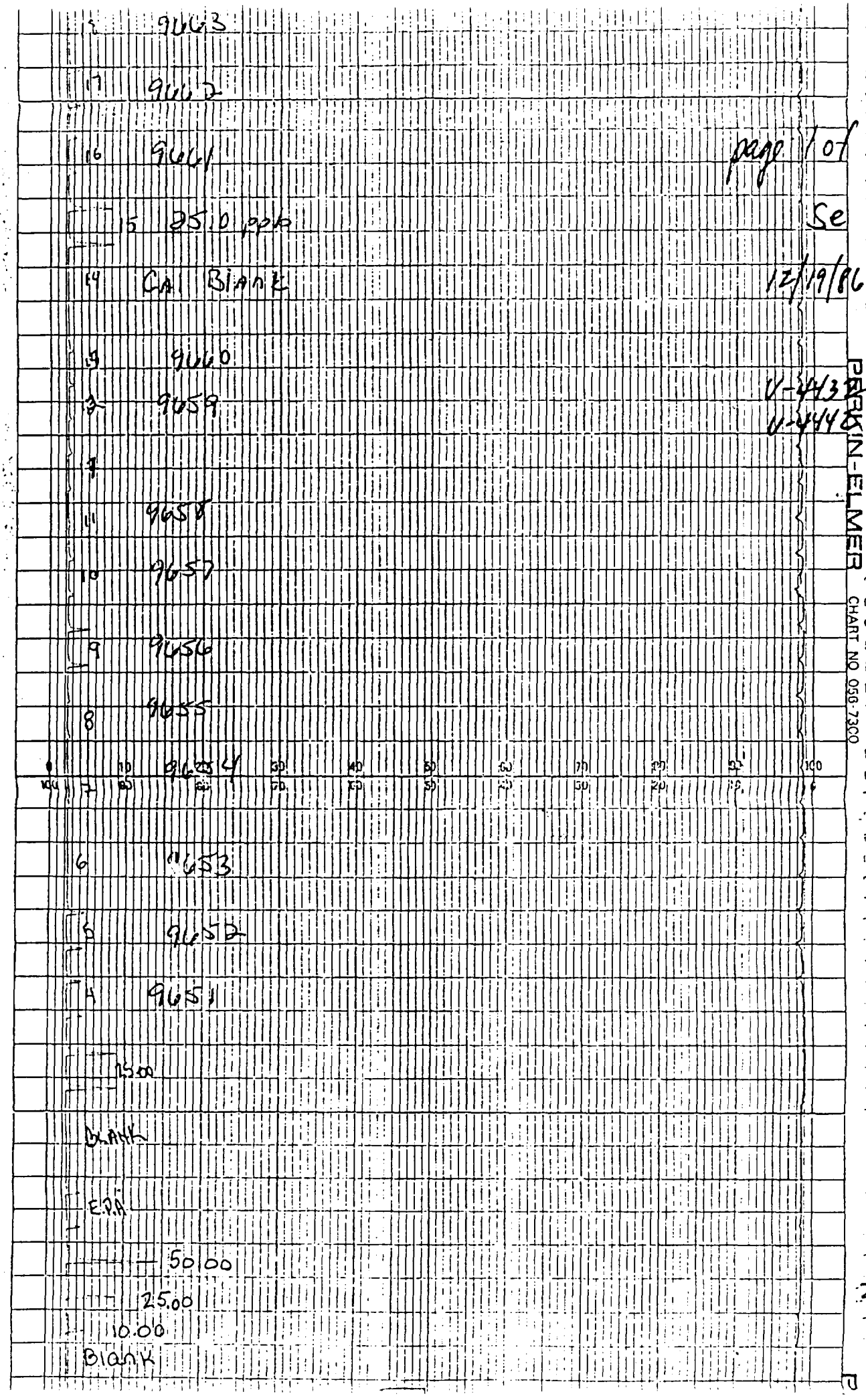
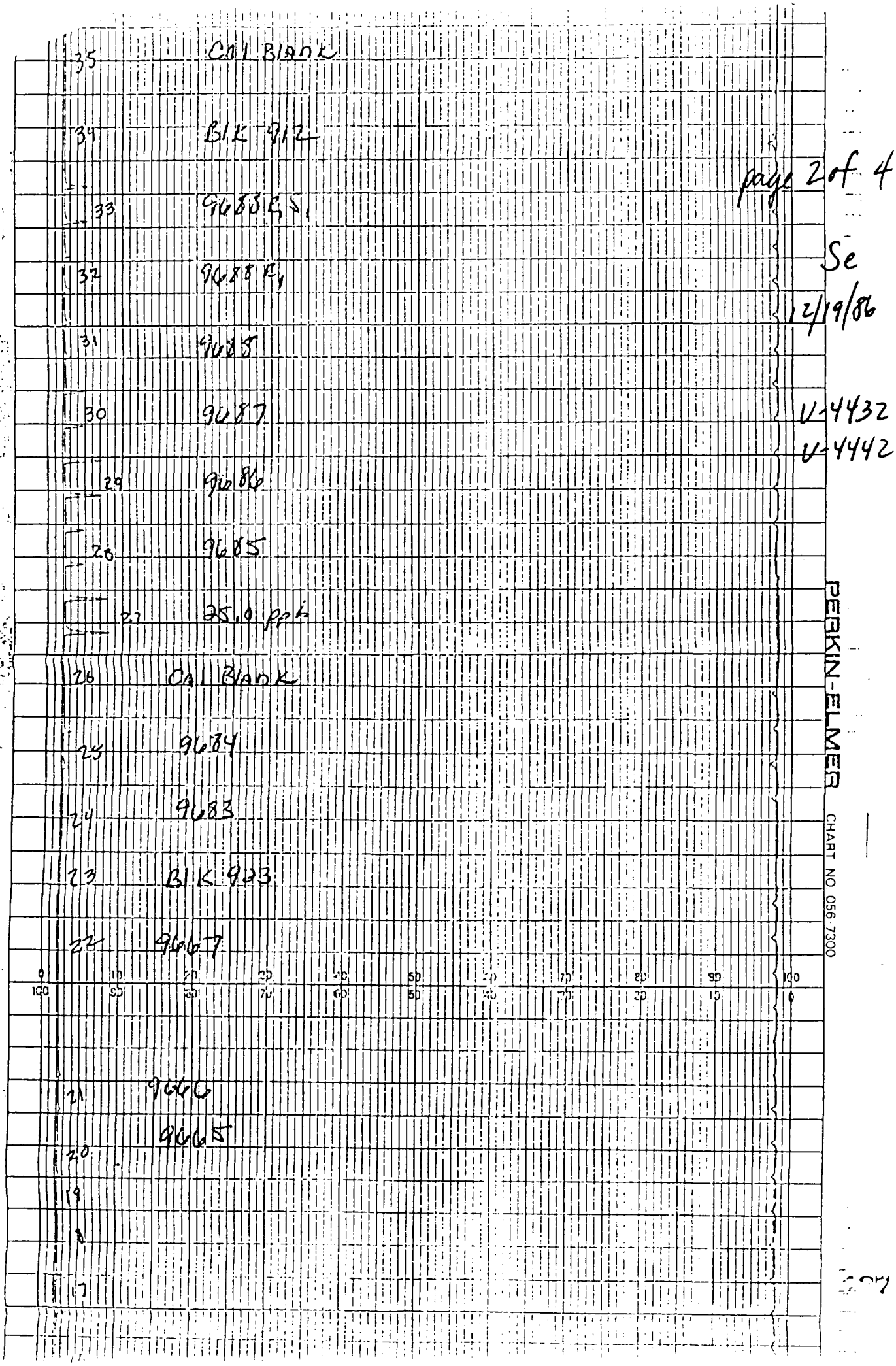
[illegible]	[illegible]	[illegible]

601	23.10
602	8.62
603	36.13
604	14.12
605	14.42
606	9.05
607	9.86
608	12.04
609	15.73
610	12.78
611	12.05
612	12.33
613	9.58
614	9.34
615	33.21
616	13.05
617	13.58
618	10.39
619	10.80
620	11.83
621	10.34
622	10.45
623	7.62
624	9.41
625	11.39
626	9.08
627	28.34
628	14.46
629	31.08
630	13.48
631	10.49
632	10.38
633	14.04
634	6.83
635	7.72
636	24.91


9663
9662
9661
2510 ppb
CAL BLANK
9660
9659
9658
9657
9656
9655
9654
9653
9652
9651
2500
BLANK
EPA
50.00
25.00
10.00
Blank
page 1 of 4
Se
12/19/86
V-443
V-444
PERKIN-ELMER
CHART NO. 050-7300

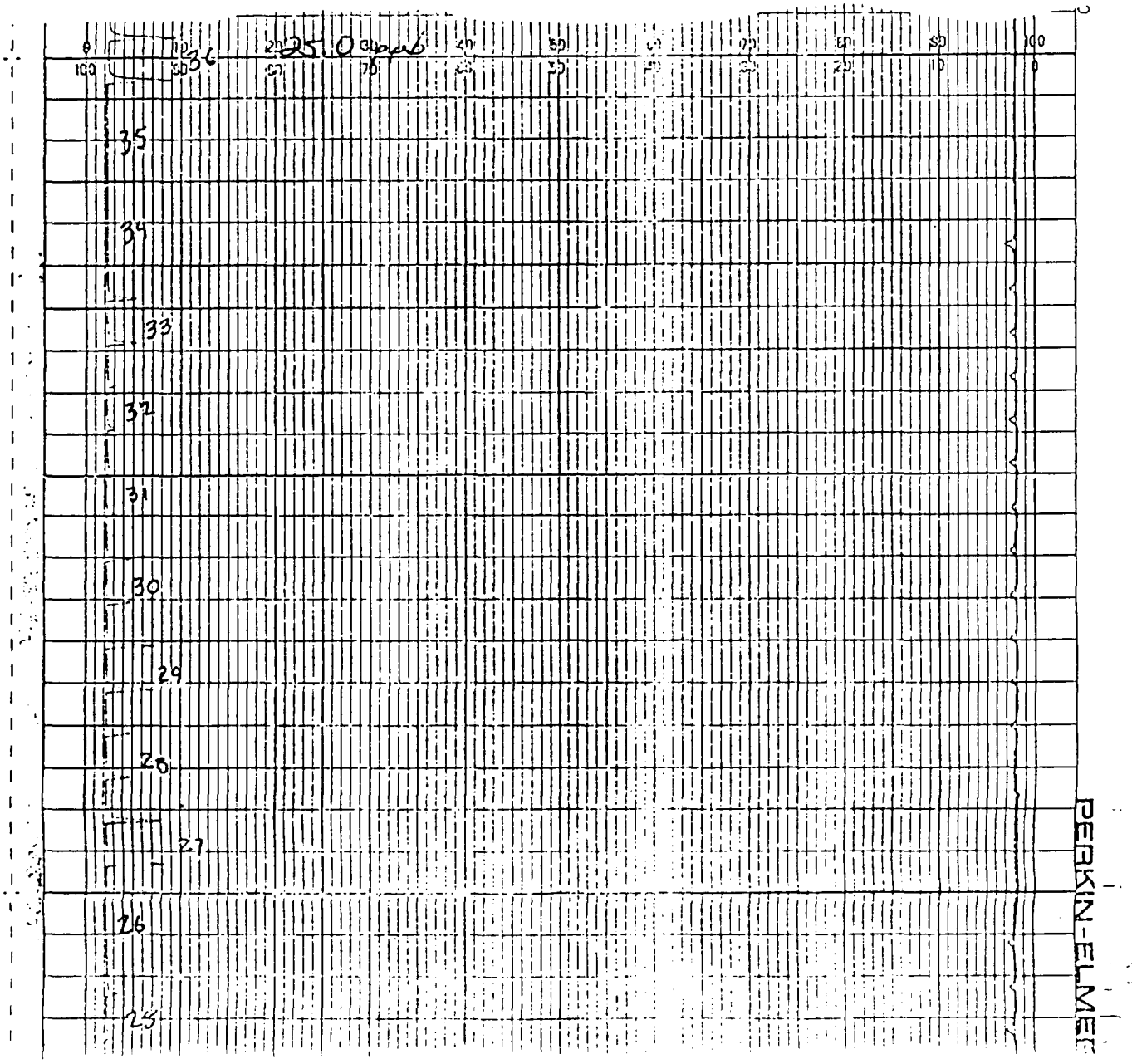

Cal Blank
Blk 912
9683 E1
9682 E1
9685
9687
9686
9685
25.0 ppb
Cal Blank
9684
9683
Blk 923
9667
9666
9665
page 2 of 4
Se
2/19/86
V-4432
V-4442
PERKIN-ELMER
CHART NO 056-7300

page 3 of 4

Sc

12/19/86

U-4432
U-4442



page 4 of 4

Se

12/19/86.

