OMC

OUTBOARD MARINE CORPORATION

US EPA RECORDS CENTER REGION 5
396636

100 Sea Horse Drive
Waukegan, Illinois 60085-2195
Phone 847/689-6200

December 8, 1999

VIA UPS 2nd DAY AIR

Mr. Michael E. Bellot
Remedial Project Manager/
Waukegan Harbor Site On-Scene Coordinator
U.S. Environmental Protection Agency
77 W. Jackson Blvd. SR-6J
Chicago, IL 60604-3590

RE: **Waukegan Harbor Superfund Site**
United States of America and the People of the State of Illinois
vs. The Outboard Marine Corporation
Civil Action # 88 C 8571
Transmittal of Quarterly Report

Dear Mr. Bellot:

As called for in the subject consent decree, OMC herein submits a quarterly report for the period ending November 30, 1999. If you have any questions, please feel free to call me at (847) 689-7046.

Sincerely,

Michael W. Rehor

Michael W. Rehor, P.E.
Manager, Environmental Services

MR/lms
Enclosure
cc: See Distribution List (attached)

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QUARTERLY PROGRESS REPORT

SEPTEMBER 1, 1999
THROUGH
NOVEMBER 30, 1999

WAUKEGAN HARBOR REMEDIAL ACTION

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QUARTERLY PROGRESS REPORT
SEPTEMBER 1, 1999 THROUGH NOVEMBER 30, 1999
WAUKEGAN HARBOR REMEDIAL ACTION

This report presents a quarterly report for the above-specified time period for the Waukegan Harbor Superfund Site pursuant to the Consent Decree for remedial action.

WORK COMPLETED; NEW DATA AND TEST RESULTS

Attachment 1 contains copies of Discharge Monitoring Reports for NPDES Permit Number IL0002267 for July, August, and September 1999.

Tables 1a, 1b, and 1c summarize the analytical results received during the quarter for samples collected from the Category 5 water treatment systems. Attachment 2 contains copies of the analytical reports received for the treatment plant samples.

Tables 2a, 2b, and 2c summarize the Category 5 Water Treatment Plant operational data for the Slip 3, East, and West Containment Cells, respectively. Tables 3, 4, and 5 present water level measurements collected this quarter for the Slip 3, East, and West Containment Cells, respectively. An inward hydraulic gradient was maintained at the containment cells throughout the quarter. Table 6 presents water level measurements for the Temporary Designated Soil Stockpile (PNA Cell).

Attachment 3a presents the analytical review report, including a summary table of the results and the validated analytical data. Attachment 3b contains copies of the field logs for the groundwater-sampling event.

During the quarter, the following additional activities occurred:

1. Semi-annual groundwater monitoring was conducted during the first week in October.

2. During the week of November 8, 1999, all three water treatment systems were shut down and winterized.

3. OMC has received information from its consultant regarding various flow-metering technologies to replace the R-1 (Slip 3 containment cell) meter. We are evaluating the information, and a determination of the best meter for this application will be made during the winter shutdown period.

PLANS FOR THE NEXT QUARTER

1. Bi-weekly water level measurements will be taken throughout the next quarter to insure inward hydraulic gradient during the shutdown period.

2. The water treatment systems will be started up sometime in the spring, date dependent on water level data and weather conditions.

LEGAL ISSUES

There have been no legal developments during the past quarter.

TABLES

TABLE 1a

THIRD QUARTER 1999
CATEGORY 5 WATER TREATMENT
PCB ANALYTICAL RESULTS
SLIP 3 CONTAINMENT CELL
WAUKEGAN HARBOR REMEDIAL ACTION

Sample I.D.	Sample Results: PCB (ug/l) 9/15/99	Sample Results: PCB (ug/l) 10/11/99	Sample Results: PCB (ug/l) 10/13/99	Sample Results: PCB (ug/l) 11/10/99
T5-E	ND	ND	ND	ND
T5-I	9.2	11	11	1.2
T5-ID	--	--	--	--
T5-LC	ND	ND	ND	ND

Legend:

T5	Category 5 Water Treatment System
E	System Effluent
LC	Lead Carbon Effluent
I	Influent
D	Duplicate
B	Blank
--	Not Collected
ND	Not detected/below laboratory detection limit
R	Recovery well and number (Influent samples for the treatment systems may be collected either from a combined influent port or for individual recovery wells.)

TABLE 1b

THIRD QUARTER 1999
CATEGORY 5 WATER TREATMENT
PCB ANALYTICAL RESULTS
EAST CONTAINMENT CELL
WAUKEGAN HARBOR REMEDIAL ACTION

Sample I.D.	Sample Results: PCB (ug/l) 9/15/99	Sample Results: PCB (ug/l) 10/11/99	Sample Results: PCB (ug/l) 10/13/99	Sample Results: PCB (ug/l) 11/10/99
T5-E	ND	ND	ND	ND
T5-I	ND	ND	ND	ND
T5-ID	--	--	--	--
T5-LC	ND	ND	ND	ND

Legend:

T5	Category 5 Water Treatment System
E	System Effluent
LC	Lead Carbon Effluent
I	Influent
D	Duplicate
B	Blank
--	Not Collected
ND	Not detected/below laboratory detection limit
R	Recovery well and number (Influent samples for the treatment systems may be collected either from a combined influent port or for individual recovery wells.)

TABLE 1c

THIRD QUARTER 1999
CATEGORY 5 WATER TREATMENT
PCB ANALYTICAL RESULTS
WEST CONTAINMENT CELL
WAUKEGAN HARBOR REMEDIAL ACTION

Sample I.D.	Sample Results: PCB (ug/l) 9/15/99	Sample Results: PCB (ug/l) 10/11/99	Sample Results: PCB (ug/l) 10/13/99	Sample Results: PCB (ug/l) 11/10/99
T5-E	ND	ND	ND	ND
T5-I	1.8	.79	.88	.86
T5-ID	--	--	--	--
T5-LC	ND	ND	ND	ND
T5-ED	--	--		--

Legend:

T5	Category 5 Water Treatment System
E	System Effluent
LC	Lead Carbon Effluent
I	Influent
D	Duplicate
B	Blank
--	Not Collected
ND	Not detected/below laboratory detection limit
R	Recovery well and number (Influent samples for the treatment systems may be collected either from a combined influent port or for individual recovery wells.)

Michael W. Rehor

Discharge Monitoring Data Certified by
Michael W. Rehor
OMC Project Manager

Table 2a
CATEGORY 5 WATER TREATMENT PLANT
OPERATIONAL DATA
SLIP 3 CONTAINMENT CELL

DATE	IME	TOTALIZER R-1 (W)	TOTALIZER R-2 (E)	GALLONS PER PERIOD	GALLONS TOTAL	COMMENTS
09/01/1999	30 AM	365,148	484,047	-4,831	81,855	System OK. Flow meters not working.
09/08/1999	45 AM	365,148	484,056	9	81,864	System OK. Flow meters not working.
09/15/1999	00 PM	365,148	484,077	21	81,885	System OK. Flow meters not working.
09/22/1999	45 AM	365,150	485,089	1,014	82,899	System OK. Flow meters not working.
09/29/1999	30 AM	367,690	485,091	2,542	85,441	System OK. Flow meters not working.
10/05/1999	30 AM	367,690	485,108	17	85,458	System OK. Flow meters not working.
10/13/1999	00 AM	367,690	485,108	0	85,458	System OK. Flow meters not working.
10/21/1999	30 PM	367,690	485,108	0	85,458	System OK. Flow meters not working.
10/27/1999	30 PM	367,690	485,108	0	85,458	System OK. Flow meters not working.
11/03/1999	00 AM	369,043	485,108	1,353	86,811	System OK. Flow meters not working.
11/10/1999	45 AM	369,245	485,108	202	87,013	System OK. Flow meters not working.
11/17/1999	00 AM	369,855	485,108	610	87,623	System is shut down for winter; heater is on "high."

Table 2b
CATEGORY 5 WATER TREATMENT PLANT
OPERATIONAL DATA
EAST CONTAINMENT CELL

DATE	ME	TOTALIZER R-3	TOTALIZER R-4	GALLONS PER PERIOD	GALLONS TOTAL	COMMENTS
09/01/1999	1 0 AM	1,805,137	2,149,106	31,274	791,175	System OK.
09/08/1999	0 PM	1,817,012	2,157,900	20,669	811,844	System OK.
09/15/1999	1 0 AM	1,843,478	2,170,206	38,772	850,616	System OK.
09/22/1999	1 5 AM	1,868,978	2,187,788	43,082	893,698	System OK.
09/29/1999	1 0 AM	1,886,588	2,197,423	27,245	920,943	System OK.
10/05/1999	0 PM	1,907,048	2,212,711	35,748	956,691	System OK.
10/13/1999	5 PM	1,935,002	2,220,777	36,020	992,711	System OK.
10/21/1999	5 PM	1,972,301	2,235,011	51,533	1,044,244	System OK.
10/27/1999	1 0 AM	1,984,549	2,235,030	12,267	1,056,511	System OK.
11/03/1999	1 0 AM	2,003,980	2,235,030	19,431	1,075,942	System OK.
11/10/1999	1 0 PM	2,037,444	2,235,030	33,464	1,109,406	System OK. Changed bag filter.
11/17/1999	1 0 AM	2,056,994	2,235,030	19,550	1,128,956	System is shut down for winter; heater is on "high."

Table 2c
CATEGORY 5 WATER TREATMENT PLANT
OPERATIONAL DATA
WEST CONTAINMENT CELL

DATE	TIME	TOTALIZER R-5	TOTALIZER R-6	GALLONS PER PERIOD	GALLONS TOTAL	COMMENTS
09/01/1999	10:00 AM	1,937,766	2,822,054	34,027	873,128	System OK. Pump R-5 off.
09/08/1999	1:30 PM	1,939,952	2,848,234	28,366	901,494	System OK. Pump R-5 repaired and operating.
09/15/1999	11:00 AM	1,940,113	2,862,566	14,493	915,987	System OK.
09/22/1999	11:30 AM	1,949,627	2,873,135	20,083	936,070	System OK.
09/29/1999	11:45 AM	1,971,888	2,901,443	50,569	986,639	System OK.
10/05/1999	2:30 PM	2,009,177	2,935,920	71,766	1,058,405	System OK.
10/13/1999	1:30 PM	2,042,373	2,970,312	67,588	1,125,993	System OK.
10/21/1999	1:45 PM	2,082,528	3,006,474	76,317	1,202,310	System OK. Changed filter bag.
10/27/1999	9:30 AM	2,101,476	3,012,313	24,787	1,227,097	System OK.
11/03/1999	10:00 AM	2,102,110	3,038,777	27,098	1,254,195	System OK. Changed filter bag.
11/10/1999	11:00 AM	2,102,216	3,082,679	44,008	1,298,203	System OK.
11/17/1999	9:45 AM	2,102,321	3,089,477	6,903	1,305,106	System shut down for winter; heater on "high."

Table 3

Slip 3 Containment Ground Water Data
Waukegan Harbor Remedial Action

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	586.49	587.59	587.52	587.94	585.97	588.61	582.3	587.54	590.6	591.17
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
09/01/99	DEPTH	4 93	16.14	5 53	18.7	4.11	19.38	2.2	19.2	24.86	23.84
9:30 AM	ELEV.	581 56	571.45	581.94	569.24	581.86	569.23	580.1	571.82	565.74	567.33
	DIFF.	10 11		12 7		12 63		8 28			
09/08/99	DEPTH	5.1	16 22	5.65	18.72	4.26	19.45	2.33	19.17	25.2	24.74
10:45 AM	ELEV.	581.39	571.37	581.82	569 22	581.71	569.16	579.97	571.85	565.4	566.43
	DIFF.	10 02		12.6		12.55		8.12			
09/15/99	DEPTH	5 25	16.36	5.78	18.81	4.31	19.55	2.45	19 08	25.23	25 98
1:00 PM	ELEV.	581.24	571 23	581.69	569.13	581.66	569.06	579.85	571 94	565.37	565.19
	DIFF.	10 01		12.56		12.6		7.91			
09/22/99	DEPTH	5.02	16.37	4.95	18.8	4.1	19.57	2.35	19 05	25.1	26
10:45 AM	ELEV.	581.47	571.22	582.52	569.14	581.87	569.04	579.95	571.97	565.5	565.17
	DIFF.	10 25		13.38		12.83		7.98			
09/29/99	DEPTH	4 35	16.48	4 91	18.92	3.5	19.58	1.92	19.11	25.42	23.47
10:30 AM	ELEV.	582.14	571.11	582.56	569.02	582.47	569.03	580.38	571.91	565.18	567.7
	DIFF.	11.03		13.54		13.44		8 47			
10/05/99	DEPTH	4 41	16.48	5 1	18.88	3.73	18.64	2.1	19 07	25.08	24.54
9:00 AM	ELEV.	582.08	571.11	582.37	569.06	582.24	569.97	580.2	571.95	565.52	566.63
	DIFF.	10 97		13.31		12.27		8 25			
10/13/99	DEPTH	4 72	16 55	5 4	18 92	4	19.64	2.31	19 08	25	24 97
11:00 AM	ELEV.	581.77	571 04	582.07	569 02	581.97	568 97	579 99	571 94	565.6	566.2
	DIFF.	10 73		13 05		13		8.05			
10/21/99	DEPTH	4 9	16 61	5.48	18.9	4.1	19.61	2.5	19.15	25.02	24.58
12:30 PM	ELEV.	581 59	570.98	581.99	569.04	581.87	569	579.8	571.87	565.58	566 59
	DIFF.	10 61		12.95		12.87		7.93			
10/27/99	DEPTH	5.07	16.81	5.63	19.14	4.18	19 87	2.54	19 5	25.2	25.15
12:30 PM	ELEV.	581.42	570.78	581 84	568 8	581.79	568.74	579.76	571 52	565.4	566 02
	DIFF.	10 64		13.04		13.05		8.24			
11/03/99	DEPTH	5.11	16.77	5.5	19.05	4.21	19.75	2.57	19 41	25.5	24.09
9:00 AM	ELEV.	581 38	570.82	581.97	568 89	581.76	568.86	579.73	571 61	565.1	567.08
	DIFF.	10 56		13.08		12.9		8.12			
11/10/99	DEPTH	5.22	16.82	5.7	19.13	4.26	19.91	2.72	19 35	25.44	24.17
9:45 AM	ELEV.	581.27	570 77	581.77	568.81	581.71	568.7	579.58	571.67	565.16	567
	DIFF.	10.5		12.96		13.01		7.91			
11/17/99	DEPTH	5.37	17.04	6 1	19.53	4.4	19.99	2.73	19 42	25.6	24.33
11:00 AM	ELEV.	581.12	570.55	581.37	568.41	581.57	568.62	579.57	571.6	565	566.84
	DIFF.	10 57		12.96		12.95		7.97			

Table 4

East Containment Ground Water Data
Waukegan Harbor Remedial Action

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.8	587.9	588.31	587.96	586.71	587.08	586.67	587.86	591.93	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
09/01/99	DEPTH	8.15	14.25	7.2	14.02	6.02	12.92	6.6	14.15	22.78	20.06
10:30 AM	ELEV.	580.65	573 65	581.11	573 94	580 69	574 16	580.07	573 71	569.15	571.92
	DIFF.	7		7.17		6 53		6.36			
09/08/99	DEPTH	8.41	15.18	7.35	14	6.05	12.83	6.82	14.1	25.55	19.66
2:00 PM	ELEV.	580.39	572.72	580.96	573.96	580 66	574 25	579 85	573.76	566 38	572.32
	DIFF.	7.67		7		6.41		6.09			
09/15/99	DEPTH	8.52	14.4	7.41	14.33	6.12	13.11	6.92	14.31	27.61	20
10:30 AM	ELEV.	580.28	573.5	580.9	573 63	580 59	573 97	579 75	573.55	564.32	571.93
	DIFF.	6.78		7.27		6.62		6.2			
09/22/99	DEPTH	8.4	14.15	7.25	14	6 04	12 85	6.9	14.09	25.17	19.3
11:45 AM	ELEV.	580.4	573.75	581.06	573.96	580.67	574 23	579.77	573.77	566.76	572.63
	DIFF.	6 65		7.1		6.44		6			
09/29/99	DEPTH	7.32	14.3	6.86	14.2	5 82	13 05	6.44	15 22	29.55	20.79
11:00 AM	ELEV.	581.48	573.6	581.45	573.76	580 89	574.03	580 23	572.64	562.38	571.19
	DIFF.	7.88		7.69		6.86		7 59			
10/05/99	DEPTH	7.35	14.4	6 8	14.21	5 82	13.1	6 57	14.27	29.4	20 15
1:30 PM	ELEV.	581 45	573.5	581.51	573.75	580.89	573 98	580.1	573.59	562.53	571.83
	DIFF.	7.95		7.76		6.91		6 51			
10/13/99	DEPTH	7.85	14.4	7 02	14 31	5 96	13.18	6 85	14 3	29.37	19.76
2:00 PM	ELEV.	580.95	573.5	581.29	573.65	580.75	573 9	579 82	573.56	562.56	572.22
	DIFF.	7.45		7.64		6.85		6.26			
10/21/99	DEPTH	8.08	15.3	7.17	14.16	6	13 09	6.91	14 15	30.24	19.53
2:15 PM	ELEV.	580.72	572.6	581.14	573 8	580.71	573 99	579 76	573.71	561.69	572.45
	DIFF.	8.12		7.34		6.72		6 05			
10/27/99	DEPTH	8.2	14.76	7.34	14 82	6.17	13 68	7.05	14.7	28	19.98
10:00 AM	ELEV.	580.6	573.14	580.97	573.14	580.54	573.4	579.62	573.16	563.93	572
	DIFF.	7.46		7.83		7.14		6.46			
11/03/99	DEPTH	8.32	14.38	7.1	14.52	5.95	13.35	7.17	14.37	29.94	20.86
11:00 AM	ELEV.	580.48	573.52	581.21	573.44	580.76	573.73	579.5	573.49	561.99	571.12
	DIFF.	6.96		7.77		7.03		6.01			
11/10/99	DEPTH	8.48	14.75	7.55	14.58	5.97	13 4	7.2	14.54	28.57	21.65
12:30 PM	ELEV.	580.32	573.15	580.76	573.38	580.74	573.68	579.47	573.32	563.36	570.33
	DIFF.	7.17		7.38		7.06		6.15			
11/17/99	DEPTH	8.51	14.82	8.2	14.66	6.35	13.51	7.33	14.64	28.87	21.9
10:30 AM	ELEV.	580 29	573.08	580.11	573.3	580.36	573.57	579.34	573.22	563.06	570.08
	DIFF.	7.21		6.81		6.79		6.12			

Table 5

West Containment Ground Water Data
Waukegan Harbor Remedial Action

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.81	588.01	587.51	587.52	589.26	588.12	587.13	587.8	603.83	601.56
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
09/01/99	DEPTH	6	13.02	5 23	12.4	7.15	13.01	6.17	11.02	28 81	28.85
10:00 AM	ELEV.	581 81	574.99	582 28	575.12	582.11	575.11	580 96	576.78	575 02	572.71
	DIFF.	6 82		7 16		7		4 18			
09/08/99	DEPTH	6 1	12.76	5 41	12.47	7.38	12.95	6.26	10.9	29.5	28 32
1:00 PM	ELEV.	581.71	575.25	582.1	575.05	581.88	575.17	580.87	576.9	574.33	573.24
	DIFF.	6 46		7.05		6.71		3 97			
09/15/99	DEPTH	6.18	12.77	5 5	12.51	7.52	13.28	6.31	10.96	30.31	28.23
11:00 AM	ELEV.	581.63	575.24	582.01	575.01	581.74	574.84	580.82	576.84	573.52	573.33
	DIFF.	6.39		7		6.9		3.98			
09/22/99	DEPTH	6.05	12.72	5 37	12.52	7.37	13 34	6.18	10.92	30.14	27.45
11:30 AM	ELEV.	581.76	575.29	582.14	575	581.89	574.78	580.95	576.88	573.69	574.1
	DIFF.	6 47		7.14		7 11		4.07			
09/29/99	DEPTH	5 45	13	4 68	12.7	6.55	13.63	5 44	10.95	30.73	29.77
11:30 AM	ELEV.	582 36	575.01	582.83	574.82	582.71	574.49	581.69	576.85	573.1	571.79
	DIFF.	7 35		8 01		8.22		4.84			
10/05/99	DEPTH	5.6	13.05	5 82	12.65	6 55	13.76	5.72	11	32.45	31.97
3:00 PM	ELEV.	582 21	574.96	581 69	574.87	582.71	574.36	581 41	576.8	571.38	569.59
	DIFF.	7.25		6.82		8.35		4.61			
10/13/99	DEPTH	5.73	13 18	4 96	12.86	6 67	14	5 95	11.1	31.54	31.24
1:00 PM	ELEV.	582.08	574 83	582 55	574.66	582.59	574 12	581.18	576 7	572.29	570.32
	DIFF.	7.25		7.89		8.47		4.48			
10/21/99	DEPTH	5 88	13.26	5	13.02	6 9	14 12	6.05	11.18	31.52	30.34
1:30 PM	ELEV.	581 93	574 75	582.51	574.5	582.36	574	581 08	576.62	572.31	571.22
	DIFF.	7.18		8 01		8 36		4.46			
10/27/99	DEPTH	6 02	13.75	5.15	13.48	7.1	14.45	6 23	11.6	30.6	32.7
9:30 AM	ELEV.	581 79	574.26	582.36	574.04	582.16	573.67	580.9	576.2	573.23	568.86
	DIFF.	7 53		8 32		8.49		4.7			
11/03/99	DEPTH	6 04	13.68	5.17	13.28	7.1	14	6.3	11.54	29.74	31.9
10:00 AM	ELEV.	581.77	574.33	582.34	574.24	582.16	574 12	580.83	576.26	574.09	569 66
	DIFF.	7.44		8 1		8.04		4.57			
11/10/99	DEPTH	6.1	13.88	5 3	13.3	7.2	14.55	6.42	11.79	31.8	32.7
10:30 AM	ELEV.	581.71	574.13	582.21	574.22	582.06	573.57	580.71	576 01	572.03	568.86
	DIFF.	7.58		7.99		8.49		4.7			
11/17/99	DEPTH	6.09	13.81	5.27	13.31	7.14	14.41	6.4	11.59	31.07	31.99
9:45 AM	ELEV.	581.72	574 2	582.24	574.21	582.12	573.71	580.73	576.21	572.76	569.57
	DIFF.	7.52		8.03		8.41		4.52			

TABLE 6

TEMPORARY DESIGNATED SOIL STOCKPILE (PNA Cell)
WATER LEVEL READINGS
WAUKEGAN HARBOR REMEDIAL ACTION

READING DATE	READING ABOVE SUMP (in inches)	ELEVATION (feet MSL)	ACTION LEVEL (feet MSL)	DIFFERENCE (in inches)	COMMENTS/ INSPECTION NOTES
09/23/99	35.00	585.73	586.14	-4.96	Cover OK
10/14/99	34.50	585.69	586.14	-5.46	Cover OK
11/19/99	34.50	585.69	586.14	-5.46	Cover OK

ATTACHMENT 1

DISCHARGE MONITORING REPORTS

OMC

BOARD MARINE CORPORATION

Sea Horse
Waukegan, Illinois 60085
Phone 847 689-5200

August 23, 1999

Mr. Dan Ray
Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance Section
1021 North Grand Avenue East
Springfield, IL 62702

Re: Discharge Monitoring Report - July 1999
NPDES Permit No. IL 0002267

Dear Mr. Ray:

Enclosed is the July 1999, Discharge Monitoring Report for the OMC Waukegan facility. If you have any questions regarding these matters, I can be contacted at 847 / 689-5363.

Sincerely,

Anthony Montemurro

Anthony M. Montemurro, CHMM
Environmental Specialist
Outboard Marine Corporation

encl.

cc: J. R. Crawford
U. Libigs
J. Moran

S:\EHS\0WORKING\AMM\Water\NPDES\DRAY23599.doc

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

IEPA - Region

COMMENTS

PERMITTEE NAME: OMC WAUKEGAN - FACILITY OF OUTBOARD MARINE CORPORATION

ADDRESS: 100 SEA-HORSE DRIVE
WAUKEGAN, IL 60085 ATTN: ANTHONY MONTEMURRO

PHONE: (847)689-5363

(2-3)	(4-10)	(17-19)			
IL	0002267	001	3519	42° 21' 48"	87° 49' 18"
ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE

REPORTING PERIOD FROM (20-21) YEAR 9 9 (22-23) MO 0 7 (24-25) DAY 0 1 TO (26-27) YEAR 9 9 (28-29) MO 0 7 (30-31) DAY 3 1

(32-37) PARAMETER		QUANTITY (38-34) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-62) NO EX	CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO EX	(64-68) FREQUENCY OF ANALYSIS	(68-70) SAMPLE TYPE
	REPORTED	1.245	1.287	1.375	10^6	0						5/30	24 HOUR
FLOW	PERMIT CONDITION				Gallons							1/30	24 HOUR
pH	REPORTED						7.9	7.9	7.9		0	1/30	GRAB
(00440)	PERMIT CONDITION						6		9			1/30	GRAB
TEMPERATURE	REPORTED						74.3	74.3	74.3		0	1/30	GRAB
(00010)	PERMIT CONDITION									°F		1/30	GRAB
POLYCHLORINATED	REPORTED						<0.0005	<0.0005	<0.0005		0	1/7	24 HOUR
BIPHENYLS	PERMIT CONDITION									Mg/l		1/7	24 HOUR
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER			TITLE OF THE OFFICER	DATE		
SCHNEIDER,	TERRY	D.	PLANT MANAGER	9 9	0 8	2 3
LAST	FIRST	MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete and accurate.

Terry D. Schneider
SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

IL532-0092
WPC 242 11/79

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111½, Section 1042. Disclosure of this information is required. Failure to do so may result in a civil penalty up to $10,000.00 per day of violation or a fine up to $25,000.00 per day of violation and imprisonment up to one year. This form has been approved by the Forms Management Center.

044020

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

DISCHARGE MONITORING REPORT

IEPA - Region

PERMITTEE NAME: OMC WAUKEGAN - FACILITY OF OUTBOARD MARINE CORPORATION

ADDRESS: 100 SEA-HORSE DRIVE
WAUKEGAN, IL 60085 ATTN: ANTHONY MONTEMURRO

PHONE: (847)689 5363

COMMENTS

* DUE TO THE INSTALLATION OF A CLOSED LOOP COOLING SYSTEM IN DECEMBER 1993, DISCHARGE FROM THIS OUTFALL HAS BEEN ELIMINATED.

