SDMS US EPA REGION V -1

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

L16302 00005 158899
ST. CLAIR
SAUGET - SAUGET
LAB DATA

SURFACE SOIL
ORGANICS
(RC Extracts)

SUBSURFACE SOIL ORGANICS
(RE-EXTRACTS)

CASE NARRATIVE

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

July 20, 1987

E & E Job # U-4835 U-4928
U-4863 U-4971

Sample # DC-GB-34 DC-I7-45 DC-03-61
DC-G4-35 DC-I7-46
DC-G4-36 DC-I7-47
DC-IB-44 DC-GB-68

CASE NARRATIVE

Enclosed are the semi-volatile and pesticide/PCB results for nine samples which were re-extracted and re-analyzed. These samples were orginally analyzed using 3 grams for extraction. Since little or no contaminants were observed, these samples were re-extracted using 30 grams. As agreed upon at the January 30, 1987 meeting between E & E Inc. and the Illinois EPA these re-extractions are hold time exempt.

All results in this pack are reported on a wet weight (as received) basis. Percent moisture information has been reported on the data sheets.

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

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

Andrew P. Clifton, Director
Analytical Services Center

recycled paper

SURROGATE PERCENT RECOVERY SUMMARY

...RY SUMM...

Case No. 4835, 4823, 4928, 4971 Contract Laboratory Ecology & Environment Inc. Contract No. IL-3140

Low X Medium ____

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-GB-34				98	93	85			65	61	52	84
DC-G4-35				84	76	99			90	66	45	INT.
DC-G4-36				88	80	90			82	61	44	92
DC-IB-44				94	97	95			105	88	99	76
DC-I7-45				81	67	93			134*	78	83	INT
DC-I7-46				70	54	122			94	83	63	118
DC-I7-47				81	59	103			112	90	86	107
D2304				110	109	96			79	66	44	107
DC-I7-46MS				103	92	112			103	91	97	108
DC-I7-46MSD				92	81	106			100	68	109	132
D2456				89	91	103			92	84	62	115
DC-GB-68				85	109	134			66	21*	34	120
DC-GB-68MS				94	99	111			73	47	35	93
DC-GB-68MSD				94	104	122			80	64	43	113
DC-03-61				75	84	98			64	42	64	DL
B3754				62	41	86			50	24*	16*	115

Not Required

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

**ADVISORY LIMITS ONLY

Volatiles: – out of – ; outside of QC limits

Semi-Volatiles: 4 out of 96 ; outside of QC limits

Pesticides: 0 out of 13 ; outside of QC limits

7/85

Comments: B3754 - BLANK EXTRACTED 4/19
D2456 - BLANK EXTRACTED 4/2
D2304 - BLANK EXTRACTED 4/1

INT = INTERFERENCE
DL = DILUTED OUT

FORM II

MS/MSD SUMMARY

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. U-4835,4863,4928,4971 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-Dichloroethene								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-I7-46	1,2,4-Trichlorobenzene	3300	0	1600	48	1300	39	21	23	38-107
	Acenaphthene	3300	0	3100	94	2900	88	6.7	19	31-137
	2,4 Dinitrotoluene	3300	0	3500	106*	3500	106*	0	47	28-89
	Pyrene	3300	0	3300	100	3100	94	6.2	36	35-142
	N-Nitrosodi-n-Propylamine	3300	0	2600	79	2500	76	3.9	38	41-126
	1,4-Dichlorobenzene	3300	0	1000	30	650	20*	42*	27	28-104
ACID SMO SAMPLE NO. DC-I7-46	Pentachlorophenol	6600	0	3200	48	5000	76	44	47	17-109
	Phenol	6600	0	6300	95*	6000	91*	4.9	35	26-90
	2-Chlorophenol	6600	0	6000	91	5600	85	6.9	50	25-102
	4-Chloro-3-Methylphenol	6600	0	6400	97	6700	102	4.6	33	26-103
	4-Nitrophenol	6600	0	4100	62	4600	70	11	50	11-114
PEST SMO SAMPLE NO. DC-I7-46	Lindane	33	0	26	79	29	88	11	50	46-127
	Heptachlor	33	0	INT	-	INT	-	-	31	35-130
	Aldrin	33	0	28	85	30	91	6.9	43	34-132
	Dieldrin	83	0	64	77	76	92	17	38	31-134
	Endrin	83	0	70	84	80	96	13	45	42-139
	4,4'-DDT	83	0	72	87	93	112	25	50	23-134

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD:
VOAs ____ out of ____ : outside QC limits
B/N 1 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 3 out of 12 : outside QC limits
ACID 2 out of 10 : outside QC limits
PEST 0 out of 12 : outside QC limits

Comments: Heptachlor interference

7/85

FORM III

MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. U-4835,4863,4928,4971 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-GB-68	1,2,4-Trichlorobenzene	3300		2300	70	2500	76	8.3	23	38-107
	Acenaphthene	3300		3200	97	3200	97	0	19	31-137
	2,4 Dinitrotoluene	3300		2300	70	2500	76	8.3	47	28-89
	Pyrene	3300		3800	115	4200	127	10	36	35-142
	N-Nitrosodi-n-Propylamine	3300		2700	82	2800	85	3.6	38	41-126
	1,4-Dichlorobenzene	3300		1800	54	1900	58	5.4	27	28-104
ACID SMO SAMPLE NO. DC-GB-68	Pentachlorophenol	6600		1500	23	2100	32	33	47	17-109
	Phenol	6600		5800	88	6800	103*	16	35	26-90
	2-Chlorophenol	6600		6000	91	6500	98	8.0	50	25-102
	4-Chloro-3-Methylphenol	6600		6000	91	6200	94	3.3	33	26-103
	4-Nitrophenol	6600		3100	47	3200	48	3.2	50	11-114
PEST SMO SAMPLE NO. DC-GB-68	Lindane	27	0	21	78	27	100	25	50	46-127
	Heptachlor	27	0	INF	—	INF	—	—	31	35-130
	Aldrin	27	0	15	56	18	67	18	43	34-132
	Dieldrin	67	0	57	85	68	101	18	38	31-134
	Endrin	67	0	58	87	70	104	19	45	42-139
	4,4'-DDT	67	0	INF	—	INF	—	—	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 4 ; outside QC limits

RECOVERY:
VOAs ____ out of ____ ; outside QC limits
B/N 0 out of 12 ; outside QC limits
ACID 1 out of 10 ; outside QC limits
PEST 0 out of 8 ; outside QC limits

Comments: INF = Interference due to co-elution of Non-HSL compounds

STANDARDS DATA

INITIAL CALIBRATION DATA

Initial Calibration Data
HSL Compounds

: No: U-4835, 4863, 4928, 4971 Instrument ID: HP-5970D

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

tract 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
NOL-D5	(SURR) 99	1.45905	1.41913	1.41915	1.33738	1.36821	1.40059	3.415		
TAFLUOROPHENOL	184	-	-	-	-	-	-	-		
LUOROPHENOL	(SURR) 112	.92276	.93267	.97441	.89171	.88493	.92130	3.895		
ENOL	94	1.27336	1.40484	1.36645	1.32617	1.33444	1.34105	3.646	*	
-METHYL PHENOL	108	.94183	1.07660	1.05407	1.08273	1.00266	1.03158	5.743		
-CHLOROPHENOL	128	1.07483	1.16854	1.16604	1.17284	1.10940	1.13833	3.865		
-METHYL PHENOL	108	.96587	1.08143	1.13309	1.12036	1.07834	1.07582	6.129		
''ITROPHENOL	139	.17264	.20916	.21365	.21306	.20457	.20262	8.462	*	
-DIMETHYLPHENOL	122	.26750	.29889	.30065	.29911	.27965	.28916	5.145		
ZOIC ACID	105	-	.15595	.20240	.22265	.23506	.20401	17.036		
-DICHLOROPHENOL	162	.28939	.33168	.32894	.32204	.30635	.31568	5.601	*	
-LORO-3-METHYLPHENOL	107	.29459	.33844	.35108	.35646	.33826	.33577	7.252	*	
,6-TRICHLOROPHENOL	196	.42290	.47918	.46473	.45782	.45268	.45546	4.555	*	
,5-TRICHLOROPHENOL	196	-	.49037	.49512	.49589	.47584	.48930	1.901		
,6-TRIBROMOPHENOL	(SURR) 330	.29588	.32928	.34498	.31993	.33911	.32584	5.917		
-DINITROPHENOL	184	-	.13902	.16374	.19064	.18943	.17071	14.351		**
ITROPHENOL	139	-	.28898	.31865	.33700	.34792	.32314	7.977		**
-DINITRO-2-METHYLPHENOL	198	-	.10474	.11556	.12900	.13233	.12041	10.560		
TACHLOROPHENOL	266	-	.17917	.18989	.19137	.19048	.18773	3.054	*	

Response Factor (Subscript is amount in UG/L)

- Average Response Factor

D - Percent Relative Standard Deviation

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

Initial Calibration Data
HSL Compounds

Case No: U-4835, 4863, 4928, 4971 Instrument ID: HP-5970D

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

Contract No: IL-3140

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

Compound		RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RF}$	% RSD	CCC	SPCC
Laboratory ID:		>D0965	>D0966	>D0967	>D0968	>D0969				
ANILINE	93	1.44667	1.40722	1.59651	1.68331	1.56844	1.54043	7.321		
BIS(-2-CHLOROETHYL)ETHER	93	1.24523	1.09828	1.23677	1.16323	1.17789	1.18428	5.058		
1,3-DICHLOROBENZENE	146	1.57666	1.39985	1.51213	1.50440	1.38815	1.47624	5.436		
1,4-DICHLOROBENZENE	146	1.61777	1.38930	1.48504	1.45121	1.40035	1.46874	6.256	*	
BENZYL ALCOHOL	79	1.01010	1.00872	1.21875	1.21807	1.21800	1.13473	10.082		
1,2-DICHLOROBENZENE	146	1.63938	1.36507	1.53750	1.47276	1.44493	1.49193	6.908		
BIS(2-CHLOROISOPROPYL)ETHER	45	2.68736	2.47650	2.77020	2.69646	2.77634	2.68137	4.535		
N-NITROSO-DI-N-PROPYLAMINE	70	1.12218	1.08234	1.21987	1.19548	1.28596	1.18117	6.816		**
HEXACHLOROETHANE	117	.74389	.66875	.73696	.70875	.68371	.70841	4.605		
NITROBENZENE-D5 (SURR)	82	.35564	.33927	.38027	.40789	.38878	.37437	7.253		
NITROBENZENE	77	.39592	.35266	.39754	.39299	.35937	.37969	5.744		
ISOPHORONE	82	.79161	.70915	.78705	.75762	.73425	.75594	4.631		
BIS(-2-CHLOROETHOXY)METHANE	93	.40059	.38692	.42170	.42353	.43054	.41266	4.415		
1,2,4-TRICHLOROBENZENE	180	.41095	.34484	.39226	.39897	.37508	.38442	6.671		
NAPHTHALENE	128	1.07749	.91373	.97630	.97339	.89249	.96668	7.446		
4-CHLOROANILINE	127	.33401	.32798	.42540	.44310	.35932	.37796	14.044		
HEXACHLOROBUTADIENE	225	.29443	.24392	.26045	.25805	.23855	.25908	8.420	*	
2-METHYLNAPHTHALENE	142	.67945	.60785	.66493	.68192	.59005	.64484	6.646		
HEXACHLOROCYCLOPENTADIENE	237	.56264	.50376	.58602	.60451	.58378	.56814	6.852		**
2-FLUOROBIPHENYL (SURR)	172	1.70967	1.49275	1.58507	1.65769	1.62088	1.61321	5.059		
2-CHLORONAPHTHALENE	162	1.47542	1.23459	1.36421	1.37148	1.41834	1.37281	6.493		
2-NITROANILINE	65	.43757	.43867	.51133	.51859	.47610	.47645	8.082		
DIMETHYL PHTHALATE	163	1.83005	1.68051	1.71649	1.69378	1.67688	1.71954	3.704		
4-NITROANILINE	138	.23949	.23631	.27642	.27327	.26589	.25828	7.365		
DIBENZOFURAN	168	2.04488	1.83571	1.94866	1.91782	1.79656	1.90873	5.115		
ACENAPHTHYLENE	152	2.24178	1.99625	2.09922	2.09094	2.07505	2.10065	4.229		
FLUORENE	166	1.55490	1.33626	1.34395	1.28944	1.20896	1.34670	9.518		
3-NITROANILINE	138	-	.04883	.11452	.11792	.08856	.09246	34.506		
ACENAPHTHENE	153	1.52777	1.33286	1.39452	1.37214	1.26556	1.37857	7.016	*	
2,4-DINITROTOLUENE	165	.35967	.32328	.34179	.32754	.30831	.33212	5.867		
2,6-DINITROTOLUENE	165	.38599	.35678	.37953	.36730	.36597	.37112	3.126		
DIETHYLPHTHALATE	149	1.88063	1.62618	1.53368	1.45917	1.43355	1.58664	11.383		
4-CHLOROPHENYL-PHENYLETHER	204	.78893	.66962	.70193	.69165	.66856	.70414	7.032		
N-NITROSODIPHENYLAMINE	169	.51567	.44734	.53097	.55655	.53802	.51771	8.111	*	
4-BROMOPHENYL-PHENYL ETHER	248	.31338	.30497	.33954	.35732	.35891	.33482	7.406		
CHLOROBENZENE	284	.46739	.39403	.43794	.45768	.43251	.43791	6.473		

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

$\overline{RF}$ - Average Response Factor

Initial Calibration Data
HSL Compounds

Case No: U-4835, 4863, 4928, 4971 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	.98608	.99874	4.387		
DI-N-BUTYLPHTHALATE	149	1.16959	.91435	.95835	.92928	.88461	.97124	11.741		
FLUORANTHENE	202	.74009	.58463	.63445	.60617	.54197	.62146	11.974	*	
BENZIDINE		-	.65247	-	-	-	.65247	-		
PYRENE	202	2.67187	2.75714	2.57294	2.60959	2.82056	2.68642	3.814		
TERPHENYL-D14 (SURR)	244	1.42937	1.47810	1.43384	1.50928	1.55799	1.48172	3.638		
BUTYLBENZYLPHTHALATE	149	.62104	.62940	.71297	.68630	.76414	.68277	8.728		
3,3'DICHLOROBENZIDINE	252	.08557	.07185	.16233	.19359	.14980	.13263	39.182		
BENZO(A)ANTHRACENE	228	.79361	.77498	.97287	1.00315	1.03158	.91524	13.276		
BIS(2-ETHYLHEXYL)PHTHALATE	149	.78298	.70108	.85062	.83155	.91270	.81579	9.708		
CHRYSENE	228	1.34326	1.12613	1.17809	1.12675	1.18262	1.19137	7.479		
DI-N-OCTYL PHTHALATE	149	1.37470	1.35508	1.83002	1.65900	1.98983	1.64173	16.968	*	
BENZO(B)FLUORANTHENE	252	.92969	.97296	1.14091	1.25304	1.37734	1.13479	16.551		
BENZO(K)FLUORANTHENE	252	1.68215	1.48612	1.68304	1.46335	1.43849	1.55063	7.844		
BENZO(A)PYRENE	252	1.05697	.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	1.10886	8.264		

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

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

Initial Calibration Data
HSL Compounds

se No: U-4835,4863,4928,4971 Instrument ID: HP-5970

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

ıtract No: IL-3140

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

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

Response Factor (Subscript is amount in UG/L)

- Average Response Factor

D - Percent Relative Standard Deviation

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

Initial Calibration Data
HSL Compounds

se No: U-4835, 4863, 4928, 4971 Instrument ID: HP-5970

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

ntract No: IL-3140

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

Laboratory ID:		>B2318	>B2317	>B2320	>B2321	>B2322				
		RF	RF	RF	RF	RF				
Compound		20.00	50.00	80.00	120.00	160.00	$\overline{RF}$	% RSD	CCC	SPCC
ENANTHRENE	178	1.04931	1.01512	.98050	.95298	.88999	.97758	6.231		
THRACENE	178	1.12091	1.02625	1.04493	.93788	.90233	1.00646	8.678		
)I-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		
'TYLBENZYLPHTHALATE	149	.65885	.67321	.68349	.67508	.67739	.67361	1.353		
3'DICHLOROBENZIDINE	252	.27363	.29497	.31038	.35282	.36231	.31882	11.871		
NZO(A)ANTHRACENE	228	1.11295	1.16545	1.14131	1.09826	1.08387	1.12037	2.943		
S(2-ETHYLHEXYL)PHTHALATE	149	.89359	.90143	.88579	.90223	.92113	.90083	1.461		
RYSENE	228	1.21768	1.19377	1.18843	.98625	1.04715	1.12666	9.164		
-N-OCTYL PHTHALATE	149	1.66258	1.75298	1.71967	1.71622	1.68266	1.70682	2.056	*	
NZO(B)FLUORANTHENE	252	1.07961	1.23626	1.14532	1.32040	1.29211	1.21474	8.303		
NZO(K)FLUORANTHENE	252	1.41040	1.33474	1.35790	1.08149	1.00129	1.23716	14.793		
NZO(A)PYRENE	252	1.10805	1.15079	1.13626	1.11791	1.09145	1.12089	2.078	*	
DENO(1,2,3-CD)PYRENE	276	.91950	1.10814	1.04174	1.09403	1.04427	1.04154	7.135		
BENZ(A,H)ANTHRACENE	278	.98398	1.11071	1.10486	1.07317	1.06502	1.06755	4.748		
NZO(G,H,I)PERYLENE	276	1.10921	1.20556	1.17094	1.16451	1.14309	1.15866	3.073		

Response Factor (Subscript is amount in UG/L)

- Average Response Factor

SD - Percent Relative Standard Deviation

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

Initial Calibration Data
HSL Compounds

e No: 4-4835, 4863, 4928, 4971 Instrument ID: HP-5970

tr r: E & E, INC. Calibration Date: 7-30-86

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

esponse Factor (Subscript is amount in UG/L)

- Average Response Factor

) - Percent Relative Standard Deviation

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

CONTINUING CALIBRATION DATA

Continuing Calibration Check
HSL Compounds

Case No: U-4835, 4863, 4928, 4971

Calibration Date: 04/16/87

Contractor: E & E, INC.

Time: 13:16

Contract No: IL-3140

Laboratory ID: >D2294

Instrument ID: HP-5970D

Initial Calibration Date: 6/19/86

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

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
PHENOL-D5 (SURR)	99	1.40059	1.61573	15.36		
PENTAFLUOROPHENOL	184	-	-	-		
2-FLUOROPHENOL (SURR)	112	.92130	1.28520	39.50		
PHENOL	94	1.34105	1.56923	17.02	*	
2-METHYL PHENOL	108	1.03158	1.16102	12.55		
2-CHLOROPHENOL	128	1.13833	1.21226	6.49		
4-METHYL PHENOL	108	1.07582	1.14668	6.59		
2-NITROPHENOL	139	.20262	.19072	5.87	*	
2,4-DIMETHYLPHENOL	122	.28916	.27528	4.80		
BENZOIC ACID	105	.20401	.14847	27.22		
2,4-DICHLOROPHENOL	162	.31568	.28068	11.09	*	
4-CHLORO-3-METHYLPHENOL	107	.33577	.27364	18.50	*	
2,4,6-TRICHLOROPHENOL	196	.45546	.40216	11.70	*	
2,4,5-TRICHLOROPHENOL	196	.48930	.37982	22.38		
2,4,6-TRIBROMOPHENOL(SURR)	330	.32584	.26357	19.11		
2,4-DINITROPHENOL	184	.17071	.10799	36.74		**
4-NITROPHENOL	139	.32314	.12802	60.38		**
4,6-DINITRO-2-METHYLPHENOL	198	.12041	.12391	2.91		
PENTACHLOROPHENOL	266	.18773	.15730	16.21	*	

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

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

%Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

Case No: 11-4835, 4863, 4928, 4971

Calibration Date: 04/16/87

Contractor: E & E, INC.

Time: 16:21

Contract No: TL-3140

Laboratory ID: >D2297

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	1.39203	9.63		
BIS(-2-CHLOROETHYL)ETHER	93	1.18428	1.26342	6.68		
1,3-DICHLOROBENZENE	146	1.47624	1.41222	4.34		
1,4-DICHLOROBENZENE	146	1.46874	1.47187	.21	*	
BENZYL ALCOHOL	79	1.13473	1.30094	14.65		
1,2-DICHLOROBENZENE	146	1.49193	1.45794	2.28		
BIS(2-CHLOROISOPROPYL)ETHER	45	2.68137	3.54404	32.17		
N-NITROSO-DI-N-PROPYLAMINE	70	1.18117	1.36307	15.40		**
HEXACHLOROETHANE	117	.70841	.71942	1.55		
NITROBENZENE-D5 (SURR)	82	.37437	.40860	9.14		
NITROBENZENE	77	.37969	.43232	13.86		
ISOPHORONE	82	.75594	.83735	10.77		
BIS(-2-CHLOROETHOXY)METHANE	93	.41266	.50451	22.26		
1,2,4-TRICHLOROBENZENE	180	.38442	.39057	1.60		
NAPHTHALENE	128	.96668	1.06243	9.91		
4-CHLOROANILINE	127	.37796	.38923	2.98		
HEXACHLOROBUTADIENE	225	.25908	.26900	3.83	*	
2-METHYLNAPHTHALENE	142	.64484	.68518	6.26		
HEXACHLOROCYCLOPENTADIENE	237	.56814	.38564	32.12		**
2-FLUOROBIPHENYL (SURR)	172	1.61321	1.32007	18.17		
2-CHLORONAPHTHALENE	162	1.37281	1.13499	17.32		
2-NITROANILINE	65	.47645	.42138	11.56		
DIMETHYL PHTHALATE	163	1.71954	1.36450	20.65		
4-NITROANILINE	138	.25828	.24031	6.96		
DIBENZOFURAN	168	1.90873	1.53118	19.78		
ACENAPHTHYLENE	152	2.10065	1.66870	20.56		
FLUORENE	166	1.34670	1.11394	17.28		
3-NITROANILINE	138	.09246	.12401	34.12		
ACENAPHTHENE	153	1.37857	1.07728	21.86	*	
2,4-DINITROTOLUENE	165	.33212	.29848	10.13		
2,6-DINITROTOLUENE	165	.37112	.32256	13.08		
DIETHYLPHTHALATE	149	1.58664	1.52400	3.95		
4-CHLOROPHENYL-PHENYLETHER	204	.70414	.58563	16.83		
N-NITROSODIPHENYLAMINE	169	.51771	.48509	6.30	*	
4-BROMOPHENYL-PHENYL ETHER	248	.33482	.28899	13.69		
HEXACHLOROBENZENE	284	.43791	.32065	26.78		

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: U-4835,4863,4928,4971

Calibration Date: 04/16/87

Contractor: E & E, INC.

Time: 16:21

Contract No: IL-3140

Laboratory ID: >D2297

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	.94279	7.12		
ANTHRACENE	178	.99874	.93088	6.80		
DI-N-BUTYLPHTHALATE	149	.97124	1.04083	7.17		
FLUORANTHENE	202	.62146	.75965	22.24	*	
BENZIDINE		.65247	-	-		
PYRENE	202	2.68642	1.70664	36.47		
TERPHENYL-D14 (SURR)	244	1.48172	.98178	33.74		
BUTYLBENZYLPHTHALATE	149	.68277	.60940	10.75		
,3'DICHLOROBENZIDINE	252	.13263	.13941	5.11		
BENZO(A)ANTHRACENE	228	.91524	1.00597	9.91		
BIS(2-ETHYLHEXYL)PHTHALATE	149	.81579	.70884	13.11		
CHRYSENE	228	1.19137	.97266	18.36		
DI-N-OCTYL PHTHALATE	149	1.64173	1.54466	5.91	*	
BENZO(B)FLUORANTHENE	252	1.13479	1.30605	15.09		
BENZO(K)FLUORANTHENE	252	1.55063	1.14417	26.21		
BENZO(A)PYRENE	252	1.10877	1.04436	5.81	*	
INDENO(1,2,3-CD)PYRENE	276	.99032	.93684	5.40		
DIBENZ(A,H)ANTHRACENE	278	.81159	.86485	6.56		
BENZO(G,H,I)PERYLENE	276	1.10886	.97235	12.31		

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

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

Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

Case No: U-4835,4863,4928,4971

Calibration Date: 05/07/87

Contractor: E & E, INC.

Time: 11:58

Contract No: II-3140

Laboratory ID: >D2454

Instrument ID: HP-5970D

Initial Calibration Date: 6/19/86

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

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
PHENOL-D5	(SURR) 99	1.40059	1.14263	18.42		
PENTAFLUOROPHENOL	184	-	-	-		
2-FLUOROPHENOL	(SURR) 112	.92130	1.16802	26.78		
PHENOL	94	1.34105	1.31587	1.88	*	
2-METHYL PHENOL	108	1.03158	1.15391	11.86		
2-CHLOROPHENOL	128	1.13833	1.16909	2.70		
4-METHYL PHENOL	108	1.07582	1.18468	10.12		
2-NITROPHENOL	139	.20262	.21273	4.99	*	
2,4-DIMETHYLPHENOL	122	.28916	.25359	12.30		
BENZOIC ACID	105	.20401	.15258	25.21		
2,4-DICHLOROPHENOL	162	.31568	.30699	2.75	*	
4-CHLORO-3-METHYLPHENOL	107	.33577	.28399	15.42	*	
2,4,6-TRICHLOROPHENOL	196	.45546	.44234	2.88	*	
2,4,5-TRICHLOROPHENOL	196	.48930	.44782	8.48		
2,4,6-TRIBROMOPHENOL	(SURR) 330	.32584	.26377	19.05		
2,4-DINITROPHENOL	184	.17071	.15520	9.09		**
4-NITROPHENOL	139	.32314	.12758	60.52		**
4,6-DINITRO-2-METHYLPHENOL	198	.12041	.14714	22.20		
PENTACHLOROPHENOL	266	.18773	.18306	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-4835,4863,4928,4971 Calibration Date: 05/07/87

Contractor: E & E, INC. Time: 12:55

Contract No: IL-3140 Laboratory ID: >D2455

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	.96891	37.10		
BIS(-2-CHLOROETHYL)ETHER	93	1.18428	1.00957	14.75		
1,3-DICHLOROBENZENE	146	1.47624	1.34949	8.59		
1,4-DICHLOROBENZENE	146	1.46874	1.47359	.33	*	
BENZYL ALCOHOL	79	1.13473	.96131	15.28		
1,2-DICHLOROBENZENE	146	1.49193	1.46665	1.69		
BIS(2-CHLOROISOPROPYL)ETHER	45	2.68137	2.95228	10.10		
N-NITROSO-DI-N-PROPYLAMINE	70	1.18117	1.14082	3.42		**
HEXACHLOROETHANE	117	.70841	.67997	4.01		
NITROBENZENE-D5 (SURR)	82	.37437	.37688	.67		
NITROBENZENE	77	.37969	.39063	2.88		
ISOPHORONE	82	.75594	.78521	3.87		
BIS(-2-CHLOROETHOXY)METHANE	93	.41266	.45862	11.14		
1,2,4-TRICHLOROBENZENE	180	.38442	.44646	16.14		
NAPHTHALENE	128	.96668	1.04167	7.76		
4-CHLOROANILINE	127	.37796	.18596	50.80		
HEXACHLOROBUTADIENE	225	.25908	.22031	14.96	*	
2-METHYLNAPHTHALENE	142	.64484	.67017	3.93		
HEXACHLOROCYCLOPENTADIENE	237	.56814	.43163	24.03		**
2-FLUOROBIPHENYL (SURR)	172	1.61321	1.36719	15.25		
2-CHLORONAPHTHALENE	162	1.37281	1.12872	17.78		
2-NITROANILINE	65	.47645	.34621	27.34		
DIMETHYL PHTHALATE	163	1.71954	1.38927	19.21		
4-NITROANILINE	138	.25828	.19528	24.39		
DIBENZOFURAN	168	1.90873	1.52690	20.00		
ACENAPHTHYLENE	152	2.10065	1.66913	20.54		
FLUORENE	166	1.34670	1.07559	20.13		
3-NITROANILINE	138	.09246	.02397	74.07		
ACENAPHTHENE	153	1.37857	1.08163	21.54	*	
2,4-DINITROTOLUENE	165	.33212	.30195	9.08		
2,6-DINITROTOLUENE	165	.37112	.30962	16.57		
DIETHYLPHTHALATE	149	1.58664	1.24481	21.54		
4-CHLOROPHENYL-PHENYLETHER	204	.70414	.60932	13.47		
N-NITROSODIPHENYLAMINE	169	.51771	.52922	2.22	*	
4-BROMOPHENYL-PHENYL ETHER	248	.33482	.33055	1.28		
HEXACHLOROBENZENE	284	.43791	.39506	9.78		

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

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

Continuing Calibration Check
HSL Compounds

Case No: 11-4835, 4863, 4928, 4971 Calibration Date: 05/07/87

Contractor: E & E, INC. Time: 12:55

Contract No: IL-3140 Laboratory ID: >D2455

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	.95848	5.57		
ANTHRACENE	178	.99874	.93858	6.02		
DI-N-BUTYLPHTHALATE	149	.97124	.99190	2.13		
FLUORANTHENE	202	.62146	.74175	19.36	*	
BENZIDINE		.65247	.26023	60.12		
PYRENE	202	2.68642	1.51073	43.76		
TERPHENYL-D14 (SURR)	244	1.48172	.90782	38.73		
BUTYLBENZYLPHTHALATE	149	.68277	.49374	27.69		
3,3'DICHLOROBENZIDINE	252	.13263	.08464	36.19		
BENZO(A)ANTHRACENE	228	.91524	.98136	7.22		
BIS(2-ETHYLHEXYL)PHTHALATE	149	.81579	.64314	21.16		
CHRYSENE	228	1.19137	.95640	19.72		
DI-N-OCTYL PHTHALATE	149	1.64173	1.39277	15.16	*	
BENZO(B)FLUORANTHENE	252	1.13479	1.13144	.30		
BENZO(K)FLUORANTHENE	252	1.55063	1.13144	27.03		
BENZO(A)PYRENE	252	1.10877	1.07720	2.85	*	
INDENO(1,2,3-CD)PYRENE	276	.99032	.88674	10.46		
DIBENZ(A,H)ANTHRACENE	278	.81159	.88583	9.15		
BENZO(G,H,I)PERYLENE	276	1.10886	1.07750	2.83		

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

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

Continuing Calibration Check
HSL Compounds

e No: U-4835, 4863, 4928, 4971 Calibration Date: 05/18/87

Contractor: E & E, INC. Time: 09:21

Contract No: IL-3140 Laboratory ID: >B3749

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	1.12489	26.16		
BIS(-2-CHLOROETHYL)ETHER	93	1.23992	1.13824	8.20		
1,3-DICHLOROBENZENE	146	1.38276	1.51145	9.31		
1,4-DICHLOROBENZENE	146	1.36777	1.45448	6.34	*	
BENZYL ALCOHOL	79	1.07958	1.13540	5.17		
1,2-DICHLOROBENZENE	146	1.42808	1.47324	3.16		
BIS(2-CHLOROISOPROPYL)ETHER	45	2.97018	2.86317	3.60		
N-NITROSO-DI-N-PROPYLAMINE	70	1.29228	1.24512	3.65		**
HEXACHLOROETHANE	117	.70913	.67571	4.71		
NITROBENZENE-D5 (SURR)	82	.40084	.40737	1.63		
NITROBENZENE	77	.41948	.41074	2.08		
ISOPHORONE	82	.80995	.77865	3.86		
BIS(-2-CHLOROETHOXY)METHANE	93	.45577	.46655	2.37		
1,2,4-TRICHLOROBENZENE	180	.37851	.40389	6.70		
NAPHTHALENE	128	.98472	1.03328	4.93		
4-CHLOROANILINE	127	.39458	.29632	24.90		
HEXACHLOROBUTADIENE	225	.25803	.31046	20.32	*	
2-METHYLNAPHTHALENE	142	.62355	.69458	11.39		
HEXACHLOROCYCLOPENTADIENE	237	.45397	.37280	17.88		**
2-FLUOROBIPHENYL (SURR)	172	1.33061	1.20839	9.19		
2-CHLORONAPHTHALENE	162	1.20816	1.08565	10.14		
2-NITROANILINE	65	.43896	.39122	10.88		
DIMETHYL PHTHALATE	163	1.43709	1.36829	4.79		
4-NITROANILINE	138	.25992	.18517	28.76		
DIBENZOFURAN	168	1.61498	1.50894	6.57		
ACENAPHTHYLENE	152	1.80371	1.61565	10.43		
FLUORENE	166	1.19425	1.16600	2.37		
3-NITROANILINE	138	.15454	.08495	45.03		
ACENAPHTHENE	153	1.18706	1.05071	11.49	*	
2,4-DINITROTOLUENE	165	.38188	.33296	12.81		
2,6-DINITROTOLUENE	165	.35087	.29558	15.76		
DIETHYLPHTHALATE	149	1.39014	1.34301	3.39		
4-CHLOROPHENYL-PHENYLETHER	204	.62534	.63495	1.54		
N-NITROSODIPHENYLAMINE	169	.42524	.43311	1.85	*	
4-BROMOPHENYL-PHENYL ETHER	248	.26659	.30878	15.83		
HEXACHLOROBENZENE	284	.34094	.35357	3.71		

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

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

%Diff - % Difference from original average or curve

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

Continuing Calibration Check
HSL Compounds

e No: 11-4835, 4863, 4928, 4971 Calibration Date: 05/18/87

Contractor: E & E, INC. Time: 09:21

Contract No: IL-3140 Laboratory ID: >B3749

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	1.00279	2.58		
ANTHRACENE	178	1.00646	.97522	3.10		
DI-N-BUTYLPHTHALATE	149	1.12721	1.17325	4.08		
FLUORANTHENE	202	.81517	.94554	15.99	*	
BENZIDINE		-	.01066	-		
PYRENE	202	1.60192	1.60860	.42		
TERPHENYL-D14 (SURR)	244	1.11052	.97345	12.34		
BUTYLBENZYLPHTHALATE	149	.67361	.58118	13.72		
3,3'DICHLOROBENZIDINE	252	.31882	.14998	52.96		
BENZO(A)ANTHRACENE	228	1.12037	.97901	12.62		
BIS(2-ETHYLHEXYL)PHTHALATE	149	.90083	.72028	20.04		
CHRYSENE	228	1.12666	1.02037	9.43		
DI-N-OCTYL PHTHALATE	149	1.70682	1.53919	9.82	*	
BENZO(B)FLUORANTHENE	252	1.21474	1.15755	4.71		
BENZO(K)FLUORANTHENE	252	1.23716	1.19683	3.26		
BENZO(A)PYRENE	252	1.12089	1.03419	7.74	*	
INDENO(1,2,3-CD)PYRENE	276	1.04154	1.01725	2.33		
DIBENZ(A,H)ANTHRACENE	278	1.06755	.95241	10.78		
BENZO(G,H,I)PERYLENE	276	1.15866	1.08129	6.68		

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

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

%Diff - % Difference from original average or curve

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

Continuing Calibration Check
HSL Compounds

Case No: N-4835,4863,4928,4971 Calibration Date: 05/18/87

Contractor: E & E, INC. Time: 10:16

Contract No: IL-3140 Laboratory ID: >B3750

Instrument ID: HP-5970 Initial Calibration Date: 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	1.55410	12.70		
PENTAFLUOROPHENOL	184	-	-	-		
2-FLUOROPHENOL	(SURR) 112	.86917	1.15518	32.91		
PHENOL	94	1.27723	1.28278	.43	*	
2-METHYL PHENOL	108	1.06214	1.05597	.58		
2-CHLOROPHENOL	128	1.17232	.99609	15.03		
3-METHYL PHENOL	108	1.06894	1.10622	3.49		
-NITROPHENOL	139	.19333	.17747	8.20	*	
,4-DIMETHYLPHENOL	122	.27900	.25272	9.42		
ENZOIC ACID	105	.23920	.16398	31.45		
,4-DICHLOROPHENOL	162	.30213	.26270	13.05	*	
-CHLORO-3-METHYLPHENOL	107	.33099	.29464	10.98	*	
,4,6-TRICHLOROPHENOL	196	.44521	.35208	20.92	*	
,4,5-TRICHLOROPHENOL	196	.51987	.40479	22.14		
,4,6-TRIBROMOPHENOL	(SURR) 330	.32822	.36718	11.87		
,4-DINITROPHENOL	184	.16189	.10785	33.38		**
-NITROPHENOL	139	.16233	.08535	47.42		**
,6-DINITRO-2-METHYLPHENOL	198	.14211	.12246	13.83		
ENTACHLOROPHENOL	266	.17144	.18224	6.30	*	

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

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

Diff - % Difference from original average or curve

PESTICIDE STANDARDS

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

Pesticide Evaluation Standards Summary
(Page 1)

U-4835
4863

Case No: 4928, 4971 Region: _____

Contract No: II-3140

Date of Analysis 5-8-87

Laboratory: Ecology and Environment, Inc.

GC Column: SP2250/SP2401

Instrument ID: VARIAN 600 GC#2

Evaluation Check for Linearity

Laboratory ID	RUN 1	RUN 2	RUN 3	
Pesticide	Calibration Factor Eval. Mix A	Calibration Factor Eval. Mix B	Calibration Factor Eval. Mix C	% RSD (≤10%)
Aldrin	933	890	981	4.9
Endrin	691	665	713	3.5
4,4'- DDT(1)	428	460	546	13
Dibutyl Chlorendate	668	610	630	4.6

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	17:13	<1.0	9.1	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					
Eval Mix B					

(1) See Exhibit E, Section 7 5 4
(2) See Exhibit E, Section 7.3 1.2 2.1

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

SMO Sample No	Lab ID	Time of Analysis	Percent Diff	SMO Sample No	Lab ID	Time of Analysis	Percent Diff
EVAL A	RUN 1	16:39	—				
EVAL B	2	17:13	0.13				
EVAL C	3	17:50	0.13				
IND A	4	18:24	0.09				
PCB 1254	5	18:58	Ø				
BLANK 4-1	6	19:30	0.27				
DC-G4-35	7	20:08	0.09				
DC-G4-36	8	20:42	0.13				
BLK. 19 NA	4-2 9	21:24	Ø				
DC-I7-45	10	22:02	0.13				
IND A	11	22:44	0.09				

Pesticide Evaluation Standards Summary
(Page 1)

Case No: 4835 4863 4928 4971 Region: _____

Contract No: IL-3140

Date of Analysis 5-6-87 5-7-87

Laboratory: Ecology and Environment, Inc.

GC Column: OV-1

Instrument ID: Varian 6000 GC#2

Evaluation Check for Linearity

Laboratory ID	Run 1	Run 2	Run 3	
Pesticide	Calibration Factor Eval. Mix A	Calibration Factor Eval. Mix B	Calibration Factor Eval. Mix C	% RSD (≤10%)
Aldrin	758	776	731	3.0
Endrin	569	580	550	2.7
4,4'- DDT(1)	406	448	465	6.9
Dibutyl Chlorendate	556	575	555	2.0

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	16:29	NA	NA	5.6
Eval Mix B	Run 19	8:33	NA	NA	5.0
Eval Mix B	Run 30	10:54	NA	NA	13
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					

(1) See Exhibit E, Section 7 5 4
(2) See Exhibit E, Section 7.3.1.2 2 1

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

	SMO Sample No	Lab ID	Time of Analysis	Percent Diff	SMO Sample No	Lab ID	Time of Analysis	Percent Diff
	EVAL A	RUN 1	15:50	—				
	EVAL B	2	16:29	0.18				
	EVAL C	3	17:07	0.22				
	IND A	4	17:48	0.18				
	IND B	5	18:26	0.22				
	TOXAPHENE	6	19:09	0.15				
	CHLORDANE	7	19:48	0.33				
	PCB 1016/1260	8	20:26	1.3				
	PCB 1221	9	21:06	0.37				
	PCB 1232	10	21:44	0.37				
	PCB 1242	11	22:23	0.37				
	PCB 1248	12	23:02	0.26				
	PCB 1254	13	23:41	0.40				
	BLANK 41	14	0:19	0.58				
3-34	0753	15	0:58	0.62				
1-35	0754	16	1:37	INT.				
1-36	0755	17	2:16	0.77				
	0755 MS	18	2:54	0.80				
	EVAL B	19	3:33	0.73				
	0755 MSD	20	4:12	0.77				
	BLANK 42	21	4:50	0.69				
3-44	0860	22	5:29	0.73				
-45	0861	23	6:07	INT.				
-46	0862	24	6:46	AUTO. ERROR				
	IND A	25	7:24	0				
	0862 MS	26	8:09	0.11				
	0862 MSD	27	8:46	0.07				
	0862	28	9:26	0.26				
1-47	0863	29	10:14	0.07				
	EVAL B	30	10:54	0.15				
	IND A	31	11:33	0.29				
	IND B	32	12:09	0.22				

4-4835
4863
4928
4971

Pesticide Evaluation Standards Summary
(Page 1)

Case No: 4971 Region: _____

Contract No: IL-3140

Date of Analysis 5-11-87
5-12-87

Laboratory: ECOLOGY AND ENVIRONMENT, INC.

GC Column: OV-1

Instrument ID: VARIAN 6000 GC#2

Evaluation Check for Linearity

Laboratory ID	RUN 1	RUN 2	RUN 3	
Pesticide	Calibration Factor Eval. Mix A	Calibration Factor Eval. Mix B	Calibration Factor Eval. Mix C	% RSD (≤10%)
Aldrin	708	678	663	3.4
Endrin	491	463	448	4.7
4,4'- DDT(1)	359	360	380	3.2
Dibutyl Chlorendate	528	510	509	2.1

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

	Laboratory I.D.	Time of Analysis	Endrin	4,4'- DDT	Combined(2)
Eval Mix B 72 Hour					
Eval Mix B	RUN 2	11:08	NA	NA	8.7
Eval Mix B	RUN 19	5:12	NA	NA	10
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					

(1) See Exhibit E, Section 7.5.4

(2) See Exhibit E, Section 7.3.1.2.2.1

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

SMO Sample No	Lab ID	Time of Analysis	Percent Diff	SMO Sample No	Lab ID	Time of Analysis	Percent Diff
EVAL A	RUN 1	10:29	—				
EVAL B	2	11:08	0.15				
EVAL C	3	11:46	0.15				
IND A	4	13:31	0.22				
IND B	5	14:10	0.15				
TOXAPHENE	6	15:01	0.04				
CHLORDANE	7	15:35	0.15				
PCB 1016/1260	8	16:09	1.2				
PCB 1221	9	16:45	0.33				
PCB 1232	10	17:19	0.37				
PCB 1242	11	17:54	0.29				
PCB 1248	12	18:30	0.33				
PCB 1254	13	19:04	0.33				
BLANK	14	19:46	0.11				
1112	15	23:51	DL				
1112 MS	16	1:11	DL				
1112 MSD	17	2:31	DL				
1275	18	3:51	0.80				
EVAL B	19	5:12	0.69				
1275 MS	20	6:31	0.69				
1275 MSD	21	7:52	0.84				
IND A	22	9:13	0.15				
IND B	23	9:52	0.29				

DL = DILUTED OUT

Pesticide Evaluation Standards Summary

(Page 1)

U-4835, 4863, 4928,

Case No: 4971 Region: _____

Contract No: IL-3140

Date of Analysis 5-15-87

Laboratory: ECOLOGY AND ENVIRONMENT, INC.

GC Column: SP 2250 / SP 2401

Instrument ID: VARIAN 6000 GC #2

Evaluation Check for Linearity

Laboratory ID	RUN 1	RUN 2	RUN 3	
Pesticide	Calibration Factor Eval. Mix A	Calibration Factor Eval. Mix B	Calibration Factor Eval. Mix C	% RSD (≤10%)
Aldrin	1010	928	1030	5.5
Endrin	742	695	743	3.8
4,4'- DDT(1)	555	555	640	8.4
Dibutyl Chlorendate	654	620	643	2.7

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

(percent breakdown expressed as total degradation)

	Laboratory I.D.	Time of Analysis	Endrin	4,4'- DDT	Combined(2)
Eval Mix B 72 Hour					
Eval Mix B	RUN 2	16:50	<1.0	8.7	NA
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					

(1) See Exhibit E, Section 7 5 4

(2) See Exhibit E, Section 7.3 1 2 2 1

Pesticide Evaluation Standards Summary
(Page 2)

Evaluation of Retention Time Shift for Dibutyl Chlorendate

Report all standards, blanks and samples

SMO Sample No	Lab I D	Time of Analysis	Percent Diff	SMO Sample No.	Lab I.D.	Time of Analysis	Percent Diff
EVAL A	RUN 1	16:15	—				
EVAL B	2	16:50	0.04				
EVAL C	3	17:23	0.13				
IND A	4	17:53	0.13				
BLANK	5	18:28	0				
1112	6	19:04	D.L.				
IND A	7	19:37	0.31				

PESTICIDE/PCB STANDARDS SUMMARY

Case No. U-4835, 4863, 4928, 4971 Laboratory ECOLOGY AND ENVIRONMENT, INC.

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

	DATE OF ANALYSIS 5-8-87				DATE OF ANALYSIS 5-8-87			
	TIME OF ANALYSIS 18:24		18:58		TIME OF ANALYSIS 22:44			
	LABORATORY ID RUN 4		RUN 5		LABORATORY ID RUN 11			
COMPOUND.	RT	RETENTION TIME WINDOW	CALIBRATION FACTOR	CONF. OR QUANT.	RT	CALIBRATION FACTOR	CONF. OR QUANT.	PERCENT DIFF.**
alpha-BHC								
beta-BHC								
delta-BHC								
gamma-BHC	2.16	2.13-2.19	974	CONF.	2.16	982		0.82
Heptachlor	2.66	2.62-2.70	846		2.66	767		9.3
Aldrin	3.21	3.17-3.25	927		3.22	940		1.4
Heptachlor Epoxide	4.78	4.73-4.83	836		4.79	852		1.9
Endosulfan I	6.00	5.94-6.06	791		6.02	804		1.6
Dieldrin	7.33	7.26-7.40	855		7.34	858		0.35
4,4'-DDE								
Endrin								
Endosulfan II	10.75	10.65-10.85	755	CONF.	10.77	756		0.13
4,4'-DDD								
Endosulfan Sulfate								
4,4'-DDT	12.78	12.63-12.93	501	CONF.	12.80	472		5.8
Methoxychlor	24.49	24.25-24.73	235	CONF.	24.49	231		1.7
Endrin Ketone								
Tech. Chlordane								
alpha-Chlordane*								
gamma-Chlordane*								
Toxaphene								
Aroclor - 1016								
Aroclor - 1221								
Aroclor - 1232								
Aroclor - 1242								
Aroclor - 1248								
Aroclor - 1254	8.70	8.66-8.74	64.3	CONF.				
Aroclor - 1260								

7/85

* SEE EXHIBIT E, PART 7

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

FORM IX

[illegible] SUMMARY

Case N 4835, 4863, 4928, 4971 Laboratory ECOLOGY AND ENVIRONMENT, INC.

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

	DATE OF ANALYSIS 5-6-87 TIME OF ANALYSIS 17:48 → 23:41 LABORATORY ID RUN 4 → RUN 13				DATE OF ANALYSIS 5-7-87 TIME OF ANALYSIS 7:24 LABORATORY ID RUN 25			
COMPOUND	RT	RETENTION TIME WINDOW	CALIBRATION FACTOR	CONF. OR QUANT.	RT	CALIBRATION FACTOR	CONF. OR QUANT.	PERCENT DIFF. **
alpha-BHC	2.16	2.13-2.19	836	QUANT.				
beta-BHC	2.30	2.27-2.33	290					
delta-BHC	2.59	2.56-2.62	729					
gamma-BHC	2.52	2.49-2.55	727		2.52	737		1.4
Heptachlor	3.98	3.94-4.02	637		3.98	627		1.6
Aldrin	4.89	4.85-4.93	728		4.90	731		0.4
Heptachlor Epoxide	5.92	5.87-5.97	690		5.93	695		0.7
Endosulfan I	7.33	7.27-7.39	663		7.34	669		0.9
Dieldrin	8.53	8.46-8.60	699		8.54	709		1.4
4,4'-DDE	8.40	8.33-8.47	665					
Endrin	9.49	9.41-[illegible].57	589					
Endosulfan II	9.68	9.59-9.77	643		9.70	650		1.1
4,4'-DDD	10.53	10.44-10.62	577					
Endosulfan Sulfate	12.35	12.25-12.45	435					
4,4'-DDT	13.72	13.62-13.82	427		13.74	420		1.6
Methoxychlor	20.08	19.94-20.22	241		20.11	239		0.8
Endrin Ketone	15.80	15.66-15.94	699					
Tech. Chlordane	6.74	6.65-6.83	99.0					
alpha-Chlordane*								
gamma-Chlordane*								
Toxaphene	13.73	13.63-13.83	79.0	QUANT.				
Aroclor - 1016	3.47	3.42-3.52	36.3					
Aroclor - 1221	2.18	2.15-2.21	14.1					
Aroclor - 1232	3.47	3.42-3.52	23.0					
Aroclor - 1242	3.47	3.42-3.52	24.6					
Aroclor - 1248	6.01	5.95-6.07	46.0					
Aroclor - 1254	14.24	14.18-14.30	42.3					
Aroclor - 1260	22.40	22.08-22.72	80.0					

7/85

* SEE EXHIBIT E, PART 7

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

FORM IX

PESTICIDE/PCB STANDARDS SUMMARY

Case No. 11-4835, 4863, 4928, 4971 Laboratory Ecology and Environment, Inc.

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

	DATE OF ANALYSIS 5-6-87				DATE OF ANALYSIS 5-7-87			
	TIME OF ANALYSIS 17:48		23:41		TIME OF ANALYSIS 11:33		12:09	
	LABORATORY ID Run 4		Run 13		LABORATORY ID Run 31		Run 32	
COMPOUND	RT	RETENTION TIME WINDOW	CALIBRATION FACTOR	CONF. OR QUANT.	RT	CALIBRATION FACTOR	CONF. OR QUANT.	PERCENT DIFF. **
alpha-BHC	2.16	2.13-2.19	836	QUANT.	2.15	804		3.8
beta-BHC	2.30	2.27-2.33	290		2.29	299		3.1
delta-BHC	2.59	2.56-2.62	729		2.58	700		4.0
gamma-BHC	2.52	2.49-2.55	727		2.51	731		0.55
Heptachlor	3.98	3.94-4.02	637		3.97	632		0.78
Aldrin	4.89	4.85-4.93	728		4.88	727		0.14
Heptachlor Epoxide	5.92	5.87-5.97	690		5.91	688		0.29
Endosulfan I	7.33	7.27-7.39	663		7.32	660		0.45
Dieldrin	8.53	8.46-8.60	699		8.52	702		0.43
4,4'-DDE	8.40	8.33-8.47	665		8.39	656		1.4
Endrin	9.49	9.41-9.57	589		9.48	566		3.9
Endosulfan II	9.68	9.59-9.77	643		9.68	636		1.1
4,4'-DDD	10.53	10.44-10.62	577		10.52	581		0.69
Endosulfan Sulfate	12.35	12.25-12.45	435		12.35	407		6.4
4,4'-DDT	13.72	13.62-13.82	427		13.71	458		7.3
Methoxychlor	20.08	19.94-20.22	241		20.07	236		2.1
Endrin Ketone	15.80	15.66-15.94	699		15.81	684		2.1
Tech. Chlordane	6.74	6.65-6.83	99.0					
alpha-Chlordane*								
gamma-Chlordane*								
Toxaphene	13.73	13.63-13.83	79.0	QUANT.				
Aroclor - 1016	3.47	3.42-3.52	36.3					
Aroclor - 1221	2.18	2.15-2.21	14.1					
Aroclor - 1232	3.47	3.42-3.52	23.0					
Aroclor - 1242	3.47	3.42-3.52	24.6					
Aroclor - 1248	6.01	5.95-6.07	46.0					
Aroclor - 1254	14.24	14.18-14.30	42.3					
Aroclor - 1260	22.40	22.28-22.72	80.0					

* SEE EXHIBIT E, PART 7

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

7/85

FORM IX

PESTICIDE/PCB STANDARDS SUMMARY

Case No. 11-4835, 4863, 4928, 4971 Laboratory. ECOLOGY AND ENVIRONMENT, INC.

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

	DATE OF ANALYSIS 5-11-87 TIME OF ANALYSIS 13:31 – 19:04 LABORATORY ID RUN 4 – RUN 13				DATE OF ANALYSIS 5-12-87 TIME OF ANALYSIS 9:13 9:52 LABORATORY ID RUN 22 RUN 23			
COMPOUND	RT	RETENTION TIME WINDOW	CALIBRATION FACTOR	CONF. OR QUANT.	RT	CALIBRATION FACTOR	CONF. OR QUANT.	PERCENT DIFF. **
alpha-BHC	2.17	2.14-2.20	768	QUANT.	2.16	802		4.4
beta-BHC	2.30	2.27-2.33	275		2.30	281		2.1
delta-BHC	2.59	2.56-2.62	662		2.59	681		2.9
gamma-BHC	2.52	2.49-2.55	674		2.52	717		6.4
Heptachlor	3.98	3.94-4.02	585		3.97	631		7.9
Aldrin	4.89	4.85-4.93	687		4.89	709		3.2
Heptachlor Epoxide	5.92	5.87-5.97	652		5.92	670		2.8
Endosulfan I	7.33	7.27-7.39	628		7.33	641		2.1
Dieldrin	8.52	8.45-8.59	659		8.52	679		3.0
4,4'-DDE	8.41	8.34-8.48	619		8.39	638		3.1
Endrin	9.49	9.41-9.57	518		9.48	550		6.2
Endosulfan II	9.69	9.60-9.78	613		9.68	613		0
4,4'-DDD	10.53	10.44-10.62	540		10:52	567		5.0
Endosulfan Sulfate	12.36	12.26-12.46	383		12.34	401		4.7
4,4'-DDT	13.72	13.62-13.82	374		13.71	377		0.80
Methoxychlor	20.08	19.94-20.22	211		20.07	226		7.1
Endrin Ketone	15.81	15.67-15.95	646		15.79	657		1.7
Tech. Chlordane	6.76	6.67-6.85	95.5					
alpha-Chlordane*								
gamma-Chlordane*								
Toxaphene	13.75	13.65-13.85	74.5	QUANT.				
Aroclor - 1016	3.47	3.42-3.52	34.3					
Aroclor - 1221	2.18	2.15-2.21	12.3					
Aroclor - 1232	3.48	3.43-3.53	22.5					
Aroclor - 1242	3.48	3.43-3.53	23.8					
Aroclor - 1248	6.03	5.97-6.09	44					
Aroclor - 1254	14.17	14.11-14.23	59					
Aroclor - 1260	22.42	22.10-22.74	78.3					

* SEE EXHIBIT E, PART 7

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

7/85

FORM IX

SOMM....

Case N 4-4835, 4863, 4928, 4971 Laboratory ECOLOGY AND ENVIRONMENT, INC.

