GC/MS TUNING AND MASS CALIBRATION

000011

Bromofluorobenzene (BFB)

Case No. 4248/SAS1644C Contractor RMAL Contract No. 68-01-7016

Instrument ID J Date 5/1/85 Time 15:28

Lab ID BFJ085 Data Release Authorized By: Ig

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of the base peak	28.96
75	30.0 - 60.0% of the base peak	57.28
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of the base peak	7.11
173	Less than 1.0% of the base peak	0.00
174	Greater than 50.0% of the base peak	71.01
175	5.0 - 9.0% of mass 174	4.92 (6.93)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	69.46 (97.82)[1]
177	5.0 - 9.0% of mass 176	4.53 (6.52)[2]

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

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

Tune OK W.

	SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
	50PPBSTD	STDJ085	5/1/85	16:05
	MB-3	BLJ086	5/1/85	16:54
	7112-03 CA190	S7112J087	5/1/85	18:04
	7112-04 CA191	S7112J088	5/1/85	18:53
	7112-05 CA192	S7112J089	5/1/85	19:37
	7112-06 CA193	S7112J090	5/1/85	20:27
rerun	7112-05 CA192	S7112J091	5/1/85	21:25:55
rerun	7112-06 CA193	S7112J092	5/1/85	22:13:30
	7112-07 CA194	S7112J093	5/1/85	22:58:38
	7112-08 CA195	S7112J094	5/1/85	23:42:02
	7112-09 CA196	S7112J095	5/1/85	0:31:01
	7112-10 CA197	S7112J096	5/1/85	1:16:48

FORM V

GC/MS TUNING AND MASS CALIBRATION

00CC12

Bromofluorobenzene (BFB)

Case No. 4248/SA31644C Contractor RMAL Contract No. 68-01-7016

Instrument ID J Date 5.2.85 Time 7:25:00

Lab ID BFJ097 Data Release Authorized By: lg

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of the base peak	27.42
75	30.0 - 60.0% of the base peak	57.65
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of the base peak	6.87
173	Less than 1.0% of the base peak	0.00
174	Greater than 50.0% of the base peak	85.76
175	5.0 - 9.0% of mass 174	5.59 (6.51)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	83.79 (97.70)[1]
177	5.0 - 9.0% of mass 176	6.21 (7.41)[2]

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

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

Tune OK
M.

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
STD 50ppb	STDJ098 N.G.	5.2.85	7:41:00
STD 50ppb	STDJ099	5.2.85	09:07
MB-4	BLJ100	5.2.85	10:03
CA198	S7112J101	5.2.85	10:47
CA199	S7112J102	5.2.85	12:14
CA200	S7112J103	5.2.85	12:58
CA201	S7112J104	5.2.85	13:42

FORM V

VOLATILES COMPOUNDS

ORIGINAL 000577

CASE NO: 4247/SAS16
CONTRACTOR: RMAL
CONTRACT NO: 68-01-7016

INSTRUMENT ID: J
CALIBRATION DATE: 30APR85

MINIMUM RF FOR SPCC IS 0.300 MAXIMUM % RSD FOR CCC IS 25%

LABORATORY ID:	STDJ063	STDJ062	STDJ067	STDJ065	STDJ066		
COMPOUND	RF 20.	RF 50.	RF 100.	RF 150.	RF 200.	AVG RF	%RS
CHLOROMETHANE	1.478	0.866	1.236	1.023	0.866	1.093	24.
BROMOMETHANE	2.452	2.328	1.489	1.336	1.465	1.818	29.
VINYL CHLORIDE	4.398	2.646	3.501	3.130	2.645	3.264	22.
CHLOROETHANE	2.290	1.486	1.837	1.523	1.479	1.733	20.
METHYLENE CHLORIDE	2.154	1.991	1.703	1.230	1.488	1.713	21.
ACETONE	0.214	0.172	0.164	0.180	0.155	0.177	12.
CARBON DISULFIDE	1.473	0.937	1.471	0.932	0.794	1.121	23.
1,1-DICHLOROETHENE	1.023	0.749	1.006	0.645	0.617	0.808	24.
1,1-DICHLOROETHANE	1.054	0.951	1.035	0.694	0.730	0.893	19.
TRANS-1,2-DICHLOROETHENE	0.880	0.745	0.646	0.552	0.585	0.721	20.
CHLOROFORM	1.452	1.370	1.432	1.031	1.077	1.272	15.
1,2-DICHLOROETHANE	1.131	1.074	1.114	0.916	0.845	1.016	12.
2-BUTANONE	0.199	0.139	0.155	0.180	0.152	0.165	14.
1,1,1-TRICHLOROETHANE	0.607	0.524	0.605	0.383	0.452	0.514	18.
CARBONTETRACHLORIDE	0.646	0.554	0.687	0.427	0.526	0.568	18.
VINYL ACETATE	0.379	0.266	0.405	0.341	0.300	0.338	16.
BROMODICHLOROMETHANE	0.800	0.756	0.801	0.633	0.667	0.731	10.
1,2-DICHLOROPROPANE	0.345	0.324	0.339	0.258	0.264	0.306	13.
TRANS-1,3-DICHLOROPROPENE	0.441	0.428	0.459	0.352	0.367	0.409	11.
TRICHLOROETHENE	0.483	0.443	0.483	0.342	0.405	0.431	13.
CHLORODIBROMOMETHANE	0.733	0.759	0.965	0.837	0.785	0.866	13.
1,1,2-TRICHLOROETHANE	0.410	0.409	0.508	0.475	0.520	0.464	11.
BENZENE	0.664	0.599	0.657	0.457	0.507	0.577	15.
CIS-1,3-DICHLOROPROPENE	0.517	0.526	0.661	0.596	0.660	0.592	11.
2-CHLOROETHYL VINYL ETHER	0.023	0.001	0.016	0.010	0.005	0.011	75.
BROMOFORM	0.949	0.912	1.092	1.097	1.147	1.039	9.
2-HEXANONE	0.140	0.090	0.140	0.170	0.125	0.133	21.
4-METHYL-2-PENTANONE	0.168	0.114	0.126	0.140	0.114	0.132	17.
TETRACHLOROETHENE	0.497	0.481	0.528	0.360	0.437	0.461	14.
1,1,2,2-TETRACHLOROETHANE	0.481	0.414	0.489	0.489	0.491	0.473	6.
TOLUENE	0.488	0.460	0.440	0.316	0.334	0.407	19.
CHLOROBENZENE	0.888	0.826	0.809	0.645	0.650	0.764	14.
ETHYLBENZENE	0.331	0.303	0.304	0.217	0.230	0.278	18.
STYRENE	0.686	0.640	0.690	0.562	0.567	0.629	9.
O&P-XYLENES	0.461	0.406	0.404	0.313	0.313	0.379	17.
M-XYLENE	2.208	0.840	0.392	0.264	0.189	0.779	107.

only at LOQ

AVG RF - AVERAGE RESPONSE FACTOR SPCC - SYSTEM PERFORMANCE CHECK COMPO
%RSD - PERCENT RELATIVE STANDARD DEVIATION
CCC - CALIBRATION CHECK COMPOUNDS(*) # - NOT DETECTABLE AT LOW LEVEL

LOQ - only effects Level of quantitation - Not nessesarily detection limits

ORIGINAL (Red)

INITIAL CALIBRATION
EXTRACTABLES COMPOUNDS

CASE NO: 4113
CONTRACTOR: RMAL
CONTRACT NO: 68-01-7016

INSTRUMENT ID: FINNIGAN.K
CALIBRATION DATE: 05/01/85

MINIMUM RF FOR SPCC IS 0.000 MAXIMUM % RSD FOR CCC IS 25%

LABORATORY ID:	STDK124	STDK123	STDK121	STDK120	STDK122			
COMPOUND	RF 20.	RF 50.	RF 80.	RF 120.	RF 160.	AVG RF	%RSD only 2	
N-NITROSODIMETHYLAMINE	0.072	2.396	2.348	2.366	2.365	1.990	53.9	
PHENOL	3.207	3.707	3.711	4.210	3.807	3.744	8.7	
ANILINE	3.727	4.230	4.071	4.524	4.551	4.265	6.3	
BIS(2-CHLOROETHYL)ETHER	2.954	3.473	3.503	4.024	3.597	3.510	10.8	
2-CHLOROPHENOL	1.930	2.237	2.339	2.616	2.590	2.342	12.0	
1,3-DICHLOROBENZENE	1.944	2.219	2.311	2.697	2.535	2.341	12.4	
1,4-DICHLOROBENZENE	2.016	2.345	2.476	2.722	2.646	2.441	11.4	
BENZYL ALCOHOL	0.130	0.263	0.968	0.963	0.710	0.607	64.3	
1,2-DICHLOROBENZENE	1.787	2.104	2.277	2.488	2.441	2.219	12.8	
2-METHYLPHENOL	1.088	2.311	2.119	2.491	2.640	2.278	12.4	
BIS(2-CHLOROISOPROPYL)ETHER	0.521	0.693	0.781	0.887	0.796	0.736	18.7	
4-METHYLPHENOL	1.963	2.492	2.260	2.417	2.446	2.315	9.3	
N-NITROSO-DI-N-PROPYLAMINE	0.338	0.477	0.221	0.334	0.398	0.334	26.3	
HEXACHLOROETHANE	0.627	0.670	0.842	0.889	0.823	0.770	14.8	
NITROBENZENE	0.429	0.447	0.461	0.468	0.471	0.455	3.8	
ISOPHORONE	0.781	0.810	0.646	0.778	0.644	0.732	10.9	
2-NITROPHENOL	0.161	0.202	0.203	0.226	0.236	0.206	14.0	
2,4-DIMETHYLPHENOL	0.264	0.318	0.325	0.340	0.346	0.318	10.2	
BENZOIC ACID [1]#	0.000	0.119	0.112	0.066	0.244	0.136	56.0	
BIS(2-CHLOROETHOXY)METHANE	0.619	0.654	0.618	0.693	0.562	0.629	7.6	
2,4-DICHLOROPHENOL	0.208	0.232	0.230	0.246	0.250	0.235	8.0	
1,2,4-TRICHLOROBENZENE	0.218	0.236	0.238	0.262	0.262	0.243	7.8	
NAPHTHALENE	1.105	1.102	1.132	1.200	1.064	1.123	4.6	
4-CHLOROANILINE	0.403	0.444	0.453	0.496	0.451	0.449	7.3	
HEXACHLOROBUTADIENE	0.099	0.118	0.118	0.129	0.125	0.118	9.9	
4-CHLORO-3-METHYLPHENOL	0.212	0.284	0.287	0.297	0.301	0.276	13.3	
2-METHYLNAPHTHALENE	0.677	0.761	0.736	0.810	0.782	0.753	6.7	
HEXACHLOROCYCLOPENTADIENE	0.091	0.084	0.162	0.131	0.144	0.126	28.4	
2,4,6-TRICHLOROPHENOL	0.285	0.320	0.374	0.407	0.454	0.368	18.1	
2,4,5-TRICHLOROPHENOL [1]#	0.000	0.374	0.373	0.420	0.424	0.403	5.8	
2-CHLORONAPHTHALENE	1.047	1.158	1.297	1.455	1.511	1.294	15.0	
2-NITROANILINE [1]#	0.000	0.453	0.454	0.504	0.514	0.481	6.6	
DIMETHYL PHTHALATE	1.227	1.444	1.507	1.727	1.437	1.467	12.1	
ACENAPHTHYLENE	1.637	2.043	2.178	2.465	2.414	2.151	15.5	
3-NITROANILINE [1]#	0.000	0.441	0.451	0.587	0.595	0.517	16.1	
ACENAPHTHENE	0.978	1.200	1.260	1.532	1.606	1.313	19.3	
2,4-DINITROPHENOL [1]#	0.000	0.083	0.106	0.135	0.111	0.109	18.8	
4-NITROPHENOL [1]#	0.000	0.110	0.140	0.220	0.169	0.160	27.1	
DIBENZOFURAN	1.606	1.848	1.878	2.213	2.154	1.940	12.7	

[1] D.L raised appropriately.

COMPOUND		RF	20. RF	50. RF	80. RF	120. RF	160.	AVG RF	%RSD
2,4-DINITROTOLUENE		0.233	0.310	0.308	0.392	0.286	0.306	18.	
2,6-DINITROTOLUENE		0.173	0.220	0.235	0.280	0.247	0.233	16.	
DIETHYLPHTHALATE		1.410	1.854	2.021	2.536	2.516	2.067	22.	
4-CHLOROPHENYL-PHENYLETHER		0.490	0.647	0.705	0.834	0.779	0.671	17.	
FLUORENE		1.184	1.316	1.621	1.910	1.905	1.627	18.	
4-NITROANILINE	#	0.000	0.288	0.229	0.427	0.315	0.315	26.	
4,6-DINITRO-2-METHYLPHENOL	#	0.000	0.066	0.074	0.093	0.082	0.079	14.	
DIPHENYLAMINE		0.592	0.688	0.847	0.959	0.946	0.806	20.	
4-BROMOPHENYL-PHENYLETHER		0.167	0.197	0.221	0.213	0.220	0.205	11.	
HEXACHLOROBENZENE		0.227	0.240	0.252	0.260	0.261	0.248	5.	
PENTACHLOROPHENOL	#	0.000	0.080	0.090	0.111	0.107	0.097	14.	
PHENANTHRENE		1.034	1.514	1.572	1.701	1.785	1.521	19.	
ANTHRACENE		1.024	1.254	1.213	1.435	1.273	1.240	11.	
DI-N-BUTYLPHTHALATE		1.511	1.977	1.877	2.434	2.170	1.974	17.	
FLUORANTHENE		0.857	0.929	1.035	1.495	1.346	1.136	24.	
BENZIDINE	#	0.000	0.687	0.973	1.065	0.335	0.765	42.	
PYRENE		1.282	1.306	1.431	1.507	1.556	1.414	8.	
BUTYLBENZYLPHTHALATE		0.703	0.793	0.714	0.870	0.839	0.788	10.	
3,3'-DICHLOROBENZIDINE		0.838	0.869	0.918	1.133	1.071	0.966	13.	
BENZO(A)ANTHRACENE		0.826	0.855	0.871	1.054	1.067	0.937	12.	
BIS(2-ETHYLHEXYL)PHTHALATE		1.044	1.217	1.141	1.361	1.278	1.209	10.	
CHRYSENE		1.055	1.092	1.125	1.297	1.176	1.149	8.	
DI-N-OCTYL PHTHALATE		2.431	3.586	4.084	4.470	4.404	3.835	23.	
BENZO(B)FLUORANTHENE		1.164	1.404	2.276	2.979	2.705	2.110	37.	
BENZO(K)FLUORANTHENE		1.523	1.499	1.680	3.002	0.868	1.714	45.	
BENZO(A)PYRENE		1.046	1.165	1.287	1.431	1.562	1.278	15.	
INDENO(1,2,3-CD)PYRENE		0.858	0.953	0.607	1.213	1.153	0.957	25.	
DIBENZ(A,H)ANTHRACENE		0.845	0.937	1.069	1.021	1.220	1.019	13.	
BENZO(GHI)PERYLENE		0.867	0.859	0.987	0.943	1.044	0.920	9.	

all OK.

AVG RF - AVERAGE RESPONSE FACTOR SPCC - SYSTEM PERFORMANCE CHECK COMPOUN
%RSD - PERCENT RELATIVE STANDARD DEVIATION
CCC - CALIBRATION CHECK COMPOUNDS(#) # - NOT DETECTABLE AT LOW LEVEL

CONTINUING CALIBRATION CHECK
VOLATILES COMPOUNDS

CASE NO: 4248/SAS16
CONTRACTOR: RMAL
CONTRACT NO: 68-01-7016
INSTRUMENT ID: J

CALIBRATION DATE: 01MAY85
TIME: 08:51:07
LABORATORY ID: STDJ077
INITIAL CALIBRATION DATE: 30APR85

MINIMUM RF FOR SPCC IS 0.300 MAXIMUM %D FOR CCC IS 25%

COMPOUND	AVG RF	RF 50.	% DIFF	CCC	SPCC
CHLOROMETHANE	1.093	0.856	21.6		**
BROMOMETHANE	1.818	2.048	-12.6	[1]	
VINYL CHLORIDE	3.264	2.174	33.4	*	
CHLOROETHANE	1.723	1.267	26.4	[2]	
METHYLENE CHLORIDE	1.713	1.350	21.2		
ACETONE	0.177	0.109	38.5	contaminant	
CARBON DISULFIDE	1.121	0.885	21.1		
1,1-DICHLOROETHENE	0.808	0.733	9.2	*	
1,1-DICHLOROETHANE	0.893	0.903	-1.1		**
TRANS-1,2-DICHLOROETHENE	0.721	0.690	4.3		
CHLOROFORM	1.272	1.375	-8.0	*	
1,2-DICHLOROETHANE	1.016	1.012	0.4		
2-BUTANONE	0.165	0.092	44.0	estimate - contamin	
1,1,1-TRICHLOROETHANE	0.514	0.522	-1.5		
CARBONTETRACHLORIDE	0.568	0.555	2.2		
VINYL ACETATE	0.338	0.288	14.7		
BROMODICHLOROMETHANE	0.731	0.755	-3.2		
1,2-DICHLOROPROPANE	0.306	0.320	-4.6	*	
TRANS-1,3-DICHLOROPROPENE	0.409	0.403	1.4		
TRICHLOROETHENE	0.431	0.419	2.7		
CHLORODIBROMOMETHANE	0.866	0.690	20.2		
1,1,2-TRICHLOROETHANE	0.464	0.374	19.4		
BENZENE	0.577	0.579	-0.4		
CIS-1,3-DICHLOROPROPENE	0.592	0.463	21.7		
2-CHLOROETHYL VINYL ETHER	0.011	0.005	52.9	D.L unreliable	
BROMOFORM	1.039	0.715	31.1		**
2-HEXANONE	0.133	0.066	50.3	contaminant.	
4-METHYL-2-PENTANONE	0.132	0.079	39.9		
TETRACHLOROETHENE	0.461	0.438	4.8		
1,1,2,2-TETRACHLOROETHANE	0.473	0.326	31.0	only LOQ	**
TOLUENE	0.407	0.415	-1.8	*	
CHLOROBENZENE	0.764	0.780	-2.1		**
ETHYLBENZENE	0.278	0.289	-4.0	*	
STYRENE	0.629	0.624	0.8		
O&P-XYLENES	0.379	0.380	-0.1		
M-XYLENE	0.417	0.419	-0.3		

AVG RF - AVERAGE RESPONSE FACTOR SPCC - SYSTEM PERFORMANCE CHECK COMPOUN
%RSD - PERCENT RELATIVE STANDARD DEVIATION
CCC - CALIBRATION CHECK COMPOUNDS(*) # - NOT DETECTABLE AT LOW LEVEL

[1] Contractual violation - No corrective action taken.
[2] Chloroethane in CA190, 195, 197, estimated.