(2-3)		(4-10)	(11-19)			
IL		0002267	006	3519	42° 21' 51"	87° 49' 17"
ST		PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE

REPORTING PERIOD FROM (20-21) 9 9 YEAR (22-23) 0 7 MO (24-25) 0 1 DAY TO (26-27) 9 9 YEAR (28-29) 0 7 MO (30-31) 3 1 DAY

(32-37) PARAMETER		QUANTITY (3 card only) MINIMUM (38-34)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO EX (62-62)	CONCENTRATION (4 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
	REPORTED	*	*	*	10^6		*	*	*				24 HOUR
FLOW	PERMIT CONDITION				Gallons							1/7	24 HOUR
pH	REPORTED						*	*	*				GRAB
(00440)	PERMIT CONDITION						6		9			1/30	GRAB
TEMPERATURE	REPORTED						*	*	*				GRAB
(00010)	PERMIT CONDITION									°F		1/30	GRAB
OIL & GREASE	REPORTED						*	*	*				GRAB
(00550)	PERMIT CONDITION							15	30	mg/l		1/30	GRAB
POLYCHLORINATED	REPORTED						*	*	*				24 HOUR
BIPHENYLS	PERMIT CONDITION								0.005	mg/l		1/7	24 HOUR
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER			TITLE OF THE OFFICER	DATE		
SCHNEIDER,	TERRY	D.	PLANT MANAGER	9 9	0 8	2 3
LAST	FIRST	MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Terry D. Schneider

SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

IL532-0092
WPC 242 11/79

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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

IEPA - Region

COMMENTS

PERMITTEE NAME: OMC WAUKEGAN - FACILITY OF OUTBOARD MARINE CORPORATION

ADDRESS: 100 SEA-HORSE DRIVE
WAUKEGAN, IL 60085 ATTN: ANTHONY MONTEMURRO

PHONE: (847)689-5363

(2-3) ST	(4-9) PERMIT NUMBER	(17-19) DIS	SIC	LATITUDE	LONGITUDE
IL	0002267	007	3519	42° 22' 6"	87° 48' 54"

REPORTING PERIOD FROM (20-21) YEAR 99 (22-23) MO 07 (24-25) DAY 01 TO (26-27) YEAR 99 (28-29) MO 07 (30-31) DAY 31

(32-37) PARAMETER		QUANTITY (38-34) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-62) NO EX	CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO EX	(64-68) FREQUENCY OF ANALYSIS	(68-70) SAMPLE TYPE
	REPORTED	0.165	0.192	0.201	10^6	0						2/7	24 HOUR
FLOW	PERMIT CONDITION				Gallons							2/7	24 HOUR
PH	REPORTED						7.7	7.7	7.7		0	2/30	GRAB
(00440)	PERMIT CONDITION						6		9			1/30	GRAB
TEMPERATURE	REPORTED						75.3	75.35	75.4		0	2/30	GRAB
(00010)	PERMIT CONDITION									F		1/30	GRAB
POLYCHLORINATED	REPORTED						<0.0005	<0.0005	<0.0005		0	2/7	24 HOUR
BIPHENYLS	PERMIT CONDITION							0.001	0.005	mg/l		2/7	24 HOUR
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER			TITLE OF THE OFFICER	DATE		
SCHNEIDER,	TERRY	D.	PLANT MANAGER	99	08	23
LAST	FIRST	MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true complete and accurate

Terry D. Schneider
SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

IL532-0092
WPC 242 11/79

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544 030

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

IEPA - R OF

PERMITTEE NAME: OMC WAUKEGAN - FACILITY OF OUTBOARD MARINE CORPORATION

ADDRESS: 100 SEA-HORSE DRIVE
WAUKEGAN, IL 60085 ATTN: ANTHONY MONTEMURRO

PHONE: (847)689-5363

COMMENTS

* Recent calibration of flow monitoring equipment has indicated that the meter for this discharge location malfunctioned during the reporting period. These problems are being corrected, however, flow values may be greater than those reported.

(2-3)	(4-16)	(17-19)			
IL	0002267	008	3519	42°22'4"	87°49'14"
ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE

REPORTING PERIOD FROM 99 (YEAR) 07 (MO) 01 (DAY) TO 99 (YEAR) 07 (MO) 31 (DAY)

(32-37) PARAMETER		QUANTITY (3 card only) MINIMUM (38-34)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO EX (62-62)	CONCENTRATION (4 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (68-70)
FLOW	REPORTED	0.0	0.026	0.121	10^6	0						2/7	24 HOUR
	PERMIT CONDITION				Gallons							2/7	24 HOUR
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER			TITLE OF THE OFFICER	DATE		
SCHNEIDER,	TERRY	D.	PLANT MANAGER	99 (YEAR)	08 (MO)	23 (DAY)
LAST	FIRST	MI	TITLE			

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

IL532-0092
WPC 242 11/79

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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

DISCHARGE MONITORING REPORT

IEPA - Region

PERMITTEE NAME: OMC WAUKEGAN - FACILITY OF OUTBOARD MARINE CORPORATION

ADDRESS: 100 SEA-HORSE DRIVE
WAUKEGAN, IL 60085 ATTN: ANTHONY MONTEMURRO

PHONE: (847)689-5363

COMMENTS

STORM WATER DISCHARGES FROM THIS OUTFALL HAVE BEEN DIRECTED TO THE STORM WATER RETENTION POND. THE POND DISCHARGE HAS BEEN DESIGNATED TO OUTFALL 017.

(2-3)	(4-16)	(17-19)			
IL	0[illegible]02267	014	3519	42° 22' 15"	87° 49' 18"
ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE

REPORTING PERIOD FROM (20-21) 99 (22-23) 07 (24-25) 01 YEAR MO DAY TO (26-27) 99 (28-29) 07 (30-31) 31 YEAR MO DAY

PARAMETER (32-37)		QUANTITY MINIMUM (38-34)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO EX (62-62)	CONCENTRATION MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (68-70)
	REPORTED	NO FLOW AT THIS OUTFALL.			10^6								24 HOUR
FLOW	PERMIT CONDITION				Gallons							2/7	24 HOUR
pH	REPORTED												GRAB
(00440)	PERMIT CONDITION						6		9			1/30	GRAB
TEMPERATURE	REPORTED												GRAB
(00010)	PERMIT CONDITION									F		1/30	GRAB
POLYCHLORINATED	REPORTED												24 HOUR
BIPHENYLS	PERMIT CONDITION							0.001	0.005	mg/l		2/7	24 HOUR
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER			TITLE OF THE OFFICER	DATE		
SCHNEIDER,	TERRY	D.	PLANT MANAGER	99	08	23
LAST	FIRST	MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete and accurate.

Terry D. Schneider

SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

IL532-0092
WPC 242 11/79

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244 030

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

IEPA - Region

PERMITTEE NAME: OMC WAUKEGAN - FACILITY OF OUTBOARD MARINE CORPORATION

ADDRESS: 100 SEA-HORSE DRIVE
WAUKEGAN, IL 60085 ATTN: ANTHONY MONTEMURRO

PHONE: (847)689-5363

COMMENTS

* SAMPLES REQUIRED FOR EACH PRECIPITATION EVENT GREATER THAN 0.3 INCHES IN A 24 HOUR PERIOD

STORM WATER DISCHARGES FROM THIS OUTFALL HAVE BEEN DIRECTED TO THE STORM WATER RETENTION POND. THE POND DISCHARGE HAS BEEN DESIGNATED OUTFALL 017.

(2-3) ST	(4-16) PERMIT NUMBER	(17-19) DIS	SIC	LATITUDE	LONGITUDE
IL	0002267	015	3519	42°22'19"	87°48'59"

REPORTING PERIOD FROM 99 (YEAR) 07 (MO) 01 (DAY) TO 99 (YEAR) 07 (MO) 31 (DAY)

(32-37) PARAMETER		QUANTITY (38-34) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-62) NO EX	CONCENTRATION (38-45) MINIMUM	(45-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO EX	(64-68) FREQUENCY OF ANALYSIS	(66-70) SAMPLE TYPE
	REPORTED	NO FLOW AT THIS OUTFALL.			10^6								Calculation
FLOW	PERMIT CONDITION				Gallons							*/30	Calculation
pH	REPORTED												Grab
(00440)	PERMIT CONDITION						6		9			*/30	Grab
TOTAL	REPORTED												Storm Composite
SUSPENDED SOLIDS	PERMIT CONDITION								30	mg/l		*/30	Storm Composite
POLYCHLORINATED	REPORTED												Storm Composite
BIPHENYLS	PERMIT CONDITION								0.005	mg/l		*/30	Storm Composite
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
SCHNEIDER, TERRY D. (LAST FIRST MI)	PLANT MANAGER (TITLE)	99 (YEAR) 08 (MO) 23 (DAY)

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

IL532-0092
WPC 242 11/79

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 ½, Section 1042. Disclosure of this information is required. Failure to do so may result in a civil penalty up to $10,000.00 per day of violation or a fine up to $25,000.00 per day of violation and imprisonment up to one year. This form has been approved by the Forms Management Center.

044 020

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

DISCHARGE MONITORING REPORT

IEPA - Region

PERMITTEE NAME: OMC WAUKEGAN - FACILITY OF OUTBOARD MARINE CORPORATION

ADDRESS: 100 SEA-HORSE DRIVE
WAUKEGAN, IL 60085 ATTN: ANTHONY MONTEMURRO

PHONE: (847)689-5363

COMMENTS

* SAMPLES REQUIRED FOR EACH PRECIPITATION EVENT GREATER THAN 0.3 INCHES IN A 24 HOUR PERIOD

STORM WATER DISCHARGES FROM THIS OUTFALL HAVE BEEN DIRECTED TO THE STORM WATER RETENTION POND. THE POND DISCHARGE HAS BEEN DESIGNATED OUTFALL 017.

(2-3) ST	(4-16) PERMIT NUMBER	(17-19) DIS	SIC	LATITUDE	LONGITUDE
IL	0[illegible]12267	016	3519	42°22'19"	87°49'15"

REPORTING PERIOD FROM 99 07 01 (YEAR MO DAY) TO 99 07 31 (YEAR MO DAY)

PARAMETER		QUANTITY (3 card only) MINIMUM (38-34)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO EX (62-62)	CONCENTRATION (4 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (66-70)
FLOW	REPORTED	NO FLOW AT THIS OUTFALL.			10^6 Gallons								Calculation
	PERMIT CONDITION											*/30	Calculation
pH (00440)	REPORTED												Grab
	PERMIT CONDITION						6		9			*/30	Grab
TOTAL SUSPENDED SOLIDS	REPORTED												Storm Composi
	PERMIT CONDITION								30	mg/l		*/30	Storm Composi
POLYCHLORINATED BIPHENYLS	REPORTED												Storm Composi
	PERMIT CONDITION								0.005	mg/l		*/30	Storm Composi
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
SCHNEIDER, TERRY O. (LAST FIRST MI)	PLANT MANAGER (TITLE)	99 08 23 (YEAR MO DAY)

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true complete and accurate

SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

IL532-0092
WPC 242 11/79

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044-020

IEPA Region 1

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

PERMITTEE NAME: OMC WAUKEGAN - FACILITY OF OUTBOARD MARINE CORPORATION

ADDRESS: 100 SEA-HORSE DRIVE
WAUKEGAN, IL 60085 ATTN: ANTHONY MONTEMURRO

PHONE: (847)689-5363

COMMENTS

Amended Page

* SAMPLES REQUIRED FOR EACH PRECIPITATION EVENT GREATER THAN 0.3 INCHES IN A 24 HOUR PERIOD

THIS DISCHARGE IS FROM THE STORM RETENTION POND, CONSTRUCTED AS AGREED TO IN THE CONSENT DECREE ENTERED IN NRDC V. OMC, N.D. ILL. 87 C 4648

(2-3) ST	(4-16) PERMIT NUMBER	(17-19) DIS	SIC	LATITUDE	LONGITUDE
IL	0002267	017	3519	42° 22' 19"	87° 49' 15"

REPORTING PERIOD FROM	(20-21) YEAR	(22-23) MO	(24-25) DAY	TO	(26-27) YEAR	(28-29) MO	(30-31) DAY
	9 9	0 7	0 1		9 9	0 7	3 1

(32-37) PARAMETER		QUANTITY (3 card only) (38-34) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-62) NO EX	CONCENTRATION (4 card only) (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
	REPORTED	0.131	0.131	0.131	10^6	0						1/30	Calculation
*FLOW	PERMIT CONDITION				Gallons							*/30	Calculation
pH	REPORTED						7.7	7.7	7.7		0	1/30	Grab
(00440)	PERMIT CONDITION						6		9			*/30	Grab
TOTAL	REPORTED						48	48	48		0	1/30	Storm Composite
SUSPENDED SOLIDS	PERMIT CONDITION									mg/l		*/30	Storm Composite
POLYCHLORINATED	REPORTED						<0.0005	<0.0005	<0.0005		0	1/30	Storm Composite
BIPHENYLS	PERMIT CONDITION									mg/l		*/30	Storm Composite
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER			TITLE OF THE OFFICER	DATE		
SCHNEIDER,	TERRY	D.	PLANT MANAGER	9 9	0 8	2 3
LAST	FIRST	MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true complete and accurate

Terry D. Schneider
SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

IL532-0092
WPC 242 11/79

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 ½, Section 1042. Disclosure of this information is required. Failure to do so may result in a civil penalty up to $10 000 00 per day of violation or a fine up to $25 000 00 per day of violation and imprisonment up to one year. This form has been approved by the Forms Management Center

044 020

OMC

OUTBOARD MARINE CORPORATION

100 Sea Horse Drive
Waukegan, Illinois 60085-2195
Phone 847/689-6200

September 28, 1999

Mr. Dan Ray
Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance Section
1021 North Grand Avenue East
Springfield, IL 62702

Re: Discharge Monitoring Report - August 1999
NPDES Permit No. IL 0002267

Dear Mr. Ray:

Enclosed is the August 1999, Discharge Monitoring Report for the OMC Waukegan facility.

Also enclosed are amended pages for outfall 008 for December 1998 and February 1999. The pages have been amended to correct typographical errors.

If you have any questions regarding these matters, I can be contacted at 847 / 689-5363.

Sincerely,

Anthony M. Montemurro, CHMM
Environmental Specialist
Outboard Marine Corporation

encl.

cc: J. R. Crawford
W. Libbigs
J. Moran

S:\EHS\Omc-naeo\WKGN\ENVIR\WATER\NPDES\1999 DMR's\DRAY27199.doc

NATIONAL POLLUTANT DISCH E ELIMINATION SYSTEM
DISCHARGE MON (ING REPORT

IEPA - Region II

PERMITTEE NAME: OMC WAUKEGAN - FACILITY OF OUTBOARD MARINE CORPORATION

ADDRESS: 100 SEA-HORSE DRIVE
WAUKEGAN, IL 60085 ATTN: ANTHONY MONTEMURRO

PHONE: (847)689-5363

COMMENTS

(2-3) ST	PERMIT NUMBER	(17-19) DIS	SIC	LATITUDE	LONGITUDE
IL	00 7	001	3519	42° 21' 48"	87° 49' 18"

REPORT PERIOD FROM (20-21) YEAR 9 9 (22-23) MO 0 8 (24-25) DAY 0 1 TO (26-27) YEAR 9 9 (28-29) MO 0 8 (30-31) DAY 3 1

(32-37) PARAMETER		QUANTITY (3 card only) MINIMUM (38-34)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO EX (62-62)	CONCENTRATION (4 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO EX. (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (68-70)
	REPORTED	0.643	1.190	1.366	10^6	0						6/30	24 HOUR
FLOW	PERMIT CONDITION				Gallons							1/30	24 HOUR
pH	REPORTED						7.9	7.9	7.9		0	1/30	GRAB
(00440)	PERMIT CONDITION						6		9			1/30	GRAB
TEMPERATURE	REPORTED						72.2	72.2	72.2		0	1/30	GRAB
(00010)	PERMIT CONDITION									°F		1/30	GRAB
POLYCHLORINATED	REPORTED						<0.0005	<0.0005	<0.0005		0	1/7	24 HOUR
BIPHENYLS	PERMIT CONDITION									Mg/l		1/7	24 HOUR
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER			TITLE OF THE OFFICER	DATE		
SCHNEIDER,	TERRY	D	PLANT MANAGER	9 9	0 9	2 4
LAST	FIRST	MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate

T. Schneider /OM

SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

IL532-0092
WPC 242 11/79

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044-020

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

IEPA - Region II

PERMITTEE NAME: OMC WAUKEGAN - FACILITY OF OUTBOARD MARINE CORPORATION

ADDRESS: 100 SEA-HORSE DRIVE
WAUKEGAN, IL 60085 ATTN: ANTHONY MONTEMURRO

PHONE: (847)689-5363

COMMENTS

* DUE TO THE INSTALLATION OF A CLOSED LOOP COOLING SYSTEM IN DECEMBER 1993, DISCHARGE FROM THIS OUTFALL HAS BEEN ELIMINATED.

(2-3)	(4-15)	(17-19)			
IL	0002267	006	3519	42° 21' 51"	87° 49' 17"
ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE

REPORTING PERIOD FROM (20-21) 9 9 YEAR (22-23) 0 8 MO (24-25) 0 1 DAY TO (26-27) 9 9 YEAR (28-29) 0 8 MO (30-31) 3 1 DAY

(32-37) PARAMETER		QUANTITY (3 card only) (38-34) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-62) NO EX	CONCENTRATION (4 card only) (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO EX.	(64-68) FREQUENCY OF ANALYSIS	(68-70) SAMPLE TYPE
	REPORTED	*	*	*	10^6		*	*	*				24 HOUR
FLOW	PERMIT CONDITION				Gallons							1/7	24 HOUR
pH	REPORTED						*	*	*				GRAB
(00440)	PERMIT CONDITION						6		9			1/30	GRAB
TEMPERATURE	REPORTED						*	*	*				GRAB
(00010)	PERMIT CONDITION									°F		1/30	GRAB
OIL & GREASE	REPORTED						*	*	*				GRAB
(00550)	PERMIT CONDITION							15	30	mg/l		1/30	GRAB
POLYCHLORINATED	REPORTED						*	*	*				24 HOUR
BIPHENYLS	PERMIT CONDITION								0.005	mg/l		1/7	24 HOUR
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER			TITLE OF THE OFFICER	DATE		
SCHNEIDER,	TERRY	D.	PLANT MANAGER	9 9	0 9	2 4
LAST	FIRST	MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and Belief such information is true, complete, and accurate.

T. Schneider
SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

IL532-0092
WPC 242 11/79

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044-020

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

IEPA - Region II

PERMITTEE NAME: OMC WAUKEGAN - FACILITY OF OUTBOARD MARINE CORPORATION

ADDRESS: 100 SEA-HORSE DRIVE
WAUKEGAN, IL 60085 ATTN: ANTHONY MONTEMURRO

PHONE: (847)689-5363

COMMENTS

No flow recorded during this reporting period. This outfall conveys overflow only.

(2-3) ST	(4-16) PERMIT NUMBER	(17-19) DIS	SIC	LATITUDE	LONGITUDE
IL	[illegible]2267	008	3519	42° 22' 4"	87° 49' 14"

REPORTING PERIOD FROM (20-21) YEAR 9 9 (22-23) MO 0 8 (24-25) DAY 0 1 TO (26-27) YEAR 9 9 (28-29) MO 0 8 (30-31) DAY 3 1

(32-37) PARAMETER		QUANTITY (3 card only) (38-34) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-62) NO EX.	CONCENTRATION (4 card only) (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO EX.	(64-68) FREQUENCY OF ANALYSIS	(68-70) SAMPLE TYPE
FLOW	REPORTED	0.0	0.0	0.0	10^6 Gallons	0						2/7	24 HOUR
	PERMIT CONDITION											2/7	24 HOUR
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
SCHNEIDER, TERRY D.	PLANT MANAGER	9 9 0 9 2 4	
LAST FIRST MI	TITLE	YEAR MO DAY	

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate

T. Schneider / [illegible]
SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

JL532-0092
WPC 242 11/79

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044-020

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

IEPA Region II

PERMITTEE NAME: OMC WAUKEGAN - FACILITY OF OUTBOARD MARINE CORPORATION

ADDRESS: 100 SEA-HORSE DRIVE
WAUKEGAN, IL 60085 ATTN: ANTHONY MONTEMURRO

PHONE: (847)689-5363

COMMENTS

(2-3)	(4-16)	(17-19)			
IL	0002267	007	3519	42° 22' 6"	87° 48' 54"
ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE

REPORTING PERIOD FROM 9 9 (20-21) 0 8 (22-23) 0 1 (24-25) TO 9 9 (26-27) 0 8 (28-29) 3 1 (30-31)
YEAR MO DAY YEAR MO DAY

(32-37) PARAMETER		QUANTITY (3 card only) MINIMUM (38-34)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO EX (62-62)	CONCENTRATION (4 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO EX. (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (68-70)
FLOW	REPORTED	0.158	0.168	0.201	10^6	0						2/7	24 HOUR
	PERMIT CONDITION				Gallons							2/7	24 HOUR
PH (00440)	REPORTED						7.8	7.8	7.8		0	2/30	GRAB
	PERMIT CONDITION						6		9			1/30	GRAB
TEMPERATURE (00010)	REPORTED						75.3	75.35	75.4		0	2/30	GRAB
	PERMIT CONDITION									°F		1/30	GRAB
POLYCHLORINATED BIPHENYLS	REPORTED						<0.0005	<0.0005	<0.0005		0	2/7	24 HOUR
	PERMIT CONDITION							0.001	0.005	mg/l		2/7	24 HOUR
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER			TITLE OF THE OFFICER	DATE		
SCHNEIDER,	TERRY	D.	PLANT MANAGER	9 9	0 9	2 4
LAST	FIRST	MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and Belief such information is true, complete, and accurate

T. Schneider
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

ILS32-0092
WPC 242 11/79

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044-020

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

IEPA - Region II

PERMITTEE NAME: OMC WAUKEGAN - FACILITY OF OUTBOARD MARINE CORPORATION

ADDRESS: 100 SEA-HORSE DRIVE
WAUKEGAN, IL 60085 ATTN: ANTHONY MONTEMURRO

PHONE: (847)689-5363

COMMENTS

STORM WATER DISCHARGES FROM THIS OUTFALL HAVE BEEN DIRECTED TO THE STORM WATER RETENTION POND. THE POND DISCHARGE HAS BEEN DESIGNATED TO OUTFALL 017.

(2-3) ST	(4-15) PERMIT NUMBER	(17-19) DIS	SIC	LATITUDE	LONGITUDE
IL	0002267	014	3519	42° 22' 15"	87° 49' 18"

REPORTING PERIOD FROM (20-21) YEAR 9 9 (22-23) MO 0 8 (24-25) DAY 0 1 TO (26-27) YEAR 9 9 (28-29) MO 0 8 (30-31) DAY 3 1

(32-37) PARAMETER		QUANTITY (0 card only) (38-34) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-62) NO EX.	CONCENTRATION (4 card only) (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO EX.	(64-68) FREQUENCY OF ANALYSIS	(68-70) SAMPLE TYPE
	REPORTED	NO FLOW AT THIS OUTFALL.			10^6								24 HOUR
FLOW	PERMIT CONDITION				Gallons							2/7	24 HOUR
pH	REPORTED												GRAB
(00440)	PERMIT CONDITION						6		9			1/30	GRAB
TEMPERATURE	REPORTED												GRAB
(00010)	PERMIT CONDITION									°F		1/30	GRAB
POLYCHLORINATED	REPORTED												24 HOUR
BIPHENYLS	PERMIT CONDITION							0.001	0.005	mg/l		2/7	24 HOUR
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE		
SCHNEIDER, TERRY D.	PLANT MANAGER	9 9	0 9	2 4
LAST FIRST MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and Belief such information is true complete and accurate

SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

IL532-0092
WPC 242 11/79

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044-020

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

IEPA - Region

PERMITTEE NAME: OMC WAUKEGAN - FACILITY OF OUTBOARD MARINE CORPORATION

ADDRESS: 100 SEA-HORSE DRIVE
WAUKEGAN, IL 60085 ATTN: ANTHONY MONTEMURRO

PHONE: (847)689-5363

COMMENTS

* SAMPLES REQUIRED FOR EACH PRECIPITATION EVENT GREATER THAN 0.3 INCHES IN A 24 HOUR PERIOD

STORM WATER DISCHARGES FROM THIS OUTFALL HAVE BEEN DIRECTED TO THE STORM WATER RETENTION POND. THE POND DISCHARGE HAS BEEN DESIGNATED OUTFALL 017.

(2-3) ST	(4-16) PERMIT NUMBER	(17-19) DIS	SIC	LATITUDE	LONGITUDE
IL	0002267	015	3519	42° 22' 19"	87° 48' 59"

REPORTING PERIOD FROM (20-21) YEAR 99 (22-23) MO 08 (24-25) DAY 01 TO (26-27) YEAR 99 (28-29) MO 08 (30-31) DAY 31

(32-37) PARAMETER		QUANTITY (3 card only) (38-34) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-62) NO EX.	CONCENTRATION (4 card only) (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO EX.	(64-68) FREQUENCY OF ANALYSIS	(68-70) SAMPLE TYPE
	REPORTED	NO FLOW AT THIS OUTFALL.			10^6								Calculation
FLOW	PERMIT CONDITION				Gallons							*/30	Calculation
pH	REPORTED												Grab
(00440)	PERMIT CONDITION						6		9			*/30	Grab
TOTAL	REPORTED												Storm Composite
SUSPENDED SOLIDS	PERMIT CONDITION								30	mg/l		*/30	Storm Composite
POLYCHLORINATED	REPORTED												Storm Composite
BIPHENYLS	PERMIT CONDITION								0.005	mg/l		*/30	Storm Composite
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE			
SCHNEIDER, TERRY D.	PLANT MANAGER	99	09	24	I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate
LAST FIRST MI	TITLE	YEAR	MO	DAY	SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

IL532-0092
WPC 242 11/79

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044-020

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

IEPA - Region II

PERMITTEE NAME: OMC WAUKEGAN - FACILITY OF OUTBOARD MARINE CORPORATION

ADDRESS: 100 SEA-HORSE DRIVE
WAUKEGAN, IL 60085 ATTN: ANTHONY MONTEMURRO

PHONE: (847)689-5363

COMMENTS

* SAMPLES REQUIRED FOR EACH PRECIPITATION EVENT GREATER THAN 0.3 INCHES IN A 24 HOUR PERIOD

STORM WATER DISCHARGES FROM THIS OUTFALL HAVE BEEN DIRECTED TO THE STORM WATER RETENTION POND. THE POND DISCHARGE HAS BEEN DESIGNATED OUTFALL 017.