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

	DATE OF ANALYSIS 5-15-87 TIME OF ANALYSIS 17:53 LABORATORY ID RUN 4				DATE OF ANALYSIS 5-15-87 TIME OF ANALYSIS 19:37 LABORATORY ID RUN 7			
COMPOUND	RT	RETENTION TIME WINDOW	CALIBRATION FACTOR	CONF. OR QUANT.	RT	CALIBRATION FACTOR	CONF. OR QUANT.	PERCENT DIFF. **
alpha-BHC								
beta-BHC								
delta-BHC								
gamma-BHC	2.17	2.14→2.20	999		2.16	1026		2.7
Heptachlor	2.67	2.63→2.71	978		2.66	994		1.6
Aldrin	3.22	3.18→3.26	957		3.21	970		1.4
Heptachlor Epoxide	4.79	4.74→4.84	865		4.78	883		2.1
Endosulfan I	6.02	5.96→6.08	822		6.00	834		1.5
Dieldrin	7.35	7.28→7.42	898		7.33	905		0.78
4,4'-DDE								
Endrin								
Endosulfan II	10.78	10.68-10.88	786		10.76	782		0.5
4,4'-DDD								
Endosulfan Sulfate								
4,4'-DDT	12.84	12.69→12.99	571		12.78	571		0
Methoxychlor	24.53	24.29→24.77	290		24.48	296		2.1
Endrin Ketone								
Tech. Chlordane								
alpha-Chlordane*								
gamma-Chlordane*								
Toxaphene								
Aroclor - 1016								
Aroclor - 1221								
Aroclor - 1232								
Aroclor - 1242								
Aroclor - 1248								
Aroclor - 1254								
Aroclor - 1260								

7/85

* SEE EXHIBIT E, PART 7

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

FORM IX

Pesticide/PCB Identification

Case No. U-4835, 4863, 4928, 4971

Laboratory Ecology and Environment, Inc.

Contract No. IL-3140

SAMPLE ID	PRIMARY COLUMN	~~PESTICIDE~~/ PCB	RT OF TENTATIVE ID	RT WINDOW OF APPROPRIATE STANDARD	CONFIRMATION COLUMN	RT ON CONFIRMATORY COLUMN	RT WINDOW OF APPROPRIATE STANDARD	GC/MS CONFIRMED (Y or N)
0754	OV-1	1254	14.37	14.18-14.30	SP2250/SP2401	8.70	8.66-8.74	N
0755	OV-1	1254	14.28	14.18-14.30	SP2250/SP2401	8.71	8.66-8.74	N
0861	OV-1	1254	14.29	14.18-14.30	SP2250/SP2401	8.69	8.66-8.74	N

4/84
505095

FORM X

GC/MS TUNING

1. DFTPP FORM V

2. BFB FORM V

GC/MS TUNING AND MASS CALIBRATION
Decafluorotriphenylphosphine (DFTPP)

Case No. U-4835 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 Stoytowicz

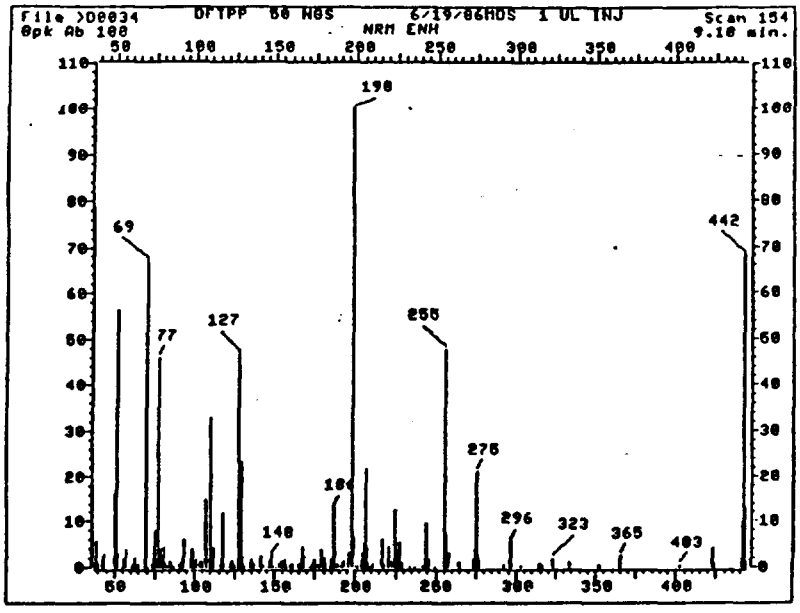
m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	56.4
68	less than 2.0% of mass 69	0 (0)[1]
69	mass 69 relative abundance	67.0
70	less than 2.0% of mass 69	0.21 (0.31)[1]
127	40.0 - 60.0% of mass 198	46.9
197	less than 1.0% of mass 198	0
198	base peak, 100% relative abundance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

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

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

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

FORM 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	.79	142.00	.76	188.05	.18	245.05	1.11
39.95	1.12	92.00	.77	143.00	.54	188.95	.65	245.95	1.70
42.95	.73	93.00	6.11	146.10	.22	190.95	.47	248.95	.22
43.95	2.79	96.90	.15	147.00	1.32	191.95	.88	254.95	47.84
50.05	16.29	98.00	4.02	148.00	2.71	193.05	1.32	255.95	7.03
51.05	56.44	99.00	3.31	149.00	.51	195.95	3.12	257.05	.55
51.95	2.66	100.00	.23	151.00	.22	197.95	100.00	257.95	2.94
55.05	.23	101.00	1.74	153.00	.73	198.95	6.93	264.95	.97
55.95	1.77	103.00	.67	154.00	.53	200.05	.26	272.95	1.38
56.95	3.87	104.00	1.30	155.00	1.49	201.35	.40	273.95	3.92
61.05	.42	104.90	1.19	156.00	1.90	203.05	.68	274.95	21.00
61.90	.64	107.00	14.80	157.80	.22	203.95	3.15	275.95	2.42
63.00	2.24	108.00	2.15	159.00	.38	205.05	5.24	276.95	1.62
64.10	.20	110.00	32.99	160.00	.68	206.05	21.54	292.75	.38
65.00	.66	111.00	4.57	160.90	.87	207.05	4.61	295.95	5.75
69.00	67.05	111.90	.29	164.90	.82	208.05	1.11	296.85	.76
70.00	.21	116.00	.83	166.00	.71	208.75	.12	302.85	.58
73.10	.90	117.00	11.76	167.00	4.52	210.05	.17	314.90	.61
74.00	4.82	118.00	.87	168.00	2.21	210.95	.79	316.00	.38
[illegible].00	8.23	122.00	.85	171.80	.17	216.95	5.98	323.10	1.91
76.10	1.92	123.00	1.52	172.90	.45	217.95	.60	334.00	.98
77.00	46.20	123.90	.70	174.00	1.01	220.95	4.54	352.00	.46
78.10	2.96	124.80	.57	175.00	1.81	222.95	1.57	353.00	.49
79.00	4.13	127.00	46.89	176.00	.31	224.05	12.35	365.00	2.47
80.00	2.58	128.00	3.90	177.00	.77	225.05	3.21	402.90	.57
81.00	4.32	129.00	23.30	177.90	.16	225.95	.20	423.00	3.98
81.90	1.06	129.90	2.11	178.90	3.64	226.95	5.42	423.80	.60
83.10	.34	130.80	.38	180.00	2.16	227.95	.79	441.05	9.97
84.00	.38	134.00	.49	180.90	.97	228.95	.96	442.05	68.07
85.00	1.30	135.00	1.64	184.05	.18	233.85	.14	443.05	13.00
86.00	1.03	136.10	.61	185.05	2.02	237.05	.18	444.05	1.14
86.90	.40	137.10	.66	186.05	13.07	242.05	.54		

MS data file header from : >D0034

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

Chromatographic temperatures : 120. 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-4835 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 Slotowicz

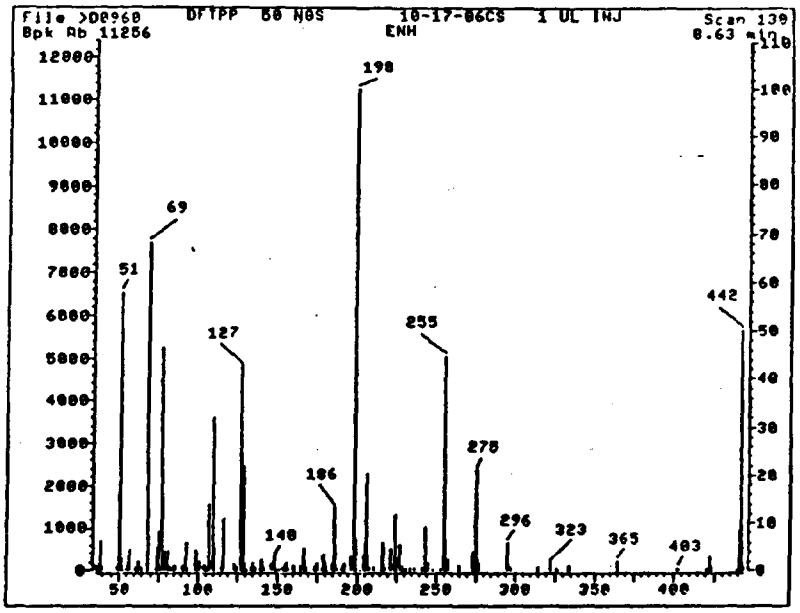
m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	58.2
68	less than 2.0% of mass 69	0 (0)[1]
69	mass 69 relative abundance	68.4
70	less than 2.0% of mass 69	0 (0)[1]
127	40.0 - 60.0% of mass 198	42.6
197	less than 1.0% of mass 198	0
198	base peak, 100% relative abundance	100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

FORM V 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	192.95	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
Misc : 10-17-86CS 1 UL INJ BTL# 1
Sys. #: 1 MS model: 70 SW/HW rev.: CA ALS # : 0
Method file: DFTPPD Tuning file: MTDON2 No. of extra records: 1
Source temp.: 0 Analyzer temp.: 275 Transfer line temp. : 20

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

GC/MS TUNING AND MASS CALIBRATION
Decafluorotriphenylphosphine (DFTPP)

Case No. U-4835 Contractor Ecology & Environment Inc. Contract No. IL-3140

Instrument ID HP5970B Date 7-30-86 Time 1051

Lab ID B2316 Data Release Authorized By: [signature]

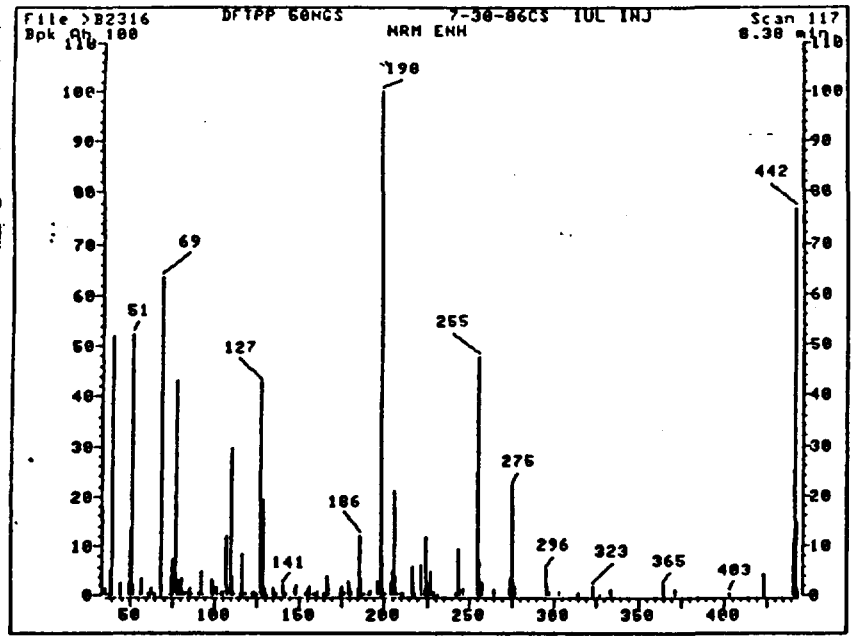
m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	52.4
68	less than 2.0% of mass 69	0 (0)[1]
69	mass 69 relative abundance	63.5
70	less than 2.0% of mass 69	0 (0)[1]
127	40.0 - 60.0% of mass 198	42.6
197	less than 1.0% of mass 198	0
198	base peak, 100% relative abundance	100
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

FORM V 7/85



>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: MTBON 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. 4-4835 Contractor Ecology & Environment Inc. Contract No. IL-3140

Instrument ID HP5970D Date 4-16-87 Time 1156

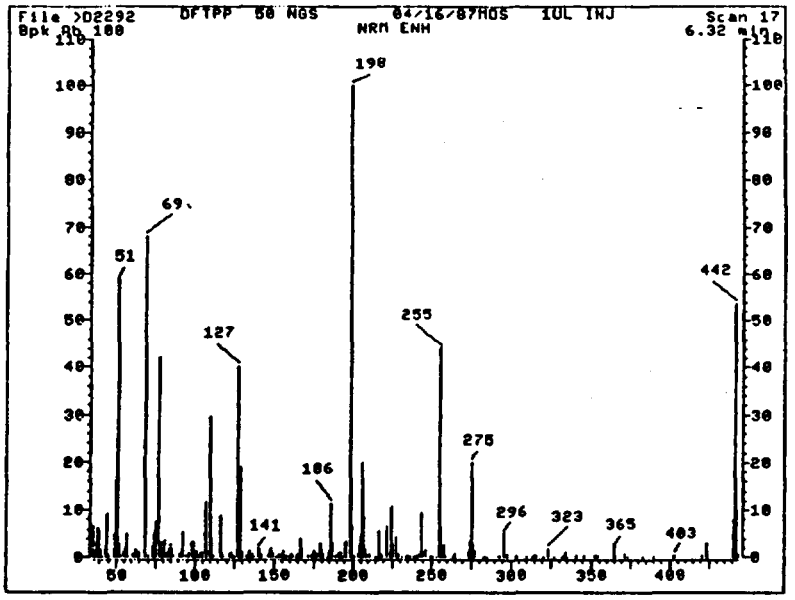
Lab ID D2292 Data Release Authorized By: _____

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	58.9
68	less than 2.0% of mass 69	0 (0)[1]
69	mass 69 relative abundance	68.0
70	less than 2.0% of mass 69	0.43 (0.63)[1]
127	40.0 - 60.0% of mass 198	40.2
197	less than 1.0% of mass 198	0
198	base peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.56
275	10.0 - 30.0% of mass 198	19.9
365	greater than 1.00% of mass 198	2.19
441	present, but less than mass 443	7.98
442	greater than 40.0% of mass 198	53.7
443	17.0 - 23.0% of mass 442	10.1 (18.8)[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	D2294	4-16-87	1316
	BN STD - 50ng	D2297		1621
DC-G4-35	754	D2301		2030
DC-G4-36	755	D2302		2126
DC-GB-34	753	D2303		2221
	BLANK	D2304	4-16-87	2318



>D2292 DFTPP 50 NGS 04/16/87MDS 1µL INJ
17 NRM ENH

File: >D2292 Scan #: 17 Retn. time: 6.32

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.05	6.45	93.00	5.10	151.95	.15	207.00	8.49	275.05	19.94
37.05	.24	94.10	.31	152.95	.59	208.00	1.94	276.05	2.53
38.05	3.02	96.00	1.12	154.05	.47	208.90	.71	276.95	1.48
39.15	6.20	98.00	3.28	155.05	.83	211.10	.82	283.00	.12
39.95	5.98	99.00	3.15	156.05	1.34	215.00	.15	285.10	.16
41.05	1.60	100.00	.38	157.05	.17	217.00	5.44	293.00	.27
41.95	.12	101.00	1.29	158.05	.28	218.00	.62	296.00	5.05
43.15	2.25	102.20	.08	160.05	.47	218.90	.50	297.00	.71
44.05	8.94	102.50	.09	161.05	.79	221.00	6.52	303.05	.37
45.15	.55	103.00	.57	162.05	.33	223.10	1.16	303.95	.22
47.95	.14	104.00	1.01	164.05	.12	223.95	10.53	310.05	.06
49.05	4.74	105.00	.94	165.05	.72	224.95	2.61	313.95	.20
50.00	16.18	107.00	11.49	166.10	.69	226.95	4.37	315.05	.45
51.00	58.89	108.05	1.45	167.00	4.06	227.95	.60	316.05	.36
52.00	2.61	109.95	29.65	167.90	1.79	228.95	.71	321.00	.10
52.80	.28	111.05	3.81	171.10	.09	230.85	.14	323.00	1.71
55.20	1.16	112.15	.30	171.90	.39	233.85	.10	323.90	.18
55.90	2.02	116.95	8.70	173.10	.42	235.05	.33	327.10	.18
57.00	4.87	117.95	.76	173.90	.61	237.05	.23	331.90	.07
58.30	.22	122.05	.63	175.00	1.29	238.85	.10	333.00	.16
61.10	.87	123.05	.98	176.10	.64	239.95	.07	334.10	.94
62.00	.75	123.95	.43	177.00	.79	240.95	.33	335.00	.15
63.10	1.79	124.95	.54	179.00	2.98	242.05	.35	340.95	.30
64.00	.24	125.15	.20	180.00	1.70	243.10	.73	345.95	.26
65.00	1.06	127.00	40.22	181.10	.82	244.00	9.39	352.05	.34
68.95	67.98	128.00	3.02	184.00	.16	245.00	.93	352.95	.29
70.05	.43	129.00	18.82	184.95	1.43	246.00	1.60	353.95	.55
73.15	2.32	130.00	1.43	186.05	11.38	246.90	.15	365.00	2.19
74.05	4.75	133.00	.40	187.05	2.97	248.90	.29	371.90	.62
75.05	7.51	133.90	.49	188.95	.53	249.90	.05	373.10	.14
77.05	41.96	135.00	1.48	190.85	.71	250.90	.08	382.75	.12
78.05	2.71	136.00	.45	191.95	.94	252.80	.09	383.05	.19
79.05	3.35	137.10	.58	193.05	1.20	253.00	.09	389.95	.04
80.05	1.97	138.00	.15	193.95	.19	255.00	44.17	401.90	.29
81.05	3.71	140.90	1.98	195.95	3.36	256.00	6.22	403.00	.42
81.95	.64	142.10	.56	197.95	100.00	257.10	.51	420.95	.37
82.95	.99	143.00	.45	198.95	6.56	258.00	2.51	423.05	2.99
84.05	2.02	146.00	.28	199.95	.31	258.90	.28	423.95	.54
84.95	2.53	147.05	1.15	201.45	.51	263.95	.06	441.10	7.98
86.05	2.11	147.95	1.86	202.95	.56	264.95	.83	442.00	53.71
87.05	.53	149.05	1.20	204.05	2.53	273.05	1.22	443.00	10.10
91.00	.85	150.95	.16	205.00	4.83	274.05	3.52	444.00	.85
92.00	.78	151.45	.16	206.00	19.98				

MS data file header from : >D2292

Sample: DFTPP 50 NGS Operator: USER6 MS 4/16/87 11:56
Misc : 04/16/87MDS 1UL INJ BIL# 1
Sys. #: 1 MS model: 70 SW/HW rev.: CA ALS # : 0
Method file: DFTPPD Tuning file: MTDON No. of extra records: 1

GC/MS TUNING AND MASS CALIBRATION
Decafluorotriphenylphosphine (DFTPP)

Case No. U-4835 Contractor Ecology & Environment Contract No. IL-3140

Instrument ID HP5970D Date 5-7-87 Time 1016

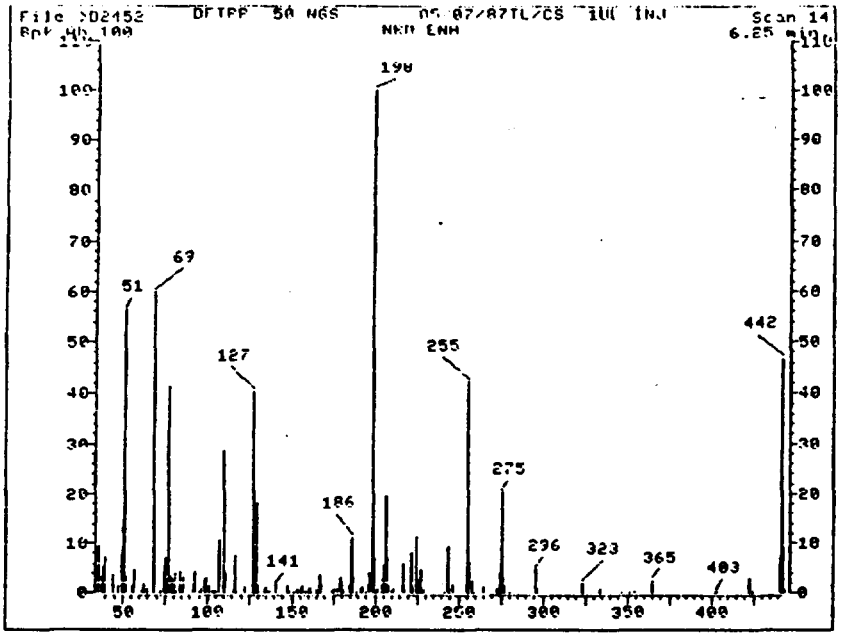
Lab ID D2452 Data Release Authorized By: _____

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	59.9
70	less than 2.0% of mass 69	0 (0)[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	6.87
275	10.0 - 30.0% of mass 198	20.2
365	greater than 1.00% of mass 198	2.39
441	present, but less than mass 443	7.36
442	greater than 40.0% of mass 198	46.6
443	17.0 - 23.0% of mass 442	8.92 (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 - 50ng	D2454	5-7-87	1158
	BN STD - 50ng	D2455		1255
	BLANK	D2456		1401
DC-I7-46	862	D2457		1505
DC-I7-46 MSD	862 MSD	D2459		1659
DC-I7-47	863	D2460		1755
DC-IB-44	860	D2461		1850
DC-I7-45	861	D2462		1946
DC-I7-46 MS	862 MS	D2463		2045



>D2452 DFTPP 50 NGS 05/07/87TL/CS 1UL INJ
14 NRM ENH

File: >D2452 Scan #: 14 Retn. time: 6.25

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.05	9.63	92.10	.75	147.25	1.43	196.05	3.94	255.00	42.28
37.95	3.29	92.30	.21	147.95	.38	197.95	100.00	256.00	6.07
39.05	5.31	92.90	3.89	151.35	.13	198.95	6.87	258.10	2.28
39.95	7.12	95.20	.22	151.55	.13	199.95	.32	259.00	.13
44.05	3.48	96.10	.82	152.85	.65	201.35	.71	265.05	1.03
46.95	1.41	98.00	2.80	154.95	.54	203.25	.19	272.75	.85
49.05	7.91	99.00	2.85	155.95	1.49	204.05	2.56	273.15	.23
50.00	14.95	100.90	1.45	157.85	.28	205.00	5.47	273.95	3.77
51.00	56.38	103.00	.46	159.95	.38	206.00	19.73	275.05	20.17
52.00	3.31	104.10	.43	160.95	1.03	207.10	6.90	275.95	2.90
55.90	1.51	105.10	.50	162.05	.13	207.90	1.44	276.95	1.39
57.00	4.44	107.10	10.69	164.55	.15	208.10	.32	280.55	.09
61.90	.39	109.95	28.68	164.75	.57	210.10	.32	296.00	4.88
63.10	1.77	110.95	3.95	166.00	.49	210.70	.64	296.80	.67
65.10	.81	115.65	.56	166.90	3.72	211.10	.47	323.00	1.84
68.95	59.91	116.15	.39	168.00	2.10	217.00	5.73	334.10	.83
72.75	.38	117.05	7.56	174.00	.64	218.10	.37	346.05	.16
74.15	4.36	117.95	.31	175.00	.84	221.00	8.25	351.65	.20
74.95	7.02	121.95	.34	176.80	.71	222.90	1.18	353.95	.27
76.05	2.59	122.85	1.03	179.00	3.02	223.95	11.45	364.90	2.39
77.05	41.35	127.00	40.38	180.10	2.10	224.95	2.72	402.20	.11
78.05	3.15	128.00	3.06	181.10	.39	225.95	.18	402.60	.13
78.95	2.83	129.00	17.96	184.95	1.67	226.95	4.44	402.90	.28
80.15	2.40	129.90	1.65	186.05	11.12	227.85	.54	422.95	2.80
81.05	3.93	134.00	.54	187.05	2.81	228.95	.67	424.05	.30
81.85	.53	135.00	1.10	188.95	.15	242.05	.21	441.00	7.36
84.05	4.15	136.90	.49	191.95	.73	244.00	9.48	442.00	46.63
85.15	.74	140.90	1.56	192.95	1.02	245.00	.80	443.00	8.92
86.05	3.34	147.05	.77	194.35	.10	246.00	1.66	444.00	.61

MS data file header from : >D2452

Sample: DFTPP 50 NGS Operator: USER8 MS 5/07/87 10:16
Misc : 05/07/87TL/CS 1UL INJ BTL# 1
Sys. #: 1 MS model: 70 SW/HW rev.: CA ALS # : 0
Method file: DFTPPD Tuning file: MTDUN No. of extra records: 1
Source temp.: 0 Analyzer temp.: 275 Transfer line temp. : 20

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

GC/MS TUNING AND MASS CALIBRATION
Decafluorotriphenylphosphine (DFTPP)

Case No. U-4835 Contractor ECOLOGY + ENVIRONMENT Contract No. IL-3140

Instrument ID HP 5970B Date 5-18-87 Time 902

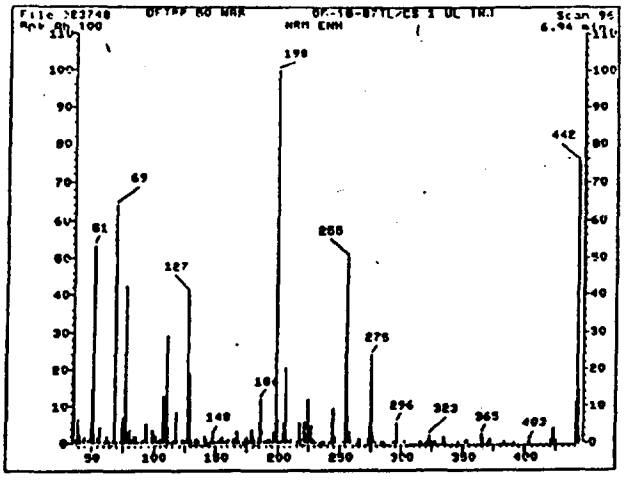
Lab ID B3748 - Data Release Authorized By:

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	53.2
68	less than 2.0% of mass 69	0 (0)[1]
69	mass 69 relative abundance	64.0
70	less than 2.0% of mass 69	0.50 (0.78)[1]
127	40.0 - 60.0% of mass 198	40.7
197	less than 1.0% of mass 198	0
198	base peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.30
275	10.0 - 30.0% of mass 198	23.8
365	greater than 1.00% of mass 198	2.48
441	present, but less than mass 443	11.0
442	greater than 40.0% of mass 198	75.2
443	17.0 - 23.0% of mass 442	14.2 (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 - 50ng	B3749	5-18-87	921
	AP STD - 50ng	B3750		1016
DC-GB-68	1275	B3751		1136
DC-GB-68 MS	1275 MS	B3752		1233
DC-GB-68 MSD	1275 MSD	B3753		1329
	BLANK	B3754		1427
DC-03-61	1112	B3755		1522



>83748 DFTPP 50 NGS 05-18-87TL/CS 1 UL INJ
96 NRM ENH

File: >83748 Scan #: 96 Retn. time: 6.94

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.05	.22	92.00	.08	151.90	.18	201.75	.27	278.90	.10
37.45	.08	93.00	5.29	153.00	.73	203.05	.61	283.10	.30
38.05	1.02	94.00	.50	154.00	.61	204.05	2.89	283.90	.10
39.15	6.34	96.90	.12	155.05	1.23	205.05	5.66	285.20	.39
40.05	3.89	98.10	3.63	155.95	1.69	206.05	20.29	293.80	.28
41.05	1.88	99.00	3.09	156.85	.50	207.05	3.36	295.10	.34
42.05	.63	101.00	1.91	157.15	.26	208.05	.82	296.00	5.65
43.25	1.09	102.60	.46	157.55	.22	209.15	.44	297.00	.93
44.05	2.01	102.90	.20	157.85	.55	210.25	.21	302.90	.70
47.15	1.08	104.00	.94	158.05	.26	211.05	.91	315.00	.36
49.05	3.94	105.10	1.14	158.65	.15	214.95	.31	316.00	.42
50.15	14.50	106.00	.57	159.15	.22	216.95	5.65	320.10	.09
51.05	53.25	107.00	12.40	160.05	.65	218.15	.86	321.00	.20
52.10	3.12	108.10	1.05	160.95	.97	221.05	5.85	322.00	.13
52.90	.20	110.00	28.78	163.95	.13	223.05	1.40	323.10	2.04
55.20	1.31	111.00	4.23	164.95	1.01	224.05	11.71	324.00	.45
56.00	1.04	112.00	.55	166.05	.09	225.05	2.79	325.90	.08
57.10	4.40	112.80	.12	167.05	3.40	226.95	4.98	327.10	.54
58.00	.10	115.00	.08	168.05	1.06	228.15	.84	327.90	.27
60.90	.71	115.90	.68	168.95	.30	229.05	1.01	334.10	1.24
62.10	.68	117.00	0.43	171.95	.42	230.05	.53	334.90	.16
63.00	1.95	118.10	.82	173.95	1.01	233.95	.17	335.20	.17
65.10	.88	122.10	1.03	175.05	1.56	235.05	.35	346.00	.37
67.20	.61	123.10	1.08	176.15	.60	237.15	.28	352.10	.68
69.00	63.96	123.90	.66	177.05	.82	241.05	.41	353.10	.34
70.00	.58	125.20	.58	178.15	.25	242.05	.56	354.00	.66
72.90	.63	127.00	40.67	178.95	3.47	243.05	.33	364.95	2.48
74.10	4.31	128.20	2.96	180.05	1.99	244.05	9.40	365.95	.37
75.00	7.20	129.00	18.74	181.15	1.13	245.15	1.25	369.45	.08
76.10	1.09	130.10	1.65	183.05	.30	246.05	1.71	371.05	.27
77.10	42.50	131.10	.55	185.05	1.65	253.15	.40	372.05	1.04
78.00	3.33	133.40	.22	185.25	.74	255.05	50.25	382.95	.32
79.00	3.43	134.10	.70	186.05	12.00	256.05	7.22	390.05	.12
80.00	2.68	135.20	1.41	187.05	3.59	258.00	3.01	402.05	.51
81.10	3.51	136.10	.50	188.15	.20	259.00	.46	403.05	.65
82.10	.92	137.10	.77	189.15	.73	264.30	.19	404.15	.15
83.00	.63	141.00	2.07	191.05	.60	265.00	.98	421.05	.69
84.00	1.90	142.10	.98	192.05	1.13	266.00	.18	422.05	.56
85.10	.72	144.10	.09	193.15	1.06	273.00	1.49	423.05	3.95
86.00	2.06	144.50	.10	195.05	.25	274.00	4.54	424.15	.86
87.00	.44	145.90	.46	196.05	2.06	275.00	23.02	441.15	10.97
87.50	.14	147.00	1.05	198.05	100.00	276.00	3.19	442.05	75.19
88.00	.35	148.00	2.32	199.05	6.30	277.00	1.08	443.05	14.18
89.20	.13	149.10	.53	199.95	.40	277.80	.38	444.15	1.27
91.00	.01	151.20	.29	201.35	.29				

MS data file header from : >83748

Sample: DFTPP 50 NGS Operator: USER8 MS 5/18/87 9:02
Misc : 05-18-87TL/CS 1 UL INJ
Sys. #: 2 MS model: 70 SW/HW rev.: CA ALS # : 0
Method file: DFTPP8 Tuning file: MTBDN No. of extra records: 1
Source temp.: 0 Analyzer temp.: 275 Transfer line temp. : 0

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

SAMPLE DATA

SAMPLE NUMBER DC-GB-34

Laboratory Name: ECOLOGY & ENVIRONMENT INC.
Case No: 11-4835, 4863, 4928, 4971

Sample Number
DC-GB-34

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 4-1-87
Date Analyzed: 4-16-87
Conc/Dil Factor: 2
Percent Moisture (Decanted) 22

GPC Cleanup ☐Yes ☒No
Separatory Funnel Extraction ☐Yes
Continuous Liquid - Liquid Extraction ☐Yes

CONCENTRATIONS REPORTED "AS RECEIVED"

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
·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	250	J
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	52	J
84-74-2	Di-n-Butylphthalate	140	J
206-44-0	Fluoranthene	77	J
129-00-0	Pyrene	53	J
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3, 3'-Dichlorobenzidine	660	U
56-55-3	Benzo(a)Anthracene	45	J
117-81-7	bis(2-Ethylhexyl)Phthalate	110	J
218-01-9	Chrysene	62	J
117-84-0	Di-n-Octyl Phthalate	330	U
205-99-2	Benzo(b)Fluoranthene	69	J
207-08-9	Benzo(k)Fluoranthene	330	U
50-32-8	Benzo(a)Pyrene	330	U
193-39-5	Indeno(1 2, 3-cd)Pyrene	330	U
53-70-3	Dibenzo(a h)Anthracene	330	U
191-24-2	Benzo(g, h, i)Perylene	330	U

(1)-Cannot be separated from diphenylamine

Laboratory Name Ecology and Environment, Inc.
Case No U-4835, 4863, 4928, 4971

Sample Number
DC-GB-34

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 4-1-87
Date Analyzed: 5-7-87
Conc/Dil Factor: 1
Percent Moisture (decanted) 22

GPC Cleanup ☐Yes ☑No
Separatory Funnel Extraction ☐Yes
Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)	
319-84-6	Alpha-BHC	10	U
319-85-7	Beta-BHC	10	U
319-86-8	Delta-BHC	10	U
58-89-9	Gamma-BHC (Lindane)	10	U
76-44-8	Heptachlor	10	U
309-00-2	Aldrin	10	U
1024-57-3	Heptachlor Epoxide	10	U
959-98-8	Endosulfan I	10	U
60-57-1	Dieldrin	21	U
72-55-9	4, 4'-DDE	21	U
72-20-8	Endrin	21	U
33213-65-9	Endosulfan II	21	U
72-54-8	4, 4'-DDD	21	U
1031-07-8	Endosulfan Sulfate	21	U
50-29-3	4 4'-DDT	21	U
72-43-5	Methoxychlor	100	U
53494-70-5	Endrin Ketone	21	U
57-74-9	Chlordane	100	U
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	100	U
11104-28-2	Aroclor-1221	100	U
11141-16-5	Aroclor-1232	100	U
53469-21-9	Aroclor-1242	100	U
12672-29-6	Aroclor-1248	100	U
11097-69-1	Aroclor-1254	200	U
11096-82-5	Aroclor-1260	200	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

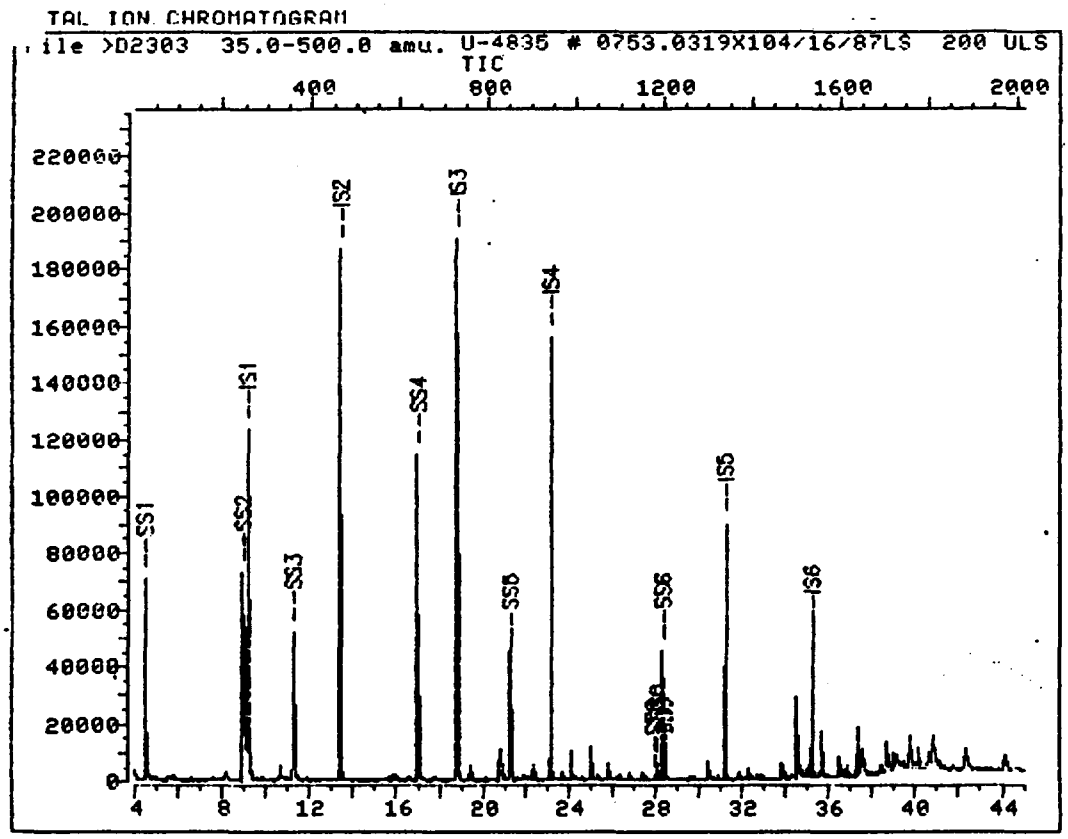
Laboratory Name: Ecology & Environment Inc.
Case No: 11-4835, 4863, 4928, 4971

Sample Number: DC-GB-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.	Unknown	BNA	34.50	1500 J
2.	Unknown Aliphatic Hydrocarbon		35.60	720 J
3.	Unknown Aliphatic Hydrocarbon		37.31	600 J
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

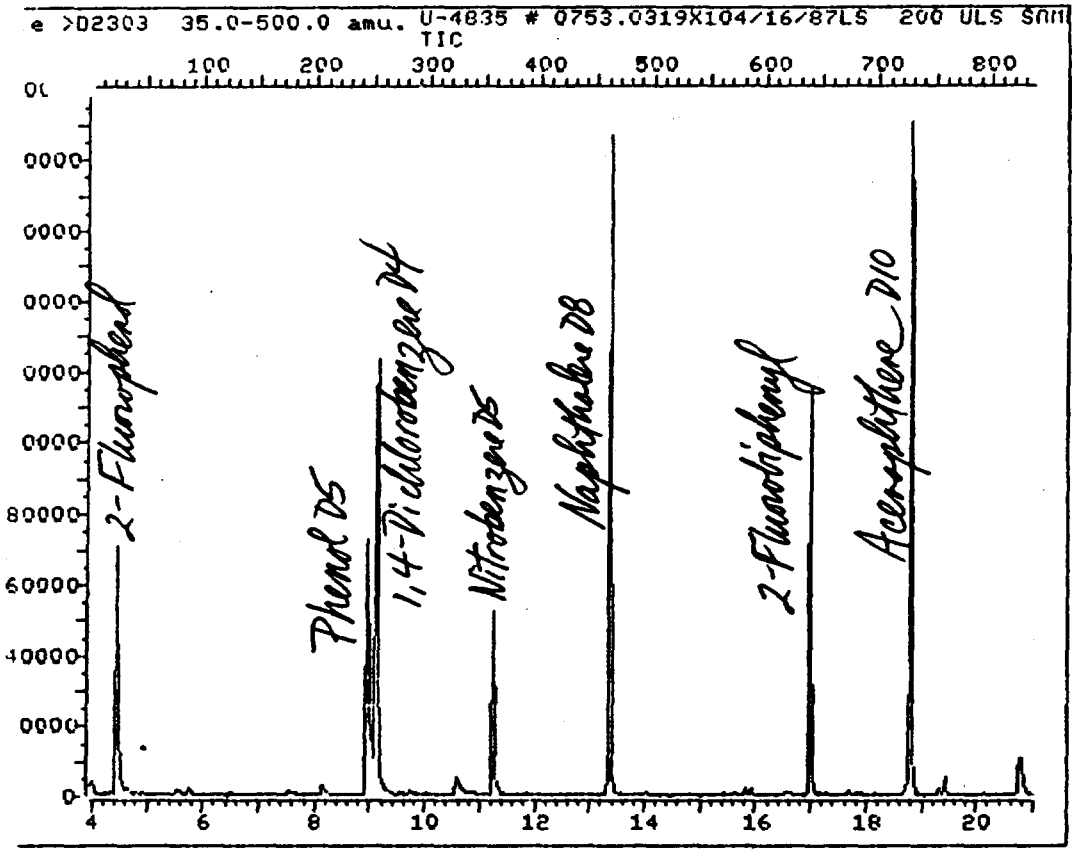


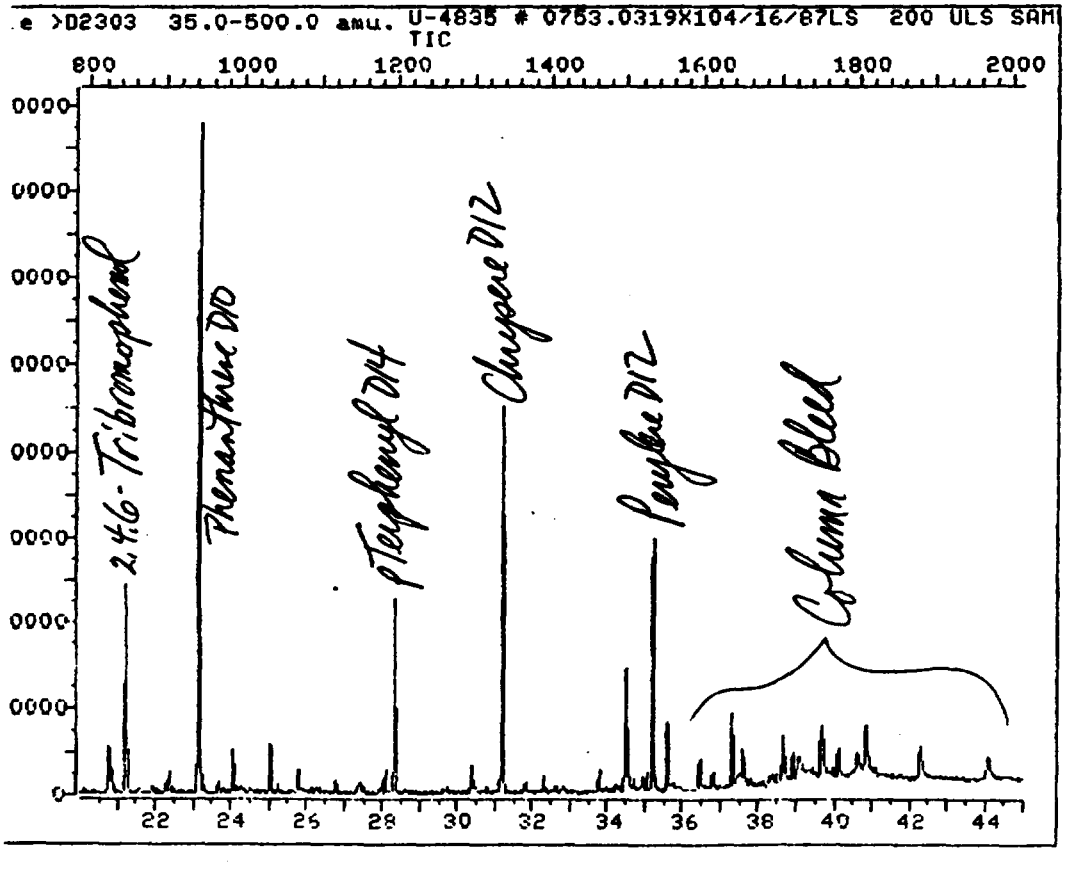
Data File: >D2303::D3
Name: U-4835 # 0753.0319X1 DC-GB-34
Misc: 04/16/87LS 200 ULS SAMPLE + 200 ULS MECL2 + 4 ULS IS BTL# 3

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870416 17:43

Operator ID: USER6
Quant Time: 870416 23:09
Injected at: 870416 22:21

DC-CB-34


e >D2303 35.0-500.0 amu. U-4835 # 0753.0319X104/16/87LS 200 ULS SAM
TIC
2-Fluorophenol
Phenol D5
1,4-Dichlorobenzene D4
Nitrobenzene D5
Naphthalene D8
2-Fluorobiphenyl
Acenaphthene D10


e >D2303 35.0-500.0 amu. U-4835 # 0753.0319X104/16/87LS 200 ULS SAM
TIC
2,4,6-Tribromophenol
Phenanthrene D10
pTerphenyl D14
Chrysene D12
Perylene D12
Column Bleed

QUANT REPORT

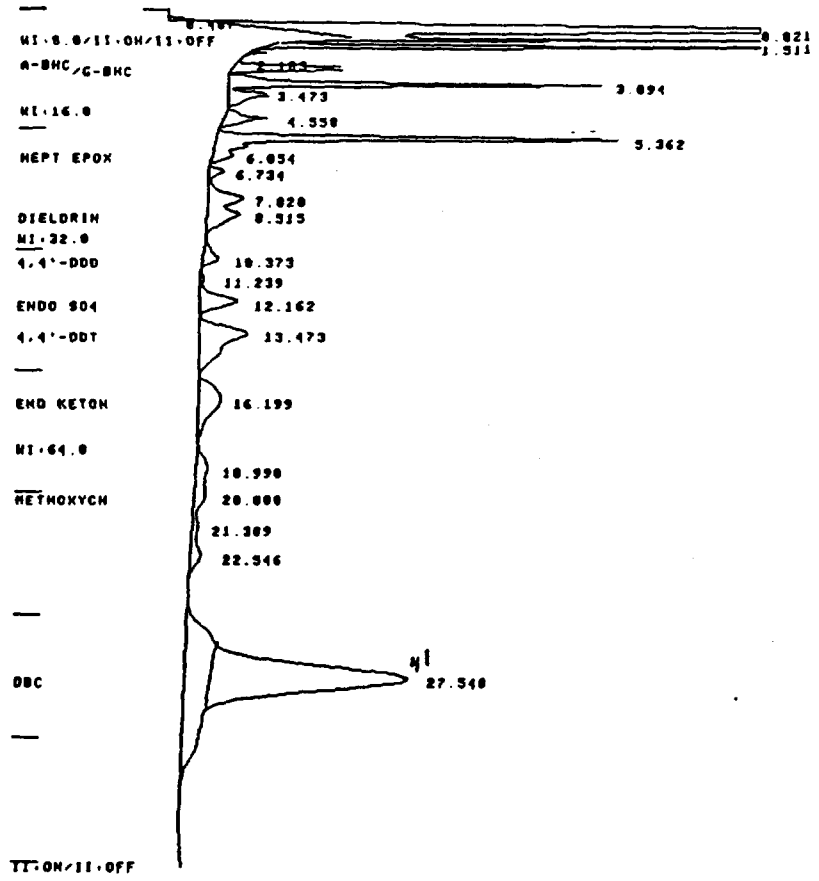
Operator ID: USER6 Quant Rev: 4 Quant Time: 870416 23:09
Output File: ^D2303::Q2 Injected at: 870416 22:21
Data File: >D2303::D3 Dilution Factor: 2.00
Name: U-4835 # 0753.0319X1 DC-GB-34
Misc: 04/16/87LS 200 ULS SAMPLE + 200 ULS MECL2 + 4 ULS IS BIL# 3

ID File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870416 17:43

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152 9.13	254	53649	40.00	UG/L	85
2)	PHENOL-D5	(SURR)	99 8.92	244	70091	64.69	UG/L 65 ✓	96
5)	2-FLUOROPHENOL	(SURR)	112 4.42	23	52242	60.61	UG/L	81
~~17)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70 11.23~~	~~357~~	~~7934~~	~~8.68~~	~~UG/L~~	~~89~~
19)	*NAPHTHALENE-D8	(IS)	136 13.37	462	184856	40.00	UG/L	100
20)	NITROBENZENE-D5	(SURR)	82 11.23	357	46363	49.11	UG/L 98 ✓	96
34)	*ACENAPHTHENE-D10	(IS)	162 18.78	728	105002	40.00	UG/L	95
38)	2-FLUOROBIPHENYL	(SURR)	172 16.99	640	80902	46.69	UG/L 93 ✓	95
~~41)~~	~~DIMETHYL-PHTHALATE~~		~~163 18.78~~	~~728~~	~~19886~~	~~11.10~~	~~UG/L~~	~~100~~
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330 21.23	848	17970	51.94	UG/L 52	98
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165 18.78~~	~~728~~	~~14271~~	~~33.71~~	~~UG/L~~	~~100~~
53)	DIETHYLPHTHALATE		149 20.76	825	14819	7.41	UG/L yes	95
55)	*PHENANTHRENE-D10	(IS)	188 23.17	943	138539	40.00	UG/L	91
~~61)~~	~~PHENANTHRENE~~		~~178 23.23~~	~~946~~	~~2518~~	~~1.54~~	~~UG/L~~	~~93~~
62)	ANTHRACENE		178 23.23	946	2518	1.56	UG/L yes	93
63)	DI-N-BUTYLPHTHALATE		149 25.77	1071	7328	4.07	UG/L yes	90
64)	FLUORANTHENE		202 26.81	1122	3056	2.32	UG/L yes	90
65)	*CHRYSENE-D12	(IS)	240 31.19	1337	77277	40.00	UG/L	100
67)	PYRENE		202 27.40	1151	2645	1.60	UG/L yes	94
~~69)~~	~~TERPHENYL-D14~~	~~(SURR)~~	~~244 27.93~~	~~1177~~	~~106~~	~~.11~~	~~UG/L~~	~~100~~
~~68)~~	~~TERPHENYL-D14~~	~~(SURR)~~	~~244 28.08~~	~~1184~~	~~1736~~	~~1.83~~	~~UG/L~~	~~100~~
68)	TERPHENYL-D14	(SURR)	244 28.32	1196	40483	42.69	UG/L 85 ✓	100
~~68)~~	~~TERPHENYL-D14~~	~~(SURR)~~	~~244 28.38~~	~~1199~~	~~103~~	~~.11~~	~~UG/L~~	~~100~~
~~68)~~	~~TERPHENYL-D14~~	~~(SURR)~~	~~244 28.44~~	~~1202~~	~~86~~	~~.09~~	~~UG/L~~	~~100~~
71)	BENZO(A)ANTHRACENE		228 31.15	1335	1316	1.35	UG/L yes	90
~~71)~~	~~BENZO(A)ANTHRACENE~~		~~228 31.25~~	~~1340~~	~~1751~~	~~1.80~~	~~UG/L~~	~~96~~
72)	BIS(2-ETHYLHEXYL)PHTHALATE		149 32.31	1392	2299	3.36	UG/L yes	98
~~73)~~	~~CHRYSENE~~		~~228 31.15~~	~~1335~~	~~1316~~	~~1.40~~	~~UG/L~~	~~92~~
73)	CHRYSENE		228 31.25	1340	1751	1.86	UG/L yes	97
74)	*PERYLENE-D12	(IS)	264 35.19	1533	61815	40.00	UG/L	100
76)	BENZO(B)FLUORANTHENE		252 34.25	1487	2097	2.08	UG/L yes	100
~~77)~~	~~BENZO(K)FLUORANTHENE~~		~~252 34.35~~	~~1487~~	~~2097~~	~~2.32~~	~~UG/L~~	~~100~~

* Compound is ISTD

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



DC-GB-34

CHANNEL: 1A - 1 TITLE: RUN# 15 8:58 7 MAY 87

SAMPLE: 0753 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	1.511		520571	BV		4.19
2	~~B-BHC~~	6.6133	2.357	0.067	89740	VV	?	6.31
3	~~G-BHC~~	2.8216	2.481	-0.029	95983	VV	?	7.81
4		0.0000	3.094		427525	VV		7.69
5		0.0000	3.473		37447	VV	?	9.56
6		0.0000	3.594		88092	VB	?	16.81
7		0.0000	4.558		107484	BV		12.94
8		0.0000	5.362		636699	VV		11.75
9		0.0000	5.698		54958	VV	?	15.56
10	~~HEPT EPOX~~	1.5935	6.054	0.144	51450	VV	?	17.81
11		0.0000	6.734		33304	VV		15.75
12		0.0000	7.828		140250	VV		31.94
13	~~DIELDRIN~~	4.2850	8.515	-0.005	140180	VB	?	36.63
14	~~4,4'-DDD~~	2.3141	10.373	-0.147	62518	BV		23.69
15	~~ENDO SO4~~	7.2248	12.162	-0.188	146964	VV		30.56
16	~~4,4'-DDT~~	18.1812	13.473	-0.237	363155	VB		47.50
17	~~END KETON~~	6.6920	16.199	0.399	218931	BB	?	78.25
18		0.0000	18.990		82763	BV	?	57.75
19	~~METHOXYCH~~	6.5856	20.080	0.010	74333	VV	?	52.56
20		0.0000	21.389		39929	VV		29.75
21		0.0000	22.546		68045	VB		33.06
22	DBC 34%	~~186.0069~~ 71.5 PM	27.548	0.238	2621077	BB		72.81
TOTALS:		163.1181 55.5		0.252	6093398			

DETECTED PKS: 32 REJECTED PKS: 10

DIVISOR: 1.17000 MULTIPLIER: 1000.00000

NOISE: 22.9 OFFSET: 19

RACK: 1 VIAL: 15 INJ: 1

NOTES:
NOTEBOOK: 297-21 ANALYST: RICHARD SAMSON
SECURE AREA: U-4835 , U-4863
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
DET: 300 C INJ: 220 C

SAMPLE NUMBER DC-G4-35

481095

Laboratory Name: Ecology & Environment Inc.