CONTINUING CALIBRATION CHECK
VOLATILES COMPOUNDS

CASE NO: 4248/SAS16
CONTRACTOR: RMAL
CONTRACT NO: 68-01-7016
INSTRUMENT ID: J

CALIBRATION DATE: 02MAY85
TIME: 09:07:53
LABORATORY ID: STDJ099
INITIAL CALIBRATION DATE: 30APR85

MINIMUM RF FOR SPCC IS 0.300 MAXIMUM %D FOR CCC IS 25%

COMPOUND	AVG RF	RF 50.	% DIFF	CCC	SPCC
CHLOROMETHANE	1.093	1.009	7.7		**
BROMOMETHANE	1.818	2.760	-51.8	-only LOQ	
VINYL CHLORIDE	3.264	2.552	21.8	*	
CHLOROETHANE	1.723	1.569	8.9		
METHYLENE CHLORIDE	1.713	2.350	-37.1	-contaminant	
ACETONE	0.177	0.168	5.2		
CARBON DISULFIDE	1.121	1.001	10.7		
1,1-DICHLOROETHENE	0.808	0.892	-10.3	*	
1,1-DICHLOROETHANE	0.893	1.126	-26.1	-CA201 estimat	**
TRANS-1,2-DICHLOROETHENE	0.721	0.879	-21.8		
CHLOROFORM	1.272	1.577	-23.9	*	
1,2-DICHLOROETHANE	1.016	1.305	-28.4	-only LOQ	
2-BUTANONE	0.165	0.132	20.1		
1,1,1-TRICHLOROETHANE	0.514	0.551	-7.1		
CARBONTETRACHLORIDE	0.568	0.605	-6.4		
VINYL ACETATE	0.338	0.442	-30.7	-LOQ	
BROMODICHLOROMETHANE	0.731	0.803	-9.7		
1,2-DICHLOROPROPANE	0.306	0.355	-16.0	*	
TRANS-1,3-DICHLOROPROPENE	0.409	0.425	-3.8		
TRICHLOROETHENE	0.431	0.413	4.1		
CHLORODIBROMOMETHANE	0.866	0.740	14.5		
1,1,2-TRICHLOROETHANE	0.464	0.418	9.8		
BENZENE	0.577	0.645	-11.8		
CIS-1,3-DICHLOROPROPENE	0.592	0.558	5.7		
2-CHLOROETHYL VINYL ETHER	0.011	0.016	-39.3	-D.L unreliable	
BROMOFORM	1.039	0.880	15.3		**
2-HEXANONE	0.133	0.142	-6.2		
4-METHYL-2-PENTANONE	0.132	0.130	1.6		
TETRACHLOROETHENE	0.461	0.443	3.7		
1,1,2,2-TETRACHLOROETHANE	0.473	0.437	7.5		**
TOLUENE	0.407	0.456	-12.0	*	
CHLOROBENZENE	0.764	0.797	-4.3		**
ETHYLBENZENE	0.278	0.279	-0.3	*	
STYRENE	0.629	0.585	7.0		
O&P-XYLENES	0.379	0.353	7.0		
M-XYLENE	0.417	0.399	4.4		

AVG RF - AVERAGE RESPONSE FACTOR SPCC - SYSTEM PERFORMANCE CHECK COMPOUN
%RSD - PERCENT RELATIVE STANDARD DEVIATION
CCC - CALIBRATION CHECK COMPOUNDS(*) # - NOT DETECTABLE AT LOW LEVEL

CONTINUING CALIBRATION CHECK
VOLATILES COMPOUNDS

CASE NO: 4248/SAS16
CONTRACTOR: RMAL
CONTRACT NO: 68-01-7016
INSTRUMENT ID: J

CALIBRATION DATE: 01MAY85
TIME: 16:05:50
LABORATORY ID: STDJ085
INITIAL CALIBRATION DATE: 30APR85

MINIMUM RF FOR SPCC IS 0.300 MAXIMUM %D FOR CCC IS 25%

COMPOUND	AVG RF	RF 50.	% DIFF	CCC	SPCC
CHLOROMETHANE	1.093	1.034	5.4		**
BROMOMETHANE	1.818	3.194	-75.7	-LOQ	
VINYL CHLORIDE	3.264	3.312	-1.4	✓ *	
CHLOROETHANE	1.723	1.902	-10.3		
METHYLENE CHLORIDE	1.713	2.083	-21.5		
ACETONE	0.177	0.154	13.1		
CARBON DISULFIDE	1.121	0.875	21.9		
1,1-DICHLOROETHENE	0.808	0.764	5.4	✓ *	
1,1-DICHLOROETHANE	0.893	0.953	-6.7		**
TRANS-1,2-DICHLOROETHENE	0.721	0.738	-2.2		
CHLOROFORM	1.272	1.379	-8.3	✓ *	
1,2-DICHLOROETHANE	1.016	1.132	-11.3		
2-BUTANONE	0.165	0.121	26.3	- estimate - Contamin	
1,1,1-TRICHLOROETHANE	0.514	0.507	1.4		
CARBONTETRACHLORIDE	0.568	0.557	1.8		
VINYL ACETATE	0.338	0.407	-20.4		
BROMODICHLOROMETHANE	0.731	0.762	-4.1		
1,2-DICHLOROPROPANE	0.306	0.316	-3.3	✓ *	
TRANS-1,3-DICHLOROPROPENE	0.409	0.422	-3.0		
TRICHLOROETHENE	0.431	0.390	9.6		
CHLORODIBROMOMETHANE	0.866	0.729	15.8		
1,1,2-TRICHLOROETHANE	0.464	0.407	12.2		
BENZENE	0.577	0.559	3.0		
CIS-1,3-DICHLOROPROPENE	0.592	0.532	10.1		
2-CHLOROETHYL VINYL ETHER	0.011	0.009	18.6	- D & unreliable	
BROMOFORM	1.039	0.879	15.3		**
2-HEXANONE	0.133	0.107	19.2		
4-METHYL-2-PENTANONE	0.132	0.122	7.4		
TETRACHLOROETHENE	0.461	0.424	7.9		
1,1,2,2-TETRACHLOROETHANE	0.473	0.417	11.8		**
TOLUENE	0.407	0.402	1.3	✓ *	
CHLOROBENZENE	0.764	0.793	-3.8		**
ETHYLBENZENE	0.278	0.278	0.1	✓ *	
STYRENE	0.629	0.611	2.8		
O&P-XYLENES	0.379	0.375	1.2		
M-XYLENE	0.417	0.403	3.3		

AVG RF - AVERAGE RESPONSE FACTOR SPCC - SYSTEM PERFORMANCE CHECK COMPOUN
%RSD - PERCENT RELATIVE STANDARD DEVIATION
CCC - CALIBRATION CHECK COMPOUNDS(*) # - NOT DETECTABLE AT LOW LEVEL

CONTINUING CALIBRATION CHECK
EXTRACTABLES COMPOUNDS

CASE NO: CASE 4248/SAS1644C mmk 5/6/85
CONTRACTOR: RMAL
CONTRACT NO: 68-01-7016
INSTRUMENT ID: FINNIGAN.K

CALIBRATION DATE: 06MAY85
TIME: 7:58
LABORATORY ID: STDK190
INITIAL CALIBRATION DATE: 05/01/85

MINIMUM RF FOR SPCC IS 0.050 MAXIMUM %D FOR CCC IS 25%

COMPOUND	AVG RF	RF 50.	% DIFF	CCC	SPCC
N-NITROSODOMETHYLAMINE	1.950	2.445	-25.4	-LOQ	
PHENOL	3.744	4.510	-20.4	*	
ANILINE	4.265	4.536	-6.3		
BIS(2-CHLOROETHYL)ETHER	3.510	3.815	-8.6		
2-CHLOROPHENOL	2.342	2.319	1.0		
1,3-DICHLOROBENZENE	2.341	2.371	-1.2		
1,4-DICHLOROBENZENE	2.441	2.534	-3.8	*	
BENZYL ALCOHOL	0.607	0.849	-39.8	-LOQ	
1,2-DICHLOROBENZENE	2.219	2.286	-2.9		
2-METHYLPHENOL	2.278	1.985	12.8		
BIS(2-CHLOROISOPROPYL)ETHER	0.736	0.721	1.9		
4-METHYLPHENOL	2.315	2.670	-15.3		
N-NITROSO-DI-N-PROPYLAMINE	0.354	0.499	-41.1	LOQ	**
HEXACHLOROETHANE	0.770	0.990	-28.5		
NITROBENZENE	0.455	0.480	-5.4		
ISOPHORONE	0.732	0.771	-5.3		
2-NITROPHENOL	0.206	0.198	3.9	*	
2,4-DIMETHYLPHENOL	0.318	0.326	-2.4		
BENZOIC ACID	0.136	0.122	9.7		
BIS(2-CHLOROETHOXY)METHANE	0.629	0.705	-12.0		
2,4-DICHLOROPHENOL	0.235	0.244	-3.8	*	
1,2,4-TRICHLOROBENZENE	0.243	0.236	2.7		
NAPHTHALENE	1.125	1.178	-4.7		
4-CHLOROANILINE	0.449	0.437	2.6		
HEXACHLOROBUTADIENE	0.118	0.114	2.7	*	
4-CHLORO-3-METHYLPHENOL	0.276	0.268	2.8	*	
2-METHYLNAPHTHALENE	0.753	0.724	3.8		
HEXACHLOROCYCLOPENTADIENE	0.126	0.194	-53.9	-LOQ	**
2,4,6-TRICHLOROPHENOL	0.368	0.443	-20.3	*	
2,4,5-TRICHLOROPHENOL	0.403	0.413	-2.4		
2-CHLORONAPHTHALENE	1.294	1.224	5.3		
2-NITROANILINE	0.481	0.355	26.2	-LOQ	
DIMETHYL PHTHALATE	1.469	1.618	-10.1		
ACENAPHTHYLENE	2.151	2.300	-6.9		
3-NITROANILINE	0.519	0.360	30.6	-LOQ	
ACENAPHTHENE	1.313	1.387	-5.6	*	
2,4-DINITROPHENOL	0.109	0.087	20.0		**
4-NITROPHENOL	0.160	0.210	-31.5	-LOQ	**
DIBENZOFURAN	1.940	2.109	-8.7		

COMPOUND	AVG RF	RF 50.	% DIFF	CCC	SPCC
2,4-DINITROTOLUENE	0.306	0.326	-6.7		
2,6-DINITROTOLUENE	0.233	0.196	15.4		
DIETHYLPHTHALATE	2.067	2.072	-0.2		
4-CHLOROPHENYL-PHENYLETHER	0.691	0.833	-20.4		
FLUORENE	1.627	1.678	-3.1		
4-NITROANILINE	0.315	0.356	-13.1		
4,6-DINITRO-2-METHYLPNENOL	0.079	0.073	6.9		
DIPHENYLAMINE	0.806	0.733	9.1	*	
4-BROMOPHENYL-PHENYLETHER	0.205	0.199	2.8		
HEXACHLOROBENZENE	0.248	0.267	-7.5		
PENTACHLOROPHENOL	0.097	0.106	-9.0	*	
PHENANTHRENE	1.521	1.632	-7.2		
ANTHRACENE	1.240	1.450	-16.9		
DI-N-BUTYLPHTHALATE	1.994	2.443	-22.5		
FLUORANTHENE	1.136	1.394	-22.6	*	
BENZIDINE	0.765	0.279	63.4		**
PYRENE	1.416	1.079	23.7		
BUTYLBENZYLPHTHALATE	0.788	0.581	26.2		
3,3'-DICHLOROBENZIDINE	0.966	0.350	63.7		
BENZO(A)ANTHRACENE	0.939	0.648	30.9		
BIS(2-ETHYLHEXYL)PHTHALATE	1.209	1.129	6.5		
CHRYSENE	1.149	0.931	18.9		
DI-N-OCTYL PHTHALATE	3.835	4.331	-12.9	*	
BENZO(B)FLUORANTHENE	2.110	1.544	26.8	LOQ	
BENZO(K)FLUORANTHENE	1.714	1.974	-15.1		
BENZO(A)PYRENE	1.298	1.173	9.6	*	
INDENO(1,2,3-CD)PYRENE	0.957	0.821	14.1		
DIBENZ(A,H)ANTHRACENE	1.019	0.833	18.2		
BENZO(GHI)PERYLENE	0.920	0.790	14.1		

AVG RF - AVERAGE RESPONSE FACTOR SPCC - SYSTEM PERFORMANCE CHECK COMPOUNI
%RSD - PERCENT RELATIVE STANDARD DEVIATION
CCC - CALIBRATION CHECK COMPOUNDS(*) # - NOT DETECTABLE AT LOW LEVEL

CONTINUING CALIBRATION CHECK
EXTRACTABLES COMPOUNDS

000700

CASE NO: 4248
CONTRACTOR: RMAL
CONTRACT NO: 68-01-7016
INSTRUMENT ID: FINNIGAN.K

CALIBRATION DATE: 06MAY85
TIME: 19:05
LABORATORY ID: STDK203
INITIAL CALIBRATION DATE: 05/01/85

MINIMUM RF FOR SPCC IS 0.050 MAXIMUM %D FOR CCC IS 25%

COMPOUND	AVG RF	RF 50.	% DIFF	CCC	SPCC
N-NITROSODOMETHYLAMINE	1.950	2.019	-3.5		
PHENOL	3.744	4.172	-11.4	*	
ANILINE	4.265	4.260	0.1		
BIS(2-CHLOROETHYL)ETHER	3.510	4.020	-14.5		
2-CHLOROPHENOL	2.342	2.521	-7.6		
1,3-DICHLOROBENZENE	2.341	2.389	-2.0		
1,4-DICHLOROBENZENE	2.441	2.839	-16.3	*	
BENZYL ALCOHOL	0.607	1.021	-68.1	-LOQ	
1,2-DICHLOROBENZENE	2.219	2.492	-12.2		
2-METHYLPHENOL	2.278	2.161	5.1		
BIS(2-CHLOROISOPROPYL)ETHER	0.736	0.871	-18.3		
4-METHYLPHENOL	2.315	2.378	-2.7		
N-NITROSO-DI-N-PROPYLAMINE	0.354	0.434	-22.8		**
HEXACHLOROETHANE	0.770	0.928	-20.4		
NITROBENZENE	0.455	0.413	9.2		
ISOPHORONE	0.732	0.647	11.5		
2-NITROPHENOL	0.206	0.195	5.0	*	
2,4-DIMETHYLPHENOL	0.318	0.303	4.8		
BENZOIC ACID	0.136	0.137	-1.3		
BIS(2-CHLOROETHOXY)METHANE	0.629	0.618	1.7		
2,4-DICHLOROPHENOL	0.235	0.212	9.8	*	
1,2,4-TRICHLOROBENZENE	0.243	0.220	9.6		
NAPHTHALENE	1.125	1.180	-4.9		
4-CHLOROANILINE	0.449	0.396	11.8		
HEXACHLOROBUTADIENE	0.118	0.105	10.3	*	
4-CHLORO-3-METHYLPHENOL	0.276	0.244	11.4	*	
2-METHYLNAPHTHALENE	0.753	0.665	11.6		
HEXACHLOROCYCLOPENTADIENE	0.126	0.196	-55.2	-LOQ	**
2,4,6-TRICHLOROPHENOL	0.368	0.375	-1.8	*	
2,4,5-TRICHLOROPHENOL	0.403	0.361	10.2		
2-CHLORONAPHTHALENE	1.294	1.129	12.7		
2-NITROANILINE	0.481	0.355	26.2	-LOQ	
DIMETHYL PHTHALATE	1.469	1.298	11.6		
ACENAPHTHYLENE	2.151	2.028	5.7		
3-NITROANILINE	0.519	0.381	26.5	-LOQ	
ACENAPHTHENE	1.313	1.197	8.8	*	
2,4-DINITROPHENOL	0.109	0.082	24.7		**
4-NITROPHENOL	0.160	0.148	7.2		**
DIBENZOFURAN	1.940	1.692	12.7		

000701

COMPOUND	AVG RF	RF 50.	% DIFF	CCC	SPCC
2,4-DINITROTOLUENE	0.306	0.252	17.4		
2,6-DINITROTOLUENE	0.233	0.156	33.0	-LOQ	
DIETHYLPHTHALATE	2.067	1.822	11.8		
4-CHLOROPHENYL-PHENYLETHER	0.691	0.678	1.9		
FLUORENE	1.627	1.581	2.8		
4-NITROANILINE	0.315	0.206	34.5	-LOQ	
4,6-DINITRO-2-METHYLPNENOL	0.079	0.063✓	19.6		
DIPHENYLAMINE	0.806	0.703	12.7	*	
4-BROMOPHENYL-PHENYLETHER	0.205	0.205	0.3		
HEXACHLOROBENZENE	0.248	0.256	-2.8		
PENTACHLOROPHENOL	0.097	0.072✓	25.7	*	
PHENANTHRENE	1.521	1.435	5.6		
ANTHRACENE	1.240	1.176	5.1		
DI-N-BUTYLPHTHALATE	1.994	1.696	14.9		
FLUORANTHENE	1.136	0.915	19.4	*	
BENZIDINE	0.765	0.270	64.6	-LOQ	**
PYRENE	1.416	1.322	6.6		
BUTYLBENZYLPHTHALATE	0.788	0.601	23.7		
3,3'-DICHLOROBENZIDINE	0.966	0.317	67.1		
BENZO(A)ANTHRACENE	0.939	0.945	-0.7		
BIS(2-ETHYLHEXYL)PHTHALATE	1.209	1.009	16.4		
CHRYSENE	1.149	0.886	22.8		
DI-N-OCTYL PHTHALATE	3.835	4.351	-13.4	*	
BENZO(B)FLUORANTHENE	2.110	1.828	13.3		
BENZO(K)FLUORANTHENE	1.714	1.606	6.3		
BENZO(A)PYRENE	1.298	1.142	12.0	*	
INDENO(1,2,3-CD)PYRENE	0.957	0.845	11.6		
DIBENZ(A,H)ANTHRACENE	1.019	0.815	19.9		
BENZO(GHI)PERYLENE	0.920	0.745	19.0		

AVG RF - AVERAGE RESPONSE FACTOR SPCC - SYSTEM PERFORMANCE CHECK COMPOUNI
%RSD - PERCENT RELATIVE STANDARD DEVIATION
CCC - CALIBRATION CHECK COMPOUNDS(*) # - NOT DETECTABLE AT LOW LEVEL

CONTINUING CALIBRATION CHECK
EXTRACTABLES COMPOUNDS

000702

CASE NO: 4247/SAS16
CONTRACTOR: RMAL
CONTRACT NO: 68-01-7016
INSTRUMENT ID: FINNIGAN.K

CALIBRATION DATE: 09MAY85
TIME: 6:55:23
LABORATORY ID: STDK258
INITIAL CALIBRATION DATE: 05/01/85

MINIMUM RF FOR SPCC IS 0.050 MAXIMUM %D FOR CCC IS 25%

COMPOUND	AVG RF	RF 50.	% DIFF	CCC	SPCC
N-NITROSODOMETHYLAMINE	1.950	1.701	12.7		
PHENOL	3.744	3.445	8.0	*	
ANILINE	4.265	4.135	3.0		
BIS(2-CHLOROETHYL)ETHER	3.510	3.271	6.8		
2-CHLOROPHENOL	2.342	2.512	-7.2		
1,3-DICHLOROBENZENE	2.341	2.256	3.6		
1,4-DICHLOROBENZENE	2.441	2.421	0.7	*	
BENZYL ALCOHOL	0.607	0.868	-42.9	- LOQ	
1,2-DICHLOROBENZENE	2.219	2.215	0.1		
2-METHYLPHENOL	2.278	2.141	5.9		
BIS(2-CHLOROISOPROPYL)ETHER	0.736	0.748	-1.5		
4-METHYLPHENOL	2.315	2.184	5.6		
N-NITROSO-DI-N-PROPYLAMINE	0.354	0.108	69.4	- LOQ	**
HEXACHLOROETHANE	0.770	0.854	-10.8		
NITROBENZENE	0.455	0.442	3.0		
ISOPHORONE	0.732	0.749	-2.4		
2-NITROPHENOL	0.206	0.220	-7.0	*	
2,4-DIMETHYLPHENOL	0.318	0.321	-0.9		
BENZOIC ACID	0.136	0.051	Just made it. 61.9	✓ LOQ	
BIS(2-CHLOROETHOXY)METHANE	0.629	0.656	-4.2		
2,4-DICHLOROPHENOL	0.235	0.226	3.8	*	
1,2,4-TRICHLOROBENZENE	0.243	0.232	4.5		
NAPHTHALENE	1.125	1.021	9.1		
4-CHLOROANILINE	0.449	0.403	10.2		
HEXACHLOROBUTADIENE	0.118	0.110	6.1	*	
4-CHLORO-3-METHYLPHENOL	0.276	0.252	8.5	*	
2-METHYLNAPHTHALENE	0.753	0.636	15.5		
HEXACHLOROCYCLOPENTADIENE	0.126	0.223	-76.3	- LOQ	**
2,4,6-TRICHLOROPHENOL	0.368	0.398	-8.1	*	
2,4,5-TRICHLOROPHENOL	0.403	0.394	2.0		
2-CHLORONAPHTHALENE	1.294	1.216	5.9		
2-NITROANILINE	0.481	0.434	9.8		
DIMETHYL PHTHALATE	1.469	1.279	12.9		
ACENAPHTHYLENE	2.151	2.072	3.6		
3-NITROANILINE	0.519	0.451	13.0		
ACENAPHTHENE	1.313	1.282	2.3	*	
2,4-DINITROPHENOL	0.109	0.084	22.9		**
4-NITROPHENOL	0.160	0.168	-5.2		**
DIBENZOFURAN	1.940	1.834	5.4		