	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
	0[illegible]2267	016	3519	42° 22' 19"	87° 49' 15"

REPORTING PERIOD FROM 9 9 (YEAR) 0 8 (MO) 0 1 (DAY) TO 9 9 (YEAR) 0 8 (MO) 3 1 (DAY)

PARAMETER		QUANTITY MINIMUM	QUANTITY AVERAGE	QUANTITY MAXIMUM	UNITS	NO EX.	CONCENTRATION MINIMUM	CONCENTRATION AVERAGE	CONCENTRATION MAXIMUM	UNITS	NO EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
	REPORTED	NO FLOW AT THIS OUTFALL.			10^6 Gallons								Calculation
FL[illegible]	PERMIT CONDITION											*/30	Calculation
pH	REPORTED												Grab
(O[illegible])	PERMIT CONDITION						6		9			*/30	Grab
TO[illegible]	REPORTED												Storm Composite
SU[illegible]NDED SOLIDS	PERMIT CONDITION								30	mg/l		*/30	Storm Composite
[illegible]HLO[illegible]NATED	REPORTED												Storm Composite
[illegible]YLS	PERMIT CONDITION								0.005	mg/l		*/30	Storm Composite
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
SH[illegible]ER, TERRY D. (LAST, FIRST, MI)	PLANT MANAGER (TITLE)	9 9 (YEAR) 0 9 (MO) 2 4 (DAY)

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate

T. Schneider

SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

IL[illegible]/92
W[illegible]42 11/79

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044-020

NATIONAL POLLUTANT DISCH[illegible] ELIMINATION SYSTEM
DISCHARGE MONI[illegible]ING REPORT

IEP[illegible] Region II

PE[illegible]TEE NAME: OMC WAUKEGAN - FACILITY OF OUTBOARD MARINE CORPORATION

AD[illegible]: 100 SEA-HORSE DRIVE
WAUKEGAN, IL 60085 ATTN: ANTHONY MONTEMURRO

PH[illegible]: (847)689-5363

COMMENTS

Amended Page

* SAMPLES REQUIRED FOR EACH PRECIPITATION EVENT GREATER THAN 0.3 INCHES IN A 24 HOUR PERIOD

THIS DISCHARGE IS FROM THE STORM RETENTION POND, CONSTRUCTED AS AGREED TO IN THE CONSENT DECREE ENTERED IN NRDC V. OMC, N.D. ILL. 87 C 4648

(2[illegible])	(4-16)	(17-19)			
I[illegible]	0002267	017	3519	42° 22' 19"	87° 49' 15"
S[illegible]	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE

	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)
REPORTING PERIOD FROM	9 9	0 8	0 1	TO	9 9	0 8	3 1
	YEAR	MO	DAY		YEAR	MO	DAY

(12-37) PARAMETER		3 card only QUANTITY (38-34) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-62) NO EX	4 card only CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO EX.	(64-68) FREQUENCY OF ANALYSIS	(68-70) SAMPLE TYPE
	REPORTED	0.121	0.121	0.121	10^6	0						1/30	Calculation
FL[illegible]	PERMIT CONDITION				Gallons							*/30	Calculation
pH	REPORTED						7.7	7.7	7.7		0	1/30	Grab
(00[illegible]	PERMIT CONDITION						6		9			*/30	Grab
TO[illegible]	REPORTED						< 5	< 5	< 5		0	1/30	Storm Composite
SUS[illegible]NDED SOLIDS	PERMIT CONDITION									mg/l		*/30	Storm Composite
POL[illegible]ORINATED	REPORTED						<0.0005	<0.0005	<0.0005		0	1/30	Storm Composite
BIP[illegible]YLS	PERMIT CONDITION									mg/l		*/30	Storm Composite
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

[illegible]E OF PRINCIPAL EXECUTIVE OFFICER			TITLE OF THE OFFICER	DATE		
SCH[illegible]DER,	TERRY	D.	PLANT MANAGER	9 9	0 9	2 4
LAS[illegible]	FIRST	MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

T. Schneider

SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

IL5[illegible]92
WP[illegible]-2 11/79

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044-020

NATIONAL POLLUTANT DISCHA ELIMINATION SYSTEM
DISCHARGE MONIT NG REPORT

IEPA - Region II

PERMITTEE NAME:)MC WAUKEGAN - FACILITY OF OUTBOARD MARINE CORPORATION

ADDRESS: 100 SEA-HORSE DRIVE
VAUKEGAN, IL 60085 ATTN: ANTHONY MONTEMURRO

PHONE: (847)689-5363

COMMENTS

Amended Report Page

(2-3)	(4-16)	(17-19)				
IL	00022 7	008	3519	42° 22' 4"	87° 49' 14"
ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE

REPORTING PERIOD FROM (20-21) 9 8 YEAR (22-23) 1 2 MO (24-25) 0 1 DAY TO (26-27) 9 9 YEAR (28-29) 1 2 MO (30-31) 3 1 DAY

(32-37) PARAMETER		3 card only QUANTITY (38-34) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-62) NO EX.	4 card only CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO EX.	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
	REPORTED	No Flow	0.002	0.017	10^6	0						2/7	24 HOUR
FLOW	PERMIT CONDITION				Gallons							2/7	24 HOUR
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER			TITLE OF THE OFFICER	DATE		
SCHNEIDER,	TERRY	D.	PLANT MANAGER	9 9	0 8	2 7
LAST	FIRST	MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Terry D. Schneider
SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

IL532-0092
WPC 242 11/79

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 ½, Section 1042. Disclosure of this information is required. Failure to do so may result in a civil penalty up to $10,000.00 per day of violation or a fine up to $25,000.00 per day of violation and imprisonment up to one year. This form has been approved by the Forms Management Center

044-020

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

DISCHARGE MONITORING REPORT

IEPA - Region II

PERMITTEE NAME: OMC WAUKEGAN – FACILITY OF OUTBOARD MARINE CORPORATION

ADDRESS: 100 SEA-HORSE DRIVE
WAUKEGAN, IL 60085 ATTN: ANTHONY MONTEMURRO

PHONE: (847)689-5363

COMMENTS

Amended Report Page

(2-3) ST	(4-16) PERMIT NUMBER	(17-19) DIS	SIC	LATITUDE	LONGITUDE
IL	0002267	008	3519	42°22'4"	87°49'14"

REPORTING PERIOD FROM (20-21) YEAR 99 (22-23) MO 02 (24-25) DAY 01 TO (26-27) YEAR 99 (28-29) MO 02 (30-31) DAY 28

(32-37) PARAMETER		QUANTITY (3 card only) (38-34) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-62) NO EX.	CONCENTRATION (4 card only) (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO EX.	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
FLOW	REPORTED	No Flow	0.000	0.001	10^6	0						2/7	24 HOUR
	PERMIT CONDITION				Gallons							2/7	24 HOUR
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER			TITLE OF THE OFFICER	DATE		
SCHNEIDER,	TERRY	D.	PLANT MANAGER	99	08	27
LAST	FIRST	MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Terry D. Schneider

SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

IL532-0092
WPC 242 11/79

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044-020

OMC

OUTBOARD MARINE CORPORATION

[illegible]
[illegible]
[illegible]

October 25, 1999

Mr. Dan Ray
Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance Section
1021 North Grand Avenue East
Springfield, IL 62702

Re: Discharge Monitoring Report - September 1999
NPDES Permit No. IL 0002267

Dear Mr. Ray:

Enclosed is the September 1999, Discharge Monitoring Report for the OMC Waukegan facility.

If you have any questions regarding these matters, I can be contacted at 847 / 689-5363.

Sincerely,

Anthony M. Montemurro, CHMM
Environmental Specialist
Outboard Marine Corporation

encl.

cc: J. R. Crawford
U. Libigs
J. Moran

S:\EHS\Omc-naeo\WKGN\ENVIR\WATER\NPDES\1999 DMR's\DRAY29899.doc

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

IEPA - Region II

PERMITTEE NAME: OMC WAUKEGAN - FACILITY OF OUTBOARD MARINE CORPORATION

ADDRESS: 100 SEA-HORSE DRIVE
WAUKEGAN, IL 60085 ATTN: ANTHONY MONTEMURRO

PHONE: (847)689-5363

COMMENTS

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
IL	0002267	001	3519	42° 21' 48"	87° 49' 18"

REPORTING PERIOD FROM (20-21) YEAR 99 (22-23) MO 09 (24-25) DAY 01 TO (26-27) YEAR 99 (28-29) MO 09 (30-31) DAY 30

PARAMETER		3 card only QUANTITY (38-34) MINIMUM	(45-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-62) NO EX	4 card only CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO EX.	(64-68) FREQUENCY OF ANALYSIS	(68-70) SAMPLE TYPE
FLOW	REPORTED	0.604	0.966	1.689	10^6	0						4/30	24 HOUR
	PERMIT CONDITION				Gallons							1/30	24 HOUR
pH (00440)	REPORTED						7.5	7.5	7.5		0	1/30	GRAB
	PERMIT CONDITION						6		9			1/30	GRAB
TEMPERATURE (00010)	REPORTED						69.3	69.3	69.3		0	1/30	GRAB
	PERMIT CONDITION									°F		1/30	GRAB
POLYCHLORINATED BIPHENYLS	REPORTED						<0.0005	<0.0005	<0.0005		0	1/7	24 HOUR
	PERMIT CONDITION									Mg/l		1/7	24 HOUR
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
SCHNEIDER, TERRY D.	PLANT MANAGER	99 10 25
LAST FIRST MI	TITLE	YEAR MO DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate

T. Schneider

SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

IL532-0092
WPC 242 11/79

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044 020

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

U.S. EPA Region II

PERMITTEE NAME: OMC WAUKEGAN - FACILITY OF OUTBOARD MARINE CORPORATION

ADDRESS: 100 SEA-HORSE DRIVE
WAUKEGAN, IL 60085 ATTN: ANTHONY MONTEMURRO

PHONE: (847)689-5363

COMMENTS

* DUE TO THE INSTALLATION OF A CLOSED LOOP COOLING SYSTEM IN DECEMBER 1993, DISCHARGE FROM THIS OUTFALL HAS BEEN ELIMINATED.

(2 3)	(4 16)	(17 19)			
IL	0002267	006	3519	42° 21' 51"	87° 49' 17"
ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE

REPORTING PERIOD FROM (20 21) 9 9 YEAR (22 23) 0 9 MO (24 25) 0 1 DAY TO (26 27) 9 9 YEAR (28 29) 0 9 MO (30 31) 3 0 DAY

(32 37) PARAMETER		1 card only QUANTITY (38 34) MINIMUM	(45 53) AVERAGE	(54 61) MAXIMUM	UNITS	(62 62) NO EX	4 card only CONCENTRATION (38 45) MINIMUM	(45 53) AVERAGE	(54 61) MAXIMUM	UNITS	(62 63) NO EX	(64 68) FREQUENCY OF ANALYSIS	(69 70) SAMPLE TYPE
	REPORTED	*	*	*	10^6		*	*	*				24 HOUR
FLOW	PERMIT CONDITION				Gallons							1/7	24 HOUR
pH	REPORTED						*	*	*				GRAB
(00440)	PERMIT CONDITION						6		9			1/30	GRAB
TEMPERATURE	REPORTED						*	*	*				GRAB
(00010)	PERMIT CONDITION									°F		1/30	GRAB
OIL & GREASE	REPORTED						*	*	*				GRAB
(00550)	PERMIT CONDITION							15	30	mg/l		1/30	GRAB
POLYCHLORINATED	REPORTED						*	*	*				24 HOUR
BIPHENYLS	PERMIT CONDITION								0.005	mg/l		1/7	24 HOUR
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE		
SCHNEIDER, TERRY D.	PLANT MANAGER	9 9	1 0	2 5
LAST FIRST MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and Belief such information is true, complete, and accurate

T. Schneider

SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

IL532-0092
WPC 242 11/79

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044-020

NATIONAL POLLUTANT DISCH[illegible] ELIMINATION SYSTEM
DISCHARGE MONI[illegible]ING REPORT

IEPA [illegible]

PERMI[illegible] NAME: OMC WAUKEGAN - FACILITY OF OUTBOARD MARINE CORPORATION

ADDR: 100 SEA-HORSE DRIVE
WAUKEGAN, IL 60085 ATTN: ANTHONY MONTEMURRO

PHONE: (847)689-5363

COMMENTS

(2-3)	(4-15)	(17-19)			
IL	0002267	007	3519	42° 22' 6"	87° 48' 54"
ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE

REPORTING PERIOD FROM (20-21) (22-23) (24-25): 9 9 (YEAR) 0 9 (MO) 0 1 (DAY) TO (26-27) (28-29) (30-31): 9 9 (YEAR) 0 9 (MO) 3 0 (DAY)

(1-2) PARAMETER		QUANTITY (3 card only) MINIMUM (38-34)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO EX. (62-62)	CONCENTRATION (4 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO EX. (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (68-70)
FLOW	REPORTED	0.057	0.218	0.666	10^6	0						2/7	24 HOUR
	PERMIT CONDITION				Gallons							2/7	24 HOUR
PH	REPORTED						7.6	7.65	7.7		0	2/30	GRAB
(00440)	PERMIT CONDITION						6		9			1/30	GRAB
TEMPE[illegible]URE	REPORTED						69.8	69.85	69.9		0	2/30	GRAB
(00010)	PERMIT CONDITION									°F		1/30	GRAB
POLYC[illegible]RINATED	REPORTED						<0.0005	0.00057	0.00083		0	2/7	24 HOUR
BIPHEN[illegible]	PERMIT CONDITION							0.001	0.005	Mg/l		2/7	24 HOUR
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER			TITLE OF THE OFFICER	DATE		
SCHNEIDER	TERRY	D.	PLANT MANAGER	9 9	1 0	2 5
LAST	FIRST	MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate

T. Schneider

SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

IL532-0092
WPC 242 11/79

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044-020

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

U.S.E.P.A. Region II

PERMITTEE NAME: OMC WAUKEGAN - FACILITY OF OUTBOARD MARINE CORPORATION

ADDRESS: 100 SEA-HORSE DRIVE
WAUKEGAN, IL 60085 ATTN: ANTHONY MONTEMURRO

PHONE: (847)689-5363

COMMENTS

* indicates no flow. This outfall conveys overflow only.

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
IL	00 67	008	3519	42° 22' 4"	87° 49' 14"

REPORTING PERIOD FROM 99 09 01 (YEAR MO DAY) TO 99 09 30 (YEAR MO DAY)

PARAMETER		QUANTITY MINIMUM	QUANTITY AVERAGE	QUANTITY MAXIMUM	UNITS	NO EX	CONCENTRATION MINIMUM	CONCENTRATION AVERAGE	CONCENTRATION MAXIMUM	UNITS	NO EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
FLOW	REPORTED	*	1.434	1.578	10^6 Gallons	0						2/7	24 HOUR
	PERMIT CONDITION											2/7	24 HOUR
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER			TITLE OF THE OFFICER	DATE		
SCHNEIDER,	TERRY	D.	PLANT MANAGER	99	10	25
LAST	FIRST	MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete and accurate

T. Schneider

SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

IL532-0092
WPC 242 11/79

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044-020

NATIONAL POLLUTANT DISCH GE ELIMINATION SYSTEM
DISCHARGE MON RING REPORT

IEPA Region II

PERMITTEE NAME: OMC WA GAN - FACILITY OF OUTBOARD MARINE CORPORATION

ADDRESS: 100 SEA SE DRIVE
WAUKE IL 60085 ATTN: ANTHONY MONTEMURRO

PHONE: (847)689

COMMENTS

STORM WATER DISCHARGES FROM THIS OUTFALL HAVE BEEN DIRECTED TO THE STORM WATER RETENTION POND. THE POND DISCHARGE HAS BEEN DESIGNATED TO OUTFALL 017.

(2-3)	(4-15)	(17-19)			
IL	0002267	014	3519	42° 22' 15"	87° 49' 18"
ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE

REPORTING PERIOD FR

(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)
9 9	0 9	0 1	TO	9 9	0 9	3 0
YEAR	MO	DAY		YEAR	MO	DAY

(32-37) PARAME		QUANTITY (card only) (38-34) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-62) NO EX.	CONCENTRATION (card only) (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO EX.	(64-66) FREQUENCY OF ANALYSIS	(68-70) SAMPLE TYPE
	REPORTED	NO FLOW AT THIS OUTFALL.			10^6								24 HOUR
FLOW	PERMIT CONDITION				Gallons							2/7	24 HOUR
pH	REPORTED												GRAB
(00440)	PERMIT CONDITION						6		9			1/30	GRAB
TEMPERATURE	REPORTED												GRAB
(00010)	PERMIT CONDITION									°F		1/30	GRAB
POLYCHLORINA	REPORTED												24 HOUR
BIPHENYLS	PERMIT CONDITION							0.001	0.005	mg/l		2/7	24 HOUR
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRIN	XECUTIVE OFFICE	TITLE OF THE OFFICER	DATE			
SCHNEIDER.	RY D	PLANT MANAGER	9 9	1 0	2 5	I certify that I am familiar with the information contained in this report and that to the best of my knowledge and Belief such information is true, complete, and accurate
LAST	T	TITLE	YEAR	MO	DAY	SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

IL532-0092
WPC 242 11/79

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044-020

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

IEPA - Region II

PERMITTEE NAME: OMC WAUKEGAN - FACILITY OF OUTBOARD MARINE CORPORATION

ADDRESS: 100 SEA-HORSE DRIVE
WAUKEGAN, IL 60085 ATTN: ANTHONY MONTEMURRO

PHONE: (847)689-5363

COMMENTS

* SAMPLES REQUIRED FOR EACH PRECIPITATION EVENT GREATER THAN 0.3 INCHES IN A 24 HOUR PERIOD

STORM WATER DISCHARGES FROM THIS OUTFALL HAVE BEEN DIRECTED TO THE STORM WATER RETENTION POND. THE POND DISCHARGE HAS BEEN DESIGNATED OUTFALL 017.

(2-3)	(4-15)	(17-19)			
IL	0002267	015	3519	42° 22' 19"	87° 48' 59"
ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE

REPORTING PERIOD FROM (20-21) (22-23) (24-25): 99 09 01 (YEAR MO DAY) TO (26-27) (28-29) (30-31): 99 09 30 (YEAR MO DAY)

(32-37) PARAMETER		QUANTITY (1 card only) (38-34) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-62) NO EX.	CONCENTRATION (4 card only) (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO EX.	(64-68) FREQUENCY OF ANALYSIS	(68-70) SAMPLE TYPE
	REPORTED	NO FLOW AT THIS OUTFALL.			10^6								Calculation
FLOW	PERMIT CONDITION				Gallons							*/30	Calculation
pH	REPORTED												Grab
(00440)	PERMIT CONDITION						6		9			*/30	Grab
TOTAL	REPORTED												Storm Composite
SUSPENDED SO	PERMIT CONDITION								30	mg/l		*/30	Storm Composite
POLYCHLORINA	REPORTED												Storm Composite
BIPHENYLS	PERMIT CONDITION								0.005	mg/l		*/30	Storm Composite
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRIN EXECUTIVE OFFICER			TITLE OF THE OFFICER	DATE		
SCHNEIDER,	RRY	D.	PLANT MANAGER	9 9	1 0	2 5
LAST	RST	MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and Belief such information is true, complete, and accurate

T. Schneider

SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

* IL532-0092
WPC 242 11/79

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044-020

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

IEPA Region II

PERMITTEE NAME: OMC WAUKEGAN - FACILITY OF OUTBOARD MARINE CORPORATION

ADDRESS: 100 SEA-HORSE DRIVE
WAUKEGAN, IL 60085 ATTN: ANTHONY MONTEMURRO

PHONE: (847)689-5363

COMMENTS

* SAMPLES REQUIRED FOR EACH PRECIPITATION EVENT GREATER THAN 0.3 INCHES IN A 24 HOUR PERIOD

STORM WATER DISCHARGES FROM THIS OUTFALL HAVE BEEN DIRECTED TO THE STORM WATER RETENTION POND. THE POND DISCHARGE HAS BEEN DESIGNATED OUTFALL 017.

(2-3)	(4-16)	(17-19)			
IL	0002267	016	3519	42° 22' 19"	87° 49' 15"
ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE

REPORTING PERIOD FROM 99 (YEAR) 09 (MO) 01 (DAY) TO 99 (YEAR) 09 (MO) 30 (DAY)

(32-37) PARAMETER		QUANTITY (3 card only) (38-34) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-62) NO EX.	CONCENTRATION (4 card only) (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO EX.	(64-68) FREQUENCY OF ANALYSIS	(68-70) SAMPLE TYPE
	REPORTED	NO FLOW AT THIS OUTFALL.			10^6								Calculation
FLOW	PERMIT CONDITION				Gallons							*/30	Calculation
pH	REPORTED												Grab
(00440)	PERMIT CONDITION						6		9			*/30	Grab
TOTAL	REPORTED												Storm Composite
SUSPENDED SOLIDS	PERMIT CONDITION								30	mg/l		*/30	Storm Composite
POLYCHLORINATED	REPORTED												Storm Composite
BIPHENYLS	PERMIT CONDITION								0.005	mg/l		*/30	Storm Composite
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER			TITLE OF THE OFFICER	DATE		
SCHNEIDER,	TERRY	D.	PLANT MANAGER	99 (YEAR)	10 (MO)	25 (DAY)
LAST	FIRST	MI	TITLE			

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and Belief such information is true, complete, and accurate.

T. Schneider

SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

* IL532-0092
WPC 242 11/79

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044-020

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

IEPA - Region II

PERMITTEE NAME: *OMC WAUKEGAN - FACILITY OF OUTBOARD MARINE CORPORATION*

ADDRESS: *100 SEA-HORSE DRIVE*
WAUKEGAN, IL 60085 *ATTN: ANTHONY MONTEMURRO*

PHONE: *(847)689-5363*

COMMENTS

Amended Page

** SAMPLES REQUIRED FOR EACH PRECIPITATION EVENT GREATER THAN 0.3 INCHES IN A 24 HOUR PERIOD*

THIS DISCHARGE IS FROM THE STORM RETENTION POND, CONSTRUCTED AS AGREED TO IN THE CONSENT DECREE ENTERED IN NRDC V. OMC, N.D. ILL. 87 C. 4648

(2-3)	(4-16)	(17-19)			
IL	0002267	017	3519	42° 22' 19"	87° 49' 15"
ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE

REPORTING PERIOD FROM (20-21) (22-23) (24-25): 9 9 YEAR, 0 9 MO, 0 1 DAY TO (26-27) (28-29) (30-31): 9 9 YEAR, 0 9 MO, 3 0 DAY

(32-37) PARAMETER		QUANTITY (3 card only) MINIMUM (38-34)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO EX. (62-62)	CONCENTRATION (4 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO EX. (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (68-70)
FLOW	REPORTED	0.127	0.299	0.507	10^6 Gallons	0						3/30	Calculation
	PERMIT CONDITION											*/30	Calculation
pH (00440)	REPORTED						7.5	7.6	7.7		0	3/30	Grab
	PERMIT CONDITION						6		9			*/30	Grab
TOTAL SUSPENDED SOLIDS	REPORTED						7	9.8	13		0	3/30	Storm Composite
	PERMIT CONDITION									mg/l		*/30	Storm Composite
POLYCHLORINATED BIPHENYLS	REPORTED						<0.0005	0.00051	0.00054		0	3/30	Storm Composite
	PERMIT CONDITION									mg/l		*/30	Storm Composite
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER			TITLE OF THE OFFICER	DATE		
SCHNEIDER,	TERRY	D.	PLANT MANAGER	9 9	1 0	2 5
LAST	FIRST	MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

T. Schneider

SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

IL532-0092
WPC 242 11/79

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 ½, Section 1042. Disclosure of this information is required. Failure to do so may result in a civil penalty up to $10,000.00 per day of violation or a fine up to $25,000.00 per day of violation and imprisonment up to one year. This form has been approved by the Forms Management Center

044-020

ATTACHMENT 2

CATEGORY 5 TREATMENT PLANT ANALYTICAL RESULTS

Summary Report

Sept. Monthly Sampling Event

KEMRON Environmental Services
109 Starlite Park
Marietta, Ohio 45750
Phone: (740) 373-4071

Outboard Marine Corporation
90 Sea Horse Drive
Waukegan, IL 60085

Attention: Mr. Tony Montemurro

PO Number:
Account Number: OUTBOARD-379

Login #: L9909343
Report Date: 09/22/99
Work ID: OMC WAUKEGAN
Date Received: 09/17/99

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
L9909343-01	S3-T5-I	L9909343-02	S3-T5-I/MS
L9909343-03	S3-T5-I/MSD	L9909343-04	S3-T5-LC
L9909343-05	S3-T5-E	L9909343-06	W-T5-I
L9909343-07	W-T5-LC	L9909343-08	W-T5-E
L9909343-09	E-T5-I	L9909343-10	E-T5-LC
L9909343-11	E-T5-E		

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861

Certified By
Dennis S. Tepe

KEMRON
ENVIRONMENTAL SERVICES

Order #: 99-343
September 30, 1999
15:36

KEMRON ENVIRONMENTAL SERVICES
REPORT NARRATIVE

SAMPLE RECEIPT AND LOGIN:

The cooler temperatures were 5.0 and 5.0 °C. All samples were received intact.

PCBs - 8082:

Sample fractions 01 and 06 contained badly weathered arochlors that could not be positively identified. These samples most closely resemble AR1232. They were calculated as total arochlor using AR1232 as the standard.

KEMRON ENVIRONMENTAL SERVICES

Product: 808-PCB-W - PCB's (Water)

Sample ID: L9909343-01
C Sample ID: S3-T5-
te/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 09/15/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TC tract Date: N/A
tract Date: 09/17/99
lysis Date: 09/18/99 Time: 07:04

Instrument: HP7
Analyst: CDB
Lab File ID: 7G3720

Method: 8082/3550
Run ID: R74004
Batch : WG65361

	#	Compound	Units	Result	Qualifiers	RL	Dilution
12	11-2	Aroclor-1016	ug/L		ND	0.50	1
11	28-2	Aroclor-1221	ug/L		ND	0.50	1
11	16-5	Aroclor-1232	ug/L	9.2		0.50	1
5	21-9	Aroclor-1242	ug/L		ND	0.50	1
12	29-6	Aroclor-1248	ug/L		ND	0.50	1
11	69-1	Aroclor-1254	ug/L		ND	0.50	1
11	82-5	Aroclor-1260	ug/L		ND	0.50	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	64.8	(13 - 154%)
Decachlorobiphenyl	68.6	(25 - 140%)

Product: 808-PCB-W - PCB's (Water)

Sample ID: L9909343-02
C Sample ID: S3-T5-I/MS
te/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 09/15/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCL tract Date: N/A
tract Date: 09/17/99
lysis Date: 09/18/99 Time: 07:30

Instrument: HP7
Analyst: CDB
Lab File ID: 7G3721

Method: 8082/3550
Run ID: R74004
Batch : WG65361

	#	Compound	Units	Result	Qualifiers	RL	Dilution
12	11-2	Aroclor-1016	ug/L		ND	0.50	1
11	28-2	Aroclor-1221	ug/L		ND	0.50	1
11	16-5	Aroclor-1232	ug/L		ND	0.50	1
53	21-9	Aroclor-1242	ug/L		ND	0.50	1
12	29-6	Aroclor-12	ug/L	110		0.50	1
11	69-1	Aroclor-12	ug/L		ND	0.50	1
11	82-5	Aroclor-12	ug/L		ND	0.50	1

RL = ting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9909343-02
Client Sample ID: S3-T5-I/MS
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 09/15/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 09/17/99
Analysis Date: 09/18/99 Time: 07:30

Instrument: HP7
Analyst: CDB
Lab File ID: 7G3721

Method: 8082/3550
Run ID: R74004
Batch : WG65361

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....	64.2		(13 - 154%)		
	Decachlorobiphenyl.....	73.8		(25 - 140%)		

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9909343-03
Client Sample ID: S3-T5-I/MSD
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 09/15/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 09/17/99
Analysis Date: 09/18/99 Time: 07:55

Instrument: HP7
Analyst: CDB
Lab File ID: 7G3722

Method: 8082/3550
Run ID: R74004
Batch : WG65361

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016.....	% Recovery		ND	0.50	1
11104-28-2	Aroclor-1221.....	% Recovery		ND	0.50	1
11141-16-5	Aroclor-1232.....	% Recovery		ND	0.50	1
53469-21-9	Aroclor-1242.....	% Recovery		ND	0.50	1
12672-29-6	Aroclor-1248.....	% Recovery	115		0.50	1
11097-69-1	Aroclor-1254.....	% Recovery		ND	0.50	1
11096-82-5	Aroclor-1260.....	% Recovery		ND	0.50	1
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....	89.1		(13 - 154%)		
	Decachlorobiphenyl.....	75.6		(25 - 140%)		

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Pro t: 808-PCB-W - PCB's (Water)

ab Sampl D: L9909343-04
Client Sampl D: S3-T5-LC
Site/Wor D: OMC WAUKEGAN
Ma x: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 09/15/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract e: N/A
Extract e: 09/17/99
Analysis e: 09/18/99 Time: 08:20

Instrument: HP7
Analyst: CDB
Lab File ID: 7G3723

Method: 8082/3550
Run ID: R74004
Batch : WG65361

CAS #	pound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	clor-1016	ug/L		ND	0.50	1
11104-28-2	clor-1221	ug/L		ND	0.50	1
11141-16-5	clor-1232	ug/L		ND	0.50	1
53469-21-9	clor-1242	ug/L		ND	0.50	1
12672-29-6	clor-1248	ug/L		ND	0.50	1
11097-69-1	clor-1254	ug/L		ND	0.50	1
11096-82-5	clor-1260	ug/L		ND	0.50	1

SURRO ES- In Percent Recovery:

,5,6-Tetrachloro-m-xylene	87.4	(13 - 154%)
achlorobiphenyl	101	(25 - 140%)

Pro t: 808-PCB-W - PCB's (Water)

Lab Sampl D: L9909343-05
Client Sampl D: S3-T5-E
Site/Wor D: OMC WAUKEGAN
Ma x: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 09/15/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract e: N/A
Extract e: 09/17/99
Analysis e: 09/18/99 Time: 08:46

Instrument: HP7
Analyst: CDB
Lab File ID: 7G3724

Method: 8082/3550
Run ID: R74004
Batch : WG65361

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	0.50	1

RL - Reporting Lim

KEMRON ENVIRONMENTAL SERVICES

Product: 808-PC[illegible]W - PCB's (Water)

Lab Sample ID:	L99093[illegible]-05	Dil. Type: N/A	Sample Weight: N/A
Client Sample ID:	S3-T5[illegible]	COC Info: N/A	Extract Volume: N/A
Site/Work ID:	OMC W[illegible]EGAN		
Matrix:	Water	Date Collected: 09/15/99	% Solid: N/A
TCLP Extract[illegible]e:	N/A	Instrument: HP7	Method: 8082/3550
Extract[illegible]e:	09/17/[illegible]9	Analyst: CDB	Run ID: R74004
Analysis[illegible]te:	09/18/[illegible]9 Time: 08:46	Lab File ID: 7G3724	Batch : WG65361

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
	SURR[illegible]ES- In P[illegible]cent Recovery:					
	[illegible],4,5,6-Tet[illegible]chloro-m-xylene.....	80.3		(13 - 154%)		
	Dec[illegible]achlorobi[illegible]henyl.....	96.0		(25 - 140%)		