Case No: 4-4835, 4863, 4928, 4971

Sample Number: DC-G4-35

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 4-1-87

Date Analyzed: 4-16-87

Conc/Dil Factor: 2

Percent Moisture (Decanted) 24

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CONCENTRATIONS REPORTED "AS RECEIVED"

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	1600	
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	320	J
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	
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	200	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	320	J
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-4835, 4863, 4928, 4971

Sample Number
DC-G435

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 4-1-87
Date Analyzed: 5-7-87
Conc/Dil Factor: 10
Percent Moisture (decanted) 24

GPC Cleanup ☐Yes ☑No
Separatory Funnel Extraction ☐Yes
Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)	
319-84-6	Alpha-BHC	100	U
319-85-7	Beta-BHC	100	U
319-86-8	Delta-BHC	100	U
58-89-9	Gamma-BHC (Lindane)	100	U
76-44-8	Heptachlor	100	U
309-00-2	Aldrin	100	U
1024-57-3	Heptachlor Epoxide	100	U
959-98-8	Endosulfan I	100	U
60-57-1	Dieldrin	210	U
72-55-9	4, 4'-DDE	210	U
72-20-8	Endrin	210	U
33213-65-9	Endosulfan II	210	U
72-54-8	4, 4'-DDD	210	U
1031-07-8	Endosulfan Sulfate	210	U
50-29-3	4 4'-DDT	210	U
72-43-5	Methoxychlor	1050	U
53494-70-5	Endrin Ketone	210	U
57-74-9	Chlordane	1050	U
8001-35-2	Toxaphene	2100	U
12674-11-2	Aroclor-1016	1050	U
11104-28-2	Aroclor-1221	1050	U
11141-16-5	Aroclor-1232	1050	U
53469-21-9	Aroclor-1242	1050	U
12672-29-6	Aroclor-1248	1050	U
11097-69-1	Aroclor-1254	600	J
11096-82-5	Aroclor-1260	2100	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

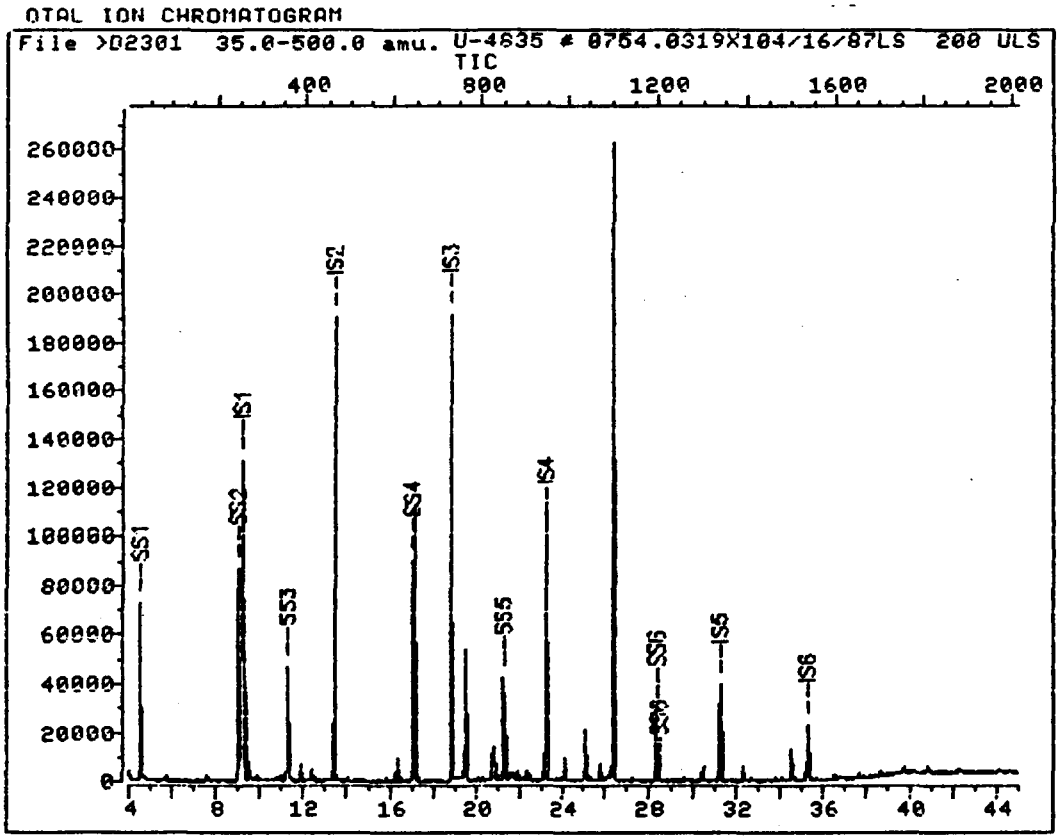
Laboratory Name: Ecology & Environment Inc.
Case No: 11-4835, 4863, 4928, 4971

Sample Number
DC-G4-35

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

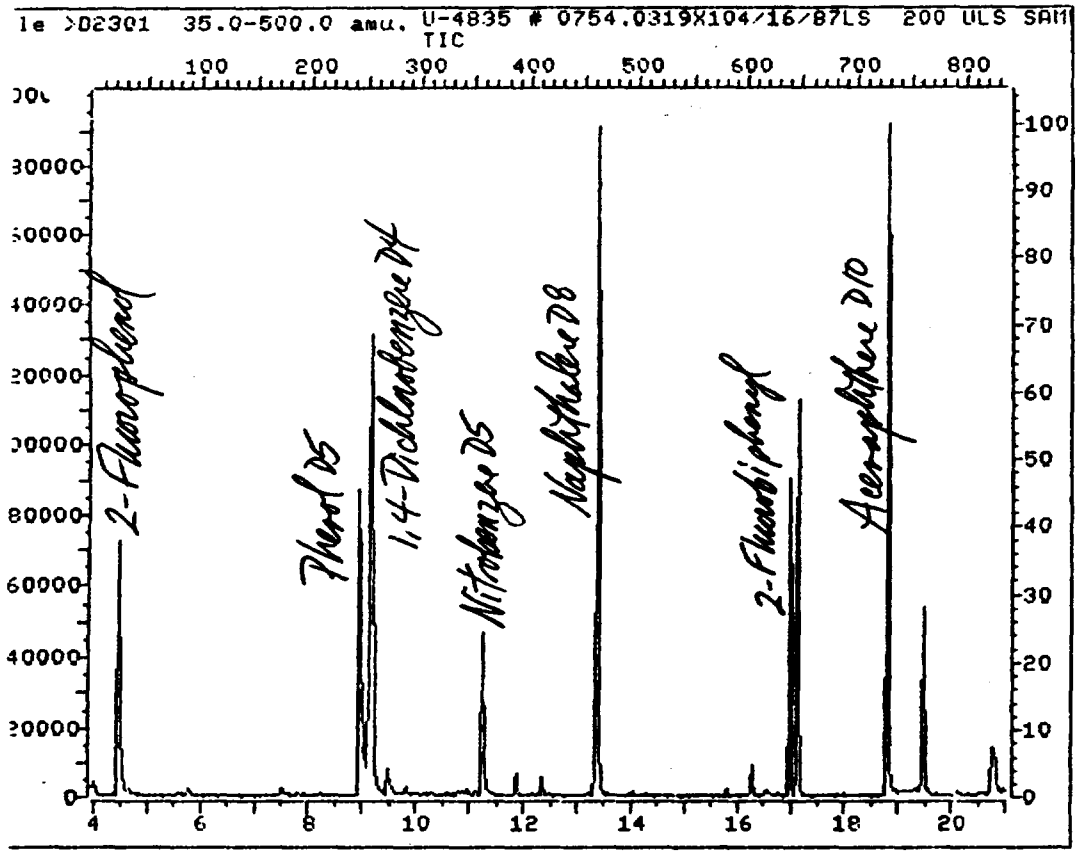
CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 95943	1,2,4,5-Tetrachlorobenzene	BNA	17.14	1400 J
2. 608935	Pentachlorobenzene		19.46	760 J
3. –	Unknown		25.13	730 J
4. 10544500	Molecular Sulfur		26.41	8300 J
5.	Unknown	BNA	34.50	1200 J
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				



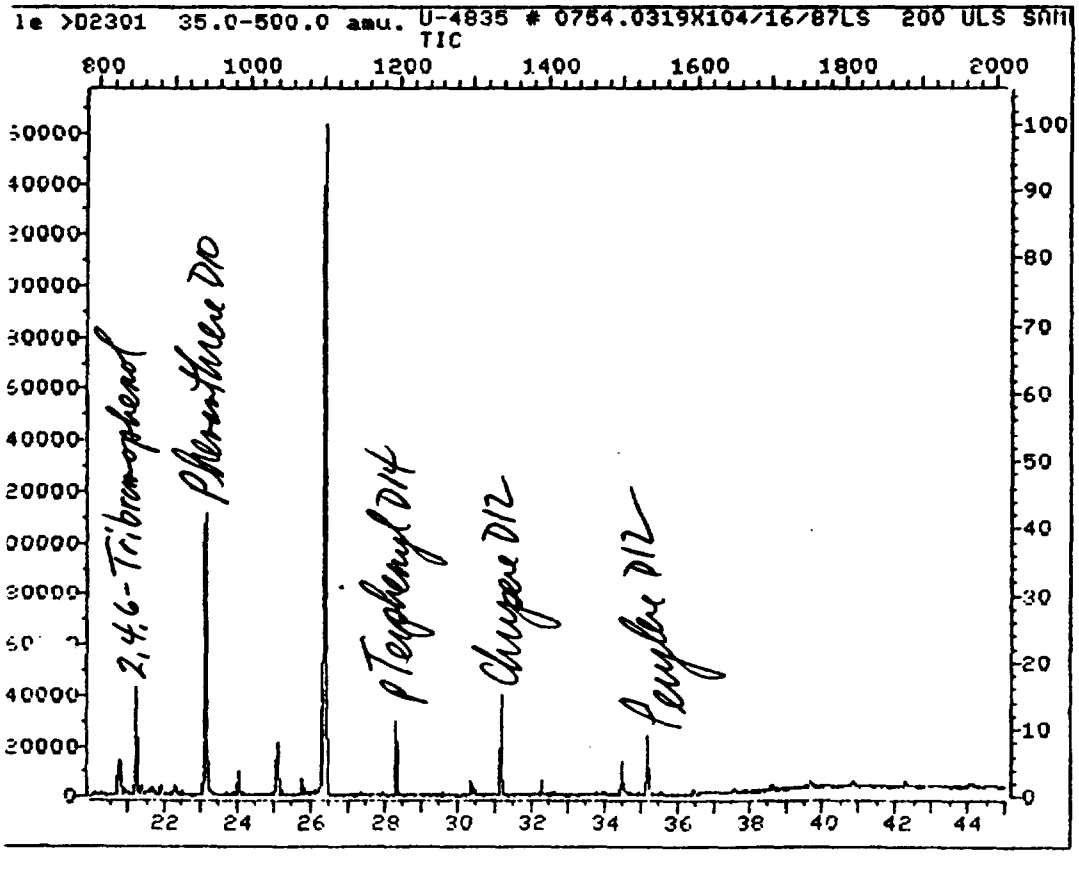
Data File: >D2301::D3
Name: U-4835 # 0754.0319X1 DC-G4-35
Misc: 04/16/87LS 200 ULS SAMPLE + 200 ULS MECL2 + 4 ULS IS BTL# 1

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870416 17:43

Operator ID: USER6
Quant Time: 870416 21:18
Injected at: 870416 20:30


le >D2301 35.0-500.0 amu. U-4835 # 0754.0319X104/16/87LS 200 ULS SAM
TIC
2-Fluorophenol
Phenol D5
1,4-Dichlorobenzene D4
Nitrobenzene D5
Naphthalene D8
2-Fluorobiphenyl
Acenaphthene D10

DC-G4-35


le >D2301 35.0-500.0 amu. U-4835 # 0754.0319X104/16/87LS 200 ULS SAM
TIC
2,4,6-Tribromophenol
Phenanthrene D10
p Terphenyl D14
Chrysene D12
Perylene D12

QUANT REPORT

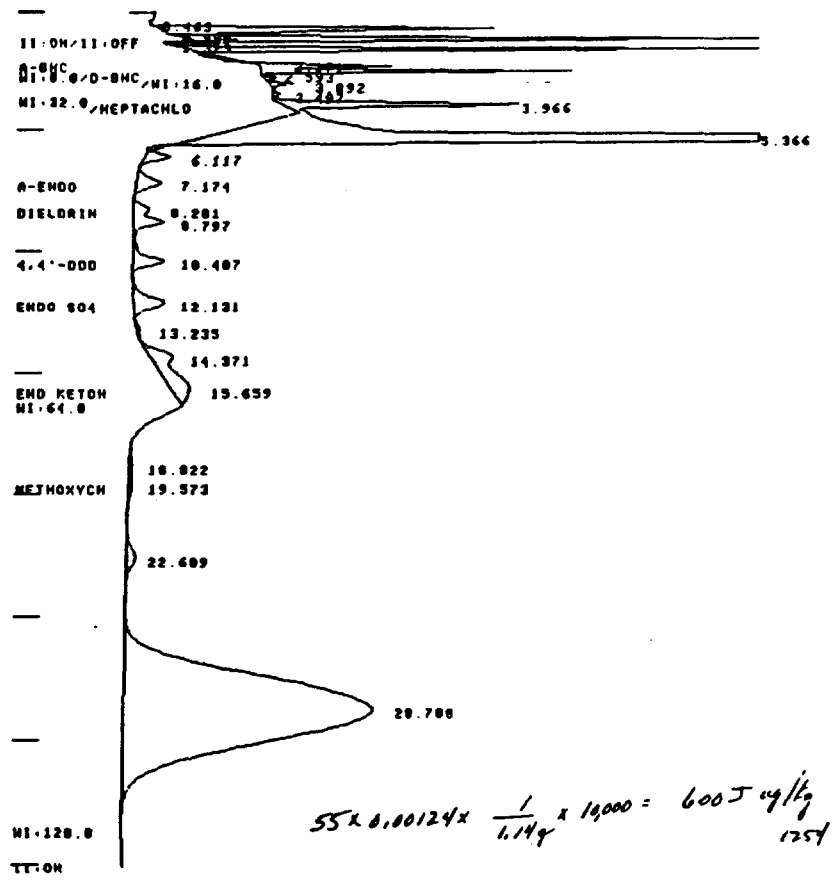
Operator ID: USER6 Quant Rev: 4 Quant Time: 870416 21:18
Output File: ^D2301::Q2 Injected at: 870416 20:30
Data File: >D2301::D3 Dilution Factor: 2.00
Name: U-4835 # 0754.0319X1 DC-G4-35
Misc: 04/16/87LS 200 ULS SAMPLE + 200 ULS MECL2 + 4 ULS IS BTL# 1

ID File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870416 17:43

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.13	254	51571	40.00 UG/L	86
2)	PHENOL-D5	(SURR)	99	8.92	244	93853	90.11 UG/L 90	99 ✓
5)	2-FLUOROPHENOL	(SURR)	112	4.44	24	54850	66.21 UG/L 66	85 ✓
~~9)~~	~~1,3-DICHLOROBENZENE~~		~~146~~	~~9.19~~	~~257~~	~~45233~~	~~49.69 UG/L~~	~~99~~
10)	1,4-DICHLOROBENZENE		146	9.19	257	45233	47.67 UG/L	98
~~17)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.23~~	~~357~~	~~6910~~	~~7.86 UG/L~~	~~92~~
19)	*NAPHTHALENE-D8	(IS)	136	13.37	462	183616	40.00 UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	11.23	357	39525	42.15 UG/L 84	99 ✓
28)	1,2,4-TRICHLOROBENZENE		180	13.33	460	8683	9.69 UG/L	100
34)	*ACENAPHTHENE-D10	(IS)	162	18.79	728	99968	40.00 UG/L	95
38)	2-FLUOROBIPHENYL	(SURR)	172	16.99	640	62267	37.75 UG/L 76	90 ✓
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.79~~	~~728~~	~~19420~~	~~11.39 UG/L~~	~~100~~
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.23	848	14789	44.90 UG/L 45	98 ✓
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.79~~	~~728~~	~~13532~~	~~33.57 UG/L~~	~~90~~
53)	DIETHYLPHTHALATE		149	20.76	825	18880	9.91 UG/L	97
55)	*PHENANTHRENE-D10	(IS)	188	23.15	942	107100	40.00 UG/L	98
63)	DI-N-BUTYLPHTHALATE		149	25.78	1071	8362	6.00 UG/L	98
65)	*CHRYSENE-D12	(IS)	240	31.20	1337	38988	40.00 UG/L	100
68)	TERPHENYL-D14	(SURR)	244	28.33	1196	23746	49.63 UG/L 99	100 ✓
~~68)~~	~~TERPHENYL-D14~~	(SURR)	~~244~~	~~28.39~~	~~1199~~	~~86~~	~~.18 UG/L~~	~~100~~
72)	BIS(2-ETHYLHEXYL)PHTHALATE		149	32.32	1392	3375	9.77 UG/L	94
74)	*PERYLENE-D12	(IS)	264	35.19	1533	24395	40.00 UG/L	100

* Compound is ISTD

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



55 x 0.00124 x 1/1.14g x 10,000 = 600 J ug/kg
125J

RECALCULATE ON FILE: D.CRK.053

CHANNEL: 1A - 1 TITLE: RUN# 16 1:37 7 MAY 87

DC-G4-35

SAMPLE: 0754 METHOD: CASE9 CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	WI/2 (SEC)
1		0.0000	1.227		22271	BB	2.06
2		0.0000	1.483		1817565	VV	4.13
3	~~A-BHC~~	33.2435	2.171	0.011	126683	VV	6.56
4	~~B-BHC~~	185.5695	2.391	0.101	245354	BB	7.25
5		0.0000	3.092		28720	BB	? 20.19
6	~~HEPTACHLO~~	110.5047	3.966	-0.004	320966	BB	14.38
7		0.0000	5.366		9329043	BB	11.44
8	~~HEPT EPOX~~	19.7161	6.117	0.207	82027	T	17.75
9	~~A-ENDO~~	29.6736	7.174	-0.146	89730	T	25.75
10	~~4,4'-DDE~~	16.8383	8.281	-0.119	51027	T	? 27.94
11	~~DIELDRIN~~	30.0538	8.797	0.277	95797	T	22.50
12	~~4,4'-DDD~~	42.2575	10.407	-0.113	111234	T	23.94
13	~~ENDO SO4~~	88.9346	12.131	-0.219	136628	T	35.13
14	~~4,4'-DDT~~	44.0452	14.371	0.661	85721	T	? 47.88
15	~~END KETON~~	46.5828	15.659	-0.141	148490	T	? 72.19
16		0.0000	18.822		20410	BV	? 40.50
17	~~METHOXYCH~~	19.9913	19.573	-0.497	21986	VB	? 41.44
18		0.0000	22.609		71871	BV	50.31
19		0.0000	28.788		5471303	VB	?175.56

TOTALS: 647.4109 0.018 18266826

DETECTED PKS: 31 REJECTED PKS: 12

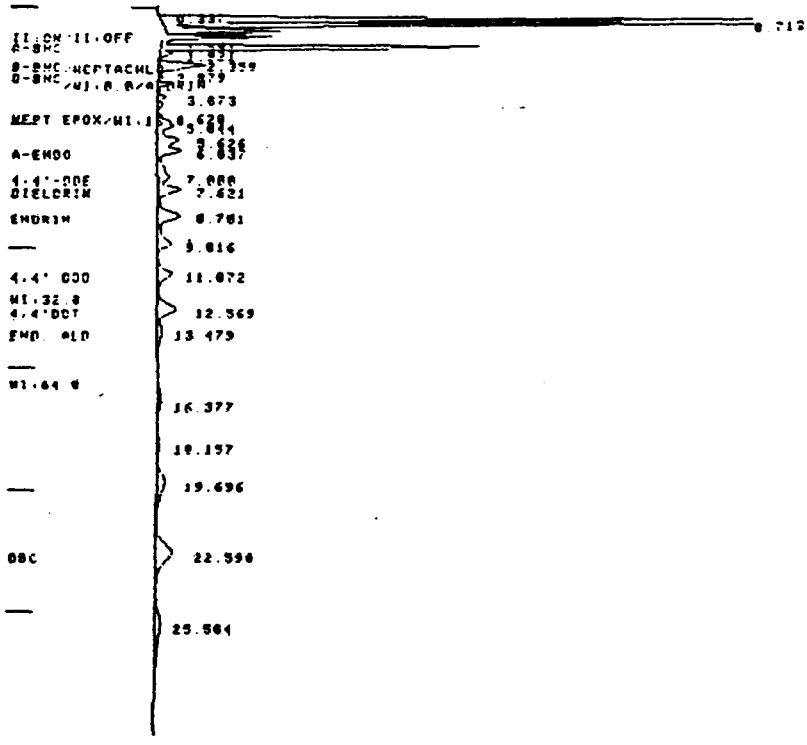
DIVISOR: 1.14000 MULTIPLIER: 10000.0000

NOISE: 11.4 OFFSET: -113

RACK: 2 VIAL: 1 INJ: 1

NOTES:
NOTEBOOK: 297-21 ANALYST: RICHARD SAMSON
SECURE AREA: U-4835 , U-4863
INST: VARIAN 6000# 2A ECD 18x1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1

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



CHANNEL: 1B - 1 TITLE: RUN# 7 20:08 8 MAY 87

SAMPLE: 0754 METHOD: PEPA CALCULATION: ES - ANALYS

DC-G4-35

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		W1/2 (SEC)
1		0.0000	1.591		351538	BV		3.69
2	~~A-BHC~~	0.0000	1.708	-0.022	222964	VV		4.25
3		0.0000	1.921		25861	VB		4.69
4		0.0000	2.358		128579	BV		5.63
5	~~B-BHC~~	0.0000	2.498	0.008	54174	VV	?	8.13
6	~~ALDRIN~~	10.3084	3.261	0.061	43564	VB		8.75
7		0.0000	3.873		27422	BV		11.44
8	~~HEPT EPOX~~	25.0630	5.044	0.274	35520	VV		24.00
9		0.0000	5.626		114945	VV	?	17.94
10	~~A-ENDO~~	25.2632	6.037	0.037	91146	VV	?	15.69
11	~~4,4'-DDE~~	0.0000	7.080	-0.010	100549	VV	?	38.75
12	~~DIELDRIN~~	29.3990	7.621	0.301	114677	VV		19.19
13	~~ENDRIN~~	0.0000	* 8.701 RB 12ST	-0.379	155652	VV		23.00
14		0.0000	9.816		109664	VV		25.50
15	~~B-ENDOSUL~~	0.0000	11.072	0.072	110546	VV		28.19
16	~~4,4'DDT~~	67.5529	12.569	-0.211	154457	VV		31.88
17	~~ENDR. ALD.~~	23.3340	13.479	-0.491	98399	VB	?	57.25
18		0.0000	16.377		46169	BV		48.56
19	~~ENDR. KET~~	0.0000	18.157	0.087	28069	VV		43.31
20		0.0000	19.696		120661	VV		53.31
21	DBC	85.0754	22.590	0.050	212051	VB		52.25
22	~~METHOXYCHL~~	123.6458	25.504	1.014	132030	BB		78.56

TOTALS: 389.6418 1.591 2499437

DETECTED PKS: 33 REJECTED PKS: 11

DIVISOR: 1.14000 MULTIPLIER: 10000.0000

NOISE: 34.3 OFFSET: -17

NOTES:
NOTEBOOK: 297-24 ANALYST: RICHARD SAMSON
SECURE AREA: D JOB U-4835, U-4863
INST:VARIAN 6000#2B ECD 10X1 ATTN:8X
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
PHASE:1.5% SP2250/1.95% SP2401
CARRIER GAS: N2 @ 60 ML/MIN.
DET:300 C INJ:220 C
200 C ISOTHERMAL 4 UL INJECTION
CONFIRMATION RUNS DEAD CREEK SOIL SAMPLES

POST RUN:
SAVE FILE: RAW CONF256

SAMPLE NUMBER DC-G4-36

481095

Laboratory Name: ECOLOGY & ENVIRONMENT INC.

Case No: 4-4835, 4863, 4928, 4971

Sample Number: DC-G4-36

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 4-1-87

Date Analyzed: 4-16-87

Conc/Dil Factor: 2

Percent Moisture (Decanted) 20

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CONCENTRATIONS REPORTED "AS RECEIVED"

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	60	J
106-46-7	1, 4-Dichlorobenzene	2800	
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	320	J
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	270	J
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	180	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	220	J
218-01-9	Chrysene	330	U
117-84-0	Di-n-Octyl Phthalate	330	U
205-99-2	Benzo(b)Fluoranthene	330	U
207-08-9	Benzo(k)Fluoranthene	330	U
50-32-8	Benzo(a)Pyrene	330	U
193-39-5	Indeno(1, 2, 3-cd)Pyrene	330	U
53-70-3	Dibenzo(a, h)Anthracene	330	U
191-24-2	Benzo(g, h, i)Perylene	330	U

(1)-Cannot be separated from diphenylamine

Laboratory Name Ecology and Environment, Inc.
Case No 11-4835, 4863, 4928, 4971

Sample Number
DC-G4-36

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 4-1-87
Date Analyzed: 5-7-87
Conc/Dil Factor: 5
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	50	U
319-85-7	Beta-BHC	50	U
319-86-8	Delta-BHC	50	U
58-89-9	Gamma-BHC (Lindane)	50	U
76-44-8	Heptachlor	50	U
309-00-2	Aldrin	50	U
1024-57-3	Heptachlor Epoxide	50	U
959-98-8	Endosulfan I	50	U
60-57-1	Dieldrin	100	U
72-55-9	4, 4'-DDE	100	U
72-20-8	Endrin	100	U
33213-65-9	Endosulfan II	100	U
72-54-8	4, 4'-DDD	100	U
1031-07-8	Endosulfan Sulfate	100	U
50-29-3	4 4'-DDT	100	U
72-43-5	Methoxychlor	500	U
53494-70-5	Endrin Ketone	100	U
57-74-9	Chlordane	500	U
8001-35-2	Toxaphene	1000	U
12674-11-2	Aroclor-1016	500	U
11104-28-2	Aroclor-1221	500	U
11141-16-5	Aroclor-1232	500	U
53469-21-9	Aroclor-1242	500	U
12672-29-6	Aroclor-1248	500	U
11097-69-1	Aroclor-1254	230	J
11096-82-5	Aroclor-1260	1000	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 & Environment Inc.

Case No: 11-4835, 4863, 4928, 4971

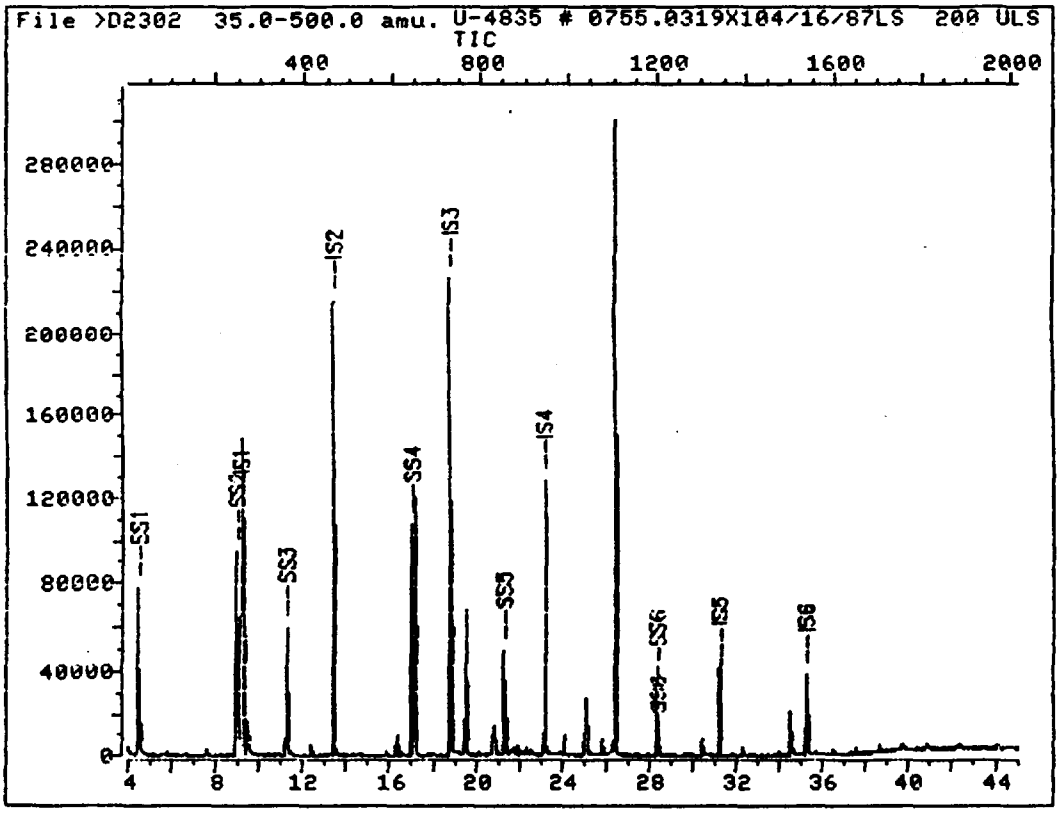
Sample Number: DC-64-36

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. 95943	1,2,4,5-Tetrachlorobenzene	BNA	17.14	1400 J
2. 608935	Pentachlorobenzene	|	19.46	770 J
3.	Unknown	|	25.13	920 J
4. 10544500	Molecular Sulfur	|	26.41	9000 J
5.	Unknown	—	34.50	1700 J
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ION CHROMATOGRAM

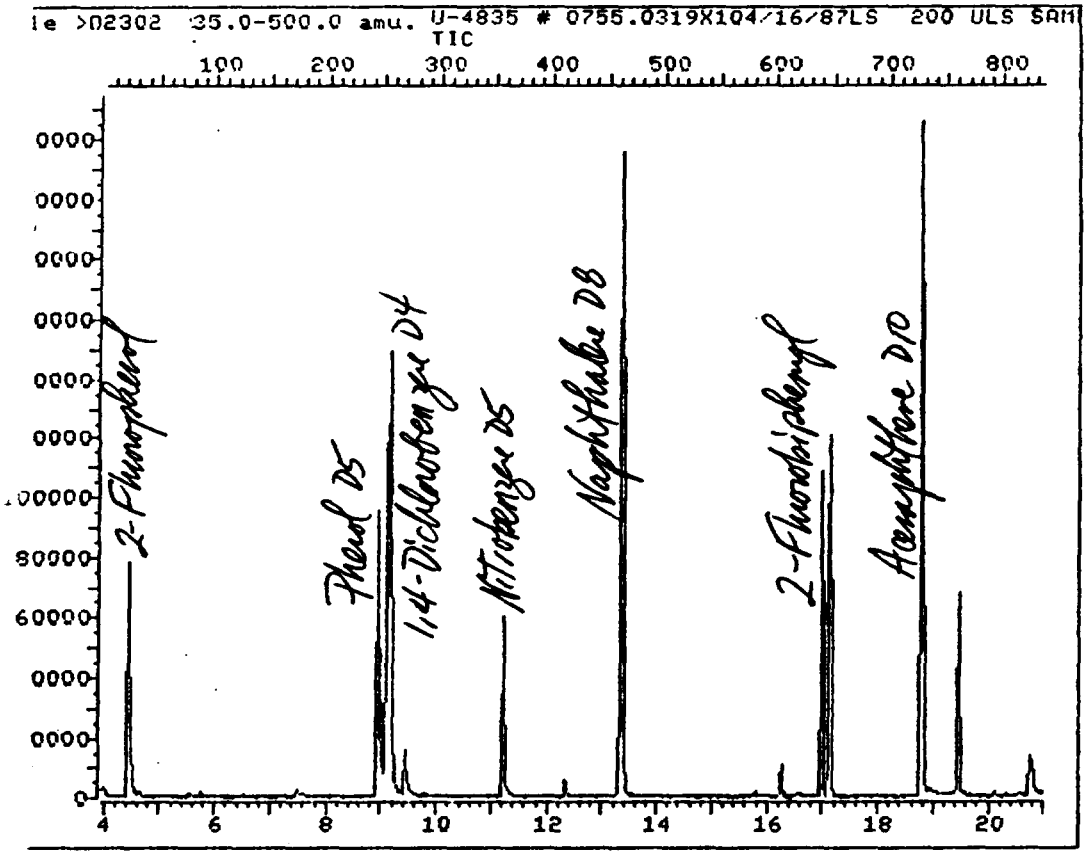


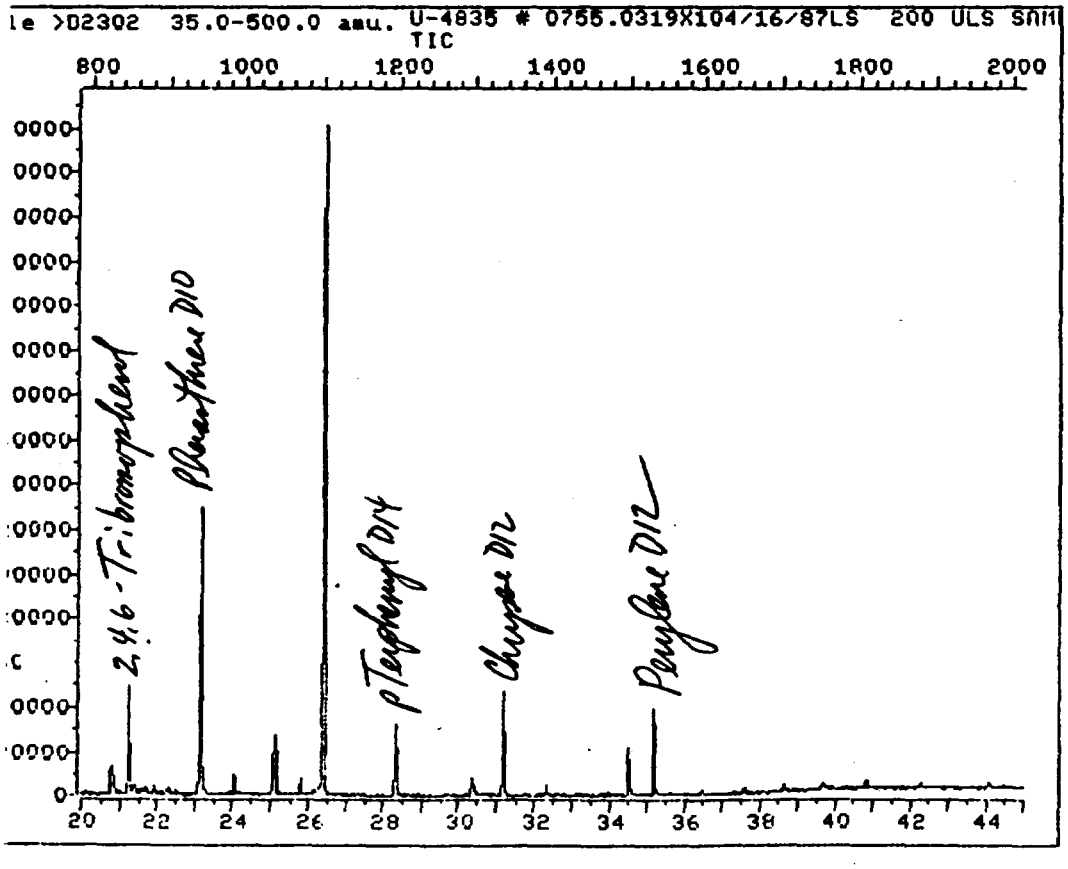
Data File: >D2302::D3
Name: U-4835 # 0755.0319X1 DC-C4-36
Misc: 04/16/87LS 200 ULS SAMPLE + 200 ULS MECL2 + 4 ULS IS BTL# 2

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870416 17:43

Operator ID: USER6
Quant Time: 870416 22:14
Injected at: 870416 21:26

DC-64-36


le >D2302 35.0-500.0 amu. U-4835 # 0755.0319X104/16/87LS 200 ULS SAM
TIC
2-Fluorophenol
Phenol D5
1,4-Dichlorobenzene D4
Nitrobenzene D5
Naphthalene D8
2-Fluorobiphenyl
Acenaphthene D10


le >D2302 35.0-500.0 amu. U-4835 # 0755.0319X104/16/87LS 200 ULS SAM
TIC
2,4,6-Tribromophenol
Phenanthrene D10
pTerphenyl D14
Chrysene D12
Perylene D12

QUANT REPORT

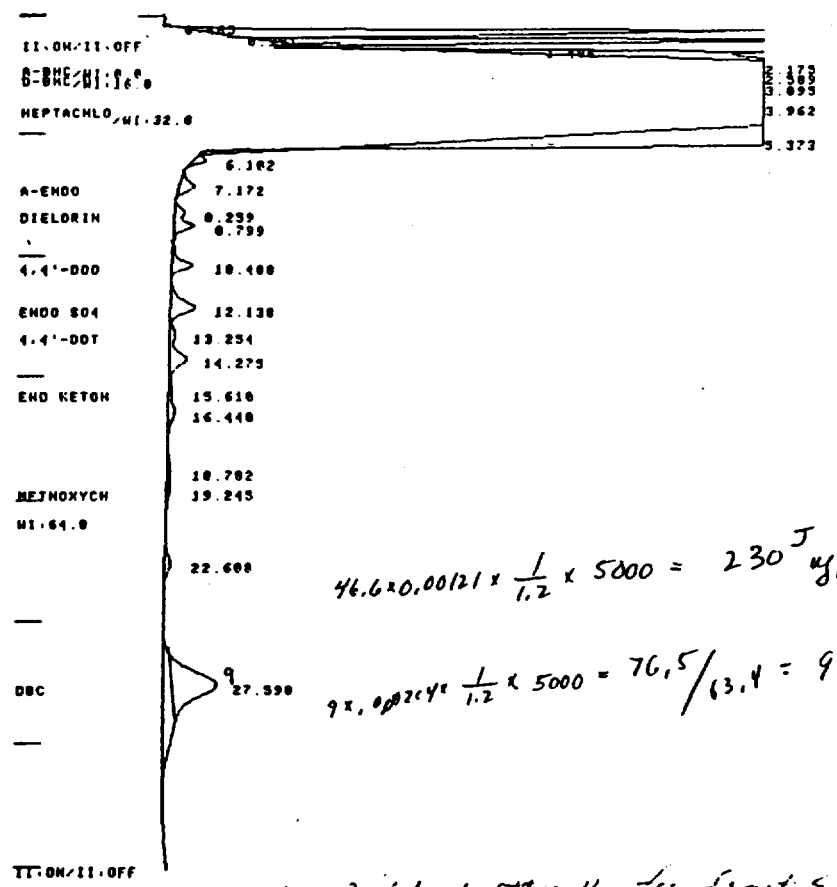
Operator ID: USER6 Quant Rev: 4 Quant Time: 870416 22:14
Output File: ^D2302::Q2 Injected at: 870416 21:26
Data File: >D2302::D3 Dilution Factor: 2.00
Name: U-4835 # 0755.0319X1 DC-64-36
Misc: 04/16/87LS 200 ULS SAMPLE + 200 ULS MECL2 + 4 ULS IS BTL# 2

ID File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870416 17:43

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.11	253	56167	40.00 UG/L	84
2)	PHENOL-D5	(SURR)	99	8.93	244	93201	82.16 UG/L 82	97 ✓
5)	2-FLUOROPHENOL	(SURR)	112	4.43	23	55336	61.33 UG/L 61	77 ✓
9)	1,3-DICHLOROBENZENE		146	8.95	245	1786	1.80 UG/L	98
~~9)~~	~~1,3-DICHLOROBENZENE~~		~~146~~	~~9.17~~	~~256~~	~~87300~~	~~88.05 UG/L~~	~~99~~
~~10)~~	~~1,4-DICHLOROBENZENE~~		~~146~~	~~8.95~~	~~245~~	~~1786~~	~~1.73 UG/L~~	~~97~~
10)	1,4-DICHLOROBENZENE		146	9.17	256	87300	84.48 UG/L	99
~~17)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.23~~	~~357~~	~~7552~~	~~7.89 UG/L~~	~~88~~
19)	*NAPHTHALENE-D8	(IS)	136	13.37	462	201509	40.00 UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	11.23	357	45086	43.81 UG/L 88	94 ✓
~~27)~~	~~2,4-DICHLOROPHENOL~~		~~162~~	~~13.41~~	~~464~~	~~2518~~	~~3.55 UG/L~~	~~91~~
28)	1,2,4-TRICHLOROBENZENE		180	13.33	460	9328	9.48 UG/L	100
34)	*ACENAPHTHENE-D10	(IS)	162	18.79	728	112475	40.00 UG/L	95
38)	2-FLUOROBIPHENYL	(SURR)	172	17.00	640	74027	39.89 UG/L 80	93 ✓
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.79~~	~~728~~	~~21312~~	~~11.11 UG/L~~	~~100~~
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.24	848	16294	43.97 UG/L 44	97 ✓
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.79~~	~~728~~	~~14730~~	~~32.48 UG/L~~	~~100~~
53)	DIETHYLPHTHALATE		149	20.77	825	17321	8.08 UG/L	96
55)	*PHENANTHRENE-D10	(IS)	188	23.15	942	118652	40.00 UG/L	98
63)	DI-N-BUTYLPHTHALATE		149	25.78	1071	8553	5.54 UG/L	99
65)	*CHRYSENE-D12	(IS)	240	31.18	1336	47499	40.00 UG/L	100
68)	TERPHENYL-D14	(SURR)	244	28.33	1196	26212	44.97 UG/L 90	100 ✓
~~68)~~	~~TERPHENYL-D14~~	(SURR)	~~244~~	~~28.39~~	~~1199~~	~~83~~	~~.14 UG/L~~	~~100~~
72)	BIS(2-ETHYLHEXYL)PHTHALATE		149	32.32	1392	2781	6.61 UG/L	84
74)	*PERYLENE-D12	(IS)	264	35.19	1533	38640	40.00 UG/L	100

* Compound is ISTD

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



46.6x0.00121 x 1/1.2 x 5000 = 230 ug/kg 1.54

9x.00264 x 1/1.2 x 5000 = 76.5/83.4 = 92

See signal at atten 16 for front end

RECALCULATE ON FILE: D.CRK.854

DC-G4-36

CHANNEL: 1A - 1 TITLE: RUN# 17 2:16 7 MAY 87

SAMPLE: 0755 METHOD: CASE9 CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	WI/2 (SEC)
1		0.0000	1.229		32057	BV	2.25
2		0.0000	1.486		4495547	VV	4.44
3		0.0000	1.663		151485	VV	? 6.63
4	~~A-BHC~~	77.5176	2.175	0.015	621897	VV	? 9.50
5	~~B-BHC~~	202.7867	2.393	0.103	564459	BB	? 15.81
6		0.0000	2.835		197409	BB	? 18.81
7		0.0000	3.895		132926	BB	? 25.69
8	~~HEPTACHLO~~	134.8504	3.962	-0.008	824588	BB	? 24.44
9		0.0000	5.373		25677436	VV	12.94
10	HEPT EPOX	4.0876	6.102	0.192	27073	T	13.44
11	~~A-ENDO~~	8.5693	7.172	-0.148	54553	T	21.31
12	~~4,4'-DDE~~	4.5525	8.259	-0.141	28044	T	? 27.31
13	~~DIELDRIN~~	8.5342	8.799	0.279	57269	T	20.88
14	~~4,4'-DDD~~	12.8045	10.408	-0.112	70958	T	22.44
15	~~ENDO SO4~~	27.0744	12.138	-0.212	112971	T	33.94
16	~~4,4'-DDT~~	6.2046	13.254	-0.456	25422	T	? 33.44
17		0.0000	*14.275 RED 1.54		89880	T	36.06
18	~~END KETON~~	6.4379	16.449	0.648	43204	T	40.56
19		0.0000	18.782		20063	T	? 50.44
20		0.0000	22.608		37132	BB	45.81
21	DBC 92% PLUS.	~~138.4550~~ 76.5/83.4	27.590	0.280	696980	BB	81.00
TOTALS:		631.8765		0.440	33962360		

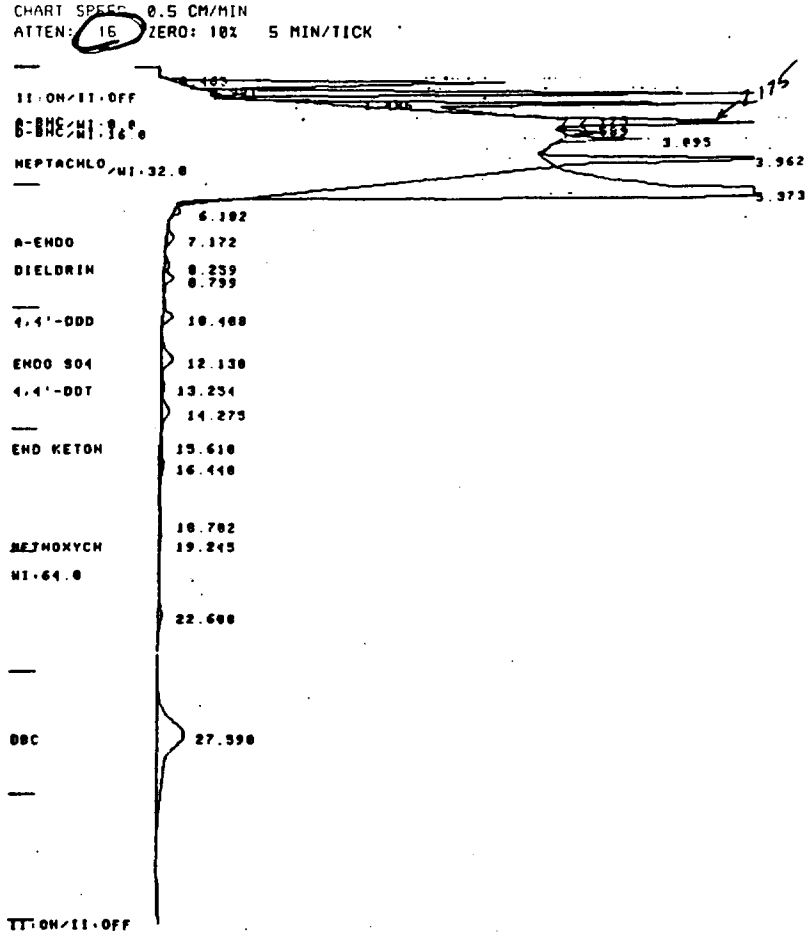
DETECTED PKS: 30 REJECTED PKS: 9

DIVISOR: 1.20000 MULTIPLIER: 5000.00000

NOISE: 11.4 OFFSET: -18

RACK: 2 VIAL: 2 INJ: 1

NOTES:
NOTEBOOK: 297-21 ANALYST: RICHARD SAMSON
SECURE AREA: U-4835 , U-4863
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 62 ML/MIN



RECALCULATE ON FILE: D.CRK.854

CHANNEL: 1A - 1 TITLE: RUN# 17 2:16 7 MAY 87

DC-G4-36

SAMPLE: 0755 METHOD: CASE9 CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	WI/2 (SEC)
1		0.0000	1.229		32057	BV	2.25
2		0.0000	1.486		4495547	VV	4.44
3		0.0000	1.663		151485	VV	? 6.63
4	~~A-BHC~~	77.5176	2.175	0.015	621897	VV	? 9.50
5	~~G-BHC~~	202.7867	2.393	0.103	564459	BB	? 15.81
6		0.0000	2.835		197489	BB	? 18.81
7		0.0000	3.095		132926	BB	? 25.69
8	~~HEPTACHLO~~	134.8504	3.962	-0.008	824588	BB	? 24.44
9		0.0000	5.373		25677436	VV	12.94
10	~~HEPT EPOX~~	4.0876	6.102	0.192	27073	T	13.44
11	~~A-ENDO~~	8.5693	7.172	-0.148	54553	T	21.31
12	~~4,4'-DDE~~	4.5525	8.259	-0.141	29044	T	? 27.31
13	~~DIELDRIN~~	8.5342	8.799	0.279	57269	T	20.88
14	~~4,4'-DDD~~	12.8045	10.408	-0.112	70958	T	22.44
15	~~ENDO SO4~~	27.0744	12.138	-0.212	112971	T	33.94
16	~~4,4'-DDT~~	6.2046	13.254	-0.456	25422	T	? 33.44
17		0.0000	14.275		89880	T	36.06
18	~~END KETON~~	6.4379	16.440	0.648	43204	T	40.56
19		0.0000	18.782		20063	T	? 50.44
20		0.0000	22.608		37132	BB	45.81
21	DBC	~~130.4585~~	27.590	0.280	696980	BB	81.00
TOTALS:		631.8765		0.440	33962360		

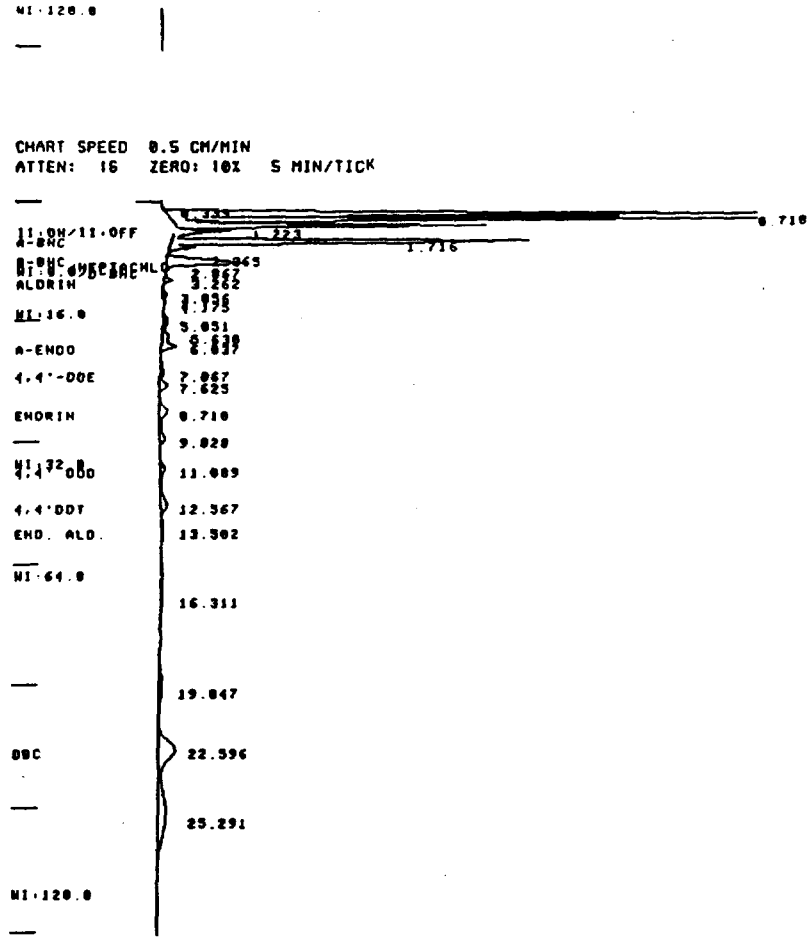
DETECTED PKS: 30 REJECTED PKS: 9

DIVISOR: 1.20000 MULTIPLIER: 5000.00000

NOISE: 11.4 OFFSET: -18

RACK: 2 VIAL: 2 INJ: 1

NOTES:
NOTEBOOK: 297-21 ANALYST: RICHARD SAMSON
SECURE AREA: U-4835 , U-4863
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN



DC-G4-36

CHANNEL: 1B - 1 TITLE: RUN# 8 20:42 8 MAY 87

SAMPLE: 0755 METHOD: PEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.223		22270	BB	1.88
2		0.0000	1.597		365536	BV	3.75
3	~~A-BHC~~	0.0000	1.716	-0.014	255205	VV	4.13
4		0.0000	1.923		38257	VB	4.19
5		0.0000	2.365		128092	BV	5.88
6	~~B-BHC~~	0.0000	2.508	0.018	128596	VB	6.38
7	~~ALDRIN~~	4.7446	3.262	0.062	21106	VB	7.31
8	~~HEPT EPOX~~	6.9742	5.051	0.281	27979	BV	20.06
9		0.0000	5.630		35061	VV	? 14.56
10	~~A-ENDO~~	14.2034	6.037	0.037	53941	VB	11.19
11	~~4,4'-DDE~~	0.0000	7.067	-0.023	24808	BV	22.19
12	~~DIELDRIN~~	9.2891	7.625	0.305	38141	VV	16.75
13	~~ENDRIN~~	0.0000	~~8.710~~ PCB	-0.370	71346	VV	25.13
14		0.0000	~~9.828~~ 1254		32811	VV	27.81
15	~~B-ENDOSUL~~	0.0000	11.089	0.089	38215	VV	34.88
16	~~4,4'DDT~~	27.0554	12.567	-0.213	65117	VV	47.44
17	~~END. ALD.~~	8.2856	13.502	-0.468	21828	VB	? 80.06
18		0.0000	19.847		51263	BV	72.13
19	DBC	94.4269	22.596	0.056	247747	VV	54.00
20	~~METHOXYCH~~	235.9794	25.291	0.801	266850	VB	?122.88
TOTALS:		400.9585		0.561	1934169		

DETECTED PKS: 31 REJECTED PKS: 11

DIVISOR: 1.20000 MULTIPLIER: 10000.0000

NOISE: 45.7 OFFSET: -9

NOTES:
NOTEBOOK: 297-24 ANALYST: RICHARD SAMSON
SECURE AREA: D JOB U-4835, U-4863
INST:VARIAN 6000#28 ECD 10X1 ATTN:8X
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
PHASE:1.5% SP2250/1.95% SP2401
CARRIER GAS: N2 @ 60 ML/MIN.
DET:300 C INJ:220 C
200 C ISOTHERMAL 4 UL INJECTION
CONFIRMATION RUNS DEAD CREEK SOIL SAMPLES

POST RUN:

SAMPLE NUMBER DC-IB-44

Laboratory Name: ECOLOGY & ENVIRONMENT INC.