COMPOUND	AVG RF	RF 50.	% DIFF	CCC	SPCC	
2,4-DINITROTOLUENE	0.306	0.291	4.8			
2,6-DINITROTOLUENE	0.233	0.223	4.2			
DIETHYLPHTHALATE	2.067	1.774	14.1			
4-CHLOROPHENYL-PHENYLETHER	0.691	0.643	6.9			
FLUORENE	1.627	1.521	6.5			
4-NITROANILINE	0.315	0.223	29.1	LOQ		
4,6-DINITRO-2-METHYLPNENOL	0.079	0.060 ✓	23.7			
DIPHENYLAMINE	0.806	0.792	1.7	*		
4-BROMOPHENYL-PHENYLETHER	0.205	0.227	-10.5			
HEXACHLOROBENZENE	0.248	0.267	-7.4			
PENTACHLOROPHENOL	0.097	0.119	-22.1	*		
PHENANTHRENE	1.521	1.502	1.2			
ANTHRACENE	1.240	1.266	-2.1			
DI-N-BUTYLPHTHALATE	1.994	1.873	6.0			
FLUORANTHENE	1.136	1.121	1.3	*		
BENZIDINE	0.765	0.434	43.2	-LOQ		**
PYRENE	1.416	1.665	-17.5			
BUTYLBENZYLPHTHALATE	0.788	0.826	-4.8			
3,3'-DICHLOROBENZIDINE	0.966	0.402	58.3	-LOQ		
BENZO(A)ANTHRACENE	0.939	1.252	-33.3			
BIS(2-ETHYLHEXYL)PHTHALATE	1.209	1.195	1.0			
CHRYSENE	1.149	0.899	21.7			
DI-N-OCTYL PHTHALATE	3.835	3.673	4.2	*		
BENZO(B)FLUORANTHENE	2.110	1.813	14.0			
BENZO(K)FLUORANTHENE	1.714	1.489	13.1			
BENZO(A)PYRENE	1.298	1.175	9.4	*		
INDENO(1,2,3-CD)PYRENE	0.957	1.336	-39.6	-LOQ		
DIBENZ(A,H)ANTHRACENE	1.019	0.953	6.5			
BENZO(GHI)PERYLENE	0.920	0.975	-5.9			

Original (Red)

000703

AVG RF - AVERAGE RESPONSE FACTOR SPCC - SYSTEM PERFORMANCE CHECK COMPOUN
%RSD - PERCENT RELATIVE STANDARD DEVIATION
CCC - CALIBRATION CHECK COMPOUNDS(*) # - NOT DETECTABLE AT LOW LEVEL

Pesticide Evaluation Standards Summary

000078

Case No. 4348 SAS 11-44C Laboratory Rocky Mountain Analytical Lab

Contract No. 68-01-7016 Column 1.5% OV-17/1.95% QF1

Date of Analysis 6-12-85 Instrument ID B

EVALUATION CHECK FOR LINEARITY

LABORATORY ID	PS005B	PS005C	PS005D	
PESTICIDE	CALIBRATION FACTOR EVAL. MIX A	CALIBRATION FACTOR EVAL. MIX B	CALIBRATION FACTOR EVAL. MIX C	% RSD (≤10%)
ALDRIN	$1.6 \times 10^{+5}$	$1.5 \times 10^{+5}$	$1.4 \times 10^{+5}$	6.7%
ENDRIN	$1.2 \times 10^{+5}$	$1.1 \times 10^{+5}$	$1.1 \times 10^{+5}$	5.1%
4,4'-DDT	$4.4 \times 10^{+1}$	$3.8 \times 10^{+1}$	$5.0 \times 10^{+1}$	15%
DIBUTYL CHLORENDATE	$1.3 \times 10^{+5}$	$1.3 \times 10^{+5}$	$1.4 \times 10^{+5}$	4.3

out of criteria however NO effect

EVALUATION CHECK FOR 4,4'-DDT/ENDRIN BREAKDOWN

	PERCENT BREAKDOWN EXPRESSED AS TOTAL DEGRADATION			
	EVAL. MIX B	EVAL. MIX B	EVAL. MIX B	EVAL. MIX B
ENDRIN	None	None	None	
4,4'-DDT	0.73%	0.88%	1.1%	
LABORATORY ID	PS005C	PS005C	PS005C	
TIME OF ANALYSIS	6-12-85 17:08	6-13-85 04:52	6-13-85 13:57	

EVALUATION OF RETENTION TIME SHIFT FOR DIBUTYLCHLORENDATE

SMO SAMPLE NO.	LAB ID	TIME OF ANALYSIS	PERCENT DIFF. *	SMO SAMPLE NO.	LAB ID	TIME OF ANALYSIS	PERCENT DIFF. *
Evaluation Mix B	PS005C	17:08	0	CA 199	7112-12	08:44	0
Evaluation Mix C	PS005D	17:40	0.056%	CA 200	7112-13	10:00	0.11%
Individual Mix A	CM018C	18:19	0.11%	CA 201	7112-14	10:39	0.22%
CA 188	7112-01	01:03	0	Reagent Blank	7112-BLANK	11:18	0.78%
CA 189	7112-02	01:42	0.11%	CA 197 MS	7112-10MS01	11:57	0.056%
CA 190	7112-03	02:20	0.22%	CA 197 MSD	7112-10MS02	12:37	0.73%
CA 191	7112-04	02:58	0.22%	Evaluation Mix B	PS005C	13:57	0%
CA 192	7112-05	03:36	0.28%				
CA 193	7112-06	04:14	0.22%				
Evaluation Mix B	PS005C	04:52	0.34%				
CA 194	7112-07	05:31	0.056%				
CA 195	7112-08	06:09	0.22%				
CA 196	7112-09	06:48	0.34%				
CA 197	7112-10	07:27	0.22%				
CA 198	7112-11	08:06	0.28%				

all OK - PV

* ≤2% PACKED, ≤0.3% CAPILLARY

FORM VIII

Pesticide Evaluation Standards Summary

000081

Case No. 4248 SAS 1644C Laboratory Rocky Mountain Analytical Lab

Contract No. 68-01-7016 Column 3% OV-1

Date of Analysis 6-12-85 Instrument ID B

EVALUATION CHECK FOR LINEARITY

LABORATORY ID	PS005B	PS005C	PS005D	
PESTICIDE	CALIBRATION FACTOR EVAL. MIX A	CALIBRATION FACTOR EVAL. MIX B	CALIBRATION FACTOR EVAL. MIX C	% RSD (≤10%)
ALDRIN	$1.0\times10^{+5}$	$1.0\times10^{+5}$	$9.6\times10^{+4}$	2.3% ✓
ENDRIN	$1.5\times10^{+2}$	$1.5\times10^{+2}$	$1.3\times10^{+2}$	8.0% ✓
4,4'-DDT	$4.6\times10^{+1}$	$4.5\times10^{+1}$	$3.8\times10^{+1}$	10% ✓
DIBUTYL CHLORENDATE	$6.8\times10^{+4}$	$6.8\times10^{+4}$	$7.6\times10^{+4}$	6.5% ✓

EVALUATION CHECK FOR 4,4'-DDT/ENDRIN BREAKDOWN

* endrin aldehyde and DDD are not resolved on this column, therefore calculated is the

	PERCENT BREAKDOWN EXPRESSED AS TOTAL DEGRADATION			
	EVAL. MIX B	EVAL. MIX B	EVAL. MIX B	EVAL. MIX B
ENDRIN	8.7% [6.2%]	14% [10%]	15% [10%]	
4,4'-DDT	18%	36%	25%	out of criteria
LABORATORY ID	PS005C	PS005C	PS005C	
TIME OF ANALYSIS	6/12/85 16:13	6/13/85 04:55	6/13/85 13:59	No effect

EVALUATION OF RETENTION TIME SHIFT FOR DIBUTYLCHLORENDATE

SMO SAMPLE NO.	LAB ID	TIME OF ANALYSIS	PERCENT DIFF. *	SMO SAMPLE NO.	LAB ID	TIME OF ANALYSIS	PERCENT DIFF. *
Evaluation Mix B	PS005C	16:13	0.30%	CA199	7112-12	08:46	not recorded
Evaluation Mix C	PS005D	16:52	0.15%	CA 200	7112-13	10:01	0.11%
Individual Mix A	C MC18C	18:18	-0- %	CA 201	7112-14	10:40	0.19%
CA 188	7112-01	01:06	0.22%	Reagent Blank	7112-Blank	11:19	2.5%
CA 189	7112-02	01:44	0.38%	CA 197 MS	7112-10Spl	11:58	0.075%
CA 190	7112-03	02:23	0.53%	CA 197 MSD	7112-10Spd	12:38	2.4%
CA 191	7112-04	03:01	0.56%	Evaluation Mix B	PS005C	13:59	0.19%
CA 192	7112-05	03:39	0.41%				
CA 193	7112-06	04:17	0.15%				out of criteria
Evaluation Mix B	PS005C	04:55	0.15%				
CA 194	7112-07	05:34	0.86%				No effect
CA 195	7112-08	06:12	0.34%				on spks
CA 196	7112-09	06:51	0.56%				
CA 197	7112-10	07:30	0.38%				
CA 198	7112-11	08:08	0.41%				

* ≤2% PACKED, ≤0.3% CAPILLARY

PESTICIDE/PCB STANDARDS SUMMARY

000079

Case No. 4248 SAS 16446 Laboratory Rocky Mountain Analytical Lab
Contract No. 68-01-7016 GC Column 15'x0.10/1.95'GE1 GC Instrument ID B

	DATE OF ANALYSIS 6-12-85				DATE OF ANALYSIS 6-13-85			
	TIME OF ANALYSIS 19:00				TIME OF ANALYSIS 09:23			
	LABORATORY ID CM019C				LABORATORY ID CM019C			
COMPOUND	RT	RETENTION TIME WINDOW	CALIBRATION FACTOR	CONF. OR QUANT.	RT	CALIBRATION FACTOR	CONF. OR QUANT.	PERCENT DIFF.**
alpha-BHC	1.18	1.17±0.06	1.5×10^{-5}	Quant	1.18	1.6×10^{-5}	Quant	6.7
beta-BHC								
delta-BHC								
gamma-BHC	1.51	1.49±0.08	1.4×10^{-5}	Quant	1.51	1.5×10^{-5}	Quant	7.1
Heptachlor	1.84	1.83±0.10	1.5×10^{-5}	Quant	1.84	1.6×10^{-5}	Quant	6.7
Aldrin	2.22	2.21±0.10	1.5×10^{-5}	Quant	2.22	1.6×10^{-5}	Quant	6.7
Heptachlor Epoxide								
Endosulfan I								
Dieldrin	5.35	5.33±0.30	1.4×10^{-5}	Quant	5.34	1.4×10^{-5}	Quant	0
4,4'-DDE								
Endrin	6.53	6.52±0.40	1.2×10^{-5}	Quant	6.53	1.2×10^{-5}	Quant	0
Endosulfan II								
4,4'-DDD	8.05	8.06±0.50	1.2×10^{-5}	Quant	8.05	1.2×10^{-5}	Quant	0
Endrin Aldehyde								
Endosulfan Sulfate								
4,4'-DDT	9.70	9.74±0.60	1.4×10^{-5}	Quant	9.71	1.3×10^{-5}	Quant	7.1
Methoxychlor	19.46	19.56±1.30	1.3×10^{-1}	Quant	19.46	1.4×10^{-1}	Quant	7.7
Endrin Ketone								
Tech. Chlordane								
alpha-Chlordane*								
gamma-Chlordane*								
Toxaphene								
Aroclor - 1016								
Aroclor - 1221								
Aroclor - 1232								
Aroclor - 1242								
Aroclor - 1248								
Aroclor - 1254								
Aroclor - 1260								

all verified acceptable

* SEE EXHIBIT B, PART 7

** CONF. = CONFIRMATION (<20% DIFFERENCE)
QUANT. = QUANTITATION (<10% DIFFERENCE)

FORM IV

4/84

000080

Case No. 424B SAS 16446 Laboratory Rocky Mountain Analytical Lab
Contract No. 68-01-7016 GC Column 3% OV-1 GC Instrument ID B

	DATE OF ANALYSIS 6-12-85 TIME OF ANALYSIS 18:58 LABORATORY ID CM019C				DATE OF ANALYSIS 6-13-85 TIME OF ANALYSIS 09:24 LABORATORY ID CM019C			
COMPOUND	RT	RETENTION TIME WINDOW	CALIBRATION FACTOR	CONF. OR QUANT.	RT	CALIBRATION FACTOR	CONF. OR QUANT.	PERCENT DIFF.**
alpha-BHC	1.72	1.69±0.04	1.0×10^{-5}	Quant	1.72	Quant	9.5×10^{-4}	5.0%
beta-BHC								
delta-BHC								
gamma-BHC	2.03	2.00±0.04	9.9×10^{-4}	Quant	2.03	Quant	9.4×10^{-4}	5.0
Heptachlor	3.33	3.29±0.08	7.4×10^{-4}	Quant	3.33	Quant	7.3×10^{-4}	1.4
Aldrin	4.15	4.11±0.08	9.9×10^{-4}	Quant	4.14	Quant	9.5×10^{-4}	4.0
Heptachlor Epoxide								
Endosulfan I								
Dieldrin	7.52	7.47±0.17	8.4×10^{-4}	Quant	7.51	Quant	8.0×10^{-4}	4.8
4,4'-DDE								
Endrin	8.40	8.35±0.17	6.9×10^{-4}	Quant	8.39	Quant	6.4×10^{-4}	7.2
Endosulfan II								
4,4'-DDD	9.59	9.52±0.19	9.0×10^{-4}	Quant	9.58	Quant	9.1×10^{-4}	1.1
Endrin Aldehyde								
Endosulfan Sulfate								
4,4'-DDT	12.58	12.58±0.29	3.0×10^{-4}	Conf	12.66	Conf	3.6×10^{-4}	20
Methoxychlor	19.32	19.15±0.45	2.2×10^{-4}	Quant	19.30	Quant	2.4×10^{-4}	9.1%
Endrin Ketone								
Tech. Chlordane								
alpha-Chlordane*								
gamma-Chlordane*								
Toxaphene								
Aroclor - 1016								
Aroclor - 1221								
Aroclor - 1232								
Aroclor - 1242								
Aroclor - 1248								
Aroclor - 1254								
Aroclor - 1260								

ok
PV

* SEE EXHIBIT B, PART 7

** CONF. = CONFIRMATION (<20% DIFFERENCE)
QUANT. = QUANTITATION (<~~10~~% DIFFERENCE) 15%

FORM IX

4/84

ORIGINAL (Red)

PROJECT NAME: Levittown Dump
TDD NO: B504-12

EPA SITE NO.: 4248
REGION: III

QUALITY ASSURANCE REVIEW OF INORGANIC ANALYTICAL DATA PACKAGE

Case No.: 4248
Contract No.:
Contract Laboratory: Versar, Inc.
Applicable IFB No.:
Reviewer: SLM
Review Date: 6-11-85

Applicable Sample No's.:
MCB334 - MCB350

The inorganic analytical data for this case has been reviewed. The quality assurance evaluation is summarized in the following table:

Reviewer's Evaluation*	Fraction			
	TASK I ICP or AA METALS	TASK II FURNACE AA METALS	TASK III COLD VAPOR AA MERCURY	TASK III CYANIDE
Acceptable				
Acceptable with exception(s)				
Questionable	①②			
Unacceptable	③			

* Definitions of the evaluation score categories are listed on next page.

This evaluation was based upon an analysis of the review items indicated below:

- ● DATA COMPLETENESS
- ● BLANK ANALYSIS RESULTS
- ◑ MATRIX SPIKE RESULTS
- ● DUPLICATE ANALYSIS RESULTS
- ○ STANDARD ADDITIONS RESULTS
- ● QUANTITATIVE CALCULATIONS
- ● INITIAL CALIBRATION VERIFICATION
- ● CONTINUING CALIBRATION VERIFICATION
- ○ INTERFERENCE QC RESULTS
- ● DETECTION LIMITS RESULTS
- ● INSTRUMENT SENSITIVITY REPORTS

Data review forms are attached for each of the review items indicated above.

‡ No errors noted, no form attached.

◒ Spot Check performed.

Comments: ① Field Blank results
② Spike results for silver in the aqueous matrix.
③ Spike results for Antimony in the aqueous matrix & tin in the solid matrix.

DATA EVALUATION SCORE CATEGORIES

(Red)

ACCEPTABLE: Data is within established control limits, or the data which is outside established control limits does not affect the validity of the analytical results.

ACCEPTABLE WITH EXCEPTION(S): Data is not completely within established control limits. The deficiences are identified and specific data is still valid, given certain qualifications which are listed below.

QUESTIONABLE: Data is not within established control limits. The deficiences bring the validity of the entire data set into question. However, the data validity is neither proved nor disproved by the available information.

UNACCEPTABLE: Data is not within established control limits. The deficiences imply the results are not meaningful.

DATA COMPLETENESS	CONC./ MATRIX	L/AQ	L/AQ	L/AQ	L/AQ	L/AQ	L/AQ	L/AQ	L/AQ	L/AQ	L/AQ	L/AQ	L/SOL	L/SOL	L/SOL	L/SOL
	TRAFFIC REPORT #	MC B334	MC B335	MC B336	MC B338	MC B339	MC B340	MC B342	MC B344	MC B346	MC B348	MC B350	MC B337	MC B341	MC B343	MC B345
	LAB I.D. #	2434, 2445	2435, 2446	2436, 2447	2437, 2448	2438, 2449	2439, 2450	2440, 2451	2441, 2452	2442, 2453	2443, 2454	2444, 2455	2456	2457	2458	2459
FIELD QC	BLANK											✓				
	DUPLICATE						✓	✓						✓	✓	
	SPIKE															
TASK I: ICAP OR AA: METALS	RAW DATA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TAB. RESULTS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	TAB. D.L.'s	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	QA FORM	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	ICAP INTER. QC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	INSTR. SENS.															
TASK II: FURNACE AA: METALS	RAW DATA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TAB. RESULTS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TAB. D.L.'s	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	QA FORM	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	INSTR. SENS.															
TASK II: COLD VAPOR AA: MERCURY	RAW DATA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TAB. RESULTS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TAB. D.L.'s	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	QA FORM	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	INSTR. SENS.															
TASK III: CYANIDE	RAW DATA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TAB. RESULTS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TAB. D.L.'s	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	QA FORM.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	INSTR. SENS.															
OTHER (SPECIFY):	RAW DATA															
	TAB. RESULTS															
	TAB. D.L.'s															
	QA FORM															
	INSTR. SENS.															
OTHER (SPECIFY):	RAW DATA															
	TAB. RUSULTS															
	TAB. D.L.'s															
	QA FORM															
	INSTR. SENS.															