Product: 808-PC[illegible]-W - PCB's (Water)

Lab Sample ID:	L99093[illegible]3-06	Dil. Type: N/A	Sample Weight: N/A
Client Sample ID:	W-T5-I	COC Info: N/A	Extract Volume: N/A
Site/Work ID:	OMC WA[illegible]KEGAN		
Matrix:	Water	Date Collected: 09/15/99	% Solid: N/A
TCLP Extract[illegible]te:	N/A	Instrument: HP7	Method: 8082/3550
Extract[illegible]te:	09/17/[illegible]9	Analyst: CDB	Run ID: R74004
Analysis[illegible]te:	09/18/[illegible]9 Time: 09:11	Lab File ID: 7G3725	Batch : WG65361

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016.....	ug/L		ND	0.50	1
11[illegible]4-28-2	Aroclor-122[illegible].....	ug/L		ND	0.50	1
11[illegible]1-16-5	Aroclor-1232.....	ug/L	1.8		0.50	1
53[illegible]9-21-9	Aroclor-1242.....	ug/L		ND	0.50	1
12[illegible]72-29-6	[illegible]clor-1248.....	ug/L		ND	0.50	1
11097-69-1	[illegible]clor-1254.....	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260.....	ug/L		ND	0.50	1
	SURRO[illegible]ATES- In Pe[illegible]cent Recovery:					
	2,4,5,6-Tet[illegible]chloro-m-xylene.....	75.0		(13 - 154%)		
	Decachlorobi[illegible]henyl.....	92.1		(25 - 140%)		

RL Reporting Li[illegible]t

Product: 808-PCB-W - PCB's (Water)

ab Sample ID:	L9909343-07	Dil. Type: N/A	Sample Weight: N/A
Cli nt Sample ID:	W-T5-LC	COC Info: N/A	Extract Volume: N/A
Site/Work ID:	OMC WAUKEGAN		
Matrix:	Water	Date Collected: 09/15/99	% Solid: N/A
TCLP Extract Date:	N/A	Instrument: HP7	Method: 8082/3550
Extract Date:	09/17/99	Analyst: CDB	Run ID: R74004
nalysis Date:	09/18/99 Time: 09:37	Lab File ID: 7G3726	Batch : WG65361

C S #	Compound	Units	Result	Qualifiers	RL	Dilution
126 4-11-2	Aroclor-1016	ug/L		ND	0.50	1
111 4-28-2	Aroclor-1221	ug/L		ND	0.50	1
111 1-16-5	Aroclor-1232	ug/L		ND	0.50	1
534 9-21-9	Aroclor-1242	ug/L		ND	0.50	1
126 2-29-6	Aroclor-1248	ug/L		ND	0.50	1
110 7-69-1	Aroclor-1254	ug/L		ND	0.50	1
110 6-82-5	Aroclor-1260	ug/L		ND	0.50	1

SURROGATES- In Percent Recovery:

2,4,5, -Tetrachlo o-m-xylene	83.1	(13 - 154%)
D ac orobiphenyl	99.2	(25 - 140%)

Product: 808-PCB-W - PCB's (Water)

ab Sample ID:	L9909343-08	Dil. Type: N/A	Sample Weight: N/A
Cli nt Sample ID:	W-T5-E	COC Info: N/A	Extract Volume: N/A
Site/Work ID:	OMC WAUKEGAN		
Matrix:	Water	Date Collected: 09/15/99	% Solid: N/A
TCLP Extract Date:	N/A	Instrument: HP7	Method: 8082/3550
Extract Date:	09/17/99	Analyst: CDB	Run ID: R74004
nalysis Date:	09/18/99 Time: 10:02	Lab File ID: 7G3727	Batch : WG65361

C S #	Compound	Units	Result	Qualifiers	RL	Dilution
126 4-11-2	Aroclor-1016	ug/L		ND	0.50	1
111 4-28-2	Aroclor-1221	ug/L		ND	0.50	1
111 1-16-5	Aroclor-1232	ug/L		ND	0.50	1
534 9-21-9	Aroclor 1242	ug/L		ND	0.50	1
126 2-29-6	Aroclor-1248	ug/L		ND	0.50	1
110 7-69-1	Aroclor-1254	ug/L		ND	0.50	1
110 6-82-5	Aroclor-1260	ug/L		ND	0.50	1

RL = orting Limit

KEMRON ENVIRONMENTAL SERVICES

Produc 08-PCB-W - PCB's (Water)

Lab Sample 9909343-08
Cl ent Sample -T5-E
Site/Work MC WAUKEGAN
Matr ater

Dil. Type: N/A
COC Info: N/A
Date Collected: 09/15/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCL Extract Date: /A
Extract Date: 9/17/99
Analysis Date: 9/18/99 Time: 10:02

Instrument: HP7
Analyst: CDB
Lab File ID: 7G3727

Method: 8082/3550
Run ID: R74004
Batch : WG65361

AS #	Compo d	Units	Result	Qualifiers	RL	Dilution
SURROGATES- In Percent Recovery:						
	2,4,5,6-Tetrachloro-m-xylene.....		76.2	(13 - 154%)		
	Decach orobiphenyl.....		69.5	(25 - 140%)		

Product: 08-PCB-W - PCB's (Water)

Lab Sample ID: 9909343-09
Cl ent Sample ID: -T5-I
Site/Work ID: MC WAUKEGAN
Matrix: ater

Dil. Type: N/A
COC Info: N/A
Date Collected: 09/15/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCL Extract Date: /A
Extract Date: 9/17/99
Analysis Date: 9/18/99 Time: 10:53

Instrument: HP7
Analyst: CDB
Lab File ID: 7G3729

Method: 8082/3550
Run ID: R74004
Batch : WG65361

AS #	Compo d	Units	Result	Qualifiers	RL	Dilution
12 4-11-2	Aroclor-1016.....	ug/L		ND	0.50	1
11 4-28-2	Aroclor-1221.....	ug/L		ND	0.50	1
11 1-16-5	Aroclor-1232.....	ug/L		ND	0.50	1
53 9-21-9	Aroclor-1242.....	ug/L		ND	0.50	1
12 2-29-6	Aroclor-1248.....	ug/L		ND	0.50	1
7-69-1	Aroclor-1254.....	ug/L		ND	0.50	1
6-82-5	Aroclor-1260.....	ug/L		ND	0.50	1
SURROGATES- In Percent Recovery:						
	2,4,5,6-Tetrachloro-m-xylene.....		71.2	(13 - 154%)		
	Decachlorobiphenyl.....		64.0	(25 - 140%)		

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Produ 1-PCB-W - PCB's (Water)

b Sample : 909343-10
Cl Sample : T5-LC
/Work : WAUKEGAN
Matr ter

Dil. Type: N/A
COC Info: N/A
Date Collected: 09/15/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCL ct Da A
ct Da /17/99
is Da /18/99 Time: 11:18

Instrument: HP7
Analyst: CDB
Lab File ID: 7G3730

Method: 8082/3550
Run ID: R74004
Batch : WG65361

C	Co		Units	Result	Qualifiers	RL	Dilution
126	-2	Arc 1016	ug/L		ND	0.50	1
111	-2	Arc 1221	ug/L		ND	0.50	1
111	-5	Arc 1232	ug/L		ND	0.50	1
534	-9	Arc 1242	ug/L		ND	0.50	1
12	-6	Arc 1248	ug/L		ND	0.50	1
1	-1	Arc 1254	ug/L		ND	0.50	1
1	-5	Arc 1260	ug/L		ND	0.50	1

RROGA a Percent Recovery:

2,	Tetrachloro-m-xylene	86.2	(13 - 154%)
De	robiphenyl	78.4	(25 - 140%)

Produ 1-PCB-W - PCB's (Water)

mple : 909343-11
mple : T5-E
/Work : WAUKEGAN
Matr ter

Dil. Type: N/A
COC Info: N/A
Date Collected: 09/15/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

T ct Da A
ct Da /17/99
is Da /18/99 Time: 11:43

Instrument: HP7
Analyst: CDB
Lab File ID: 7G3731

Method: 8082/3550
Run ID: R74004
Batch : WG65361

	Co		Units	Result	Qualifiers	RL	Dilution
	-2	Arc 1016	ug/L		ND	0.50	1
	-2	Arc 1221	ug/L		ND	0.50	1
	-5	Arc 1232	ug/L		ND	0.50	1
	-9	Arc 1242	ug/L		ND	0.50	1
	6	Arc 1248	ug/L		ND	0.50	1
	1	Arc 1254	ug/L		ND	0.50	1
	-5	Arc 1260	ug/L		ND	0.50	1

g Limit

Logi 909
Sept 22, 1999 :41 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 8-PCB-W - PCB's (Water)

ample ID:	909343-11	Dil. Type: N/A	Sample Weight: N/A
Cli ample ID:	T5-E	COC Info: N/A	Extract Volume: N/A
/Work ID:	C WAUKEGAN		
Matrix:	ter	Date Collected: 09/15/99	% Solid: N/A
TCLP act Date:	A	Instrument: HP7	Method: 8082/3550
act Date:	/17/99	Analyst: CDB	Run ID: R74004
sis Date:	/18/99 Time: 11:43	Lab File ID: 7G3731	Batch : WG65361

C	Compo	Units	Result	Qualifiers	RL	Dilution
	URROGATES- Percent Recovery:					
	2,4,5, Tetrachloro-m-xylene.....	78.8		(13 - 154%)		
	Decach robiphenyl.....	91.1		(25 - 140%)		

RL - Limit

#: 99-09-343
ıber 22, 1999 :41 m

KEMRON ENVIRONMENTAL SERVICES
WORK GROUPS

Wo Gr	un ID	Samp	l pe	Matrix	Product	Method	Date Collected	Department
WG65	R74004	L99093	01	Water	PCB's (Water)	8082/3550	15-SEP-1999	Extraction
WG65	R74004	L99093	02	Water	PCB's (Water)	8082/3550	15-SEP-1999	Extraction
WG65	R74004	L99093	03	Water	PCB's (Water)	8082/3550	15-SEP-1999	Extraction
WG65	R74004	L99093	04	Water	PCB's (Water)	8082/3550	15-SEP-1999	Extraction
WG65	R74004	L99093	05	Water	PCB's (Water)	8082/3550	15-SEP-1999	Extraction
WG65	R74004	L99093	06	Water	PCB's (Water)	8082/3550	15-SEP-1999	Extraction
WG65	R74004	L99093	07	Water	PCB's (Water)	8082/3550	15-SEP-1999	Extraction
WG65	R74004	L99093	08	Water	PCB's (Water)	8082/3550	15-SEP-1999	Extraction
WG65	R74004	L9909	09	Water	PCB's (Water)	8082/3550	15-SEP-1999	Extraction
WG65	R74004	L9909	10	Water	PCB's (Water)	8082/3550	15-SEP-1999	Extraction
WG65	R74004	L9909	11	Water	PCB's (Water)	8082/3550	15-SEP-1999	Extraction
WG65	R74004	L9909	01	Water	PCB's (Water)	8082/3550	15-SEP-1999	Semivolatile - GC
WG65	R74004	L9909	02	Water	PCB's (Water)	8082/3550	15-SEP-1999	Semivolatile - GC
WG65	R74004	L9909	03	Water	PCB's (Water)	8082/3550	15-SEP-1999	Semivolatile - GC
WG65	R74004	L9909	04	Water	PCB's (Water)	8082/3550	15-SEP-1999	Semivolatile - GC
WG65	R74004	L9909	05	Water	PCB's (Water)	8082/3550	15-SEP-1999	Semivolatile - GC
WG65	R74004	L9909	06	Water	PCB's (Water)	8082/3550	15-SEP-1999	Semivolatile - GC
WG65	R74004	L9909	07	Water	PCB's (Water)	8082/3550	15-SEP-1999	Semivolatile - GC
WG65	R74004	L9909	08	Water	PCB's (Water)	8082/3550	15-SEP-1999	Semivolatile - GC
WG65	R74004	L9909	09	Water	PCB's (Water)	8082/3550	15-SEP-1999	Semivolatile - GC
WG65	R74004	L9909	10	Water	PCB's (Water)	8082/3550	15-SEP-1999	Semivolatile - GC
WG65	R74004	L9909	11	Water	PCB's (Water)	8082/3550	15-SEP-1999	Semivolatile - GC

KEMRON ANALYST LIST

Ohio Valley Laboratory

09/02/99

ALC - - Ann L. Clark
CBN - - C. Brian Noll
CEB - - Chad E. Barnes
CDB - - Christy D. Burton
CG - - Cheryl Graham
CK - - Carl King
CMS - - Crystal M. Stevens
CRC - - Carla R. Cochran
DIH - - Deanna I. Hesson
DLN - - Deanna L. Norton
DLP - - Dorothy L. Payne
DMD - - David M. Dye
ECL - - Eric C. Lawson
FEH - - Fay E. Harmon
GWH - - George W. Hutchinson
HV - - Hema Vilasagar
JCR - - Jennifer C. Randall
JDN - - Jamie D. Newell
JG - - Jonathan Graziani
JLH - - Janice L. Holland
JWR - - John W. Richards
JYH - - Ji Y. Hu

KAS - - Kevin A Stutler
KHA - - Kim H. Archer
LKM - - Laura K. Morris
MDA - - Mike D. Albertson
MDC - - Michael D. Cochran
MES - - Mary E. Schiling
MLS - - Michael L. Schimmel
MMB - - Maren M. Beery
RDC - - Rebecca D. Cutlip
REF - - Ron E. Fertile
REK - - Robert E. Kyer
RSS - - Regina S. Simmons
RWC - - Rodney W. Campbell
SJK - - Sindy J. Kinney
SJM - - Shawn J. Marshall
SLP - - Sheri L. Pfalzgraf
SMW - - Shauna M. Welch
SPL - - Steve P. Learn
SPS - - Steve P. Swatzel
TMM - - Tammy M. Morris
TRS - - Todd R. Stack
VC - - Vicki Collier
VMN - - Vincent M. Nedeff

KEMRON Environmental Services, Inc.
LIST OF VALID QUALIFIERS (qual)
December 10, 1998

Qualifier	Description
/	See the report narrative
N	Not applicable
H	Correlation coefficient for the MSA is less than 0.995
<	Less than
>	Greater than
B	Present in the method blank
C	Confirmed by GC/MS
*	Surrogate or spike compound out of range
C	Confluent growth
D	The analyte was quantified at a secondary dilution factor
DL	Surrogate or spike was diluted out
E	Estimated concentration due to sample matrix interference
F	Present below nominal reporting limit (AFCEE only)
FL	Free liquid
I	Semiquantitative result, out of instrument calibration range
J	Present below nominal reporting limit
L	Sample reporting limits elevated due to matrix interference
M	Duplicate injection precision not met

Qualifier	Description
N	Tentatively Identified Compound (TIC)
ND	Not detected at or above the reporting limit (RL)
NF	Not found
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentration > 25% difference between the two GC columns
QNS	Quantity not sufficient to perform analysis
R	Analyte exceeds regulatory limit
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TNTC	Too numerous to count
U	Analyzed for but not detected
W	Post-digestion spike for furnace AA out of control limits
Z	Can not be resolved from isomer. See below.

Special Notes for Organic Analytes

1. Acrolein and acrylonitrile by method 624 are semiquantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

OMC

OUTBOARD MARINE CORPORATION

CHAIN OF CUSTODY

OMC FACILITY: OMC WAUKEGAN

PHONE NO.: 847/689-5363

ADDRESS:

SAMPLE COLLECTED BY (Please Print): DAVE WESNER

(SIGNATURE): [signature]

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	NO. OF CONTAINERS	PCB TOTAL								COMMENTS
	9/15/99	per containers	S3 TS I	4	X								MS/MSD
			S3 TS LC	2	X								
			S3 TS E	2	X								
			W TS I	2	X								
			W TS LC	2	X								
			W TS E	2	X								
			E TS I	2	X								
			E TS LC	2	X								C/C sealed
			E TS E	2	X								5x5 in tact
													cooler temps 5.5

TRANSFER NUMBER	RELINQUISHED BY (Signature)	ACCEPTED BY (Signature)	DATE	TIME
1	[signature]	Tracy Baldwin	9/17/99	0950
2				
3				

DISTRIBUTION:

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No. 02844

KEMRON Environmental Services

SUMMARY REPORT

October Monthly
Sampling Event

KEMRON
ENVIRONMENTAL SERVICES

KEMRON Environmental Services
109 Starlite Park
Marietta, Ohio 45750
Phone: (740) 373-4071

Outboard Marine Corporation
90 Sea Horse Drive
Waukegan, IL 60085

Attention: Mr. Tony Montemurro

PO Number:
Account Number: OUTBOARD-379

Login #: L9910203
Report Date: 10/19/99
Work ID: OMC WAUKEGAN
Date Received: 10/12/99

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
L9910203-01	S3-T5-I	L9910203-02	S3-T5-I/MS
L9910203-03	S3-T5-I/MSD	L9910203-04	S3-T5-LC
L9910203-05	S3-T5-E	L9910203-06	W-T5-I
L9910203-07	W-T5-LC	L9910203-08	W-T5-E
L9910203-09	E-T5-I	L9910203-10	E-T5-LC
L9910203-11	E-T5-E		

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861

Certified By
Dennis S. Tepe

KEMRON
ENVIRONMENTAL SERVICES

KEMRON ENVIRONMENTAL SERVICES
REPORT NARRATIVE

SAMPLE RECEIPT AND LOGIN:

The cooler temperature was 6.0 and 3.0 °C. All samples were received intact.

PCB's - 8082:

The MS/MSD parent sample contained a pattern very similar to AR1221. This pattern exhibited some possible weathering making a positive ID difficult. The quantitation was performed using this AR1221 standard because it represented the best match.

KEMRON ENVIRONMENTAL SERVICES

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910203-01
Client Sample ID: S3-T5-I
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02849/
Date Collected: 10/11/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/12/99
Analysis Date: 10/14/99 Time: 23:40

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2445

Method: 8082/3550
Run ID: R75859
Batch : WG66627

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
1267[illegible]-11-2	Aroclor-1016	ug/L		ND	0.50	1
1110[illegible]-28-2	Aroclor-1221	ug/L	11		0.50	1
1114[illegible]-16-5	Aroclor-1232	ug/L		ND	0.50	1
5346[illegible]-21-9	Aroclor-1242	ug/L		ND	0.50	1
1267[illegible]-29-6	Aroclor-1248	ug/L		ND	0.50	1
1109[illegible]-69-1	Aroclor-1254	ug/L		ND	0.50	1
1109[illegible]-82-5	Aroclor-1260	ug/L		ND	0.50	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	193	*SMI	(13 - 154%)
Decachlorobiphenyl	74.0		(25 - 140%)

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910203-02
Client Sample ID: S3-T5-I/MS
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02849/
Date Collected: 10/11/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/12/99
Analysis Date: 10/14/99 Time: 23:59

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2446

Method: 8082/3550
Run ID: R75859
Batch : WG66627

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
1267[illegible]11-2	Aroclor-1016	% Recovery		NS	0.50	1
1110[illegible]28-2	Aroclor-1221	ug/L	11.4	NS	0.50	1
1114[illegible]16-5	Aroclor-1232	% Recovery		NS	0.50	1
5346[illegible]21-9	Aroclor-1242	% Recovery		NS	0.50	1
1267[illegible]29-6	Aroclor-1248	% Recovery	128		0.50	1
1109[illegible]69-1	Aroclor-1254	% Recovery		NS	0.50	1
1109[illegible]82-5	Aroclor-1260	% Recovery		NS	0.50	1

RL = Reporting Limit

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID:	L9910203-02	Dil. Type: N/A	Sample Weight: N/A
Client Sample ID:	S3-T5-I/MS	COC Info: 02849/	Extract Volume: N/A
Site/Work ID:	OMC WAUKEGAN		
Matrix:	Water	Date Collected: 10/11/99	% Solid: N/A
TCL Extract Date:	N/A	Instrument: HP4	Method: 8082/3550
Extract Date:	10/12/99	Analyst: ECL	Run ID: R75859
Analysis Date:	10/14/99 Time: 23:59	Lab File ID: 4GF2446	Batch : WG66627

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....	137		(13 - 154%)		
	Decachlorobiphenyl.....	73.4		(25 - 140%)		

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID:	L9910203-03	Dil. Type: N/A	Sample Weight: N/A
Client Sample ID:	S3-T5-I/MSD	COC Info: 02849/	Extract Volume: N/A
Site/Work ID:	OMC WAUKEGAN		
Matrix:	Water	Date Collected: 10/11/99	% Solid: N/A
TCL Extract Date:	N/A	Instrument: HP4	Method: 8082/3550
Extract Date:	10/12/99	Analyst: ECL	Run ID: R75861
Analysis Date:	10/15/99 Time: 00:17	Lab File ID: 4GF2447	Batch : WG66627

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12[illegible]-11-2	Aroclor-1016.....	% Recovery		NS	0.50	1
11[illegible]-28-2	Aroclor-1221.....	ug/L	13.3	NS	0.50	1
11[illegible]-16-5	Aroclor-1232.....	% Recovery		NS	0.50	1
5[illegible]-21-9	Aroclor-1242.....	% Recovery		NS	0.50	1
12[illegible]-29-6	Aroclor-1248.....	% Recovery	124		0.50	1
11[illegible]-69-1	Aroclor-1254.....	% Recovery		NS	0.50	1
11[illegible]-82-5	Aroclor-1260.....	% Recovery		NS	0.50	1
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....	177 *SMI		(13 - 154%)		
	Decachlorobiphenyl.....	73.8		(25 - 140%)		

RL - Reporting Limit

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910203-04
Client Sample ID: S3-T5-LC
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02849/
Date Collected: 10/11/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/12/99
Analysis Date: 10/15/99 Time: 00:36

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2448

Method: 8082/3550
Run ID: R75861
Batch : WG66627

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
126..11-2	Aroclor-1016	ug/L		ND	0.50	1
111..-28-2	Aroclor-1221	ug/L		ND	0.50	1
111..-16-5	Aroclor-1232	ug/L		ND	0.50	1
534..-21-9	Aroclor-1242	ug/L		ND	0.50	1
126..-29-6	Aroclor-1248	ug/L		ND	0.50	1
110..-69-1	Aroclor-1254	ug/L		ND	0.50	1
110..-82-5	Aroclor-1260	ug/L		ND	0.50	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	60.1	(13 - 154%)
Decachlorobiphenyl	75.4	(25 - 140%)

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910203-05
Client Sample ID: S3-T5-E
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02849/
Date Collected: 10/11/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/12/99
Analysis Date: 10/15/99 Time: 00:54

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2449

Method: 8082/3550
Run ID: R75861
Batch : WG66627

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
126..-11-2	Aroclor-1016	ug/L		ND	0.50	1
111..-28-2	Aroclor-1221	ug/L		ND	0.50	1
111..-16-5	Aroclor-1232	ug/L		ND	0.50	1
534..-21-9	Aroclor-1242	ug/L		ND	0.50	1
126..-29-6	Aroclor-1248	ug/L		ND	0.50	1
110..-69-1	Aroclor-1254	ug/L		ND	0.50	1
110..-82-5	Aroclor-1260	ug/L		ND	0.50	1

RL = Reporting Limit

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910203-05
Client Sample ID: S3-T5-E
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02849/
Date Collected: 10/11/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/12/99
Analysis Date: 10/15/99 Time: 00:54

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2449

Method: 8082/3550
Run ID: R75861
Batch : WG66627

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....	61.8		(13 - 154%)		
	Decachlorobiphenyl.....	79.9		(25 - 140%)		

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910203-06
Client Sample ID: W-T5-I
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02849/
Date Collected: 10/11/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/12/99
Analysis Date: 10/15/99 Time: 01:13

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2450

Method: 8082/3550
Run ID: R75861
Batch : WG66627

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016.....	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221.....	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232.....	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242.....	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248.....	ug/L	0.79		0.50	1
11097-69-1	Aroclor-1254.....	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260.....	ug/L		ND	0.50	1
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....	64.0		(13 - 154%)		
	Decachlorobiphenyl.....	81.1		(25 - 140%)		

RL = Reporting Limit

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910203-07
Client Sample ID: W-T5-LC
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02849/
Date Collected: 10/11/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/12/99
Analysis Date: 10/15/99 Time: 01:31

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2451

Method: 8082/3550
Run ID: R75861
Batch : WG66627

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	0.50	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	53.8	(13 - 154%)
Decachlorobiphenyl	82.4	(25 - 140%)

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910203-08
Client Sample ID: W-T5-E
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02849/
Date Collected: 10/11/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/12/99
Analysis Date: 10/15/99 Time: 02:27

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2454

Method: 8082/3550
Run ID: R75861
Batch : WG66627

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	0.50	1

RL = Reporting Limit

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910203-08
Client Sample ID: W-T5-E
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02849/
Date Collected: 10/11/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/12/99
Analysis Date: 10/15/99 Time: 02:27

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2454

Method: 8082/3550
Run ID: R75861
Batch : WG66627

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....	52.5		(13 - 154%)		
	Decachlorobiphenyl.....	85.0		(25 - 140%)		

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910203-09
Client Sample ID: E-T5-I
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02849/
Date Collected: 10/11/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/12/99
Analysis Date: 10/15/99 Time: 02:46

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2455

Method: 8082/3550
Run ID: R75861
Batch : WG66627

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016.....	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221.....	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232.....	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242.....	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248.....	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254.....	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260.....	ug/L		ND	0.50	1
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....	59.3		(13 - 154%)		
	Decachlorobiphenyl.....	73.2		(25 - 140%)		

RL = Reporting Limit

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910203-10
Client Sample ID: E-T5-LC
Site/Work ID: OMC WAUKEGAN
Matrix: water

Dil. Type: N/A
COC Info: 02849/
Date Collected: 10/11/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/12/99
Analysis Date: 10/15/99 Time: 03:04

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2456

Method: 8082/3550
Run ID: R75861
Batch : WG66627

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	0.50	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	62.3	(13 - 154%)
Decachlorobiphenyl	80.7	(25 - 140%)

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910203-11
Client Sample ID: E-T5-E
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02849/
Date Collected: 10/11/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/12/99
Analysis Date: 10/15/99 Time: 03:23

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2457

Method: 8082/3550
Run ID: R75861
Batch : WG66627

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	0.50	1

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910203-11
Client Sample ID: E-T5-E
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02849/
Date Collected: 10/11/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/12/99
Analysis Date: 10/15/99 Time: 03:23

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2457

Method: 8082/3550
Run ID: R75861
Batch : WG66627

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....	71.6		(13 - 154%)		
	Decachlorobiphenyl.....	84.3		(25 - 140%)		

RL = Reporting Limit

Order #: 99-10-2[illegible]3
October 19, 1999 12:27 pm

KEMRON ENVIRONMENTAL SERVICES
WORK GROUPS

Work Group	Run ID	Sample	Dil Type	Matrix	Product	Method	Date Collected	Department
WG66588	R75859	L9910203-01		Water	PCB's (Water)	8082/3550	11-OCT-1999	Extraction
WG66588	R75859	L9910203-02		Water	PCB's (Water)	8082/3550	11-OCT-1999	Extraction
WG66588	R75861	L9910203-03		Water	PCB's (Water)	8082/3550	11-OCT-1999	Extraction
WG66588	R75861	L9910203-04		Water	PCB's (Water)	8082/3550	11-OCT-1999	Extraction
WG66588	R75861	L9910203-05		Water	PCB's (Water)	8082/3550	11-OCT-1999	Extraction
WG66588	R75861	L9910203-06		Water	PCB's (Water)	8082/3550	11-OCT-1999	Extraction
WG66588	R75861	L9910203-07		Water	PCB's (Water)	8082/3550	11-OCT-1999	Extraction
WG66588	R75861	L9910203-08		Water	PCB's (Water)	8082/3550	11-OCT-1999	Extraction
WG66588	R75861	L9910203-09		Water	PCB's (Water)	8082/3550	11-OCT-1999	Extraction
WG66588	R75861	L9910203-10		Water	PCB's (Water)	8082/3550	11-OCT-1999	Extraction
WG66588	R75861	L9910203-11		Water	PCB's (Water)	8082/3550	11-OCT-1999	Extraction
WG66627	R75859	L9910203-01		Water	PCB's (Water)	8082/3550	11-OCT-1999	Semivolatile - GC
WG66627	R75859	L9910203-02		Water	PCB's (Water)	8082/3550	11-OCT-1999	Semivolatile - GC
WG66627	R75861	L9910203-03		Water	PCB's (Water)	8082/3550	11-OCT-1999	Semivolatile - GC
WG66627	R75861	L9910203-04		Water	PCB's (Water)	8082/3550	11-OCT-1999	Semivolatile - GC
WG66627	R75861	L9910203-05		Water	PCB's (Water)	8082/3550	11-OCT-1999	Semivolatile - GC
WG66627	R75861	L9910203-06		Water	PCB's (Water)	8082/3550	11-OCT-1999	Semivolatile - GC
WG66627	R75861	L9910203-07		Water	PCB's (Water)	8082/3550	11-OCT-1999	Semivolatile - GC
WG66627	R75861	L9910203-08		Water	PCB's (Water)	8082/3550	11-OCT-1999	Semivolatile - GC
WG66627	R75861	L9910203-09		Water	PCB's (Water)	8082/3550	11-OCT-1999	Semivolatile - GC
WG66627	R75861	L9910203-10		Water	PCB's (Water)	8082/3550	11-OCT-1999	Semivolatile - GC
WG66627	R75861	L9910203-11		Water	PCB's (Water)	8082/3550	11-OCT-1999	Semivolatile - GC