Case No: U-4835, 4863, 4928, 4971

Sample Number: DC-IB-44

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 4-2-87

Date Analyzed: 5-7-87

Conc/Dil Factor: 2

Percent Moisture (Decanted) 22

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CONCENTRATIONS REPORTED "AS RECEIVED"

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
-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	42	J
120-12-7	Anthracene	330	U
84-74-2	Di-n-Butylphthalate	330	U
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	52	J
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	460	
218-01-9	Chrysene	67	J
117-84-0	Di-n-Octyl Phthalate	41	J
205-99-2	Benzo(b)Fluoranthene	330	U
207-08-9	Benzo(k)Fluoranthene	87	J
50-32-8	Benzo(a)Pyrene	47	J
193-39-5	Indeno(1, 2, 3-cd)Pyrene	330	U
53-70-3	Dibenzo(a, h)Anthracene	330	U
191-24-2	Benzo(g, h, i)Perylene	330	U

(1)-Cannot be separated from diphenylamine

Laboratory Name Ecology and Environment, Inc.
Case No 11-4835, 4863, 4928, 4971

Sample Number
DC-IB-44

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 4-2-87
Date Analyzed: 5-7-87
Conc/Dil Factor: 1
Percent Moisture (decanted) 22

GPC Cleanup ☐Yes ☑No
Separatory Funnel Extraction ☐Yes
Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	10 u
319-85-7	Beta-BHC	10 u
319-86-8	Delta-BHC	10 u
58-89-9	Gamma-BHC (Lindane)	10 u
76-44-8	Heptachlor	10 u
309-00-2	Aldrin	10 u
1024-57-3	Heptachlor Epoxide	10 u
959-98-8	Endosulfan I	10 u
60-57-1	Dieldrin	21 u
72-55-9	4, 4'-DDE	21 u
72-20-8	Endrin	21 u
33213-65-9	Endosulfan II	21 u
72-54-8	4, 4'-DDD	21 u
1031-07-8	Endosulfan Sulfate	21 u
50-29-3	4 4'-DDT	21 u
72-43-5	Methoxychlor	100 u
53494-70-5	Endrin Ketone	21 u
57-74-9	Chlordane	100 u
8001-35-2	Toxaphene	200 u
12674-11-2	Aroclor-1016	100 u
11104-28-2	Aroclor-1221	100 u
11141-16-5	Aroclor-1232	100 u
53469-21-9	Aroclor-1242	100 u
12672-29-6	Aroclor-1248	100 u
11097-69-1	Aroclor-1254	200 u
11096-82-5	Aroclor-1260	200 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

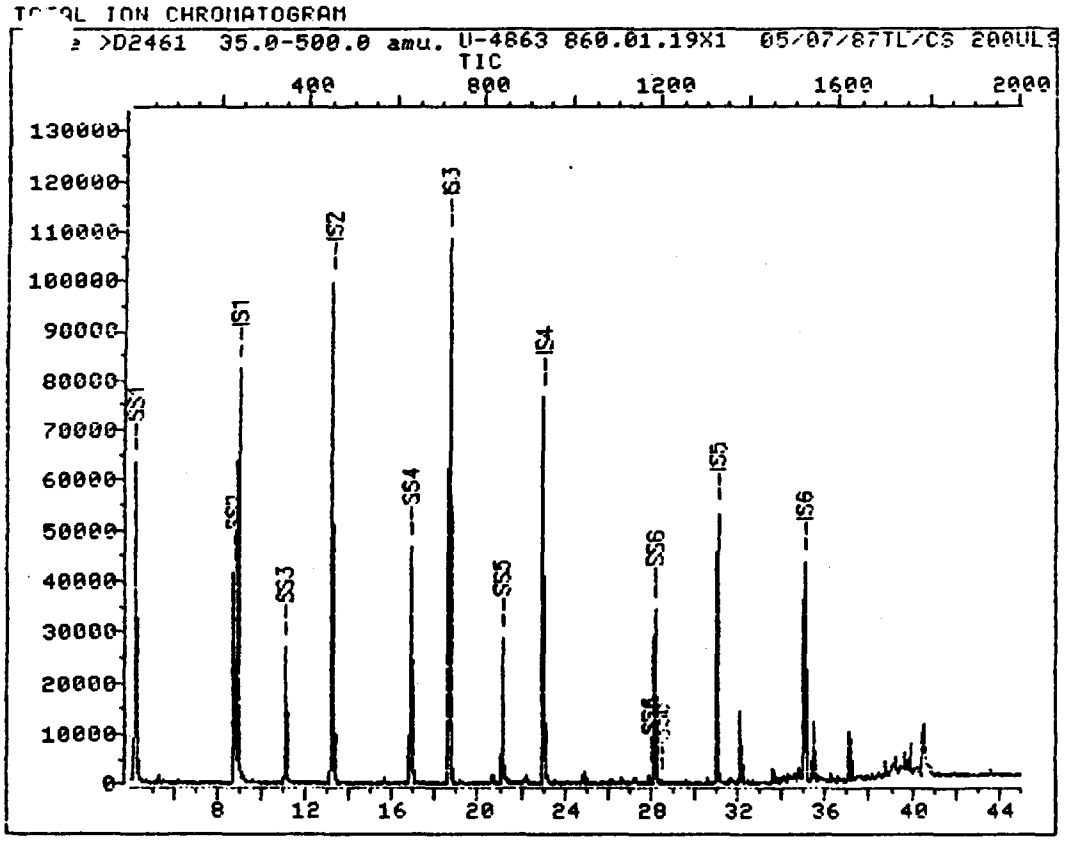
Laboratory Name: Ecology & Environment Inc.
Case No: 11-4835, 4863, 4928, 4971

Sample Number: DC-IB-44

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

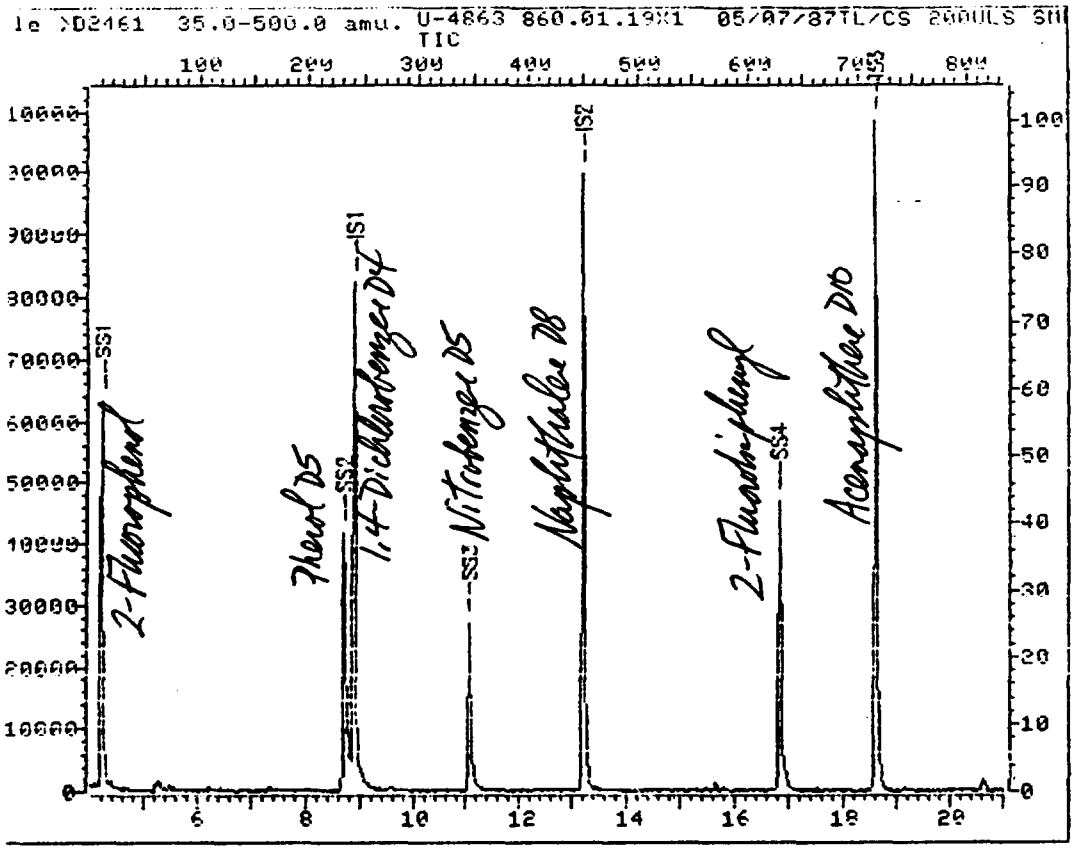
CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Unknown Aliphatic Hydrocarbon	BNA	35.39	480 J
2.	Unknown Aliphatic Hydrocarbon	|	37.08	460 J
3.	Unknown	|	39.85	330 J
4.	Unknown	|	40.50	1100 J
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				



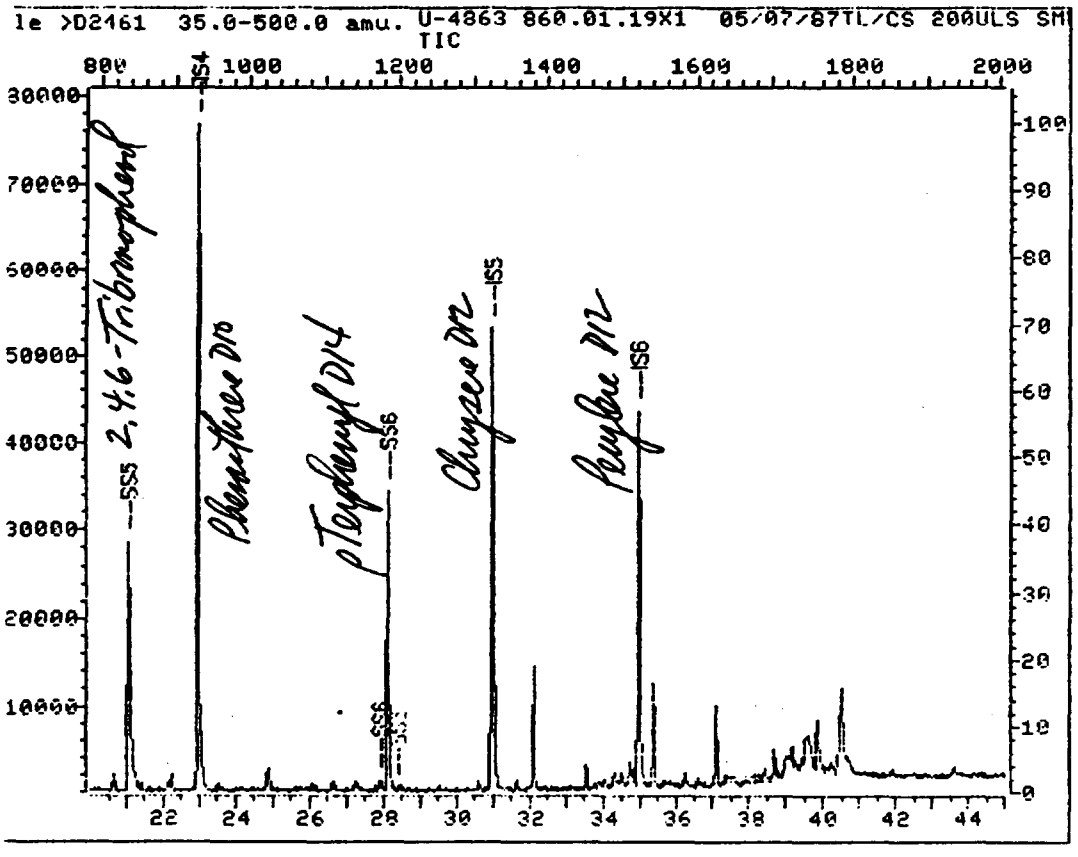
Data File: >D2461::D3
Name: U-4863 860.01.19X1 DC-IB-44
Misc: 05/07/87TL/CS 200ULS SMP + 200ULS MECL2+ 4ULS IS BTL# 4

Id File: BNAUR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870507 14:21

Operator ID: USER8
Quant Time: 870507 19:38
Injected at: 870507 18:50


le >D2161 35.0-500.0 amu. U-4863 860.01.19X1 05/07/87TL/CS 200ULS SM
TIC
SS1
2-Fluorophenol
IS1
Phenol D5
SS2
1,4-Dichlorobenzene D4
SS3
Nitrobenzene D5
IS2
Naphthalene D8
SS4
2-Fluorobiphenyl
IS3
Acenaphthene D10

DC-IB-44


le >D2161 35.0-500.0 amu. U-4863 860.01.19X1 05/07/87TL/CS 200ULS SM
TIC
SS5
2,4,6-Tribromophenol
IS4
Phenanthrene D10
SS6
p-Terphenyl D14
IS5
Chrysene D12
IS6
Perylene D12

QUANT REPORT

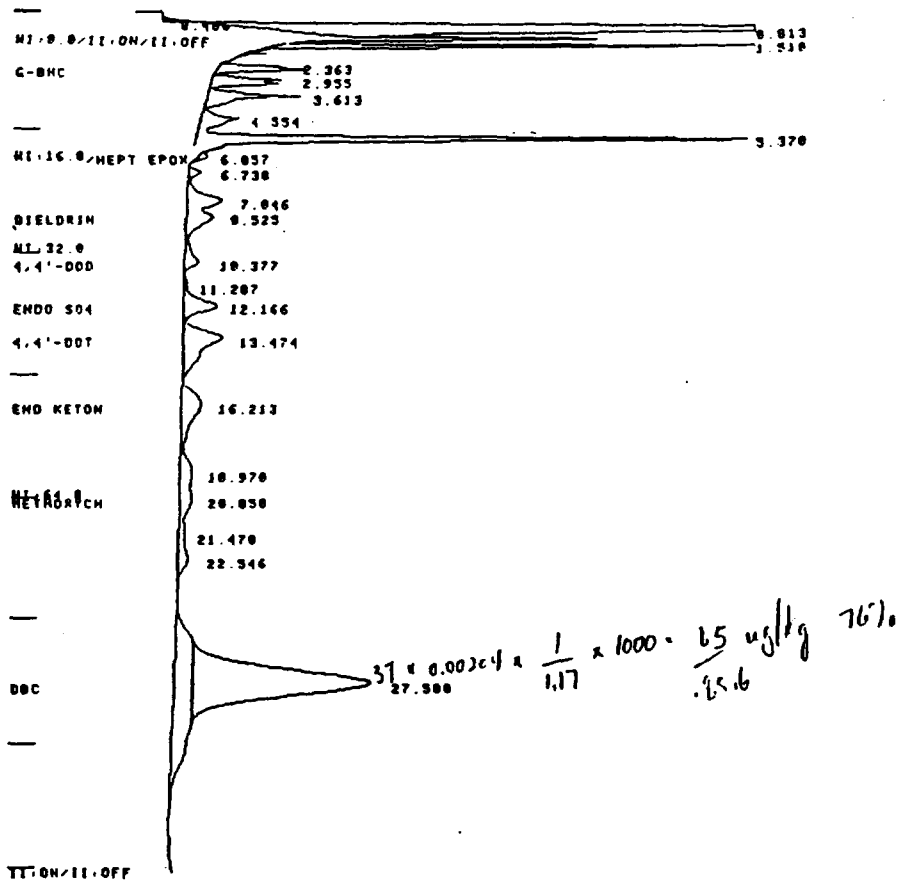
perator ID: USER8 Quant Rev: 4 Quant Time: 870507 19:38
utput File: ^D2461::Q2 Injected at: 870507 18:50
ata File: >D2461::D3 Dilution Factor: 2.00
ame: U-4863 860.01.19X1 DC-IB-44
isc: 05/07/87TL/CS 200ULS SMP + 200ULS MECL2+ 4ULS IS BTL# 4

D File: BNADR::D2
itle: BNA ID FILE FOR THE HP 5970 (B)
ast Calibration: 870507 14:21

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	8.91	241	38889	40.00 UG/L	82
2)	PHENOL-D5	(SURR)	99	8.20	231	58161	104.71 UG/L 105	96
5)	2-FLUOROPHENOL	(SURR)	112	4.20	10	49869	87.83 UG/L 88	86
12)	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.05~~	~~346~~	~~4592~~	~~8.28 UG/L~~ No GM	82
19)	*NAPHTHALENE-D8	(IS)	136	13.19	451	126610	40.00 UG/L	100
0)	NITROBENZENE-D5	(SURR)	82	11.05	346	28109	47.13 UG/L 94	98
4)	*ACENAPHTHENE-D10	(IS)	162	18.60	717	73994	40.00 UG/L	95
8)	2-FLUOROBIPHENYL	(SURR)	172	16.81	629	61252	48.44 UG/L 97	95
1)	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.60~~	~~717~~	~~14278~~	~~11.11 UG/L~~ No GM	100
8)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.07	838	24177	99.10 UG/L 99	97
2)	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.60~~	~~717~~	~~9724~~	~~33.96 UG/L~~ No GM	100
5)	*PHENANTHRENE-D10	(IS)	188	22.96	931	113773	40.00 UG/L	94
1)	PHENANTHRENE		178	23.03	934	1735	1.27 UG/L yes	91
2)	~~ANTHRACENE~~		~~178~~	~~23.03~~	~~934~~	~~1735~~	~~1.30 UG/L~~ No GM	91
5)	*CHRYSENE-D12	(IS)	240	30.99	1325	88559	40.00 UG/L	100
7)	PYRENE		202	27.22	1140	2608	1.56 UG/L yes	95
~~8)~~	~~TERPHENYL-D14~~	~~(SURR)~~	~~244~~	~~27.91~~	~~1174~~	~~1349~~	~~1.34 UG/L~~ No GM	100
8)	TERPHENYL-D14	(SURR)	244	28.14	1185	47671	47.44 UG/L 95	100
~~8)~~	~~TERPHENYL-D14~~	~~(SURR)~~	~~244~~	~~28.40~~	~~1198~~	~~58~~	~~.06 UG/L~~ No GM	100
1)	~~BENZO(A)ANTHRACENE~~		~~228~~	~~31.05~~	~~1328~~	~~2130~~	~~1.96 UG/L~~ No GM	91
2)	BIS(2-ETHYLHEXYL)PHTHALATE		149	32.11	1380	9922	13.94 UG/L yes	98
3)	CHRYSENE		228	31.05	1328	2130	2.01 UG/L yes	93
4)	*PERYLENE-D12	(IS)	264	34.98	1521	71090	40.00 UG/L	100
5)	DI-N-OCTYL PHTHALATE		149	33.90	1468	1530	1.24 UG/L yes	100
~~6)~~	~~BENZO(B)FLUORANTHENE~~		~~252~~	~~34.07~~	~~1476~~	~~3072~~	~~3.06 UG/L~~ No GM	100
7)	BENZO(K)FLUORANTHENE		252	34.07	1476	3072	2.62 UG/L yes	100
8)	BENZO(A)PYRENE		252	34.82	1513	1353	1.41 UG/L yes	100

* Compound is ISTD

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



37 x 0.00304 x 1/1.17 x 1000 = 65 ug/kg 76%
85.6

DC-IB-44

CHANNEL: 1A - 1 TITLE: RUN# 22 5:29 7 MAY 87

SAMPLE: 0860 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	1.510		535433	BV		4.06
2	~~G-BHC~~	3.2115	2.363	0.073	43579	BV	?	6.81
3	~~G-BHC~~	2.7259	2.484	-0.026	92727	VV	?	8.38
4		0.0000	2.955		88131	VV	?	8.63
5		0.0000	3.104		66900	VV	?	8.88
6		0.0000	3.613		195242	VV		9.94
7		0.0000	4.554		119437	VV		22.13
8		0.0000	5.370		946193	VV		11.75
9		0.0000	6.735		27507	BV		16.06
10		0.0000	7.838		148918	VV	?	32.06
11	~~DIELDRIN~~	3.7209	8.525	0.005	121724	VV	?	39.56
12	~~4,4'-DDD~~	2.5271	10.360	-0.152	68272	VV		23.00
13	~~ENDO SO4~~	7.3666	12.158	-0.192	149848	VV		31.63
14	~~4,4'-DDT~~	14.9025	13.474	-0.236	297666	VB		46.56
15	~~END KETON~~	6.1819	16.213	0.413	202243	BV		76.31
16		0.0000	18.970		188052	VV	?	66.31
17	~~METHOXYCH~~	0.2037	20.050	-0.020	92597	VV	?	74.44
18		0.0000	21.470		36892	VV	?	44.00
19		0.0000	22.546		73256	VB		47.44
20	DBC 76% pd.int.	~~95.2335~~ 65/85.6	27.500	0.270	2337062	BB		74.31
TOTALS:		144.0737		0.135	5751679			

DETECTED PKS: 32 REJECTED PKS: 12

DIVISOR: 1.17000 MULTIPLIER: 1000.00000

NOISE: 22.9 OFFSET: -3

RACK: 2 VIAL: 7 INJ: 1

NOTES:
NPOTEBOOK: 297-21 ANALYST: RICHARD SAMSON
SECURE AREA: U-4835 , U-4863
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
DET: 300 C INJ: 220 C
200 C ISOTHERMAL 4 UL INJECTION

SAMPLE NUMBER DC-I7-45

481095

Laboratory Name: ECOLOGY & ENVIRONMENT INC.

Case No: 4-4835, 4863, 4928, 4971

Sample Number: DC-I7-45

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 4-2-87

Date Analyzed: 5-7-87

Conc/Dil Factor: 2

Percent Moisture (Decanted) 23

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CONCENTRATIONS REPORTED "AS RECEIVED"

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
-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	580	
218-01-9	Chrysene	330	U
117-84-0	Di-n-Octyl Phthalate	48	J
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	Dibenzia 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-4835, 4863, 4928, 4971

Sample Number
DC-I7-45

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 4-2-87
Date Analyzed: 5-7-87
Conc/Dil Factor: 5
Percent Moisture (decanted) 23

GPC Cleanup ☐Yes ☑No
Separatory Funnel Extraction ☐Yes
Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	52 u
319-85-7	Beta-BHC	52 u
319-86-8	Delta-BHC	52 u
58-89-9	Gamma-BHC (Lindane)	52 u
76-44-8	Heptachlor	52 u
309-00-2	Aldrin	52 u
1024-57-3	Heptachlor Epoxide	52 u
959-98-8	Endosulfan I	52 u
60-57-1	Dieldrin	100 u
72-55-9	4, 4'-DDE	100 u
72-20-8	Endrin	100 u
33213-65-9	Endosulfan II	100 u
72-54-8	4, 4'-DDD	100 u
1031-07-8	Endosulfan Sulfate	100 u
50-29-3	4 4'-DDT	100 u
72-43-5	Methoxychlor	520 u
53494-70-5	Endrin Ketone	100 u
57-74-9	Chlordane	520 u
8001-35-2	Toxaphene	1040 u
12674-11-2	Aroclor-1016	520 u
11104-28-2	Aroclor-1221	520 u
11141-16-5	Aroclor-1232	520 u
53469-21-9	Aroclor-1242	520 u
12672-29-6	Aroclor-1248	520 u
11097-69-1	Aroclor-1254	1600
11096-82-5	Aroclor-1260	1000 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_i 1000 V_t 4

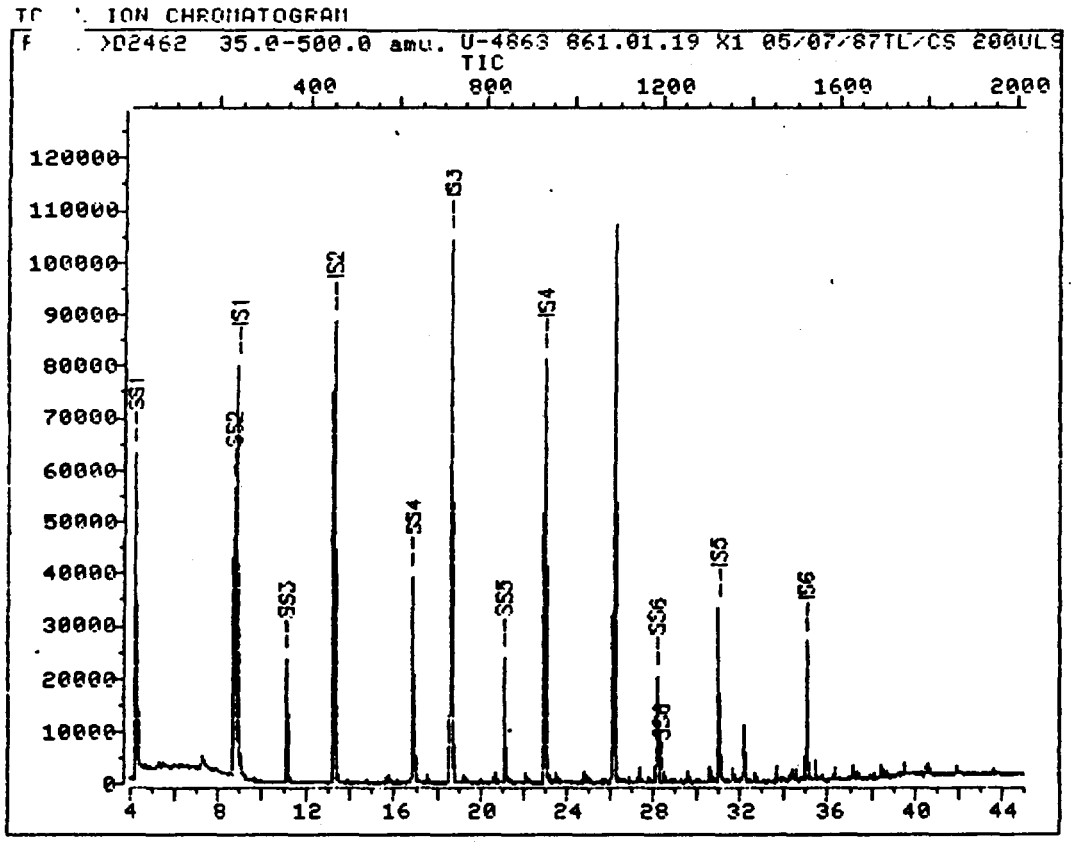
Laboratory Name: Ecology & Environment Inc.
Case No: 4-4835, 4863, 4928, 4971

Sample Number
DC-I7-45

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

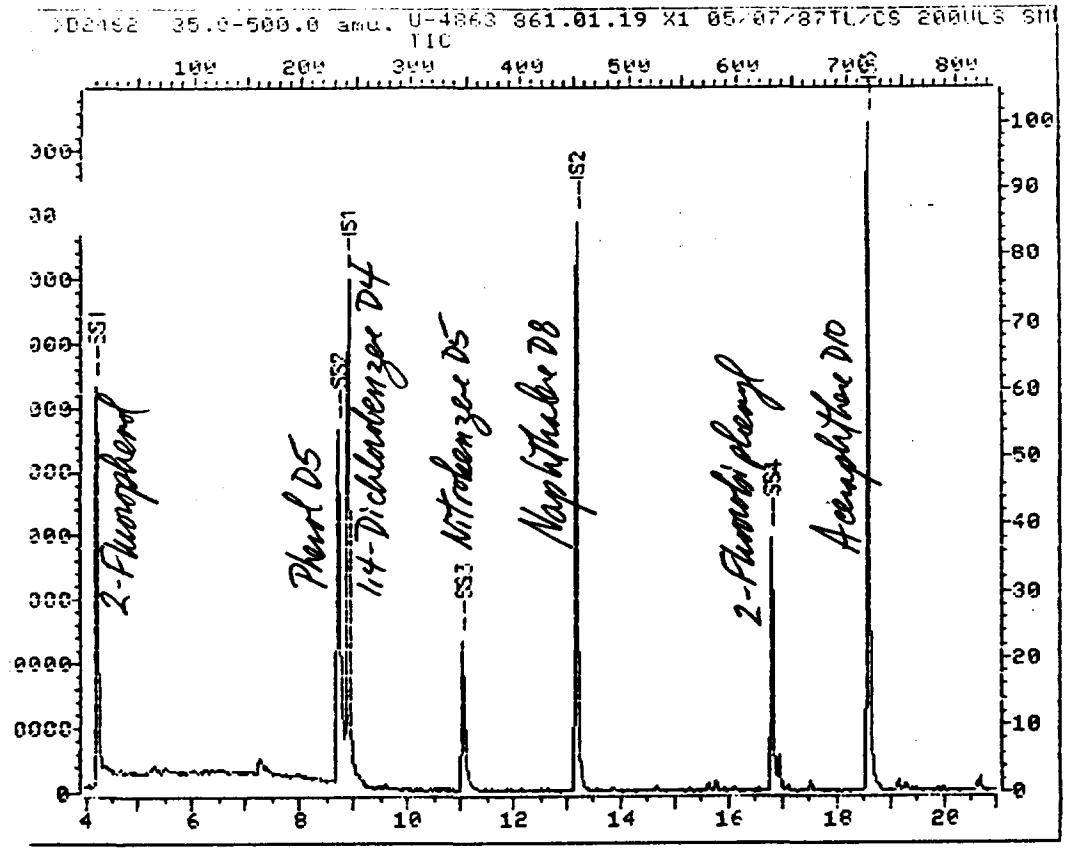
CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 10544500	Molecular Sulfur	BNA	26.17	3500 J
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				



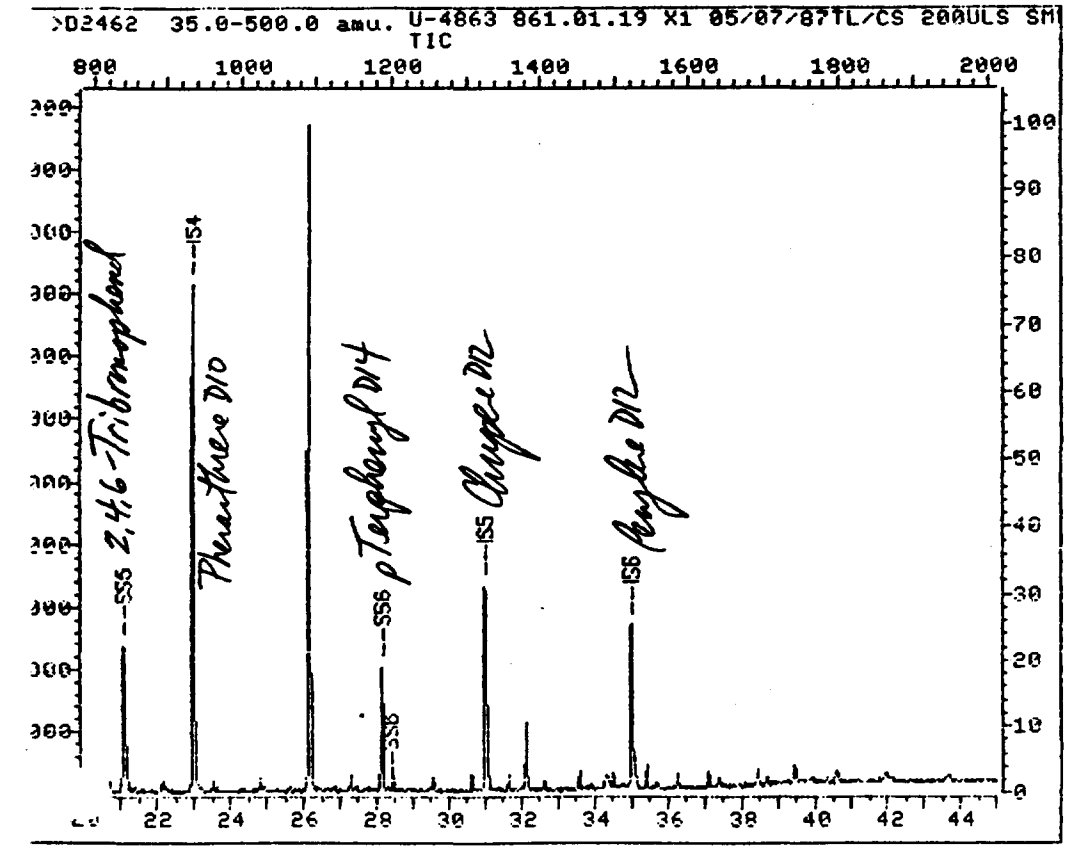
Data File: >D2462::D3
Name: U-4863 861.01.19 X1 DC-I7-45
Misc: 05/07/87TL/CS 200ULS SMP + 200ULS MECL2+ 4ULS IS BIL# 5

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870507 14:21

Operator ID: USER8
Quant Time: 870507 20:34
Injected at: 870507 19:46


D2462 35.0-500.0 amu. U-4863 861.01.19 X1 05/07/87TL/CS 200ULS SM
TIC
SS1
2-Fluorophenol
SS2
Phenol D5
IS1
1,4-Dichlorobenzene D4
SS3
Nitrobenzene D5
IS2
Naphthalene D8
SS4
2-Fluorobiphenyl
IS3
Acenaphthene D10

DC-I7-45


D2462 35.0-500.0 amu. U-4863 861.01.19 X1 05/07/87TL/CS 200ULS SM
TIC
SS5
2,4,6-Tribromophenol
IS4
Phenanthrene D10
SS6
p-Terphenyl D14
IS5
Chrysene D12
IS6
Perylene D12

QUANT REPORT

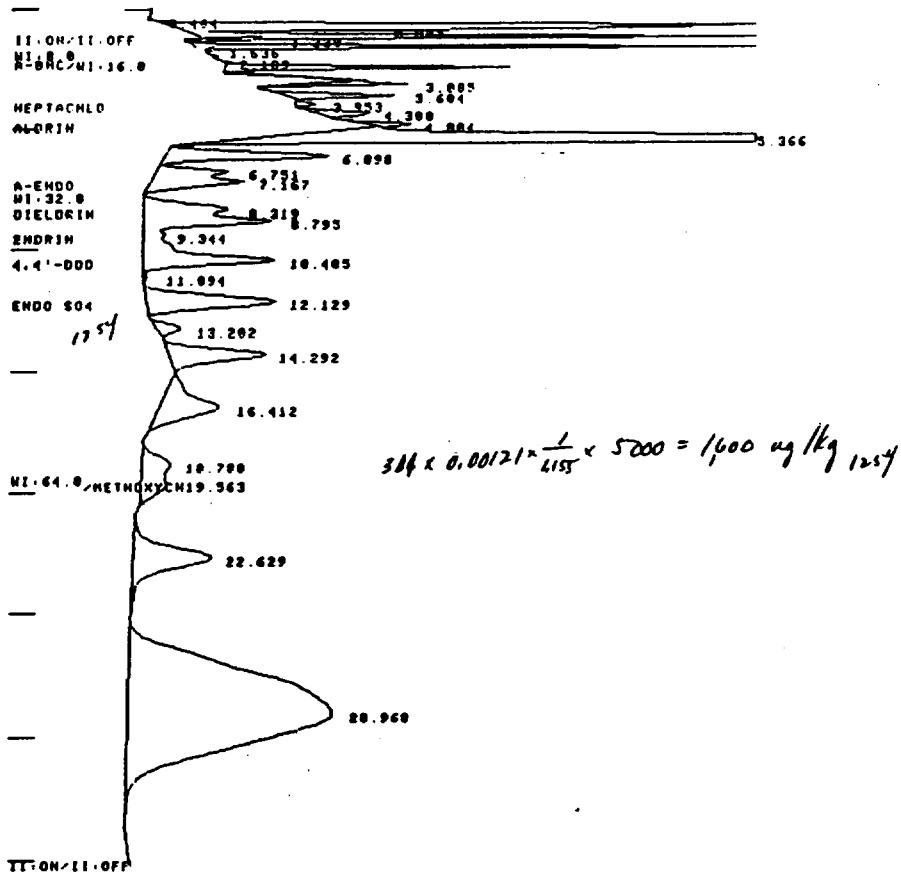
perator ID: USER8 Quant Rev: 4 Quant Time: 870507 20:34
utput File: ^D2462::Q2 Injected at: 870507 19:46
ata File: >D2462::D3 Dilution Factor: 2.00
ame: U-4863 861.01.19 X1 DCI7-45
isc: 05/07/87TL/CS 200ULS SMP + 200ULS MECL2+ 4ULS IS BTL# 5

D File: BNADR::D2
itle: BNA ID FILE FOR THE HP 5970 (B)
ast Calibration: 870507 14:21

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	8.90	242	41883	40.00 UG/L	88
2)	PHENOL-D5	(SURR)	99	8.71	233	80007	133.74 UG/L 134	96H
5)	2-FLUOROPHENOL	(SURR)	112	4.19	11	47441	77.58 UG/L 78	93
17)	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.06~~	~~348~~	~~3071~~	~~6.48 UG/L~~	96
19)	*NAPHTHALENE-D8	(IS)	136	13.19	453	124021	40.00 UG/L	100
10)	NITROBENZENE-D5	(SURR)	82	11.06	348	23610	40.41 UG/L 81	96
4)	*ACENAPHTHENE-D10	(IS)	162	18.61	719	75890	40.00 UG/L	99
3)	2-FLUOROBIPHENYL	(SURR)	172	16.82	631	43764	33.74 UG/L 67	93
1)	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.61~~	~~719~~	~~14682~~	~~11.14 UG/L~~	100
3)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.06	839	20703	82.74 UG/L 83	98
2)	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.59~~	~~718~~	~~9991~~	~~34.02 UG/L~~	100
5)	*PHENANTHRENE-D10	(IS)	188	22.97	933	107063	40.00 UG/L	97
5)	*CHRYSENE-D12	(IS)	240	30.98	1326	59706	40.00 UG/L	100
3)	TERPHENYL-D14	(SURR)	244	28.13	1186	31595	46.63 UG/L 93	100
~~3)~~	~~TERPHENYL-D14~~	~~(SURR)~~	~~244~~	~~28.35~~	~~1197~~	~~73~~	~~.11 UG/L~~	~~100~~
2)	BIS(2-ETHYLHEXYL)PHTHALATE		149	32.12	1382	8282	17.25 UG/L	98
4)	*PERYLENE-D12	(IS)	264	34.97	1522	50158	40.00 UG/L	100
5)	DI-N-OCTYL PHTHALATE		149	33.91	1470	1245	1.43 UG/L	100

* Compound is ISTD

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



$384 \times 0.00121 \times \frac{1}{4155} \times 5000 = 1{,}600$ ug/kg 1254

RECALCULATE ON FILE: D.CRK.860

CHANNEL: 1A - 1 TITLE: RUN# 23 6:07 7 MAY 87

DC-I7-45

SAMPLE: 0861 METHOD: CASE9 CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	WI/2 (SEC)
1		0.0000	1.230		27591	BB	2.31
2		0.0000	1.489		512143	BV	4.50
3	~~G-BHC~~	39.1409	2.395	-0.115	262078	BB	7.88
4		0.0000	3.086		46908	BB	? 12.69
5		0.0000	3.604		206006	BB	? 22.94
6		0.0000	4.308		115729	BB	? 22.56
7	~~ALDRIN~~	9.0433	4.804	-0.086	61050	BB	? 24.13
8		0.0000	5.366		10508863	BB	11.81
9	~~HEPT.EPOX~~	65.4305	6.098	0.188	417107	T	20.50
10		0.0000	~~6.751~~		~~162478~~	T	? 15.56
11	~~A-ENDO~~	46.6744	7.167	-0.153	285992	T	? 26.88
12	~~4,4'-DDE~~	44.7955	8.306	-0.094	275071	T	? 30.25
13	~~DIELDRIN~~	61.9941	8.795	0.275	400414	T	? 29.94
14	~~ENDRIN~~	7.6534	9.344	-0.136	41673	T	? 28.19
15	~~4,4'-DDD~~	99.2395	10.405	-0.115	529328	T	26.06
16	~~ENDO-SO4~~	137.5960	12.129	-0.221	552606	T	34.69
17	~~4,4'-DDT~~	18.6088	13.202	-0.508	73386	T	? 31.06
18		0.0000	14.292		416113	BB	40.44
19	~~END-KETON~~	68.1120	16.412	0.612	439954	BB	? 71.19
20		0.0000	18.788		172772	VV	? 49.13
21	~~METHOXYCH~~	70.7916	19.563	-0.507	157759	VB	? 76.38
22		0.0000	22.629		602124	BV	54.81
23		0.0000	28.968		5073019	VB	?221.56

TOTALS: 669.0808 -0.860 21331466

DETECTED PKS: 36 REJECTED PKS: 13

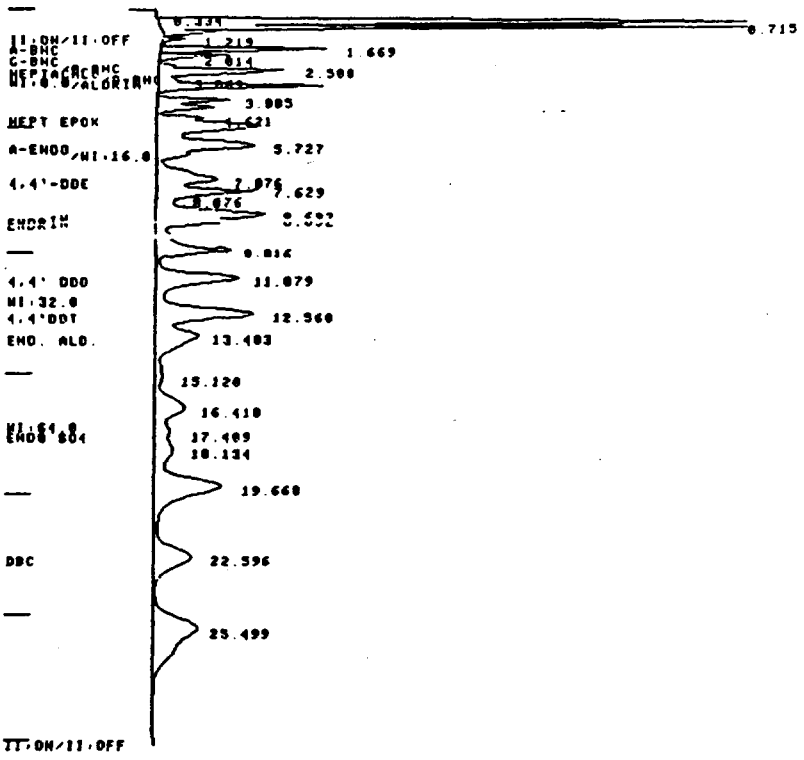
DIVISOR: 1.15500 MULTIPLIER: 5000.00000

NOISE: 11.4 OFFSET: -111

RACK: 2 VIAL: 8 INJ: 1

NOTES:
NPOTEBOOK: 297-21 ANALYST: RICHARD SAMSON
SECURE AREA: U-4835 , U-4863
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1

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



DC-I7-45

CHANNEL: 1B - 1 TITLE: RUN# 10 22:02 8 MAY 87

SAMPLE: 0861 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	1.594		171538	VV	?	3.75
2	~~A-BHC~~	0.0000	1.669	-0.061	142350	VV	?	5.19
3		0.0000	1.920		95373	VV		4.56
4	~~G-BHC~~	2.3333	2.014	-0.136	20995	VB	?	4.81
5		0.0000	2.347		35482	BV	?	8.50
6	~~B-BHC~~	0.0000	2.508	0.019	197319	VV	?	6.00
7	~~HEPTACHLO~~	31.1456	2.645	-0.005	243602	VV	?	9.94
8	~~D-BHC~~	0.0000	2.872	-0.028	35026	VV	?	10.69
9		0.0000	3.069		38387	VV	?	8.50
10	~~ALDRIN~~	49.1248	3.263	0.063	420671	VB		9.06
11		0.0000	3.895		192029	BV		10.06
12		0.0000	4.162		163042	VV		11.56
13		0.0000	4.621		123698	VV	?	11.25
14	~~HEPT EPOX~~	72.4563	4.897	0.127	559556	VV		21.44
15		0.0000	5.727		605205	VV	?	24.88
16	~~A-ENDO~~	14.5103	6.055	0.055	106080	VV	?	18.38
17	~~4,4'-DDE~~	0.0000	7.076	-0.014	468172	VV	?	33.19
18	~~DIELDRIN~~	70.6823	7.629	0.309	558677	VV		20.31
19		0.0000	8.076		47078	VV	?	
20	~~ENDRIN~~	0.0000	8.692	-0.308	686815	VV		23.13
21		0.0000	9.816		554057	VV		24.88
22	~~B-ENDOSUL~~	0.0000	11.079	0.079	637145	VV		27.19
23	~~4,4'DDT~~	178.6679	12.569	-0.212	827785	VV		31.00
24	~~END. ALD.~~	84.5591	13.483	-0.487	479542	VV		46.75
25		0.0000	15.120		93524	VV	?	81.00
26		0.0000	16.410		396878	VV		53.31
27	~~ENDO SO4~~	0.0000	17.409	0.139	123117	VV	?	39.69
28		0.0000	18.134		239811	VV	?	70.88
29		0.0000	19.669		956992	VV		48.19
30	DBC	189.3811	22.595	0.055	552037	VV		54.56
31	~~METHOXYCH~~	427.7296	25.493	1.009	931093	VB		78.19
TOTALS:		1050.510		0.524	10703055			

DETECTED PKS: 41 REJECTED PKS: 10

DIVISOR: 1.15500 MULTIPLIER: 5000.00000

NOISE: 57.1 OFFSET: -5

NOTES:
NOTEBOOK: 297-24 ANALYST: RICHARD SAMSON
SECURE AREA: D JOB U-4835, U-4863
INST:VARIAN 6000#2B ECD 10X1 ATTN:8X
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
PHASE:1.5% SP2250/1.95% SP2401

SAMPLE NUMBER DC-I7-46

Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No 4-4835, 4863, 4928, 4971

Sample Number DC-I7-46

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared 4-2-87

Date Analyzed 5-7-87

Conc/Dil Factor 2

Percent Moisture (Decanted) 20

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CONCENTRATIONS REPORTED "AS RECEIVED"

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
[illegible]-11-3	Dimethyl Phthalate	330	U
[illegible]-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	490	
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-4835, 4863, 4928, 4971

Sample Number
DC-I7-46

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 4-2-87
Date Analyzed: 5-7-87
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	20 u
319-85-7	Beta-BHC	20 u
319-86-8	Delta-BHC	20 u
58-89-9	Gamma-BHC (Lindane)	20 u
76-44-8	Heptachlor	20 u
309-00-2	Aldrin	20 u
1024-57-3	Heptachlor Epoxide	20 u
959-98-8	Endosulfan I	20 u
60-57-1	Dieldrin	40 u
72-55-9	4,4'-DDE	40 u
72-20-8	Endrin	40 u
33213-65-9	Endosulfan II	40 u
72-54-8	4,4'-DDD	40 u
1031-07-8	Endosulfan Sulfate	40 u
50-29-3	4,4'-DDT	40 u
72-43-5	Methoxychlor	200 u
53494-70-5	Endrin Ketone	40 u
57-74-9	Chlordane	200 u
8001-35-2	Toxaphene	400 u
12674-11-2	Aroclor-1016	200 u
11104-28-2	Aroclor-1221	200 u
11141-16-5	Aroclor-1232	200 u
53469-21-9	Aroclor-1242	200 u
12672-29-6	Aroclor-1248	200 u
11097-69-1	Aroclor-1254	400 u
11096-82-5	Aroclor-1260	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 & Environment Inc.

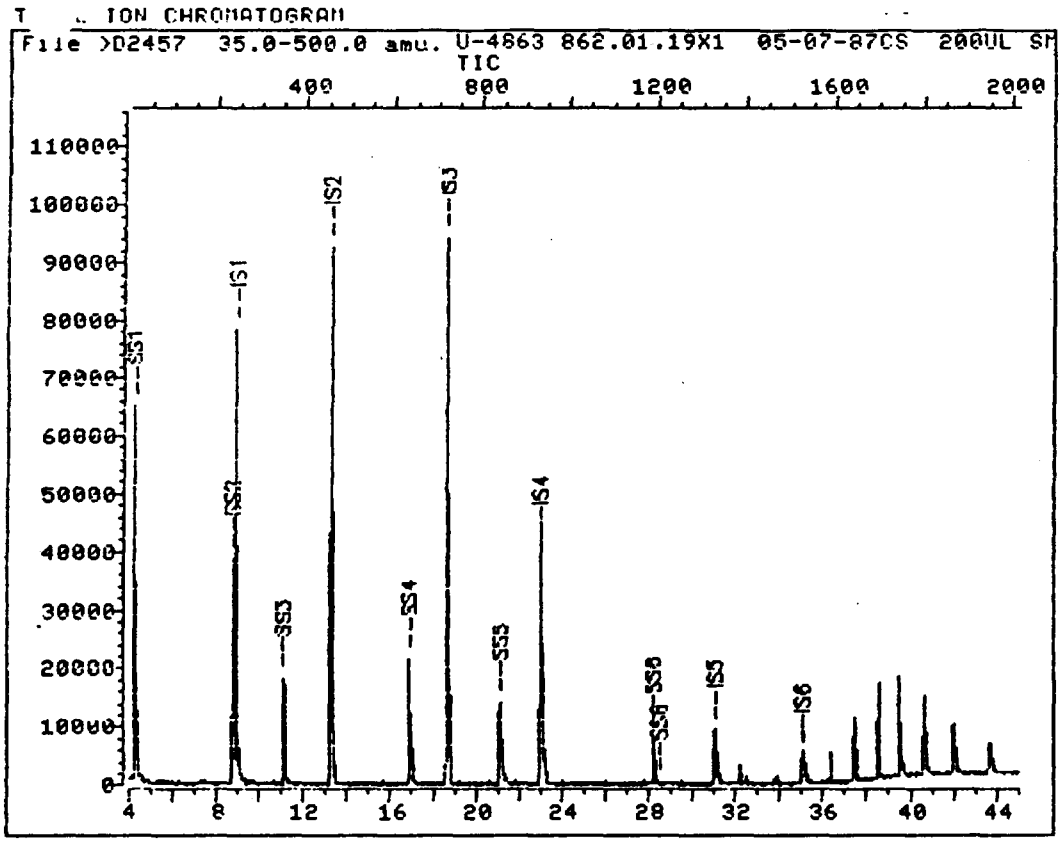
Case No: 11-4835, 4863, 4928, 4971

Sample Number: DC-I7-46

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

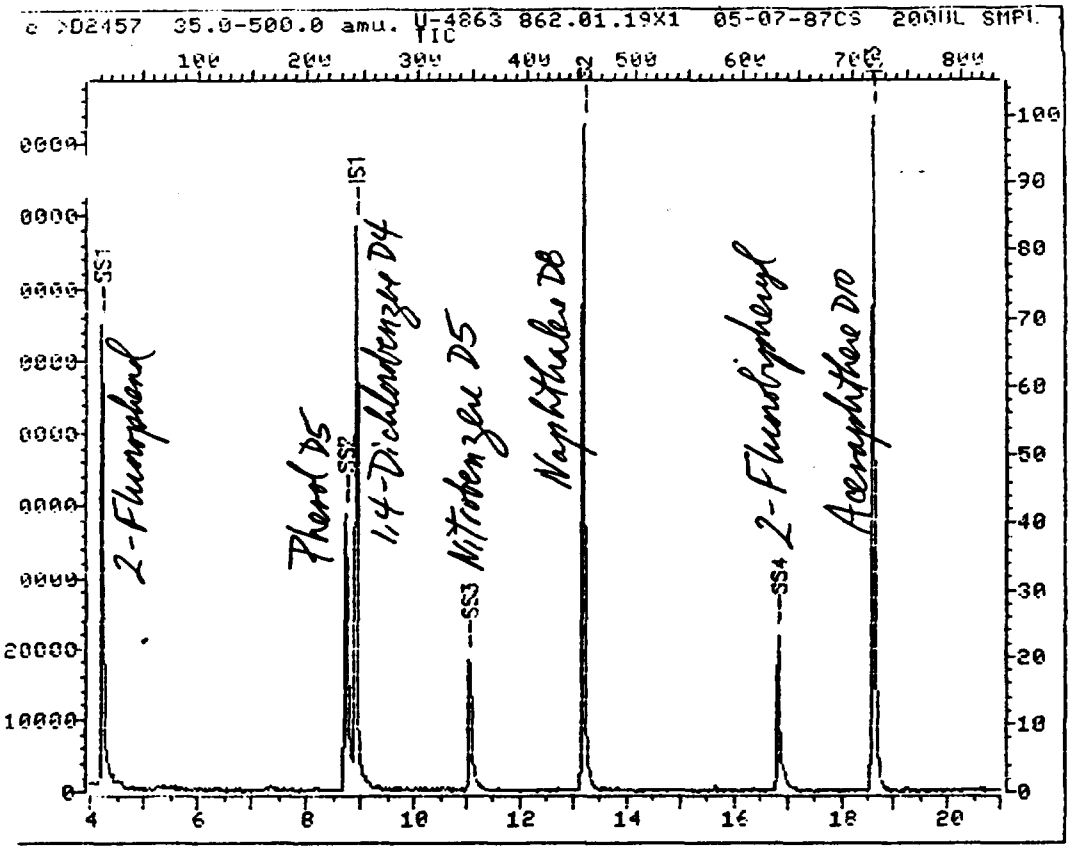
CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	No Semi-Volatile Compounds Found			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				



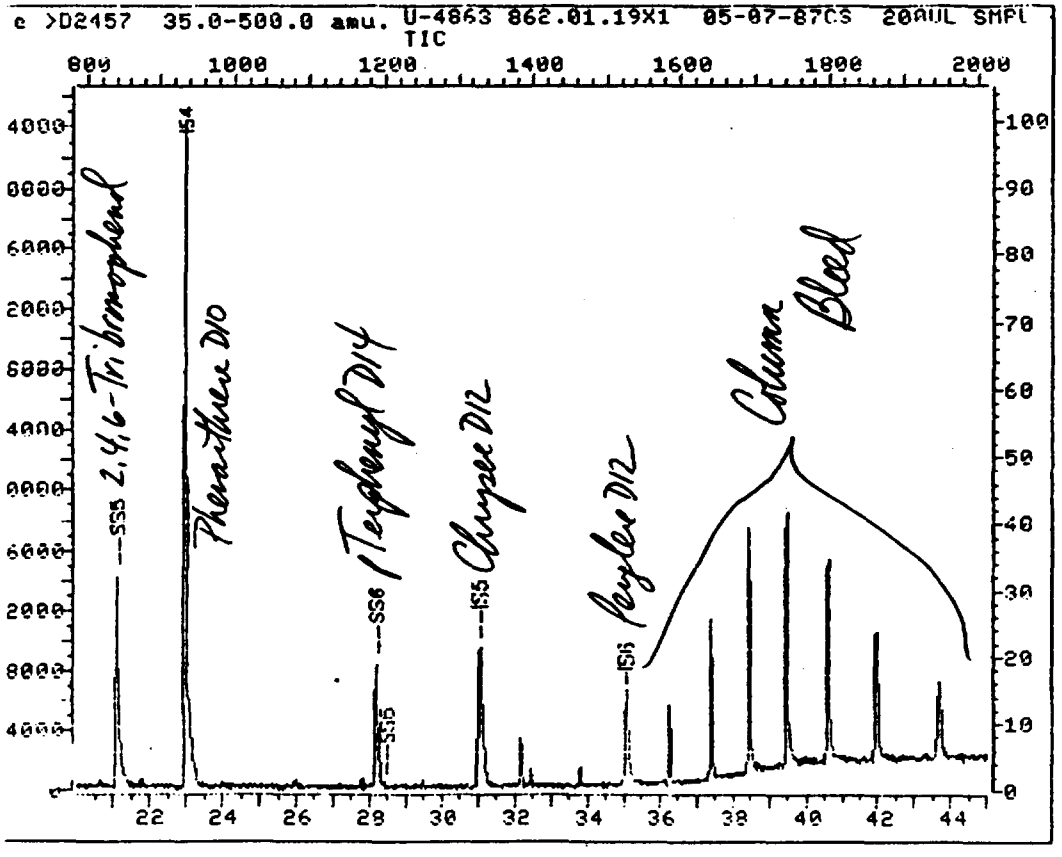
Data File: >D2457::D3
Name: U-4863 862.01.19X1 DC-I7-46
Misc: 05-07-87CS 200UL SMPL + 200UL MECL2 + 4UL IS BTL# 1

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870507 14:21

Operator ID: USER8
Quant Time: 870507 15:52
Injected at: 870507 15:05


c >D2457 35.0-500.0 amu. U-4863 862.01.19X1 05-07-87CS 200UL SMPL
TIC
SS1
2-Fluorophenol
IS1
Phenol D5
SS2
1,4-Dichlorobenzene D4
SS3
Nitrobenzene D5
Naphthalene D8
SS4
2-Fluorobiphenyl
Acenaphthene D10

DC-I7-46


c >D2457 35.0-500.0 amu. U-4863 862.01.19X1 05-07-87CS 200UL SMPL
TIC
SS5
2,4,6-Tribromophenol
IS4
Phenanthrene D10
SS6
Terphenyl D14
IS5
Chrysene D12
IS6
Perylene D12
Column Bleed