COMMENTS: _____

DATA COMPLETENESS																
	CONC./ MATRIX	L/SOL	L/SOL													
	TRAFFIC REPORT #	MC B347	MC B349													
	LAB I.D. #	2460	2461													
FIELD QC	BLANK															
	DUPLICATE															
	SPIKE															
TASK I: ICAP OR AA: METALS	RAW DATA	✓	✓													
	TAB. RESULTS	✓	✓													
	TAB. D.L.'s	✓	✓													
	QA FORM	✓	✓													
	ICAP INTER. QC	✓	✓													
	INSTR. SENS.															
TASK II: FURNACE AA: METALS	RAW DATA	✓	✓													
	TAB. RESULTS	✓	✓													
	TAB. D.L.'s	✓	✓													
	QA FORM	✓	✓													
	INSTR. SENS.															
TASK II: COLD VAPOR AA: MERCURY	RAW DATA	✓	✓													
	TAB. RESULTS	✓	✓													
	TAB. D.L.'s	✓	✓													
	QA FORM	✓	✓													
	INSTR. SENS.															
TASK III: CYANIDE	RAW DATA	✓	✓													
	TAB. RESULTS	✓	✓													
	TAB. D.L.'s	✓	✓													
	QA FORM.	✓	✓													
	INSTR. SENS.															
OTHER (SPECIFY):	RAW DATA															
	TAB. RESULTS															
	TAB. D.L.'s															
	QA FORM															
	INSTR. SENS.															
OTHER (SPECIFY):	RAW DATA															
	TAB. RUSULTS															
	TAB. D.L.'s															
	QA FORM															
	INSTR. SENS.															

COMMENTS: _____

BLANK ANALYSIS RESULTS

ORIGINAL (Red)

TASK	TYPE	CONC	MATRIX	SAMPLE #	SOURCE OF H_2O	CONTAMINANTS (CONCENTRATION / DETECTION LIMIT
INOR. I, II, III	FIELD/L/AQ			MCB 350	NUS	Cu - 8.4 ug/l Mg - 24 ug/l Ca - 16 ug/l Zn - 11 ug/l Fe - 27 ug/l
INOR. I, II, III	LAB PREP/L/SOL				LAB DI/SUT	Ca - 35 ug/l Fe - 40 ug/l Mg - 38 ug/l

LABORATORY REPORTED FIELD BLANK DATA IS COMPARED WITH THE SAMPLE DATA IN A TABULATION FORM WITHIN SAMPLE ANALYTICAL DATA SUMMARY.

COMMENTS:

(1) RESULT REPORTED BY LABORATORY AND CONFIRMED BY REVIEWER.

(2) RESULT INFERRED FROM RAW DATA

BASED UPON THE ABOVE LISTED CONTAMINANT LEVELS THE FOLLOWING DATA POINTS MAY BE QUESTIONABLE (5X RULE APPLIED):

Cu - MCB 334, MCB 335, MCB 336, MCB 338, MCB 339, MCB 340, MCB 342, MCB 344, MCB 346, MCB 348

Zn - MCB 334, MCB 335, MCB 336, MCB 338, MCB 339, MCB 340, MCB 342, MCB 344, MCB 346, MCB 348.

Fe - MCB 334, MCB 335, MCB 336, MCB 338, MCB 340, MCB 342, MCB 344

LAB

Duplicate Analysis Results

ORIGINAL (Red)

The applicable duplicate pairs are:

sample no.	MCB 334	MCB 348	MCB 459	MCB 337		
Field duplicate						
Lab duplicate	✓	✓	✓	✓		
sample level	L	L	L	L		
sample matrix	AQ	AQ	SOL	SOL		
TASK	I, II, III	Hg	I, II, III	Hg		

The relative percent difference (RPD) for each parameter group was evaluated. The duplicate analysis RPD acceptance criteria should be:

MATRIX	maximum acceptable Percent Difference
AQ	± 20 %
SOL	± 40 %

The RPD's exceeding the maximum acceptable percent difference were:

MATRIX	Compound	Actual RPD	Comparison Sample	conc.	conc.

Comments: _____

FIELD

Duplicate Analysis Results

ORIGINAL (Red)

The applicable duplicate pairs are:

sample no.	MCB 340	MCB 342	MCB 341	MCB 343		
Field duplicate	✓	✓	✓			
Lab duplicate						
sample level	L	L	L			
sample matrix	AQ	AQ	SOL			
TASK	I, II, III	I, II, III	I, II, III			

The relative percent difference (RPD) for each parameter group was evaluated. The duplicate analysis RPD acceptance criteria should be:

MATRIX	maximum acceptable Percent Difference
AQ	± 20%
SOL	± 40%

The RPD's exceeding the maximum acceptable percent difference were:

MATRIX	Compound	Actual RPD	Comparison		

Comments: _____

ORIGINAL (Red)

MATRIX SPIKE RECOVERIES

Sample No.	MCB 335	MCB 345				
Field Spike						
Lab Spike	✓	✓				
Matrix	AQ	SOL				
Conc. Level	L	L				
Method Std.						
TASK	I, II, III	I, II, III				

All matrix spike recoveries were within the established control ranges specified in; IFB WA8 -A , Exhibit E, Table 2. ___ Yes ___ No

Exception(s):

Parameter	Accepted Range (%)	Actual % Rec.	Sample Number	Org. Result	Spike Added	Spike Result	Units
Sb	75-125	0.0	MCB 335	24.U	550	24.U	ug/l
Sn	75-125	186.0	MCB 335	13.U	400	743	ug/l
Ag	75-125	51.0	MCB 335	3.0U	50	26	ug/l
Sn	75-125	9.0	MCB 345	20	694	63	mg/kg

Comments: _____

STANDARD ADDITION RESULTS

ORIGINAL (Red)

Documentation indicates a standard addition correction was performed on all spiked samples for parameters having recoveries outside of control limits: Yes_____ No_____

For the parameters having poor recoveries in the spiked sample(s), standard additions were also performed on all other samples where the following conditions were met:

(1) The sample matrix was similar to the matrix of the sample which was spiked; and

(2) The parameters in question were detected with postive results.

Yes___ No____ NOT REQUIRED BY CONTRACT

The parameters with poor spike recoveries are listed below, along with the type of standard addition performed(none, 1, 2, or 3 point). The results for these parameters in other samples which have a similar r rix are also listed below:

sample	description of matrix	parameter	recovery	type of std. add.
		NA		

omments: _____

Initial Calibration Verification and Continuing Calibration Verification

Documentation indicates calibrations were performed and checked every ten samples: Yes ✓ No_

Exceptions: _____

Calibrations and verifications were all within the control limits specified in

SOW 784 : Yes ✓ No_

Outliers are listed below:

Parameter	Acceptable Range (%)	Calibration Identifier	% of True Value	Comments

Interference QC Results

Documentation indicates interference QC samples were run before and after every ten samples: Yes ✓ No_

Exceptions: RUN AT START and FINISH OF SHIFT AS REQUIRED BY CONTRACT

Interference QC results were all within the control limits specified in

_____ : EPA CRL III guidelines 85 - 115 % Yes ✓ No__

Exceptions:

Parameter	Acceptable Range (%)	Calibration Identifier	% of True Value	Comments

QUANTITATIVE CALCULATIONS

ORIGINAL (Red)

CALCULATION ERRORS AND CORRECTED RESULTS ARE LISTED BELOW:

Actual matrix spike recovery for Mg on Form V is 89% not 0%.

Lab reported improper spike added on Form V for antimony in the solid matrix. Should have been 7010.

ORIGINAL (Red)

Detection Limits Results

Detection limits were reported for all samples analyzed: Yes ✓ No ___

Exceptions: _____

Detection limits were less than or equal to the required detection limits specified in _____. Yes ✓ No ___

Exceptions: _____

Instrument Sensitivity Reports

Instrument sensitivity reports were documented for all parameters:

Yes ___ No ___

Comments: _____

Other Remarks Concerning this Case:

There are currently no established control ranges for ICP interference check standards. However, although not a contractual requirement, 85% - 115% is used here as a tentative guideline for evaluation. Outliers of this tentative control range, if any, are tabulated on the bottom of the preceeding page.

U.S. EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS:8-557-2490

DATE 5/ 7/85

COVER PAGE
INORGANIC ANALYSES DATA PACKAGE

QC REPORT: 260
LAB NAME: VERSAR, INC. CASE NO. 4248
PROJECT NO.: 834.0000

SAMPLE NUMBERS

EPA NO.	LAB ID NO.	EPA NO.	LAB ID NO.
C B334	2434	MC B335	2435
C B336	2436	MC B338	2437
MC B339	2438	MC B340	2439
MC B342	2440	MC B344	2441
C B346	2442	MC B348	2443
C B350	2444	MC B334	2445
MC B335	2446	MC B336	2447
C B338	2448	MC B339	2449
C B340	2450	MC B342	2451
MC B344	2452	MC B346	2453
MC B348	2454	MC B350	2455
C 337	2456	MC B341	2457
C B343	2458	MC B345	2459
MC B347	2460	MC B349	2461

COMMENTS: CN results for some samples are reported to 1/2 the IDL due to the 2X concentration inherent in the method. Samples MC B339 + MC B348 will be reanalyzed for Pb to confirm reported data.

IS INTERELEMENT AND BACKGROUND CORRECTION APPLIED? YES.
CORRECTIONS APPLIED BEFORE GENERATION OF RAW DATA.

FOOTNOTES:

NR - NOT REQUIRED BY CONTRACT AT THIS TIME

FORM I:

VALUE - IF THE RESULT IS A VALUE GREATER THAN OR EQUAL TO THE INSTRUMENT DETECTION LIMIT BUT LESS THAN THE CONTRACT REQUIRED DETECTION LIMIT, REPORT THE VALUE IN BRACKETS (I.E., [10]). INDICATE THE ANALYTICAL METHOD USED WITH P (FOR ICP/FLAME AA) OR F (FOR FURNACE).

U - INDICATES ELEMENT WAS ANALYZED FOR BUT NOT DETECTED. REPORT WITH THE DETECTION LIMIT VALUE (E.G., 10U).

E - INDICATES A VALUE ESTIMATED OR NOT REPORTED DUE TO THE PRESENCE OF INTERFERENCE. EXPLANATORY NOTE INCLUDED ON COVER PAGE.

S - INDICATES VALUE DETERMINED BY METHOD OF STANDARD ADDITION

R - INDICATES SPIKE SAMPLE RECOVERY IS NOT WITHIN CONTROL LIMITS.

* - INDICATES DUPLICATE ANALYSIS IS NOT WITHIN CONTROL LIMITS.

+ - INDICATES THE CORRELATION COEFFICIENT FOR METHOD OF STANDARD ADDITION IS LESS THAN 0.995

DF - DILUTION FACTOR

PROJECT NAME: Leuttown Dump
TDD NO: F3-8504-12

EPA SITE NO.: PA-282
REGION: Fct III

QUALITY ASSURANCE REVIEW OF INORGANIC ANALYTICAL DATA PACKAGE

Case No.: 4248/SAS 1644C
Contract No.: SOW 784
Contract Laboratory: VERSAR
Applicable IFB No.:
Reviewer: Rock J. Vitale
Review Date: 8/13/85

Applicable Sample No's.:
MCB352 - up to and including MCB365

The inorganic analytical data for this case has been reviewed. The quality assurance evaluation is summarized in the following table:

Reviewer's Evaluation*	Fraction			
	TASK I ICP or AA METALS	TASK II FURNACE AA METALS	TASK II COLD VAPOR AA MERCURY	TASK III CYANIDE
Acceptable		✓		✓
Acceptable with exception(s)	✓ #1, #2, #3, #4		✓ #1	
Questionable				
Unacceptable				

* Definitions of the evaluation score categories are listed on next page.

This evaluation was based upon an analysis of the review items indicated below:

- ● DATA COMPLETENESS
- ● BLANK ANALYSIS RESULTS
- ● MATRIX SPIKE RESULTS
- ● DUPLICATE ANALYSIS RESULTS
- ● STANDARD ADDITIONS RESULTS
- ‡ ● QUANTITATIVE CALCULATIONS
- ● INITIAL CALIBRATION VERIFICATION
- ● CONTINUING CALIBRATION VERIFICATION
- ● INTERFERENCE QC RESULTS
- ● DETECTION LIMITS RESULTS
- ● INSTRUMENT SENSITIVITY REPORTS

Data review forms are attached for each of the review items indicated above.

‡ No errors noted, no form attached.

◒ Spot Check performed.

Comments: #1 Please see blank analysis documentation
#2 Please see matrix spike recoveries
#3 Please see lab control standard results.
#4 Lab error noted - lab reported % rec for Mg incorrectly.

DATA EVALUATION SCORE CATEGORIES

ACCEPTABLE: Data is within established control limits, or the data which is outside established control limits does not affect the validity of the analytical results.

ACCEPTABLE WITH EXCEPTION(S): Data is not completely within established control limits. The deficiences are identified and specific data is still valid, given certain qualifications which are listed below.

QUESTIONABLE: Data is not within established control limits. The deficiences bring the validity of the entire data set into question. However, the data validity is neither proved nor disproved by the available information.

UNACCEPTABLE: Data is not within established control limits. The deficiences imply the results are not meaningful.

DATA COMPLETENESS	CONC./ MATRIX	LO/AQ														
	TRAFFIC REPORT # MCB	352	353	354	355	356	357	358	359	360	361	362	363	364	365	Pref
	LAB I.D. #	2378 2392	2379 2393	2380 2394	2381 2395	2382 2396	2883 2397	2384 2398	2385 2399	2386 2400	2387 2401	2388 2402	2389 2403	2390 2404	2391 2405	
FIELD QC	BLANK												✓			
	DUPLICATE	✓	✓	✓												
	SPIKE		✓		✓											
TASK I: ICAP OR AA: METALS	RAW DATA	✓														✓
	TAB. RESULTS	✓														✓
	TAB. D.L.'s	✓														✓
	QA FORM	✓														✓
	ICAP INTER. QC	✓														✓
	INSTR. SENS.	✓														✓
TASK II: FURNACE AA: METALS	RAW DATA	✓														✓
	TAB. RESULTS	✓														✓
	TAB. D.L.'s	✓														✓
	QA FORM	✓														✓
	INSTR. SENS.	✓														✓
TASK II: COLD VAPOR AA: MERCURY	RAW DATA	✓														✓
	TAB. RESULTS	✓														✓
	TAB. D.L.'s	✓														✓
	QA FORM	✓														✓
	INSTR. SENS.	✓														✓
TASK III: CYANIDE	RAW DATA	✓														✓
	TAB. RESULTS	✓														✓
	TAB. D.L.'s	✓														✓
	QA FORM.	✓														✓
	INSTR. SENS.	✓														✓
~~OTHER (SPECIFY):~~	~~RAW DATA~~															
	~~TAB. RESULTS~~															
	~~TAB. D.L.'s~~															
	~~QA FORM~~															
	~~INSTR. SENS.~~															
OTHER (SPECIFY):	RAW DATA															
	TAB. RUSULTS															
	TAB. D.L.'s															
	QA FORM															
	INSTR. SENS.															

COMMENTS: _____

BLANK ANALYSIS RESULTS

TASK	TYPE	CONC	MATRIX	SAMPLE #	SOURCE OF H_2O	CONTAMINANTS (CONCENTRATION / DETECTION LIMIT
All	field/lw/AQ			MCB363 2389 2403	NUS.	Al (6.8 µg/L/100)#2 34 Ca (25 mg/L/5000)#1 125 Co (2.2 µg/L/50)#2 11.0 Cr (1.9 µg/L/10)#2 9.5 K (680 µg/L/5000)#1 Mg (29 µg/L/5000)#1 145 Na (28 µg/L/5000)#2 Hg (0.13 µg/L/0.2)#2
All	DB/lw/AQ			DB	VERSAR	Ba (1.6 µg/L/100)#2 8 Ca (7 µg/L/5000)#2 Co (1.9 µg/L/50)#2 K (542 µg/L/5000)#2 Na (30 µg/L/5000)#2 150 Fe (13.9 µg/L/100)#2 69.5
All	AR/lw/AQ			AR	VERSAR	Cu (11.7 µg/L/5000)#2 Co (2 µg/L/50)#2 K (901 µg/L/5000)#2 4505

LABORATORY REPORTED FIELD BLANK DATA IS COMPARED WITH THE SAMPLE DATA IN A TABULATION FORM WITHIN SAMPLE ANALYTICAL DATA SUMMARY.

COMMENTS:

(1) RESULT REPORTED BY LABORATORY AND CONFIRMED BY REVIEWER.