KEMRON ANALYST LIST

Ohio Valley Laboratory

09/02/99

ALC - - Ann L. Clark
CBN - - C. Brian Noll
CEB - - Chad E. Barnes
CDB - - Christy D. Burton
CG - - Cheryl Graham
CK - - Carl King
CMS - - Crystal M. Stevens
CRC - - Carla R. Cochran
DIH - - Deanna I. Hesson
DLN - - Deanna L. Norton
DLP - - Dorothy L. Payne
DMD - - David M. Dye
ECL - - Eric C. Lawson
FEH - - Fay E. Harmon
GWH - - George W. Hutchinson
HV - - Hema Vilasagar
JCR - - Jennifer C. Randall
JDN - - Jamie D. Newell
JG - - Jonathan Graziani
JLH - - Janice L. Holland
JWR - - John W. Richards
JYH - - Ji Y. Hu

KAS - - Kevin A Stutler
KHA - - Kim H. Archer
LKM - - Laura K. Morris
MDA - - Mike D. Albertson
MDC - - Michael D. Cochran
MES - - Mary E. Schiling
MLS - - Michael L. Schimmel
MMB - - Maren M. Beery
RDC - - Rebecca D. Cutlip
REF - - Ron E. Fertile
REK - - Robert E. Kyer
RSS - - Regina S. Simmons
RWC - - Rodney W. Campbell
SJK - - Sindy J. Kinney
SJM - - Shawn J. Marshall
SLP - - Sheri L. Pfalzgraf
SMW - - Shauna M. Welch
SPL - - Steve P. Learn
SPS - - Steve P. Swatzel
TMM - - Tammy M. Morris
TRS - - Todd R. Stack
VC - - Vicki Collier
VMN - - Vincent M. Nedeff

KEMRON Environmental Services, Inc.
LIST OF VALID QUALIFIERS (qual)
December 10, 1998

Qualifier	Description
A	See the report narrative
NA	Not applicable
+	Correlation coefficient for the MSA is less than 0.995
<	Less than
>	Greater than
B	Present in the method blank
C	Confirmed by GC/MS
*	Surrogate or spike compound out of range
CG	Confluent growth
D	The analyte was quantified at a secondary dilution factor
DL	Surrogate or spike was diluted out
E	Estimated concentration due to sample matrix interference
F	Present below nominal reporting limit (AFCEE only)
FL	Free liquid
I	Semi-quantitative result, out of instrument calibration range
J	Present below nominal reporting limit
L	Sample reporting limits elevated due to matrix interference
M	Duplicate injection precision not met

Qualifier	Description
N	Tentatively Identified Compound (TIC)
ND	Not detected at or above the reporting limit (RL)
NF	Not found
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentration > 25% difference between the two GC columns
QNS	Quantity not sufficient to perform analysis
R	Analyte exceeds regulatory limit
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TNTC	Too numerous to count
U	Analyzed for but not detected
W	Post-digestion spike for furnace AA out of control limits
Z	Can not be resolved from isomer. See below.

Special Notes for Organic Analytes

1. Acrolein and acrylonitrile by method 624 are semiquantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methylphenol and 4-Methyphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

KEMRON Environmental Services

SUMMARY REPORT

Extra
(Voluntary)
Monthly Sampling
Event Data
10/99

KEMRON
ENVIRONMENTAL SERVICES

KEMRON Environmental Services
109 Starlite Park
Marietta, Ohio 45750
Phone: (740) 373-4071

Outboard Marine Corporation
90 Sea Horse Drive
Waukegan, IL 60085

Attention: Mr. Tony Montemurro

PO Number:
Account Number: OUTBOARD-379

Login #: L9910249
Report Date: 10/21/99
Work ID: OMC WAUKEGAN
Date Received: 10/14/99

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
L9910249-01	S3-T5-I	L9910249-02	S3-T5-I/MS
L9910249-03	S3-T5-I/MSD	L9910249-04	S3-T5-LC
L9910249-05	S3-T5-E	L9910249-06	W-T5-I
L9910249-07	W-T5-LC	L9910249-08	W-T5-E
L9910249-09	E-T5-I	L9910249-10	E-T5-LC
L9910249-11	E-T5-E		

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861

Certified By
Dennis S. Tepe

KEMRON
ENVIRONMENTAL SERVICES

KEMRON ENVIRONMENTAL SERVICES
REPORT NARRATIVE

SAMPLE RECEIPT AND LOGIN:

The cooler temperature was 5.0 and 5.0 °C. All samples were received intact.

PCB's [illegible]8082.

Sample [illegible]on 01 yielded a % recovery for tetrachloro-m-xylene that was outside advisory limits. MS/MSD analysis confirms sample matrix interference.

KEMRON ENVIRONMENTAL SERVICES

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910249-01
Client Sample ID: S3-T5-I
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02856/
Date Collected: 10/13/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/14/99
Analysis Date: 10/15/99 Time: 18:15

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2477

Method: 8082/3550
Run ID: R76091
Batch : WG66769

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L	11		0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	0.50	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	180	*SMI	(13 - 154%)
Decachlorobiphenyl	67.8		(25 - 140%)

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910249-02
Client Sample ID: S3-T5-I/MS
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02856/
Date Collected: 10/13/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/14/99
Analysis Date: 10/15/99 Time: 18:34

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2478

Method: 8082/3550
Run ID: R76091
Batch : WG66769

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	% Recovery		NS	0.50	1
11104-28-2	Aroclor-1221	% Recovery		NS	0.50	1
11141-16-5	Aroclor-1232	% Recovery		NS	0.50	1
53469-21-9	Aroclor-1242	% Recovery		NS	0.50	1
12672-29-6	Aroclor-1248	% Recovery	113		0.50	1
11097-69-1	Aroclor-1254	% Recovery		NS	0.50	1
11096-82-5	Aroclor-1260	% Recovery		NS	0.50	1

RL = Reporting Limit

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910249-02
Client Sample ID: S3-T5-I/MS
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02856/
Date Collected: 10/13/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/14/99
Analysis Date: 10/15/99 Time: 18:34

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2478

Method: 8082/3550
Run ID: R76091
Batch : WG66769

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....	181	*SMI	(13 - 154%)		
	Decachlorobiphenyl.....	60.8		(25 - 140%)		

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910249-03
Client Sample ID: S3-T5-I/MSD
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02856/
Date Collected: 10/13/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/14/99
Analysis Date: 10/15/99 Time: 18:52

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2479

Method: 8082/3550
Run ID: R76091
Batch : WG66769

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016.....	% Recovery		NS	0.50	1
11104-28-2	Aroclor-1221.....	% Recovery		NS	0.50	1
11141-16-5	Aroclor-1232.....	% Recovery		NS	0.50	1
53469-21-9	Aroclor-1242.....	% Recovery		NS	0.50	1
12672-29-6	Aroclor-1248.....	% Recovery	112		0.50	1
11097-69-1	Aroclor-1254.....	% Recovery		NS	0.50	1
11096-82-5	Aroclor-1260.....	% Recovery		NS	0.50	1
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....	184	*SMI	(13 - 154%)		
	Decachlorobiphenyl.....	77.8		(25 - 140%)		

RL = Reporting Limit

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910249-04
Client Sample ID: S3-T5-LC
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02856/
Date Collected: 10/13/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/14/99
Analysis Date: 10/15/99 Time: 19:11

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2480

Method: 8082/3550
Run ID: R76091
Batch : WG66769

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	0.50	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	68.1	(13 - 154%)
Decachlorobiphenyl	70.7	(25 - 140%)

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910249-05
Client Sample ID: S3-T5-E
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02856/
Date Collected: 10/13/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/14/99
Analysis Date: 10/15/99 Time: 19:30

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2481

Method: 8082/3550
Run ID: R76091
Batch : WG66769

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	0.50	1

RL = Reporting Limit

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910249-05
Client Sample ID: S3-T5-E
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02856/
Date Collected: 10/13/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/14/99
Analysis Date: 10/15/99 Time: 19:30

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2481

Method: 8082/3550
Run ID: R76091
Batch : WG66769

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....	72.8		(13 - 154%)		
	Decachlorobiphenyl.....	78.8		(25 - 140%)		

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910249-06
Client Sample ID: W-T5-I
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02856/
Date Collected: 10/13/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/14/99
Analysis Date: 10/15/99 Time: 19:48

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2482

Method: 8082/3550
Run ID: R76091
Batch : WG66769

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016.....	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221.....	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232.....	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242.....	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248.....	ug/L	0.88		0.50	1
11097-69-1	Aroclor-1254.....	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260.....	ug/L		ND	0.50	1
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....	76.2		(13 - 154%)		
	Decachlorobiphenyl.....	82.6		(25 - 140%)		

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910249-07
Client Sample ID: W-T5-LC
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02856/
Date Collected: 10/13/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/14/99
Analysis Date: 10/15/99 Time: 20:44

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2485

Method: 8082/3550
Run ID: R76091
Batch : WG66769

CAS	#	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2		Aroclor-1016	ug/L		ND	0.50	1
11104-28-2		Aroclor-1221	ug/L		ND	0.50	1
11141-16-5		Aroclor-1232	ug/L		ND	0.50	1
53469-21-9		Aroclor-1242	ug/L		ND	0.50	1
12672-29-6		Aroclor-1248	ug/L		ND	0.50	1
11097-69-1		Aroclor-1254	ug/L		ND	0.50	1
11096-82-5		Aroclor-1260	ug/L		ND	0.50	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	70.8	(13 - 154%)
Decachlorobiphenyl	80.1	(25 - 140%)

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910249-08
Client Sample ID: W-T5-E
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02856/
Date Collected: 10/13/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/14/99
Analysis Date: 10/15/99 Time: 21:02

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2486

Method: 8082/3550
Run ID: R76091
Batch : WG66769

CAS	#	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2		Aroclor-1016	ug/L		ND	0.50	1
11104-28-2		Aroclor-1221	ug/L		ND	0.50	1
11141-16-5		Aroclor-1232	ug/L		ND	0.50	1
53469-21-9		Aroclor-1242	ug/L		ND	0.50	1
12672-29-6		Aroclor-1248	ug/L		ND	0.50	1
11097-69-1		Aroclor-1254	ug/L		ND	0.50	1
11096-82-5		Aroclor-1260	ug/L		ND	0.50	1

RL = Reporting Limit

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910249-08
Client Sample ID: W-T5-E
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02856/
Date Collected: 10/13/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/14/99
Analysis Date: 10/15/99 Time: 21:02

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2486

Method: 8082/3550
Run ID: R76091
Batch : WG66769

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene		71.0	(13 - 154%)		
	Decachlorobiphenyl		82.4	(25 - 140%)		

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910249-09
Client Sample ID: E-T5-I
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02856/
Date Collected: 10/13/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/14/99
Analysis Date: 10/15/99 Time: 21:20

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2487

Method: 8082/3550
Run ID: R76091
Batch : WG66769

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	0.50	1
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene		79.6	(13 - 154%)		
	Decachlorobiphenyl		80.1	(25 - 140%)		

RL = Reporting Limit

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910249-10
Client Sample ID: E-T5-LC
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02856/
Date Collected: 10/13/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/14/99
Analysis Date: 10/15/99 Time: 21:39

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2488

Method: 8082/3550
Run ID: R76091
Batch : WG66769

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	0.50	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	64.5	(13 - 154%)
Decachlorobiphenyl	70.7	(25 - 140%)

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910249-11
Client Sample ID: E-T5-E
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02856/
Date Collected: 10/13/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/14/99
Analysis Date: 10/15/99 Time: 21:57

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2489

Method: 8082/3550
Run ID: R76091
Batch : WG66769

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	0.50	1

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: **808-PCB-W - PCB's (Water)**

I Sample ID:	L9910249-11	Dil. Type: N/A	Sample Weight: N/A
Clie Sample ID:	E-T5-E	COC Info: 02856/	Extract Volume: N/A
e/Work II:	OMC WAUKEGAN		
Matri :	Water	Date Collected: 10/13/99	% Solid: N/A
TCLP ract Dat :	N/A	Instrument: HP4	Method: 8082/3550
ract Dat :	10/14/99	Analyst: ECL	Run ID: R76091
I ysis Dat :	10/15/99 Time: 21:57	Lab File ID: 4GF2489	Batch : WG66769

CI	Compound	Units	Result	Qualifiers	RL	Dilution
	SURROGATES- **In Percent Recovery:**					
	2,4,5,6-Tetrachloro-m-xylene.....	76.8		(13 - 154%)		
	Decachlorobiphenyl.....	75.5		(25 - 140%)		

RL = Reporting Limit

Order #: 99-10-249
October 21, 1999 03:27 pm

KEMRON ENVIRONMENTAL SERVICES
WORK GROUPS

Work Group	Run ID	Sample	Dil Type	Matrix	Product	Method	Date Collected	Department
WG667[illegible]	R76091	L991[illegible]49-01		Water	PCB's (Water)	8082/3550	13-OCT-1999	Extraction
WG667[illegible]	R76091	L9910249-02		Water	PCB's (Water)	8082/3550	13-OCT-1999	Extraction
WG667[illegible]	R76091	L9910249-03		Water	PCB's (Water)	8082/3550	13-OCT-1999	Extraction
WG667[illegible]	R76091	L9910249-04		Water	PCB's (Water)	8082/3550	13-OCT-1999	Extraction
WG667[illegible]	R76091	L9910249-05		Water	PCB's (Water)	8082/3550	13-OCT-1999	Extraction
WG667[illegible]	R76091	L9910249-06		Water	PCB's (Water)	8082/3550	13-OCT-1999	Extraction
WG667[illegible]	R76091	L9910249-07		Water	PCB's (Water)	8082/3550	13-OCT-1999	Extraction
WG667[illegible]	R76091	L9910249-08		Water	PCB's (Water)	8082/3550	13-OCT-1999	Extraction
WG667[illegible]	R76091	L9910249-09		Water	PCB's (Water)	8082/3550	13-OCT-1999	Extraction
WG667[illegible]	R76091	L9910249-10		Water	PCB's (Water)	8082/3550	13-OCT-1999	Extraction
WG667[illegible]	R76091	L991024[illegible]-11		Water	PCB's (Water)	8082/3550	13-OCT-1999	Extraction
WG6676[illegible]	R76091	L9[illegible]-01		Water	PCB's (Water)	8082/3550	13-OCT-1999	Semivolatile - GC
WG667[illegible]	R76091	L991024[illegible]		Water	PCB's (Water)	8082/3550	13-OCT-1999	Semivolatile - GC
WG667[illegible]	R76091	L991024[illegible]-04		Water	PCB's (Water)	8082/3550	13-OCT-1999	Semivolatile - GC
WG667[illegible]	R76091	L9[illegible]-04		Water	PCB's (Water)	8082/3550	13-OCT-1999	Semivolatile - GC
WG667[illegible]	R76091	L9[illegible]		Water	PCB's (Water)	8082/3550	13-OCT-1999	Semivolatile - GC
WG667[illegible]	R76091	L9[illegible]1024[illegible]06		Water	PCB's (Water)	8082/3550	13-OCT-1999	Semivolatile - GC
WG667[illegible]	R76091	L9[illegible]1024[illegible]07		Water	PCB's (Water)	8082/3550	13-OCT-1999	Semivolatile - GC
WG667[illegible]	R76091	L991024-08		Water	PCB's (Water)	8082/3550	13-OCT-1999	Semivolatile - GC
WG667[illegible]	R76091	L991024-09		Water	PCB's (Water)	8082/3550	13-OCT-1999	Semivolatile - GC
WG667[illegible]	R76091	L991024-10		Water	PCB's (Water)	8082/3550	13-OCT-1999	Semivolatile - GC
WG667[illegible]	R76091	L991024-11		Water	PCB's (Water)	8082/3550	13-OCT-1999	Semivolatile - GC

KEMRON ANALYST LIST

Ohio Valley Laboratory

09/02/99

ALC - - Ann L. Clark
CBN - - C. Brian Noll
CEB - - Chad E. Barnes
CDB - - Christy D. Burton
CG - - Cheryl Graham
CK - - Carl King
CMS - - Crystal M. Stevens
CRC - - Carla R. Cochran
DIH - - Deanna I. Hesson
DLN - - Deanna L. Norton
DLP - - Dorothy L. Payne
DMD - - David M. Dye
ECL - - Eric C. Lawson
FEH - - Fay E. Harmon
GWH - - George W. Hutchinson
HV - - Hema Vilasagar
JCR - - Jennifer C. Randall
JDN - - Jamie D. Newell
JG - - Jonathan Graziani
JLH - - Janice L. Holland
JWR - - John W. Richards
JYH - - Ji Y. Hu
KAS - - Kevin A Stutler
KHA - - Kim H. Archer
LKM - - Laura K. Morris
MDA - - Mike D. Albertson
MDC - - Michael D. Cochran
MES - - Mary E. Schiling
MLS - - Michael L. Schimmel
MMB - - Maren M. Beery
RDC - - Rebecca D. Cutlip
REF - - Ron E. Fertile
REK - - Robert E. Kyer
RSS - - Regina S. Simmons
RWC - - Rodney W. Campbell
SJK - - Sindy J. Kinney
SJM - - Shawn J. Marshall
SLP - - Sheri L. Pfalzgraf
SMW - - Shauna M. Welch
SPL - - Steve P. Learn
SPS - - Steve P. Swatzel
TMM - - Tammy M. Morris
TRS - - Todd R. Stack
VC - - Vicki Collier
VMN - - Vincent M. Nedeff

KEMRON Environmental Services, Inc.
LIST OF VALID QUALIFIERS (qual)
December 10, 1998

Qualifier	Description
A	See the report narrative
NA	Not applicable
+	Correlation coefficient for the MSA is less than 0.995
<	Less than
>	Greater than
B	Present in the method blank
C	Confirmed by GC/MS
*	Surrogate or spike compound out of range
CG	Confluent growth
D	The analyte was quantified at a secondary dilution factor
DL	Surrogate or spike was diluted out
E	Estimated concentration due to sample matrix interference
F	Present below nominal reporting limit (AFCEE only)
FL	Free liquid
I	Semiquantitative result, out of instrument calibration range
J	Present below nominal reporting limit
L	Sample reporting limits elevated due to matrix interference
M	Duplicate injection precision not met
N	Tentatively Identified Compound (TIC)
ND	Not detected at or above the reporting limit (RL)
NF	Not found
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentration > 25% difference between the two GC columns
QNS	Quantity not sufficient to perform analysis
R	Analyte exceeds regulatory limit
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TNTC	Too numerous to count
U	Analyzed for but not detected
W	Post-digestion spike for furnace AA out of control limits
Z	Can not be resolved from isomer. See below.

Special Notes for Organic Analytes

1. Acrolein and acrylonitrile by method 624 are semiquantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

KEMRON Environmental Services

SUMMARY REPORT

System Sampling Prior to
Winter Shutdown.

NOV 10, 1999

KEMRON
ENVIRONMENTAL SERVICES

KEMRON Environmental Services
109 Starlite Park
Marietta, Ohio 45750
Phone: (740) 373-4071

Outboard Marine Corporation
90 Sea Horse Drive
Waukegan, IL 60085

Attention: Mr. Tony Montemurro

PO Number:
Account Number: OUTBOARD-379

Login #: L9911245
Report Date: 11/17/99
Work ID: OMC WAUKEGAN
Date Received: 11/11/99

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
L9911245-01	S3-T5-I	L9911245-02	S3-T5-I/MS
L9911245-03	S3-T5-I/MSD	L9911245-04	S3-T5-LC
L9911245-05	S3-T5-E	L9911245-06	W-T5-I
L9911245-07	W-T5-LC	L9911245-08	W-T5 E
L9911245-09	E-T5-I	L9911245-10	E-T5-LC
L9911245-11	E-T5-E		

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861

Certified By
Dennis S. Tepe

KEMRON
ENVIRONMENTAL SERVICES

KEMRON ENVIRONMENTAL SERVICES
REPORT NARRATIVE

PCB's - 8082:

There were no t chnical difficulties encountered during the analysis of this Sample Delivery Group (SDG).

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9911245-01
Client Sample ID: S3-T5-I
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02858/
Date Collected: 11/10/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/11/99
Analysis Date: 11/15/99 Time: 12:07

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF3038

Method: 8082/3550
Run ID: R77907
Batch : WG68162

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor 1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L	1.2		0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	0.50	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	85.5	(13 - 154%)
Decachlorobiphenyl	108	(25 - 140%)

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9911245-02
Client Sample ID: S3-T5-I/MS
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02858/
Date Collected: 11/10/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/11/99
Analysis Date: 11/15/99 Time: 12:25

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF3039

Method: 8082/3550
Run ID: R77907
Batch : WG68162

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	% Recovery		NS	0.50	1
11104-28-2	Aroclor-1221	% Recovery		NS	0.50	1
11141-16-5	Aroclor-1232	% Recovery		NS	0.50	1
53469-21-9	Aroclor-1242	% Recovery		NS	0.50	1
12672-29-6	Aroclor-1248	% Recovery	76.8		0.50	1
11097-69-1	Aroclor-1254	% Recovery		NS	0.50	1
11096-82-5	Aroclor-1260	% Recovery		NS	0.50	1

RL = Reporting Limit

Produ : 808-PCB-W - PCB's (Water)

Lab Sample : L9911245-02
Client Sample : S3-T5-I/MS
Site/Work : OMC WAUKEGAN
Matr : Water

Dil. Type: N/A
COC Info: 02858/
Date Collected: 11/10/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Da : N/A
Extract Da : 11/11/99
Analysis Da : 11/15/99 Time: 12:25

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF3039

Method: 8082/3550
Run ID: R77907
Batch : WG68162

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....	89.9		(13 - 154%)		
	Decachlorobiphenyl.....	113		(25 - 140%)		

Produ t: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9911245-03
Client Sample ID: S3-T5-I/MSD
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02858/
Date Collected: 11/10/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/11/99
Analysis Date: 11/15/99 Time: 12:43

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF3040

Method: 8082/3550
Run ID: R77907
Batch : WG68162

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016.....	% Recovery		NS	0.50	1
11104-28-2	Aroclor-1221.....	% Recovery		NS	0.50	1
11141-16-5	Aroclor-1232.....	% Recovery		NS	0.50	1
53469-21-9	Aroclor-1242.....	% Recovery		NS	0.50	1
12672-29-6	Aroclor-1248.....	% Recovery	82.5		0.50	1
11097-69-1	Aroclor-1254.....	% Recovery		NS	0.50	1
11096-82-5	Aroclor-1260.....	% Recovery		NS	0.50	1
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....	104		(13 - 154%)		
	Decachlorobiphenyl.....	116		(25 - 140%)		

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 8[illegible]8-PCB-W - PCB's (Water)

Lab Sample ID: L 911245-04
Client Sample ID: S[illegible]-T5-LC
Site/Work ID: G[illegible]C WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02858/
Date Collected: 11/10/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/11/99
Analysis Date: 11/15/99 Time: 13:02

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF3041

Method: 8082/3550
Run ID: R77907
Batch : WG68162

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor 1016	ug/L		ND	0.50	1
11104-28-2	Aroclor 1221	ug/L		ND	0.50	1
11141-16-5	Aroclor 1232	ug/L		ND	0.50	1
53469-21-9	Aroclor 1242	ug/L		ND	0.50	1
12672-29-6	Aroclor 1248	ug/L		ND	0.50	1
11097-69-1	Aroclor 1254	ug/L		ND	0.50	1
11096-82-5	Aroclor 1260	ug/L		ND	0.50	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	70.9	(13 - 154%)
Decachlorobiphenyl	117	(25 - 140%)

Product: 8[illegible]8-PCB-W - PCB's (Water)

Lab Sample ID: L0911245-05
Client Sample ID: S[illegible]-T5-E
Site/Work ID: GMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02858/
Date Collected: 11/10/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/11/99
Analysis Date: 11/15/99 Time: 13:20

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF3042

Method: 8082/3550
Run ID: R77907
Batch : WG68162

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor 1016	ug/L		ND	0.50	1
11104-28-2	Aroclor 1221	ug/L		ND	0.50	1
11141-16-5	Aroclor 1232	ug/L		ND	0.50	1
53469-21-9	Aroclor 1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	0.50	1

RL = Reporting Limit

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9911245-05
Client Sample ID: S3-T5-E
Site/Work ID: GMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02858/
Date Collected: 11/10/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/11/99
Analysis Date: 11/15/99 Time: 13:20

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF3042

Method: 8082/3550
Run ID: R77907
Batch : WG68162

CAS	Compound	Units	Result	Qualifiers	RL	Dilution
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....		65.3	(13 - 154%)		
	Decachlorobiphenyl.....		123	(25 - 140%)		

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9911245-06
Client Sample ID: W-T5-I
Site/Work ID: GMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02858/
Date Collected: 11/10/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/11/99
Analysis Date: 11/15/99 Time: 13:57

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF3044

Method: 8082/3550
Run ID: R77907
Batch : WG68162

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor 1016.....	ug/L		ND	0.50	1
11104-28-2	Aroclor 1221.....	ug/L		ND	0.50	1
11141-16-5	Aroclor 1232.....	ug/L		ND	0.50	1
53469-21-9	Aroclor 1242.....	ug/L		ND	0.50	1
12672-29-6	Aroclor 1248.....	ug/L	0.86		0.50	1
11097-69-1	Aroclor 1254.....	ug/L		ND	0.50	1
11096-82-5	Aroclor 1260.....	ug/L		ND	0.50	1
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....		60.2	(13 - 154%)		
	Decachlorobiphenyl.....		119	(25 - 140%)		

RL = Reporting Limit

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9911245-07
Client Sample ID: W-T5-LC
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02858/
Date Collected: 11/10/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/11/99
Analysis Date: 11/15/99 Time: 14:16

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF3045

Method: 8082/3550
Run ID: R77907
Batch : WG68162

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	0.50	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	74.2	(13 - 154%)
Decachlorobiphenyl	124	(25 - 140%)

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9911245-08
Client Sample ID: W-T5-E
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02858/
Date Collected: 11/10/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/11/99
Analysis Date: 11/15/99 Time: 14:34

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF3046

Method: 8082/3550
Run ID: R77907
Batch : WG68162

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	0.50	1

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9911245-08
Client Sample ID: W-T5-E
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02858/
Date Collected: 11/10/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/11/99
Analysis Date: 11/15/99 Time: 14:34

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF3046

Method: 8082/3550
Run ID: R77907
Batch : WG68162

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....		72.2	(13 - 154%)		
	Decachlorobiphenyl.....		128	(25 - 140%)		

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9911245-09
Client Sample ID: E-T5-I
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02858/
Date Collected: 11/10/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/11/99
Analysis Date: 11/15/99 Time: 14:52