QUANT REPORT

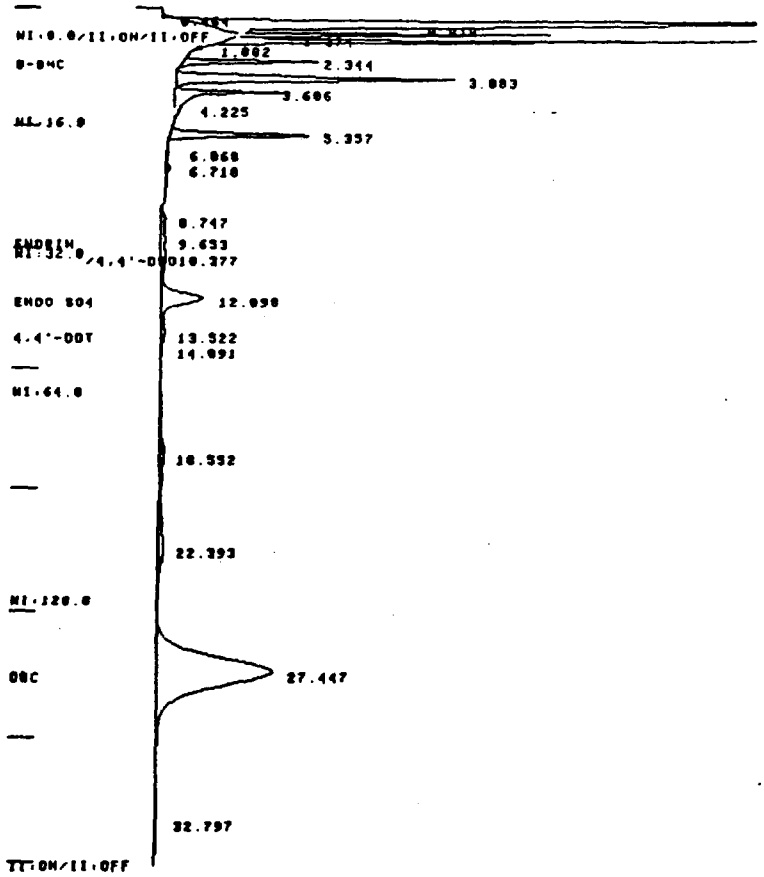
Operator ID: USER8 Quant Rev: 4 Quant Time: 870507 15:52
Output File: ^D2457::Q2 Injected at: 870507 15:05
Data File: >D2457::D3 Dilution Factor: 2.00
Name: U-4863 862.01.19X1 DC-I7-46
Misc: 05-07-87CS 200UL SMPL + 200UL MECL2 + 4UL IS BIL# 1

ID File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870507 14:21

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	8.92	243	40621	40.00 UG/L	89
2)	PHENOL-D5	(SURR)	99	8.72	233	54358	93.69 UG/L	94
5)	2-FLUOROPHENOL	(SURR)	112	4.19	11	49371	83.25 UG/L	85
17)	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.06~~	~~348~~	~~3711~~	~~6.41~~ UG/L No GM	83
19)	*NAPHTHALENE-D8	(IS)	136	13.20	453	128899	40.00 UG/L	100
0)	NITROBENZENE-D5	(SURR)	82	11.06	348	21425	35.28 UG/L	94
4)	*ACENAPHTHENE-D10	(IS)	162	18.62	719	74405	40.00 UG/L	96
8)	2-FLUOROBIPHENYL	(SURR)	172	16.84	632	34217	26.91 UG/L	92
1)	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.62~~	~~719~~	~~14240~~	~~11.02~~ UG/L No GM	100
8)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.10	841	15556	63.41 UG/L	95
2)	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.62~~	~~719~~	~~9683~~	~~33.63~~ UG/L No GM	100
5)	*PHENANTHRENE-D10	(IS)	188	22.98	933	92566	40.00 UG/L	92
5)	*CHRYSENE-D12	(IS)	240	31.02	1328	30995	40.00 UG/L	100
8)	TERPHENYL-D14	(SURR)	244	28.17	1188	21432	60.93 UG/L	100
8)	~~TERPHENYL-D14~~	~~(SURR)~~	~~244~~	~~28.45~~	~~1202~~	~~100~~	~~.28~~ UG/L No GM	100
2)	BIS(2-ETHYLHEXYL)PHTHALATE		149	32.14	1383	3672	14.74 UG/L	96
4)	*PERYLENE-D12	(IS)	264	35.03	1525	18121	40.00 UG/L	100

* Compound is ISTD

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



DC-I7-46

CHANNEL: 1A - 1 TITLE: RUN# 28 9:26 7 MAY 87

SAMPLE: 0062 METHOD: CFPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.374		30174	BV	? 4.94
2		0.0000	1.507		346026	VB	4.69
3	~~0-BHC~~	18.5971	2.344	0.054	129413	VV	6.13
4		0.0000	3.083		381404	VV	8.31
5		0.0000	3.606		188315	VV	8.63
6		0.0000	5.357		217153	BB	11.63
7	~~0-ENDO~~	1.5720	9.653	-0.027	24250	VV	? 31.44
8	~~4,4'-DDE~~	2.5152	10.377	-0.143	34846	VV	? 96.88
9	~~ENDO SO4~~	17.0495	12.098	-0.252	177853	VV	30.19
10	~~4,4'-DDT~~	2.2827	13.522	-0.188	23382	VV	? 64.00
11		0.0000	18.552		72043	BV	91.19
12		0.0000	22.393		83894	VB	98.63
13	DBC	98.5775	27.447	0.137	1240577	BV	76.50
TOTALS:		140.5941		-0.419	2949330		

DETECTED PKS: 28 REJECTED PKS: 15

DIVISOR: 1.20000 MULTIPLIER: 2000.00000

NOISE: 11.4 OFFSET: -4

NOTES:
NOTEBOOK: 297-21 ANALYST: RICHARD SAMSON
SECURE AREA: U-4835 , U-4863
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
OFT: 300 C INJ: 220 C
200 C ISOTHERMAL 4 UL INJECTION
PRIMARY ANALYSIS AUTOSAMPLER
DEAD CREEK

POST RUN:
SAVE FILE: RAW D.CRK.865

SAMPLE NUMBER DC-I7-47

Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No U-4835, 4863, 4928, 4971

Sample Number DC-I7-47

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 4-2-87

Date Analyzed 5-7-87

Conc./Dil Factor 2

Percent Moisture (Decanted) 21

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CONCENTRATIONS REPORTED "AS RECEIVED"

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
[illegible]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	340	
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-4835, 4863, 4928, 4971

Sample Number
DC-I7-47

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 4-2-87
Date Analyzed: 5-7-87
Conc/Dil Factor: 1
Percent Moisture (decanted) 21

GPC Cleanup ☐Yes ☑No
Separatory Funnel Extraction ☐Yes
Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	10 U
319-85-7	Beta-BHC	20 U
319-86-8	Delta-BHC	10 U
58-89-9	Gamma-BHC (Lindane)	10 U
76-44-8	Heptachlor	10 U
309-00-2	Aldrin	10 U
1024-57-3	Heptachlor Epoxide	10 U
959-98-8	Endosulfan I	10 U
60-57-1	Dieldrin	20 U
72-55-9	4,4'-DDE	20 U
72-20-8	Endrin	20 U
33213-65-9	Endosulfan II	20 U
72-54-8	4,4'-DDD	20 U
1031-07-8	Endosulfan Sulfate	20 U
50-29-3	4,4'-DDT	20 U
72-43-5	Methoxychlor	100 U
53494-70-5	Endrin Ketone	20 U
57-74-9	Chlordane	100 U
8001-35-2	Toxaphene	200 U
12674-11-2	Aroclor-1016	100 U
11104-28-2	Aroclor-1221	100 U
11141-16-5	Aroclor-1232	100 U
53469-21-9	Aroclor-1242	100 U
12672-29-6	Aroclor-1248	100 U
11097-69-1	Aroclor-1254	200 U
11096-82-5	Aroclor-1260	200 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

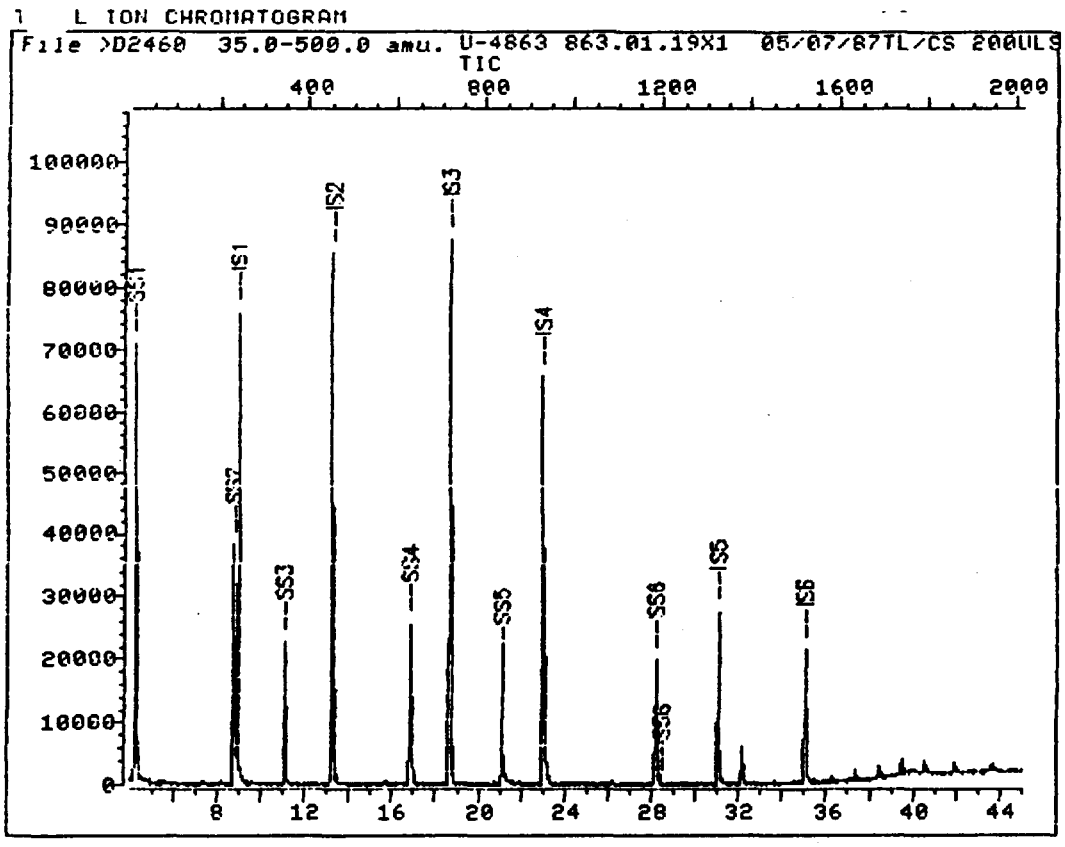
Laboratory Name: Ecology & Environment Inc.
Case No: H-4835, 4863, 4928, 4971

Sample Number
DC-I7-47

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

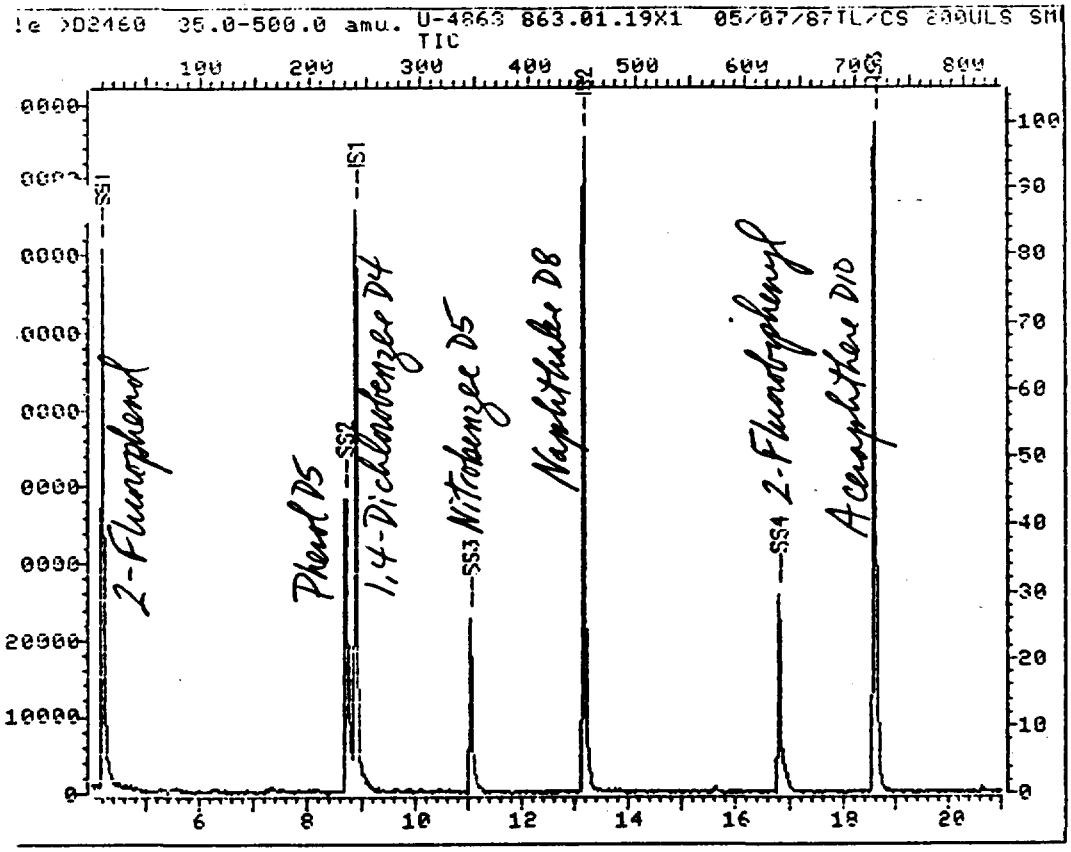
CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	No Semi-Volatile Compounds			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				



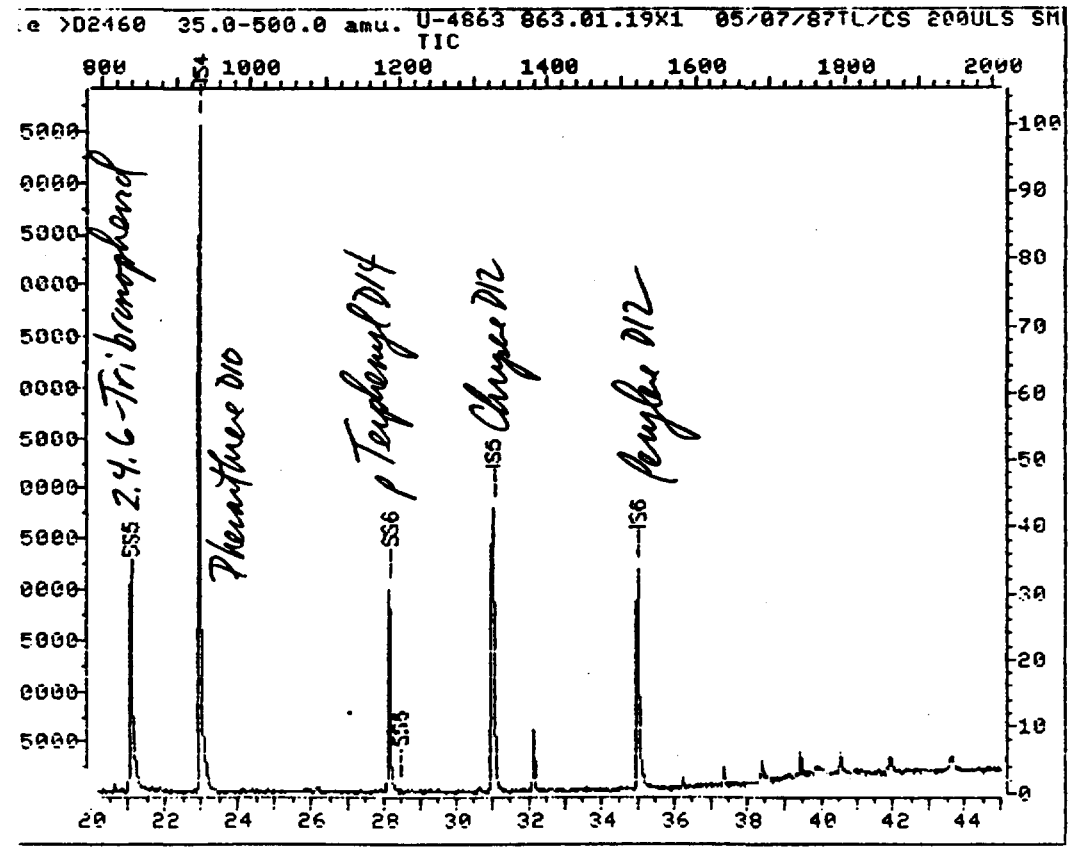
Data File: >D2460::D3 DC-I7-47
Name: U-4863 863.01.19X1
Misc: 05/07/87TL/CS 200ULS SMP + 200ULS MECL2+ 4ULS IS BTL# 3

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870507 14:21

Operator ID: USER8
Quant Time: 870507 18:42
Injected at: 870507 17:55


>D2460 35.0-500.0 amu. U-4863 863.01.19X1 05/07/87TL/CS 200ULS SM
TIC
SS1
2-Fluorophenol
IS1
Phenol D5
SS2
1,4-Dichlorobenzene D4
SS3
Nitrobenzene D5
IS2
Naphthalene D8
SS4
2-Fluorobiphenyl
IS3
Acenaphthene D10

DC-I7.47


>D2460 35.0-500.0 amu. U-4863 863.01.19X1 05/07/87TL/CS 200ULS SM
TIC
SS5
2,4,6-Tribromophenol
IS4
Phenanthrene D10
SS6
p-Terphenyl D14
IS5
Chrysene D12
IS6
Perylene D12

QUANT REPORT

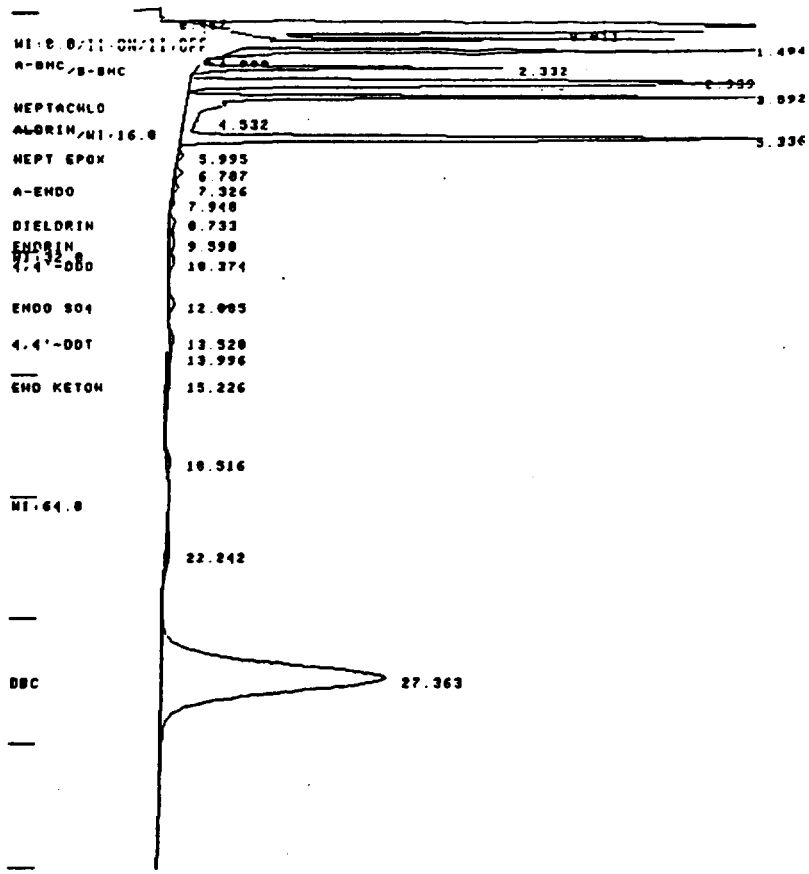
erator ID: USER8 Quant Rev: 4 Quant Time: 870507 18:42
itput File: ^D2460::Q2 Injected at: 870507 17:55
ata File: >D2460::D3 Dilution Factor: 2.00
ame: U-4863 863.01.19X1 DC-I7-47
isc: 05/07/87TL/CS 200ULS SMP + 200ULS MECL2+ 4ULS IS BIL# 3

) File: BNADR::D2
itle: BNA ID FILE FOR THE HP 5970 (B)
ast Calibration: 870507 14:21

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	~~*1,4~~-DICHLOROBENZENE-D4	(IS)	152	8.90	241	37681	40.00 UG/L	86
2)	PHENOL-D5	(SURR)	99	8.69	231	60096	111.66 UG/L 112	94
5)	2-FLUOROPHENOL	(SURR)	112	4.19	10	49749	90.43 UG/L 90	88
7)	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~78~~	~~11.06~~	~~347~~	~~3815~~	~~7.10 UG/L~~	87
9)	*NAPHTHALENE-D8	(IS)	136	13.20	452	124615	40.00 UG/L	100
1)	NITROBENZENE-D5	(SURR)	82	11.06	347	23897	40.71 UG/L 81	98
4)	*ACENAPHTHENE-D10	(IS)	162	18.61	718	74802	40.00 UG/L	96
8)	2-FLUOROBIPHENYL	(SURR)	172	16.82	630	37967	29.70 UG/L 59	94
.)	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.61~~	~~718~~	~~14242~~	~~10.96 UG/L~~	100
8)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.06	838	21203	85.97 UG/L 86	99
2)	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.59~~	~~717~~	~~9915~~	~~34.25 UG/L~~	100
5)	*PHENANTHRENE-D10	(IS)	188	22.97	932	114637	40.00 UG/L	97
5)	*CHRYSENE-D12	(IS)	240	31.00	1326	63289	40.00 UG/L	100
8)	TERPHENYL-D14	(SURR)	244	28.15	1186	37115	51.68 UG/L 103	100
8)	~~TERPHENYL-D14~~	~~(SURR)~~	~~244~~	~~28.41~~	~~1199~~	~~78~~	~~.10 UG/L~~	100
8)	~~TERPHENYL-D14~~	~~(SURR)~~	~~244~~	~~28.45~~	~~1201~~	~~136~~	~~.19 UG/L~~	100
2)	BIS(2-ETHYLHEXYL)PHTHALATE		149	32.12	1381	5159	10.14 UG/L	96
4)	*PERYLENE-D12	(IS)	264	34.99	1522	49915	40.00 UG/L	100

* Compound is ISTD

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



DC-I7-47

CHANNEL: 1A - 1 TITLE: RUN# 29 10:14 7 MAY 87

SAMPLE: 0863 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	1.494		704915	BV	4.44
2	~~B-BHC~~ Syd. B	19.3175	2.332	0.042	265491	VV	6.06
3		0.0000	2.939		433657	VV	? 8.00
4		0.0000	3.066		642750	VV	? 9.19
5		0.0000	3.592		707673	VV	8.69
6	HEPTACHLO	3.7012	3.901	-0.069	111747	VV	? 25.50
7		0.0000	4.532		26437	VV	? 16.25
8	~~ALDRIN~~	0.6017	4.704	-0.186	21110	VV	? 28.44
9		0.0000	5.336		967564	VV	11.81
10	~~DIELDRIN~~	0.7728	8.733	0.213	25606	T	? 21.75
11	~~B-ENDO~~	0.7597	9.598	-0.002	23145	T	? 52.63
12	~~4,4'-DDD~~	0.8768	10.363	-0.157	23990	T	? 36.25
13	~~ENDO SO4~~	1.2767	12.005	-0.265	26303	T	32.88
14	~~4,4'-DDT~~	1.0017	13.996	0.286	20265	VV	? 60.44
15	~~END KETON~~	0.9989	15.226	-0.574	33097	VB	? 39.81
16		0.0000	18.516		20301	BB	? 48.00
17		0.0000	22.242		39845	BB	62.00
18	DBC	90.5676	27.363	0.053	2251052	BB	73.44
		119.9					
TOTALS:		119.8745		-0.739	6344948		

DETECTED PKS: 33 REJECTED PKS: 15

DIVISOR: 1.18500 MULTIPLIER: 1000.00000

NOISE: 11.4 OFFSET: -4

RACK: 2 VIAL: 13 INJ: 1

NOTES:
NOTEBOOK: 297-21 ANALYST: RICHARD SAMSON
SECURE AREA: U-4835 , U-4863
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
DET: 300 C INJ: 220 C
200 C ISOTHERMAL 4 SL INJECTION

SAMPLE NUMBER DC-03-61

Laboratory Name: ECOLOGY & ENVIRONMENT INC.

Case No: 4-4835, 4863, 4928, 4971

Sample Number: DC-03-61

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 4-9-87

Date Analyzed: 5-18-87

Conc/Dil Factor: 2

Percent Moisture (Decanted) 16

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CONCENTRATIONS REPORTED "AS RECEIVED"

CAS Number		ug/l or (ug/Kg) (Circle One)
108-95-2	Phenol	360
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	48 J
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
3-96-8	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	27000
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	200 J
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	Dibenzia, 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-4835, 4863, 4928, 4971

Sample Number DC-03-61

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 4-9-87

Date Analyzed: 5-11-87

Conc/Dil Factor: 50

Percent Moisture (decanted) 16 —

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
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	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

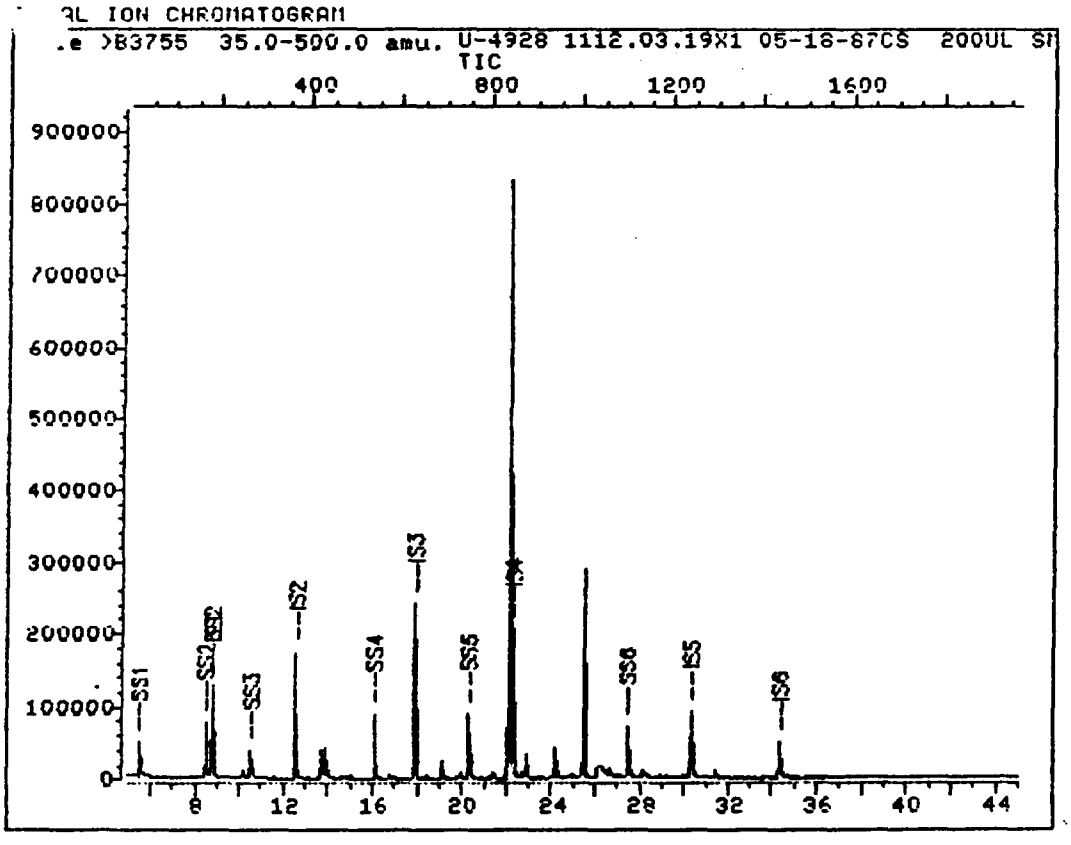
Laboratory Name: Ecology & Environment Inc.
Case No: U-4835, 4863, 4928, 4971

Sample Number
DC-03-61

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.	Chloronitrobenzene Isomer	BNA	13.69	710 J
2.	Chloronitrobenzene Isomer		13.85	800 J
3.	Tetrachlorophenol Isomer		19.10	450 J
4. 10544500	Molecular Sulfur		25.49	3000 J
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

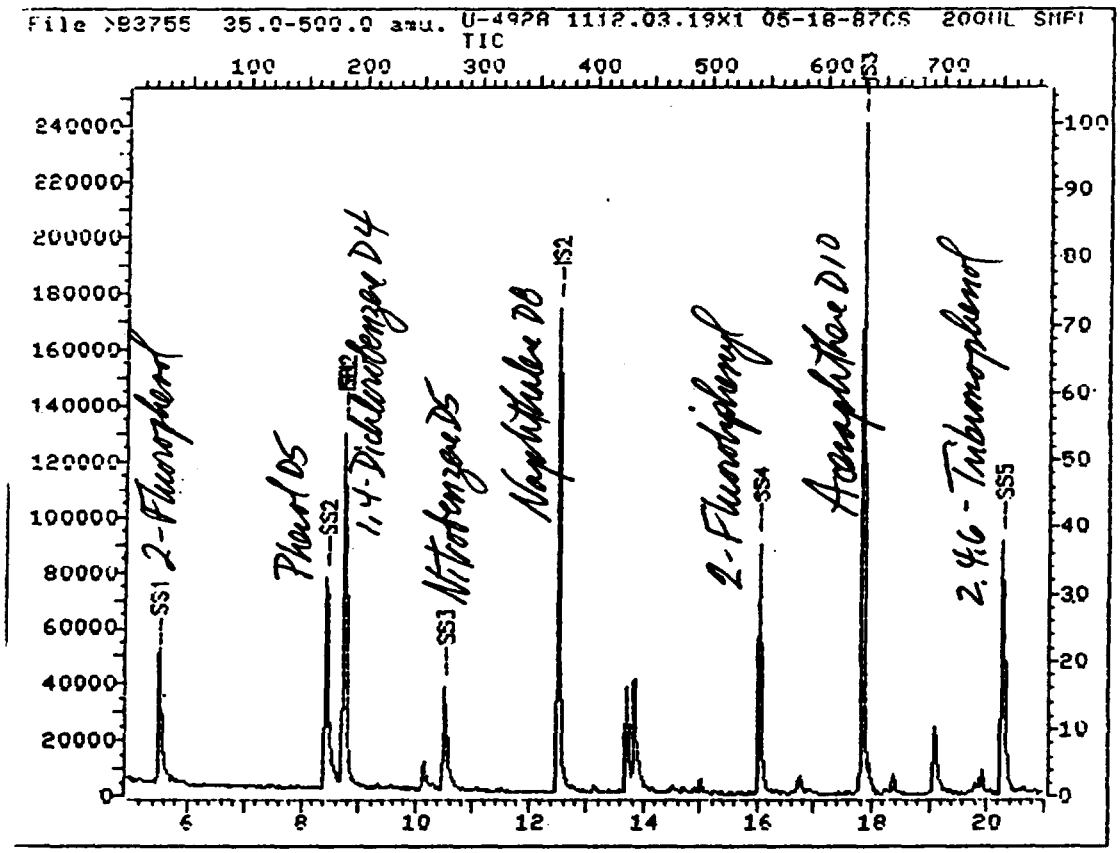


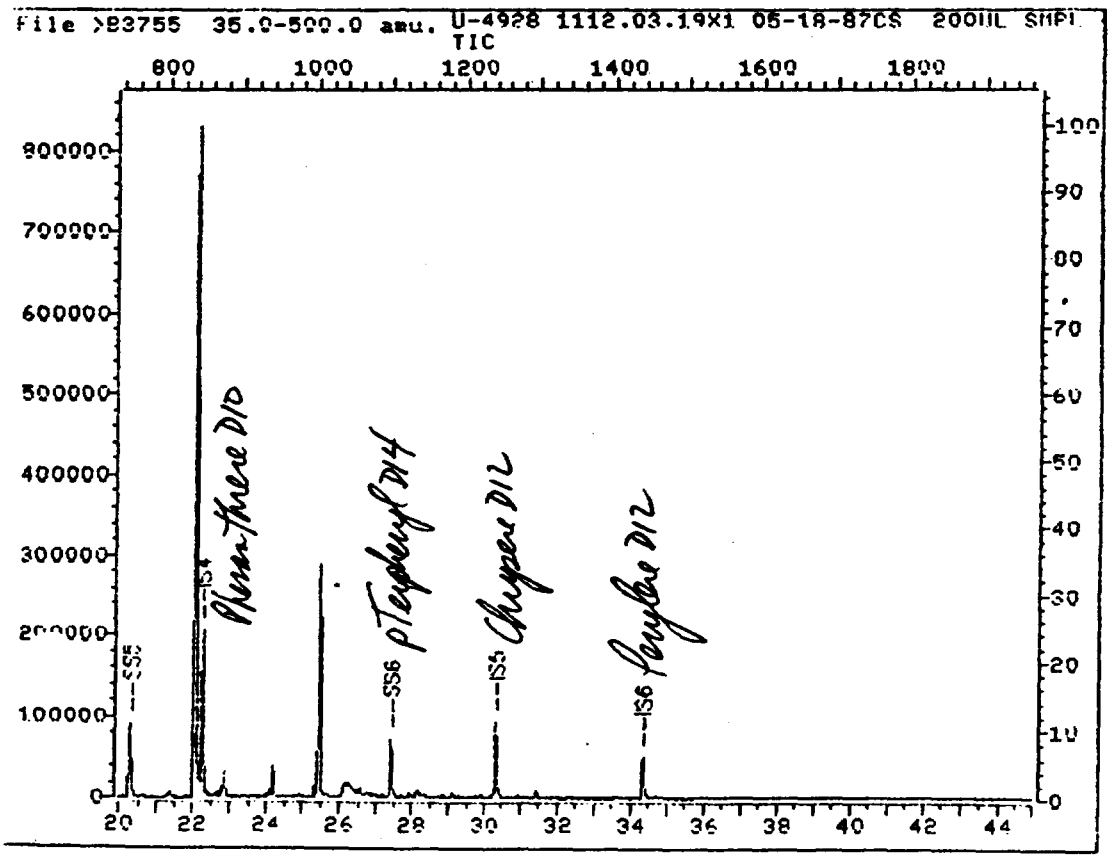
Data File: >B3755::D4
Name: U-4928 1112.03.19X1 DC-03-61
Misc: 05-18-87CS 200UL SMPL + 200UL MECL2 + 4UL IS

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870518 11:33

Operator ID: USER8
Quant Time: 870518 16:09
Injected at: 870518 15:22

DC-0361


File >83755 35.0-500.0 amu. U-4928 1112.03.19X1 05-18-87CS 200ML SMPI
TIC
2-Fluorophenol
Phenol D5
1,4-Dichlorobenzene D4
Nitrobenzene D5
Naphthalene D8
2-Fluorobiphenyl
Acenaphthene D10
2,4,6-Tribromophenol
SS1
SS2
SS3
IS2
SS4
SS5


File >83755 35.0-500.0 amu. U-4928 1112.03.19X1 05-18-87CS 200ML SMPI
TIC
Phenanthrene D10
pTerphenyl D14
Chrysene D12
Perylene D12
SS5
IS4
SS6
IS5
IS6

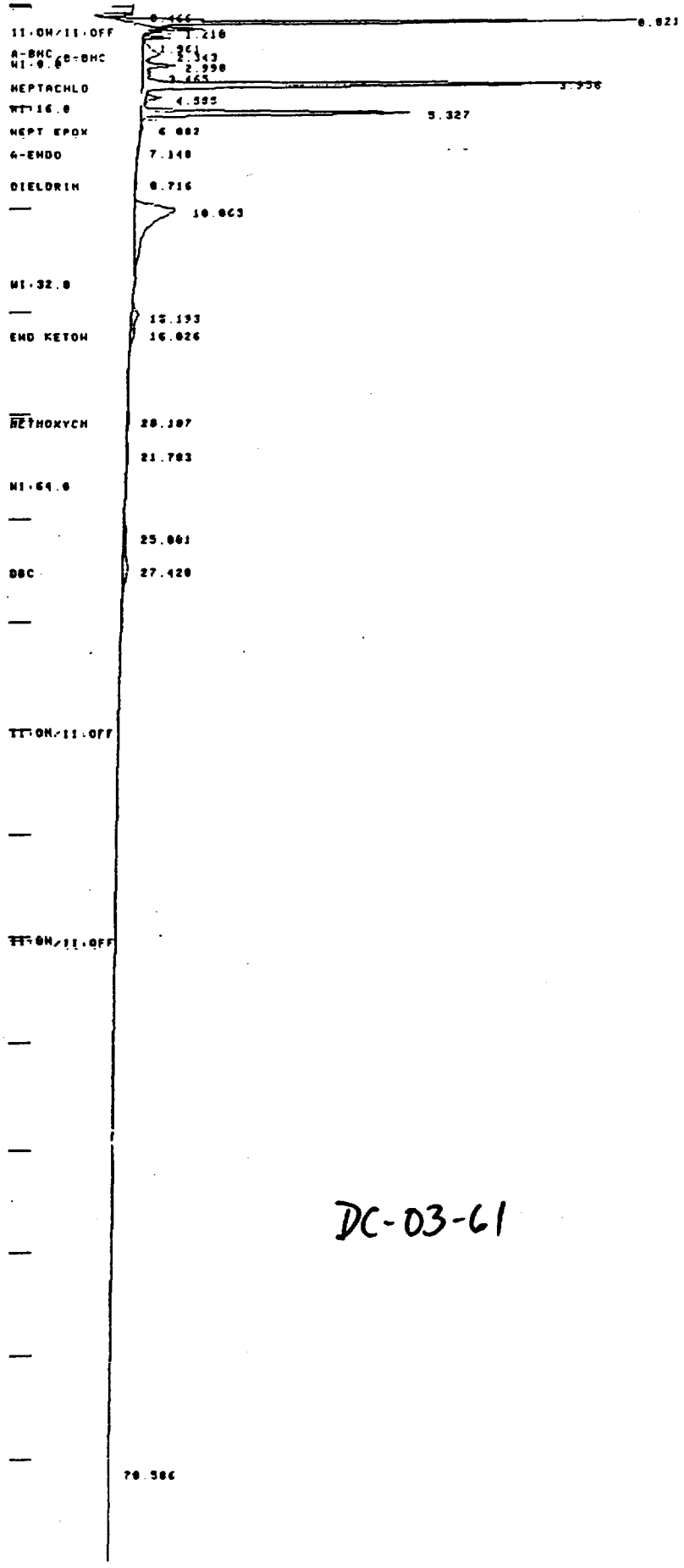
QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 870518 16:09
Output File: ^B3755::Q2 Injected at: 870518 15:22
Data File: >B3755::D4 Dilution Factor: 2.00
Name: U-4928 1112.03.19X1 DC-03-61
Misc: 05-18-87CS 200UL SMPL + 200UL MECL2 + 4UL IS

ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870518 11:33

	Compound		R.T.	Scan#	Area	Conc	Units		q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	8.75	185	67680	40.00	UG/L	86
2)	PHENOL-D5	(SURR)	99	8.44	170	83845	63.77	UG/L 64%	95
2)	~~PHENOL-D5~~	~~(SURR)~~	~~99~~	~~8.75~~	~~185~~	~~2633~~	~~2.00~~	~~UG/L~~ NOBM	85
5)	2-FLUOROPHENOL	(SURR)	112	5.49	25	41459	42.42	UG/L 42	78
6)	PHENOL		94	8.46	171	11785.	10.86	UG/L	77
12)	1,2-DICHLOROBENZENE		146	9.32	213	1798	1.44	UG/L	96
~~13)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~10.52~~	~~272~~	~~7607~~	~~7.22~~	~~UG/L~~ NOBM	96
19)	*NAPHTHALENE-D8	(IS)	136	12.51	370	244819	40.00	UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	10.52	272	46626	37.40	UG/L 75	95
29)	~~NAPHTHALENE~~		~~128~~	~~12.57~~	~~373~~	~~3126~~	~~.99~~	~~UG/L~~ NOBM	100
33)	~~2-METHYLNAPHTHALENE~~		~~142~~	~~14.71~~	~~478~~	~~1988~~	~~.90~~	~~UG/L~~	93
34)	*ACENAPHTHENE-D10	(IS)	162	17.84	632	167058	40.00	UG/L	98
38)	2-FLUOROBIPHENYL	(SURR)	172	16.03	543	106135	42.06	UG/L 84	92
41)	~~DIMETHYL PHTHALATE~~		~~163~~	~~17.84~~	~~632~~	~~30378~~	~~10.63~~	~~UG/L~~ NOBM	100
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.28	752	49313	64.31	UG/L 64	99
52)	~~2,6-DINITROTOLUENE~~		~~165~~	~~17.84~~	~~632~~	~~21701~~	~~35.16~~	~~UG/L~~ NOBM	100
55)	*PHENANTHRENE-D10	(IS)	188	22.25	849	270894	40.00	UG/L	93
60)	PENTACHLOROPHENOL		266	22.09	841	479669	777.32	UG/L	100
60)	PENTACHLOROPHENOL		266	22.13	843	15707	25.45	UG/L	100
61)	~~PHENANTHRENE~~		~~178~~	~~22.31~~	~~852~~	~~3067~~	~~.90~~	~~UG/L~~	96
62)	~~ANTHRACENE~~		~~178~~	~~22.31~~	~~852~~	~~3067~~	~~.93~~	~~UG/L~~ NOBM	96
65)	*CHRYSENE-D12	(IS)	240	30.31	1245	146420	40.00	UG/L	100
68)	TERPHENYL-D14	(SURR)	244	27.42	1103	87791	49.28	UG/L 99	100
72)	BIS(2-ETHYLHEXYL)PHTHALATE		149	31.41	1299	7877	5.98	UG/L	92
74)	*PERYLENE-D12	(IS)	264	34.34	1443	97271	40.00	UG/L	100

* Compound is ISTD



DC-03-61

122

CHANNEL: 1A - 1 TITLE: RUN# 15 23:51 11 MAY 87

FILE: 1112 METHOD: CEPA CALCULATION: ES - ANALYS

?8.596

CHANNEL: 1A - 1 TITLE: RUN# 15 23:51 11 MAY 87

DC-03-61

SAMPLE: 1112 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1	~~B-BHC~~	107.8522	2.343	0.043	35634	VV	? 11.31
2		0.0000	2.998		50809	VV	9.19
3	~~HEPTACHLO~~	1048.672	3.956	-0.024	735051	VV	9.56
4		0.0000	4.585		29452	T	14.25
5		0.0000	5.323		504370	VB	11.88
6	~~B-ENDO~~	506.0451	10.063	0.383	372092	BB	49.19
7		0.0000	15.193		41955	BV	38.13
8	~~END KETON~~	34.4417	16.026	0.216	26699	VB	? 36.38
9	~~DDC~~	97.8188	27.420	0.110	57204	VB	69.56
TOTALS:		1794.830		0.728	1853266		

DETECTED PKS: 30 REJECTED PKS: 21

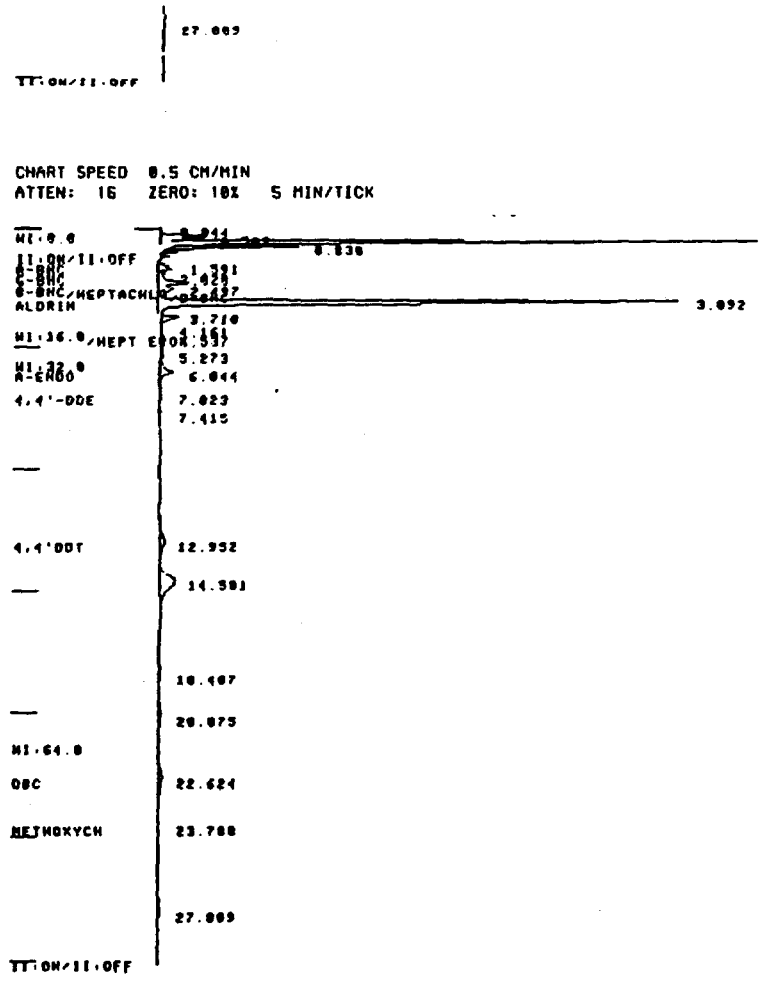
DIVISOR: 1.50000 MULTIPLIER: 50000.0000

NOISE: 137.1 OFFSET: -14

RACK: 1 VIAL: 15 INJ: 1

NOTES:
NOTEBOOK:297-25 ANALYST: RICHARD SAMSON
SECURE AREA: U-4928, U-4971
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
DET: 300 C INJ: 220 C
200 C ISOTHERMAL 4 UL INJECTION
PRIMARY ANALYSIS AUTOSAMPLER
DEAD CREEK 306 EXTRACTION

POST RUN:
SAVE FILE: RAW DC910



DC-03-61

CHANNEL: 1B - 1 TITLE: RUN: 6 19:04 15 MAY 87

SAMPLE: 1112 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~~	0.0000	1.709	-0.021	25441	VV	?	5.94
2	~~B-BHC~~	49.9528	2.268	0.108	59864	VV		6.63
3	~~B-BHC~~	0.0000	2.497	0.007	35321	VV	?	9.25
4	~~ALDRIN~~	970.7573	3.092	-0.120	1124396	VV		6.81
5		0.0000	3.710		52229	T		14.00
6	~~A-ENDO~~	57.7348	6.044	0.024	56979	T		17.50
7	~~4,4'DDT~~	79.6159	12.952	0.152	54593	BV		34.31
8	~~END. REC.~~	226.7511	14.581	0.571	159985	VB		43.00
9		0.0000	20.075		31231	VB		53.00
10	~~000~~	98.1875	22.624	0.054	65841	BV		61.94

TOTALS: 1490.999 0.767 1665880

DETECTED PKS: 33 REJECTED PKS: 23

DIVISOR: 1.50000 MULTIPLIER: 50000.0000

NOISE: 45.7 OFFSET: -12

NOTES:
NOTEBOOK:297-29 ANALYST: RICHARD SAMSON
SECURE AREA: D JOB #U-4928
INST:VARIAN 600082B ECD 10X1 ATTN:BX
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
PHASE:1.5% SP2250/1.95% SP2401
CARRIER GAS: N2 @ 60 ML/MIN.
DET:300 C INJ:220 C
200 C ISOTHERMAL 4 UL INJECTION
CONFIRMATION RUNS DEAD CREEK SOIL SAMPLES

POST RUN:
SAVE FILE: RAW CONF266

SAMPLE NUMBER DC-GB-68

Laboratory Name: Ecology & Environment Inc.

Case No: U-4835, 4863, 4928, 4971

Sample Number: DC-GB-68

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 4-9-87

Date Analyzed: 5-18-87

Conc/Dil Factor: 2

Percent Moisture (Decanted) 21

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CONCENTRATIONS REPORTED "AS RECEIVED"

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	660	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
3-96-8	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	59	J
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	160	J
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 11-4835, 4863, 4928, 4971

Sample Number
DC-GB-68

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 4-9-87
Date Analyzed: 5/2-87
Conc/Dil Factor: 2
Percent Moisture (decanted) — 21

GPC Cleanup ☐Yes ☑No
Separatory Funnel Extraction ☐Yes
Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)	
319-84-6	Alpha-BHC	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 & ENVIRONMENT INC.