(2) RESULT INFERRED FROM RAW DATA

FORM III A
BLANKS

Q.C.REPORT:258

LAB NAME: VERSAR, INC.
DATE 5/ 2/85

CASE NO.: 4248 SAS-1644-C
UNITS: UG/L

COMPOUND	INITIAL CALIB BLANK VALUE	MATRIX HOH CONTINUING CALIB BLANK VALUE 1	2	PREP BLANK 1.	2.
1. ALUMINUM	200.U	200.U	200.U	18.U	
2. ANTIMONY	60.U	60.U	60.U	24.U	
3. ARSENIC	10.U	10.U	10.U	10.U	
4. BARIUM	200.U	200.U	200.U	[1.6]	
5.BERYLLIUM	5.0U	5.0U	5.0U	1.0U	
6. CADMIUM	5.0U	5.0U	5.0U	5.0U	
7. CALCIUM	5000.U	5000.U	5000.U	[10.]	
8. CHROMIUM	10.U	10.U	10.U	3.0U	
9. COBALT	50.U	50.U	50.U	[4.4]	
10. COPPER	25.U	25.U	25.U	2.0U	
11. IRON	100.U	100.U	100.U	3.0U	
12. LEAD	5.0U	5.0U	5.0U	5.0U	
13.MAGNESIUM	5000.U	5000.U	5000.U	[6.0]	
14.MANGANESE	15.U	15.U	15.U	2.0U	
15. MERCURY	0.2U	0.2U	0.2U	0.2U	
16. NICKEL	40.U	40.U	40.U	10.U	
17.POTASSIUM	5000.U	5000.U	5000.U	[416.]	
18. SELENIUM	5.0U	5.0U	5.0U	5.0U	
19. SILVER	10.U	10.U	10.U	3.0U	
20. SODIUM	5000.U	5000.U	5000.U	30.U	
21. THALLIUM	10.U	10.U	10.U	10.U	
22. TIN	40.U	40.U	40.U	13.U	
23. VANADIUM	50.U	50.U	50.U	3.0U	
24. ZINC	20.U	20.U	20.U	3.0U	
25.CYANIDE	5.0U	5.0U	5.0U		

FORM III B
BLANKS

Q.C.REPORT:258

LAB NAME: VERSAR, INC.
DATE 5/ 2/85

CASE NO.: 4248 SAS-1644-C
UNITS: UG/L

MATRIX HOH

COMPOUND	INITIAL CALIB BLANK VALUE	CONTINUING CALIB BLANK VALUE 1	CONTINUING CALIB BLANK VALUE 2	PREP BLANK 1.	PREP BLANK 2.
1. ALUMINUM		200.U			
2. ANTIMONY		60.U			
3. ARSENIC		10.U	10.U		
4. BARIUM		200.U			
5.BERYLLIUM		5.0U			
6. CADMIUM		5.0U			
7. CALCIUM		5000.U			
8. CHROMIUM		10.U			
. COBALT		50.U			
10. COPPER		25.U			
11. IRON		100.U			
12. LEAD		5.0U	5.0U		
13.MAGNESIUM		5000.U			
14.MANGANESE		15.U			
15. MERCURY					
16. NICKEL		40.U			
.POTASSIUM		5000.U			
18. SELENIUM		5.0U	5.0U		
19. SILVER		10.U			
20. SODIUM		5000.U			
21. THALLIUM		10.U	10.U		
22. TIN		40.U			
23. VANADIUM		50.U			
24. ZINC		20.U			
25.CYANIDE		5.0U	5.0U		

Form IIIC

Q. C. Report No. 258

BLANKS

LAB NAME Versar, Inc. CASE NO. 4248 SAS 1644C

DATE 5/3/85 UNITS ug/l

Matrix HOH

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic		10.U	10.U				
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead		5.0U	5.0U	5.0U			
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium		5.0U	5.0U	5.0U			
19. Silver							
20. Sodium							
21. Thallium		10.U	10.U	10.U			
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide							

FORM V
SPIKE SAMPLE RECOVERY

Q.C. REPORT: 258

LAB NAME: VERSAR, INC.
DATE 5/ 2/85

CASE NO.: 4248 SAS-1644-C
EPA SAMPLE NO.: MCB 353
LAB SAMPLE ID NO.: 2379

MATRIX: L HOH

UNITS: UG/L

COMPOUND	CONTROL LIMIT %R	SPIKED SAMPLE RESULT (SSR)	SAMPLE RESULT (SR)	SPIKED ADDED (SA)	%R (1)
1. ALUMINUM	75-125	1990.	18.U	2000.	99.
2. ANTIMONY	75-125	519.	24.U	550.	94.
3. ARSENIC	75-125	17.	10.U	20.	85.
4. BARIUM	75-125	1990.	[44.]	2000.	100.
5. BERYLLIUM	75-125	50.	1.0U	50.	100.
6. CADMIUM	75-125	48.	5.0U	50.	96.
CALCIUM	75-125	113000.	16900.	100000.	96.
8. CHROMIUM	75-125	194.	3.0U	200.	97.
9. COBALT	75-125	481.	4.0U	500.	96.
10. COPPER	75-125	805.	597.	250.	83.
11. IRON	75-125	1500.	560.	1000.	94.
12. LEAD	75-125	22.	5.0U	20.	110.
13. MAGNESIUM	75-125	51,730 0.0U	10400.	50000.	0.0 (83%) R [1]
14. MANGANESE	75-125	206.	[11.]	200.	103.
MERCURY (2)	75-125	1.2	0.2U	1.0	120.
16. NICKEL	75-125	386.	10.U	400.	97.
17. POTASSIUM	75-125	45900.	[2880.]	50000.	92.
18. SELENIUM	75-125	8.8	5.0U	10.	88.
19. SILVER	75-125	19.	3.0U	50.	38. [2] R
20. SODIUM	75-125	123000.	23600.	100000.	100.
21. THALLIUM	75-125	56.	10.U	50.	112.
22. TIN	75-125	196.	13.U	400.	49. [3] R
23. VANADIUM	75-125	483.	3.0U	500.	97.
24. ZINC	75-125	211.	[17.]	200.	106.
25. CYANIDE (3)	75-125	204.	5.0U	200.	102.

(1) %R = [(SSR-SR)/SA] X 100 "R"- OUT OF CONTROL (2) SAMPLE No. MCB355

[1] Lab error actually 83% [2] All spks DL. As higher (LCS) [3] Actual DL is in MCB353 higher. (3) EPA # MCB 353

FORM VI Q.C. REPORT: 258

DUPLICATES

LAB NAME: VERSAR, INC.
DATE: 5/ 2/85

MATRIX: L HOH

CASE NO.: 4248 SAS-1644-C
EPA SAMPLE NO.: MCB 352
LAB SAMPLE ID NO.: 2378
UNITS: UG/L

COMPOUND	CONTROL LIMITS (1)	SAMPLE(S)	DUPLICATE(D)	RPD(2)
1. ALUMINUM		18.U	18.U	NC
2. ANTIMONY		24.U	24.U	NC
3. ARSENIC		10.U	10.U	NC
4. BARIUM		[57.]	[54.]	NC
5. BERYLLIUM		1.0U	1.0U	NC
6. CADMIUM		5.0U	5.0U	NC
7. CALCIUM		26800.	26600.	0.70
8. CHROMIUM		3.0U	3.0U	NC
9. COBALT		4.0U	4.0U	NC
10. COPPER		[5.0]	[5.0]	NC
11. IRON		3.0U	3.0U	NC
12. LEAD		20.	19.	5.1
13. MAGNESIUM		10300.	10300.	0.53
14. MANGANESE		2510.	2490.	0.66
15. MERCURY[3]		0.2U	0.2U	NC
16. NICKEL		10.U	10.U	NC
17. POTASSIUM		7770.	7960.	2.5
18. SELENIUM		5.0U	5.0U	NC
19. SILVER		3.0U	3.0U	NC
20. SODIUM		42800.	42600.	0.47
21. THALLIUM		10.U	10.U	NC
22. TIN		13.U	13.U	NC
23. VANADIUM		3.0U	3.0U	NC
24. ZINC		[15.]	[16.]	NC
25. CYANIDE (4)		5.0U	5.0U	NC

(1) TO BE ADDED AT A LATER DATE
(2) RPD = [(S-D)/((S+D)/2)]X100
NC - NON CALCULABLE RPD DUE TO VALUE(S) LESS THAN CRDL

* - OUT OF CONTROL

3 Sample No. MCB354

(4) EPA # MCB353

Form VIII

Q.C. Report No. 258

STANDARD ADDITION RESULTS

LAB NAME Versar, Inc. CASE NO. 4248SAS-1644-C

DATE 5/3/85 UNITS ug/l

Sample #	Element	0 ADD ABS.	1 ADD CON./ABS[1]	2 ADD CON./ABS.[1]	3 ADD CON./ABS.[1]	FINAL CON.[2]	r*
LCS1A	Pb	58.	10/92	20/103	30/137	96.[A+]	.983
LCS1A	Pb	57	10/97	20/120	30/144	87.[A+]	.990
MCB362	Pb	29.	10/55	20/87	30/109	11.	.999
MCB353	Tl	26	10/54	20/82	40/127	56[B]	.998

OK (Spk)

[1] CON is the concentration added, ABS. is the instrument readout in absorbance or concentration.

[2] Concentration as determined by MSA

*"r" is the correlation coefficient.

+ - correlation coefficient is outside of control window of 0.995.

A-D.F. of 4
B-D.F. of 5
C-D.F. of
D-D.F. of
E-D.F. of

FORM II A Q.C. REPORT: 258

INITIAL AND CONTINUING CALIBRATION VERIFICATION(3)

LAB NAME: VERSAR, INC. CASE NO.: 4248 SAS-1644-C

DATE: 5/ 2/85 SOW NO. 784 UNITS: UG/L

COMPOUND	INITIAL CALIB.(1) TRUE	FOUND	%R	CONTINUING CALIB.(2) TRUE	FOUND	%R	FOUND	%R	
1. ALUMINUM	852.	858.	101.	852.	826.	97.	817.	96.	P
2. ANTIMONY	195.	207.	106.	195.	189.	97.	207.	106.	P
3. ARSENIC	43.	40.	93	43.	41.	95.	39.	91	F
4. BARIUM	437.	411.	94.	437.	410.	94.	410.	94.	P
5. BERYLLIUM	235.	229.	97.	235.	227.	97.	228.	97.	P
6. CADMIUM	243.	241.	99.	243.	237.	98.	234.	96.	P
7. CALCIUM	40600.	38900.	96.	40600.	38800.	95.	38900.	96.	P
8. CHROMIUM	311.	301.	97.	311.	300.	97.	303.	98.	P
9. COBALT	261.	249.	95.	261.	248.	95.	252.	97.	P
10. COPPER	339.	339.	100.	339.	336.	99.	340.	100.	P
11. IRON	796.	779.	98.	796.	749.	94.	753.	95.	P
12. LEAD	45	45.	100.	45.	43.	96.	48.	107.	F
13. MAGNESIUM	8400.	8170.	97.	8400.	8130.	97.	8170.	97.	P
14. MANGANESE	348.	338.	97.	348.	336.	96.	336.	97.	P
15. MERCURY	3.6	3.7	103.	2.5	2.7	108.	2.5	100.	
16. NICKEL	207.	209.	101.	207.	195.	94.	204.	99.	P
17. POTASSIUM	9800.	9080.	93.	9800.	9200.	94.	9230.	94.	P
18. SELENIUM	21.8	22.	101.	21.8	22.	101.	22.	101.	F
19. SILVER	68.	67.	99.	68.	68.	101.	67.	98.	P
20. SODIUM	46500.	47100.	101.	46500.	47000.	101.	47100.	101.	P
21. THALLIUM	50.4	51.	101.	50.4	50.	99.	50.	99.	F
22. TIN	2000.	2130.	106.	2000.	2100.	105.	2140.	107.	P
23. VANADIUM	846.	840.	99.	846.	839.	99.	842.	100.	P
24. ZINC	418.	404.	97.	418.	404.	97.	404.	97.	P
25. CYANIDE	560.	559.	100.	100.	97.	97.	108.	108.	

(1),(2) INITIAL, CONTINUING CALIBRATION SOURCE: EPA, VERSAR ALFA

(3) CONTROL LIMITS: MERCURY AND TIN 80-120; ALL OTHER COMPOUNDS 90-110

all acceptable as verified.

FORM II B Q.C. REPORT: 258

INITIAL AND CONTINUING CALIBRATION VERIFICATION(3)

LAB NAME: VERSAR, INC. CASE NO.: 4248 SAS-1644-C

DATE: 5/ 2/85 SOW NO. 784 UNITS: UG/L

COMPOUND	INITIAL CALIB.(1) TRUE	FOUND	%R	CONTINUING CALIB.(2) TRUE	FOUND	%R	FOUND	%R	
1. ALUMINUM	852.			852.	817.	96.			P
2. ANTIMONY	195.			195.	195.	100.			P
3. ARSENIC				43.	40.	93.	43.	100.	F
4. BARIUM	437.			437.	412.	94.			P
5. BERYLLIUM	235.			235.	228.	97.			P
6. CADMIUM	243.			243.	228.	94.			P
7. CALCIUM	40600.			40600.	38900.	96.			P
8. CHROMIUM	311.			311.	300.	96.			P
9. COBALT	261.			261.	249.	96.			P
10. COPPER	339.			339.	339.	100.			P
11. IRON	796.			796.	750.	94.			P
12. LEAD				45.	47.	104.	45.	100.	F
13. MAGNESIUM	8400.			8400.	8170.	97.			P
14. MANGANESE	348.			348.	338.	97.			P
15. MERCURY									
16. NICKEL	207.			207.	204.	98.			P
POTASSIUM	9800.			9800.	9040.	92.			P
18. SELENIUM				21.8	20.	92.	20.	92.	F
19. SILVER	68.			68.	68.	99.			P
20. SODIUM	46500.			46500.	47200.	101.			P
21. THALLIUM				50.4	48.	95.	47.	93.	F
22. TIN	2000.			2000.	2160.	108.			P
23. VANADIUM	846.			846.	841.	99.			P
24. ZINC	418.			418.	403.	97.			P
25. CYANIDE				100.	105.	105.			

(1),(2) INITIAL, CONTINUING CALIBRATION SOURCE: EPA, VERSAR

(3) CONTROL LIMITS: MERCURY AND TIN 80-120; ALL OTHER COMPOUNDS 90-110

all acceptable + verified.

Form IIC

Q. C. Report No. 258

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Versar, Inc.

CASE NO. 4248 SAS-1644C

SOW NO. 784

DATE

UNITS ug/l

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals[4]:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									
2. Antimony									
3. Arsenic				43.	43.	100.	43.	100.	F
4. Barium									
5. Beryllium									
6. Cadmium									
7. Calcium									
8. Chromium									
9. Cobalt									
10. Copper									
11. Iron									
12. Lead				45.	48.	107.	46.	102.	F
13. Magnesium									
14. Manganese									
15. Mercury									
16. Nickel									
17. Potassium									
18. Selenium				21.8	22.	101.	46.	92	F
19. Silver									
20. Sodium									
21. Thallium				50.4	47.	93.	52.	103.	F
22. Tin									
23. Vanadium									
24. Zinc									
Other:									
Cyanide									

[1] Initial Calibration Source EPA [2] Continuing Calibration Source EPA

[3] Control Limits: Mercury and Tin 80-120; All Other Compounds 90-110

[4] Indicate Analytical Method Used: P - ICP/Flame AA; F - Furnace

Verified.

Form II D

Q. C. Report No. 258

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Versar, Inc.

CASE NO. 4248 SAS-1644-C

SOW NO. 784

DATE 5/3/85

UNITS ug/l

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals[4]:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									
2. Antimony									
3. Arsenic									
4. Barium									
5. Beryllium									
6. Cadmium									
7. Calcium									
8. Chromium									
9. Cobalt									
10. Copper									
11. Iron									
12. Lead				45.	45.	100.			F
13. Magnesium									
14. Manganese									
15. Mercury									
16. Nickel									
17. Potassium									
18. Selenium				50.2	46.	92			F
19. Silver									
20. Sodium									
21. Thallium				50.4	52.	103.			F
22. Tin									
23. Vanadium									
24. Zinc									
Other:									
Cyanide									

[1] Initial Calibration Source EPA [2] Continuing Calibration Source EPA

[3] Control Limits: Mercury and Tin 80-120; All Other Compounds 90-110

[4] Indicate Analytical Method Used: P - ICP/Flame AA; F - Furnace

OK -pr.

FORM IV

Q.C. REPORT: 258

ICP INTERFERENCE CHECK SAMPLE

LAB NAME: VERSAR, INC.
DATE: 5/ 2/85

CASE NO.: 4248 SAS-1644-C
CHECK SAMPLE I.D.: INTER
CHECK SAMPLE SOURCE: EPA
UNITS: UG/L

COMPOUND	CONTROL LIMITS(1) MEAN	2X STD.DEV.	TRUE (2)	INITIAL OBSERVED	%R	FINAL OBSERVED	%R
1. ALUMINUM	423000.	4840.	448000.	454000.	107.	451000.	107.
2. ANTIMONY	NR						
3. ARSENIC	NR						
4. BARIUM	462.	6.	464.	479.	104.	470.	102.
5. BERYLLIUM	443.	4.	412.	443.	100.	437.	99.
6. CADMIUM	876.	10.	840.	860.	98.	867.	99.
7. CALCIUM	443000.	4600.	445000.	451000.	102.	451000.	102.
8. CHROMIUM	666.	8.	705.	678.	102.	671.	101.
9. COBALT	515.	6.	549.	523.	101.	516.	100.
10. COPPER	523.	4.	553.	537.	103.	534.	102.
11. IRON	421000.	4120.	422000.	437000.	104.	436000.	103.
12. LEAD	NR						
13. MAGNESIUM	402000.	1810.	425000.	417000.	104.	417000.	104.
14. MANGANESE	626.	6.	617.	630.	101.	626.	100.
15. MERCURY	NR						
16. NICKEL	868.	2.	890.	894.	103.	874.	101.
17. POTASSIUM	NR						
18. SELENIUM	NR						
19. SILVER	NR						
20. SODIUM	NR						
21. THALLIUM	NR						
22. TIN	NR						
23. VANADIUM	540.	4.	508.	495.	92.	493.	91.
24. ZINC	897.	8.	874.	859.	96.	858.	96.

(1) MEAN BASED ON N = 5 (2) TRUE VALUE OF INTERFERENCE CHECK SAMPLE

FORM VII Q.C. REPORT: 258

LABORATORY CONTROL SAMPLE

LAB NAME: VERSAR, INC. CASE NO.: 4248 SAS-1644-C

DATE: 5/ 2/85 LCS UNITS: UG/L

LAB SAMPLE ID NO.: LCS

MATRIX: UNITS:

COMPOUND	CRDL	ICP IDL	FURNACE IDL	TRUE	FOUND	%R
1. ALUMINUM	200.	18.		1580.	1640.	104.
2. ANTIMONY	60.	24.		203.	200.	99.
3. ARSENIC	10.		4.	53.4	52.	97.
4. BARIUM	200.	1.		781.	811.	104.
5. BERYLLIUM	5.	1.		470.	476.	101.
6. CADMIUM	5.	5.		87.	89.	102.
7. CALCIUM	5000.	5.		10600.	10600.	100.
CHROMIUM	10.	3.		618.	634.	103.
9. COBALT	50.	4.		522.	524.	100.
10. COPPER	25.	2.		678.	705.	104.
11. IRON	100.	3.		1590.	1590.	100.
12. LEAD	5.		2.	85.4	87. S+	102.
13. MAGNESIUM	5000.	1.		3600.	[3700.]	103.
14. MANGANESE	15.	2.		696.	701.	101.
15. MERCURY	0.2	0.2		3.6	3.7	103.
16. NICKEL	40.	10.		414.	421.	102.
17. POTASSIUM	5000.	400.		4200.	[4460.]	106.
18. SELENIUM	5.		2.	21.8	18.	82.
19. SILVER	10.	3.		78.	28.	36.
20. SODIUM	5000.	30.		16400.	17900.	109.
21. THALLIUM	10.		4.	50.	44.	88.
22. TIN	40.	13.		2000.	1660.	83.
23. VANADIUM	50.	3.		1690.	1750.	103.
24. ZINC	20.	3.		836.	849.	102.
25. CYANIDE	10.	5.		560.	628.	112.

D.L Ag higher in all spls.