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF3047

Method: 8082/3550
Run ID: R77907
Batch : WG68162

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
126[illegible]4-11-2	Aroclor-1016.....	ug/L		ND	0.50	1
111[illegible]1-28-2	Aroclor-1221.....	ug/L		ND	0.50	1
11[illegible]1-16-5	Aroclor-1232.....	ug/L		ND	0.50	1
53[illegible]-21-9	Aroclor-1242.....	ug/L		ND	0.50	1
12[illegible]-29-6	Aroclor-1248.....	ug/L		ND	0.50	1
110[illegible]-69-1	Aroclor-1254.....	ug/L		ND	0.50	1
110[illegible]-82-5	Aroclor-1260.....	ug/L		ND	0.50	1
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....		66.0	(13 - 154%)		
	Decachlorobiphenyl.....		110	(25 - 140%)		

RL = Reporting Limit

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9911245-10
Client Sample ID: E-T5-LC
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02858/
Date Collected: 11/10/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/11/99
Analysis Date: 11/15/99 Time: 15:11

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF3048

Method: 8082/3550
Run ID: R77907
Batch : WG68162

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	0.50	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	73.5	(13 - 154%)
Decachlorobiphenyl	115	(25 - 140%)

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9911245-11
Client Sample ID: E-T5-E
Site/Work ID: OMC WAUKEGAN
Matrix: Water

Dil. Type: N/A
COC Info: 02858/
Date Collected: 11/10/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/11/99
Analysis Date: 11/15/99 Time: 15:29

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF3049

Method: 8082/3550
Run ID: R77907
Batch : WG68162

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	0.50	1

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Produ : 808-PCB-W - PCB's (Water)

Lab Sample	: L9911245-11	Dil. Type: N/A	Sample Weight: N/A
Client Sample	: E-T5-E	COC Info: 02858/	Extract Volume: N/A
Site/Work	: OMC WAUKEGAN		
Matr	: Water	Date Collected: 11/10/99	% Solid: N/A
TCLP Extract Da	: N/A	Instrument: HP4	Method: 8082/3550
Extract Da	: 11/11/99	Analyst: ECL	Run ID: R77907
Analysis Da	: 11/15/99 Time: 15:29	Lab File ID: 4GF3049	Batch : WG68162

CAS #	Co ound	Units	Result	Qualifiers	RL	Dilution
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....	77.0		(13 - 154%)		
	Decachlorobiphenyl.....	121		(25 - 140%)		

RL = Reporting Limit

Order #: 99-11-245
November 17, 1999 02:27 pm

KEMRON ENVIRONMENTAL SERVICES
WORK GROUPS

Work Group	Run ID	Sample	Dil Type	Matrix	Product	Method	Date Collected	Department
WG68113	R77907	L9911245-01		Water	PCB's (Water)	8082/3550	10-NOV-1999	Extraction
WG68113	R77907	L9911245-02		Water	PCB's (Water)	8082/3550	10-NOV-1999	Extraction
WG68113	R77907	L9911245-03		Water	PCB's (Water)	8082/3550	10-NOV-1999	Extraction
WG68113	R77907	L9911245-04		Water	PCB's (Water)	8082/3550	10-NOV-1999	Extraction
WG68113	R77907	L9911245-05		Water	PCB's (Water)	8082/3550	10-NOV-1999	Extraction
WG68113	R77907	L9911245-06		Water	PCB's (Water)	8082/3550	10-NOV-1999	Extraction
WG68113	R77907	L9911245-07		Water	PCB's (Water)	8082/3550	10-NOV-1999	Extraction
WG68113	R77907	L9911245-08		Water	PCB's (Water)	8082/3550	10-NOV-1999	Extraction
WG68113	R77907	L9911245-09		Water	PCB's (Water)	8082/3550	10-NOV-1999	Extraction
WG68113	R77907	L9911245-10		Water	PCB's (Water)	8082/3550	10-NOV-1999	Extraction
WG68113	R77907	L9911245-11		Water	PCB's (Water)	8082/3550	10-NOV-1999	Extraction
WG68162	R77907	L9911245-01		Water	PCB's (Water)	8082/3550	10-NOV-1999	Semivolatile - GC
WG68162	R77907	L9911245-02		Water	PCB's (Water)	8082/3550	10-NOV-1999	Semivolatile - GC
WG68162	R77907	L9911245-03		Water	PCB's (Water)	8082/3550	10-NOV-1999	Semivolatile - GC
WG68162	R77907	L9911245-04		Water	PCB's (Water)	8082/3550	10-NOV-1999	Semivolatile - GC
WG68162	R77907	L9911245-05		Water	PCB's (Water)	8082/3550	10-NOV-1999	Semivolatile - GC
WG68162	R77907	L9911245-06		Water	PCB's (Water)	8082/3550	10-NOV-1999	Semivolatile - GC
WG68162	R77907	L9911245-07		Water	PCB's (Water)	8082/3550	10-NOV-1999	Semivolatile - GC
WG68162	R77907	L9911245-08		Water	PCB's (Water)	8082/3550	10-NOV-1999	Semivolatile - GC
WG68162	R77907	L9911245-09		Water	PCB's (Water)	8082/3550	10-NOV-1999	Semivolatile - GC
WG68162	R77907	L9911245-10		Water	PCB's (Water)	8082/3550	10-NOV-1999	Semivolatile - GC
WG68162	R77907	L9911245-11		Water	PCB's (Water)	8082/3550	10-NOV-1999	Semivolatile - GC

KEMRON ANALYST LIST

Ohio Valley Laboratory

10/22/99

ALT - - Ann L. Thayer
CBN - - C. Brian Noll
CEB - - Chad E. Barnes
CG - - Cheryl Graham
CK - - Carl King
CMS - - Crystal M. Stevens
CRC - - Carla R. Cochran
DIH - - Deanna I. Hesson
DLN - - Deanna L. Norton
DLP - - Dorothy L. Payne
DMD - - David M. Dye
ECL - - Eric C. Lawson
FEH - - Fay E. Harmon
GWH - - George W. Hutchinson
HV - - Hema Vilasagar
JCR - - Jennifer C. Randall
JDN - - Jamie D. Newell
JG - - Jonathan Graziani
JLH - - Janice L. Holland
JWR - - John W. Richards
JYH - - Ji Y. Hu
KAS - - Kevin A Stutler
KHR - - Kim H. Rhodes
LKM - - Laura K. Morris
MDA - - Mike D. Albertson
MDC - - Michael D. Cochran
MES - - Mary E. Schiling
MLS - - Michael L. Schimmel
MMB - - Maren M. Beery
RDC - - Rebecca D. Cutlip
REF - - Ron E. Fertile
REK - - Robert E. Kyer
RSS - - Regina S. Simmons
RWC - - Rodney W. Campbell
SJK - - Sindy J. Kinney
SJM - - Shawn J. Marshall
SLP - - Sheri L. Pfalzgraf
SMW - - Shauna M. Welch
SPL - - Steve P. Learn
SPS - - Steve P. Swatzel
TMM - - Tammy M. Morris
TRS - - Todd R. Stack
VC - - Vicki Collier
VMN - - Vincent M. Nedeff

KEMRON Environmental Services, Inc.
LIST OF VALID QUALIFIERS (qual)
December 10, 1998

Qualifier	Description
A	See the report narrative
NA	Not applicable
+	Correlation coefficient for the MSA is less than 0.995
<	Less than
>	Greater than
B	Present in the method blank
C	Confirmed by GC/MS
*	Surrogate or spike compound out of range
CG	Confluent growth
D	The analyte was quantified at a secondary dilution factor
DL	Surrogate or spike was diluted out
E	Estimated concentration due to sample matrix interference
F	Present below nominal reporting limit (AFCEE only)
FL	Free liquid
I	Semiquantitative result, out of instrument calibration range
J	Present below nominal reporting limit
L	Sample reporting limits elevated due to matrix interference
M	Duplicate injection precision not met

Qualifier	Description
N	Tentatively Identified Compound (TIC)
ND	Not detected at or above the reporting limit (RL)
NF	Not found
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentration > 25% difference between the two GC columns
QNS	Quantity not sufficient to perform analysis
R	Analyte exceeds regulatory limit
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TNTC	Too numerous to count
U	Analyzed for but not detected
W	Post-digestion spike for furnace AA out of control limits
Z	Can not be resolved from isomer. See below.

Special Notes for Organic Analytes

1. Acrolein and acrylonitrile by method 624 are semiquantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

ATTACHMENT 3

GROUNDWATER SAMPLING DATA

3a SAMPLE ANALYSIS
3b SAMPLING FIELD LOG

3a

SAMPLE ANALYSIS

Data Validation of
Oct 99 Groundwater
sampling.

TRANSMITTAL LETTER

DATE: **October 26, 1999**

TO: **Anthony M. Montemurro, CHMM**
Outboard Marine Corporation
190 Sea Horse Drive
Waukegan Harbor, IL 60085
847-689-5363

FROM: **Mark Traxler** MT
BCM Engineers
One Plymouth Meeting
Plymouth Meeting, PA 19462
610-825-3800

PROJECT DESCRIPTION: Waukegan Harbor Trust PCB Data Review
BCM ENGINEERS PROJECT NO.: 00-8094-01

WE ARE SENDING YOU: {X} Attached
{ } Under separate cover via _____ the following items:

COPIES	PREPARED BY	DESCRIPTION	CODE
1	M.Traxler	Data Reviews w/Attachments	B,C,F
1		Kemron Data Package	B,C,F

THESE ARE TRANSMITTED as checked below (CODE):

A { }For Distribution
B { X }For use on the project
C { X }As requested
D { }For review and comment
E { }Returned for corrections
F { X }For your files
G { } Other_____

REMARKS
I am returning the data packages for the October 1999 semi-annual monitoring samples to you for storage. Please sign the "Relinquished to" line on the first page of the stamped, validated Kemron Data Packages and return a copy of this signed page. If you have any questions, please contact me.

RECEIVED
NOV 2 1999
A.M. MONTEMURRO

BCM ENGINEERS
Division of VATC

One Plymouth Meeting
Plymouth Meeting, Pennsylvania 19462
610.825.3800
Fax 610.834.8236

October 26, 1999

TO: Anthony M. Montemurro, CHMM
OMC Environmental Affairs
190 Seahorse Drive
Waukegan, Illinois 60085

FROM: Mark Traxler MT
Senior Quality Assurance Scientist
BCM Engineers
Plymouth Meeting, Pennsylvania 19462

SUBJECT: PCB Data Review
October 5, 1999 Groundwater Sampling Event
Waukegan Harbor Superfund Site

INTRODUCTION

A data review of the second half, 1999 polychlorinated biphenyls (PCBs) groundwater sampling data package that was prepared for the October 5, 1999 sampling event has been performed. The data package consisted of 12 groundwater samples, 2 field duplicates, 1 matrix spike (MS), 1 matrix spike duplicate (MSD), and 1 inadvertantly extra field duplicate sample (instead of a field blank) that were analyzed for PCBs following SW-846 Method 8082. Method 8082 is an Update III method which was promulgated by EPA in 1997 and designed specifically for PCBs. The samples were analyzed by Kemron Environmental Services (Kemron), located in Marietta, Ohio under Kemron project Order Number L9910134. The data package contained raw instrument data for the initial and continuing calibration standards; field and quality control (QC) samples; tabulated calibration results; and tabulated MS/MSD and surrogate spike results. The data package was in good condition, containing all of the required deliverables, as defined by the project-specific Quality Assurance Project Plan (QAPjP) for the Operation and Maintenance Plan.

REVIEW

The samples were collected by Mr. Davis R. Wesner on October 5 and shipped under three chain-of-custodies in four shipment coolers containing the samples (identified as Batch L9910134). The samples collected on October 5 were stored in an onsite locked refrigerator maintained at 4 degrees Celsius (°C) overnight and were shipped on October 6 overnight on ice to the laboratory by Federal Express, received with custody seals intact, and logged into their computer system on [illegible] Cooler temperatures were recorded at 1, 1, 2, and 1 °C, which are acceptable. Method 8082 recommends preservation at 4 (± 2)°C.

BCM ENGINEERS

All samples were analyzed within the analytical holding times for aqueous samples for PCBs of 7 days from sample collection to sample extraction and 40 days from extraction to laboratory analysis. The aqueous PCB samples were extracted following SW-846 Method 3510 and were analyzed by Gas Chromatography/Electron Capture Detector (GC/ECD) following SW-846 Method 8082.

All initial and continuing calibrations were within the method acceptance criteria. The DB-608 column on GC instrument HP4 was used to report all Order L9910134 sample data. Positive results were not confirmed on a second column since the analytes of interest are known due to historical data. Method 8082 allows historical data to be used as confirmation of an analyte.

The laboratory identified and reported Aroclor-1248 in samples W-10R and W-10D, based on the best match to their Aroclor calibration standards. The total PCBs for W-10R and W-10D from this sampling event were reported as 1.6 and 2.0 micrograms per liter (µg/L), respectively. The laboratory identified and reported 1.9 µg/L Aroclor-1248 in sample W-10F, which was inadvertantly collected as another duplicate of monitoring well W-10, instead of the intended FIELD RINSE blank after the collection of samples W-10R, W-10D, W-10MS and W-10MSD. While this result is consistent with the results for W-10R and W-10D, for the purpose of historical consistency, the W-10F results should not be considered part of the project database. The results have therefore been qualified in the attached Table 1.

The sampler has been made aware of this mistake, and it is expected that the next round of sampling will follow the appropriate sampling protocol. While the lack of a rinse blank has an effect on the overall quality of this particular data package, no other significant problems were encountered during this round of sampling. The laboratory method blank was found to contain no reportable PCBs, and is acceptable without qualification.

Surrogate spike recoveries were within the project-specific acceptance criteria (50-150% for at least one of the two surrogate spike compounds) for all samples. Kemron's laboratory acceptance criteria for surrogate spike recoveries are lower than the project-specific acceptance criteria, at 25-140% for decachlorobiphenyl (DCB) and 13-154% for tetra-chloro-meta-xylene (TCMX). These criteria have remained the same over the past four years and three methods (8080, 8081, 8082), even after requests during the last several sampling events to update the criteria. It is the data validator's judgment that this criteria is invalid and that the laboratory should provide current, statistically derived data for their internal acceptance criteria for this project.

The laboratory control sample (LCS) recovery for Aroclor-1248 (80.6%) was within the laboratory acceptance criteria of 34-116%. The MS/MSD recoveries for Aroclor-1248 (W-10MS/W-10MSD, 85.2 & 79.4%) were within the project-specific acceptance criteria of 50-150%. The RPD for the MS/MSD results (7.0%) was within the project-specific acceptance criteria of 35%.

BCM ENGINEERS

Two field duplicates were collected with the groundwater samples and submitted to Kemron for analysis. These samples were collected for quality assurance/quality control (QA/QC) purposes in accordance with the proposed QAPjP guidelines. Field duplicates W-12R/W-12D (ND 0.5/ND 0.5 µg/L, 0% RPD) and W-10R/W-10D (1.6/2.0 µg/L Aroclor-1248, 22% RPD) are within the project-specific acceptance criteria of 35%.

This data validation report covers the second half, 1999 groundwater sampling data package. All project-specific QA/QC criteria have been met with the exception of an appropriate field blank, as identified and discussed above. Since the other results are consistent with the historical data for these samples and the laboratory method blank was found to contain no reportable PCBs, the missing field blank in this instance is considered to be a minor issue. If you have any questions regarding this data review, please contact me at (610) 825-3800.

TAB

FOURTH QUARTER 1999 GROUNDWATER SAMPLES
SUMMARY OF PCB RESULTS
WAUKEGAN HARBOR SUPERFUND SITE

Results in ug/L

Sample Number:		W-1	W-2	W-3	W-4	W-5	W-6	W-7	W-8	W-9
Background Average (ug/L):		1.9	1.3	1.7	2.1	6.3	2.6	1.0	1.0	1.3
Sample Order Number:		L9910134	L9910134	L9910134	L9910134	L9910134	L9910134	L9910134	L9910134	L9910134
Laboratory Number:		01	02	03	04	05	06	07	08	09
Dilution Factor:		1	1	1	1	1	1	1	1	1
COMPOUND	DL (ug/L)									
Aroclor-1016	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1221	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1232	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1242	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1248	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1254	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1260	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Surrogate Recoveries, %	Range									
TCMX	50-150	47.3*	52.4	50.4	56.6	50.3	103	49.2*	58.3	56.9
DCB	50-150	77.6	97.2	98.4	93.1	99.5	160*	88.7	83.9	101
Date Sampled:		10/5/99	10/5/99	10/5/99	10/5/99	10/5/99	10/5/99	10/5/99	10/5/99	10/5/99
Date Received:		10/7/99	10/7/99	10/7/99	10/7/99	10/7/99	10/7/99	10/7/99	10/7/99	10/7/99
Date Extracted:		10/7/99	10/7/99	10/7/99	10/7/99	10/7/99	10/7/99	10/7/99	10/7/99	10/7/99
Date Analyzed:		10/11/99	10/11/99	10/11/99	10/11/99	10/11/99	10/11/99	10/11/99	10/11/99	10/11/99

Initial Calibration Date:		10/5/99	10/5/99	10/5/99	10/5/99	10/5/99	10/5/99	10/5/99	10/5/99	10/5/99
Continuing Calibration Date:		10/11/99	10/11/99	10/11/99	10/11/99	10/11/99	10/11/99	10/11/99	10/11/99	10/11/99

Qualifier Key

DL: Detection limit. J : Estimated value
ND: Compound was not detected at, or above, the DL.
* : Outside project advisory criteria of 50-150%. If both surrogates are out of criteria, results are qualified as estimated (J).
Kemron acceptance criteria for DCB is 25-140%, TCMX is 13-154%.
Sample results have been validated in accordance with the Operation and Maintenance Quality Assurance Project Plan.
Results reported in bold italics have been modified by the data validation process.

FOURTH QUARTER 1999 GROUNDWATER SAMPLES
SUMMARY OF PCB RESULTS
WAUKEGAN HARBOR SUPERFUND SITE

Results in ug/L

Sample Number:		W-10R	W-10D	W-10MS	W-10MSD	W-10F	W-11	W-12R	W-12D		
Background Average (ug/L):		11.5	-	-	-	-	1.8	1.5	-		
Sample Order Number:		L9910134	L9910134	L9910134	L9910134	L9910134	L9910134	L9910134	L9910134		
Laboratory Number:		10	11	12	13	14	15	16	17		
Dilution Factor:		1	1	1	1	1	1	1	1		
COMPOUND	DL (ug/L)										
Aroclor-1016	0.5	ND	ND			***ND***	ND	ND	ND		
Aroclor-1221	0.5	ND	ND			***ND***	ND	ND	ND		
Aroclor-1232	0.5	ND	ND			***ND***	ND	ND	ND		
Aroclor-1242	0.5	ND	ND			***ND***	ND	ND	ND		
Aroclor-1248	0.5	1.6	2.0	85.2%	79.4%	***1.9***	ND	ND	ND		
Aroclor-1254	0.5	ND	ND			***ND***	ND	ND	ND		
Aroclor-1260	0.5	ND	ND			***ND***	ND	ND	ND		
Surrogate Recoveries, %	Range										
TCMX	50-150	56.3	57.7	61.5	64.5	65.2	61.8	69.2	80.5		
DCB	50-150	104	96.2	104	102	99.8	99.8	106	109		
Date Sampled:		10/5/99	10/5/99	10/5/99	10/5/99	10/5/99	10/5/99	10/5/99	10/5/99		
Date Received:		10/7/99	10/7/99	10/7/99	10/7/99	10/7/99	10/7/99	10/7/99	10/7/99		
Date Extracted:		10/7/99	10/7/99	10/7/99	10/7/99	10/7/99	10/7/99	10/7/99	10/7/99		
Date Analyzed:		10/11/99	10/11/99	10/11/99	10/11/99	10/11/99	10/11/99	10/11/99	10/11/99		

Initial Calibration Date:		10/5/99	10/5/99	10/5/99	10/5/99	10/5/99	10/5/99	10/5/99	10/5/99		
Continuing Calibration Date:		10/11/99	10/11/99	10/11/99	10/11/99	10/11/99	10/11/99	10/11/99	10/11/99		

Qualifier Key

DL: Detection limit. J : Estimated value
ND: Compound was not detected at, or above, the DL.
* : Outside project advisory criteria of 50-150%. If both surrogates are out of criteria, results are qualified as estimated (J).
Kemron acceptance criteria for DCB is 25-140%, TCMX is 13-154%.
Sample results have been validated in accordance with the Operation and Maintenance Quality Assurance Project Plan.
Results reported in bold italics have been modified by the data validation process.

Pc ll al Calibration Relative Response Factor and RSD W ksheet

CM

Pr Name: Waukegan

Pr Number: 00-8094-01

Case/SDG Number: L9910134

Calibration Date: 10/5/99

Ca tion File ID:	2150	2151	2152	2153	2154	2155
Ca tion Concentration:	0.05	0.10	0.25	0.50	1.00	2.00

Int nal Standards	Areas	Conc.	Areas	Conc.	Areas	Conc.	Areas	Conc.	Areas	Conc.	Areas	Conc.
TCMX	76961		160540		411465		790182		1657176		2958339	
DCB	51851		108091		257339		461043		905143		1526694	

Target Compounds	Areas	RRF	Areas	RRF	Areas	RRF	Areas	RRF	Areas	RRF	Areas	RRF	AVG RRF	RSD	Q
Aroclor 1016 #1	83990	1679.8	162302	1623.02	364489	1457.956	642710	1285.42	1246340	1246.34	2101719	1050.86	1390.6	17.30375	
Aroclor 1016 #2	43800	876	88886	888.86	207444	829.776	375202	750.404	753901	753.901	1303183	651.5915	791.76	11.40369	
Aroclor 1016 #3	133110	2662.2	234541	2345.41	544132	2176.528	984830	1969.66	1991668	1991.668	3453568	1726.784	2145.4	15.28718	
Aroclor 1016 #4	42883	857.66	62505	625.05	147103	588.412	265696	531.392	685780	685.78	1186202	593.101	646.9	17.7692	
Aroclor 1016 #5	50488	1009.76	99287	992.87	229048	916.192	413104	826.208	828003	828.003	1439014	719.507	882.09	12.64602	
Aroclor 1221															
Aroclor 1232															
Aroclor 1242															
Aroclor 1248 #1															
Aroclor 1248 #2															
Aroclor 1248 #3															
Aroclor 1248 #4															
Aroclor 1248 #5															
Aroclor 1254															
Aroclor 1260 #1	73587	1471.74	143060	1430.6	317174	1268.696	555575	1111.15	1093738	1093.738	1872652	936.326	1218.7	17.14707	
Aroclor 1260 #2	120448	2408.96	233851	2338.51	520641	2082.564	918424	1836.848	1825632	1825.632	3155827	1577.914	2011.7	16.07672	
Aroclor 1260 #3	106546	2130.92	208242	2082.42	492085	1968.34	890124	1780.248	1829547	1829.547	3221017	1610.509	1900.3	10.37557	
Aroclor 1260 #4	141849	2836.98	242026	2420.26	550973	2203.892	989402	1978.804	1993378	1993.378	3498898	1749.449	2197.1	17.61385	
Aroclor 1260 #5	35041	700.82	74355	743.55	185998	743.992	346002	692.004	710839	710.839	1244638	622.319	702.25	6.37394	

Q column * - Denotes %RSD outside criteria of 20%

Pcb-ical

QA Scientist M. Fowler Date 10/26/99

PCB Data Validation Summary — BCM

BCM Project Name:	Waukegan Harbor Trust	Case No./SDG	L9910134
BCM Project No.:	00-8094-01	Sampling Date(s):	10/5/99
Project Manager:	M. Traxler	Reviewed By:	M. Fowler
Laboratory:	Kemron-OH	Completion Date:	10/26/99

Compound List: [ ] TCL [X] Priority Pollutant [ ] Appendix IX [ ] Other_____

Method: [ ] CLP SOW____ [ ] 40 CFR 136 Method___ [X] SW-846 Method 8082 [ ] Other_____

The following table indicates the data validation criteria examined, problems identified, and QA action.

Data Validation Criteria:	accept/	FYI/	qualify	comments
Holding Times	✓			
Instrument Performance				
- Peak Resolution	✓			
- Surrogate RT Stability	✓			
- Retention Time Windows	✓			
Initial Calibrations	✓			~~ICAL Run 10/4/99, entered in system 10/5/99~~ Ranges from 6-18% RSD for 1016/1260
Continuing Calibrations	✓			<15% RPD
Blank Analysis Results	✓			No PCBs detected in blanks
Surrogate Recoveries	✓			W-6 appears to have been spiked twice No samples had both surrogates out
MS/MSD Results	✓			85.2% and 79.4%
Field Duplicate Results	✓			1.6 vs 2.0 (22%) and ND/ND (0%)
Target Compound Identification	✓			Aroclor 1248 properly quantified
Quantitation/Detection Limits	✓			All Aroclors MDL at 0.5µg/L
Overall Assessment of Data	✓			
Other:				

General Comments: _____

NA - Not applicable
NR - Not reviewed

QA Scientist M. Fowler Date 10/26/99

KEMRON Environmental Services

SUMMARY REPORT

KEMRON
ENVIRONMENTAL SERVICES

KEMRON Environmental Services
109 Starlite Park
Marietta, Ohio 45750
Phone: (740) 373-4071

Outboard Marine Corporation
190 Sea Horse Drive
Waukegan, IL 60085

Attention: Mr. Tony Montemurro

PO Number:
Account Number: OUTBOARD-379

Login #: L9910134
Report Date: 10/14/99
Work ID: SEMI-ANNUAL
Date Received: 10/07/99

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
L9910134-01	W-1	L9910134-02	W-2
L9910134-03	W-3	L9910134-04	W-4
L9910134-05	W-5	L9910134-06	W-6
L9910134-07	W-7	L9910134-08	W-8
L9910134-09	W-9	L9910134-10	W-10R
L9910134-11	W-10D	L9910134-12	W-10/MS
L9910134-13	W-10/MSD	L9910134-14	W-10F
L9910134-15	W-11	L9910134-16	W-12R
L9910134-17	W-12D		

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861

Certified By
Dennis S. Tepe

...L DATED DATA PACKA...
...ED BY QA M. Fraley 10/20/99
SIGNATURE DATE
...ATED BY M. Fraley 10/26/99
SIGNATURE DATE
...LINQUISHED ... Montemurro 11/2/99
SIGNATURE DATE

KEMRON
ENVIRONMENTAL SERVICES

KEMRON ENVIRONMENTAL SERVICES
REPORT NARRATIVE

SAMPLE RECEIPT:

The cooler temperatures were 1, 4, 3, and 1° C. All samples were received intact.

PCB's - 8082:

Sample fraction 06 yielded a % recovery for decachlorobiphenyl that was above acceptable limits. There were no target analytes found in this sample.