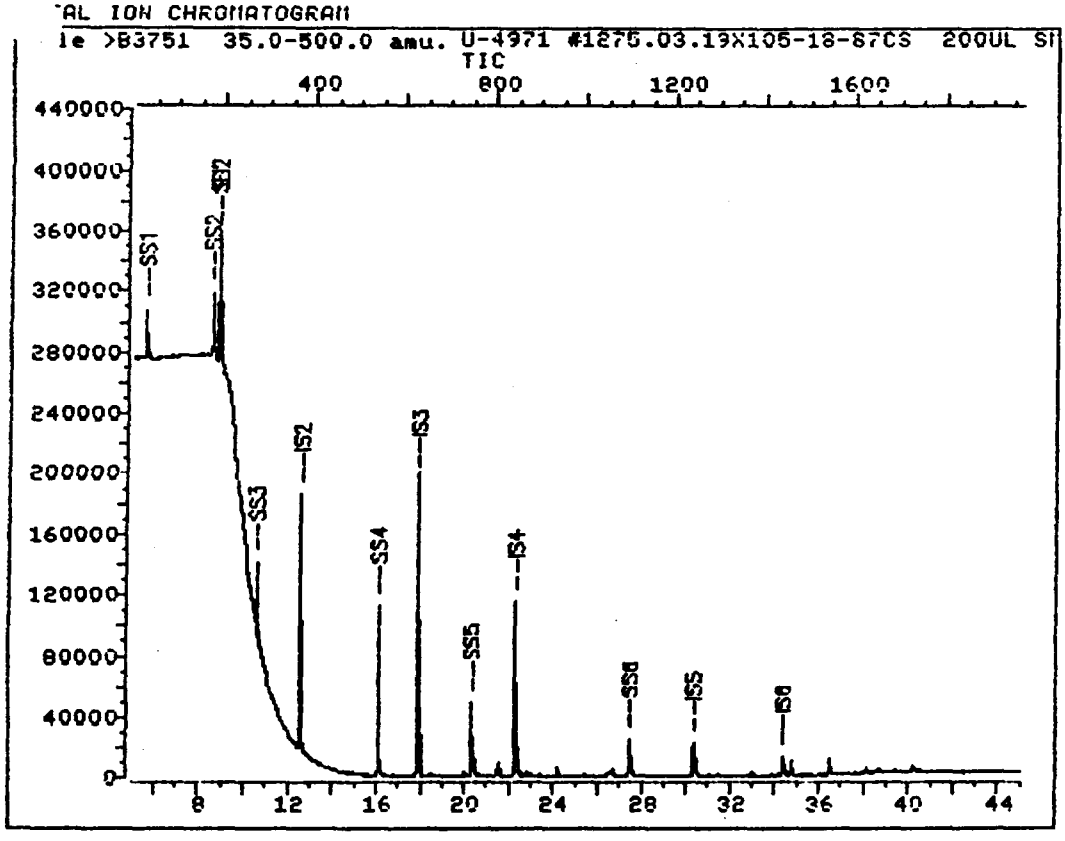
Case No: 4-4835, 4863, 4928, 4971

Sample Number: DC-GB-68

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 Aliphatic Hydrocarbon	BNA	34.73	1100 J
2.	Unknown Aliphatic Hydrocarbon	BNA	36.44	1200 J
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

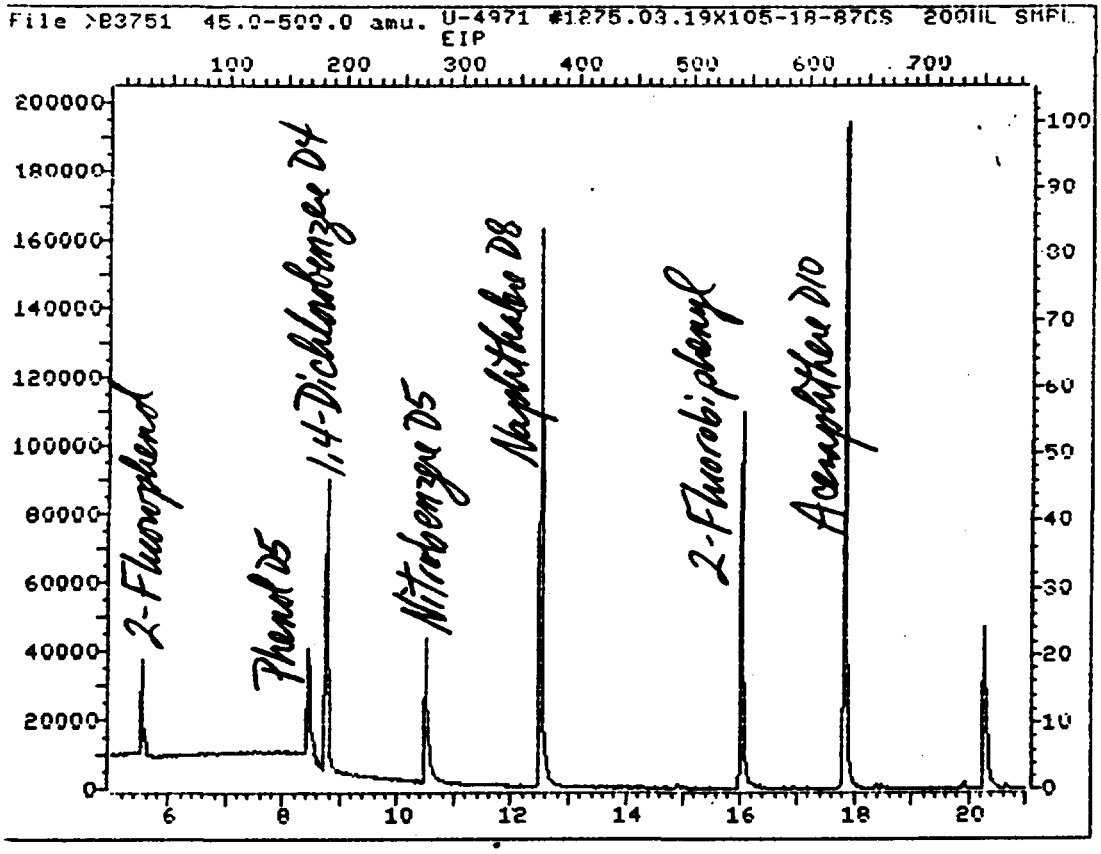


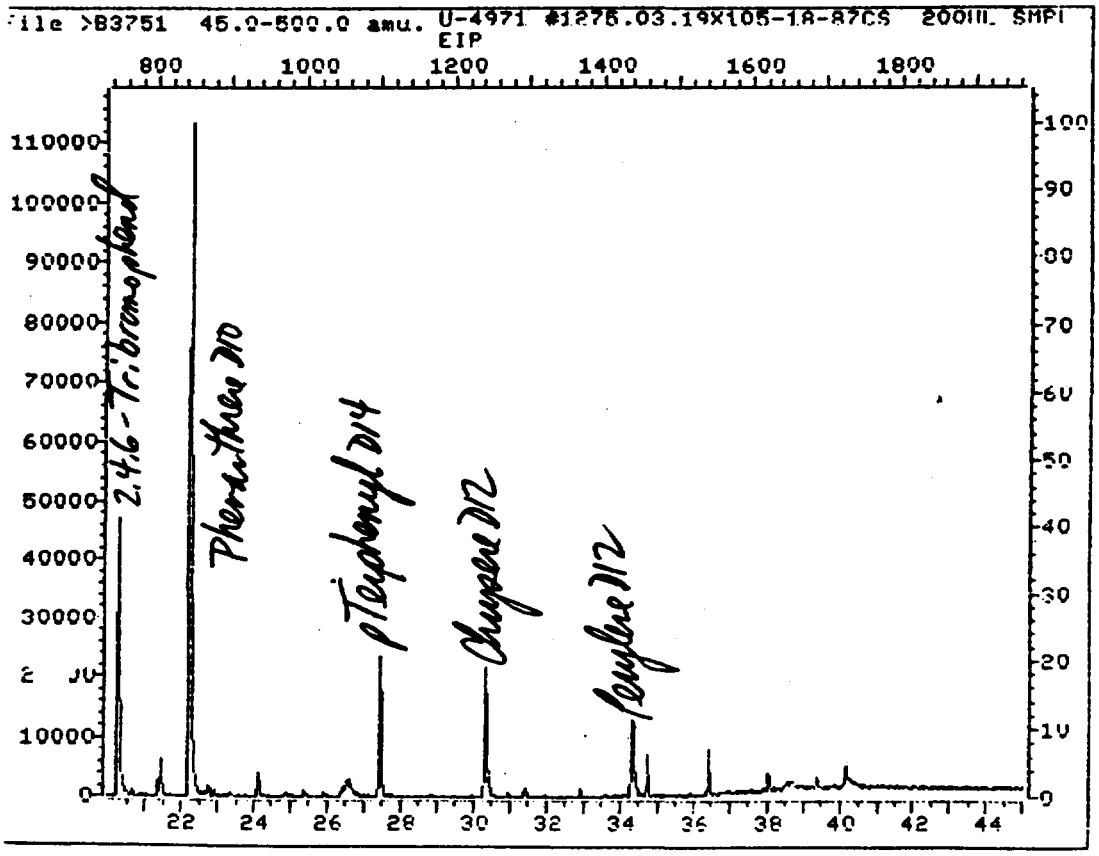
Data File: >B3751::D4 DC-GB-68
Name: U-4971 #1275.03.19X1
Misc: 05-18-87CS 200UL SMPL + 200UL MECL2 + 4UL IS

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870518 11:33

Operator ID: USER8
Quant Time: 870518 15:48
Injected at: 870518 11:36

DC-GB-68


File >B3751 45.0-500.0 amu. U-4971 #1275.03.19X105-18-87CS 200ml SMPL
EIP
2-Fluorophenol
Phenol D5
1,4-Dichlorobenzene D4
Nitrobenzene D5
Naphthalene D8
2-Fluorobiphenyl
Acenaphthene D10


File >B3751 45.0-500.0 amu. U-4971 #1275.03.19X105-18-87CS 200ml SMPL
EIP
2,4,6-Tribromophenol
Phenanthrene D10
pTerphenyl D14
Chrysene D12
Perylene D12

QUANT REPORT

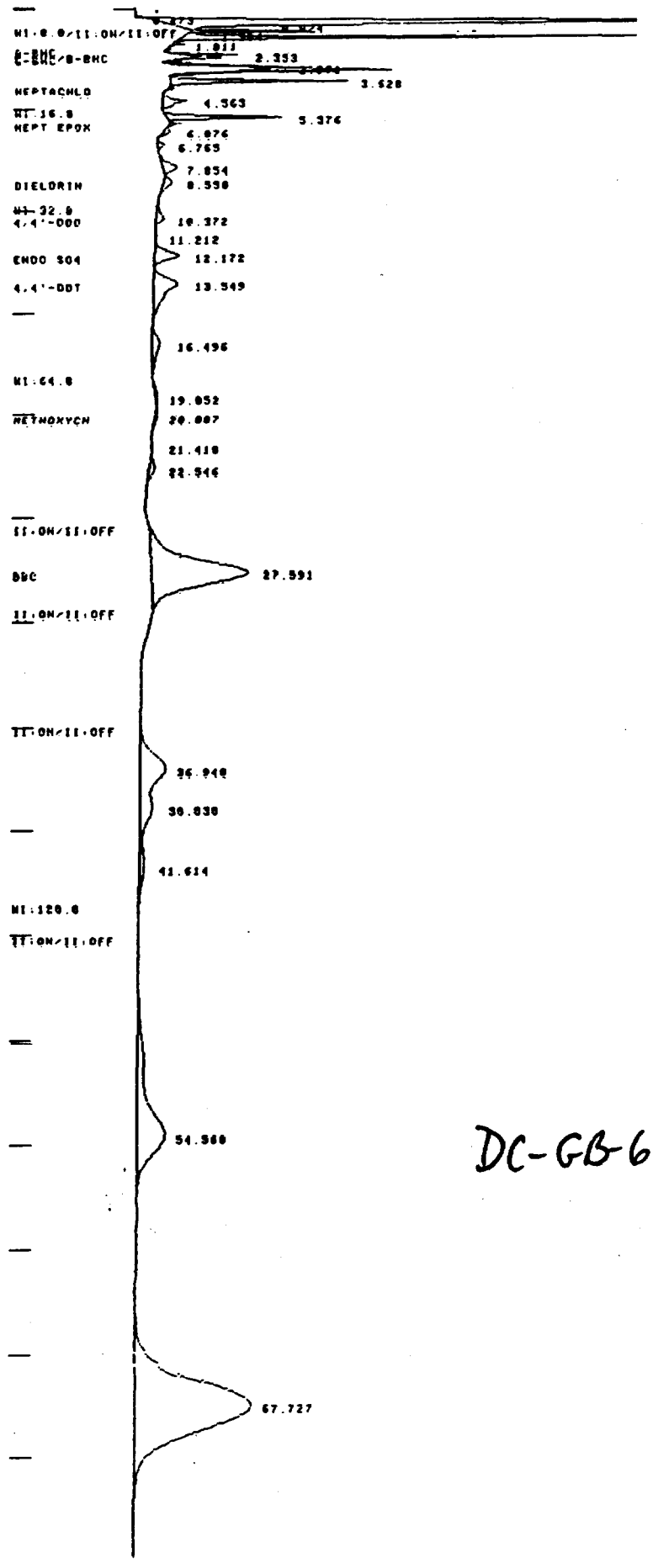
Operator ID: USER8 Quant Rev: 4 Quant Time: 870518 15:48
Output File: ^B3751::Q2 Injected at: 870518 11:36
Data File: >B3751::D4 Dilution Factor: 2.00
Name: U-4971 #1275.03.19X1 DC-GB-68
Misc: 05-18-87CS 200UL SMPL + 200UL MECL2 + 4UL IS

ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870518 11:33

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	8.76	185	39171	40.00 UG/L	85
2)	PHENOL-D5	(SURR)	99	8.45	170	50467	66.32 UG/L	91
~~2)~~	~~PHENOL-D5~~	~~(SURR)~~	~~99~~	~~8.76~~	~~185~~	~~1501~~	~~1.97 UG/L~~ Not qn	~~75~~
5)	2-FLUOROPHENOL	(SURR)	112	5.53	26	12070	21.34 UG/L 21	32
~~17)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~10.51~~	~~271~~	~~7811~~	~~12.81 UG/L~~ Not qn	~~94~~
19)	*NAPHTHALENE-D8	(IS)	136	12.52	370	225927	40.00 UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	10.51	271	49014	42.60 UG/L 86	93
54)	*ACENAPHTHENE-D10	(IS)	162	17.83	631	143809	40.00 UG/L	95
58)	2-FLUOROBIPHENYL	(SURR)	172	16.04	543	118838	54.71 UG/L	96
~~61)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~17.85~~	~~632~~	~~24834~~	~~10.10 UG/L~~ Not qn	~~100~~
68)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.27	751	22755	34.48 UG/L	98
~~72)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~17.83~~	~~631~~	~~10842~~	~~35.46 UG/L~~ Not qn	~~100~~
75)	*PHENANTHRENE-D10	(IS)	188	22.22	847	157268	40.00 UG/L	98
81)	PHENANTHRENE		178	22.28	850	3505	1.78 UG/L	96
~~82)~~	~~ANTHRACENE~~		~~178~~	~~22.28~~	~~850~~	~~3505~~	~~1.83 UG/L~~ Not qn	~~96~~
95)	*CHRYSENE-D12	(IS)	240	30.32	1245	43687	40.00 UG/L	100
98)	TERPHENYL-D14	(SURR)	244	27.43	1103	35769	67.29 UG/L 134	100
92)	BIS(2-ETHYLHEXYL)PHTHALATE		149	31.41	1299	1842	4.68 UG/L	82
94)	*PERYLENE-D12	(IS)	264	34.32	1442	28586	40.00 UG/L	100

* Compound is ISTD

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



DC-GB-68

RECALCULATE ON FILE: DC913

DC-GB-68

CHANNEL: 1A - 1 TITLE: RUN# 18 3:51 12 MAY 87

SAMPLE: 1275 METHOD: WILL CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.235		49110	BV	2.56
2		0.0000	1.514		338322	VV	4.19
3	~~B-BHC~~	4.5297	2.353	0.053	37415	BB	? 6.38
4		0.0000	3.097		100547	BB	? 9.25
5		0.0000	3.620		252031	BB	9.06
6		0.0000	4.563		72116	BB	16.13
7		0.0000	5.376		194811	BB	11.56
8		0.0000	7.854		51559	BB	33.00
9	~~DIELDRIN~~	1.8118	8.550	0.030	35759	BB	? 42.25
10	~~4,4'-DDD~~	2.2149	10.372	-0.158	35879	BB	30.50
11	~~ENDO-SO4~~	9.3737	12.172	-0.188	107661	BB	29.19
12	~~4,4'-DDT~~	18.5169	13.549	-0.171	207589	BB	47.88
13	~~END-KETON~~	3.5690	16.496	0.686	69167	BB	60.81
14		0.0000	19.052		20321	BB	? 63.19
15		0.0000	22.546		36017	BB	35.50
16	DBC 120%	80.0198	27.591	0.281	1169880	BB	75.31
17		0.0000	36.948		358898	BV	93.50
18		0.0000	38.838		146917	VV	?113.31
19		0.0000	41.614		80011	VB	101.06
20		0.0000	54.568		758490	BB	137.25
21		0.0000	67.727		2958325	BB	164.25
TOTALS:		120.0359		0.533	7080825		

DETECTED PKS: 40 REJECTED PKS: 19

DIVISOR: 1.50000 MULTIPLIER: 2000.00000

NOISE: 22.9 OFFSET: -19

RACK: 2 VIAL: 3 INJ: 1

NOTES:
NOTEBOOK:297-25 ANALYST: RICHARD SAMSON
SECURE AREA: U-4928, U-4971
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
DET: 300 C INJ: 220 C
200 C ISOTHERMAL 4 UL INJECTION
PRIMARY ANALYSIS AUTOSAMPLER
AD CREEK 30G EXTRACTION

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)

Laboratory Name: ECOLOGY & ENVIRONMENT INC.

Case No: U-4835, 4863, 4928, 4971

Sample Number: DC-I7-46 MS

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 4-2-87

Date Analyzed: 5-7-87

Conc/Dil Factor: 2

Percent Moisture (Decanted) 20

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CONCENTRATIONS REPORTED "AS RECEIVED"

CAS Number		ug/l or (ug/Kg) (Circle One)
108-95-2	Phenol	SPIKE
111-44-4	bis(-2-Chloroethyl)Ether	330 U
95-57-8	2-Chlorophenol	SPIKE
541-73-1	1, 3-Dichlorobenzene	330 U
106-46-7	1, 4-Dichlorobenzene	SPIKE
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	SPIKE
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	SPIKE
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	SPIKE
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
[illegible]-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	SPIKE
51-28-5	2, 4-Dinitrophenol	1600 U
100-02-7	4-Nitrophenol	SPIKE
132-64-9	Dibenzofuran	330 U
121-14-2	2 4-Dinitrotoluene	SPIKE
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	SPIKE
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	SPIKE
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	770
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-4835, 4863, 4928, 4971

Sample Number
DC-I7-46 MS

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 4-2-87
Date Analyzed: 5-7-87
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	20	U
319-85-7	Beta-BHC	20	U
319-86-8	Delta-BHC	20	U
58-89-9	Gamma-BHC (Lindane)	26	S
76-44-8	Heptachlor	INF.	S
309-00-2	Aldrin	28	S
1024-57-3	Heptachlor Epoxide	20	U
959-98-8	Endosulfan I	20	U
60-57-1	Dieldrin	64	S
72-55-9	4, 4'-DDE	40	U
72-20-8	Endrin	70	S
33213-65-9	Endosulfan II	40	U
72-54-8	4, 4'-DDD	40	U
1031-07-8	Endosulfan Sulfate	40	U
50-29-3	4 4'-DDT	72	S
72-43-5	Methoxychlor	200	U
53494-70-5	Endrin Ketone	40	U
57-74-9	Chlordane	200	U
8001-35-2	Toxaphene	400	U
12674-11-2	Aroclor-1016	200	U
11104-28-2	Aroclor-1221	200	U
11141-16-5	Aroclor-1232	200	U
53469-21-9	Aroclor-1242	200	U
12672-29-6	Aroclor-1248	200	U
11097-69-1	Aroclor-1254	400	U
11096-82-5	Aroclor-1260	400	U

V_i = Volume of extract injected (ul)

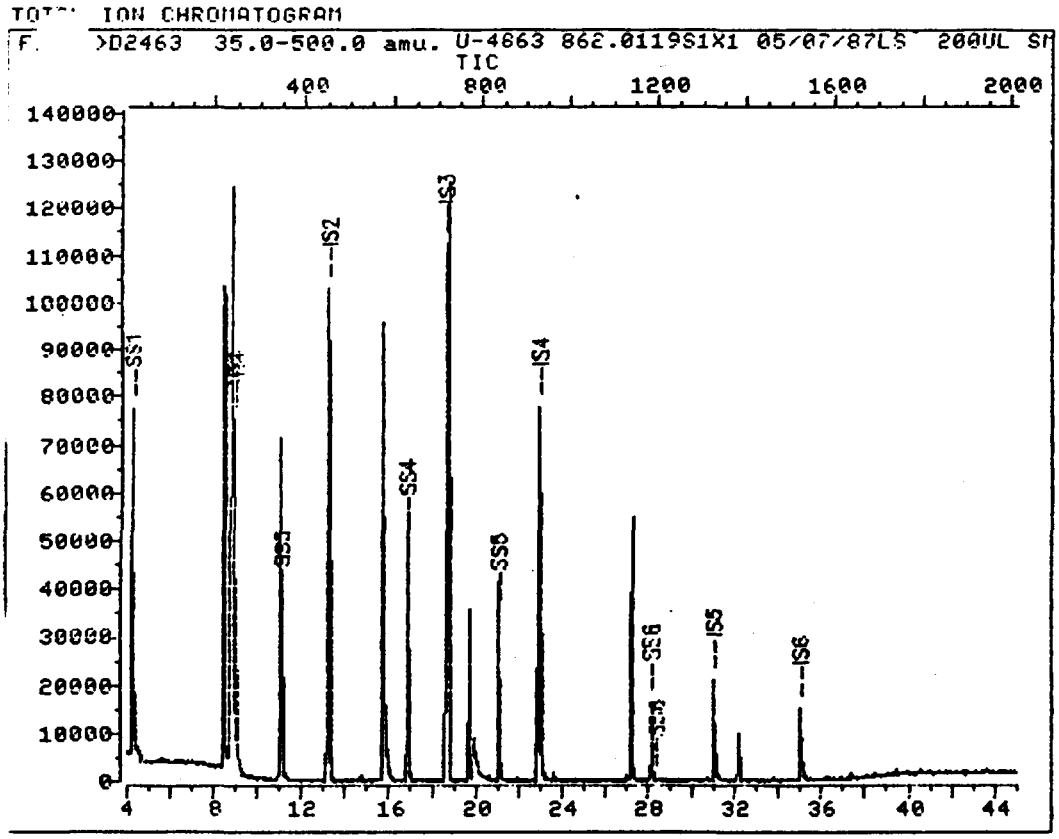
V_s = Volume of water extracted (ml)

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

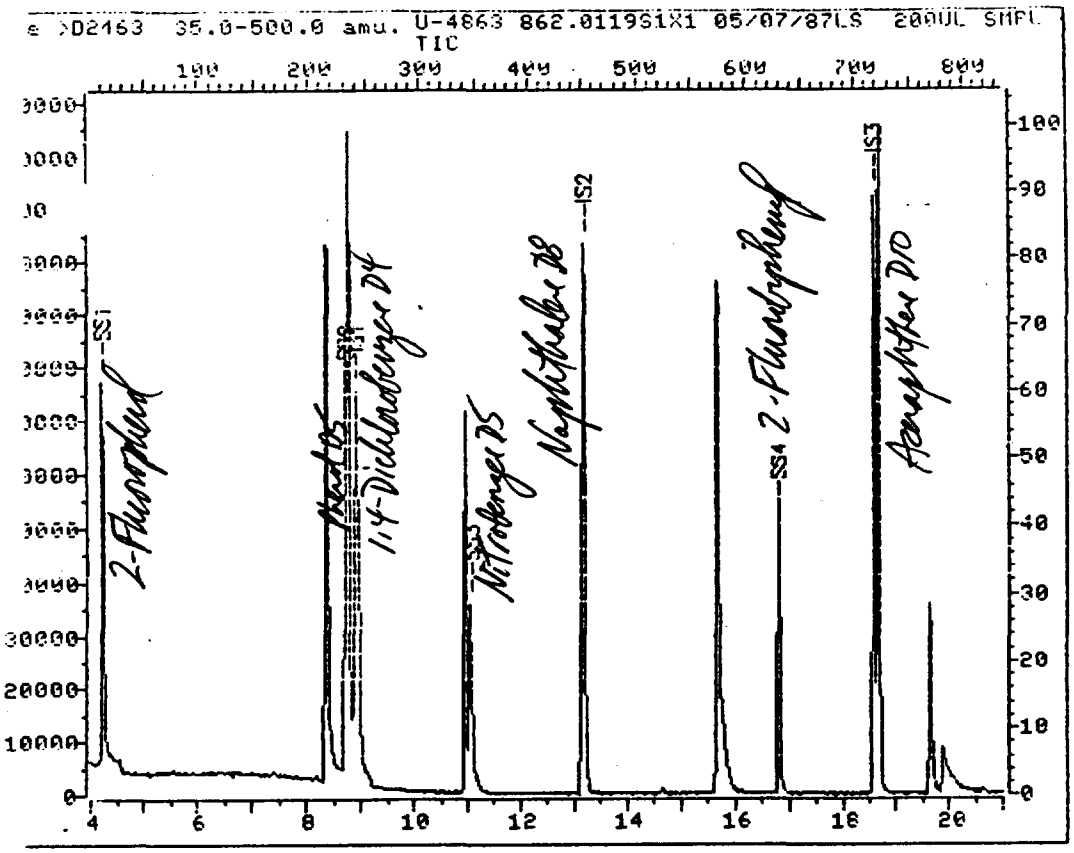
S = SPIKED COMPOUND
TNTF - TNTERFERENCE



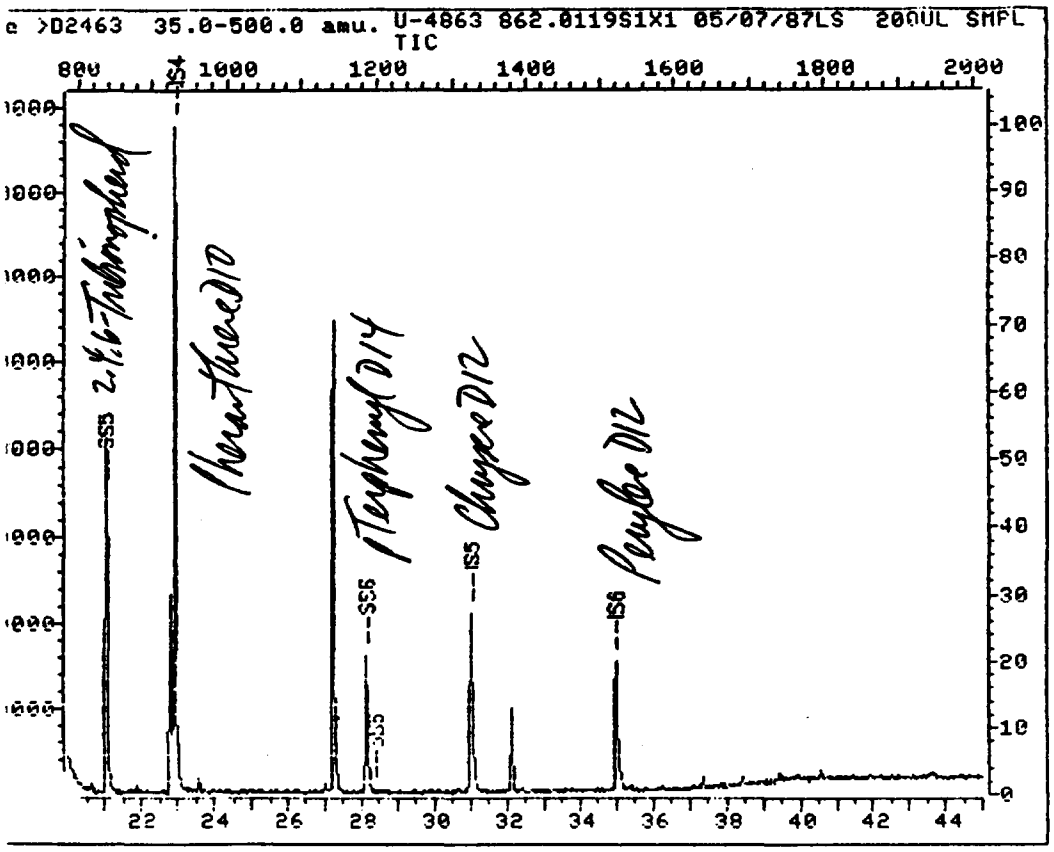
Data File: >D2463::D3
Name: U-4863 862.0119S1X1 DC-I7-46 MS
Misc: 05/07/87LS 200UL SMPL + 200UL MECL2 + 4UL IS BTL# 1

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870507 14:21

Operator ID: USER8
Quant Time: 870507 21:33
Injected at: 870507 20:45


>D2463 35.0-500.0 amu. U-4863 862.0119S1X1 05/07/87LS 200UL SMPL
TIC
2-Fluorophenol
1,4-Dichlorobenzene D4
Nitrobenzene D5
Naphthalene D8
2-Fluorophenol
Acenaphthene D10

DC-I7-46 MS


>D2463 35.0-500.0 amu. U-4863 862.0119S1X1 05/07/87LS 200UL SMPL
TIC
2,4,6-Tribromophenol
Phenanthrene D10
Terphenyl D14
Chrysene D12
Perylene D12

QUANT REPORT

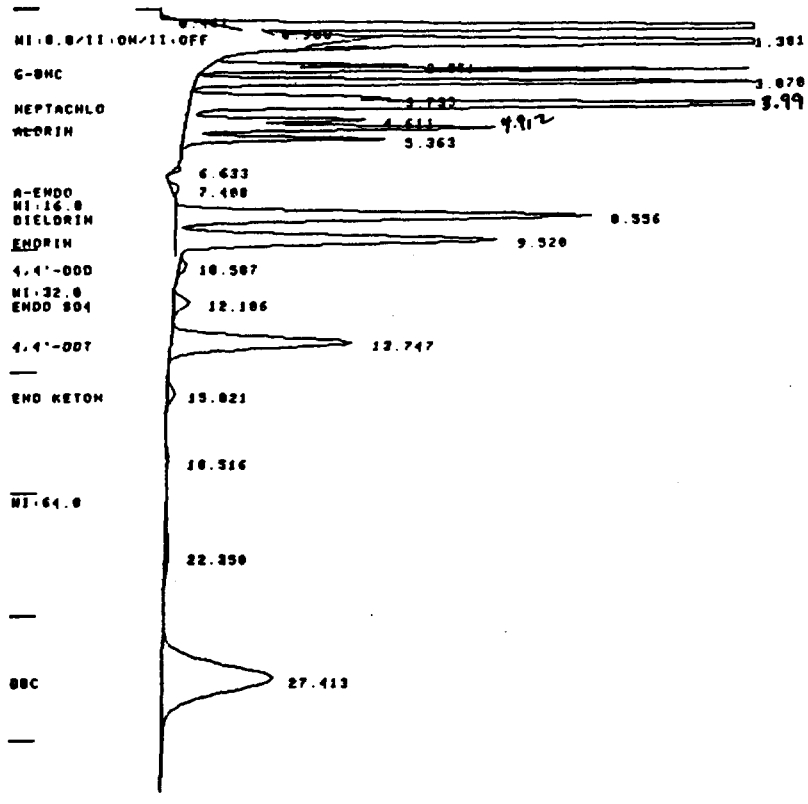
ıerator ID: USER8 Quant Rev: 4 Quant Time: 870507 21:33
ıtput File: ^D2463::Q2 Injected at: 870507 20:45
ıta File: >D2463::D3 Dilution Factor: 2.00
ıme: U-4863 862.0119S1X1 DC-I7-46MS
sc: 05/07/87LS ~~200UL SMPL~~ + 200UL MECL2 + 4UL IS BIL# 1

) File: BNADR::D2
tle: BNA ID FILE FOR THE HP 5970 (B) Spike %
ıst Calibration: 870507 14:21

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	8.90	242	38708	40.00 UG/L	89
2)	PHENOL-D5	(SURR)	99	8.72	233	56911	102.94 UG/L 103 ✓	97
5)	2-FLUOROPHENOL	(SURR)	112	4.19	11	51508	91.14 UG/L 91 ✓	86
6)	PHENOL		94	8.76	235	119846	188.23 UG/L 94%	98
7)	~~ANILINE~~		~~93~~	~~8.37~~	~~216~~	~~1825~~	~~4.00 UG/L~~ No BM	95
9)	~~1,3-DICHLOROBENZENE~~		~~146~~	~~8.96~~	~~245~~	~~21930~~	~~33.59 UG/L~~	99
10)	1,4-DICHLOROBENZENE		146	8.96	245	21930	30.76 UG/L 31%	98
)	2-CHLOROPHENOL		128	8.37	216	101014	178.58 UG/L	95
)	~~2-CHLOROPHENOL~~		~~128~~	~~8.67~~	~~231~~	~~4061~~	~~7.18 UG/L~~ No BM	95
)	N-NITROSO-DI-N-PROPYLAMINE		70	10.96	343	43371	78.57 UG/L 79%	99
)	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.06~~	~~348~~	~~10124~~	~~18.34 UG/L~~ No BM	92
)	*NAPHTHALENE-D8	(IS)	136	13.18	452	126721	40.00 UG/L	100
)	NITROBENZENE-D5	(SURR)	82	11.06	348	30844	51.67 UG/L 103 ✓	99
)	1,2,4-TRICHLOROBENZENE		180	13.14	450	34302	48.50 UG/L 49%	100
)	4-CHLORO-3-METHYLPHENOL		107	15.66	574	87108	193.64 UG/L 97%	90
)	~~2-METHYLNAPHTHALENE~~		~~142~~	~~15.46~~	~~574~~	~~71763~~	~~67.68 UG/L~~ No BM	20
)	*ACENAPHTHENE-D10	(IS)	162	18.60	718	72828	40.00 UG/L	93
)	2-FLUOROBIPHENYL	(SURR)	172	16.80	630	57267	46.01 UG/L 92 ✓	93
)	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.60~~	~~718~~	~~13872~~	~~10.97 UG/L~~ No BM	100
)	ACENAPHTHENE		153	18.70	723	91037	92.46 UG/L 93%	98
)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.04	838	23199	96.61 UG/L 97 ✓	98
)	4-NITROPHENOL		139	19.88	781	14155	121.88 UG/L 122%	100
)	~~4-NITROPHENOL~~		~~139~~	~~20.21~~	~~797~~	~~180~~	~~1.55 UG/L~~ No BM	100
)	2,4-DINITROTOLUENE		165	19.64	769	28642	104.20 UG/L 104%	100 Lig?
)	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.60~~	~~718~~	~~9755~~	~~34.61 UG/L~~ No BM	100
)	*PHENANTHRENE-D10	(IS)	188	22.96	932	102510	40.00 UG/L	94
)	PENTACHLOROPHENOL		266	22.81	925	22623	96.44 UG/L 48%	100
)	*CHRYSENE-D12	(IS)	240	31.00	1327	48904	40.00 UG/L	100
)	PYRENE		202	27.21	1141	91481	99.06 UG/L 99%	94
)	TERPHENYL-D14	(SURR)	244	28.13	1186	31175	56.18 UG/L 112 ✓	100
)	~~TERPHENYL-D14~~	(SURR)	~~244~~	~~28.37~~	~~1198~~	~~172~~	~~.31 UG/L~~ No BM	100
)	BIS(2-ETHYLHEXYL)PHTHALATE		149	32.12	1382	9049	23.02 UG/L	99
)	*PERYLENE-D12	(IS)	264	34.99	1523	37035	40.00 UG/L	100

Compound is ISTD

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



DC-I7-46 MS

CHANNEL: 1A - 1 TITLE: RUN# 26 R:08 7 MAY 87

SAMPLE: 0062 MS METHOD: CFPA CALCULATION: FS - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.238		37321	BV	2.81
2		0.0000	1.381		11228931	VV	5.75
3		0.0000	1.692		24907	T	2.63
4	~~B-BHC~~	22.2924	2.351	0.061	158607	BV	6.25
5	G-BHC	25.7850	2.536	0.026	449811	VB	6.25
6		0.0000	3.070		822752	BV	11.06
7		0.0000	3.735		375695	VV	? 18.25
8	HEPTACHLO EP	119.7015	3.986	0.016	1029887	VV	9.81
9		0.0000	4.611		269869	VV	11.56
10	ALDRIN	27.9520	4.912	0.022	489446	VV	11.69
11		0.0000	5.363		340157	VB	11.81
12	~~A-ENDO~~	1.4273	7.408	0.008	22716	BB	? 44.06
13	DIELDRIN	63.9840	8.556	0.036	1073421	BV	19.94
14	ENDRIN	69.6975	9.520	0.040	985722	VV	22.50
15	~~END ALD~~	2.1786	10.587	-0.063	26093	T	? 39.44
16	~~ENDO SO4~~	5.4443	12.097	-0.253	56793	BB	28.13
17	4,4'-DDT	72.1407	13.747	0.037	738950	BB	31.19
18	~~END KETON~~	2.1112	15.021	0.021	35420	BB	34.81
19		0.0000	22.350		43723	BB	90.00
20	DBC ref	90.3343	27.413	0.103	1136837	BB	74.75

TOTALS: 503.1488 0.134 20097062

DETECTED PKS: 20 REJECTED PKS: 8

DIVISOR: 1.20000 MULTIPLIER: 2000.00000

NOISE: 22.9 OFFSET: 0

NOTES:
NOTEBOOK: 297-21 ANALYST: RICHARD SAMSON
SECURE AREA: U-4835 , U-4863
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
DET: 300 C INJ: 220 C
200 C ISOTHERMAL 4 UL INJECTION
PRIMARY ANALYSIS AUTOSAMPLER
DEAD CREEK

Laboratory Name: ECOLOGY & ENVIRONMENT INC.

Case No: U-4835, 4863, 4928, 4971

Sample Number: DC-GB-68MS

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 4-9-87

Date Analyzed: 5-18-87

Conc/Dil Factor: 2

Percent Moisture (Decanted) 21

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CONCENTRATIONS REPORTED "AS RECEIVED"

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	SPIKE
111-44-4	bis(-2-Chloroethyl)Ether	330 U
95-57-8	2-Chlorophenol	SPIKE
541-73-1	1, 3-Dichlorobenzene	330 U
106-46-7	1, 4-Dichlorobenzene	SPIKE
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	SPIKE
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	SPIKE
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	SPIKE
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
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	SPIKE
51-28-5	2, 4-Dinitrophenol	1600 U
100-02-7	4-Nitrophenol	SPIKE
132-64-9	Dibenzofuran	330 U
121-14-2	2 4-Dinitrotoluene	SPIKE
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	SPIKE
85-01-8	Phenanthrene	58 J
120-12-7	Anthracene	330 U
84-74-2	Di-n-Butylphthalate	330 U
206-44-0	Fluoranthene	330 U
129-00-0	Pyrene	SPIKE
85-68-7	Butylbenzylphthalate	330 U
91-94-1	3, 3'-Dichlorobenzidine	660 U
56-55-3	Benzo(a)Anthracene	110 J
117-81-7	bis(2-Ethylhexyl)Phthalate	130 J
218-01-9	Chrysene	100 J
117-84-0	Di-n-Octyl Phthalate	330 U
205-99-2	Benzo(b)Fluoranthene	330 U
207-08-9	Benzo(k)Fluoranthene	130 J
50-32-8	Benzo(a)Pyrene	330 U
193-39-5	Indeno(1 2, 3-cd)Pyrene	330 U
53-70-3	Dibenzia 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 11-4835, 4863, 4928, 4971

Sample Number
DC-GB-68ms

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 4-9-87
Date Analyzed: 5-12-87
Conc/Dil Factor: 2
Percent Moisture (decanted) - 21

GPC Cleanup ☐Yes ☑No
Separatory Funnel Extraction ☐Yes
Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)	
319-84-6	Alpha-BHC	16	U
319-85-7	Beta-BHC	16	U
319-86-8	Delta-BHC	16	U
58-89-9	Gamma-BHC (Lindane)	21	S
76-44-8	Heptachlor	INF.	S
309-00-2	Aldrin	15	S
1024-57-3	Heptachlor Epoxide	16	U
959-98-8	Endosulfan I	16	U
60-57-1	Dieldrin	57	S
72-55-9	4, 4'-DDE	32	U
72-20-8	Endrin	58	S
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	INF.	S
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)

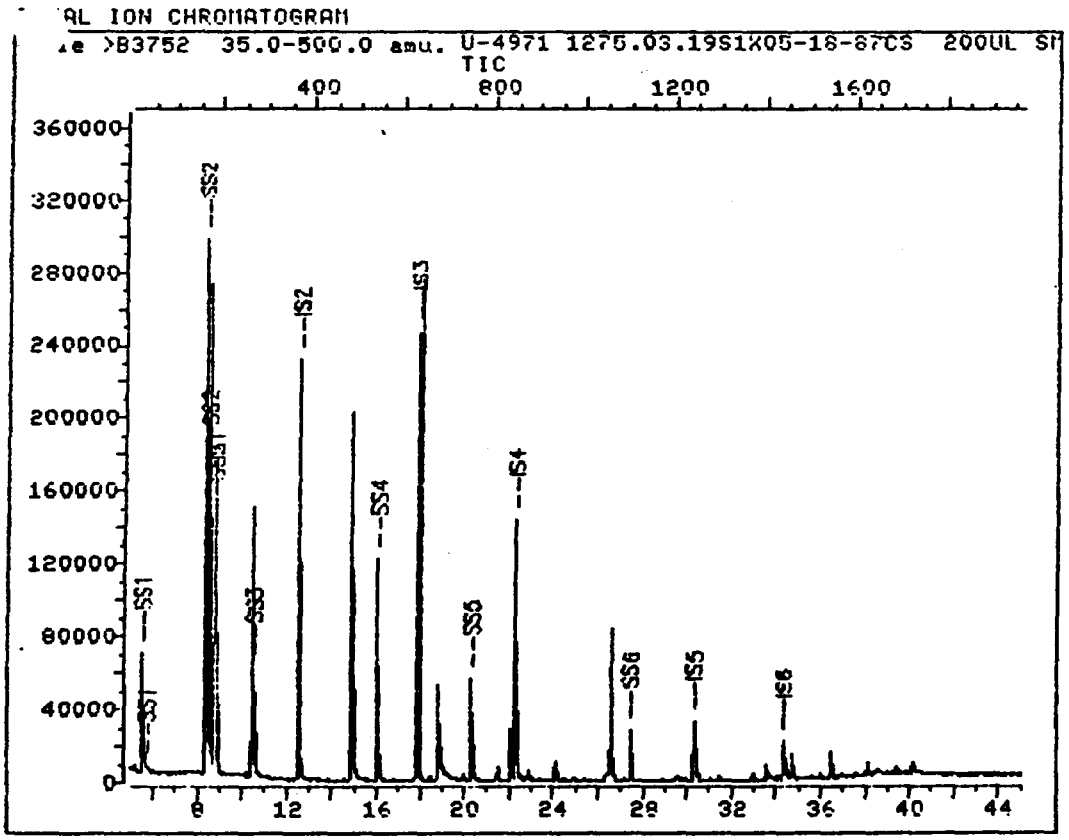
V_s = Volume of water extracted (ml)

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

S = Spiked Compound

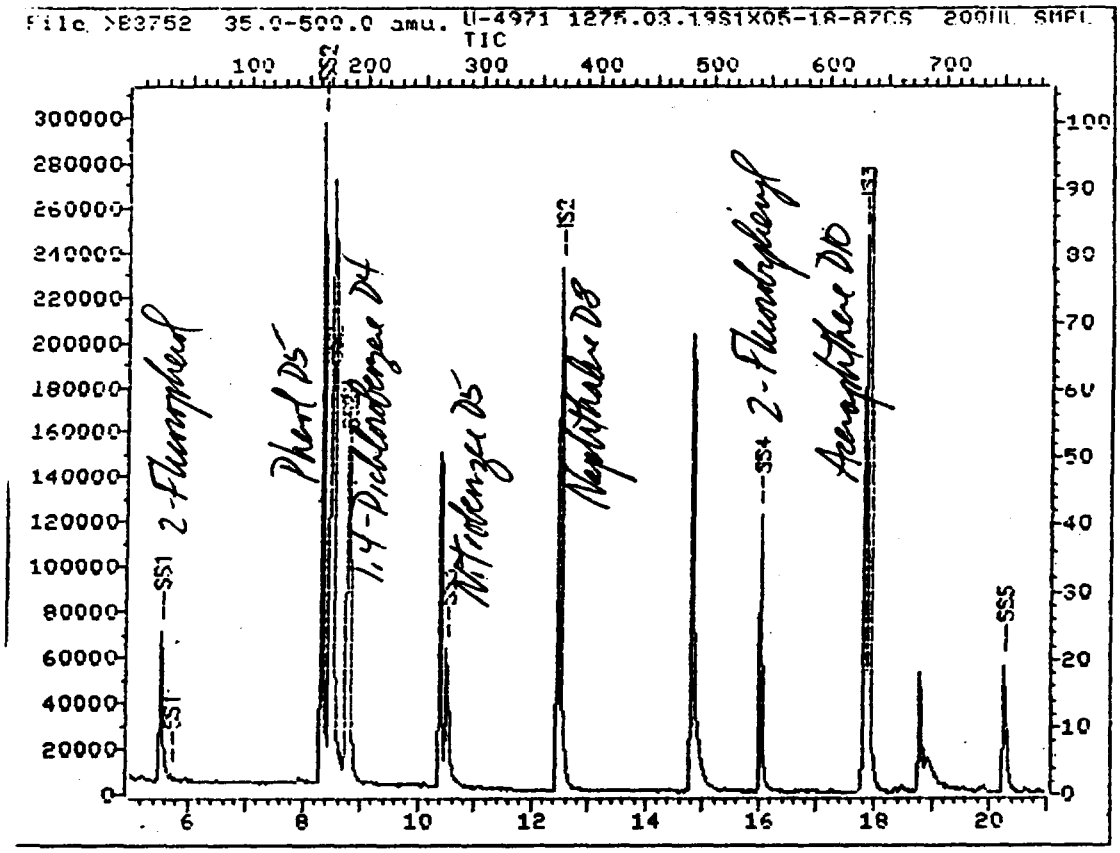


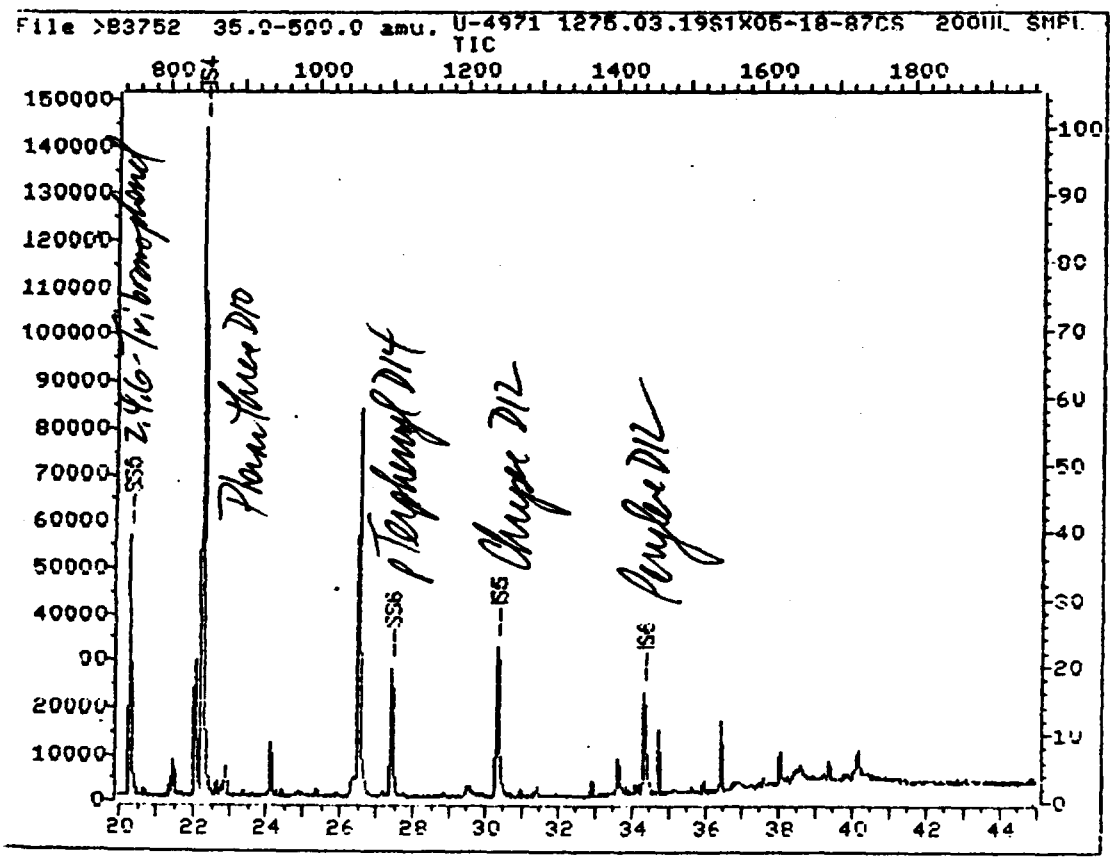
Data File: >B3752::D4
Name: U-4971 1275.03.19S1X DC-GB-68MS
Misc: 05-18-87CS 200UL SMPL + 200UL MECL2 + 4UL IS

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870518 11:33

Operator ID: USER8
Quant Time: 870518 15:51
Injected at: 870518 12:33

DC-GB-68 MS


File >B3752 35.0-500.0 amu. U-4971 1275.03.19S1X05-18-87CS 200ul SMPL
TIC
2-Fluorophenol
Phenol D5
1,4-Dichlorobenzene D4
Nitrobenzene D5
Naphthalene D8
2-Fluorobiphenyl
Acenaphthene D10
Acenaphthylene D8


File >B3752 35.0-500.0 amu. U-4971 1275.03.19S1X05-18-87CS 200ul SMPL
TIC
2,4,6-Tribromophenol
Phenanthrene D10
p-Terphenyl D14
Chrysene D12
Perylene D12

QUANT REPORT

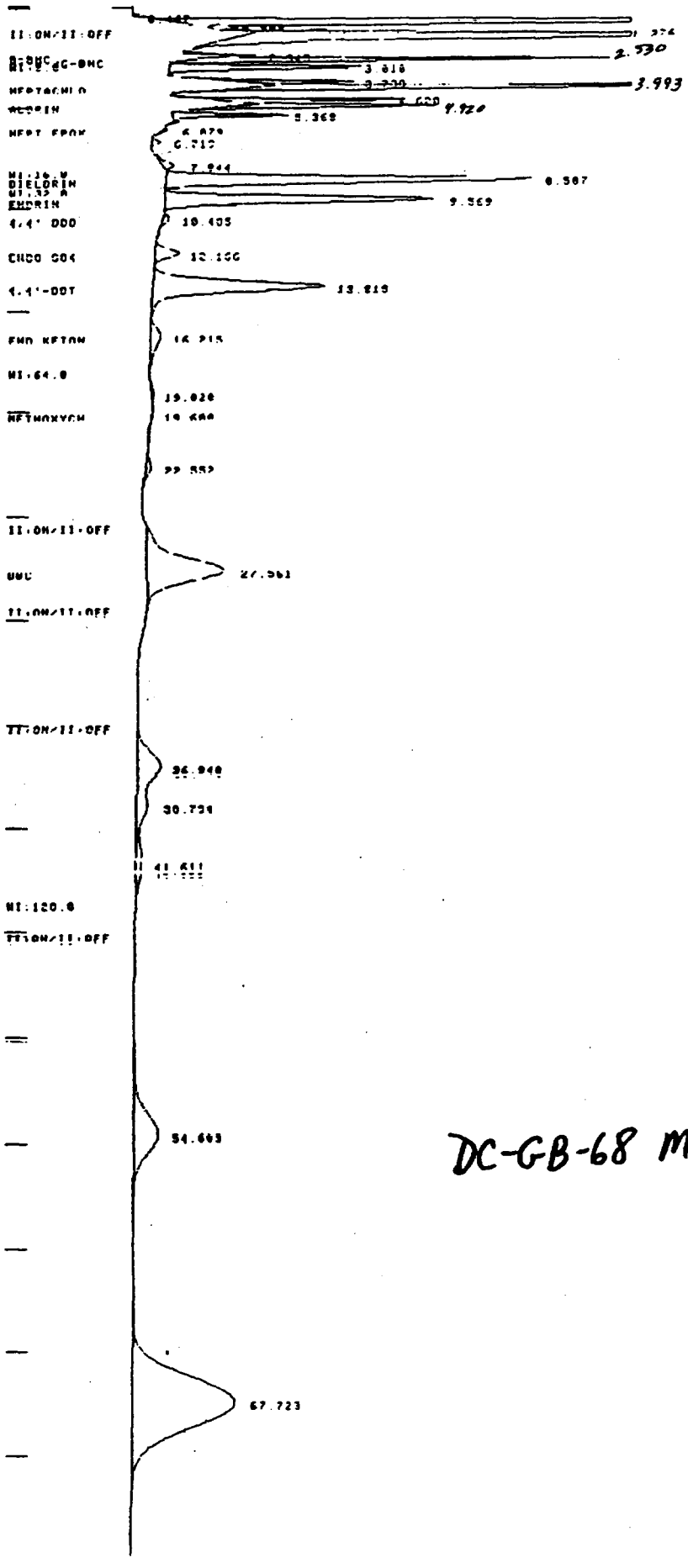
Operator ID: USER8 Quant Rev: 4 Quant Time: 870518 15:51
Output File: ^B3752::Q2 Injected at: 870518 12:33
Data File: >B3752::D4 Dilution Factor: 2.00
Name: U-4971 1275.03.19S1X DC-OB-68MS
Misc: 05-18-87CS 200UL SMPL + 200UL MECL2 + 4UL IS

ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870518 11:33

	Compound		R.T.	Scan#	Area	Conc	Units		q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	8.75	185	76800	40.00	UG/L	86
~~2)~~	~~PHENOL-D5~~	~~(SURR)~~	~~99~~	~~8.32~~	~~164~~	~~10448~~	~~7.00~~	~~UG/L~~	39
2)	PHENOL-D5	(SURR)	99	8.46	171	108362	72.63	UG/L 73	97
~~2)~~	~~PHENOL-D5~~	~~(SURR)~~	~~99~~	~~8.77~~	~~186~~	~~1359~~	~~.91~~	~~UG/L~~	74
5)	2-FLUOROPHENOL	(SURR)	112	5.53	27	52289	47.15	UG/L 94	53
~~5)~~	~~2-FLUOROPHENOL~~	~~(SURR)~~	~~112~~	~~5.72~~	~~36~~	~~1659~~	~~1.50~~	~~UG/L~~	81
6)	PHENOL		94	8.50	173	212543	172.59	UG/L	76
~~7)~~	~~ANILINE~~		~~93~~	~~8.32~~	~~164~~	~~3918~~	~~3.63~~	~~UG/L~~	3
~~9)~~	~~1,3-DICHLOROBENZENE~~		~~146~~	~~8.81~~	~~188~~	~~75651~~	~~52.14~~	~~UG/L~~	99
10)	1,4-DICHLOROBENZENE		146	8.81	188	75651	54.18	UG/L	97
~~12)~~	~~1,2-DICHLOROBENZENE~~		~~146~~	~~8.81~~	~~188~~	~~75651~~	~~53.49~~	~~UG/L~~	96
15)	2-CHLOROPHENOL		128	8.32	164	173053	180.97	UG/L	97
~~15)~~	~~2-CHLOROPHENOL~~		~~128~~	~~8.46~~	~~171~~	~~2242~~	~~2.34~~	~~UG/L~~	97
17)	N-NITROSO-DI-N-PROPYLAMINE		70	10.40	266	96114	80.41	UG/L	94
~~17)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~10.52~~	~~272~~	~~12470~~	~~10.44~~	~~UG/L~~	94
19)	*NAPHTHALENE-D8	(IS)	136	12.51	370	261647	40.00	UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	10.52	272	62388	46.83	UG/L 94	95
28)	1,2,4-TRICHLOROBENZENE		180	12.47	368	92318	69.89	UG/L	100
32)	4-CHLORO-3-METHYLPHENOL		107	14.81	483	172655	179.17	UG/L	98
~~33)~~	~~2-METHYLNAPHTHALENE~~		~~142~~	~~14.81~~	~~483~~	~~126754~~	~~55.80~~	~~UG/L~~	18
34)	*ACENAPHTHENE-D10	(IS)	162	17.84	632	164417	40.00	UG/L	98
38)	2-FLUOROBIPHENYL	(SURR)	172	16.03	543	122520	49.33	UG/L 93	94
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~17.84~~	~~632~~	~~28373~~	~~10.09~~	~~UG/L~~	100
47)	ACENAPHTHENE		153	17.94	637	206008	95.40	UG/L	95
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.28	752	26540	35.17	UG/L 35	94
50)	4-NITROPHENOL		139	18.94	686	16282	92.82	UG/L	100
51)	2,4-DINITROTOLUENE		165	18.80	679	47967	70.10	UG/L	100
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~17.84~~	~~632~~	~~21006~~	~~34.58~~	~~UG/L~~	100
55)	*PHENANTHRENE-D10	(IS)	188	22.23	848	184865	40.00	UG/L	98
60)	PENTACHLOROPHENOL		266	22.03	838	18685	44.37	UG/L	100
61)	PHENANTHRENE		178	22.29	851	4008	1.73	UG/L	96
~~62)~~	~~ANTHRACENE~~		~~178~~	~~22.29~~	~~851~~	~~4008~~	~~1.78~~	~~UG/L~~	96
65)	*CHRYSENE-D12	(IS)	240	30.31	1245	63233	40.00	UG/L	100
67)	PYRENE		202	26.50	1058	144279	113.48	UG/L	98
68)	TERPHENYL-D14	(SURR)	244	27.42	1103	42777	55.60	UG/L 112	100
71)	BENZO(A)ANTHRACENE		228	30.39	1249	2559	3.31	UG/L	91
72	BIS(2-ETHYLHEXYL)PHTHALATE		149	31.40	1299	2230	3.92	UG/L	94
73)	CHRYSENE		228	30.39	1249	2559	3.17	UG/L	92
74)	*PERYLENE-D12	(IS)	264	34.33	1443	46280	40.00	UG/L	100
~~76)~~	~~BENZO(B)FLUORANTHENE~~		~~252~~	~~33.44~~	~~1399~~	~~2785~~	~~4.16~~	~~UG/L~~	100
77)	BENZO(K)FLUORANTHENE		252	33.44	1399	2785	4.02	UG/L	100

* Compound is ISTD

CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 101 5 MIN/TICK



DC-GB-68 MS

RECALCULATE ON FILE: DC915

CHANNEL: 1A - 1 TITLE: RUN# 20 6:31 12 MAY 87

DC-GB-68 MS

SAMPLE: 1275 MS METHOD: WILL CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.229		45125	BV	2.19
2		0.0000	1.376		10776083	VB	4.69
3	~~B-BHC~~	7.2749	2.345	0.045	60090	BB	6.31
4	6-BHC	21.3908	2.530	0.010	432428	BB	6.25
5		0.0000	3.018		355410	BB	11.38
6		0.0000	3.738		118747	BB	? 17.63
7	HEPTACHLO INF.	55.3177	3.993	0.013	969352	BB	9.56
8		0.0000	4.620		235865	BB	11.69
9	ALDRIN	15.4482	4.920	0.030	318300	BB	11.94
10		0.0000	5.368		193021	BB	11.25
11		0.0000	7.844		33032	BB	? 36.94
12	DIELDRIN	56.7912	8.587	0.067	1120879	BB	20.56
13	ENDRIN	58.3291	9.569	0.079	905731	BB	23.06
14	~~4,4'-DDD~~	1.6521	10.485	-0.045	26762	BB	? 70.56
15	~~ENDO-SO4~~	9.1337	12.166	-0.194	104905	BB	33.44
16	4,4'-DDT INF.	85.8047	13.810	0.090	961936	BB	34.75
17	~~END KETON~~	5.2409	16.215	0.405	101568	BB	68.06
18		0.0000	22.552		38669	BB	37.63
19	DBC 98	62.1359	27.561	0.251	908420	BB	72.69
20		0.0000	36.940		327028	BV	93.56
21		0.0000	38.794		124416	VV	?107.19
22		0.0000	41.611		94280	VB	96.56
23		0.0000	54.603		507877	BB	129.88
24		0.0000	67.723		2604742	BB	164.69

TOTALS: 378.5192 0.751 21364668

DETECTED PKS: 34 REJECTED PKS: 10

DIVISOR: 1.50000 MULTIPLIER: 2000.00000

NOISE: 22.9 OFFSET: 5

RACK: 2 VIAL: 5 INJ: 1

NOTES:
NOTEBOOK:297-25 ANALYST: RICHARD SAMSON
SECURE AREA: U-4928, U-4971
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
DET: 300 C INJ: 220 C
200 C ISOTHERMAL 4 UL INJECTION
PRIMARY ANALYSIS AUTOSAMPLER
DEAD CREEK 30G EXTRACTION

MATRIX SPIKE DUPLICATE DATA

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

Laboratory Name: ECOLOGY & ENVIRONMENT INC.