U-4432

U-4442

36 250 ppb
35 Cal Blank
34 BLC 921
33 9688 R.S.
32 9688 R.
31 9687
30 9686
29 9686
28 9685
27 250 ppb
26 Cal Blank
25 9684
24 9683
23 BLC 923
22 9667
21 9666
20 9665
19 9664
18 9663
17 9662
16 9661
15 250 ppb
14 Cal Blank
13 9660
12 9659
11 9658
10 9657
9 9656
8 9655
7 9654
6 9653
5 9652
4 9651
3 250 ppb
2 Cal Blank
1 WS 378 #14

PERKIN-ELMER CHART NO 056-7300

129

HGA FORM #1

ELEMENT: Se, DATE: 12/[illegible]/[illegible].

S_1 = 10.0 PPB., S_2 = 25.0 PPB.

S_3 = 100 PPB, BOOK NO. ,

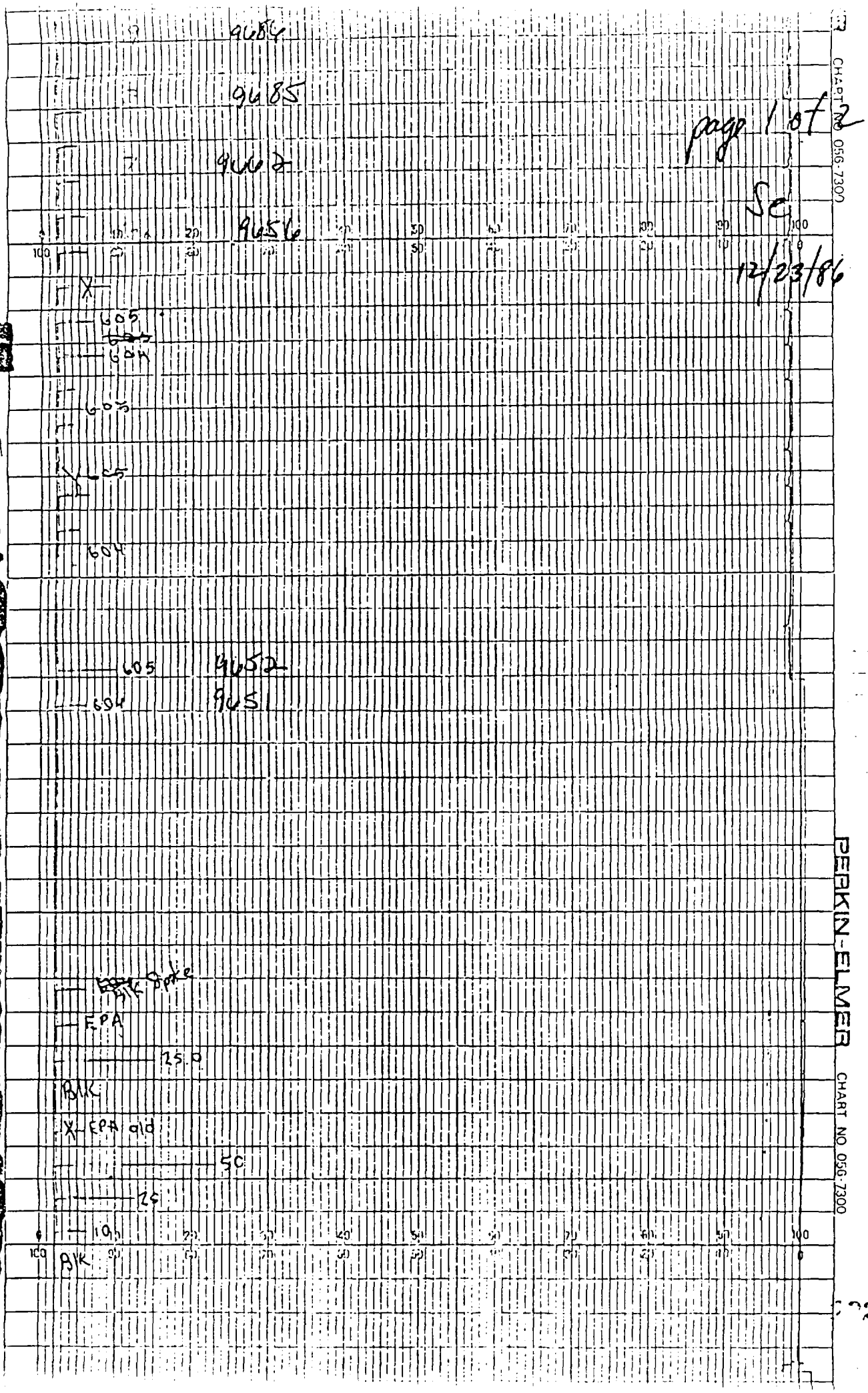
JOB #:

X01	10.378 #10	
X02	Cal Blk	
X03	250 ppb	
X04	9651.0407	
X05	9657	
X06	9656	
X07	9662	
X08	9685	
X09	9686	
X10	9687	
X11	Cal Blk	
X12	25.0 ppb	
X13		
X14		
X15	9686.0402 (1→2)	
X16	9686 1 (2→10)	
X17	, S_2	
X18		
X19		
X20		
X21		
X22		
X23		
X24		
X25		
X26		
X27		
X28		
X29		
X30		
X31		
X32		
X33		
X34		
X35	, S_3	

601	7.76	
602	11.08	
604	10.63	
605	21.29	
	0.72	
	0.67	
604	0.70	AV
	5.09	CV
	9.18	
	8.94	
604	9.06	AV
	1.67	CV
	12.16	
	1.98	
605	7.05	AV
	00	CV
	7.61	
	7.78	
605	7.69	AV
	1.56	CV
604	13.38	
605	14.50	
[illegible]	20.54	
	11.68	
	11.61	
606	11.64	AV
	0.43	CV
	7.61	
	7.55	
607	7.58	AV
	0.56	CV
	9.15	
	9.20	
608	9.17	AV
	0.39	CV
	18.11	
	18.12	
609	18.11	AV
	0.04	CV
	8.86	
	9.20	
610	9.03	AV
	2.66	CV
	0.10	
	0.30	
611	0.20	AV
	70.71	CV
	25.37	
	25.04	
612	25.21	AV
	0.93	CV

Se
12/23/86

			11.09	
			10.67	
		608	10.88	AV
			2.73	CV
601	21.10		19.20	
602	12.56		21.27	
603	40.76	609	20.23	AV
			7.23	CV
		608	22.06	
		609	25.65	
605	17.46			
606	23.13			
607	19.22			
608	22.88			
609	26.45		9.83	
610	20.25		9.98	
		615	9.91	AV
			1.07	CV
			16.07	
			4.53	
			4.79	
		616	4.66	AV
			3.95	CV
		616	10.19	


9684
9685
9662
9656
page 1 of 2
SC
12/23/86
X
605
604
605
9652
604
9651
BLK Spike
EPA
25.0
BLK
X EPA old
5C
25
10.0
BLK
PERKIN-ELMER
CHART NO 056-7300

page 2 of 2

Se

12/23/86

10 9687

9 9686

8 9685

7 9662

6 9656

5 9652 Se Spikes

12 25.0 ppb

11 Cal Blank

11 9687

PERKIN-ELMER CHART NO 056-7300

PERKIN-ELMER CHART NO

Sin Page No.

Test Performed: Cu

Date Received: 12/16/96

No. Performed By: [illegible]

λ 324.8 Energy: 44 Time: 5 sec

S1 500 ppb S2 100 S3 200

See Slide Log #008 pg. 87

Job No.	ID No.	Custody Seal Intact Yes	No	Secure Storage Area Received From		ppb Rep 1	ppb Rep 2	ppb Ave	% CV	50.0 ppb Spike	% Rec	DF	Samp. Wgt	Units	Fin Con
			N	C											
	WS 578 # 3					-0.7				91.2	114			µg/l	<40
	Cal Blk					-0.9				88.3	110				<40.
	100 ppb					95.9				213.0	/			µg/l	95.
4432	9651.0402					88.6	86.5	87.6	1.70	157.6	88		1.06	mg/kg	
	9652.0402					51.9	52.5	52.2	0.81	118.0	82		1.02		
	9653.0402					2.3	1.6	2.0		71.5	89		1.00		
	9654.0402					68.7	69.1	68.9	0.41	140.6	90		1.00		
	9655.0402					5.0	5.0	5.0	0.00	78.4	98		1.09		
	9656.0402					34.4	33.0	33.7	2.94	94.8	~~117~~ 76 (mg)		1.09		/
	9657.0402					12.7	12.9	12.8	1.11	90.5	113		1.09		
	9658.0402					6.0	5.1	5.5	11.47	86.2	108		1.05		
	9659.0402					8.2	8.7	8.4	4.18	87.6	110		1.09		
	9660.0402					15.6	16.5	16.1	3.97	94.5	118		1.04	mg/kg	/
	Cal Blk.					-1.5				91.6	115			µg/l	<40
	100 ppb					97.6				/ 05 ER	/			µg/l	97.
	9661.0402					37.9	36.9	37.4	1.89	123.9	108		1.01	mg/kg	
	9662.0402					9.2	8.9	9.1	2.34	92.3	115		1.01		
	9663.0402					2.4	2.3	2.3	3.01	82.7	103		1.03		
	9664.0402					1.6	1.5	1.6	4.56	83.4	104		1.04		
	9665.0402					3.7	3.0	3.4	14.78	83.2	104		1.09		
	9666.0402					2.1	2.3	2.2	6.43	81.3	102		1.02		
	9667.0402					0.8	37.9	19.3	/	83.4	104		1.09	mg/kg	/
	BLK923					29.1	29.1	29.1	0.00	112.7	105			µg/l	<40
4442	9683.0402					0.9	0.3	0.6		80.6	101		1.09	mg/kg	
	9684.0402					52.0	50.7	51.3	1.79	128.7	97		1.00	mg/kg	
	Cal Blk					-2.0	-1.7	-1.9	11.47	80.3	100			µg/l	<40.
	100 ppb					101.6	102.9	102.3	0.90	222.1	/		~~1.05~~ 1.05	µg/l	102
	9685.0402					05 ER	05 ER	/	/	~~106.4~~ (mg)	/		1.05	mg/kg	/

To Page No. 2

TITLE

From Page No. 99

Test Performed: Sn (Cont'd)

Received: 12/19/9[illegible]

Work Performed By: J. Oxer

Job No.	ID No.	Custody Seal Intact Yes	No	Secure Storage Area Received From N	C	ppb Found	ppb Burn 2	ppb Ave	CV	~~25~~ 50 ppb Spike	% Rec	DF	Samp Wgt	Units	Fin Cor
4442	9686.0402					05 ER	05 ER	/	/	/	/		1.02	mg/kg	/
	9687.0402					157.2	150.4	153.7	3.13	05 ER	/		1.03		/
	9688.0402					36.9	36.0	36.5	1.75	105.9	87		1.03		
	9688.R1					41.0	39.9	40.5	1.92	109.9	87		1.06		
	9688.R1S1					31.5	31.4	31.4	0.23	103.0	90		1.01	mg/kg	/
	BLK 912					30.3	29.8	30.1	1.18	107.8	97			µg/g	<40
	Cal BLK					−1.8				77.6	97				<40
	100 ppb					100.6				202.3				µg/g	10
	9685.0402					25.7	24.1	25.1	3.38	~~25 ER~~ 106.4	102	1→10	1.05	mg/kg	
	9686.0402					119.4	117.3	118.3	1.26	05 ER	/	1→10		/	/
	9652.0402					46.6	46.3	46.7	0.80	129.7	104				
	9656.0402					39.6	39.2	38.8	2.09	105.6	83				
	9660.0402					14.7	15.2	15.0	2.37	90.1	94				
	9667.0402					3.9	3.6	3.7	5.46	73.3	92				
	9686.0402					69.5	69.1	69.0	0.92	133.1	86	0.5→10			
	9687.0402					85.3	86.2	85.7	0.7	156.2	88	1→2			
	Cal BLK					0.1				78.0	98				
	100 ppb					104.7				155	100				

To Page No.