KEMRON ENVIRONMENTAL SERVICES

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910134-01
Client Sample ID: W-1
Site/Work ID: SEMI-ANNUAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/05/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/07/99
Analysis Date: 10/11/99 Time: 15:58

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2294

Method: 8082/3550
Run ID: R75562
Batch : WG66512

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	0.50	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	47.3	(13 - 154%)
Decachlorobiphenyl	77.6	(25 - 140%)

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910134-02
Client Sample ID: W-2
Site/Work ID: SEMI-ANNUAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/05/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/07/99
Analysis Date: 10/11/99 Time: 16:17

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2295

Method: 8082/3550
Run ID: R75562
Batch : WG66512

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	0.50	1

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910134-02
Client Sample ID: W-2
Site/Work ID: SEMI ANNUAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/05/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/07/99
Analysis Date: 10/11/99 Time: 16:17

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2295

Method: 8082/3550
Run ID: R75562
Batch : WG66512

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....	52.4		(13 - 154%)		
	Decachlorobiphenyl.....	97.2		(25 - 140%)		

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910134-03
Client Sample ID: W-3
Site/Work ID: SEMI-ANNUAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/05/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/07/99
Analysis Date: 10/11/99 Time: 16:36

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2296

Method: 8082/3550
Run ID: R75562
Batch : WG66512

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016.....	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221.....	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232.....	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242.....	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248.....	ug/L	0.36	J	0.50	1
11097-69-1	Aroclor-1254.....	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260.....	ug/L		ND	0.50	1
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....	50.4		(13 - 154%)		
	Decachlorobiphenyl.....	98.4		(25 - 140%)		

RL = Reporting Limit

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910134-04
Client Sample ID: W-4
Site/Work ID: SEMI-ANNUAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/05/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/07/99
Analysis Date: 10/11/99 Time: 16:54

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2297

Method: 8082/3550
Run ID: R75562
Batch : WG66512

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	0.50	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	56.6	(13 - 154%)
Decachlorobiphenyl	93.1	(25 - 140%)

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910134-05
Client Sample ID: W-5
Site/Work ID: SEMI-ANNUAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/05/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/07/99
Analysis Date: 10/11/99 Time: 17:13

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2298

Method: 8082/3550
Run ID: R75562
Batch : WG66512

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	0.50	1

RL = Reporting Limit

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910134-05
Client Sample ID: W-5
Site/Work ID: SEMI-ANNUAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/05/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/07/99
Analysis Date: 10/11/99 Time: 17:13

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2298

Method: 8082/3550
Run ID: R75562
Batch : WG66512

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....		50.3	(13 - 154%)		
	Decachlorobiphenyl.....		99.5	(25 - 140%)		

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910134-06
Client Sample ID: W-6
Site/Work ID: SEMI-ANNUAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/05/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/07/99
Analysis Date: 10/11/99 Time: 17:31

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2299

Method: 8082/3550
Run ID: R75562
Batch : WG66512

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016.....	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221.....	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232.....	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242.....	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248.....	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254.....	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260.....	ug/L		ND	0.50	1
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....		103	(13 - 154%)		
	Decachlorobiphenyl.....		160 *	(25 - 140%)		

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910134-07
C ent Sample ID: W-7
Site/Work ID: SEMI ANNUAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/05/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TC P Extract Date: N/A
Extract Date: 10/07/99
Analysis Date: 10/11/99 Time: 17:50

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2300

Method: 8082/3550
Run ID: R75562
Batch : WG66512

	AS #	Compound	Units	Result	Qualifiers	RL	Dilution
1	74-11-2	Aroclor-1016	ug/L		ND	0.50	1
1	04-28-2	Aroclor-1221	ug/L		ND	0.50	1
1	41-16-5	Aroclor-1232	ug/L		ND	0.50	1
5	69-21-9	Aroclor-1242	ug/L		ND	0.50	1
1	72-29-6	Aroclor-1248	ug/L		ND	0.50	1
1	97-69-1	Aroclor-1254	ug/L		ND	0.50	1
1	96-82-5	Aroclor-1260	ug/L		ND	0.50	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	49.2	(13 - 154%)
Decachlorobiphenyl	88.7	(25 - 140%)

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910134-08
ient Sample ID: W-8
Site/Work ID: SEMI-ANNUAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/05/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

P Extract Date: N/A
Extract Date: 10/07/99
Analysis Date: 10/11/99 Time: 18:08

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2301

Method: 8082/3550
Run ID: R75562
Batch : WG66512

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	0.50	1

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910134-08
Client Sample ID: W-8
Site/Work ID: SEMI-ANNUAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/05/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/07/99
Analysis Date: 10/11/99 Time: 18:08

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2301

Method: 8082/3550
Run ID: R75562
Batch : WG66512

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....		58.3	(13 - 154%)		
	Decachlorobiphenyl.....		83.9	(25 - 140%)		

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910134-09
Client Sample ID: W-9
Site/Work ID: SEMI-ANNUAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/05/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/07/99
Analysis Date: 10/11/99 Time: 19:03

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2304

Method: 8082/3550
Run ID: R75562
Batch : WG66512

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016.....	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221.....	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232.....	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242.....	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248.....	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254.....	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260.....	ug/L		ND	0.50	1
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....		56.9	(13 - 154%)		
	Decachlorobiphenyl.....		101	(25 - 140%)		

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910134-10
Client Sample ID: W-10R
Site/Work ID: SEMI-ANNUAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/05/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/07/99
Analysis Date: 10/11/99 Time: 19:22

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2305

Method: 8082/3550
Run ID: R75562
Batch : WG66512

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L	1.6		0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	0.50	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	56.3	(13 - 154%)
Decachlorobiphenyl	104	(25 - 140%)

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910134-11
Client Sample ID: W-10D
Site/Work ID: SEMI-ANNUAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/05/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/07/99
Analysis Date: 10/11/99 Time: 19:41

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2306

Method: 8082/3550
Run ID: R75562
Batch : WG66512

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L	2.0		0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	0.50	1

RL = Reporting Limit

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910134-11
Client Sample ID: W-10D
Site/Work ID: SEMI ANNUAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/05/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/07/99
Analysis Date: 10/11/99 Time: 19:41

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2306

Method: 8082/3550
Run ID: R75562
Batch : WG66512

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....	57.7		(13 - 154%)		
	Decachlorobiphenyl.....	96.2		(25 - 140%)		

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910134-12
Client Sample ID: W-10/MS
Site/Work ID: SEMI-ANNUAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/05/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/07/99
Analysis Date: 10/11/99 Time: 19:59

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2307

Method: 8082/3550
Run ID: R75562
Batch : WG66512

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016.....	% Recovery		NS	0.50	1
11104-28-2	Aroclor-1221.....	% Recovery		NS	0.50	1
11141-16-5	Aroclor-1232.....	% Recovery		NS	0.50	1
53469-21-9	Aroclor-1242.....	% Recovery		NS	0.50	1
12672-29-6	Aroclor-1248.....	% Recovery	85.2		0.50	1
11097-69-1	Aroclor-1254.....	% Recovery		NS	0.50	1
11096-82-5	Aroclor-1260.....	% Recovery		NS	0.50	1
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....	61.5		(13 - 154%)		
	Decachlorobiphenyl.....	104		(25 - 140%)		

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910134-13
Client Sample ID: W-10/MSD
Site/Work ID: SEMI ANNUAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/05/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/07/99
Analysis Date: 10/11/99 Time: 20:17

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2308

Method: 8082/3550
Run ID: R75562
Batch : WG66512

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	% Recovery		NS	0.50	1
11104-28-2	Aroclor-1221	% Recovery		NS	0.50	1
11141-16-5	Aroclor-1232	% Recovery		NS	0.50	1
53469-21-9	Aroclor-1242	% Recovery		NS	0.50	1
12672-29-6	Aroclor-1248	% Recovery	79.4		0.50	1
11097-69-1	Aroclor-1254	% Recovery		NS	0.50	1
11096-82-5	Aroclor-1260	% Recovery		NS	0.50	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	64.5	(13 - 154%)
Decachlorobiphenyl	102	(25 - 140%)

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910134-14
Client Sample ID: W-10F
Site/Work ID: SEMI-ANNUAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/05/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/07/99
Analysis Date: 10/11/99 Time: 20:36

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2309

Method: 8082/3550
Run ID: R75562
Batch : WG66512

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L	1.9		0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	0.50	1

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 608-PCB-W - PCB's (Water)

Lab Sample ID: L9910134-14
Client Sample ID: W-10F
Site/Work ID: SEMI-ANNUAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/05/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/07/99
Analysis Date: 10/11/99 Time: 20:36

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2309

Method: 8082/3550
Run ID: R75562
Batch : WG66512

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene		65.2	(13 - 154%)		
	Decachlorobiphenyl		99.8	(25 - 140%)		

Product: 608-PCB-W - PCB's (Water)

Lab Sample ID: L9910134-15
Client Sample ID: W-11
Site/Work ID: SEMI-ANNUAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/05/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/07/99
Analysis Date: 10/11/99 Time: 20:54

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2310

Method: 8082/3550
Run ID: R75562
Batch : WG66512

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	0.50	1
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene		61.8	(13 - 154%)		
	Decachlorobiphenyl		99.8	(25 - 140%)		

RL = Reporting Limit

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910134-16
Client Sample ID: W-12R
Site/Work ID: SEMI ANNUAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/05/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/07/99
Analysis Date: 10/11/99 Time: 21:13

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2311

Method: 8082/3550
Run ID: R75562
Batch : WG66512

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	0.50	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	69.2	(13 - 154%)
Decachlorobiphenyl	106	(25 - 140%)

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910134-17
Client Sample ID: W-12D
Site/Work ID: SEMI-ANNUAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/05/99

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/07/99
Analysis Date: 10/11/99 Time: 21:31

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2312

Method: 8082/3550
Run ID: R75562
Batch : WG66512

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	0.50	1

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9910134-17
Client Sample ID: W-12D
Site/Work ID: SEMI-ANNUAL
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 10/07/99
Analysis Date: 10/11/99 Time: 21:31

Dil. Type: N/A
COC Info: N/A

Date Collected: 10/05/99

Instrument: HP4
Analyst: ECL
Lab File ID: 4GF2312

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8082/3550
Run ID: R75562
Batch : WG66512

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
	SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene.....	80.5		(13 - 154%)		
	Decachlorobiphenyl.....	109		(25 - 140%)		

RL = Reporting Limit

Order #: 99-10-134
October 14, 1999 11:48 am

KEMRON ENVIRONMENTAL SERVICES
WORK GROUPS

Work Group	Run ID	Sample	Dil Type	Matrix	Product	Method	Date Collected	Department
WG66359	R75562	L9910134-01		Water	PCB's (Water)	8082/3550	05-OCT-1999	Extraction
WG66359	R75562	L9910134-02		Water	PCB's (Water)	8082/3550	05-OCT-1999	Extraction
WG66359	R75562	L9910134-03		Water	PCB's (Water)	8082/3550	05-OCT-1999	Extraction
WG66359	R75562	L9910134-04		Water	PCB's (Water)	8082/3550	05-OCT-1999	Extraction
WG66359	R75562	L9910134-05		Water	PCB's (Water)	8082/3550	05-OCT-1999	Extraction
WG66359	R75562	L9910134-06		Water	PCB's (Water)	8082/3550	05-OCT-1999	Extraction
WG66359	R75562	L9910134-07		Water	PCB's (Water)	8082/3550	05-OCT-1999	Extraction
WG66359	R75562	L9910134-08		Water	PCB's (Water)	8082/3550	05-OCT-1999	Extraction
WG66359	R75562	L9910134-09		Water	PCB's (Water)	8082/3550	05-OCT-1999	Extraction
WG66359	R75562	L9910134-10		Water	PCB's (Water)	8082/3550	05-OCT-1999	Extraction
WG66359	R75562	L9910134-11		Water	PCB's (Water)	8082/3550	05-OCT-1999	Extraction
WG66359	R75562	L9910134-12		Water	PCB's (Water)	8082/3550	05-OCT-1999	Extraction
WG66359	R75562	L9910134-13		Water	PCB's (Water)	8082/3550	05-OCT-1999	Extraction
WG66359	R75562	L9910134-14		Water	PCB's (Water)	8082/3550	05-OCT-1999	Extraction
WG66359	R75562	L9910134-15		Water	PCB's (Water)	8082/3550	05-OCT-1999	Extraction
WG66359	R75562	L9910134-16		Water	PCB's (Water)	8082/3550	05-OCT-1999	Extraction
WG66359	R75562	L9910134-17		Water	PCB's (Water)	8082/3550	05-OCT-1999	Extraction
WG66512	R75562	L9910134-01		Water	PCB's (Water)	8082/3550	05-OCT-1999	Semivolatile - GC
WG66512	R75562	L9910134-02		Water	PCB's (Water)	8082/3550	05-OCT-1999	Semivolatile - GC
WG66512	R75562	L9910134-03		Water	PCB's (Water)	8082/3550	05-OCT-1999	Semivolatile - GC
WG66512	R75562	L9910134-04		Water	PCB's (Water)	8082/3550	05-OCT-1999	Semivolatile - GC
WG66512	R75562	L9910134-05		Water	PCB's (Water)	8082/3550	05-OCT-1999	Semivolatile - GC
WG66512	R75562	L9910134-06		Water	PCB's (Water)	8082/3550	05-OCT-1999	Semivolatile - GC
WG66512	R75562	L9910134-07		Water	PCB's (Water)	8082/3550	05-OCT-1999	Semivolatile - GC
WG66512	R75562	L9910134-08		Water	PCB's (Water)	8082/3550	05-OCT-1999	Semivolatile - GC
WG66512	R75562	L9910134-09		Water	PCB's (Water)	8082/3550	05-OCT-1999	Semivolatile - GC
WG66512	R75562	L9910134-10		Water	PCB's (Water)	8082/3550	05-OCT-1999	Semivolatile - GC
WG66512	R75562	L9910134-11		Water	PCB's (Water)	8082/3550	05-OCT-1999	Semivolatile - GC
WG66512	R75562	L9910134-12		Water	PCB's (Water)	8082/3550	05-OCT-1999	Semivolatile - GC
WG66512	R75562	L9910134-13		Water	PCB's (Water)	8082/3550	05-OCT-1999	Semivolatile - GC
WG66512	R75562	L9910134-14		Water	PCB's (Water)	8082/3550	05-OCT-1999	Semivolatile - GC
WG66512	R75562	L9910134-15		Water	PCB's (Water)	8082/3550	05-OCT-1999	Semivolatile - GC
WG66512	R75562	L9910134-16		Water	PCB's (Water)	8082/3550	05-OCT-1999	Semivolatile - GC
WG66512	R75562	L9910134-17		Water	PCB's (Water)	8082/3550	05-OCT-1999	Semivolatile - GC

KEMRON ANALYST LIST

Ohio Valley Laboratory

09/02/99

ALC - - Ann L. Clark
CBN - - C. Brian Noll
CEB - - Chad E. Barnes
CDB - - Christy D. Burton
CG - - Cheryl Graham
CK - - Carl King
CMS - - Crystal M. Stevens
CRC - - Carla R. Cochran
DIH - - Deanna I. Hesson
DLN - - Deanna L. Norton
DLP - - Dorothy L. Payne
DMD - - David M. Dye
ECL - - Eric C. Lawson
FEH - - Fay E. Harmon
GWH - - George W. Hutchinson
HV - - Hema Vilasagar
JCR - - Jennifer C. Randall
JDN - - Jamie D. Newell
JG - - Jonathan Graziani
JLH - - Janice L. Holland
JWR - - John W. Richards
JYH - - Ji Y. Hu

KAS - - Kevin A Stutler
KHA - - Kim H. Archer
LKM - - Laura K. Morris
MDA - - Mike D. Albertson
MDC - - Michael D. Cochran
MES - - Mary E. Schiling
MLS - - Michael L. Schimmel
MMB - - Maren M. Beery
RDC - - Rebecca D. Cutlip
REF - - Ron E. Fertile
REK - - Robert E. Kyer
RSS - - Regina S. Simmons
RWC - - Rodney W. Campbell
SJK - - Sindy J. Kinney
SJM - - Shawn J. Marshall
SLP - - Sheri L. Pfalzgraf
SMW - - Shauna M. Welch
SPL - - Steve P. Learn
SPS - - Steve P. Swatzel
TMM - - Tammy M. Morris
TRS - - Todd R. Stack
VC - - Vicki Collier
VMN - - Vincent M. Nedeff

KEMRON Environmental Services, Inc.
LIST OF VALID QUALIFIERS (qual)
December 10, 1998

Qualifier	Description
A	See the report narrative
NA	Not applicable
+	Correlation coefficient for the MSA is less than 0.995
<	Less than
>	Greater than
B	Present in the method blank
C	Confirmed by GC/MS
*	Surrogate or spike compound out of range
CG	Confluent growth
D	The analyte was quantified at a secondary dilution factor
DL	Surrogate or spike was diluted out
E	Estimated concentration due to sample matrix interference
F	Present below nominal reporting limit (AFCEE only)
FL	Free liquid
I	Semiquantitative result, out of instrument calibration range
J	Present below nominal reporting limit
L	Sample reporting limits elevated due to matrix interference
M	Duplicate injection precision not met

Qualifier	Description
N	Tentatively Identified Compound (TIC)
ND	Not detected at or above the reporting limit (RL)
NF	Not found
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentration > 25% difference between the two GC columns
QNS	Quantity not sufficient to perform analysis
R	Analyte exceeds regulatory limit
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TNTC	Too numerous to count
U	Analyzed for but not detected
W	Post-digestion spike for furnace AA out of control limits
Z	Can not be resolved from isomer. See below.

Special Notes for Organic Analytes

1. Acrolein and acrylonitrile by method 624 are semiquantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

Chain of Custody Forms

OMC

OUTBOARD MARINE CORPORATION

CHAIN OF CUSTODY

OMC FACILITY: OMC WAUKEGAN

PHONE NO.: 847/689-5363

ADDRESS:

SAMPLE COLLECTED BY (Please Print): DAVID R WESNER

(SIGNATURE): [signature]

PARAMETERS: METHOD 8082 (KB)

COMMENTS

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	NO. OF CONTAINERS	METHOD 8082 (KB)								COMMENTS
W-1	10-5-99			2	X								GRAB
W-2	10-5-99			2	X								
W-3	10-5-99			2	X								
W-4	10-5-99			2	X								
													C/C sealed
													SX'S intact
													cooler temps 1, 4, 3, 1

TRANSFER NUMBER	RELINQUISHED BY (Signature)	ACCEPTED BY (Signature)	DATE	TIME
1	[signature]	TRACY Baldwin	10/6/99	0940
2			10/7/99	
3				

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No. 02845

OMC

OUTBOARD MARINE CORPORATION

CHAIN OF CUSTODY

OMC FACILITY: OMC WAUKEGAN

PHONE NO: 847/689-5363

ADDRESS:

SAMPLE COLLECTED BY (Please Print): DAVID R WEBNER

(SIGNATURE): David R Webner

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	NO. OF CONTAINERS	METHOD 8082 (PCB)								COMMENTS
W-5	10-5-99			2	X								GRAB
W-6	10-5-99			2	X								
W-7	10-5-99			2	X								
W-8	10-5-99			2	X								

C/C sealed
S/S intact
Cooler temps 1,4,3,1

TRANSFER NUMBER	RELINQUISHED BY (Signature)	ACCEPTED BY (Signature)	DATE	TIME
1	David R Webner	TRACY Baldwin	10/6/99	0940
2			10/7/99	
3				

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PINK- OMC FILE

No. 02846

OMC

OUTBOARD MARINE CORPORATION

CHAIN OF CUSTODY

OMC FACILITY: OMC WAUKEGAN

PHONE NO: 847/689-5363

ADDRESS

SAMPLE COLLECTED BY (Please Print): DAVID R WESNER

(SIGNATURE): David R Wesner

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	NO. OF CONTAINERS	METHOD 8082 PCB								COMMENTS
W-9	10-5-99			2	X								
W-10 R	10-5-99			2	X								
W-10 D	10-5-99			2	X								
W-10 MS	10-5-99			2	X								
W-10 MSD	10-5-99			2	X								
W-10 F	10-5-99			2	X								
W-11	10-5-99			2	X								C/C sealed
W-12 R	10-5-99			2	X								S/S intact
W-12 D	10-5-99			2	X								Cooler temp 1.4, 3.1

TRANSFER NUMBER	RELINQUISHED BY (Signature)	ACCEPTED BY (Signature)	DATE	TIME
1	David R Wesner	Tracy Baldwin	10/6/99	0940
2			10/7/99	
3				

DISTRIBUTION:

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No. 02847

PCB-GC DATA (8082)

Login Number: 10-134

A. QC Summary

✓ Batch QC Summary Form

B. Sample Data

✓ Target Compound List results and surrogate recoveries - See section 1.0 (c) (laboratory report)

✓ Chromatogram and external standard report for each sample analysis and re-analysis (if re-analyzed).

C. Standards Data

✓ Initial calibration summary form (Average Response Factor Calibration Data)

✓ Chromatograms and external standard reports for standards

✓ Calibration verification standards (Continuing Calibration Data) initial and ending checks, chromatograms and external standard reports (chronological)

NA Retention time window summary (if applicable)

D. Raw QC Data

✓ Method Blank, chromatogram and external standard report for each matrix type

✓ Laboratory Control Sample, chromatogram and external standard report for each matrix type

NA Matrix Spike/Matrix Spike Duplicate, chromatograms and external standard reports (if not reported as samples)

✓ Instrument runlogs

✓ Extraction bench sheets

Checked By: EC Date: 10/13/99

A. QC SUMMARY

KEMRON ENVIRONMENTAL SERVICES
MARIETTA, OH
QUALITY CONTROL SUMMARY / PCB WATERS , FRONT

	INSTRUMENT : HP4		SMPL ID : 10-134-11
EXT'N DATE : 10/7/99	ANALYST : ECL	BLK FLNM : 4GF2292	SMPL FLNM : 4GF2306
EXT'N BENCH SHT : V125 P35	RUN DATE : 10/11/99	LCS FLNM : 4GF2293	MS FLNM : 4GF2307
EXT'N WORK GRP : WG66359	ANAL WORK GRP : WG66512		MSD FLNM : 4GF2308

		CONCENTRATION , ug/L					% RECOVERY									PERCENT	
COMPOUND	RDL	Blank	LCS	Sample	MS	MSD	Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	MS/MSD RPD	RPD Advisory Limits
AROCLOR 1016	0.5	ND	NA	ND	NA	NA	NA	NA	39	113	NA	NA	NA	39	113	NA	0-46
AROCLOR 1221	0.5	ND	NA	ND	NA	NA	NA	NA	15	175	NA	NA	NA	15	175	NA	0-38
AROCLOR 1232	0.5	ND	NA	ND	NA	NA	NA	NA	15	210	NA	NA	NA	15	210	NA	0-35
AROCLOR 1242	0.5	ND	NA	ND	NA	NA	NA	NA	35	154	NA	NA	NA	35	154	NA	0-35
AROCLOR 1248	0.5	ND	2.01	2.00	4.13	3.98	NA	80.6	34	116	NA	85.2	79.4	34	116	3.6	0-31
AROCLOR 1254	0.5	ND	NA	ND	NA	NA	NA	NA	25	135	NA	NA	NA	25	135	NA	0-36
AROCLOR 1260	0.5	ND	NA	ND	NA	NA	NA	NA	44	129	NA	NA	NA	44	129	NA	0-41
SURROGATES																	
2,4,5,6-TETRACHLORO-M-XYLENE		9.32	9.18	11.5	12.3	12.9	46.6	45.9	13	154	57.7	61.5	64.5	13	154		
DECACHLOROBIPHENYL		20.6	19.9	19.2	20.9	20.3	103.0	99.6	25	140	96.2	104.3	101.5	25	140		

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at 2.5 ug/L
SURROGATES spiked at 20 ug/L
NA = NOT APPLICABLE
DL = DILUTED OUT
ND = NOT DETECTED
RDL-REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE
MS=MATRIX SPIKE
MSD=MATRIX SPIKE DUPLICATE

B. SAMPLE DATA

Data File : C:\HPCHEM\2\DATA\101199\4GF2294.D Vial: 5
Acq On : 11 Oct 1999 3:58 pm Operator: ECL
Sample : 10-134-01 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:31 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

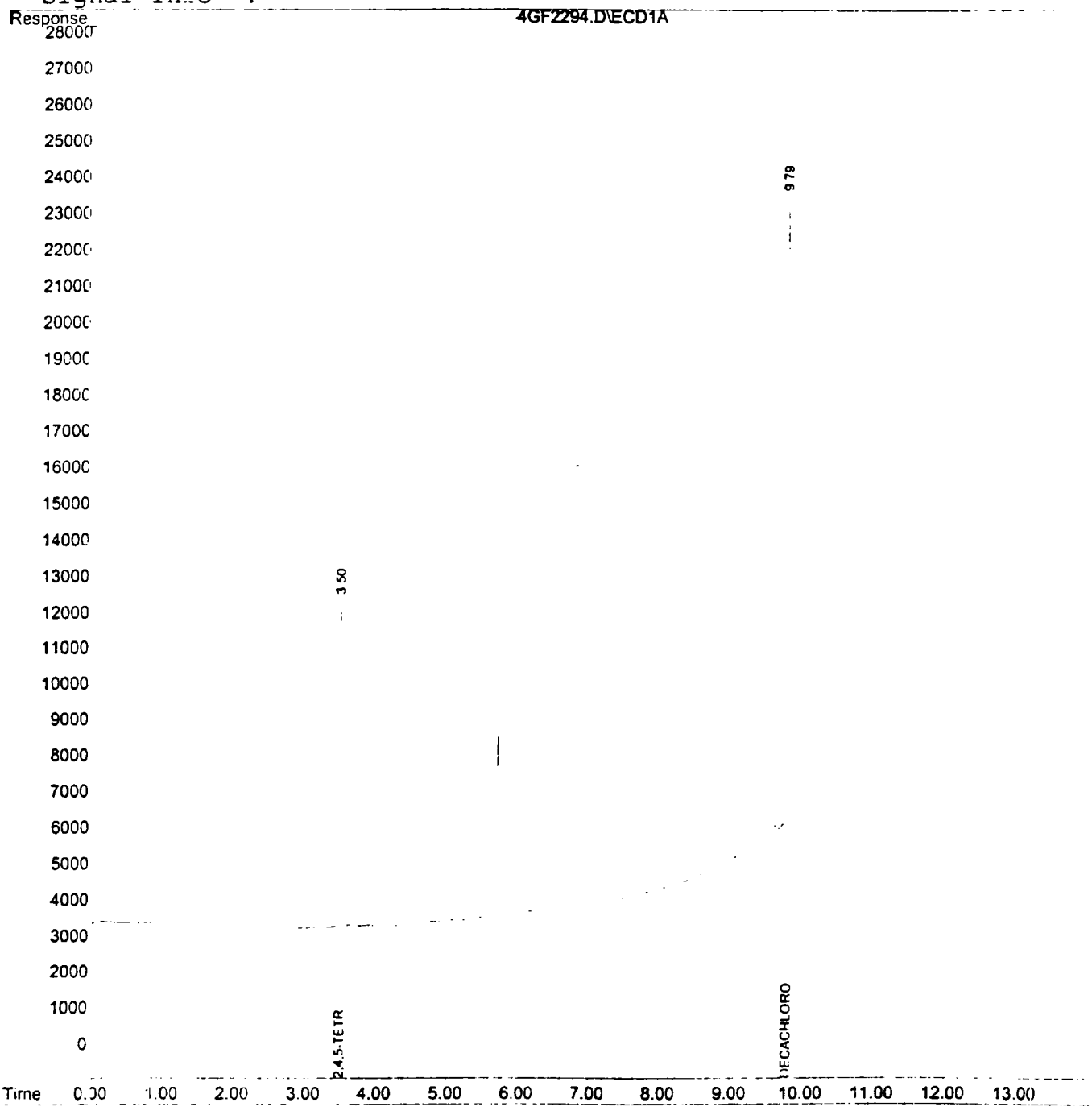
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.50	289894	9.454	UG/L
Spiked Amount 20.000		Recovery =	47.27%	
7) S DECACHLOROBIPHENYL	9.79	361297	15.511	UG/L
Spiked Amount 20.000		Recovery =	77.55%	
Target Compounds				
2) L1 PCB 1248-1	0.00	0	N.D.	UG/L
3) L1 PCB 1248-2	0.00	0	N.D.	UG/L
4) L1 PCB 1248-3	0.00	0	N.D.	UG/L
5) L1 PCB 1248-4	0.00	0	N.D.	UG/L
6) L1 PCB 1248-5	0.00	0	N.D.	UG/L
Sum PCB 1248-1		0	N.D.	UG/L
Average PCB 1248-1			0.000	UG/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\101199\4GF2294.D Vial: 5
Acq On : 11 Oct 1999 3:58 pm Operator: ECL
Sample : 10-134-01 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:31 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101199\4GF2295.D Vial: 6
Acq On : 11 Oct 1999 4:17 pm Operator: ECL
Sample : 10-134-02 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:31 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

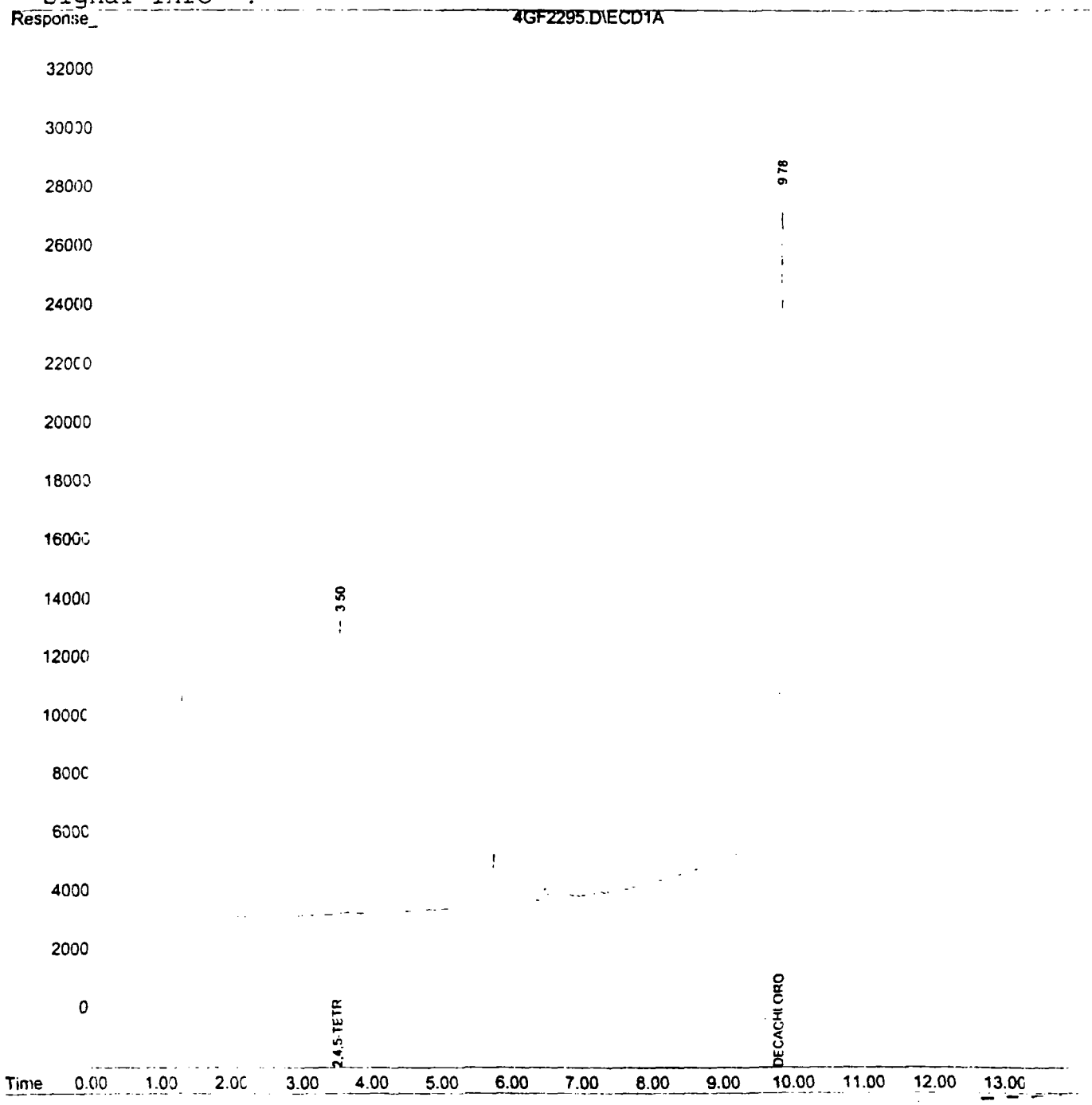
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.50	321575	10.487 UG/L
Spiked Amount 20.000		Recovery =	52.43%
7) S DECACHLOROBIPHENYL	9.78	452976	19.447 UG/L
Spiked Amount 20.000		Recovery =	97.23%
Target Compounds			
2) L1 PCB 1248-1	0.00	0	N.D. UG/L
3) L1 PCB 1248-2	0.00	0	N.D. UG/L
4) L1 PCB 1248-3	0.00	0	N.D. UG/L
5) L1 PCB 1248-4	0.00	0	N.D. UG/L
6) L1 PCB 1248-5	0.00	0	N.D. UG/L
Sum PCB 1248-1		0	N.D. UG/L
Average PCB 1248-1			0.000 UG/L

(f)=RT Delta > 1/2 Window (m)=manual Int.