Case No: H-4835, 4863, 4928, 4971

Sample Number: DC-I7-46 MSD

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 4-2-87

Date Analyzed: 5-7-87

Conc/Dil Factor: 2

Percent Moisture (Decanted) 20

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CONCENTRATIONS REPORTED 'AS RECEIVED'

CAS Number		ug/l or (ug/Kg) (Circle One)
108-95-2	Phenol	SPIKE
111-44-4	bis(-2-Chloroethyl)Ether	330 U
95-57-8	2-Chlorophenol	SPIKE
541-73-1	1, 3-Dichlorobenzene	330 U
106-46-7	1, 4-Dichlorobenzene	SPIKE
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	SPIKE
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	SPIKE
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	SPIKE
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
3-96-8	Acenaphthylene	330 U
99-09-2	3-Nitroaniline	1600 U

CAS Number		ug/l or (ug/Kg) (Circle One)
83-32-9	Acenaphthene	SPIKE
51-28-5	2, 4-Dinitrophenol	1600 U
100-02-7	4-Nitrophenol	SPIKE
132-64-9	Dibenzofuran	330 U
121-14-2	2 4-Dinitrotoluene	SPIKE
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	SPIKE
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	SPIKE
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	690
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-4835, 4863, 4928, 4971

Sample Number
DC-I7-46 MSD

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 4-2-87
Date Analyzed: 5-7-87
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	20 U
319-85-7	Beta-BHC	20 U
319-86-8	Delta-BHC	20 U
58-89-9	Gamma-BHC (Lindane)	29 S
76-44-8	Heptachlor	INF. S
309-00-2	Aldrin	30 S
1024-57-3	Heptachlor Epoxide	20 U
959-98-8	Endosulfan I	20 U
60-57-1	Dieldrin	76 S
72-55-9	4,4'-DDE	40 U
72-20-8	Endrin	80 S
33213-65-9	Endosulfan II	40 U
72-54-8	4,4'-DDD	40 U
1031-07-8	Endosulfan Sulfate	40 U
50-29-3	4,4'-DDT	93 S
72-43-5	Methoxychlor	200 U
53494-70-5	Endrin Ketone	40 U
57-74-9	Chlordane	200 U
8001-35-2	Toxaphene	400 U
12674-11-2	Aroclor-1016	200 U
11104-28-2	Aroclor-1221	200 U
11141-16-5	Aroclor-1232	200 U
53469-21-9	Aroclor-1242	200 U
12672-29-6	Aroclor-1248	200 U
11097-69-1	Aroclor-1254	400 U
11096-82-5	Aroclor-1260	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)

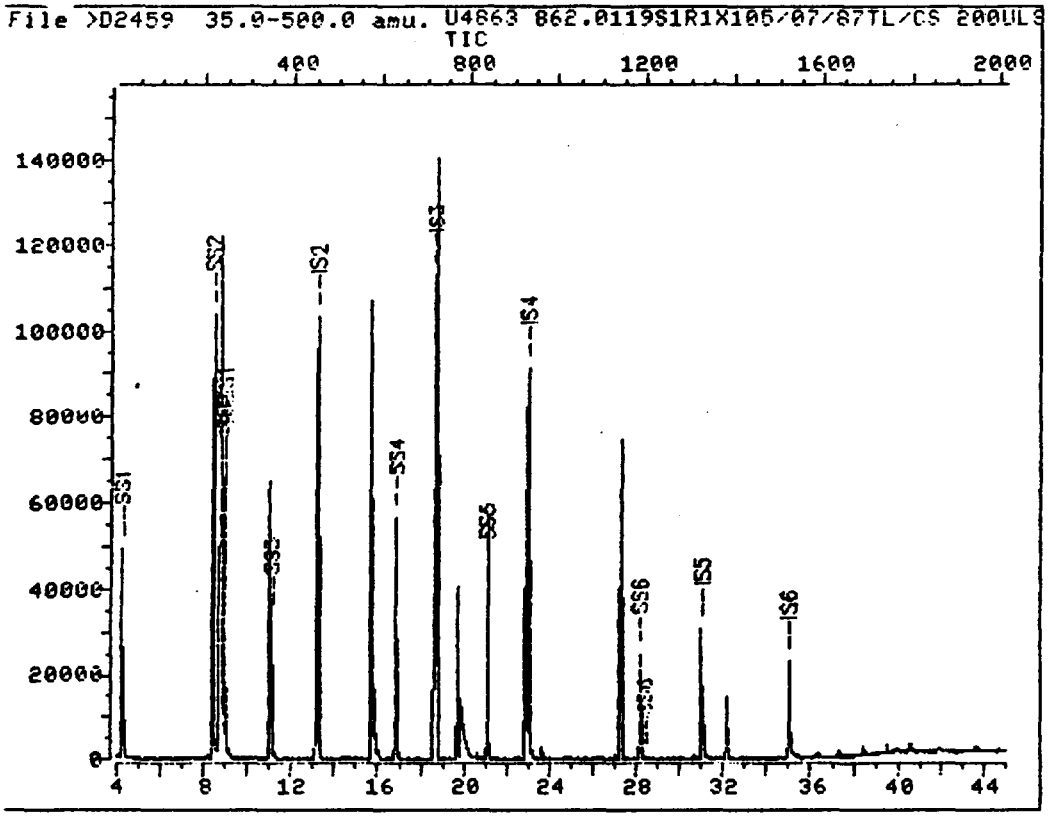
V_s _____ or W_s 30 V_t 1000 V_i 4

S = SPIKED COMPOUND

TO. ION CHROMATOGRAM

File >D2459 35.0-500.0 amu. U4863 862.0119S1R1X105/07/87TL/CS 200ULS

DC-I7-46 MSD

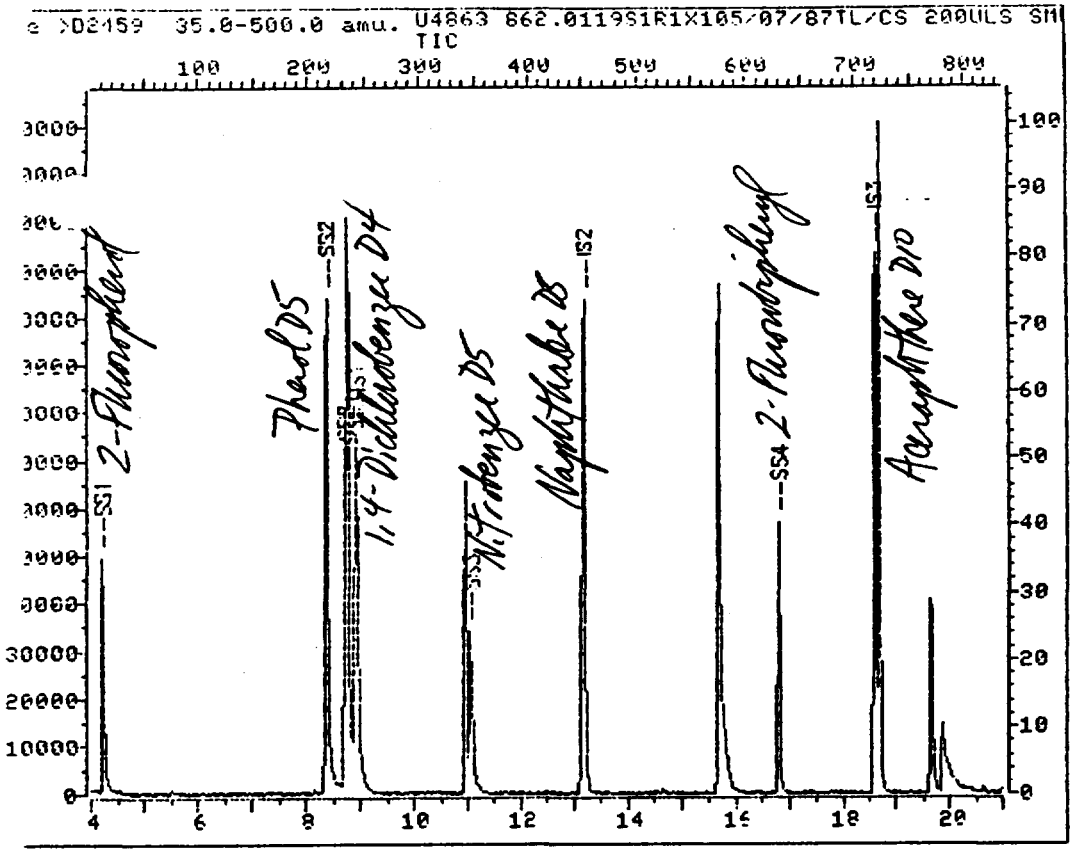


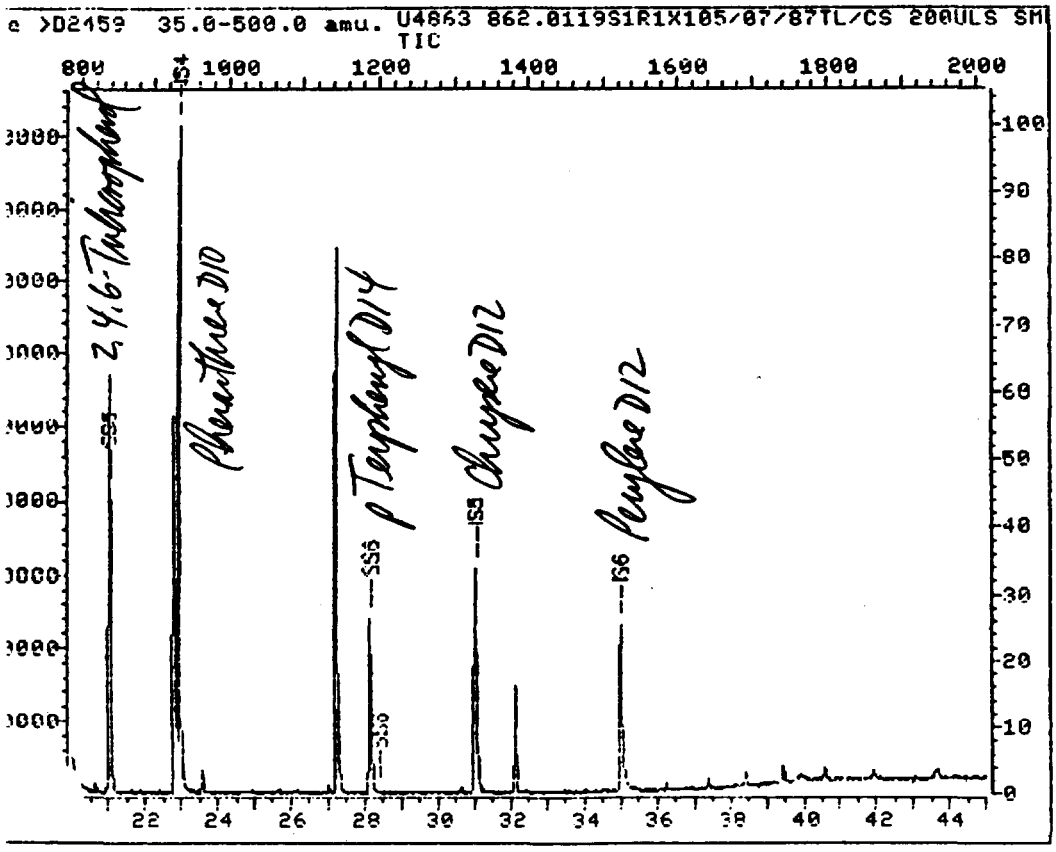
Data File: >D2459::D3
Name: U4863 862.0119S1R1X1
Misc: 05/07/87TL/CS 200ULS SMP + 200ULS MECL2+ 4ULS IS BTL# 2

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870507 14:21

Operator ID: USER8
Quant Time: 870507 17:46
Injected at: 870507 16:59

DC-I7-46 MSD


e >D2159 35.0-500.0 amu. U4863 862.0119S1R1X105/07/87TL/CS 200ULS SM
TIC
2-Fluorophenol
Phenol D5
1,4-Dichlorobenzene D4
N-Nitrosodimethylamine D6
Naphthalene D8
2-Fluorobiphenyl
Acenaphthene D10


e >D2159 35.0-500.0 amu. U4863 862.0119S1R1X105/07/87TL/CS 200ULS SM
TIC
2,4,6-Tribromophenol
Phenanthrene D10
p-Terphenyl D14
Chrysene D12
Perylene D12

QUANT REPORT

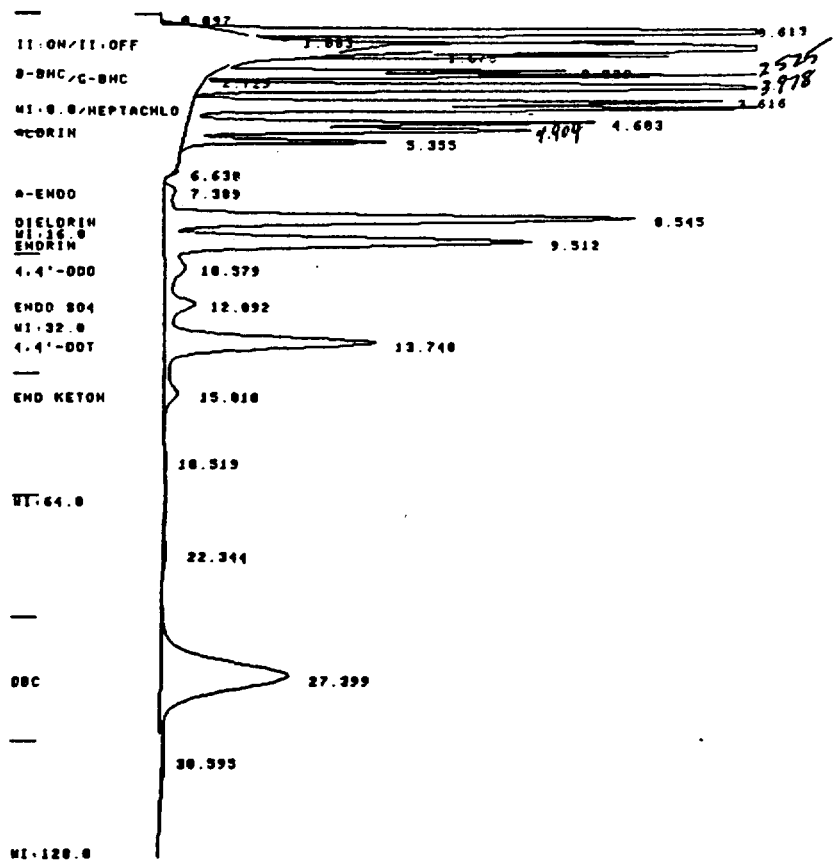
e or ID: USER8 Quant Rev: 4 Quant Time: 870507 17:46
tput File: ^D2459::Q2 Injected at: 870507 16:59
ta File: >D2459::D3 Dilution Factor: 2.00
me: U4863 862.01(19S1R1X1) DC-I7-46 MSD
sc: 05/07/87TL/CS 200ULS SMP + 200ULS MECL2+ 4ULS IS BTL# 2

File: BNADR::D2
tle: BNA 1D FILE FOR THE HP 5970 (B) Spike %
st Calibration: 870507 14:21

	Compound		R.T.	Scan#	Area	Conc	Units	q
)	*1,4-DICHLOROBENZENE-D4	(IS)	152	8.92	243	38390	40.00 UG/L	85
~~1)~~	~~PHENOL-D5~~	~~(SURR)~~	~~99~~	~~8.39~~	~~217~~	~~4457~~	~~8.13 UG/L~~ No Est	40
2)	PHENOL-D5	(SURR)	99	8.72	233	55086	100.46 UG/L	99 H
~~4)~~	~~PHENOL-D5~~	~~(SURR)~~	~~99~~	~~8.90~~	~~242~~	~~3334~~	~~6.08 UG/L~~ No Est	87
5)	2-FLUOROPHENOL	(SURR)	112	4.19	11	38093	67.96 UG/L 68 ✓	96
6)	PHENOL		94	8.76	235	114564	181.43 UG/L 91%	60
~~7)~~	~~ANILINE~~		~~93~~	~~8.39~~	~~217~~	~~1871~~	~~4.02 UG/L~~ No Est	4
)	~~1,3-DICHLOROBENZENE~~		~~146~~	~~8.96~~	~~245~~	~~13871~~	~~21.42 UG/L~~ No Est	99
)	1,4-DICHLOROBENZENE		146	8.96	245	13871	19.62 UG/L 20%	98 low
)	2-CHLOROPHENOL		128	8.39	217	93874	167.33 UG/L 84%	95
)	N-NITROSO-DI-N-PROPYLAMINE		70	10.96	343	40661	74.27 UG/L 74%	96
)	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.06~~	~~348~~	~~9676~~	~~17.67 UG/L~~ No Est	49
)	*NAPHTHALENE-D8	(IS)	136	13.20	453	127607	40.00 UG/L	100
)	NITROBENZENE-D5	(SURR)	82	11.06	348	27645	45.99 UG/L 92 ✓	98
)	1,2,4-TRICHLOROBENZENE		180	13.16	451	27722	38.93 UG/L 39%	100
)	4-CHLORO-3-METHYLPHENOL		107	15.68	575	90811	200.47 UG/L 100%	97
)	~~2-METHYLNAPHTHALENE~~		~~142~~	~~15.66~~	~~574~~	~~24539~~	~~69.73 UG/L~~ No Est	19
)	*ACENAPHTHENE-D10	(IS)	162	18.62	719	78437	40.00 UG/L	98
)	2-FLUOROBIPHENYL	(SURR)	172	16.82	631	54128	40.38 UG/L 81 ✓	91
)	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.42~~	~~719~~	~~15403~~	~~11.31 UG/L~~ No Est	100
)	ACENAPHTHENE		153	18.70	723	91897	86.65 UG/L 87%	96
)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.04	838	28143	108.82 UG/L 109 ✓	97
)	4-NITROPHENOL		139	19.86	780	17417	139.24 UG/L 70%	100
)	~~4-NITROPHENOL~~		~~139~~	~~20.35~~	~~804~~	~~558~~	~~4.48 UG/L~~ No Est	100
)	2,4-DINITROTOLUENE		165	19.64	769	31081	104.99 UG/L 105%	100 high
)	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.68~~	~~770~~	~~10220~~	~~33.67 UG/L~~ No Est	100
)	*PHENANTHRENE-D10	(IS)	188	22.98	933	118100	40.00 UG/L	98
)	PENTACHLOROPHENOL		266	22.81	925	40763	150.84 UG/L 76%	100
)	*CHRYSENE-D12	(IS)	240	31.00	1327	69110	40.00 UG/L	100
)	PYRENE		202	27.21	1141	119915	91.88 UG/L 92%	91
)	TERPHENYL-D14	(SURR)	244	28.15	1187	41385	52.77 UG/L 106 ✓	100
)	~~TERPHENYL-D14~~	~~(SURR)~~	~~244~~	~~28.38~~	~~1198~~	~~103~~	~~.23 UG/L~~ No Est	100
)	BIS(2-ETHYLHEXYL)PHTHALATE		149	32.12	1382	11433	20.58 UG/L	99
)	*PERYLENE-D12	(IS)	264	35.00	1523	52823	40.00 UG/L	100

Compound is ISTD

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



DC-I7-46 MSD

CHANNEL: 1A - 1 TITLE: RUN# 27 8:46 7 MAY 87

SAMPLE: 0862 MSD METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.223		63288	BV	1.88
2		0.0000	1.370		12728732	VV	5.13
3		0.0000	1.678		227196	T	4.50
4	~~A-BHC~~	53.8273	2.339	0.049	374572	BV	5.94
5	B-BHC	29.0769	2.525	0.015	507237	VV	6.06
6		0.0000	3.007		2205017	VV	? 10.38
7		0.0000	3.616		934026	VV	? 15.94
8	HEPTACHLO INF	127.6729	3.978	0.008	1951747	VV	9.69
9		0.0000	4.603		621808	VV	11.13
10	ALDRIN	30.4900	4.904	0.014	541638	VV	11.81
11		0.0000	5.355		344171	VB	11.63
12	~~A-ENDO~~	2.7935	7.389	0.069	44459	BV	? 44.06
13	DIELDRIN	76.1212	8.545	0.025	1277030	VV	? 20.19
14	ENDRIN	79.6644	9.512	0.032	1126682	VV	22.88
15	~~4,4'-DDD~~	10.3205	10.579	0.059	142982	VV	? 81.25
16	~~ENDO SO4~~	16.5982	12.092	-0.258	173062	VV	38.00
17	4,4'-DDT	92.9860	13.740	0.030	952472	VV	32.44
18	~~END KETON~~	5.3594	15.018	0.018	89916	VV	52.44
19		0.0000	22.344		34090	BB	81.31
20	DBC 182	109.5107	27.399	0.089	1378169	BV	74.50
21		0.0000	30.595		32669	T	?143.44
TOTALS:		634.4130		0.150	25750976		

DETECTED PKS: 31 REJECTED PKS: 10

DIVISOR: 1.20000 MULTIPLIER: 2000.00000

NOISE: 11.4 OFFSET: -20

NOTES:
NOTEBOOK: 297-21 ANALYST: RICHARD SAMSON
SECURE AREA: 11-4835 , 11-4863
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
DET: 300 C INJ: 220 C
200 C ISOTHERMAL 4 UL INJECTION
PRIMARY ANALYSIS AUTOSAMPLER

Laboratory Name: ECOLOGY & ENVIRONMENT INC.

Case No: U-4835, 4863, 4928, 4971

Sample Number: DC-GB-68MSD

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 4-9-87

Date Analyzed: 5-18-87

Conc/Dil Factor: 2

Percent Moisture (Decanted) 21

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CONCENTRATIONS REPORTED "AS RECEIVED"

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	SPIKE
111-44-4	bis(-2-Chloroethyl)Ether	330 U
95-57-8	2-Chlorophenol	SPIKE
541-73-1	1, 3-Dichlorobenzene	330 U
106-46-7	1, 4-Dichlorobenzene	SPIKE
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	SPIKE
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	SPIKE
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	SPIKE
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
[illegible]-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	SPIKE
51-28-5	2, 4-Dinitrophenol	1600 U
100-02-7	4-Nitrophenol	SPIKE
132-64-9	Dibenzofuran	330 U
121-14-2	2 4-Dinitrotoluene	SPIKE
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	SPIKE
85-01-8	Phenanthrene	84 J
120-12-7	Anthracene	330 U
84-74-2	Di-n-Butylphthalate	330 U
206-44-0	Fluoranthene	130 J
129-00-0	Pyrene	SPIKE
85-68-7	Butylbenzylphthalate	330 U
91-94-1	3, 3'-Dichlorobenzidine	660 U
56-55-3	Benzo(a)Anthracene	110 J
117-81-7	bis(2-Ethylhexyl)Phthalate	150 J
218-01-9	Chrysene	160 J
117-84-0	Di-n-Octyl Phthalate	330 U
205-99-2	Benzo(b)Fluoranthene	330 U
207-08-9	Benzo(k)Fluoranthene	260 J
50-32-8	Benzo(a)Pyrene	130 J
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 11-4835, 4863, 4928, 4971

Sample Number
IC-GB68 MSD

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 4-9-87
Date Analyzed: 5-12-87
Conc/Dil Factor: 2
Percent Moisture (decanted) — 21

GPC Cleanup ☐Yes ☑No
Separatory Funnel Extraction ☐Yes
Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	16 u
319-85-7	Beta-BHC	16 u
319-86-8	Delta-BHC	16 u
58-89-9	Gamma-BHC (Lindane)	27 S
76-44-8	Heptachlor	INF. S
309-00-2	Aldrin	18 S
1024-57-3	Heptachlor Epoxide	16 u
959-98-8	Endosulfan I	16 u
60-57-1	Dieldrin	68 S
72-55-9	4, 4'-DDE	32 u
72-20-8	Endrin	70 S
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	INF. S
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)

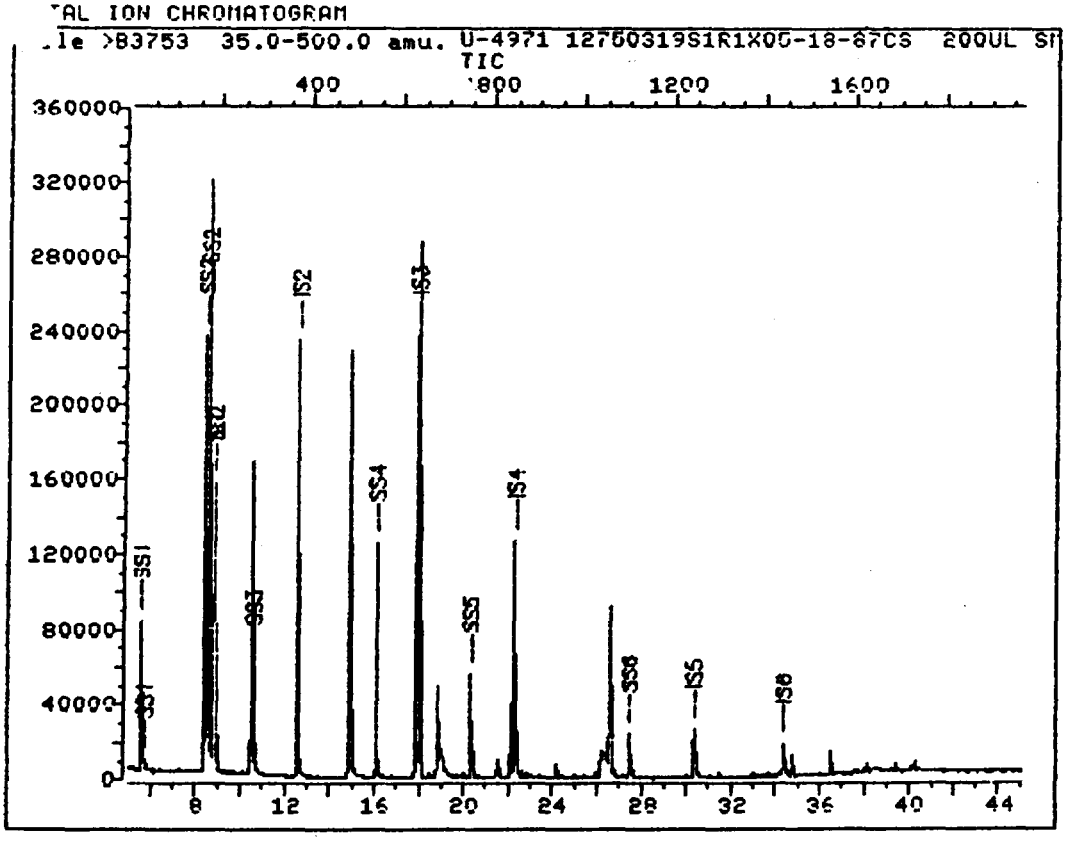
W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 30 V_t 1000 V_i 4 ~~156~~

S = Spiked Compound

* Compound is ISTD



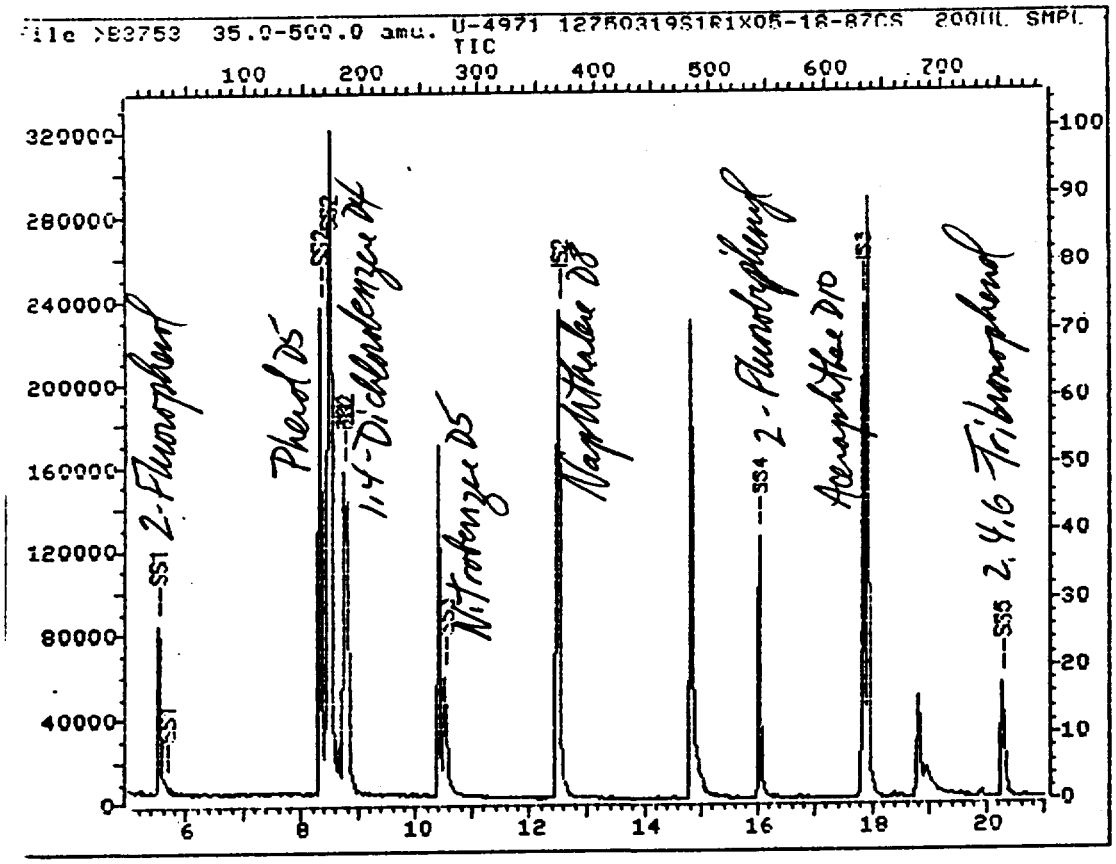
DC-GB-68 MSD

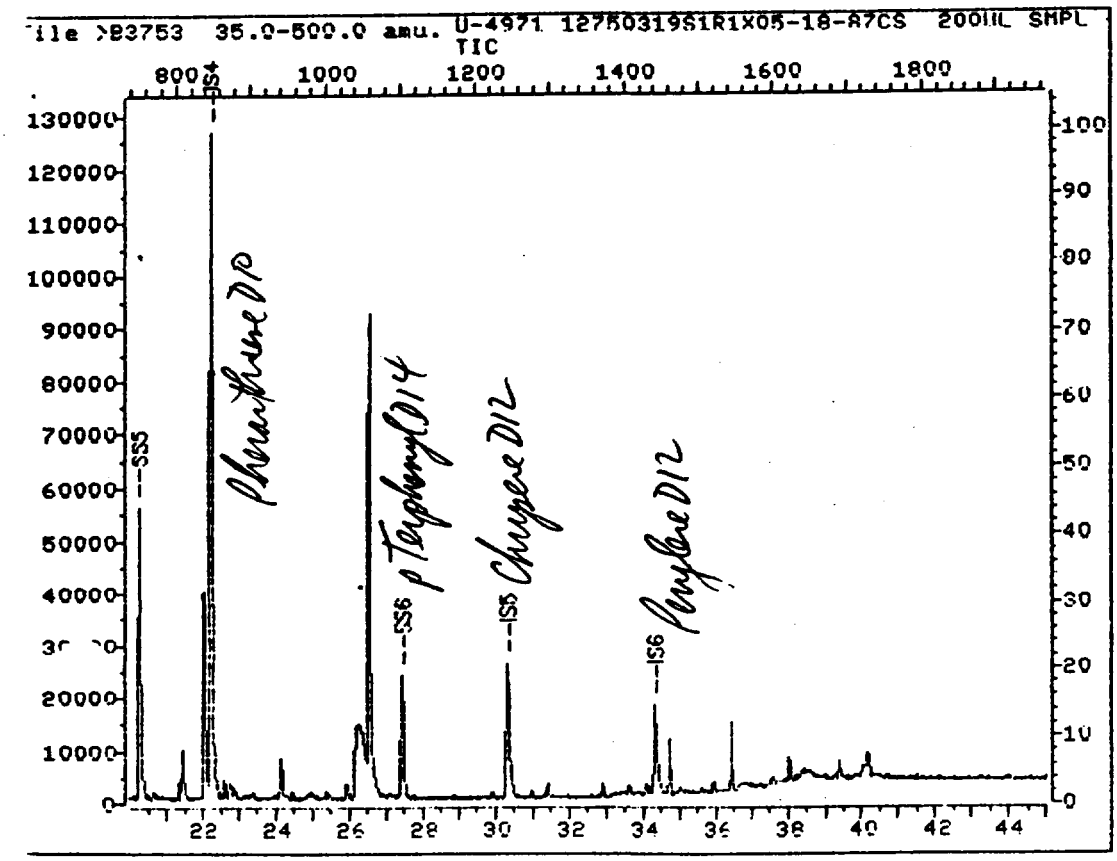
Data File: >83753::D4
Name: U-4971 12750319S1R1X
Misc: 05-18-87CS 200UL SMPL + 200UL MECL2 + 4UL IS

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870518 11:33

Operator ID: USER8
Quant Time: 870518 15:56
Injected at: 870518 13:29

DC-GB-68 MSD


File >B3753 35.0-500.0 amu. U-4971 12750319S1R1X05-18-87CS 200ml SMPL
TIC
SS1 2-Fluorophenol
Phenol D5
SS2
1,4-Dichlorobenzene D4
Nitrobenzene D5
Naphthalene D8
SS4 2-Fluorobiphenyl
Acenaphthene D10
SS5 2,4,6 Tribromophenol


File >B3753 35.0-500.0 amu. U-4971 12750319S1R1X05-18-87CS 200ml SMPL
TIC
SS5
Phenanthrene D10
IS4
SS6 p Terphenyl D14
IS5 Chrysene D12
IS6 Perylene D12

QUANT REPORT

)perator ID: USER8 Quant Rev: 4 Quant Time: 870518 15:56
)utput File: ^B3753::Q2 Injected at: 870518 13:29
)ata File: >B3753::D4 Dilution Factor: 2.00
)ame: U-4971 12750319S1R1X DC-GB-68 MSD
)isc: 05-18-87CS 200UL SMPL + 200UL MECL2 + 4UL IS

'D File: BNABR::D2
'itle: BNA ID FILE FOR THE HP 5970 (B)
.ast Calibration: 870518 11:33

	Compound		R.T.	Scan#	Area	Conc	Units		q
1)	*1,4-DICHLOROBENZENE-D4	(IS) 152	8.76	185	68675	40.00	UG/L	No	86
~~2)~~	~~PHENOL-D5~~	~~(SURR) 99~~	~~8.33~~	~~164~~	~~9553~~	~~7.16~~	~~UG/L~~	No	40
2)	PHENOL-D5	(SURR) 99	8.47	171	106057	79.50	UG/L	8	89
~~2)~~	~~PHENOL-D5~~	~~(SURR) 99~~	~~8.76~~	~~185~~	~~1681~~	~~1.26~~	~~UG/L~~	No	40
5)	2-FLUOROPHENOL	(SURR) 112	5.50	25	63876	64.41	UG/L		78
~~5)~~	~~2-FLUOROPHENOL~~	~~(SURR) 112~~	~~5.67~~	~~33~~	~~1498~~	~~1.58~~	~~UG/L~~	No	95
6)	PHENOL	94	8.52	173	226124	205.35	UG/L		82
~~7)~~	~~ANILINE~~	~~93~~	~~8.33~~	~~164~~	~~3598~~	~~3.73~~	~~UG/L~~	No	6
~~9)~~	~~1,3-DICHLOROBENZENE~~	~~146~~	~~8.80~~	~~187~~	~~72813~~	~~56.12~~	~~UG/L~~		96
0)	1,4-DICHLOROBENZENE	146	8.80	187	72813	58.32	UG/L		95
5)	2-CHLOROPHENOL	128	8.33	164	166648	194.89	UG/L		95
~~5)~~	~~2-CHLOROPHENOL~~	~~128~~	~~8.49~~	~~172~~	~~9177~~	~~10.73~~	~~UG/L~~	No	95
7)	N-NITROSO-DI-N-PROPYLAMINE	70	10.41	266	89643	83.87	UG/L		92
~~7)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~	~~70~~	~~10.53~~	~~272~~	~~13549~~	~~12.68~~	~~UG/L~~	No	93
9)	*NAPHTHALENE-D8	(IS) 136	12.52	370	244554	40.00	UG/L		100
0)	NITROBENZENE-D5	(SURR) 82	10.53	272	58477	46.96	UG/L 94		94
8)	1,2,4-TRICHLOROBENZENE	180	12.48	368	91159	73.83	UG/L		100
2)	4-CHLORO-3-METHYLPHENOL	107	14.82	483	168996	187.63	UG/L		98
~~3)~~	~~2-METHYLNAPHTHALENE~~	~~142~~	~~14.82~~	~~483~~	~~126578~~	~~59.61~~	~~UG/L~~	No	18
4)	*ACENAPHTHENE-D10	(IS) 162	17.85	632	157099	40.00	UG/L		98
8)	2-FLUOROBIPHENYL	(SURR) 172	16.04	543	123097	51.87	UG/L		94
~~1)~~	~~DIMETHYL PHTHALATE~~	~~163~~	~~17.85~~	~~632~~	~~27748~~	~~10.33~~	~~UG/L~~	No	100
7)	ACENAPHTHENE	153	17.93	636	199388	96.63	UG/L		95
8)	2,4,6-TRIBROMOPHENOL	(SURR) 330	20.27	751	30810	42.73	UG/L 43		98
0)	4-NITROPHENOL	139	18.95	686	16157	96.39	UG/L		100
1)	2,4-DINITROTOLUENE	165	18.79	678	48967	74.89	UG/L		100
~~2)~~	~~2,6-DINITROTOLUENE~~	~~165~~	~~17.85~~	~~632~~	~~20246~~	~~34.88~~	~~UG/L~~	No	100
5)	*PHENANTHRENE-D10	(IS) 188	22.22	847	181211	40.00	UG/L		95
0)	PENTACHLOROPHENOL	266	22.02	837	26295	63.70	UG/L		100
1)	PHENANTHRENE	178	22.29	850	5726	2.52	UG/L		95
~~2)~~	~~ANTHRACENE~~	~~178~~	~~22.29~~	~~850~~	~~5726~~	~~2.59~~	~~UG/L~~	No	95
4)	FLUORANTHENE	202	25.91	1028	8277	3.86	UG/L		96
5)	*CHRYSENE-D12	(IS) 240	30.32	1245	54006	40.00	UG/L		100
7)	PYRENE	202	26.52	1058	138398	127.45	UG/L		98
8)	TERPHENYL-D14	(SURR) 244	27.43	1103	39920	60.75	UG/L 121		100
'1)	BENZO(A)ANTHRACENE	228	30.30	1244	2232	3.38	UG/L	No	92
~~'1~~	~~BENZO(A)ANTHRACENE~~	~~228~~	~~30.38~~	~~1248~~	~~3380~~	~~5.11~~	~~UG/L~~	No	94
'2)	BIS(2-ETHYLHEXYL)PHTHALATE	149	31.42	1299	2188	4.50	UG/L		91
~~'3)~~	~~CHRYSENE~~	~~228~~	~~30.30~~	~~1244~~	~~2232~~	~~3.24~~	~~UG/L~~	No	91
'3)	CHRYSENE	228	30.38	1248	3380	4.91	UG/L		95
'4)	*PERYLENE-D12	(IS) 264	34.32	1442	40409	40.00	UG/L	No	100
~~'6)~~	~~BENZO(B)FLUORANTHENE~~	~~252~~	~~33.45~~	~~1399~~	~~4670~~	~~7.99~~	~~UG/L~~		100
'7)	BENZO(K)FLUORANTHENE	252	33.45	1399	4670	7.72	UG/L	No	100
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]

159

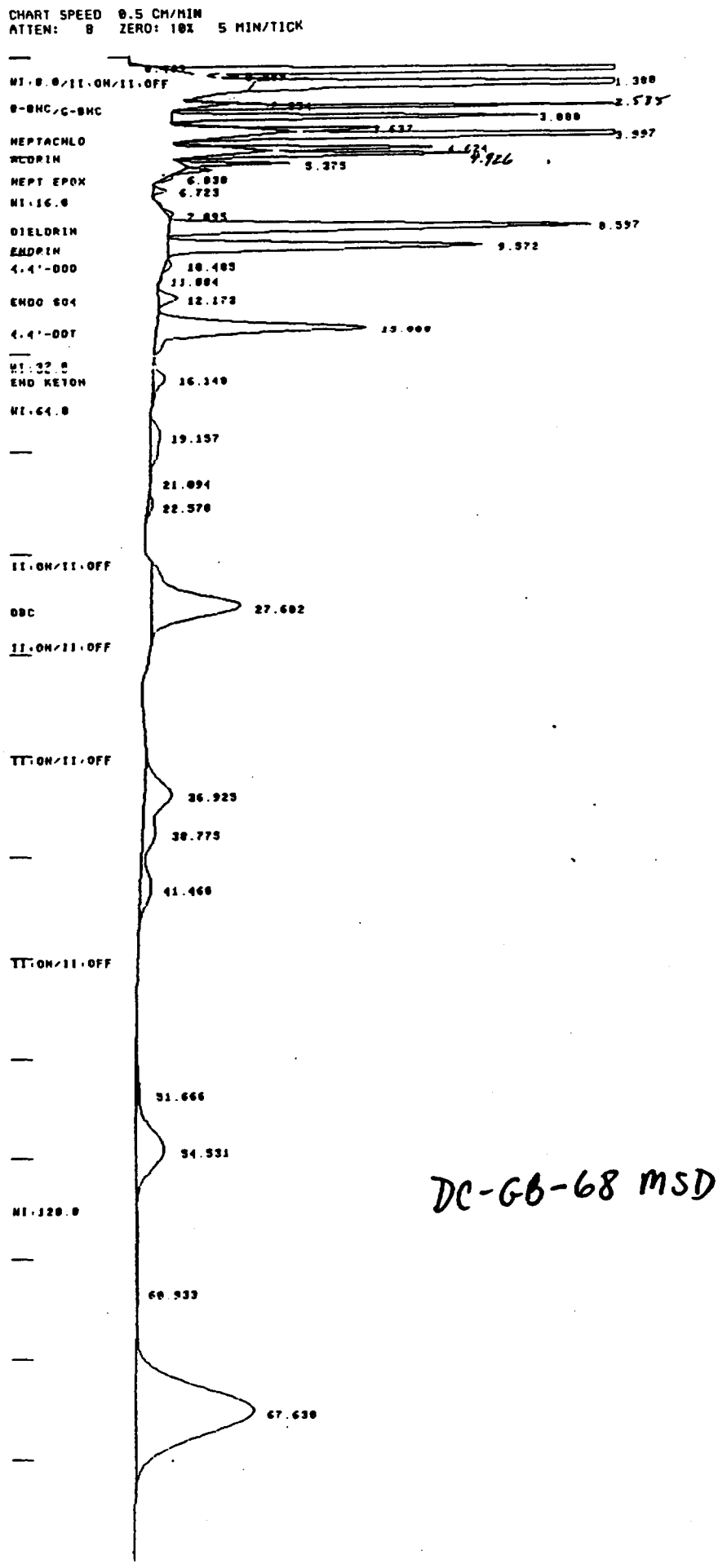


CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 10% 5 MIN/TICK
MI:8.0/II:ON/II:OFF
B-BHC/G-BHC
HEPTACHLO
HCDRIN
HEPT EPOX
MI:16.0
DIELDRIN
ENDRIN
4,4'-DDD
ENDO SO4
4,4'-DDT
MI:32.0
END KETON
MI:64.0
II:ON/II:OFF
DBC
II:ON/II:OFF
II:ON/II:OFF
II:ON/II:OFF
MI:128.0
1.388
2.535
3.888
3.997
4.624
4.926
5.375
6.030
6.723
7.895
8.597
9.572
10.403
11.884
12.173
15.000
16.149
19.157
21.094
22.570
27.692
36.925
38.775
41.468
51.666
54.531
60.933
67.630

DC-GB-68 MSD

RECALCULATE ON FILE: DC916

CHANNEL: 1A - 1 TITLE: RUN# 21 7:52 12 MAY 87

DC-GB-68-MSD

SAMPLE: 1275 MSD METHOD: WILL CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.232		47605	BV	2.31
2		0.0000	1.378		11287751	VV	4.81
3		0.0000	1.498		494704	VV	? 3.94
4		0.0000	1.676		47396	VB	? 6.63
5	~~B-BHC~~	2.5753	2.354	0.054	21272	BB	? 6.13
6	6-BHC	26.5104	2.535	0.015	535924	BB	6.25
7		0.0000	3.080		689788	BB	12.13
8		0.0000	3.637		188920	BB	? 10.31
9	HEPTACHLO INF.	123.6235	3.997	0.017	2166300	BB	9.63
10		0.0000	4.624		283575	BB	11.69
11	ALDRIN	18.3588	4.926	0.036	378272	BB	11.81
12		0.0000	5.375		185008	BB	11.38
13	~~HEPT EPOX~~	2.1865	5.702	-0.218	42816	BB	13.06
14		0.0000	6.723		29437	BB	13.88
15		0.0000	7.895		28949	BB	? 33.50
16	DIELDRIN	68.3579	8.597	0.077	1349170	BB	20.69
17	ENDRIN	70.4138	9.572	0.082	1093382	BB	22.88
18	~~ENDO SO4~~	7.3561	12.173	-0.187	84488	BB	34.56
19	4,4'-DDT INF.	115.3207	13.805	0.085	1292833	BB	? 37.19
20	~~ENB KETON~~	6.0741	16.140	0.330	117715	BB	57.25
21	~~METHOXYCH.~~	21.9442	19.157	-0.923	138770	BB	110.69
22		0.0000	22.578		35147	BB	36.06
23	DBC	75.1802	27.602	0.292	1099125	BB	72.00
24		0.0000	36.925		394983	BV	90.25
25		0.0000	38.775		146410	VV	? 86.56
26		0.0000	41.460		173850	VB	77.00
27		0.0000	51.666		36906	BV	?144.00
28		0.0000	54.531		584931	VB	131.13
29		0.0000	60.933		61211	BV	?205.06
30		0.0000	67.630		3019235	VB	162.88
TOTALS:		537.9015		-0.340	26055882		

DETECTED PKS: 39 REJECTED PKS: 9

DIVISOR: 1.50000 MULTIPLIER: 2000.00000

NOISE: 22.9 OFFSET: -14

RACK: 2 VIAL: 6 INJ: 1

NOTES:
NOTEBOOK:297-25 ANALYST: RICHARD SAMSON
SECURE AREA: U-4928, U-4971
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
DET: 300 C INJ: 220 C
200 C ISOTHERMAL 4 UL INJECTION
PRIMARY ANALYSIS AUTOSAMPLER

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)

Laboratory Name: Ecology & Environment Inc.

Case No: 4-4835, 4863, 4928, 4971

Sample Number: D2304

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 4-1-87

Date Analyzed: 4-16-87

Conc/Dil Factor: 2

Percent Moisture (Decanted) _____

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)	
108-95-2	Phenol	330	U
111-44-4	bis(-2-Chloroethyl)Ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1. 3-Dichlorobenzene	330	U
106-46-7	1. 4-Dichlorobenzene	330	U
100-51-6	Benzyl Alcohol	330	U
95-50-1.	1. 2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
39638-32-9	bis(2-chloroisopropyl)Ether	330	U
106-44-5	4-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	220	J
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	94	J
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-4835, 4863, 4928, 4971

Sample Number
BLANK

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 4-1-87
Date Analyzed: 5-7-87
Conc/Dil Factor: 1
Percent Moisture (decanted) –

GPC Cleanup ☐Yes ☑No
Separatory Funnel Extraction ☐Yes
Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)	
319-84-6	Alpha-BHC	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 1,000 V_i 4

Laboratory Name: Ecology & Environment Inc.