Witnessed & Understood By

12/[illegible]

Date

HGA FORM #1

ELEMENT: Sn, DATE: 12/19/86.

S_1 = 50.0 PPB., S_2 = 100 PPB.

S_3 = 200 PPB, BOOK NO. [illegible]

JOB #:

401	103 373 #3 (no Tin)	
X02	Cal Blk	
X03	100 ppb	
X04	9651.0402	
X05	9652	
X06	9653	
X07	9654	
X08	9655	
X09	9656	
X10	9657	
X11	9658	
X12	9659	
X13	9660	
X14	Cal Blk	
X15	100 ppb	
X16	9661.0402	
X17	9662	, S_2
X18	9663	
X19	9664	
X20	9665	
X21	9666	
X22	9667	
X23	Blk 923	
X24	9683.0402	
X25	9684.0402	
X26	Cal Blk	
X27	100 ppb	
X28	9685.0402	÷(1->10)
X29	9686	÷(1->10)
X30	9687	
X31	9688	
X32	9688 R1	
X33	9688 R.S.	
X34	Blk 912	
X35	Cal Blk	, S_3
	100 ppb	

Sn

	-0.092	
	0.000	AV
	0.185	
	50.0	S1
	98.5	C
	100.0	S2
	173.3	C
	200.0	S3
401	-0.7	
402	-0.9	
403	95.9	
	88.6	
	86.5	
404	87.6	AV
	1.70	CV
	51.9	
	52.5	
405	52.2	AV
	0.81	CV
	2.3	
	1.6	
406	2.0	AV
	25.38	CV
	68.7	
	69.1	
407	68.9	AV
	0.41	CV
	5.0	
	5.0	
408	5.0	AV
	0.00	CV
	34.4	
	33.0	
409	33.7	AV
	2.94	CV
	12.4	
	12.9	
410	12.8	AV
	1.11	CV
	6.0	
	5.1	
411	5.5	AV
	11.47	CV
	8.2	
	8.7	
412	8.4	AV
	4.18	CV
	15.6	
	16.5	
413	16.1	AV
	3.97	CV
414	-1.5	
415	97.6	
	37.9	
	36.9	
416	37.4	AV
	1.89	CV
417	9.2	

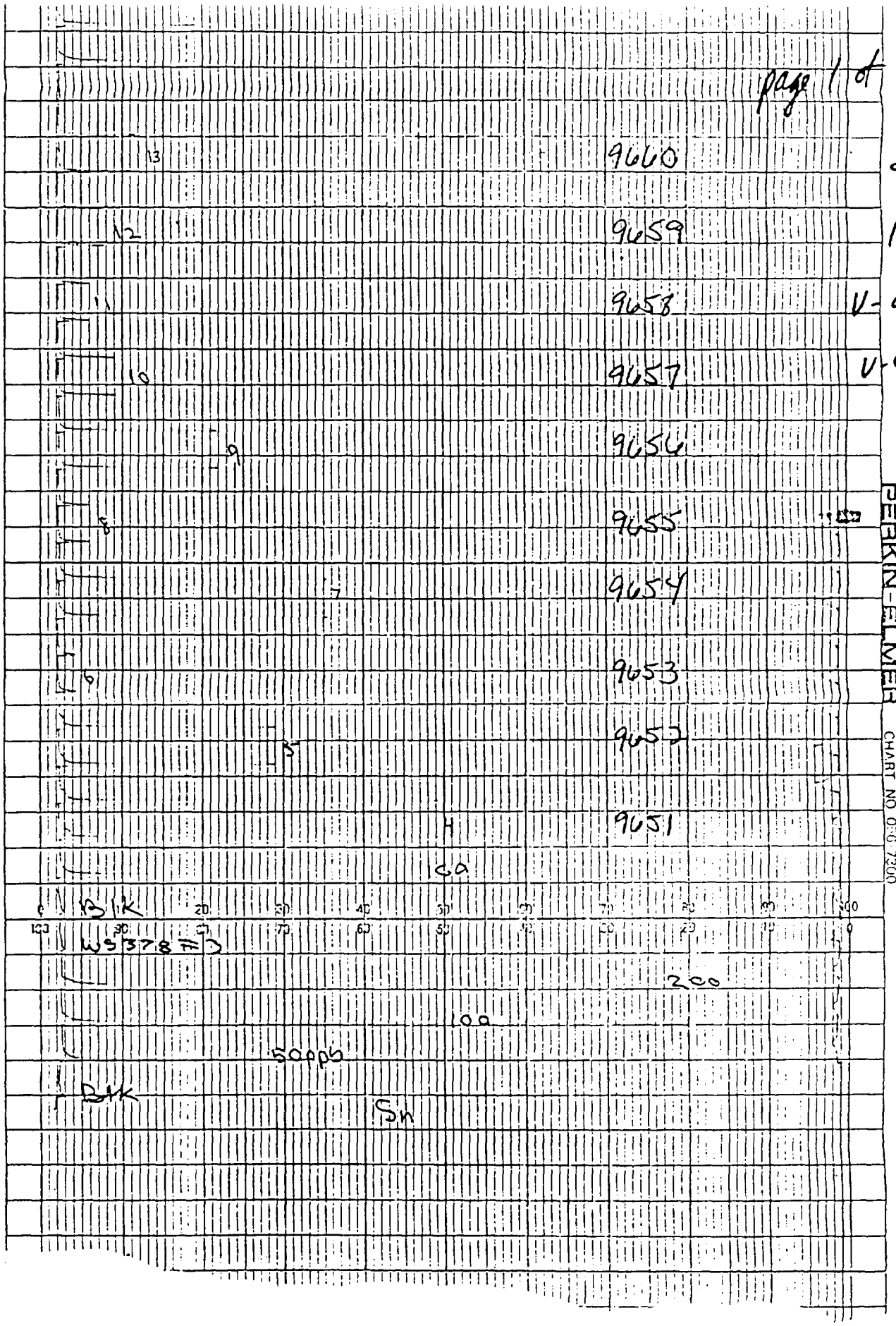
417	9.1	AV
	2.34	CV
	2.4	
	2.3	
418	2.3	AV
	3.01	CV
	1.6	
	1.5	
419	1.6	AV
	4.56	CV
	3.7	
	3.0	
420	3.4	AV
	14.78	CV
	2.1	
	2.3	
421	2.2	AV
	6.43	CV
	0.8	
	37.9	
422	19.3	AV
	00	ER
	29.1	
	29.1	
423	29.1	AV
	0.00	CV
	0.9	
	0.3	
424	0.6	AV
	70.71	CV
	32.0	
	50.7	
425	51.3	AV
	1.79	CV
	-2.0	
	-1.7	
426	-1.9	AV
	11.47	CV
	101.6	
	102.9	
427	102.3	AV
	0.90	CV
	05	ER
	05	ER
428	05	ER
	0.00	CV
	05	ER
	05	ER
429	05	ER
	0.00	CV
	157.2	
	150.4	
430	153.7	AV
	3.13	CV
	36.9	
	36.0	
431	36.5	AV
	1.75	CV
	41.0	
	39.9	
432	40.5	AV
	1.92	CV
	31.5	

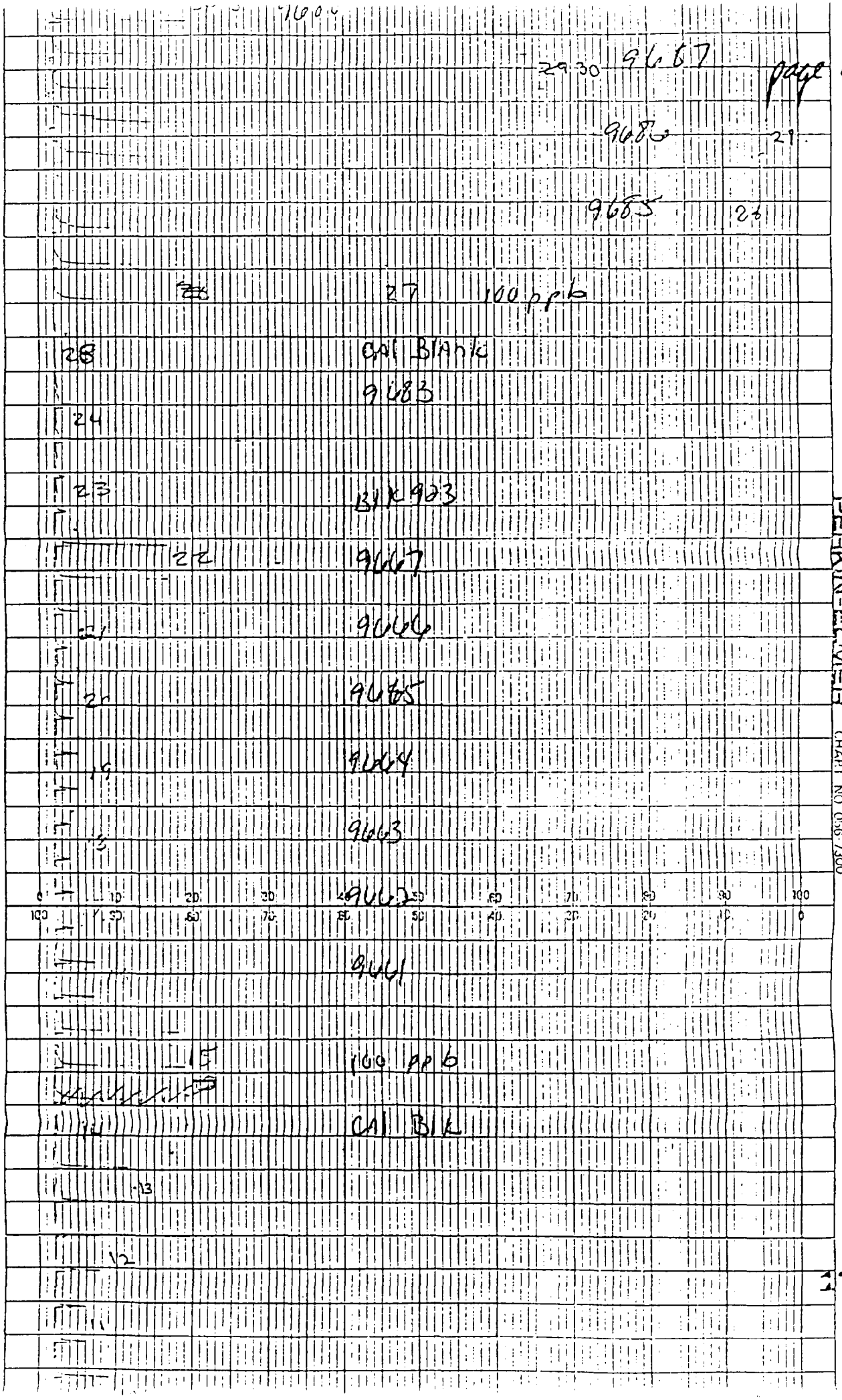
	0.23	CV
	30.3	
	29.8	
434	30.1	AV
	1.18	CV
435	-1.8	
436	100.6	