ORIGINAL
(Red)

APPENDIX D

Environmental Protection Agency. CLP Sample Management Office.
P. O. Box 818. Alexandria, Virginia 22313 703/557-2490

Sample Number
CA 104

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: VERSAR, INC.
Lab Sample ID No: 2487G
Sample Matrix: Low Level Aqueous
Data Release Authorized By:

Case No: 4248
QC Report No: 4248
Contract No: 68-01-6756 ~~68-01-6757~~
Date Sample Received: 4/25/85

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 4-25-85
Date Analyzed: 4-25-85
Conc/Dil Factor: 1.0 pH —
Percent Moisture: 100%
Percent Moisture (Decanted): —

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

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

Data Reporting Qualifiers

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

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

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

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

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

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

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

000016

Environmental Protection Agency, CLP Sample Management Office,
P. O. Box 818, Alexandria, Virginia 22313 703/557-2490

Sample Number
CA 104

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 4/29/85

Date Analyzed: 5/13/85

Conc/Dil Factor: 1 (B=2)

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	10u
108-95-2	Phenol	10u
62-53-3	Aniline	5u
111-44-4	bis(-2-Chloroethyl)Ether	10u
95-57-8	2-Chlorophenol	10u
541-73-1	1, 3-Dichlorobenzene	10u
106-46-7	1, 4-Dichlorobenzene	10u
100-51-6	Benzyl Alcohol	20u
95-50-1	1, 2-Dichlorobenzene	10u
95-48-7	2-Methylphenol	5u
39638-32-9	bis(2-chloroisopropyl)Ether	20u
106-44-5	4-Methylphenol	5u
621-64-7	N-Nitroso-Di-n-Propylamine	10u
67-72-1	Hexachloroethane	10u
98-95-3	Nitrobenzene	10u
78-59-1	Isophorone	10u
88-75-5	2-Nitrophenol	20u
105-67-9	2, 4-Dimethylphenol	10u
65-85-0	Benzoic Acid	100u
111-91-1	bis(-2-Chloroethoxy)Methane	20u
120-83-2	2, 4-Dichlorophenol	10u
120-82-1	1, 2, 4-Trichlorobenzene	10u
91-20-3	Naphthalene	10u
106-47-8	4-Chloroaniline	50u
87-68-3	Hexachlorobutadiene	10u
59-50-7	4-Chloro-3-Methylphenol	10u
91-57-6	2-Methylnaphthalene	20u
77-47-4	Hexachlorocyclopentadiene	10u
88-06-2	2, 4, 6-Trichlorophenol	10u
95-95-4	2, 4, 5-Trichlorophenol	100u
91-58-7	2-Chloronaphthalene	10u
88-74-4	2-Nitroaniline	100u
131-11-3	Dimethyl Phthalate	10u
208-96-8	Acenaphthylene	10u
99-09-2	3-Nitroaniline	100u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10u
51-28-5	2, 4-Dinitrophenol	50u
100-02-7	4-Nitrophenol	50u
132-64-9	Dibenzofuran	10u
121-14-2	2, 4-Dinitrotoluene	20u
606-20-2	2, 6-Dinitrotoluene	20u
84-66-2	Diethylphthalate	10u
7005-72-3	4-Chlorophenyl-phenylether	10u
86-73-7	Fluorene	10u
100-01-6	4-Nitroaniline	100u
534-52-1	4, 6-Dinitro-2-Methylphenol	20u
86-30-6	N-Nitrosodiphenylamine (1)	10u
101-55-3	4-Bromophenyl-phenylether	10u
118-74-1	Hexachlorobenzene	10u
87-86-5	Pentachlorophenol	10u
85-01-8	Phenanthrene	10u
120-12-7	Anthracene	10u
84-74-2	Di-n-Butylphthalate	10u
206-44-0	Fluoranthene	10u
92-87-5	Benzidine	10u
129-00-0	Pyrene	10u
85-68-7	Butylbenzylphthalate	10u
91-94-1	3, 3'-Dichlorobenzidine	20u
56-55-3	Benzo(a)Anthracene	10u
117-81-7	bis(2-Ethylhexyl)Phthalate	10u
218-01-9	Chrysene	20u
117-84-0	Di-n-Octyl Phthalate	10u
205-99-2	Benzo(b)Fluoranthene	20u
207-08-9	Benzo(k)Fluoranthene	20u
50-32-8	Benzo(a)Pyrene	20u
193-39-5	Indeno(1, 2, 3-cd)Pyrene	20u
53-70-3	Dibenz(a, h)Anthracene	20u
191-24-2	Benzo(g, h, i)Perylene	20u

(1)-Cannot be separated from diphenylamine

Environmental Protection Agency, CLP Sample Management Office
P.O. Box , Alexandria, Virginia 22313 703/557-2490

Sample Number
CA104

ORGANICS ANALYSIS DATA SHEET
(Page 3)

Pesticides/PCBs

Concentration: Low Medium (circle one)

Date Extracted/Prepared: 4/27/85

Date Analyzed: 5/9/85

Conc/Dil Factor 1

CAS Number		ug/ml
319-84-6	alpha-BHC	0.05 u
319-85-7	beta-BHC	0.07 u
319-86-8	delta-BHC	0.05 u
58-89-9	gamma-BHC (Lindane)	0.05 u
76-44-8	Heptachlor	0.05 u
309-00-2	Aldrin	0.05 u
1024-57-3	Heptachlor Epoxide	0.05 u
959-98-8	Endosulfan I	0.05 u
60-57-1	Dieldrin	0.10 u
72-55-9	4,4'-DDE	0.10 u
72-20-8	Endrin	0.10 u
33213-65-	Endosulfan II	0.10 u
72-54-8	4,4'-DDD	0.10 u
7421-93-4	Endrin Aldehyde	0.10 u
1031-07-8	Endosulfan Sulfate	0.10 u
50-29-3	4,4'-DDT	0.10 u
72-43-5	Methoxychlor	0.10 u
53494-70-	Endrin Ketone	0.10 u
57-74-9	Chlordane	0.50 u
8001-35-2	Toxaphene	1.00 u
12674-11-	Aroclor-1016	0.50 u
11104-28-	Aroclor-1221	0.10 u
11141-16-	Aroclor-1232	0.50 u
53469-21-	Aroclor-1242	0.50 u
12672-29-	Aroclor-1248	0.50 u
11097-69-	Aroclor-1254	1.00 u
11096-82-	Aroclor-1260	1.00 u

Vi = Volume of extract injected (ul)
Vs = Volume of Water Extracted (ml)
Ws = Weight of sample extracted (g)
Vt = Volume of total extract (ul)

Vs 1000.00 or Ws _____ Vt 10000 Vi 2.00

Environmental Protection Agency, CLP Sample Management Office,
P. O. Box 818, Alexandria, Virginia 22313 703/557-2490

Sample Number
CA 105

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: VERSAR, INC.
Lab Sample ID No: 2488G
Sample Matrix: Low Level Aqueous
Data Release Authorized By:

Case No: 4248
QC Report No: 4248
Contract No: 68-01-6756 ~~68-01-6757~~
Date Sample Received: 4/25/85

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 4-25-85
Date Analyzed: 4-25-85
Conc/Dil Factor: 1.0 pH —
Percent Moisture: 100%
Percent Moisture (Decanted): —

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

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

Data Reporting Qualifiers

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

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

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

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

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

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

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

000053

Environmental Protection Agency, CLP Sample Management Office,
P. O. Box 818, Alexandria, Virginia 22313 703/557-2490

Sample Number
CA 105

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 4/29/85
Date Analyzed: 5/13/85
Conc/Dil Factor: 1 [B=2]

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	10u
108-95-2	Phenol	10u
62-53-3	Aniline	5u
111-44-4	bis(-2-Chloroethyl)Ether	10u
95-57-8	2-Chlorophenol	10u
541-73-1	1, 3-Dichlorobenzene	10u
106-46-7	1, 4-Dichlorobenzene	10u
100-51-6	Benzyl Alcohol	20u
95-50-1	1, 2-Dichlorobenzene	10u
95-48-7	2-Methylphenol	5u
39638-32-9	bis(2-chloroisopropyl)Ether	20u
106-44-5	4-Methylphenol	5u
621-64-7	N-Nitroso-Di-n-Propylamine	10u
67-72-1	Hexachloroethane	10u
98-95-3	Nitrobenzene	10u
78-59-1	Isophorone	10u
88-75-5	2-Nitrophenol	20u
105-67-9	2, 4-Dimethylphenol	10u
65-85-0	Benzoic Acid	100u
111-91-1	bis(-2-Chloroethoxy)Methane	20u
120-83-2	2, 4-Dichlorophenol	10u
120-82-1	1, 2, 4-Trichlorobenzene	10u
91-20-3	Naphthalene	10u
106-47-8	4-Chloroaniline	50u
87-68-3	Hexachlorobutadiene	10u
59-50-7	4-Chloro-3-Methylphenol	10u
91-57-6	2-Methylnaphthalene	20u
77-47-4	Hexachlorocyclopentadiene	10u
88-06-2	2, 4, 6-Trichlorophenol	10u
95-95-4	2, 4, 5-Trichlorophenol	100u
91-58-7	2-Chloronaphthalene	10u
88-74-4	2-Nitroaniline	100u
131-11-3	Dimethyl Phthalate	10u
208-96-8	Acenaphthylene	10u
99-09-2	3-Nitroaniline	100u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10u
51-28-5	2, 4-Dinitrophenol	50u
100-02-7	4-Nitrophenol	50u
132-64-9	Dibenzofuran	10u
121-14-2	2, 4-Dinitrotoluene	20u
606-20-2	2, 6-Dinitrotoluene	20u
84-66-2	Diethylphthalate	10u
7005-72-3	4-Chlorophenyl-phenylether	10u
86-73-7	Fluorene	10u
100-01-6	4-Nitroaniline	100u
534-52-1	4, 6-Dinitro-2-Methylphenol	20u
86-30-6	N-Nitrosodiphenylamine (1)	10u
101-55-3	4-Bromophenyl-phenylether	10u
118-74-1	Hexachlorobenzene	10u
87-86-5	Pentachlorophenol	10u
85-01-8	Phenanthrene	10u
120-12-7	Anthracene	10u
84-74-2	Di-n-Butylphthalate	10u
206-44-0	Fluoranthene	10u
92-87-5	Benzidine	40u
129-00-0	Pyrene	10u
85-68-7	Butylbenzylphthalate	10u
91-94-1	3, 3'-Dichlorobenzidine	20u
56-55-3	Benzo(a)Anthracene	10u
117-81-7	bis(2-Ethylhexyl)Phthalate	10u
218-01-9	Chrysene	20u
117-84-0	Di-n-Octyl Phthalate	10u
205-99-2	Benzo(b)Fluoranthene	20u
207-08-9	Benzo(k)Fluoranthene	20u
50-32-8	Benzo(a)Pyrene	20u
193-39-5	Indeno(1, 2, 3-cd)Pyrene	20u
53-70-3	Dibenz(a, h)Anthracene	20u
191-24-2	Benzo(g, h, i)Perylene	20u

(1)-Cannot be separated from diphenylamine

000054

Environmental Protection Agency, CLP Sample Management Office
P.O. Box , Alexandria, Virginia 22313 703/557-2490

Sample Number
CA105

ORGANICS ANALYSIS DATA SHEET
(Page 3)

Pesticides/PCBs

Concentration: Low | Medium (circle one)

Date Extracted/Prepared: 4/27/85

Date Analyzed: 5/9/85

Conc/Dil Factor 1

CAS Number		ug/ l
319-84-6	alpha-BHC	0.05 u
319-85-7	beta-BHC	0.09 u
319-86-8	delta-BHC	0.05 u
58-89-9	gamma-BHC (Lindane)	0.05 u
76-44-8	Heptachlor	0.05 u
309-00-2	Aldrin	0.05 u
1024-57-3	Heptachlor Epoxide	0.05 u
959-98-8	Endosulfan I	0.05 u
60-57-1	Dieldrin	0.10 u
72-55-9	4,4'-DDE	0.10 u
72-20-8	Endrin	0.10 u
33213-65-	Endosulfan II	0.10 u
72-54-8	4,4'-DDD	0.10 u
7421-93-4	Endrin Aldehyde	0.10 u
1031-07-8	Endosulfan Sulfate	0.10 u
50-29-3	4,4'-DDT	0.10 u
72-43-5	Methoxychlor	0.10 u
53494-70-	Endrin Ketone	0.10 u
57-74-9	Chlordane	0.50 u
8001-35-2	Toxaphene	1.00 u
12674-11-	Aroclor-1016	0.50 u
11104-28-	Aroclor-1221	0.10 u
11141-16-	Aroclor-1232	0.50 u
53469-21-	Aroclor-1242	0.50 u
12672-29-	Aroclor-1248	0.50 u
11097-69-	Aroclor-1254	1.00 u
11096-82-	Aroclor-1260	1.00 u

Vi = Volume of extract injected (ul)
Vs = Volume of Water Extracted (ml)
Ws = Weight of sample extracted (g)
Vt = Volume of total extract (ul)

000055

Vs 1000.00 or Ws _____ Vt 10000 Vi 2.00

Environmental Protection Agency, CLP Sample Management Office,
P. O. Box 818, Alexandria, Virginia 22313 703/557-2490

Sample Number
CA 106

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: VERSAR, INC.
Lab Sample ID No: 2489G
Sample Matrix: Low Level Aqueous
Data Release Authorized By:

Case No: 4248
QC Report No: 4248
Contract No: 68-01-6756 ~~68-01-6757~~
Date Sample Received: 4/25/85.

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 4-25-85
Date Analyzed: 4-25-85
Conc/Dil Factor: 1.0 pH —
Percent Moisture: 100%
Percent Moisture (Decanted): —

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

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

Data Reporting Qualifiers

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

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

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

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

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

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

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

000094

ORIGINAL (Red)

Environmental Protection Agency, CLP Sample Management Office,
P. O. Box 818, Alexandria, Virginia 22313 703/557-2490

Sample Number
CA 106

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 4/29/85

Date Analyzed: 5/14/85

Conc/Dil Factor: 1 (B-2)

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	10u
108-95-2	Phenol	10u
62-53-3	Aniline	5u
111-44-4	bis(-2-Chloroethyl)Ether	10u
95-57-8	2-Chlorophenol	10u
541-73-1	1, 3-Dichlorobenzene	10u
106-46-7	1, 4-Dichlorobenzene	10u
100-51-6	Benzyl Alcohol	20u
95-50-1	1, 2-Dichlorobenzene	10u
95-48-7	2-Methylphenol	5u
39638-32-9	bis(2-chloroisopropyl)Ether	20u
106-44-5	4-Methylphenol	5u
621-64-7	N-Nitroso-Di-n-Propylamine	10u
67-72-1	Hexachloroethane	10u
98-95-3	Nitrobenzene	10u
78-59-1	Isophorone	10u
88-75-5	2-Nitrophenol	20u
105-67-9	2, 4-Dimethylphenol	10u
65-85-0	Benzoic Acid	100u
111-91-1	bis(-2-Chloroethoxy)Methane	20u
120-83-2	2, 4-Dichlorophenol	10u
120-82-1	1, 2, 4-Trichlorobenzene	10u
91-20-3	Naphthalene	10u
106-47-8	4-Chloroaniline	50u
87-68-3	Hexachlorobutadiene	10u
59-50-7	4-Chloro-3-Methylphenol	10u
91-57-6	2-Methylnaphthalene	20u
77-47-4	Hexachlorocyclopentadiene	10u
88-06-2	2, 4, 6-Trichlorophenol	10u
95-95-4	2, 4, 5-Trichlorophenol	100u
91-58-7	2-Chloronaphthalene	10u
88-74-4	2-Nitroaniline	100u
131-11-3	Dimethyl Phthalate	10u
208-96-8	Acenaphthylene	10u
99-09-2	3-Nitroaniline	100u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10u
51-28-5	2, 4-Dinitrophenol	50u
100-02-7	4-Nitrophenol	50u
132-64-9	Dibenzofuran	10u
121-14-2	2, 4-Dinitrotoluene	20u
606-20-2	2, 6-Dinitrotoluene	20u
84-66-2	Diethylphthalate	10u
7005-72-3	4-Chlorophenyl-phenylether	10u
86-73-7	Fluorene	10u
100-01-6	4-Nitroaniline	100u
534-52-1	4, 6-Dinitro-2-Methylphenol	20u
86-30-6	N-Nitrosodiphenylamine (1)	10u
101-55-3	4-Bromophenyl-phenylether	10u
118-74-1	Hexachlorobenzene	10u
87-86-5	Pentachlorophenol	10u
85-01-8	Phenanthrene	10u
120-12-7	Anthracene	10u
84-74-2	Di-n-Butylphthalate	10u
206-44-0	Fluoranthene	10u
92-87-5	Benzidine	10u
129-00-0	Pyrene	10u
85-68-7	Butylbenzylphthalate	10u
91-94-1	3, 3'-Dichlorobenzidine	20u
56-55-3	Benzo(a)Anthracene	10u
117-81-7	bis(2-Ethylhexyl)Phthalate	10u
218-01-9	Chrysene	20u
117-84-0	Di-n-Octyl Phthalate	10u
205-99-2	Benzo(b)Fluoranthene	20u
207-08-9	Benzo(k)Fluoranthene	20u
50-32-8	Benzo(a)Pyrene	20u
193-39-5	Indeno(1, 2, 3-cd)Pyrene	20u
53-70-3	Dibenz(a, h)Anthracene	20u
191-24-2	Benzo(g, h, i)Perylene	20u

(1)-Cannot be separated from diphenylamine

Environmental Protection Agency, CLP Sample Management Office
P.O. Box , Alexandria, Virginia 22313 703/557-2490

Sample Number
CA105

ORGANICS ANALYSIS DATA SHEET
(Page 3)

Pesticides/PCBs

Concentration: Low | Medium (circle one)

Date Extracted/Prepared: 4/27/85

Date Analyzed: 5/9/85

Conc/Dil Factor 1

CAS Number		ug/ l
319-84-6	alpha-BHC	0.05 u
319-85-7	beta-BHC	0.07 u
319-86-8	delta-BHC	0.05 u
58-89-9	gamma-BHC (Lindane)	0.05 u
76-44-8	Heptachlor	0.05 u
309-00-2	Aldrin	0.05 u
1024-57-3	Heptachlor Epoxide	0.05 u
959-98-8	Endosulfan I	0.05 u
60-57-1	Dieldrin	0.10 u
72-55-9	4,4'-DDE	0.10 u
72-20-8	Endrin	0.10 u
33213-65-	Endosulfan II	0.10 u
72-54-8	4,4'-DDD	0.10 u
7421-93-4	Endrin Aldehyde	0.10 u
1031-07-8	Endosulfan Sulfate	0.10 u
50-29-3	4,4'-DDT	0.10 u
72-43-5	Methoxychlor	0.10 u
53494-70-	Endrin Ketone	0.10 u
57-74-9	Chlordane	0.50 u
8001-35-2	Toxaphene	1.00 u
12674-11-	Aroclor-1016	0.50 u
11104-28-	Aroclor-1221	0.10 u
11141-16-	Aroclor-1232	0.50 u
53469-21-	Aroclor-1242	0.50 u
12672-29-	Aroclor-1248	0.50 u
11097-69-	Aroclor-1254	1.00 u
11096-82-	Aroclor-1260	1.00 u

Vi = Volume of extract injected (ul)
Vs = Volume of Water Extracted (ml)
Ws = Weight of sample extracted (g)
Vt = Volume of total extract (ul)

Vs 1000.00 or Ws _____ Vt 10000 Vi 2.00

Environmental Protection Agency, CLP Sample Management Office,
P. O. Box 818, Alexandria, Virginia 22313 703/557-2490

Sample Number
CA 108

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: VERSAR, INC.
Lab Sample ID No: 2490G
Sample Matrix: Low Level Aqueous
Data Release Authorized By:

Case No: 4248
QC Report No: 4248
Contract No: 68-01-6756 ~~68-01-6757~~
Date Sample Received: 4/25/85

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 4-25-85
Date Analyzed: 4-25-85
Conc/Dil Factor: 1.0 pH —
Percent Moisture: 100%
Percent Moisture (Decanted): —

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

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

Data Reporting Qualifiers

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

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

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

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

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

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

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

000131

ORIGINAL (Red)

Environmental Protection Agency, CLP Sample Management Office,
P. O. Box 818, Alexandria, Virginia 22313 703/557-2490

Sample Number
CA 108

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 4/29/85
Date Analyzed: 5/4/85
Conc/Dil Factor: 1 (B=2)