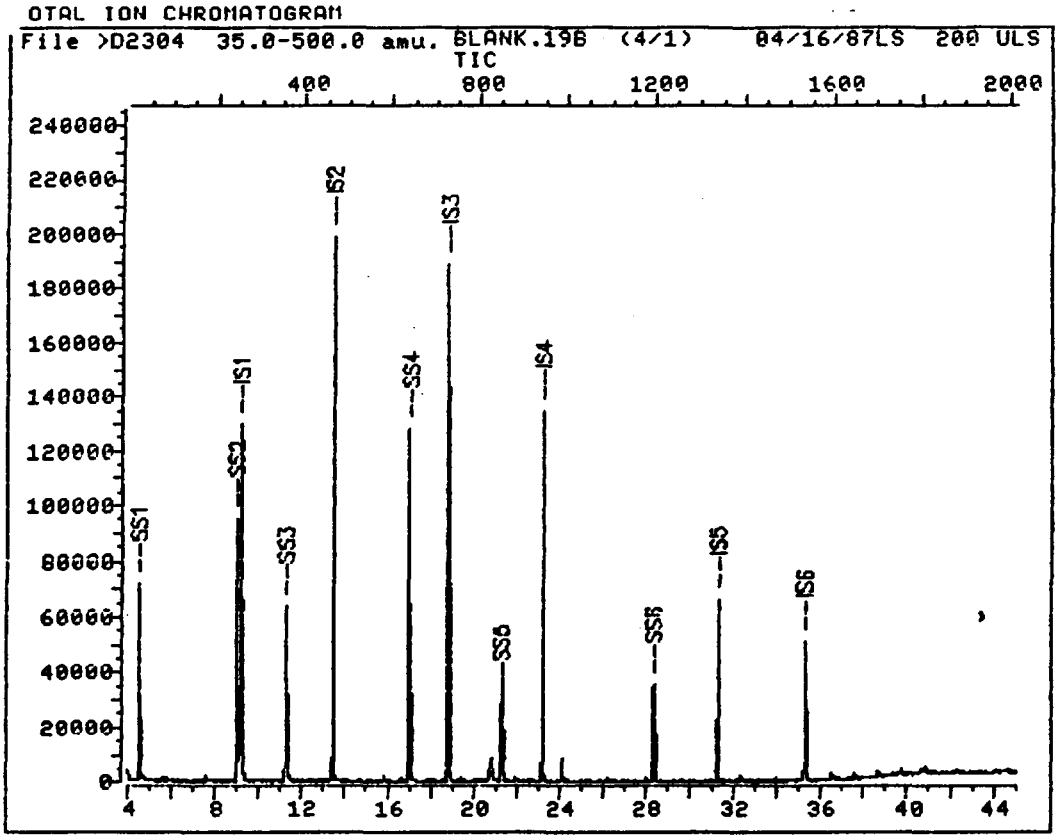
Case No: 4-4835, 4863, 4928, 4971

Sample Number: D2304

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

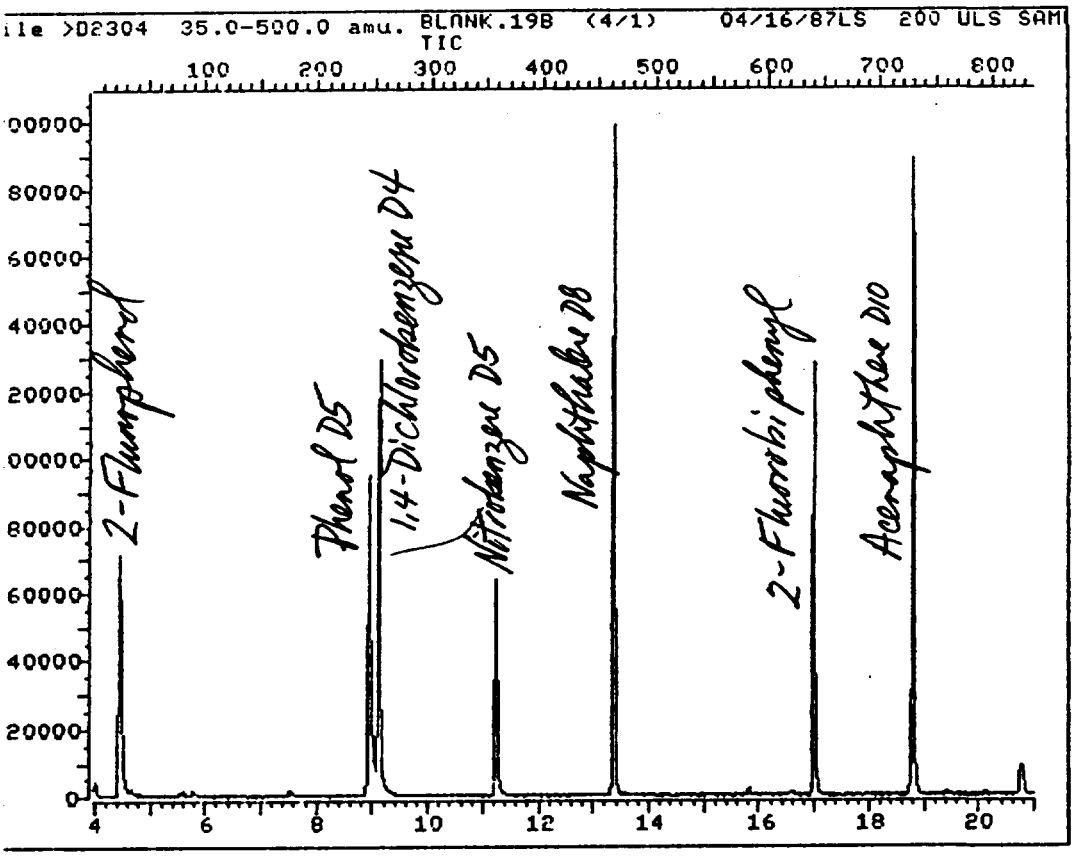
CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	No Semi-Volatile Compounds Found			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30				

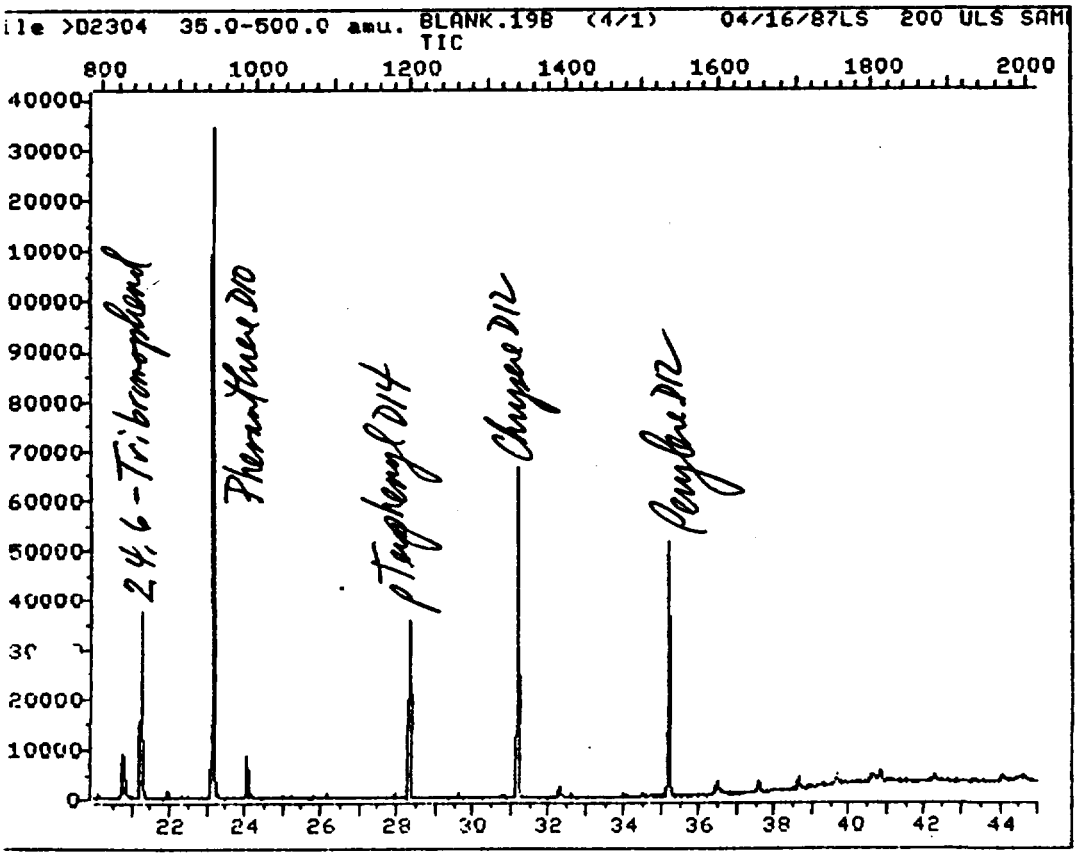


Data File: >D2304::D3
Name: BLANK.19B (4/1)
Misc: 04/16/87LS 200 ULS SAMPLE + 200 ULS MECL2 + 4 ULS IS BTL# 4

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870416 17:43

Operator ID: USER6
Quant Time: 870417 00:05
Injected at: 870416 23:18


ile >D2304 35.0-500.0 amu. BLANK.19B (4/1) 04/16/87LS 200 ULS SAM
TIC
2-Fluorophenol
Phenol D5
1,4-Dichlorobenzene D4
Nitrobenzene D5
Naphthalene D8
2-Fluorobiphenyl
Acenaphthene D10


ile >D2304 35.0-500.0 amu. BLANK.19B (4/1) 04/16/87LS 200 ULS SAM
TIC
2,4,6-Tribromophenol
Phenanthrene D10
pTerphenyl D14
Chrysene D12
Perylene D12

QUANT REPORT

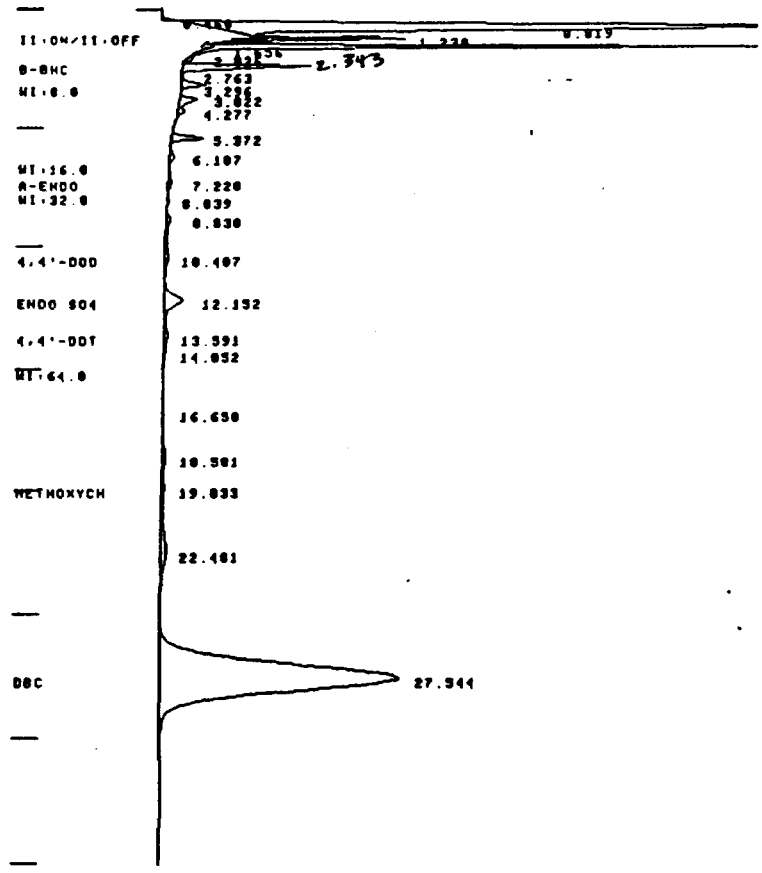
Operator ID: USER6 Quant Rev: 4 Quant Time: 870417 00:05
Output File: ^D2304::Q2 Injected at: 870416 23:18
Data File: >D2304::D3 Dilution Factor: 2.00
Name: BLANK.19B (4/1)
Misc: 04/16/87LS 200 ULS SAMPLE + 200 ULS MECL2 + 4 ULS IS BTL# 4

ID File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870416 17:43

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.13	254	56916	40.00 UG/L	86
2)	PHENOL-D5	(SURR)	99	8.92	244	91260	79.39 UG/L	97
5)	2-FLUOROPHENOL	(SURR)	112	4.44	24	60818	66.51 UG/L	78
~~17)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.23~~	~~357~~	~~9068~~	~~8.35 UG/L~~ NoGM	83
19)	*NAPHTHALENE-D8	(IS)	136	13.37	462	191725	40.00 UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	11.23	357	54024	55.17 UG/L	98
34)	*ACENAPHTHENE-D10	(IS)	162	18.78	728	102760	40.00 UG/L	94
38)	2-FLUOROBIPHENYL	(SURR)	172	16.99	640	92141	54.34 UG/L	94
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.78~~	~~728~~	~~19786~~	~~11.29 UG/L~~ NoGM	100
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.23	848	14784	43.67 UG/L	95
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.78~~	~~728~~	~~13486~~	~~39.55 UG/L~~ NoGM	100
53)	DIETHYLPHTHALATE		149	20.76	825	12896	6.59 UG/L yes	97
55)	*PHENANTHRENE-D10	(IS)	188	23.16	943	122817	40.00 UG/L	89
65)	*CHRYSENE-D12	(IS)	240	31.19	1337	62646	40.00 UG/L	100
68)	TERPHENYL-D14	(SURR)	244	28.32	1196	37122	48.29 UG/L	100
72)	BIS(2-ETHYLHEXYL)PHTHALATE		149	32.31	1392	1568	2.82 UG/L yes	96
74)	*PERYLENE-D12	(IS)	264	35.20	1534	50051	40.00 UG/L	100

* Compound is ISTD

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



CHANNEL: 1A - 1 TITLE: RUN# 14 8:19 7 MAY 87

SAMPLE: BLANK 4-1 METHOD: CFPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT (UG/KG)	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.230		62070	BB	2.44
2		0.0000	1.510		466018	BV	4.50
3	~~α-BHC~~	0.0063	2.343	0.053	153207	VB	5.88
4		0.0000	3.076		30251	VB	? 8.69
5	HEPTACHLO	0.0132	3.822	-0.148	31079	BV	12.06
6		0.0000	5.372		47982	BB	11.25
7	~~DIELDRIN~~	0.5672	8.830	0.310	23790	VV	23.75
8	~~ENDO-SO4~~	2.7231	12.152	-0.198	71016	VV	30.19
9		0.0000	18.501		22373	VV	59.19
10	~~METHOXYCH~~	1.6855	19.833	-0.237	24391	VV	? 81.50
11		0.0000	22.481		63358	VB	88.00
12	DBC~~ND~~	71.5104 / 24.7	27.544	0.234	2249857	BB	71.31
TOTALS:		86.1058		0.014	3245307		

DETECTED PKS: 30 REJECTED PKS: 18

DIVISOR: 1.50000 *MULTIPLIER: 1000.00000

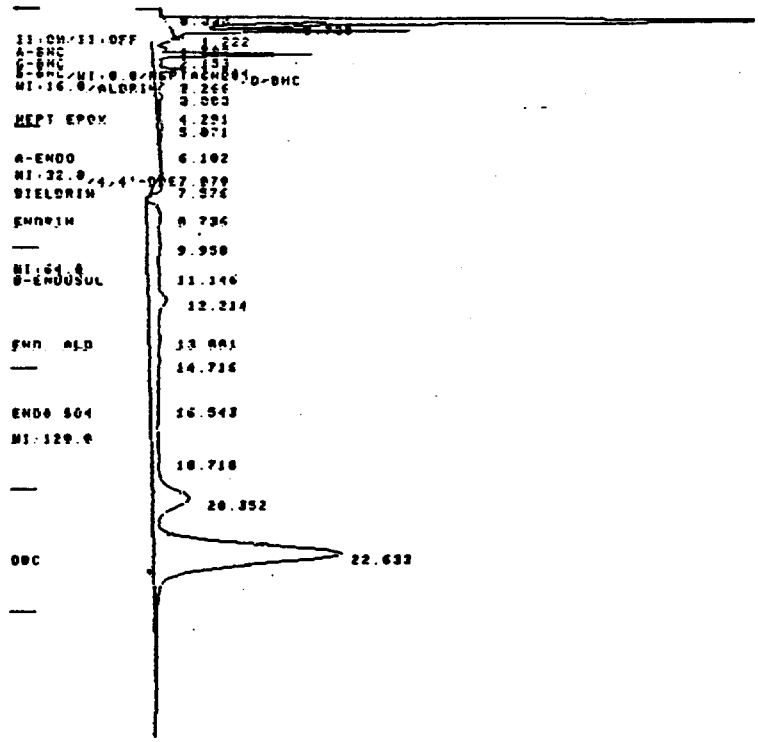
NOISE: 22.9 OFFSET: -23

RACK: 1 VIAL: 14 INJ: 1

*NOTES:
NOTEBOOK: 297-21 ANALYST: RICHARD SAMSON
SECURE AREA: U-4835 , U-4863
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
DET: 300 C INJ: 220 C
200 C ISOTHERMAL 4 UL INJECTION
PRIMARY ANALYSIS AUTOSAMPLER
DEAD CREEK

POST RUN:
SAVE FILE: RAW D.CRK.851

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



CHANNEL: 1B - 1 TITLE: RUN# 6 19:30 8 MAY 87

SAMPLE: BK.158 4-1 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~~	0.0000	1.590	-0.132	33082	BV	? 8.88
2		0.0000	1.923		241436	VV	4.56
3	~~G-BHC~~	0.4444	2.153	0.003	25966	VV	? 7.94
4	~~B-BHC~~	0.0000	2.514	0.024	77900	VV	7.94
5	~~HEPTACHLO~~	0.5438	2.688	0.038	27619	VV	? 13.88
6	~~G-BHC~~	0.0000	2.960	0.060	35704	VV	? 18.31
7	~~ALDRIN~~	0.7062	3.266	0.066	39270	VV	? 19.19
8		0.0000	3.803		50920	VV	? 21.44
9	~~HEPT EPOX~~	0.9723	5.071	0.301	48756	VV	? 33.63
10	~~4,4'-DDE~~	0.0000	7.078	-0.012	27633	BV	13.56
11	~~DIELDRIN~~	1.1261	7.576	0.256	57795	VV	9.63
12	ENDRIN	0.0000	8.736	-0.344	188695	VV	? 63.19
13		0.0000	9.958		261535	VV	?103.44
14	~~B-ENDOSUL~~	0.0000	11.146	0.146	166442	VV	? 42.56
15	~~4,4'-DDT~~	9.6663	12.214	-0.566	290811	VV	? 90.13
16	~~END. ALD.~~	5.6548	13.801	-0.169	186218	VV	? 57.19
17		0.0000	14.716		173054	VV	?132.31
18	~~ENDO-504~~	0.0000	16.543	-0.727	217557	VV	?203.94
19		0.0000	18.710		168591	VV	?110.31
20		0.0000	20.352		587095	VV	65.25
21	DBC	85.5624	22.633	0.093	2806117	VB	55.50
TOTALS:		104.6763		-0.963	5712196		

DETECTED PKS: 34 REJECTED PKS: 13

DIVISOR: 1.50000 MULTIPLIER: 1000.00000

NOISE: 45.7 OFFSET: -13

NOTES:
NOTEBOOK: 297-24 ANALYST: RICHARD SAMSON
SECURE AREA: D JOB U-4835, U-4863
INST:VARIAN 6000#28 ECD 10X1 ATTN:8X
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
PHASE:1.5% SP2250/1.95% SP2401
CARRIER GAS: N2 @ 60 ML/MIN.
DET:300 C INJ:220 C
200 C ISOTHERMAL 4 UL INJECTION
CONFIRMATION RUNS DEAD CREEK SOIL SAMPLES

POST RUN:
SAVE FILE: RAW CONF255

Laboratory Name ECOLOGY & ENVIRONMENT INC.

Case No 4-4835, 4863, 4928, 4971

Sample Number D2456

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 4-2-87

Date Analyzed 5-7-87

Conc/Dil Factor 2

Percent Moisture (Decanted) _____

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)	
108-95-2	Phenol	330	U
111-44-4	bis(2-Chloroethyl)Ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
100-51-6	Benzyl Alcohol	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
39638-32-9	bis(2-chloroisopropyl)Ether	330	U
106-44-5	4-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

Laboratory Name Ecology and Environment, Inc.
Case No U-4835, 4863, 4928, 4971

Sample Number
BLANK

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 4-2-87
Date Analyzed: 5-7-87
Conc/Dil Factor: 1
Percent Moisture (decanted) —

GPC Cleanup ☐Yes ☑No
Separatory Funnel Extraction ☐Yes
Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	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	16.0 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	50 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 1,000 V_i 4

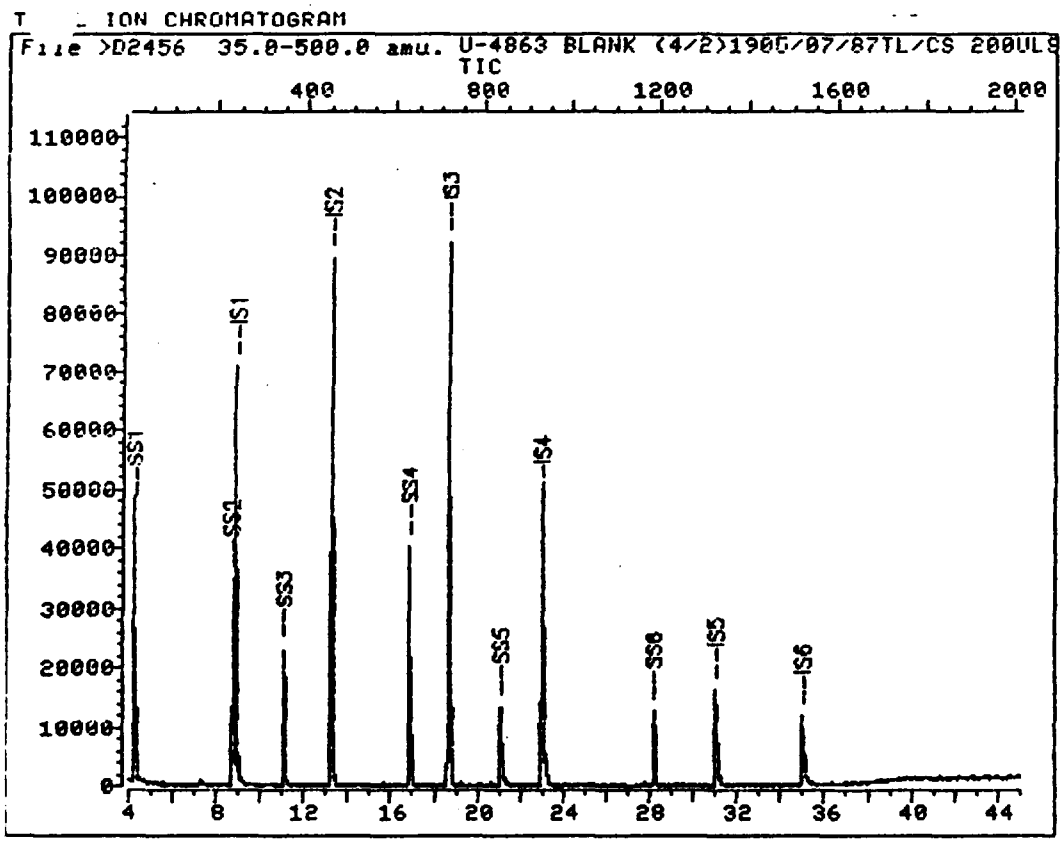
Laboratory Name: Ecology & Environment Inc.
Case No: 4-4835, 4863, 4928, 4971

Sample Number
D2456

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

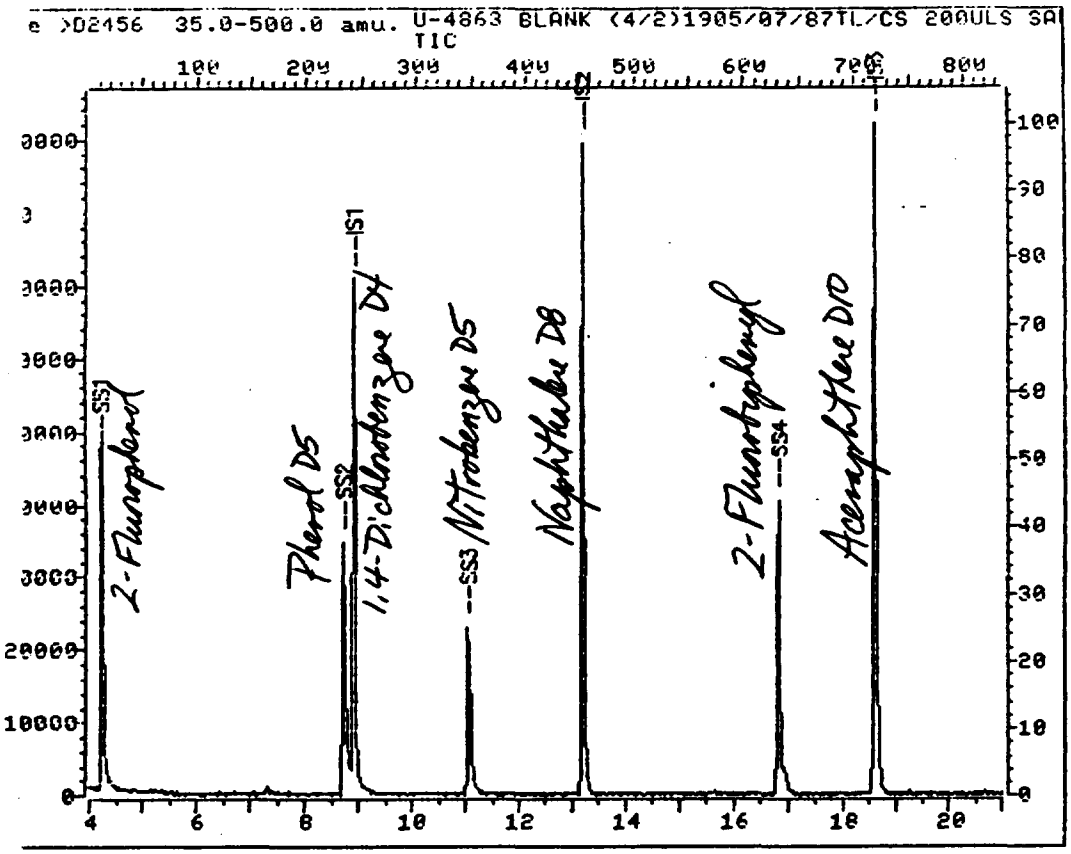
CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	No Semi-Volatile Compounds Found			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

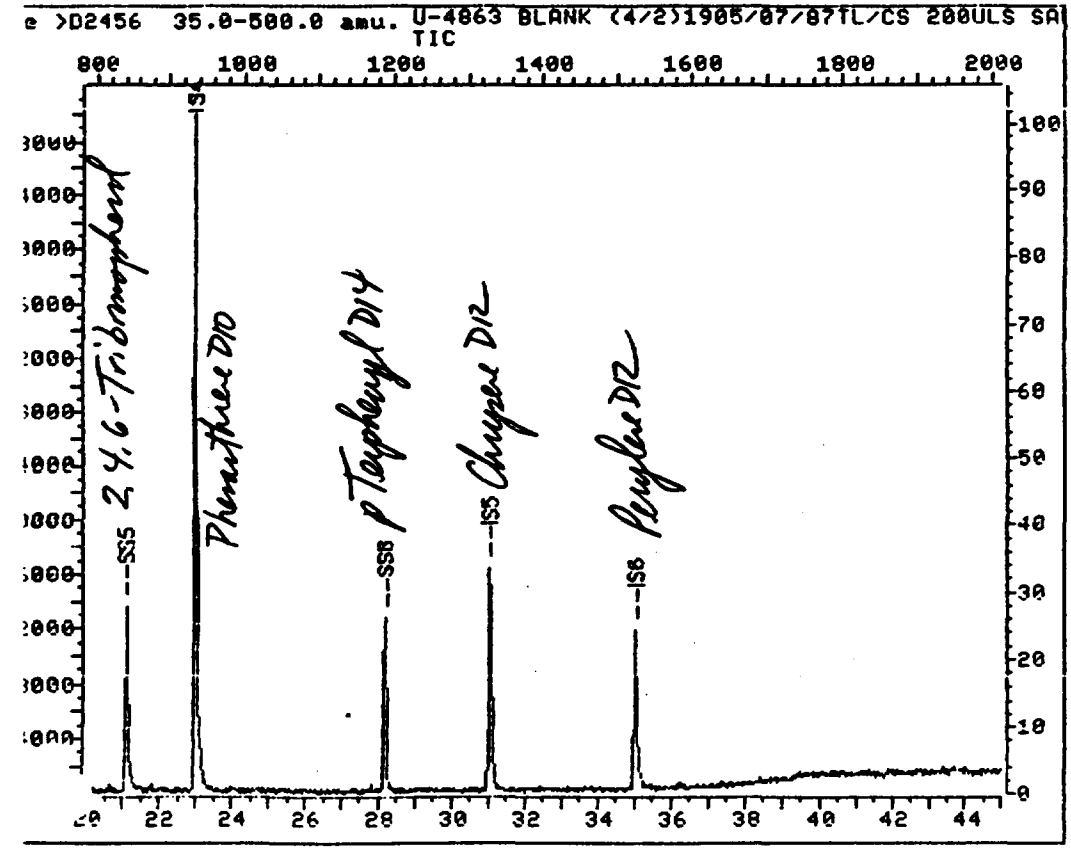


Data File: >D2456::D3
Name: U-4863 BLANK (4/2)19
Misc: 05/07/87TL/CS 200ULS SAM + 200ULS MECL2+ 4ULS IS BTL# 1

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870507 14:21

Operator ID: USER8
Quant Time: 870507 14:49
Injected at: 870507 14:01


e >D2456 35.0-500.0 amu. U-4863 BLANK (4/2)1905/07/87TL/CS 200ULS SA
TIC
SS1
2-Fluorophenol
SS2
Phenol D5
IS1
1,4-Dichlorobenzene D4
SS3
Nitrobenzene D5
Naphthalene D8
SS4
2-Fluorobiphenyl
Acenaphthene D10


e >D2456 35.0-500.0 amu. U-4863 BLANK (4/2)1905/07/87TL/CS 200ULS SA
TIC
SS5
2,4,6-Tribromophenol
IS2
Phenanthrene D10
SS6
p-Terphenyl D14
IS5
Chrysene D12
IS6
Perylene D12

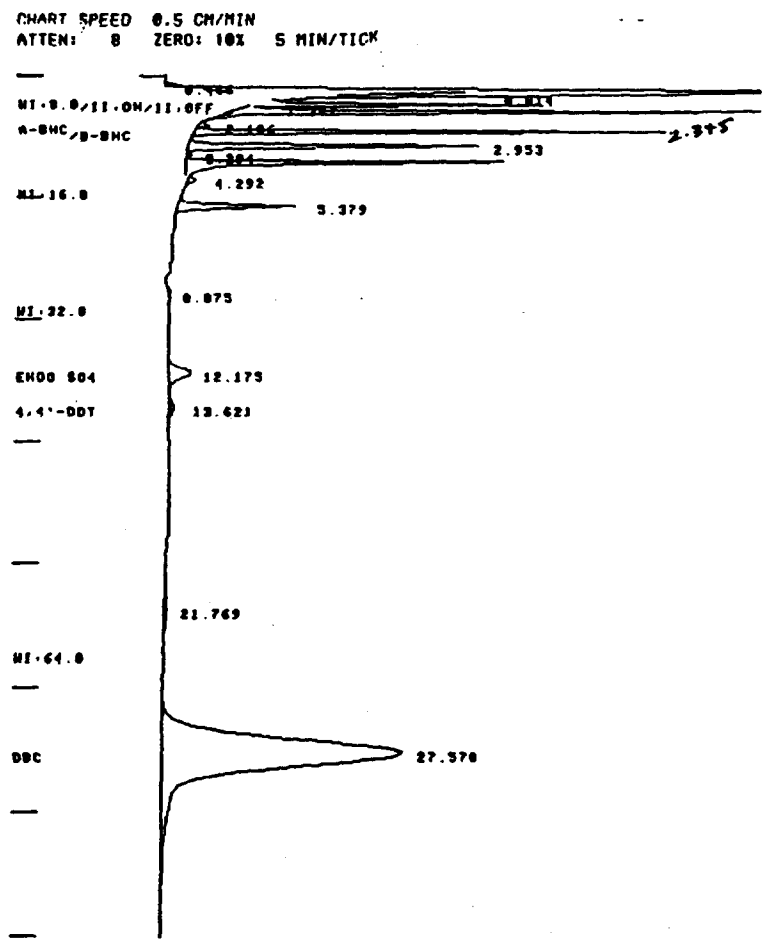
QUANT REPORT

erator ID: USER8 Quant Rev: 4 Quant Time: 870507 14:49
tput File: ^D2456::Q2 Injected at: 870507 14:01
ta File: >D2456::D3 Dilution Factor: 2.00
me: U-4863 BLANK (4/2)19
sc: 05/07/87TL/CS 200ULS SAM + 200ULS MECL2+ 4ULS IS BTL# 1

) File: BNADR::D2
tle: BNA ID FILE FOR THE HP 5970 (B)
st Calibration: 870507 14:21

	Compound		R.T.	Scan#	Area	Conc	Units		q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	8.92	243	36102	40.00	UG/L	87
2)	PHENOL-D5	(SURR)	99	8.71	233	47431	91.98	UG/L 92	98
5)	2-FLUOROPHENOL	(SURR)	112	4.19	11	44548	84.52	UG/L 85	99
)	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.06~~	~~348~~	~~3631~~	~~7.05~~	~~UG/L~~ No GK	83
)	*NAPHTHALENE-D8	(IS)	136	13.20	453	115828	40.00	UG/L	100
1)	NITROBENZENE-D5	(SURR)	82	11.06	348	24302	44.54	UG/L 90	96
)	*ACENAPHTHENE-D10	(IS)	162	18.61	719	69641	40.00	UG/L	93
1)	2-FLUOROBIPHENYL	(SURR)	172	16.84	632	54098	45.45	UG/L 90	91
)	~~DIMETHYL PHTHALATE~~		~~163~~	~~18.61~~	~~719~~	~~13443~~	~~11.12~~	~~UG/L~~ No GK	100
1)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.08	840	14194	61.82	UG/L 62	98
)	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.61~~	~~719~~	~~9537~~	~~35.38~~	~~UG/L~~ No GK	100
)	*PHENANTHRENE-D10	(IS)	188	22.97	933	97020	40.00	UG/L	94
)	*CHRYSENE-D12	(IS)	240	31.02	1328	43056	40.00	UG/L	100
1)	TERPHENYL-D14	(SURR)	244	28.17	1188	25222	51.62	UG/L 104	100
)	*PERYLENE-D12	(IS)	264	35.01	1524	31683	40.00	UG/L	100

Compound is ISTD



CHANNEL: 1A - 1 TITLE: RUN# 21 4:50 7 MAY 87

SAMPLE: BLK 4-2 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	1.387		24756	BV	3.38
2		0.0000	1.511		523500	VV	4.13
3	~~B-BHC~~	20.1374	2.345	0.055	350329	VV	5.69
4		0.0000	2.953		284802	VV	7.31
5		0.0000	3.618		434571	VV	8.75
6		0.0000	5.375		181913	BB	11.56
7	~~ENDO-SO4~~	3.2832	12.154	-0.196	85622	BB	? 28.94
8		0.0000	21.769		22015	BB	50.00
9	DDC	76.3025	27.570	0.260	2403143	BB	72.44
TOTALS:		99.8031		0.119	4310659		

DETECTED PKS: 20 REJECTED PKS: 11

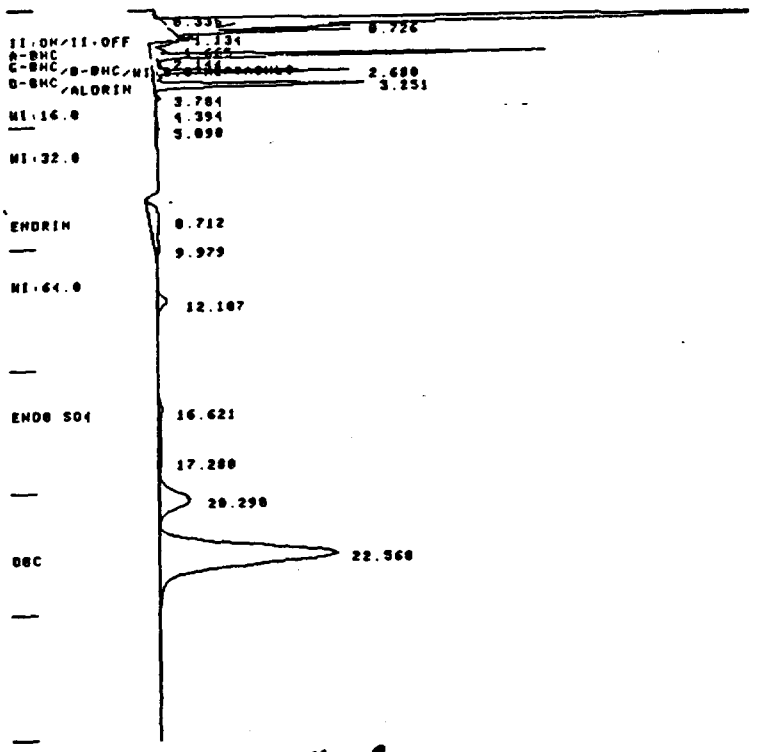
DIVISOR: 1.50000 MULTIPLIER: 1000.00000

NOISE: 22.9 OFFSET: -8

RACK: 2 VIAL: 6 INJ: 1

NOTES:
NOTEBOOK: 297-21 ANALYST: RICHARD SAMSON
SECURE AREA: U-4835 , U-4863
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
DET: 300 C INJ: 220 C
200 C ISOTHERMAL 4 UL INJECTION
PRIMARY ANALYSIS AUTOSAMPLER
DEAD CREEK

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



Run 9

???

RECALCULATE ON FILE: CONF258

CHANNEL: 18 - 1 TITLE: RUN# 9 21:24 8 MAY 87

SAMPLE: BLK.19 4-2 METHOD: PEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1	~~A-BHC~~	0.0000	1.665	-0.065	67071	VV	? 11.13
2		0.0000	1.917		541574	VV	4.31
3	~~B-BHC~~	0.0000	2.529	0.039	33356	VV	? 9.13
4	~~HEPTACHLO~~	6.5637	2.680	0.030	333356	VV	6.25
5	~~D-BHC~~	0.0000	2.950	0.050	21088	VV	? 14.81
6	~~ALDRIN~~	8.2160	3.251	0.051	456904	VV	7.50
7	~~ENDRIN~~	0.0000	8.712	-0.360	169161	BV	? 63.88
8		0.0000	9.979		46955	VB	?156.50
9	~~4,4'-DDT~~	2.1553	12.187	-0.593	64842	BB	26.69
10		0.0000	16.621		54202	BV	? 48.13
11	~~ENDO-SO4~~	0.0000	17.288	0.018	74445	VV	?
12		0.0000	20.298		392500	VV	47.38
13	DBC	75.9322	22.560	0.020	2490282	VB	52.06

TOTALS: 92.8679 -0.810 4745736

DETECTED PKS: 29 REJECTED PKS: 16

DIVISOR: 1.50000 MULTIPLIER: 1000.00000

NOISE: 45.7 OFFSET: -4

NOTES:
NOTEBOOK: 297-24 ANALYST: RICHARD SAMSON
SECURE AREA: D JOB U-4835, U-4863
INST:VARIAN 6000#28 ECD 10X1 ATTN:8X
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
PHASE:1.5% SP2250/1.95% SP2401
CARRIER GAS: N2 @ 60 ML/MIN.
DET:300 C INJ:220 C
200 C ISOTHERMAL 4 UL INJECTION
CONFIRMATION RUNS DEAD CREEK SOIL SAMPLES

Laboratory Name: Ecology & Environment Inc.

Case No: U-4835, 4863, 4928, 4971

Sample Number: B3754

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 4-9-87

Date Analyzed: 5-18-87

Conc/Dil Factor: 2

Percent Moisture (Decanted) _____

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)	
108-95-2	Phenol	330	U
111-44-4	bis(-2-Chloroethyl)Ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1, 3-Dichlorobenzene	330	U
106-46-7	1, 4-Dichlorobenzene	330	U
100-51-6	Benzyl Alcohol	330	U
95-50-1	1, 2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
39638-32-9	bis(2-chloroisopropyl)Ether	330	U
106-44-5	4-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
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	97	J
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-4835, 4863, 4928, 4971

Sample Number
BLANK

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 4-9-87
Date Analyzed: 5-11-87
Conc/Dil Factor: 1
Percent Moisture (decanted) —

GPC Cleanup ☐Yes ☑No
Separatory Funnel Extraction ☐Yes
Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	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

Laboratory Name: Ecology & Environment Inc.

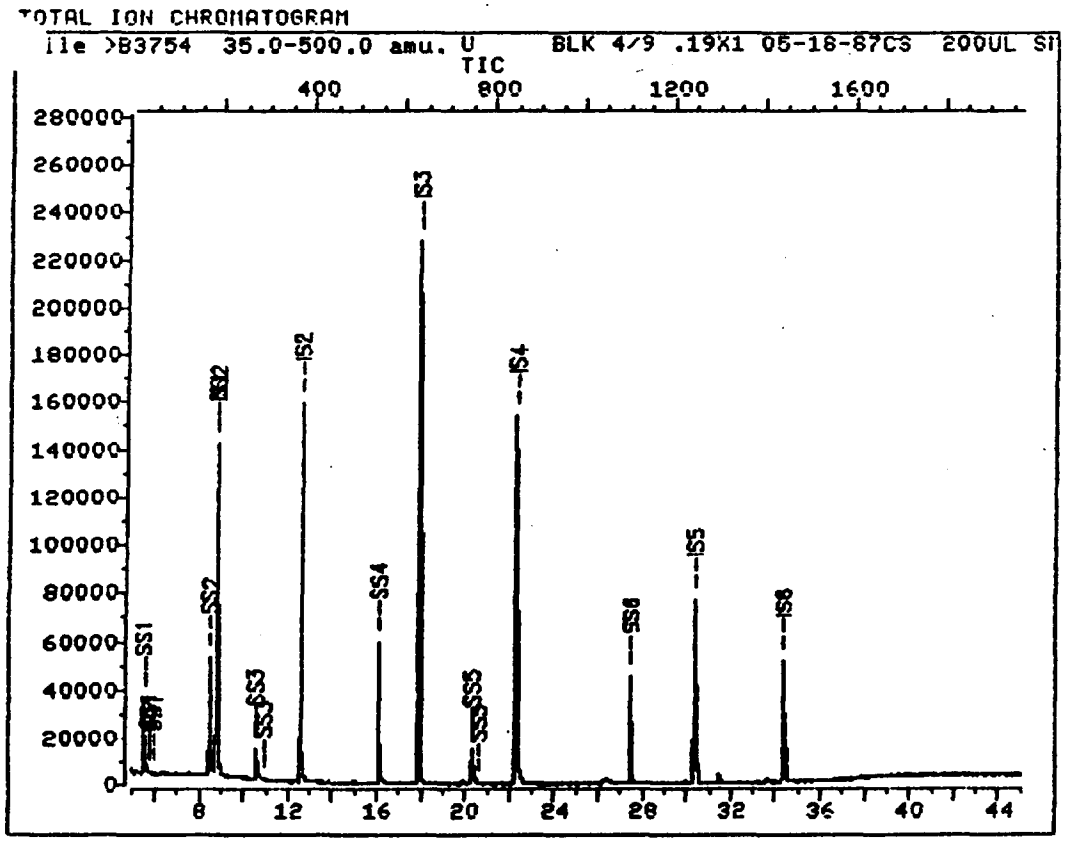
Case No: 4-4835, 4863, 4928, 4971

Sample Number: B3754

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

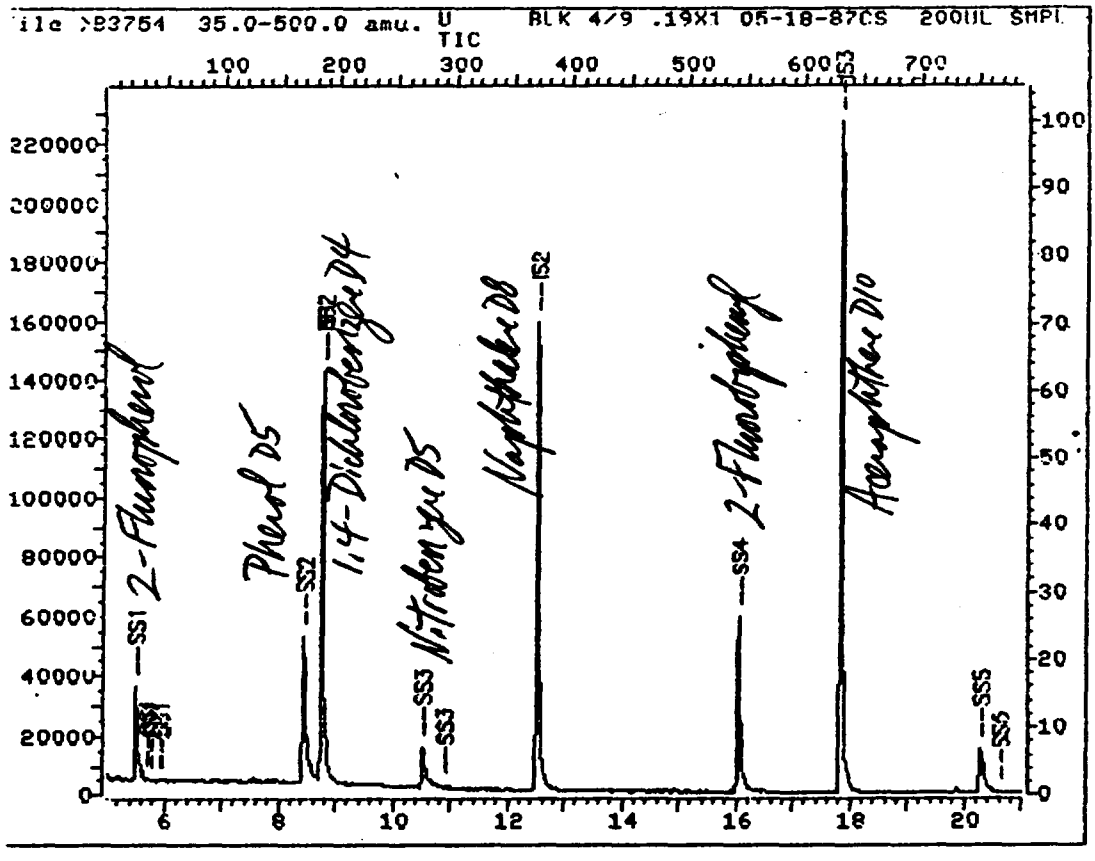
CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	No Semi-Volatile Compounds Found			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

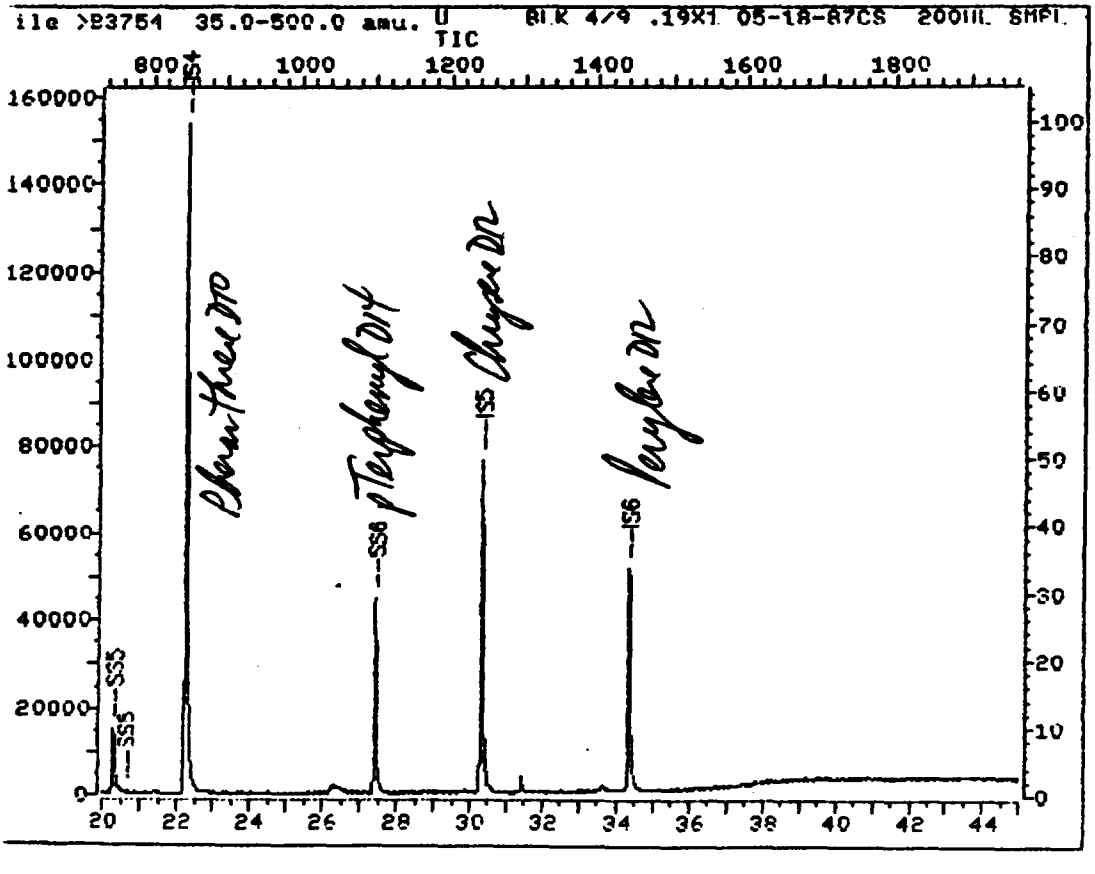


Data File: >B3754::D4
Name: U BLK 4/9 .19X1
Misc: 05-18-87CS 200UL SMPL + 200UL MECL2 + 4UL IS

Id File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870518 11:33

Operator ID: USER8
Quant Time: 870518 15:15
Injected at: 870518 14:27


ile >B3754 35.0-500.0 amu. U TIC
BLK 4/9 .19X1 05-18-87CS 200UL SMPL
2-Fluorophenol
Phenol D5
1,4-Dichlorobenzene D4
Nitrobenzene D5
Naphthalene D8
2-Fluorobiphenyl
Acenaphthene D10


ile >B3754 35.0-500.0 amu. U TIC
BLK 4/9 .19X1 05-18-87CS 200UL SMPL
Phenanthrene D10
p-Terphenyl D14
Chrysene D12
Perylene D12

QUANT REPORT

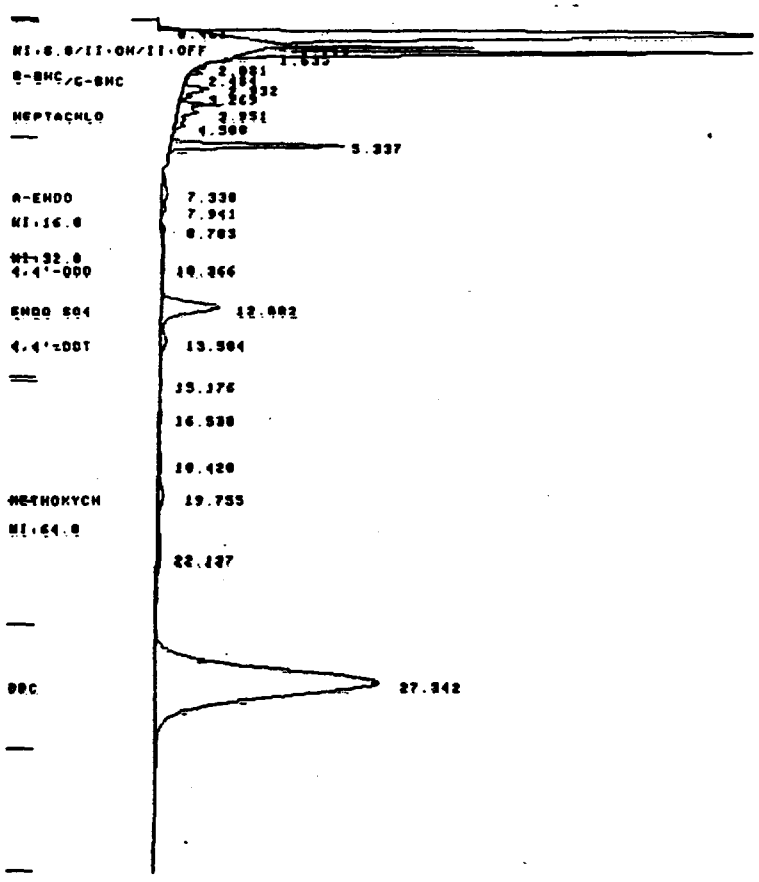
Operator ID: USER8 Quant Rev: 4 Quant Time: 870518 15:15
Output File: ^B3754::Q2 Injected at: 870518 14:27
Data File: >B3754::D4 Dilution Factor: 2.00
Name: U BLK 4/9 .19X1
Misc: 05-18-87CS 200UL SMPL + 200UL MECL2 + 4UL IS

ID File: BNABR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870518 11:33

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	8.76	186	65081	40.00 UG/L	85
2)	PHENOL-D5	(SURR)	99	8.44	170	63047	49.87 UG/L	99
~~2)~~	~~PHENOL-D5~~	~~(SURR)~~	~~99~~	~~8.76~~	~~186~~	~~1480~~	~~1.17 UG/L~~	68
5)	2-FLUOROPHENOL	(SURR)	112	5.49	25	22800	24.26 UG/L	84
~~5)~~	~~2-FLUOROPHENOL~~	~~(SURR)~~	~~112~~	~~5.69~~	~~35~~	~~1852~~	~~1.12 UG/L~~	14
~~5)~~	~~2-FLUOROPHENOL~~	~~(SURR)~~	~~112~~	~~5.75~~	~~38~~	~~843~~	~~.90 UG/L~~	50
~~5)~~	~~2-FLUOROPHENOL~~	~~(SURR)~~	~~112~~	~~5.90~~	~~45~~	~~487~~	~~.43 UG/L~~	54
~~5)~~	~~2-FLUOROPHENOL~~	~~(SURR)~~	~~112~~	~~5.96~~	~~48~~	~~297~~	~~.32 UG/L~~	58
~~7)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~10.63~~	~~273~~	~~3809~~	~~3.76 UG/L~~	96
9)	*NAPHTHALENE-D8	(IS)	136	12.51	370	242778	40.00 UG/L	100
0)	NITROBENZENE-D5	(SURR)	82	10.51	272	25118	20.32 UG/L	96
~~0)~~	~~NITROBENZENE-D5~~	~~(SURR)~~	~~82~~	~~10.98~~	~~291~~	~~538~~	~~.43 UG/L~~	~~58~~
4)	*ACENAPHTHENE-D10	(IS)	162	17.84	632	168149	40.00 UG/L	98
8)	2-FLUOROBIPHENYL	(SURR)	172	16.05	544	78619	30.95 UG/L	93
1)	~~DIMETHYL PHTHALATE~~		~~163~~	~~17.84~~	~~632~~	~~29754~~	~~18.35 UG/L~~	100
8)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.30	753	12754	16.53 UG/L	99
~~8)~~	~~2,4,6-TRIBROMOPHENOL~~	~~(SURR)~~	~~330~~	~~20.62~~	~~769~~	~~252~~	~~.33 UG/L~~	21
2)	~~2,6-DINITROTOLUENE~~		~~165~~	~~17.84~~	~~632~~	~~21789~~	~~35.07 UG/L~~	100
~~2)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~18.00~~	~~640~~	~~231~~	~~.37 UG/L~~	100
5)	*PHENANTHRENE-D10	(IS)	188	22.23	848	238426	40.00 UG/L	93
5)	*CHRYSENE-D12	(IS)	240	30.32	1246	138490	40.00 UG/L	100
8)	TERPHENYL-D14	(SURR)	244	27.43	1104	72218	42.86 UG/L	100
2)	BIS(2-ETHYLHEXYL)PHTHALATE		149	31.42	1300	3622	2.90 UG/L	85
4)	*PERYLENE-D12	(IS)	264	34.32	1443	102310	40.00 UG/L	100

* Compound is ISTD

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



CHANNEL: 1A - 1 TITLE: RUN# 14 19:46 11 MAY 87

SAMPLE: BLK 4-9 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	1.361		39324	BV	4.06
2		0.0000	1.500		714124	VV	4.56
3		0.0000	2.932		26736	T	? 6.88
4		0.0000	3.592		49667	T	8.88
5	HEPTACHLO	1.1594	3.951	-0.029	40633	T	? 16.69
6		0.0000	5.337		271085	BB	11.75
7	A-ENDO	0.9190	7.330	0.000	34635	BV	? 31.19
8	ENDO SO4	10.2055	12.082	-0.278	234429	VV	29.25
9	4,4'-DDT	1.3192	13.504	-0.216	29578	VV	34.50
10	METHOXYCH	3.4940	19.755	-0.325	44191	VV	55.81
11		0.0000	22.137		49733	VB	82.63
12	DBC 115	76.5935	27.342	0.032	2239575	BB	74.31
TOTALS:		93.6905		-0.816	3773710		

DETECTED PKS: 34 REJECTED PKS: 22

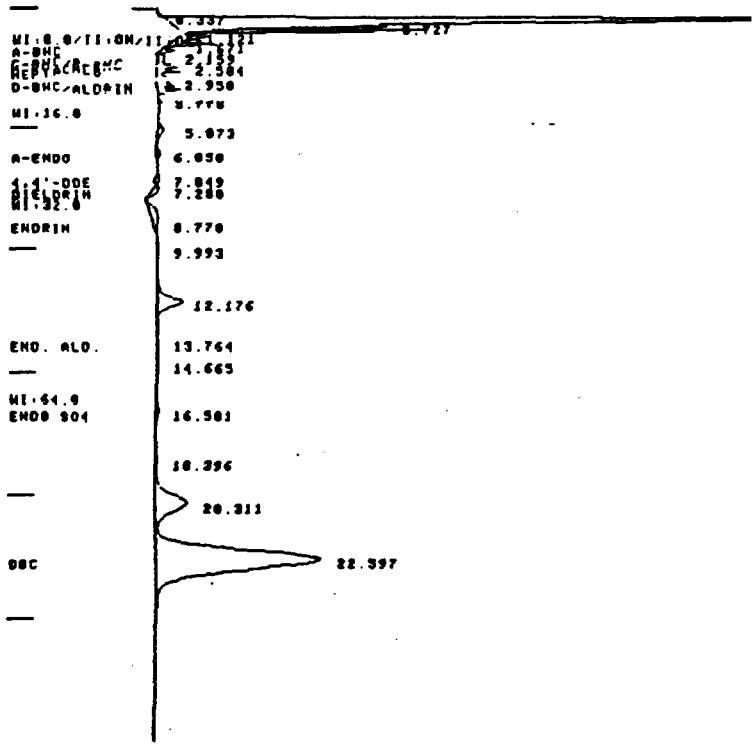
DIVISOR: 1.50000 MULTIPLIER: 1000.00000

NOISE: 91.4 OFFSET: -9

NOTES:
NOTEBOOK: 297-25 ANALYST: K.JUREK
SECURE AREA: U-4928, U-4971
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
DET: 300 C INJ: 220 C
200 C ISOTHERMAL 4 UL INJECTION
PRIMARY ANALYSIS AUTOSAMPLER
DEAD CREEK 306 EXTRACTION

POST RUN:

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



CHANNEL: 18 - 1 TITLE: RUN# 15 18:28 15 MAY 87

SAMPLE: BLK.19 4-9 METHOD: PEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		W1/2 (SEC)
1		0.0000	1.484		54624	BV		3.25
2		0.0000	1.918		23575	VV		4.31
3	~~B-BHC~~	0.0000	2.504	0.014	33897	VV		6.81
4	HEPTACHLO	0.0772	2.600	0.020	51453	VV		7.31
5	~~D-BHC~~	0.0000	2.958	0.058	21435	VV	?	9.94
6		0.0000	3.089		29202	VV	?	9.31
7	~~ALDRIN~~	0.6656	3.257	0.037	38233	VV		7.13
8	~~HEPT-EPOX~~	0.6825	5.073	0.283	35440	BV		17.75
9	~~4,4'-DDE~~	0.0000	7.049	-0.041	40140	BV		13.63
10	~~DIELDRIN~~	0.6020	7.280	-0.060	32426	T	?	36.94
11	~~ENDRIN~~	0.0000	8.745	-0.335	100343	VB	?	12.94
12	~~4,4'DDT~~	5.7131	12.176	-0.624	195874	BV		27.19
13	~~END. ALD.~~	0.5938	13.764	-0.246	20948	VV	?	41.75
14		0.0000	14.665		21326	VB	?	37.56
15	~~END SOX~~	0.0000	16.562	-0.708	31672	BV		37.13
16	*	0.0000	20.293		434083	VV		48.81
17	DBC	69.7243	22.500	0.010	2337729	VB		53.13

TOTALS: 78.8585 -1.592 3502400

DETECTED PKS: 32 REJECTED PKS: 15

DIVISOR: 1.50000 MULTIPLIER: 1000.00000

NOISE: 34.3 OFFSET: 7

NOTES:
NOTEBOOK:297-29 ANALYST: RICHARD SAMSON
SECURE AREA: O JOB #U-4928
INST:VARIAN 6000#2B ECD 10X1 ATTN:8X
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
PHASE:1.5% SP2250/1.95% SP2401
CARRIER GAS: N2 @ 60 ML/MIN.
DET:300 C INJ:220 C
200 C ISOTHERMAL 4 UL INJECTION
CONFIRMATION RUNS DEAD CREEK SOIL SAMPLES

POST RUN:
SAVE FILE: RAW CONF265