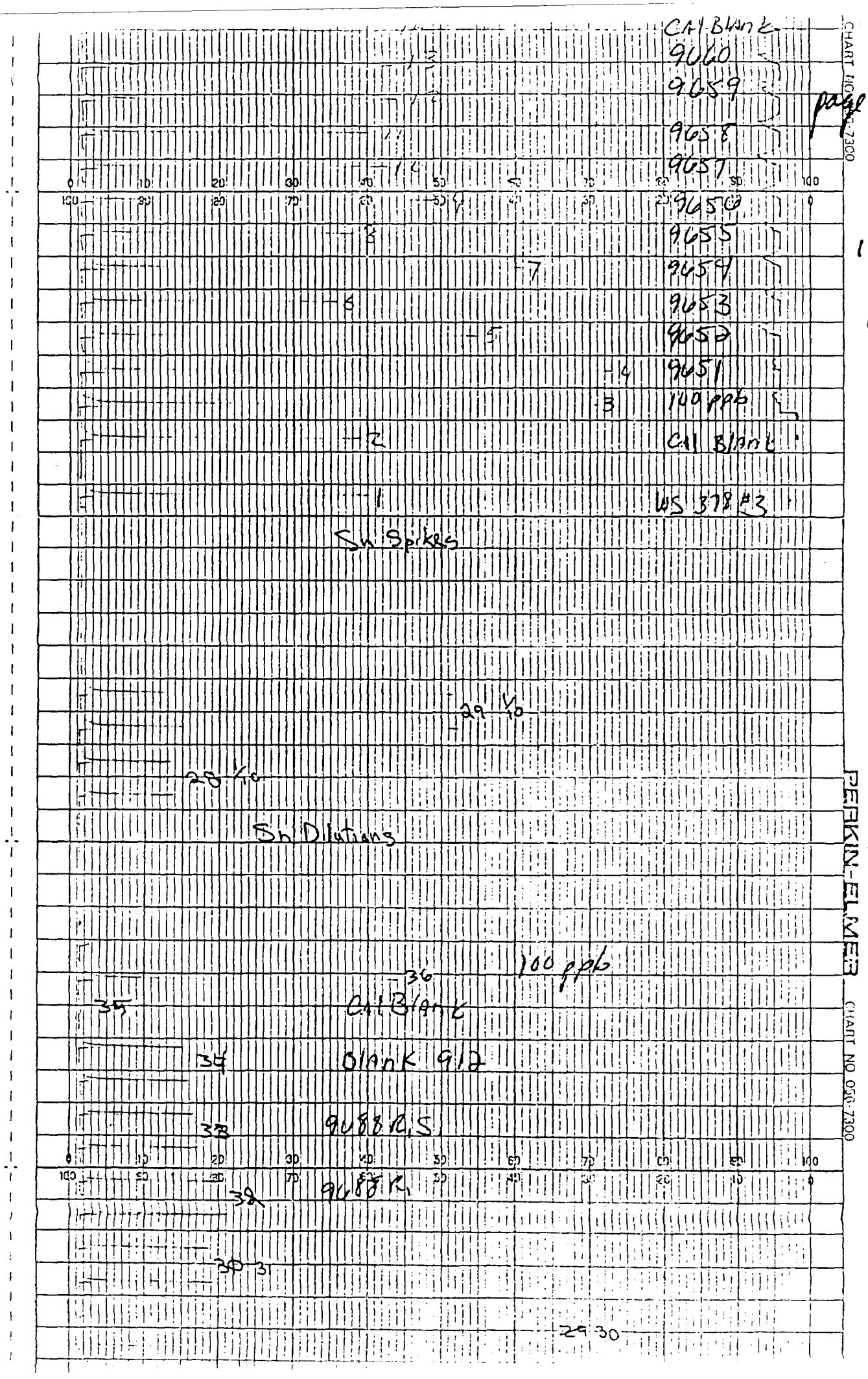
Sn
12/19/84

	0.5	
	25.7	
	24.5	
428	25.1	AV
	3.38	CV
	119.4	
	117.3	
429	118.3	AV
	1.26	CV

401	91.2	
402	88.3	
403	213.9	C
404	157.6	
405	118.0	
406	71.5	
407	140.6	
408	78.4	
409	94.8	
410	90.5	
411	86.2	
412	87.6	
413	94.5	
414	91.6	
415	05	ER
416	123.9	
417	92.3	
418	82.7	
419	83.4	
420	83.2	
421	81.3	
422	83.4	
423	112.7	
424	80.6	
425	128.7	
426	80.3	
427	222.1	C
428	106.4	
429	05	ER
430	05	ER
431	105.9	
432	109.9	
433	103.0	
434	107.8	
435	77.6	
436	222.3	


page 1 of 4
Sn
12/19/86
V-4432
V-4442
9660
9659
9658
9657
9656
9655
9654
9653
9652
9651
13
12
11
10
9
8
7
6
5
4
100
BLK
WS378 #3
200
100
500ppb
BLK
Sn
PERKIN-ELMER
CHART NO 050-7300


page 2 of 4
Sn
12/19/84
U-4432
U-4442
29 30 9667
9686 29
9685 28
27 100 ppb
28 CAL BLANK
9683
24
23 BLK 903
22 9667
21 9666
20 9685
19 9664
18 9663
17 9662
9661
15 100 ppb
CAL BLK
13
12
PERKIN-ELMER
CHART NO 056-7300



page 3 of 4

Sn

12/19/84

U-4432

U-4442

340

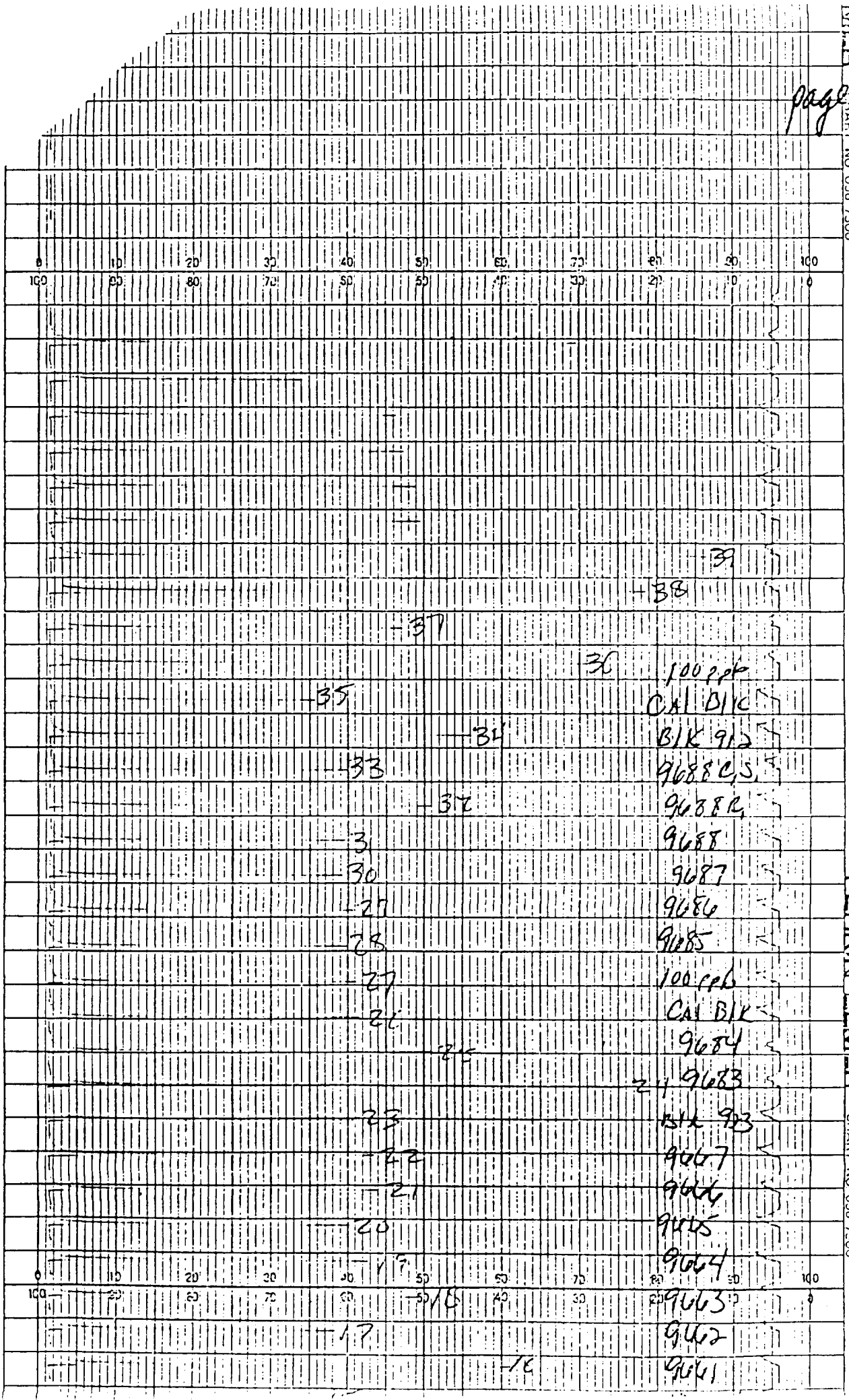
page 4 of 4

Sn

12/19/86

U-4432

U-4442



HGA FORM #1

ELEMENT: Sn, DATE: 12/[illegible].

S_1 = 50.0 PPB., S_2 = 100.0 PPB.