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	10u
108-95-2	Phenol	10u
62-53-3	Aniline	5u
111-44-4	bis(-2-Chloroethyl)Ether	10u
95-57-8	2-Chlorophenol	10u
541-73-1	1, 3-Dichlorobenzene	10u
106-46-7	1, 4-Dichlorobenzene	10u
100-51-6	Benzyl Alcohol	20u
95-50-1	1, 2-Dichlorobenzene	10u
95-48-7	2-Methylphenol	5u
39638-32-9	bis(2-chloroisopropyl)Ether	20u
106-44-5	4-Methylphenol	5u
621-64-7	N-Nitroso-Di-n-Propylamine	10u
67-72-1	Hexachloroethane	10u
98-95-3	Nitrobenzene	10u
78-59-1	Isophorone	10u
88-75-5	2-Nitrophenol	20u
105-67-9	2, 4-Dimethylphenol	10u
65-85-0	Benzoic Acid	100u
111-91-1	bis(-2-Chloroethoxy)Methane	20u
120-83-2	2, 4-Dichlorophenol	10u
120-82-1	1, 2, 4-Trichlorobenzene	10u
91-20-3	Naphthalene	10u
106-47-8	4-Chloroaniline	50u
87-68-3	Hexachlorobutadiene	10u
59-50-7	4-Chloro-3-Methylphenol	10u
91-57-6	2-Methylnaphthalene	20u
77-47-4	Hexachlorocyclopentadiene	10u
88-06-2	2, 4, 6-Trichlorophenol	10u
95-95-4	2, 4, 5-Trichlorophenol	100u
91-58-7	2-Chloronaphthalene	10u
88-74-4	2-Nitroaniline	100u
131-11-3	Dimethyl Phthalate	10u
208-96-8	Acenaphthylene	10u
99-09-2	3-Nitroaniline	100u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10u
51-28-5	2, 4-Dinitrophenol	50u
100-02-7	4-Nitrophenol	50u
132-64-9	Dibenzofuran	10u
121-14-2	2, 4-Dinitrotoluene	20u
606-20-2	2, 6-Dinitrotoluene	20u
84-66-2	Diethylphthalate	10u
7005-72-3	4-Chlorophenyl-phenylether	10u
86-73-7	Fluorene	10u
100-01-6	4-Nitroaniline	100u
534-52-1	4, 6-Dinitro-2-Methylphenol	20u
86-30-6	N-Nitrosodiphenylamine (1)	10u
101-55-3	4-Bromophenyl-phenylether	10u
118-74-1	Hexachlorobenzene	10u
87-86-5	Pentachlorophenol	10u
85-01-8	Phenanthrene	10u
120-12-7	Anthracene	10u
84-74-2	Di-n-Butylphthalate	10u
206-44-0	Fluoranthene	10u
92-87-5	Benzidine	20u
129-00-0	Pyrene	10u
85-68-7	Butylbenzylphthalate	10u
91-94-1	3, 3'-Dichlorobenzidine	20u
56-55-3	Benzo(a)Anthracene	10u
117-81-7	bis(2-Ethylhexyl)Phthalate	10u
218-01-9	Chrysene	20u
117-84-0	Di-n-Octyl Phthalate	10u
205-99-2	Benzo(b)Fluoranthene	20u
207-08-9	Benzo(k)Fluoranthene	20u
50-32-8	Benzo(a)Pyrene	20u
193-39-5	Indeno(1, 2, 3-cd)Pyrene	20u
53-70-3	Dibenz(a, h)Anthracene	20u
191-24-2	Benzo(g, h, i)Perylene	20u

(1)-Cannot be separated from diphenylamine

Environmental Protection Agency, CLP Sample Management Office
P.O. Box , Alexandria, Virginia 22313 703/557-2490

Sample Number
CA108

ORGANICS ANALYSIS DATA SHEET
(Page 3)

Pesticides/PCBs

Concentration: Low Medium (circle one)

Date Extracted/Prepared: 4/27/85

Date Analyzed: 5/9/85

Conc/Dil Factor 1

CAS Number		ug/ l
319-84-6	alpha-BHC	0.05 u
319-85-7	beta-BHC	0.08 u
319-86-8	delta-BHC	0.05 u
58-89-9	gamma-BHC (Lindane)	0.05 u
76-44-8	Heptachlor	0.05 u
309-00-2	Aldrin	0.05 u
1024-57-3	Heptachlor Epoxide	0.05 u
959-98-8	Endosulfan I	0.05 u
60-57-1	Dieldrin	0.10 u
72-55-9	4,4'-DDE	0.10 u
72-20-8	Endrin	0.10 u
33213-65-	Endosulfan II	0.10 u
72-54-8	4,4'-DDD	0.10 u
7421-93-4	Endrin Aldehyde	0.10 u
1031-07-8	Endosulfan Sulfate	0.10 u
50-29-3	4,4'-DDT	0.10 u
72-43-5	Methoxychlor	0.10 u
53494-70-	Endrin Ketone	0.10 u
57-74-9	Chlordane	0.50 u
8001-35-2	Toxaphene	1.00 u
12674-11-	Aroclor-1016	0.50 u
11104-28-	Aroclor-1221	0.10 u
11141-16-	Aroclor-1232	0.50 u
53469-21-	Aroclor-1242	0.50 u
12672-29-	Aroclor-1248	0.50 u
11097-69-	Aroclor-1254	1.00 u
11096-82-	Aroclor-1260	1.00 u

Vi = Volume of extract injected (ul)
Vs = Volume of Water Extracted (ml)
Ws = Weight of sample extracted (g)
Vt = Volume of total extract (ul)

Vs 1000.00 or Ws _____ Vt 10000 Vi 2.00

Environmental Protection Agency. CLP Sample Management Office.
P. O. Box 818. Alexandria, Virginia 22313 703/557-2490

Sample Number
CA 109

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: VERSAR, INC.
Lab Sample ID No: 2491 G
Sample Matrix: Low Level Aqueous
Data Release Authorized By: [illegible]

Case No: 4248
QC Report No: 4248
Contract No: 68-01-6756 ~~68-01-6757~~
Date Sample Received: 4/25/85

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 4-25-85
Date Analyzed: 4-25-85
Conc/Dil Factor: 1.0 pH —
Percent Moisture: 100%
Percent Moisture (Decanted): —

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

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

Data Reporting Qualifiers

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

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

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

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

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

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

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

Environmental Protection Agency, CLP Sample Management Office,
P. O. Box 818, Alexandria, Virginia 22313 703/557-2490

Sample Number
CA 109

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 4/29/85

Date Analyzed: 5/13/85

Conc/Dil Factor: 1 (B-2)

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	10u
108-95-2	Phenol	10u
62-53-3	Aniline	5u
111-44-4	bis(-2-Chloroethyl)Ether	10u
95-57-8	2-Chlorophenol	10u
541-73-1	1, 3-Dichlorobenzene	10u
106-46-7	1, 4-Dichlorobenzene	10u
100-51-6	Benzyl Alcohol	20u
95-50-1	1, 2-Dichlorobenzene	10u
95-48-7	2-Methylphenol	5u
39638-32-9	bis(2-chloroisopropyl)Ether	20u
106-44-5	4-Methylphenol	5u
621-64-7	N-Nitroso-Di-n-Propylamine	10u
67-72-1	Hexachloroethane	10u
98-95-3	Nitrobenzene	10u
78-59-1	Isophorone	10u
88-75-5	2-Nitrophenol	20u
105-67-9	2, 4-Dimethylphenol	10u
65-85-0	Benzoic Acid	100u
111-91-1	bis(-2-Chloroethoxy)Methane	20u
120-83-2	2, 4-Dichlorophenol	10u
120-82-1	1, 2, 4-Trichlorobenzene	10u
91-20-3	Naphthalene	10u
106-47-8	4-Chloroaniline	50u
87-68-3	Hexachlorobutadiene	10u
59-50-7	4-Chloro-3-Methylphenol	10u
91-57-6	2-Methylnaphthalene	20u
77-47-4	Hexachlorocyclopentadiene	10u
88-06-2	2, 4, 6-Trichlorophenol	10u
95-95-4	2, 4, 5-Trichlorophenol	100u
91-58-7	2-Chloronaphthalene	10u
88-74-4	2-Nitroaniline	100u
131-11-3	Dimethyl Phthalate	10u
208-96-8	Acenaphthylene	10u
99-09-2	3-Nitroaniline	100u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10u
51-28-5	2, 4-Dinitrophenol	50u
100-02-7	4-Nitrophenol	50u
132-64-9	Dibenzofuran	10u
121-14-2	2, 4-Dinitrotoluene	20u
606-20-2	2, 6-Dinitrotoluene	20u
84-66-2	Diethylphthalate	10u
7005-72-3	4-Chlorophenyl-phenylether	10u
86-73-7	Fluorene	10u
100-01-6	4-Nitroaniline	100u
534-52-1	4, 6-Dinitro-2-Methylphenol	20u
86-30-6	N-Nitrosodiphenylamine (1)	10u
101-55-3	4-Bromophenyl-phenylether	10u
118-74-1	Hexachlorobenzene	10u
87-86-5	Pentachlorophenol	10u
85-01-8	Phenanthrene	10u
120-12-7	Anthracene	10u
84-74-2	Di-n-Butylphthalate	10u
206-44-0	Fluoranthene	10u
92-87-5	Benzidine	10u
129-00-0	Pyrene	10u
85-68-7	Butylbenzylphthalate	10u
91-94-1	3, 3'-Dichlorobenzidine	20u
56-55-3	Benzo(a)Anthracene	10u
117-81-7	bis(2-Ethylhexyl)Phthalate	10u
218-01-9	Chrysene	20u
117-84-0	Di-n-Octyl Phthalate	10u
205-99-2	Benzo(b)Fluoranthene	20u
207-08-9	Benzo(k)Fluoranthene	20u
50-32-8	Benzo(a)Pyrene	20u
193-39-5	Indeno(1, 2, 3-cd)Pyrene	20u
53-70-3	Dibenz(a, h)Anthracene	20u
191-24-2	Benzo(g, h, i)Perylene	20u

(1)-Cannot be separated from diphenylamine

Environmental Protection Agency, CLP Sample Management Office
P.O. Box , Alexandria, Virginia 22313 703/557-2490

Sample Number
CA109

ORGANICS ANALYSIS DATA SHEET
(Page 3)

Pesticides/PCBs

Concentration: Low Medium (circle one)

Date Extracted/Prepared: 4/27/85

Date Analyzed: 5/9/85

Conc/Dil Factor 1

CAS Number		ug/ l
319-84-6	alpha-BHC	0.05 u
319-85-7	beta-BHC	0.10 u
319-86-8	delta-BHC	0.05 u
58-89-9	gamma-BHC (Lindane)	0.05 u
76-44-8	Heptachlor	0.05 u
309-00-2	Aldrin	0.05 u
1024-57-3	Heptachlor Epoxide	0.05 u
959-98-8	Endosulfan I	0.05 u
60-57-1	Dieldrin	0.10 u
72-55-9	4,4'-DDE	0.10 u
72-20-8	Endrin	0.10 u
33213-65-	Endosulfan II	0.10 u
72-54-8	4,4'-DDD	0.10 u
7421-93-4	Endrin Aldehyde	0.10 u
1031-07-8	Endosulfan Sulfate	0.10 u
50-29-3	4,4'-DDT	0.10 u
72-43-5	Methoxychlor	0.10 u
53494-70-	Endrin Ketone	0.10 u
57-74-9	Chlordane	0.50 u
8001-35-2	Toxaphene	1.00 u
12674-11-	Aroclor-1016	0.50 u
11104-28-	Aroclor-1221	0.10 u
11141-16-	Aroclor-1232	0.50 u
53469-21-	Aroclor-1242	0.50 u
12672-29-	Aroclor-1248	0.50 u
11097-69-	Aroclor-1254	1.00 u
11096-82-	Aroclor-1260	1.00 u

Vi = Volume of extract injected (ul)
Vs = Volume of Water Extracted (ml)
Ws = Weight of sample extracted (g)
Vt = Volume of total extract (ul)

Vs 1000.00 or Ws _____ Vt 10000 Vi 2.00

Environmental Protection Agency, CLP Sample Management Office,
P. O. Box 818, Alexandria, Virginia 22313 703/557-2490

Sample Number
CA 110

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: VERSAR, INC.
Lab Sample ID No: 2492G
Sample Matrix: Low Level Aqueous
Data Release Authorized By:

Case No: 4248
QC Report No: 4248
Contract No: 68-01-6756 ~~68-01-6757~~
Date Sample Received: 4/25/85

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 4-25-85
Date Analyzed: 4-25-85
Conc/Dil Factor: 1.0 pH —
Percent Moisture: 100%
Percent Moisture (Decanted): —

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

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

Data Reporting Qualifiers

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

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

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

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

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

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

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

ORIGINAL (Red)

Environmental Protection Agency, CLP Sample Management Office,
P. O. Box 818, Alexandria, Virginia 22313 703/557-2490

Sample Number
CA 110

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 4/29/85
Date Analyzed: 5/13/85
Conc/Dil Factor: 1 [B=2]

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	10u
108-95-2	Phenol	10u
62-53-3	Aniline	5u
111-44-4	bis(-2-Chloroethyl)Ether	10u
95-57-8	2-Chlorophenol	10u
541-73-1	1, 3-Dichlorobenzene	10u
106-46-7	1, 4-Dichlorobenzene	10u
100-51-6	Benzyl Alcohol	20u
95-50-1	1, 2-Dichlorobenzene	10u
95-48-7	2-Methylphenol	5u
39638-32-9	bis(2-chloroisopropyl)Ether	20u
106-44-5	4-Methylphenol	5u
621-64-7	N-Nitroso-Di-n-Propylamine	10u
67-72-1	Hexachloroethane	10u
98-95-3	Nitrobenzene	10u
78-59-1	Isophorone	10u
88-75-5	2-Nitrophenol	20u
105-67-9	2, 4-Dimethylphenol	10u
65-85-0	Benzoic Acid	100u
111-91-1	bis(-2-Chloroethoxy)Methane	20u
120-83-2	2, 4-Dichlorophenol	10u
120-82-1	1, 2, 4-Trichlorobenzene	10u
91-20-3	Naphthalene	10u
106-47-8	4-Chloroaniline	50u
87-68-3	Hexachlorobutadiene	10u
59-50-7	4-Chloro-3-Methylphenol	10u
91-57-6	2-Methylnaphthalene	20u
77-47-4	Hexachlorocyclopentadiene	10u
88-06-2	2, 4, 6-Trichlorophenol	10u
95-95-4	2, 4, 5-Trichlorophenol	100u
91-58-7	2-Chloronaphthalene	10u
88-74-4	2-Nitroaniline	100u
131-11-3	Dimethyl Phthalate	10u
208-96-8	Acenaphthylene	10u
99-09-2	3-Nitroaniline	100u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10u
51-28-5	2, 4-Dinitrophenol	50u
100-02-7	4-Nitrophenol	50u
132-64-9	Dibenzofuran	10u
121-14-2	2, 4-Dinitrotoluene	20u
606-20-2	2, 6-Dinitrotoluene	20u
84-66-2	Diethylphthalate	10u
7005-72-3	4-Chlorophenyl-phenylether	10u
86-73-7	Fluorene	10u
100-01-6	4-Nitroaniline	100u
534-52-1	4, 6-Dinitro-2-Methylphenol	20u
86-30-6	N-Nitrosodiphenylamine (1)	10u
101-55-3	4-Bromophenyl-phenylether	10u
118-74-1	Hexachlorobenzene	10u
87-86-5	Pentachlorophenol	10u
85-01-8	Phenanthrene	10u
120-12-7	Anthracene	10u
84-74-2	Di-n-Butylphthalate	10u
206-44-0	Fluoranthene	10u
92-87-5	Benzidine	10u
129-00-0	Pyrene	10u
85-68-7	Butylbenzylphthalate	10u
91-94-1	3, 3'-Dichlorobenzidine	20u
56-55-3	Benzo(a)Anthracene	10u
117-81-7	bis(2-Ethylhexyl)Phthalate	10u
218-01-9	Chrysene	20u
117-84-0	Di-n-Octyl Phthalate	10u
205-99-2	Benzo(b)Fluoranthene	20u
207-08-9	Benzo(k)Fluoranthene	20u
50-32-8	Benzo(a)Pyrene	20u
193-39-5	Indeno(1, 2, 3-cd)Pyrene	20u
53-70-3	Dibenz(a, h)Anthracene	20u
191-24-2	Benzo(g, h, i)Perylene	20u

(1)-Cannot be separated from diphenylamine

Environmental Protection Agency, CLP Sample Management Office
P.O. Box , Alexandria, Virginia 22313 703/557-2490

Sample Number
CA110

ORGANICS ANALYSIS DATA SHEET
(Page 3)

Pesticides/PCBs

Concentration: Low Medium (circle one)

Date Extracted/Prepared: 4/27/85

Date Analyzed: 5/9/85

Conc/Dil Factor 1

CAS Number		ug/ l
319-84-6	alpha-BHC	0.05 u
319-85-7	beta-BHC	0.09 u
319-86-8	delta-BHC	0.05 u
58-89-9	gamma-BHC (Lindane)	0.05 u
76-44-8	Heptachlor	0.05 u
309-00-2	Aldrin	0.05 u
1024-57-3	Heptachlor Epoxide	0.05 u
959-98-8	Endosulfan I	0.05 u
60-57-1	Dieldrin	0.10 u
72-55-9	4,4'-DDE	0.10 u
72-20-8	Endrin	0.10 u
33213-65-	Endosulfan II	0.10 u
72-54-8	4,4'-DDD	0.10 u
7421-93-4	Endrin Aldehyde	0.10 u
1031-07-8	Endosulfan Sulfate	0.10 u
50-29-3	4,4'-DDT	0.10 u
72-43-5	Methoxychlor	0.10 u
53494-70-	Endrin Ketone	0.10 u
57-74-9	Chlordane	0.50 u
8001-35-2	Toxaphene	1.00 u
12674-11-	Aroclor-1016	0.50 u
11104-28-	Aroclor-1221	0.10 u
11141-16-	Aroclor-1232	0.50 u
53469-21-	Aroclor-1242	0.50 u
12672-29-	Aroclor-1248	0.50 u
11097-69-	Aroclor-1254	1.00 u
11096-82-	Aroclor-1260	1.00 u

Vi = Volume of extract injected (ul)
Vs = Volume of Water Extracted (ml)
Ws = Weight of sample extracted (g)
Vt = Volume of total extract (ul)

Vs 1000.00 or Ws _____ Vt 10000 Vi 2.00

Environmental Protection Agency, CLP Sample Management Office,
P. O. Box 818, Alexandria, Virginia 22313 703/557-2490

Sample Number
CA 110

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 Volatiles Detected	VOA	—	—
2. 2597-49-1	Ethenyl cyclobutane	BNA	305	10 J
3. 127-18-4	Tetrachloroethene	↓	472	59 B, J
4. 21964-49-8	1,13-Tetradecadiene	↓	1794	34 J
5.				
6.				
7.				
8.				
9.				
10.				
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26.				
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28.				
29.				
30.				