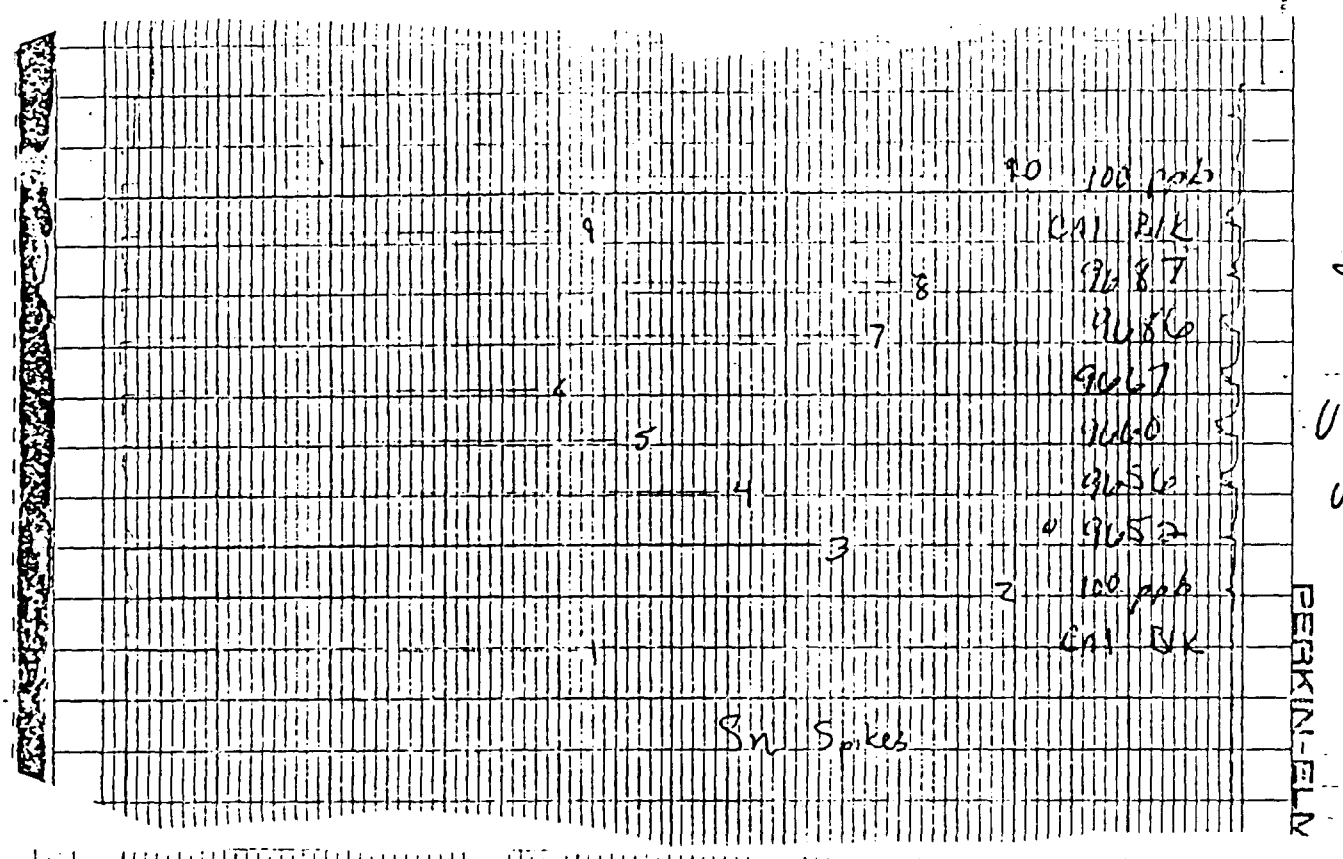
S_3 = 200.0 PPB, BOOK NO. ,

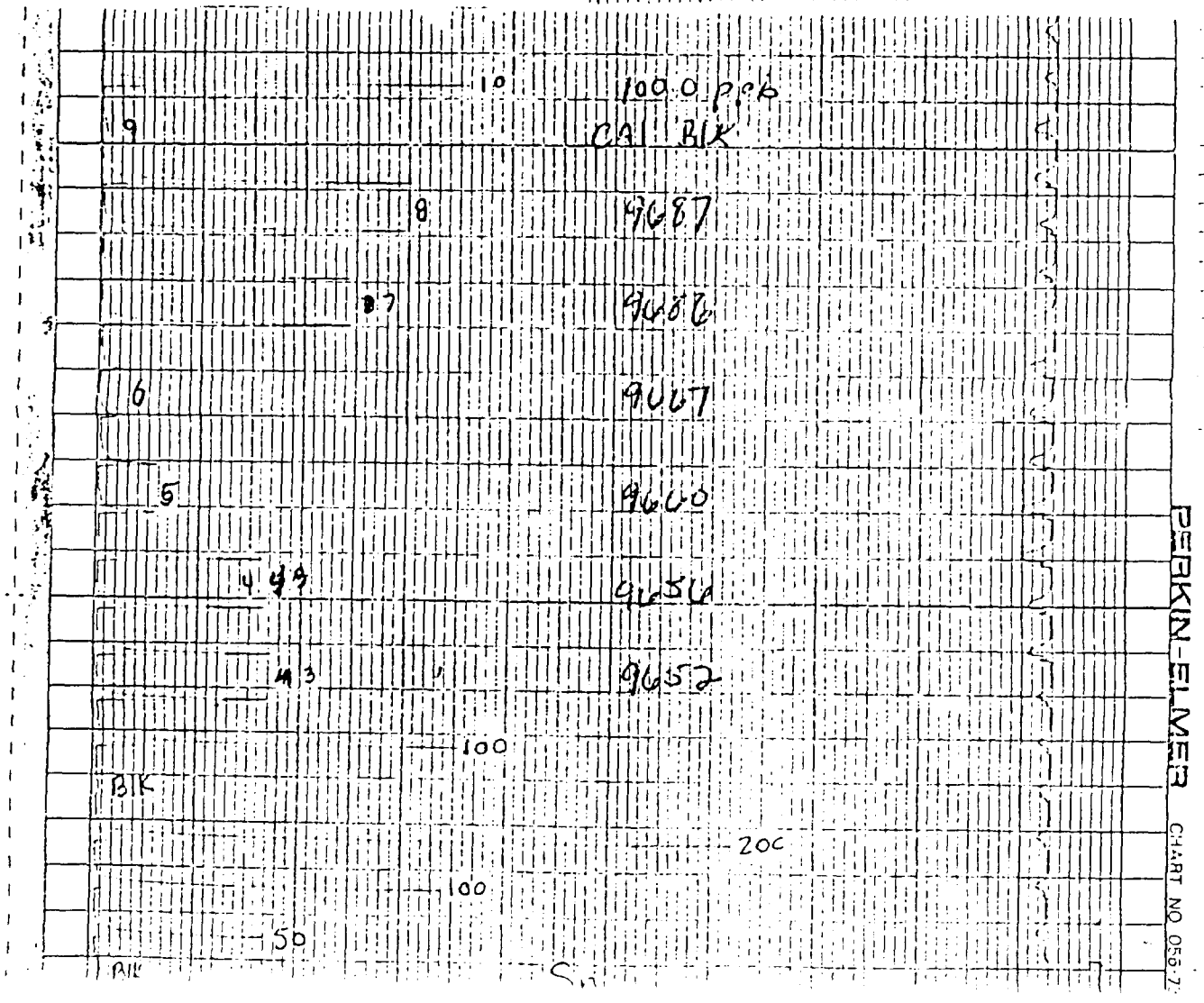
	X01	Sn Blank	
	X02	100.0 PPB	
	X03	9652, 9902.	
	X04	9656.	
JOB #:	X05	9660.	
	X06	9667.	
	X07	9686. (0.5→10)	
	X08	9687. (1→2)	
	X09	Cal Blank	
	X10	100.0	
	X11		
	X12		
	X13		
	X14		
	X15		
	X16		
	X17	, S_2	
	X18		
	X19		
	X20		
	X21		
	X22		
	X23		
	X24		
	X25		
	X26		
	X27		
	X28		
	X29		
	X30		
	X31		
	X32		
	X33		
	X34		
	X35	, S_3	

	-0.006	
	[illegible]	[illegible]
	0.204	
	50.0	S1
	100.4	C
	100.0	S2
	195.4	C
	12	[illegible]
402	103.4	
	46.6	
	46.8	
403	46.7	AV
	0.30	CV
	39.6	
	38.2	
404	38.9	AV
	2.55	CV
	14.7	
	15.2	
405	15.0	AV
	2.37	CV
	3.9	
	3.6	
406	3.7	AV
	5.46	CV
	68.5	
	69.4	
407	69.0	AV
	0.92	CV
	85.3	
	86.2	
408	85.7	AV
	0.74	CV
409	0.4	
410	104.7	
401	78.5	
402	176.0	
403	129.5	
404	195.6	
405	90.1	
406	73.8	
407	139.1	
408	156.2	
409	78.0	
410	195.2	

Sn Spikes

U-4432
U-4442





Page No.__

t Performed: Tl

te ived: 12/[illegible]/99/[illegible]

rk . .ormed By: [illegible]

λ 276.8

Energy

Time: 5 sec

S1 50.0 ppb

S2 [illegible]

S3 [illegible]

See Std Log # 036 pg 58

Job No.	ID No.	Custody Seal Intact Yes	No	Secure Storage Area Received From N	C	ppb Run 1	ppb Run 2	ppb Ave	CV	50.0 ppb Spike	% Rec	Dr	Samp Wgt	Units	Final Conc.
	WP 1133 #1					25.2	25.1	25.1	0.28	46.43	107			µg/l	25.1
	Cal Blk					0.0	0.3	0.2	—	20.78	104				<5.00
	50.0 ppb					50.6	49.6	50.1	1.41	65.17	/			µg/l	50.1
ABC	9651.0402					0.3	-0.1	0.1	—	20.42	102		1.06	mg/kg	<10.0
	9652.0402					1.2	0.9	1.0	—	20.28	101		1.02		<10.0
	9653.0402					0.4	0.8	0.6	—	18.63	93		1.00		<10.0
	9654.0402					0.3	0.2	0.3	—	15.76	79		1.06		<10.0
	9655.0402					1.1	1.1	1.1	—	19.03	95		1.09		<10.0
	9656.0402					-0.1	0.3	0.1	—	19.90	100		1.04		<10.0
	9657.0402					1.6	1.1	1.4		19.10	96		1.08		<10.0
	9658.0402					1.1	1.6	1.3		17.86	89		1.05		<10.0
	9659.0402					0.6	1.5	1.0		19.85	98		1.04		<10.0
	9660.0402					1.5	2.1	1.8		19.05	95		1.04	mg/kg	<10.0
	Cal Blk					0.3	0.5	0.4		16.36	77			µg/l	<10.0
	50.0 ppb					52.3	51.4	51.8	1.3	55.15	/			µg/l	51.8
	9661.0402					0.7	0.7	0.4		17.05	85		1.01	mg/kg	<10.0
	9662.0402					1.7	1.5	1.6		17.66	88		1.01		<10.0
	9663.0402					0.9	1.0	0.7		19.22	96		1.03		<10.0
	9664.0402					1.6	1.7	1.7		18.81	94		1.04		<10.0
	9665.0402					0.5	0.3	0.4		16.91	85		1.09		<10.0
	9666.0402					0.9	1.3	1.1		17.28	86		1.02		<10.0
	9667.0402					1.0	1.2	1.1	✓	17.33	87		1.09	mg/kg	<10.0
	Blk 923					0.2	0.3	0.2	✓	17.52	88			µg/l	<10.0
HHC	9683.0402					1.6	1.0	1.3	✓	16.47	82		1.09	mg/kg	<10.0
	9684.0402					0.8	0.8	0.8	✓	16.98	85		1.00	mg/kg	<10.0
	Cal Blk					0.5	0.0	0.3		19.83	99			µg/l	<10.0
	9685.0402					1.2	1.1	1.2	✓	21.17 ~~20.48~~	106		1.05	mg/kg	<10.0
	9686.0402					0.9	0.6	0.7	✓	23.33 ~~21.17~~	117		1.02	mg/kg	<10.0
	50.0 ppb					~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~					µg/l	47.2
						47.1	47.6	47.2	0.7	56.48	/			To Page	No 23

nessed & Understood by: [illegible] Date 12/[illegible] Inventoried by: Date [illegible]

LE _____ Batch No. _____

m Page No. 23

Test Performed: Tl (continued)

Date Received: [illegible]

Work Performed By: [illegible]

Job No.	ID No.	Custody Seal Intact Yes	No	Secure Storage Area Received From		ppb Run 1	ppb Run 2	ppb Ave	CV	20.0 ppb Spike	% Rec	DF	Samp Wgt	Units	Final Conc
			N	C											
	9687.0402					1.1	0.9	1.0	–	20.75	104		1.09	mg/kg	<10.
4442	9688.0402					1.1	0.6	0.9	–	20.45	102		1.03		<10
	9688.R1					1.3	0.9	1.1	–	19.40	97		1.06		<10
	9688.R1S1					52.9	53.2	53.1	0.40	45.12	/		1.01	mg/kg	(106
	BLK 913					0.1	0.2	0.2		19.36	97			µg/l	<10.0
	Cal BLK					0.0	0.4	0.2		22.37	112				<10.0
	50.0ppb					49.5	48.2	48.9	1.86	50.00	/			µg/l	48.9

To Page No.

Witnessed & Understood by me: [illegible] Date 12/[illegible] Inventoried by _____ Date [illegible]

HGA FORM #1

ELEMENT: Tl, DATE: 12/19/96.