Environmental Protection Agency, CLP Sample Management Office,
P. O. Box 818, Alexandria, Virginia 22313 703/557-2490

Sample Number
CA 177

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: VERSAR, INC.
Lab Sample ID No: 24936
Sample Matrix: Low Level Aqueous
Data Release Authorized By:

Case No: 4248
QC Report No: 4248
Contract No: 68-01-6756 ~~68-01-6757~~
Date Sample Received: 4/25/85

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 4-25-85
Date Analyzed: 4-25-85
Conc/Dil Factor: 1.0 pH —
Percent Moisture: 100%
Percent Moisture (Decanted): —

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

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

Data Reporting Qualifiers

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

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

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

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

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

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

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

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Environmental Protection Agency, CLP Sample Management Office,
P. O. Box 818, Alexandria, Virginia 22313 703/557-2490

Sample Number
CA 177

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 4/29/85

Date Analyzed: 5/13/85

Conc/Dil Factor: 1 (B=2)

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	10u
108-95-2	Phenol	10u
62-53-3	Aniline	5u
111-44-4	bis(-2-Chloroethyl)Ether	10u
95-57-8	2-Chlorophenol	10u
541-73-1	1, 3-Dichlorobenzene	10u
106-46-7	1, 4-Dichlorobenzene	10u
100-51-6	Benzyl Alcohol	20u
95-50-1	1, 2-Dichlorobenzene	10u
95-48-7	2-Methylphenol	5u
39638-32-9	bis(2-chloroisopropyl)Ether	20u
106-44-5	4-Methylphenol	5u
621-64-7	N-Nitroso-Di-n-Propylamine	10u
67-72-1	Hexachloroethane	10u
98-95-3	Nitrobenzene	10u
78-59-1	Isophorone	10u
88-75-5	2-Nitrophenol	20u
105-67-9	2, 4-Dimethylphenol	10u
65-85-0	Benzoic Acid	100u
111-91-1	bis(-2-Chloroethoxy)Methane	20u
120-83-2	2, 4-Dichlorophenol	10u
120-82-1	1, 2, 4-Trichlorobenzene	10u
91-20-3	Naphthalene	10u
106-47-8	4-Chloroaniline	50u
87-68-3	Hexachlorobutadiene	10u
59-50-7	4-Chloro-3-Methylphenol	10u
91-57-6	2-Methylnaphthalene	20u
77-47-4	Hexachlorocyclopentadiene	10u
88-06-2	2, 4, 6-Trichlorophenol	10u
95-95-4	2, 4, 5-Trichlorophenol	100u
91-58-7	2-Chloronaphthalene	10u
88-74-4	2-Nitroaniline	100u
131-11-3	Dimethyl Phthalate	10u
208-96-8	Acenaphthylene	10u
99-09-2	3-Nitroaniline	100u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10u
51-28-5	2, 4-Dinitrophenol	50u
100-02-7	4-Nitrophenol	50u
132-64-9	Dibenzofuran	10u
121-14-2	2, 4-Dinitrotoluene	20u
606-20-2	2, 6-Dinitrotoluene	20u
84-66-2	Diethylphthalate	10u
7005-72-3	4-Chlorophenyl-phenylether	10u
86-73-7	Fluorene	10u
100-01-6	4-Nitroaniline	100u
534-52-1	4, 6-Dinitro-2-Methylphenol	20u
86-30-6	N-Nitrosodiphenylamine (1)	10u
101-55-3	4-Bromophenyl-phenylether	10u
118-74-1	Hexachlorobenzene	10u
87-86-5	Pentachlorophenol	10u
85-01-8	Phenanthrene	10u
120-12-7	Anthracene	10u
84-74-2	Di-n-Butylphthalate	10u
206-44-0	Fluoranthene	10u
92-87-5	Benzidine	10u
129-00-0	Pyrene	10u
85-68-7	Butylbenzylphthalate	10u
91-94-1	3, 3'-Dichlorobenzidine	20u
56-55-3	Benzo(a)Anthracene	10u
117-81-7	bis(2-Ethylhexyl)Phthalate	10u
218-01-9	Chrysene	20u
117-84-0	Di-n-Octyl Phthalate	10u
205-99-2	Benzo(b)Fluoranthene	20u
207-08-9	Benzo(k)Fluoranthene	20u
50-32-8	Benzo(a)Pyrene	20u
193-39-5	Indeno(1, 2, 3-cd)Pyrene	20u
53-70-3	Dibenz(a, h)Anthracene	20u
191-24-2	Benzo(g, h, i)Perylene	20u

(1)-Cannot be separated from diphenylamine

Environmental Protection Agency, CLP Sample Management Office
P.O. Box , Alexandria, Virginia 22313 703/557-2490

Sample Number
CA177

ORGANICS ANALYSIS DATA SHEET
(Page 3)

Pesticides/PCBs

Concentration: Low Medium (circle one)

Date Extracted/Prepared: 4/27/85

Date Analyzed: 5/9/85

Conc/Dil Factor 1

CAS Number		ug/ l
319-84-6	alpha-BHC	0.05 u
319-85-7	beta-BHC	0.07 u
319-86-8	delta-BHC	0.05 u
58-89-9	gamma-BHC (Lindane)	0.05 u
76-44-8	Heptachlor	0.05 u
309-00-2	Aldrin	0.05 u
1024-57-3	Heptachlor Epoxide	0.05 u
959-98-8	Endosulfan I	0.05 u
60-57-1	Dieldrin	0.10 u
72-55-9	4,4'-DDE	0.10 u
72-20-8	Endrin	0.10 u
33213-65-	Endosulfan II	0.10 u
72-54-8	4,4'-DDD	0.10 u
7421-93-4	Endrin Aldehyde	0.10 u
1031-07-8	Endosulfan Sulfate	0.10 u
50-29-3	4,4'-DDT	0.10 u
72-43-5	Methoxychlor	0.10 u
53494-70-	Endrin Ketone	0.10 u
57-74-9	Chlordane	0.50 u
8001-35-2	Toxaphene	1.00 u
12674-11-	Aroclor-1016	0.50 u
11104-28-	Aroclor-1221	0.10 u
11141-16-	Aroclor-1232	0.50 u
53469-21-	Aroclor-1242	0.50 u
12672-29-	Aroclor-1248	0.50 u
11097-69-	Aroclor-1254	1.00 u
11096-82-	Aroclor-1260	1.00 u

Vi = Volume of extract injected (ul)
Vs = Volume of Water Extracted (ml)
Ws = Weight of sample extracted (g)
Vt = Volume of total extract (ul)

Vs 1000.00 or Ws _____ Vt 10000 Vi 2.00

Environmental Protection Agency, CLP Sample Management Office,
P. O. Box 818, Alexandria, Virginia 22313 703/557-2490

Sample Number
CA 179

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: VERSAR, INC.
Lab Sample ID No: 24946
Sample Matrix: Low Level Aqueous
Data Release Authorized By:

Case No: 4248
QC Report No: 4248
Contract No: 68-01-6756 ~~68-01-6757~~
Date Sample Received: 4/25/85

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 4-26-85
Date Analyzed: 4-26-85
Conc/Dil Factor: 1.0 pH —
Percent Moisture: 100 %
Percent Moisture (Decanted): —

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

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

Data Reporting Qualifiers

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

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

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

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

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

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

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

000272

Environmental Protection Agency, CLP Sample Management Office,
P. O. Box 818, Alexandria, Virginia 22313 703/557-2490

Sample Number
CA 179

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 4/29/85

Date Analyzed: 5/13/85

Conc/Dil Factor: 1 (B=2)

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	10u
108-95-2	Phenol	10u
62-53-3	Aniline	5u
111-44-4	bis(-2-Chloroethyl)Ether	10u
95-57-8	2-Chlorophenol	10u
541-73-1	1, 3-Dichlorobenzene	10u
106-46-7	1, 4-Dichlorobenzene	10u
100-51-6	Benzyl Alcohol	20u
95-50-1	1, 2-Dichlorobenzene	10u
95-48-7	2-Methylphenol	5u
39638-32-9	bis(2-chloroisopropyl)Ether	20u
106-44-5	4-Methylphenol	5u
621-64-7	N-Nitroso-Di-n-Propylamine	10u
67-72-1	Hexachloroethane	10u
98-95-3	Nitrobenzene	10u
78-59-1	Isophorone	10u
88-75-5	2-Nitrophenol	20u
105-67-9	2, 4-Dimethylphenol	10u
65-85-0	Benzoic Acid	100u
111-91-1	bis(-2-Chloroethoxy)Methane	20u
120-83-2	2, 4-Dichlorophenol	10u
120-82-1	1, 2, 4-Trichlorobenzene	10u
91-20-3	Naphthalene	10u
106-47-8	4-Chloroaniline	50u
87-68-3	Hexachlorobutadiene	10u
59-50-7	4-Chloro-3-Methylphenol	10u
91-57-6	2-Methylnaphthalene	20u
77-47-4	Hexachlorocyclopentadiene	10u
88-06-2	2, 4, 6-Trichlorophenol	10u
95-95-4	2, 4, 5-Trichlorophenol	100u
91-58-7	2-Chloronaphthalene	10u
88-74-4	2-Nitroaniline	100u
131-11-3	Dimethyl Phthalate	10u
208-96-8	Acenaphthylene	10u
99-09-2	3-Nitroaniline	100u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10u
51-28-5	2, 4-Dinitrophenol	50u
100-02-7	4-Nitrophenol	50u
132-64-9	Dibenzofuran	10u
121-14-2	2, 4-Dinitrotoluene	20u
606-20-2	2, 6-Dinitrotoluene	20u
84-66-2	Diethylphthalate	10u
7005-72-3	4-Chlorophenyl-phenylether	10u
86-73-7	Fluorene	10u
100-01-6	4-Nitroaniline	100u
534-52-1	4, 6-Dinitro-2-Methylphenol	20u
86-30-6	N-Nitrosodiphenylamine (1)	10u
101-55-3	4-Bromophenyl-phenylether	10u
118-74-1	Hexachlorobenzene	10u
87-86-5	Pentachlorophenol	10u
85-01-8	Phenanthrene	10u
120-12-7	Anthracene	10u
84-74-2	Di-n-Butylphthalate	10u
206-44-0	Fluoranthene	10u
92-87-5	Benzidine	10u
129-00-0	Pyrene	10u
85-68-7	Butylbenzylphthalate	10u
91-94-1	3, 3'-Dichlorobenzidine	20u
56-55-3	Benzo(a)Anthracene	10u
117-81-7	bis(2-Ethylhexyl)Phthalate	10u
218-01-9	Chrysene	20u
117-84-0	Di-n-Octyl Phthalate	10u
205-99-2	Benzo(b)Fluoranthene	20u
207-08-9	Benzo(k)Fluoranthene	20u
50-32-8	Benzo(a)Pyrene	20u
193-39-5	Indeno(1, 2, 3-cd)Pyrene	20u
53-70-3	Dibenz(a, h)Anthracene	20u
191-24-2	Benzo(g, h, i)Perylene	20u

(1)-Cannot be separated from diphenylamine

Environmental Protection Agency, CLP Sample Management Office
P.O. Box , Alexandria, Virginia 22313 703/557-2490

Sample Number
CA179

ORGANICS ANALYSIS DATA SHEET
(Page 3)

Pesticides/PCBs

Concentration: Low | Medium (circle one)

Date Extracted/Prepared: 4/27/85

Date Analyzed: 5/9/85

Conc/Dil Factor 1

CAS Number		ug/ l
319-84-6	alpha-BHC	0.05 u
319-85-7	beta-BHC	0.11 u
319-86-8	delta-BHC	0.12 u
58-89-9	gamma-BHC (Lindane)	0.05 u
76-44-8	Heptachlor	0.05 u
309-00-2	Aldrin	0.05 u
1024-57-3	Heptachlor Epoxide	0.05 u
959-98-8	Endosulfan I	0.05 u
60-57-1	Dieldrin	0.10 u
72-55-9	4,4'-DDE	0.10 u
72-20-8	Endrin	0.10 u
33213-65-	Endosulfan II	0.10 u
72-54-8	4,4'-DDD	0.10 u
7421-93-4	Endrin Aldehyde	0.10 u
1031-07-8	Endosulfan Sulfate	0.10 u
50-29-3	4,4'-DDT	0.10 u
72-43-5	Methoxychlor	0.10 u
53494-70-	Endrin Ketone	0.10 u
57-74-9	Chlordane	0.50 u
8001-35-2	Toxaphene	1.00 u
12674-11-	Aroclor-1016	0.50 u
11104-28-	Aroclor-1221	0.10 u
11141-16-	Aroclor-1232	0.50 u
53469-21-	Aroclor-1242	0.50 u
12672-29-	Aroclor-1248	0.50 u
11097-69-	Aroclor-1254	1.00 u
11096-82-	Aroclor-1260	1.00 u

Vi = Volume of extract injected (ul)
Vs = Volume of Water Extracted (ml)
Ws = Weight of sample extracted (g)
Vt = Volume of total extract (ul)

Vs 1000.00 or Ws _____ Vt 10000 Vi 2.00

ORIGINAL (Red)

Environmental Protection Agency, CLP Sample Management Office,
P. O. Box 818, Alexandria, Virginia 22313 703/557-2490

Sample Number
CA 179

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (µg/l or ug/kg)
1. —	No Volatiles Detected	VOA	—	—
2. 2597-49-1	Ethenylcyclobutane	BNA	305	11 J
3. 127-18-4	Tetrachloroethene	↓	473	56 B, J
4. 21964-49-8	1,13-Tetradecadiene	↓	1795	34 B, J
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
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14.				
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26.				
27.				
28.				
29.				
30.				

Environmental Protection Agency, CLP Sample Management Office,
P. O. Box 818, Alexandria, Virginia 22313 703/557-2490

Sample Number
CA 181

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: VERSAR, INC.
Case No: 4248
Lab Sample ID No: 2495G
QC Report No: 4248
Sample Matrix: Low Level Aqueous
Contract No: 68-01-6756 ~~68-01-6757~~
Data Release Authorized By:
Date Sample Received: 4/25/85

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 4-26-85
Date Analyzed: 4-26-85
Conc/Dil Factor: 1.0 pH –
Percent Moisture: 100%
Percent Moisture (Decanted): –

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

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

Data Reporting Qualifiers

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

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

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

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

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

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

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

000306

Environmental Protection Agency, CLP Sample Management Office,
P. O. Box 818, Alexandria, Virginia 22313 703/557-2490

Sample Number
CA 181

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 4/29/85

Date Analyzed: 5/13/85

Conc/Dil Factor: 1 (B=2)

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	10u
108-95-2	Phenol	10u
62-53-3	Aniline	5u
111-44-4	bis(-2-Chloroethyl)Ether	10u
95-57-8	2-Chlorophenol	10u
541-73-1	1, 3-Dichlorobenzene	10u
106-46-7	1, 4-Dichlorobenzene	10u
100-51-6	Benzyl Alcohol	20u
95-50-1	1, 2-Dichlorobenzene	10u
95-48-7	2-Methylphenol	5u
39638-32-9	bis(2-chloroisopropyl)Ether	20u
106-44-5	4-Methylphenol	5u
621-64-7	N-Nitroso-Di-n-Propylamine	10u
67-72-1	Hexachloroethane	10u
98-95-3	Nitrobenzene	10u
78-59-1	Isophorone	10u
88-75-5	2-Nitrophenol	20u
105-67-9	2, 4-Dimethylphenol	10u
65-85-0	Benzoic Acid	100u
111-91-1	bis(-2-Chloroethoxy)Methane	20u
120-83-2	2, 4-Dichlorophenol	10u
120-82-1	1, 2, 4-Trichlorobenzene	10u
91-20-3	Naphthalene	10u
106-47-8	4-Chloroaniline	50u
87-68-3	Hexachlorobutadiene	10u
59-50-7	4-Chloro-3-Methylphenol	10u
91-57-6	2-Methylnaphthalene	20u
77-47-4	Hexachlorocyclopentadiene	10u
88-06-2	2, 4, 6-Trichlorophenol	10u
95-95-4	2, 4, 5-Trichlorophenol	100u
91-58-7	2-Chloronaphthalene	10u
88-74-4	2-Nitroaniline	100u
131-11-3	Dimethyl Phthalate	10u
208-96-8	Acenaphthylene	10u
99-09-2	3-Nitroaniline	100u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10u
51-28-5	2, 4-Dinitrophenol	50u
100-02-7	4-Nitrophenol	50u
132-64-9	Dibenzofuran	10u
121-14-2	2, 4-Dinitrotoluene	20u
606-20-2	2, 6-Dinitrotoluene	20u
84-66-2	Diethylphthalate	10u
7005-72-3	4-Chlorophenyl-phenylether	10u
86-73-7	Fluorene	10u
100-01-6	4-Nitroaniline	100u
534-52-1	4, 6-Dinitro-2-Methylphenol	20u
86-30-6	N-Nitrosodiphenylamine (1)	10u
101-55-3	4-Bromophenyl-phenylether	10u
118-74-1	Hexachlorobenzene	10u
87-86-5	Pentachlorophenol	10u
85-01-8	Phenanthrene	10u
120-12-7	Anthracene	10u
84-74-2	Di-n-Butylphthalate	10u
206-44-0	Fluoranthene	10u
92-87-5	Benzidine	10u
129-00-0	Pyrene	10u
85-68-7	Butylbenzylphthalate	10u
91-94-1	3, 3'-Dichlorobenzidine	20u
56-55-3	Benzo(a)Anthracene	10u
117-81-7	bis(2-Ethylhexyl)Phthalate	10u
218-01-9	Chrysene	20u
117-84-0	Di-n-Octyl Phthalate	10u
205-99-2	Benzo(b)Fluoranthene	20u
207-08-9	Benzo(k)Fluoranthene	20u
50-32-8	Benzo(a)Pyrene	20u
193-39-5	Indeno(1, 2, 3-cd)Pyrene	20u
53-70-3	Dibenz(a, h)Anthracene	20u
191-24-2	Benzo(g, h, i)Perylene	20u

(1)-Cannot be separated from diphenylamine

Environmental Protection Agency, CLP Sample Management Office
P.O. Box , Alexandria, Virginia 22313 703/557-2490

Sample Number
CA181

ORGANICS ANALYSIS DATA SHEET
(Page 3)

Pesticides/PCBs

Concentration: Low | Medium (circle one)

Date Extracted/Prepared: 4/27/85

Date Analyzed: 5/9/85

Conc/Dil Factor 1

CAS Number		ug/l
319-84-6	alpha-BHC	0.05 u
319-85-7	beta-BHC	0.05 u
319-86-8	delta-BHC	0.05 u
58-89-9	gamma-BHC (Lindane)	0.05 u
76-44-8	Heptachlor	0.05 u
309-00-2	Aldrin	0.05 u
1024-57-3	Heptachlor Epoxide	0.05 u
959-98-8	Endosulfan I	0.05 u
60-57-1	Dieldrin	0.10 u
72-55-9	4,4'-DDE	0.10 u
72-20-8	Endrin	0.10 u
33213-65-	Endosulfan II	0.10 u
72-54-8	4,4'-DDD	0.10 u
7421-93-4	Endrin Aldehyde	0.10 u
1031-07-8	Endosulfan Sulfate	0.10 u
50-29-3	4,4'-DDT	0.10 u
72-43-5	Methoxychlor	0.10 u
53494-70-	Endrin Ketone	0.10 u
57-74-9	Chlordane	0.50 u
8001-35-2	Toxaphene	1.00 u
12674-11-	Aroclor-1016	0.50 u
11104-28-	Aroclor-1221	0.10 u
11141-16-	Aroclor-1232	0.50 u
53469-21-	Aroclor-1242	0.50 u
12672-29-	Aroclor-1248	0.50 u
11097-69-	Aroclor-1254	1.00 u
11096-82-	Aroclor-1260	1.00 u

Vi = Volume of extract injected (ul)
Vs = Volume of Water Extracted (ml)
Ws = Weight of sample extracted (g)
Vt = Volume of total extract (ul)

000308

Vs 1000.00 or Ws Vt 10000 Vi 2.00

Environmental Protection Agency. CLP Sample Management Office.
P. O. Box 818. Alexandria, Virginia 22313 703/557-2490

Sample Number
CA 183

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: VERSAR, INC.
Case No: 4248
Lab Sample ID No: 24966
QC Report No: 4248
Sample Matrix: Low Level Aqueous
Contract No: 68-01-6756 ~~68-01-6757~~
Data Release Authorized By:
Date Sample Received: 4/25/85

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 4-26-85
Date Analyzed: 4-26-85
Conc/Dil Factor: 1-0 pH
Percent Moisture: 100%
Percent Moisture (Decanted):

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

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

Data Reporting Qualifiers

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

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

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

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

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

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

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

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