S_1 = 25.00 PPB., S_2 = 50.0 PPB

S_3 = 100.0 PPB, BOOK NO. ,

JOB #:

01	WP 1183 (II) #1		
X02	Cal Blank		
X03	50.0 ppb		
X04	9651.0402		
X05	9652.0402		
X06	9653.0402		
X07	9654.0402		
X08	9655.0402		
X09	9656.0402		
X10	9657.0402		
X11	9658.0402		
X12	9659.0402		
X13	9660.0402		
X14	Cal Blank		
X15	50.0 ppb		
X16	9661.0402		
X17	9662.0402	, S_2	
X18	9663.0402		
X19	9664.0402		
X20	9665.0402		401
X21	9666.0402		
X22	9667.0402		
X23	PrepBlank 923		402
X24	9683.0402		
X25	9684.0402		
X26	Cal Blank		403
X27	50.0 ppb		
X28	9685.0402		
X29	9686.0402		404
X30	9687.0402		
X31	9688.0402		
X32	9688. Rep		405
X33	9688. R.S.		
X34	Prep Blank 912		
X35	Cal Blank	, S_3	406
36	50.0 ppb		

Tl

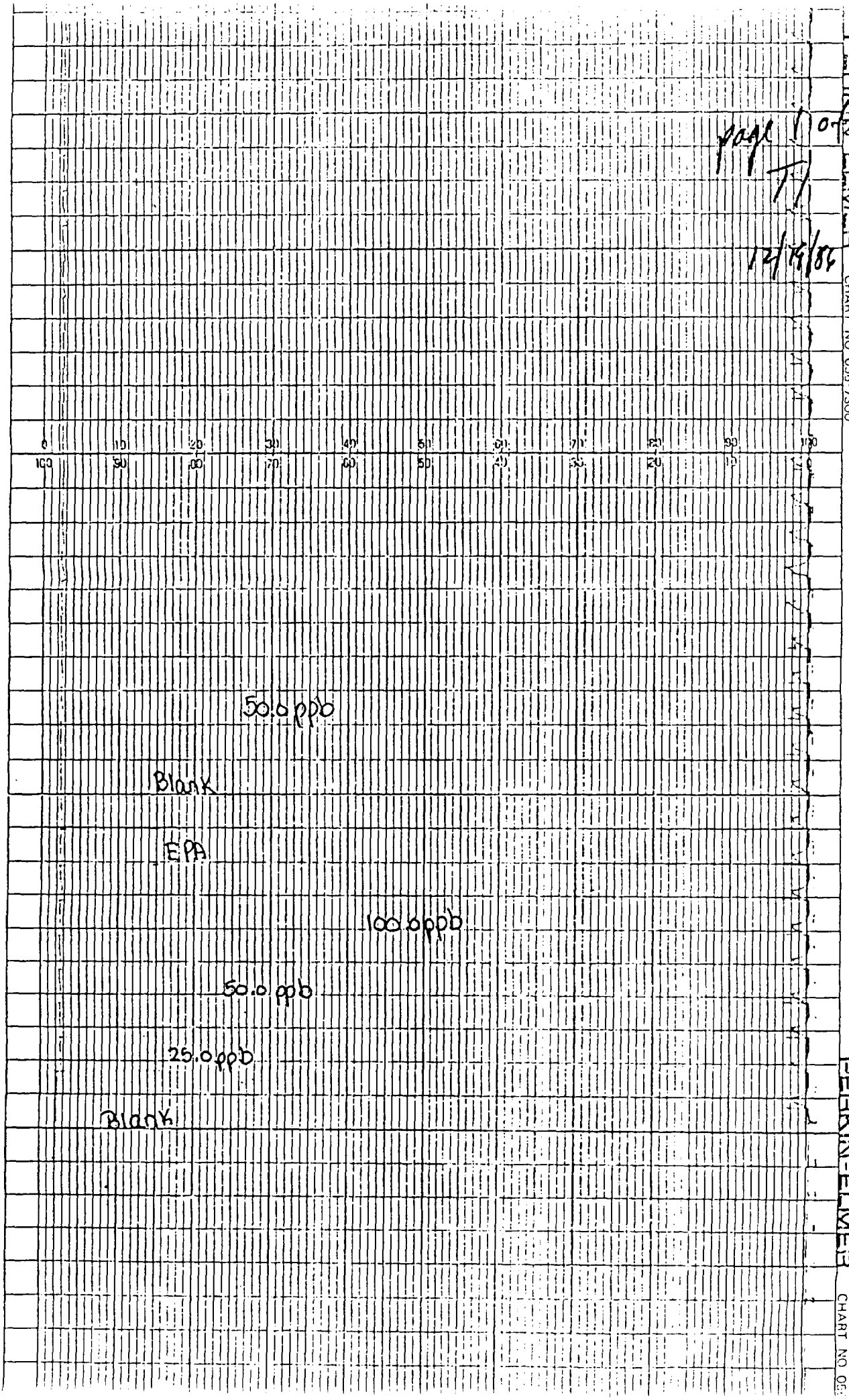
	-0.046	
	-0.045	
	-0.045	AV
	1.55	CV
	0.000	A2
	0.083	
	0.082	
	0.082	AV
	0.86	CV
	25.0	S1
	45.1	C
	45.6	C
	45.3	AV
	0.78	CV
	50.0	S2
	105.0	C
	103.3	C
	104.1	AV
	1.15	CV
	100.0	S3
	25.2	
	25.1	
	25.1	AV
	0.28	CV
	0.0	
	0.3	
	0.2	AV
	06	LO
	50.6	
	49.6	
	50.1	AV
	1.41	CV
	0.3	
	-0.1	
	0.1	AV
	06	LO
	1.2	
	0.9	
	1.0	AV
	20.20	CV
	0.4	
	0.8	
	0.6	A
	47.14	C
	0.3	
	0.2	
	0.3	A
	28.28	C

TI
12/19/86

408	1.1	AV
	0.00	CV
	-0.1	
	0.3	
409	0.1	AV
	06	ER
	1.6	
	1.1	
410	1.4	AV
	26.19	CV
	1.1	
	1.6	
411	1.3	AV
	26.19	CV
	0.6	
	1.3	
412	1.0	AV
	52.10	CV
	1.5	
	2.1	
413	1.8	AV
	23.57	CV
	0.5	
	0.3	
414	0.4	AV
	35.36	CV
	52.3	
	51.4	
415	51.8	AV
	1.23	CV
	0.7	
	0.2	
416	0.4	AV
	78.57	CV
	1.7	
	1.5	
417	1.6	AV
	8.84	CV
	0.5	
	1.0	
418	0.7	AV
	47.14	CV
	1.6	
	1.7	
419	1.7	AV
	4.29	CV
	0.5	
	0.3	
420	0.4	AV
	35.36	CV
	0.9	
	1.3	
421	1.1	AV
	25.71	CV
	1.0	
	1.2	
422	1.1	AV
	12.86	CV
	0.2	
	0.3	
423	0.2	AV
	28.28	CV
	1.6	
	1.0	
424	1.3	AV
	32.64	CV
	0.8	
	0.6	
425	0.3	AV
	0.00	CV
	0.5	
	0.0	
426	0.3	AV
	06	ER
	56.6	
X-contam	57.7	
~~427~~	~~56.2~~	AV
	1.13	CV
	1.2	
	1.1	
428	1.2	AV
	6.15	CV
	0.9	
	0.6	
429	0.7	AV
	28.28	CV
	1.1	
	0.9	
430	1.0	AV
	14.14	CV
	1.1	
	0.6	
431	0.9	AV
	41.59	CV
	1.3	
	0.9	
432	1.1	AV
	25.71	CV
	52.9	
	53.2	
433	53.1	AV
	0.40	CV
	0.1	
	0.2	
434	0.2	AV
	47.14	CV
	0.0	
	0.4	
435	0.2	AV
	06	ER
	49.5	
	48.2	
436	48.9	AV
	1.58	CV
	43.1	
	47.6	
427	47.8	AV

TI
~~SPIKED~~

401	46.43
402	20.78
403	65.17
404	20.42
405	20.29
406	18.60
407	15.76
408	19.03
409	19.90
410	19.10
411	17.87
412	19.55
413	19.05
414	15.30
415	55.15
416	17.05
417	17.66
418	19.22
419	18.81
420	16.91
421	17.28
422	17.33
423	17.52
424	16.47
425	16.98
426	19.63
427	56.48
428	21.17
429	23.33 ←
430	20.75
431	20.45
432	19.40
433	45.12
434	19.36
435	22.37
436	50.00


PERKIN-ELMER
CHART NO 056-7300
page 1 of 5
12/19/86
V-4432
V-4442
0 10 20 30 40 50 60 70 80 90 100
100 90 80 70 60 50 40 30 20 10 0
50.0 ppb
Blank
EPA
100.0 ppb
50.0 ppb
25.0 ppb
Blank
PERKIN-ELMER
CHART NO 05

PERKIN-ELMER
CHART NO 056-7300
blank
500 ppb
Page 2 of 5
11/19/80
V-4432
V-4472

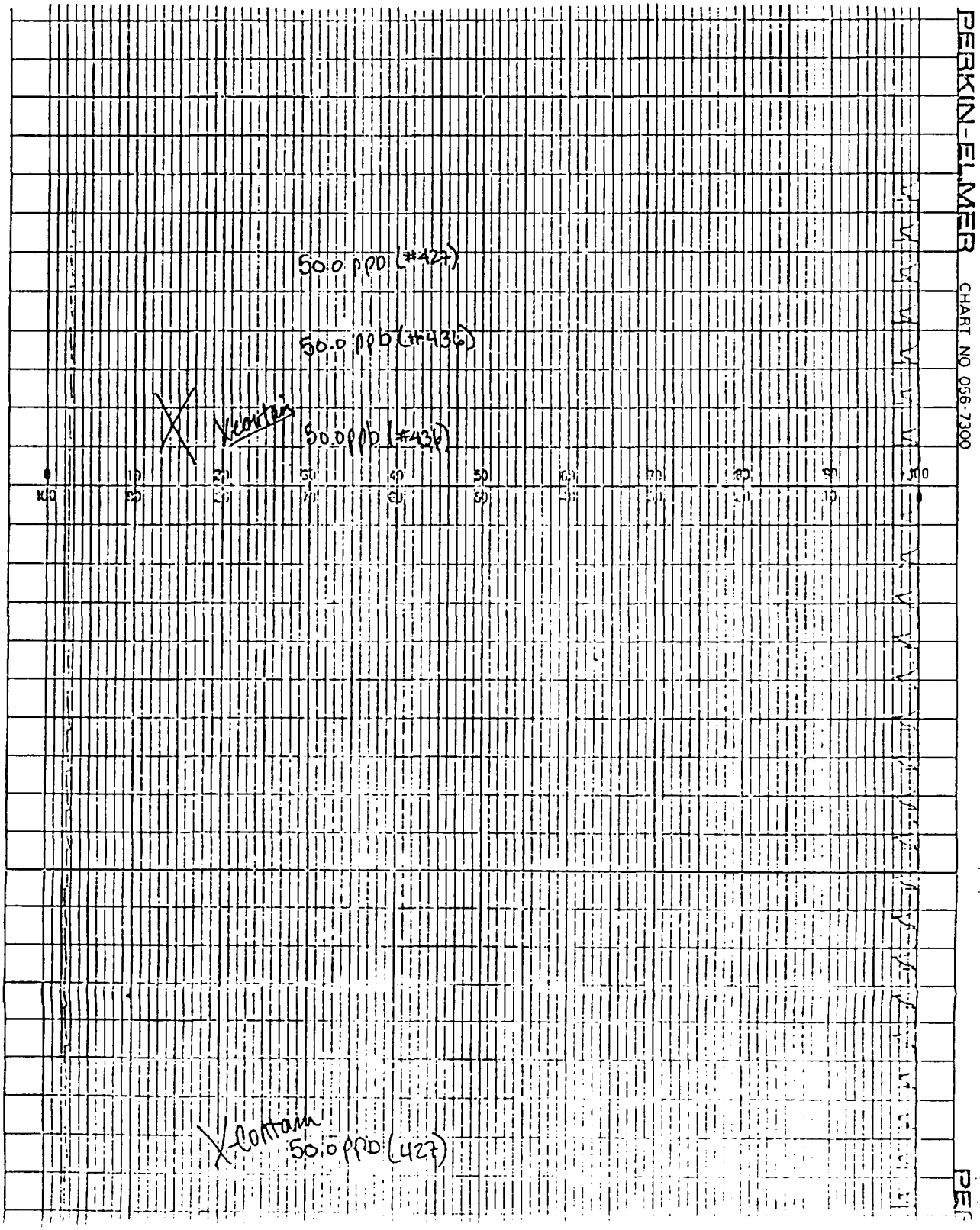
page 3 of 5

TJ

12/19/86

U-4432

U-4442



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T1

12/19/86

U-4432

U-4442

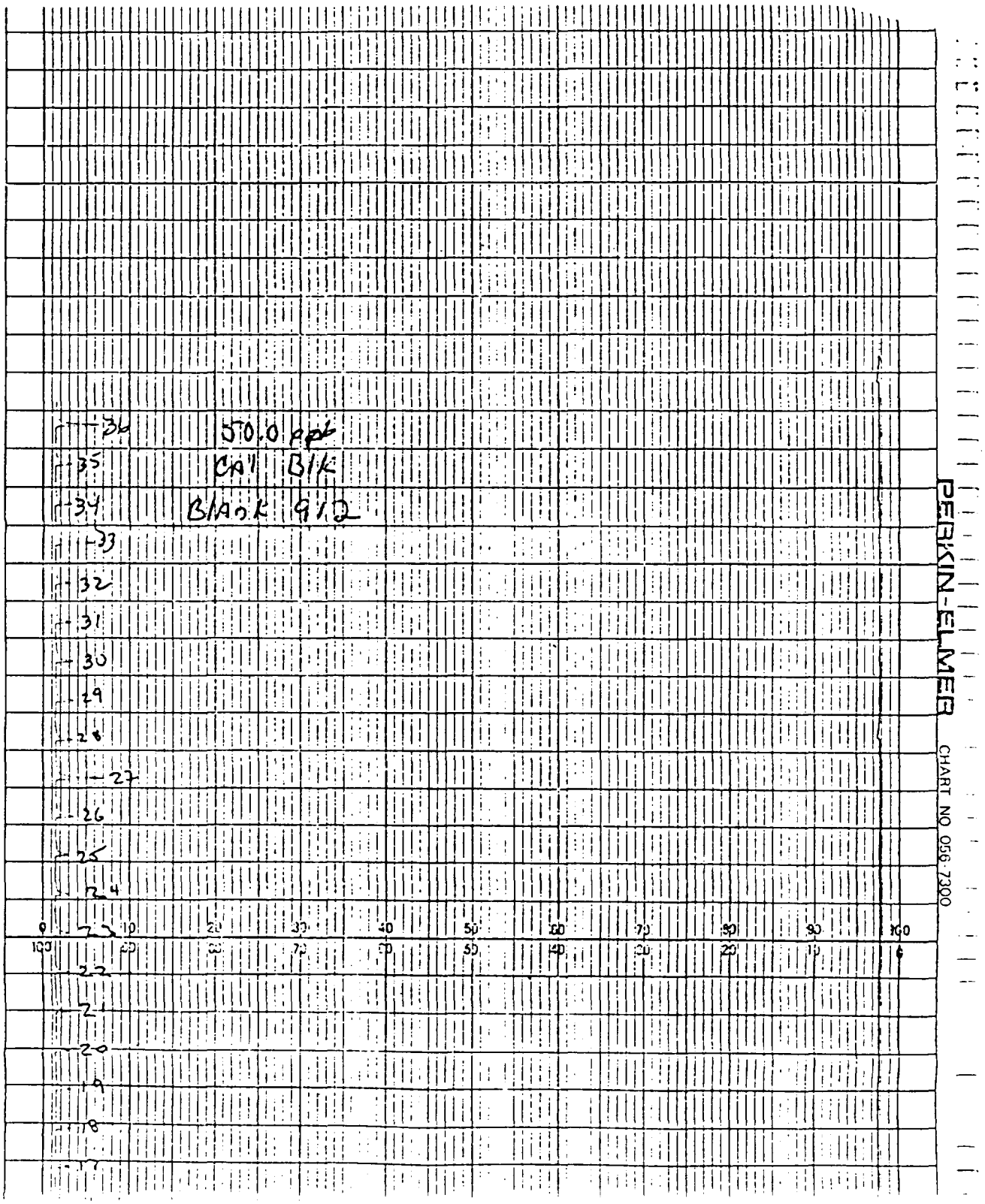
	9688 R.S.
32	9688 R.
31	9688
30	9687
29	9686
28	9685
27	50.0 ppb
26	CAL BLANK
25	9684
24	9683
23	BLK 923
22	9667
21	9666
20	9665
19	9664
18	9663
17	9662
16	9661
15	50.0 ppb
14	CAL BLANK
13	9660
12	9659
11	9658
10	9657
9	9656
8	9655
7	9654
6	9653
5	9652
4	9651
3	50.0 ppb
2	CAL BLANK
1	WP 1183 (#) #1

T1 Spikes Jobs 4432 & 4442

PERKIN-ELMER CHART NO. 056-7300

page 5 of 5
TI.
12/19/86

U-4432
U-4442



Project No.

TLE Book No. 11

Page No.

Method EPA-335.2
Instrument Spec 88
Stock CN⁻ 0.0185N .963mg/ml
Prepared 11/7/86 Book, page 251, 19
Stand. 11/7/86 Book, page 210, 61
Curve Date 11/7/86 Expires 12/7/86
Other:

STD① = 100ml Stock/1000
STD② = 100ml STD①/1000

Test Performed: CN⁻ Curve
Date Received: 11-7-86
Work Performed By: [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.

Witnessed & Understood by me. Date Invented by Date

Project No.

TITLE

Book No.

From Page No.

Method EPA 335.2
Lot Spec 88
Cal. 10185N 0.963 mg/ml
11/5/86 Check, page 251, 15
11/7/86 Check, page 210, 61
11/7/86 Expires 12/7/86

Test Performed: CN⁻
Date Performed: 11-17-86
Work Performed By: D. Butler

STD① = 100 mls Stock/1000
STD② = 100 mls STD①/1000

Sample No.	ID No.	Custody Seal Intact Yes No	Sample Condition	(B) mls distilled	(C) mls for Color	Abs	(A) µg from Curve	Results
	Blank	–	–	500	50	cal @ 0.000	-1.0	<0.02 mg/l
	DI spike	–	–	5.0 ml STD②/500	50	0.269	45.35	94.2% Rec ✓
4432	9651.04	N	A-4	7.0140 g/500	50	0.011	0.9	<1 mg/Kg
	9652.04	N	A-4	7.0130 g/500	50	0.062	9.7	1.4
	9653.04	N	A-4	7.738 g/500	50	0.010	0.7	<1
	9654.04	N	A-4	7.075 g/500	50	0.011	0.9	<1
	9655.04	N	A-4	7.031 g/500	50	0.012	1.0	<1
	9656.04	N	A-4	7.1590 g/500	50	0.011	0.9	<1
	9657.04	N	A-4	7.0860 g/500	50	0.018	2.1	<1 ✓
	9658.04	N	A-4	7.203 g/500	50	0.009	0.5	<1
	9658.04	spike	5.0 ml STD②	+ 7.258 g/500 6.634 ✓	50	0.271	45.69 6.295 ✓	94.9% Rec

To Page No.

Witnessed & Understood by me. Date Invented by Date

Project No._____

16 Book No._____ TITLE _____

From Page No.__

Test Performed: Cr

Date Received: 11/17/96

Work Performed By: [illegible]

Method EPA 3352

Instrument Spec 88

Stock Cr 0.0165N 0.963 mg/ml

Prepared 11/18/96 [illegible] 25,19

Stand. 11/21/96 [illegible] 2,0,61

Curve Date 11/18/96 Expires 12/7/96

Other:

STD① = 100ml stock / 1000ml

STD② = 100ml STD① / 1000ml

$Cr, mg/L = \frac{Rx \cdot 50}{Dr \cdot C}$

Job No.	ID No.	Custody Seal Intact Yes No	Sample Storage Area Received From	Bottle distilled	Amt. for color	Abs	Mg/L from curve	Results (mg/L)
	BLANK			500ml	50	zero @ 0.000	-1.0	< 0.02 mg/L
DI	SPIKE			5ml STD② / 500	50	0.269	45.35	94.2% rec ✓
4432	9659.04	N	A-4	6.270 g/500	50	0.009	0.5	<1 mg/kg
4432	9660.04	N	A-4	6.419 g/500	50	0.019	2.2	<1 mg/kg ✓
4432	9661.04	N	A-4	6.428 g/500	50	0.010	0.7	<1 mg/kg
4432	9662.04	N	A-4	6.724 g/500	50	0.011	0.9	<1 mg/kg
4432	9663.04	N	A-4	6.053 g/500	50	0.001	-0.9	<1 mg/kg
4432	9664.04	N	A-4	6.414 g/500	50	0.005	-0.2	<1 mg/kg
4432	9665.04	N	A-4	6.48 g/500	50	0.003	-0.5	<1 mg/kg
4432	9666.04	N	A-4	6.222 g/500	50	0.005	-0.2	<1 mg/kg
4432	9666.04	REP	A-4	6.176 g/500	50	0.004	-0.3	<1 mg/kg

To Page No.

Witnessed & Understood by me. Date Invented by Date

Recorded by

Project No. _____

TITLE _____ Book No. 256

From Page No. ____

Test Parameter: Cr⁻
Date Performed: 11/18/86
Analyst: A Nigel

Method: EPA 335.2
Instrument: Spec 88
Stock: Cr⁻ 0.0185N 0.963 mg/ml
Dilution: 11/5/86 25,19
Standard: 11/7/86 20,61
Curve Date: 11/6/86 12/1/86
Other: _____

STD① = 100ml STOCK / 1000
STD② = 100ml STD① / 1000

$Cr^-, mg/L = \frac{A \times 50}{Wt}$

Sample No.	Lab No.	Client Sample No.	Date Received	(a) ml distilled	(b) ml final	ABS	Reflectance	Results (mg/L)
	BLANK			500ml	50	0.000	-1.0	<0.02 mg/L
D1	SPIKE			5ml STD②/500	50	0.265	44.66	92.8% rec
4468	9701.01	Y	A-12	500ml	50	0.000	-1.0	<0.02 mg/L
4432	9667.04	N	A-4	7.593 g/500	50	0.001	-0.85	<1 mg/kg
4442	9683.04	N	A-16	6.670 g/500	50	0.001	-0.85	<1
4442	9684.04	N	A-16	6.493 g/500	50	0.000	-1.0	<1
4442	9685.04	N	A-16	6.650 g/500	50	0.010	0.70	<1
4442	9686.04	N	A-16	6.093 g/500	50	0.015	1.56	<1
4442	9687.04	N	A-16	6.182 g/500	50	0.020	2.42	<1
4442	9688.04	N	A-16	6.080 g/500	50	0.000	-1.0	<1 mg/kg
4442	9688.04	SPIKE Return	A-16	5.4 STD② + 3 g/500 (7.1100 g/kg)	50	0.252	43.28	89.9% rec (6.486 mg/kg)
D1	SPIKE			5ml STD② / 500	50	0.258	43.45	90.2% rec ✓
4452	9702.01	Y	A-12	500	50	0.029	3.975	<0.02 mg/L
4465	9748.04	Y	A-30	6.327 g/500	50	0.000	-1.0	<1 mg/kg
4465	9749.04	Y	A-30	6.179 g/500	50	0.003	-0.5	
4465	9750.04	Y	A-30	6.456 g/500	50	0.001	-0.85	
4465	9751.04	Y	A-30	6.141 g/500	50	0.004	-0.33	
4465	9752.04	Y	A-30	6.708 g/500	50	0.015	1.56	
4465	9753.04	Y	A-30	6.765 g/500	50	0.008	0.36	
4465	9754.04	Y	A-30	6.140 g/500	50	0.016	1.73	
4465	9755.04	Y	A-30	6.007 g/500	50	0.010	0.70	
4465	9755.04	REP	A-30	6.090 g/500	50	0.010	0.70	<1 mg/kg 0.0 RPD

Wastewater initialed 12/10/86 JN

To Page No. ____

Witnessed & Understood by me: | Date | Recorded by | Date 256

Dead Creek

All Results expressed in mg/kg (dry wt basis)

Job # 4432	Wet Wt	% Sol.	G/200mL	Ag	Al	Ba	Be	Cd	Co	Cr	Cu	Fe	Mn	Ni	Sb	Bi	Zn		Dry Wt	Hg
1.0401	1.02	52.5	0.536	10.4	4800.	410.	<1.9	21.5	6.62	61.6	8741.	16364	197.	56.2	<22.4	23.0	3313		0.161	0.73
2.0401	1.04	36.9	0.384	11.1	6375.	1110.	<2.6	35.6	9.24	153.	6698.	19966.	153.	502.	<31.2	27.3	6646		0.142	1.30
3.0401	1.02	65.9	0.672	<3.0	6560.	156.	<1.5	1.51	7.67	14.7	167.	11146.	100.	356	<17.9	18.7	868		0.242	0.13
4.0401	1.00	57.5	0.575	<3.5	2426.	131.	<1.7	11.3	7.18	37.1	1270.	26024.	96.9	258	<20.9	<17.4	872		0.201	0.56
5.0401	1.02	63.2	0.645	<3.1	7509.	196.	<1.6	7.76	5.02	53.3	1783.	14381.	139	309	<18.6	18.9	1011		0.245	0.14
6.0401	1.07	49.0	0.524	13.7	5376.	467.	<1.9	24.2	6.28	79.4	8645	16300	218	82.0	<22.9	24.5	3415		0.189	0.90
57.0401	1.09	46.7	0.509	15.4	9754.	17343	<2.0	30.1	10.6	118	15312	58212	82.3	1518	<23.6	48.1	11892		0.199	1.65
58.0401	1.01	57.9	0.585	<3.4	17863.	3115	<1.7	8.23	6.92	113	2607	21265	70.5	867	<20.5	25.0	~~6615~~	<6614	0.228	0.89
59.0401	1.03	43.1	0.444	<4.5	12633	376.	<2.3	17.3	7.53	409	580	18426	177	116.	<27.0	32.5	1366		0.160	0.71
60.0401	1.02	45.4	0.463	<4.3	7533	570	<2.2	34.0	10.0	60.3	5911	18000	95.2	838	<25.9	22.0	15633		0.153	0.95
61.0401	1.08	37.0	0.400	<5.0	8448.	1703.	<2.5	26.6	6.55	53.6	6642	35815	161	1293	<30.0	27.0	6880		0.136	1.64
62.0401	1.04	61.1	0.635	<3.1	12658.	1011.	<1.6	42.0	7.21	67.9	2438	50913	151	748	<18.9	36.3	6433		0.229	2.81
63.0401	1.03	47.9	0.493	<4.1	11251.	239.	<2.0	11.9	5.24	32.6	379	22755	190	174.	<24.3	36.8	1006		0.173	0.79
64.0401	1.05	64.3	0.675	<3.0	12483.	622.	<1.5	41.9	12.0	48.1	1626	40163	273	665	<17.8	32.2	6588		0.236	0.89
65.0401	1.08	25.5	0.275	<7.3	6397.	214.	<3.6	22.9	<7.27	34.3	1322	31342	178	537	<43.6	<36.4	2384		0.104	0.34
66.0401	1.01	66.9	0.676	<3.0	5871.	199.	<1.5	5.58	6.36	13.1	247		191	236.	<17.8	17.4	917		0.223	0.187
67.0401	1.04	78.7	0.818	<2.5	11841.	362	<1.2	2.50	5.85	14.8	350	16626	412	17.6	<14.7	26.7	197		0.286	<0.07
																		R	0.294	<0.07
																		RS	0.303	0.34
																				0.33
																				-103% R

3 4442

Deads Creek

	Wet Wt.	% Solids	Dry wt / 200ml	Ag	Al	Ba	Be	Cd	Co	Cu	Fe	Mn	Ni	Sb	V	Zn	Cr	Hg (mg)	dry wt g	Hg Conc. (mg/kg)
683.0401	1.06	80.3	0.851	<2.4	10541	277	<1.2	2.12	5.40	31.2	15716		19.2	<14.1	23.7	172	13	<0.02	.299	<0.05
683.04 R	—	80.3		—	—	—	—	—	—	—	—	—	—	—	—	—		<0.02	.289	<0.08
683.04 RS	—	80.3		—	—	—	—	—	—	—	—	—	—	—	—	—		0.182	.299	0.434
684.0401	1.06	71.1	0.754	6.0	8568	430	<1.3	17.9	8.87	2622	24954	123	765	<15.9	24.0	1590	34	.699	.249	108% 2.81
685.0401	1.02	62.9	0.642	25.9	6724	287	<1.6	25.4	3.25	4632	37352	69	310	<18.7	20.0	1513	102	.845	.208	4.06
686.0401 Second Dil.	1.01	65.7	0.664	22.7	8310 (8763)	287	<1.5	22.5	<3.01	3128	36099	66	255 (234)	<18.1	22.7	1227 (1344)	121	1.18	.210	5.62
687.0401	1.05	55.0	0.576	33.1	7211 (7740)	432	<1.7	30.6	26.6	11396 (10232)	36592	296	559	<20.8	25.2	3422	206	0.643	.214	3.00
688.0401	1.00	64.2	0.642	13.4	9176	328	<1.6	16.7	10.8	10279	21861	153	307	<18.7	21.9	2745	75	0.296	.250	1.18
688.0401 R	1.04	64.2	0.655	13.3	10246 (10794)	365	<1.5	19.2	11.8	25462	25366	165 (179)	418	<18.3	24.3	3165	84	—	—	—
688.0401 RS	1.08	64.2	0.693	27.9	10756	877	15.0	33.3	156.5	11127	24440	313	525	97.0	168.7	3065	136	—	—	—
Spike Conc.			~~70%~~	(14.4)	—	(577)	(14.3)	(14.4)	(144)	(72.)	—	(144)	(144)	(144)	(144)	(144)	(58)			
% Recovery				101%	—	95%	105%	115%	101%	—	—	111%		(67%)	102%	—				

DEAD CREEK Results expressed in mg/kg on dry wt basis)

	Pb	As	Se	Tl	Sn
JOB 4432					
9651.0401	853	13.7	3.3	<3.6	31.5
9652.0401	931	20.0	4.1	<5.3	27.8
9653.0401 HGA Det. →	26	3.5	<1.5	<3.0	<12.1
9654.0401	64.8	12.1	<1.6	<3.3	22.6
9655.0401	71.2	16.4	<1.5	<2.9	<11.6
9656.0401	983	15.5	4.4	<3.7	<15.0
9657.0401	1465	20.9	<2.0	<4.0	<15.9
9658.0401	330	12.9	<1.6	<3.3	<13.1
9659.0401	467	5.1	<2.1	<4.3	<17.0
9660.0401	593	9.0	<2.1	<4.2	<17.0
9661.0401	975	32.9	<2.7	<5.3	<21.4
9662.0401	661	30.3	2.5	<3.2	<13.0
9663.0401	146	3.2	<2.0	<4.1	<16.2
9664.0401	480	7.8	<1.5	<3.0	<12.0
9665.0401	309	4.7	<3.6	<7.2	<29.[illegible]
9666.0401	43.8	5.1	<1.5	<2.9	<11.7
9667.0401	47.0	5.6	<1.2	<2.3	<4.3
JOB 4442					
9683.0401	30.4	5.2	<1.1	<2.3	<9.1
9684.0401	225	18.2	<1.4	<2.8	14.4
9685.0401	1904	30.1	3.3	<3.0	76.1
9686.0401	2029	76.4	<7.5	<3.0	412
9687.0401	1599	21.0	3.0	<3.3	57.1
9688.0401	910	11.5	<1.5	<3.0	<12.1
9688.0401 R	956	11.8	<1.5	<2.9	11.9 ~~12.5~~
9688.0401 RS	N/A 802	18.4	3.9	16.4	<12.3
	(1.6)	(12.3)	(3.1)	(15.4)	N/A
% Recovery	N/A	[illegible]	[illegible]	[illegible]	N/A

Project No._____

Book No._____ TITLE _____

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:! ESTIONS (CONT'D)

d By:_____

D No.	Custody Seal Intact Yes	No	Secure Storage Area Received From	AMOUNT OF SAMPLE	TYPE OF DIGESTION	FINAL VOLUME	Dry Weight
32/							
651.04	(SEE ABOVE)		(SEE ABOVE)	1.06 gm	O2	200 ml.	0.557
652.04				1.02 gm	O2	200 ml.	0.376
653.04				1.00 gm	O2	200 ml.	0.659
654.04				1.06 gm	O2	200 ml.	0.610
655.04				1.09 gm	O2	200 ml.	0.684
656.04				1.09 gm	O2	200 ml.	0.554
657.04				1.08 gm	O2	200 ml.	0.501
658.04				1.05 gm	O2	200 ml.	0.608
659.04				1.09 gm	O2	200 ml.	0.470
660.04				1.04 gm	O2	200 ml.	0.472
661.04				1.01 gm	O2	200 ml.	0.371
662.04				1.01 gm	O2	200 ml.	0.617
663.04				1.03 gm	O2	200 ml.	0.493
664.04				1.04 gm	O2	200 ml.	0.664
665.04				1.09 gm	O2	200 ml.	0.278
666.04				1.02 gm	O2	200 ml.	0.682
667.04				1.09 gm	O2	200 ml	BLK ~~0.558~~ 0.558
142/							
683.04	(SEE ABOVE)		(SEE ABOVE)	1.09 gm	O2	200 ml.	0.575
684.04				1.00 gm	O2	200 ml	0.711
685.04				1.05 gm	O2	200 ml.	0.660
686.04				1.02 gm	O2	200 ml.	0.670
687.04				1.09 gm	O2	200 ml.	0.680
688.04				1.03 gm	O2	200 ml.	0.661
689.04 (R1)				1.06 gm	O2	200 ml.	0.681
688.04 (R.S.)				1.01 gm	O2	200 ml.	0.648
Blank 912	-			—0—	O2	200 ml	

Project No.
Book No.

Page No.
Performed: DIGESTIONS
Received: NOVEMBER 10, 1986
Performed By:

(C.L.P. - SOILS FINAL VOLUME = 200 ml.)

ID No.	Custody Seal Intact Yes	No	Secure Storage Area Received From	AMOUNT OF SAMPLE	TYPE OF DIGESTION	FINAL VOLUME	Dry Weight
9651.04	YES		A-4	1.02 gm	01	200 ml.	0.536
9652.04	YES		A-4	1.04 gm	01	200 ml.	0.384
9653.04	YES		A-4	1.02 gm	01	200 ml.	0.672
9654.04	YES		A-4	1.00 gm	01	200 ml.	0.575
9655.04	YES		A-4	1.02 gm	01	200 ml.	0.645
9656.04	YES		A-4	1.07 gm	01	200 ml.	0.524
9657.04	YES		A-4	1.09 gm.	01	200 ml.	0.509
9658.04	YES		A-4	1.01 gm.	01	200 ml.	0.585
9659.04	YES		A-4	1.03 gm	01	200 ml.	0.444
9660.04	YES		A-4	1.02 gm	01	200 ml.	0.463
9661.04	YES		A-4	1.08 gm	01	200 ml.	0.400
9662.04	YES		A-4	1.04 gm	01	200 ml.	0.635
9663.04	YES		A-4	1.03 gm	01	200 ml	0.493
9664.04	YES		A-4	1.05 gm	01	200 ml.	0.675
9665.04	YES		A-4	1.08 gm	01	200 ml.	0.272
9666.04	YES		A-4	1.01 gm	01	200 ml.	0.676
9667.04	YES		A-4	1.04 gm	01	200 ml.	0.818
9683.04	YES		A	1.06 gm	01	200 ml.	0.851
9684.04	YES		A	1.06 gm	01	200 ml.	0.754
9685.04	YES		A	1.02 gm	01	200 ml.	0.642
9686.04	YES		A	1.01 gm	01	200 ml.	0.664
9687.04	YES		A	1.05 gm	01	200 ml.	0.578
9688.04	YES		A	1.02 gm	01	200 ml.	0.642
9688.04 (RI)	YES		A	1.04 gm	01	200 ml.	0.668
9688.04 (RS)	YES		A	1.03 gm	01	200 ml.	0.693
Blank 911	-			—0—	01	200 ml.	