Data File : C:\HPCHEM\2\DATA\101199\4GF2295.D Vial: 6
Acq On : 11 Oct 1999 4:17 pm Operator: ECL
Sample : 10-134-02 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:31 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101199\4GF2296.D Vial: 7
Acq On : 11 Oct 1999 4:36 pm Operator: ECL
Sample : 10-134-03 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:31 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.51	308969	10.076 UG/L
Spiked Amount 20.000	Recovery	=	50.38%
7) S DECACHLOROBIPHENYL	9.78	458364	19.678 UG/L
Spiked Amount 20.000	Recovery	=	98.39%
Target Compounds			
2) L1 PCB 1248-1	0.00	0	N.D. UG/L
3) L1 PCB 1248-2	5.40	23920	0.179 UG/L
4) L1 PCB 1248-3	6.08	36249	0.346 UG/L
5) L1 PCB 1248-4	6.59	51199	0.336 UG/L
6) L1 PCB 1248-5	7.22	22683	0.574 UG/L
Sum PCB 1248-1		134051	1.436 UG/L
Average PCB 1248-1			0.359 UG/L

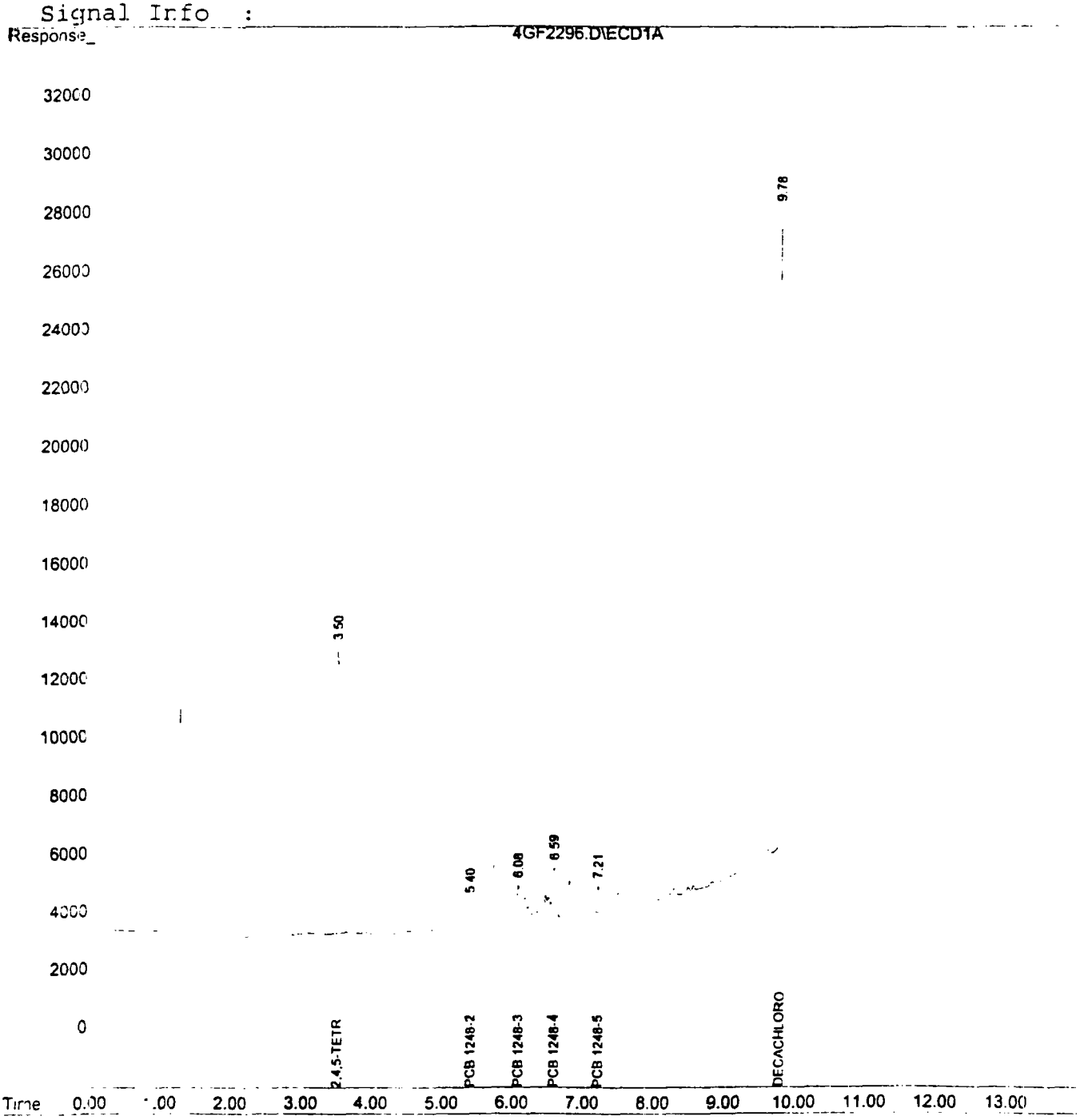
VJ

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\101199\4GF2296.D Vial: 7
Acq On : 11 Oct 1999 4:36 pm Operator: ECL
Sample : 10-134-03 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:31 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101199\4GF2297.D Vial: 8
Acq On : 11 Oct 1999 4:54 pm Operator: ECL
Sample : 10-134-04 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:31 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

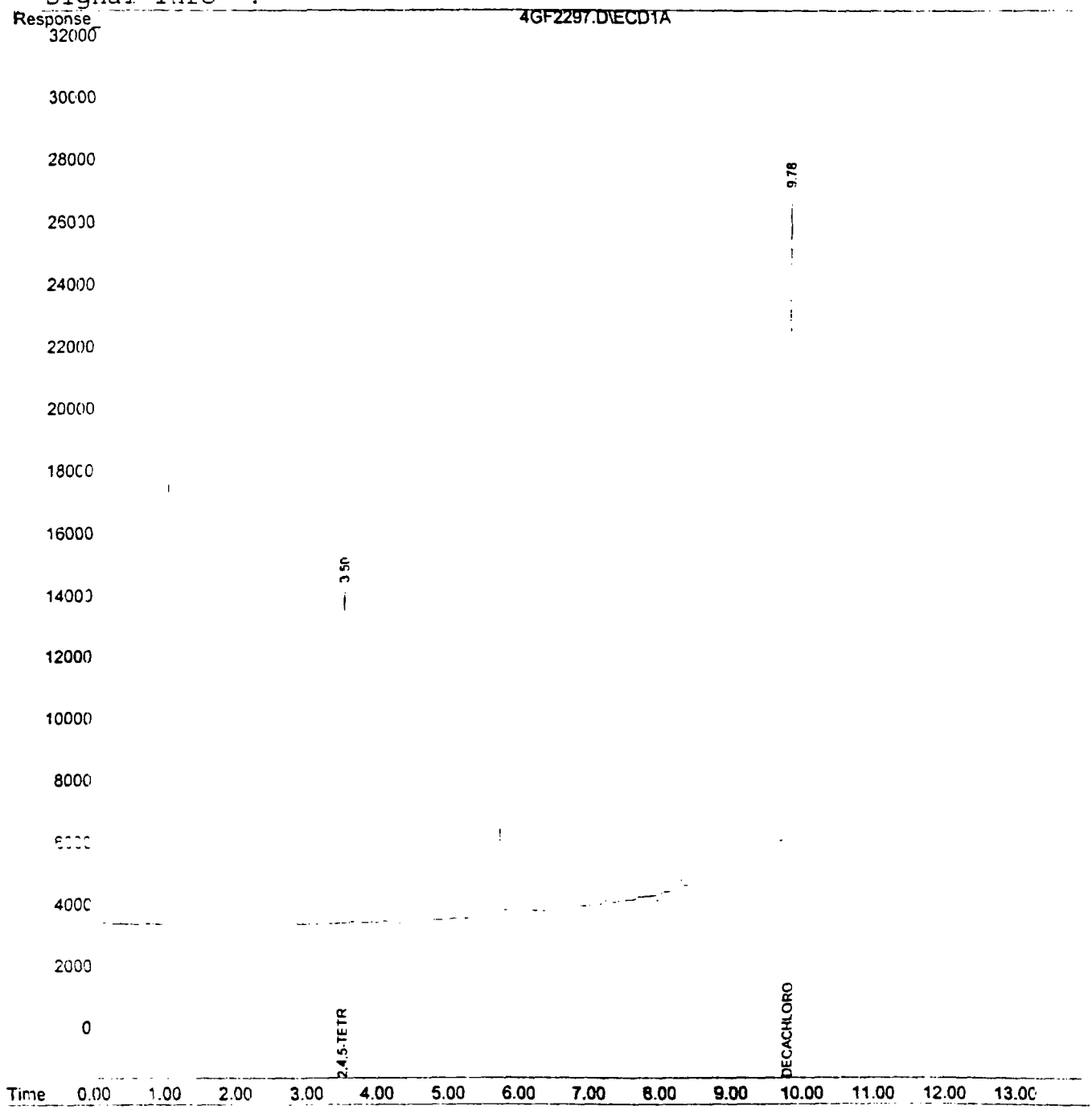
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.50	347127	11.320 UG/L
Spiked Amount 20.000		Recovery =	56.60%
7) S DECACHLOROBIPHENYL	9.78	433907	18.628 UG/L
Spiked Amount 20.000		Recovery =	93.14%
Target Compounds			
2) L1 PCB 1248-1	0.00	0	N.D. UG/L
3) L1 PCB 1248-2	0.00	0	N.D. UG/L
4) L1 PCB 1248-3	0.00	0	N.D. UG/L
5) L1 PCB 1248-4	0.00	0	N.D. UG/L
6) L1 PCB 1248-5	0.00	0	N.D. UG/L
Sum PCB 1248-1		0	N.D. UG/L
Average PCB 1248-1			0.000 UG/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\101199\4GF2297.D Vial: 8
Acq On : 11 Oct 1999 4:54 pm Operator: ECL
Sample : 10-134-04 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:31 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101199\4GF2298.D Vial: 9
Acq On : 11 Oct 1999 5:13 pm Operator: ECL
Sample : 10-134-05 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:31 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

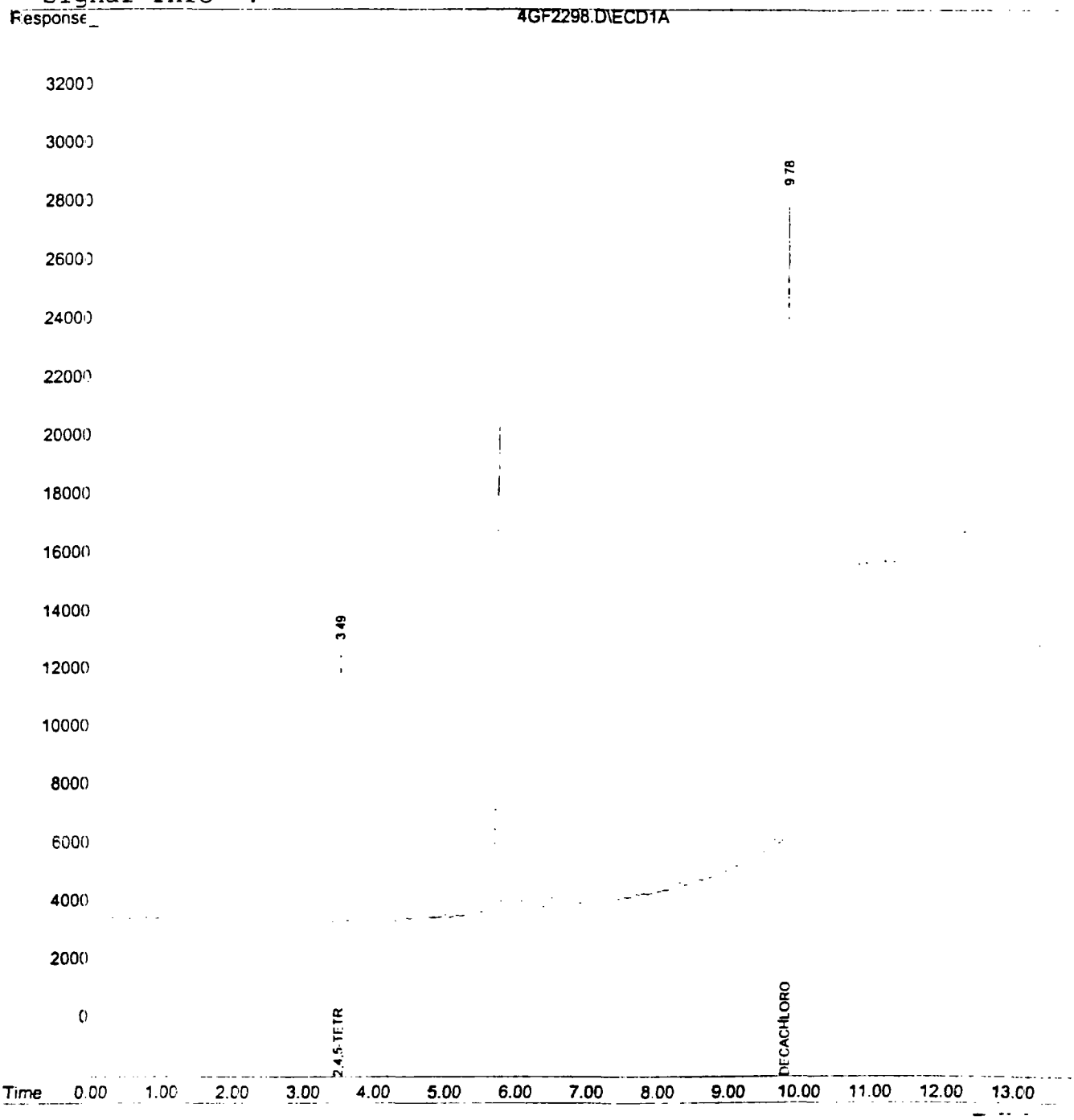
Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.49	308183	10.050 UG/L
Spiked Amount 20.000		Recovery =	50.25%
7) S DECACHLOROBIPHENYL	9.78	463672	19.906 UG/L
Spiked Amount 20.000		Recovery =	99.53%
Target Compounds			
2) L1 PCB 1248-1	0.00	0	N.D. UG/L
3) L1 PCB 1248-2	0.00	0	N.D. UG/L
4) L1 PCB 1248-3	0.00	0	N.D. UG/L
5) L1 PCB 1248-4	0.00	0	N.D. UG/L
6) L1 PCB 1248-5	0.00	0	N.D. UG/L
Sum PCB 1248-1		0	N.D. UG/L
Average PCB 1248-1			0.000 UG/L

Data File : C:\HPCHEM\2\DATA\101199\4GF2298.D Vial: 9
Acq On : 11 Oct 1999 5:13 pm Operator: ECL
Sample : 10-134-05 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:31 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101199\4GF2299.D Vial: 10
Acq On : 11 Oct 1999 5:31 pm Operator: ECL
Sample : 10-134-06 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:31 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

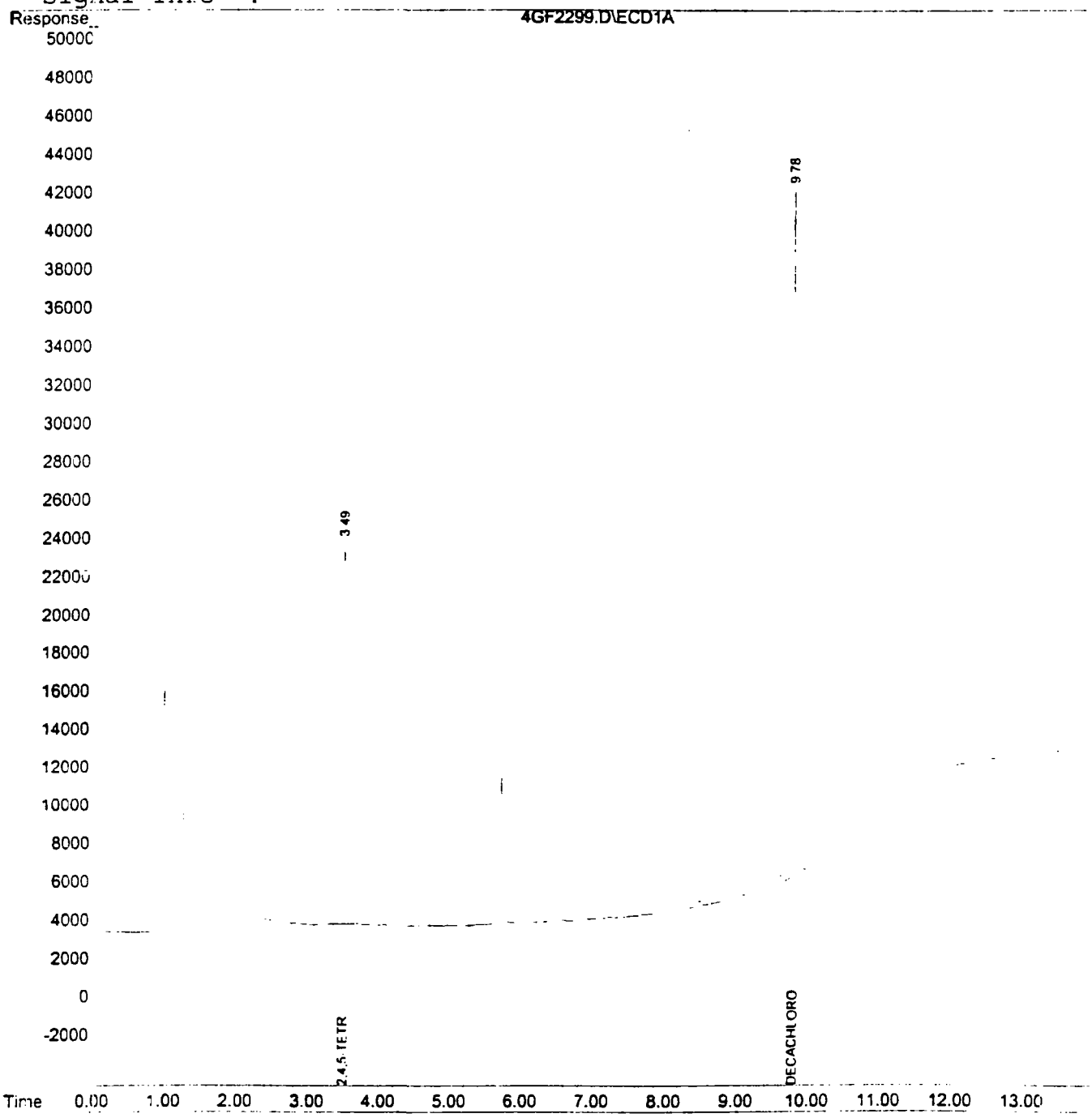
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.50	632199	20.616	UG/L
Spiked Amount 20.000		Recovery =	103.08%	
7) S DECACHLOROBIPHENYL	9.78	744566	31.965	UG/L
Spiked Amount 20.000		Recovery =	159.82%	
Target Compounds				
2) L1 PCB 1248-1	0.00	0	N.D.	UG/L
3) L1 PCB 1248-2	0.00	0	N.D.	UG/L
4) L1 PCB 1248-3	0.00	0	N.D.	UG/L
5) L1 PCB 1248-4	0.00	0	N.D.	UG/L
6) L1 PCB 1248-5	0.00	0	N.D.	UG/L
Sum PCB 1248-1		0	N.D.	UG/L
Average PCB 1248-1			0.000	UG/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\101199\4GF2299.D Vial: 10
Acq On : 11 Oct 1999 5:31 pm Operator: ECL
Sample : 10-134-06 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:31 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101199\4GF2300.D Vial: 11
Acq On : 11 Oct 1999 5:50 pm Operator: ECL
Sample : 10-134-07 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:31 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

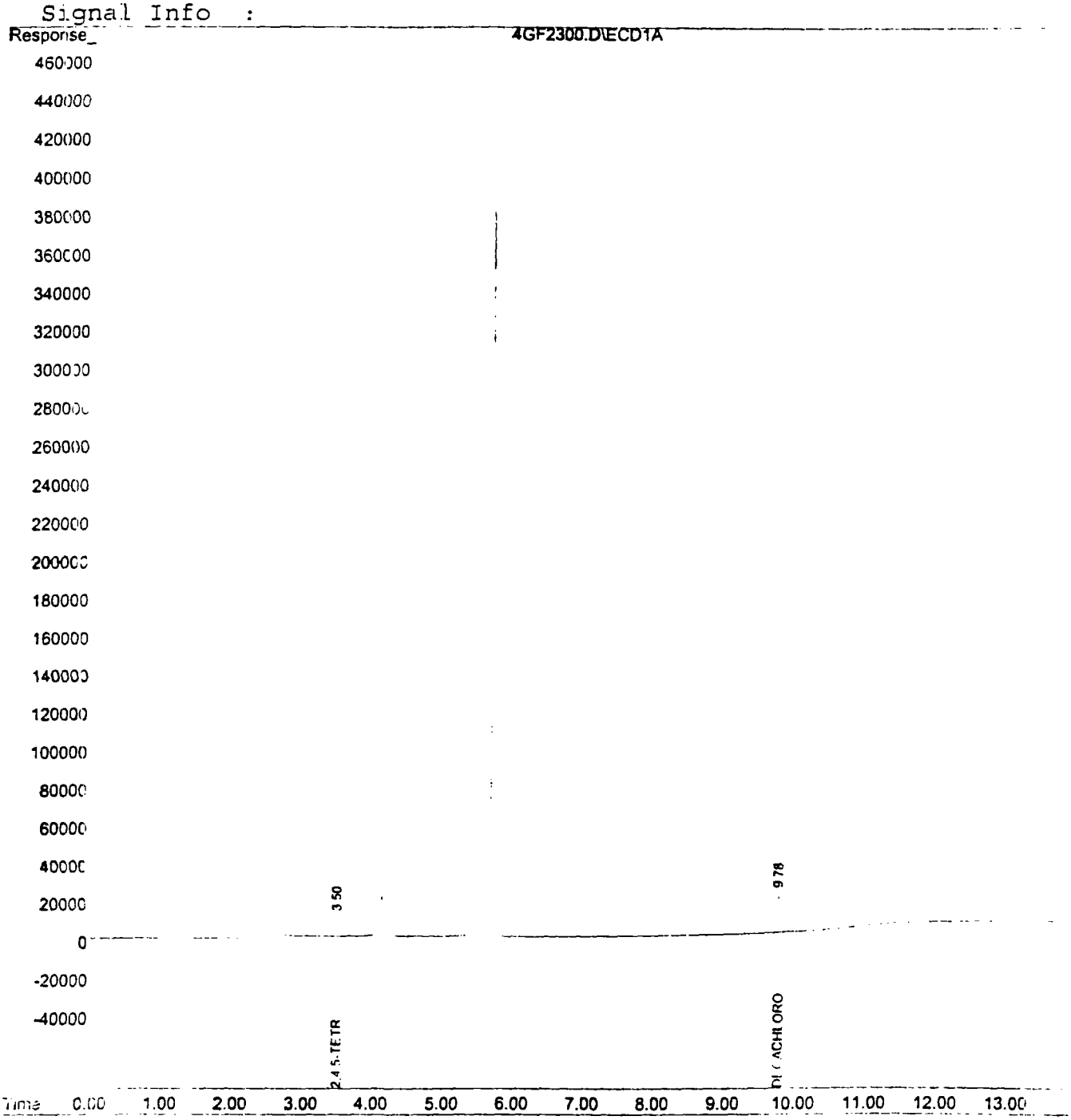
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.51	301716	9.839 UG/L
Spiked Amount 20.000	Recovery	=	49.20%
7) S DECACHLOROBIPHENYL	9.78	413166	17.737 UG/L
Spiked Amount 20.000	Recovery	=	88.68%
Target Compounds			
2) L1 PCB 1248-1	0.00	0	N.D. UG/L
3) L1 PCB 1248-2	0.00	0	N.D. UG/L
4) L1 PCB 1248-3	0.00	0	N.D. UG/L
5) L1 PCB 1248-4	0.00	0	N.D. UG/L
6) L1 PCB 1248-5	0.00	0	N.D. UG/L
Sum PCB 1248-1		0	N.D. UG/L
Average PCB 1248-1			0.000 UG/L

(f)=RT Delta > 1/2 Window (m)=manual int...

Data File : C:\HPCHEM\2\DATA\101199\4GF2300.D Vial: 11
Acq On : 11 Oct 1999 5:50 pm Operator: ECL
Sample : 10-134-07 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:31 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101199\4GF2301.D Vial: 12
Acq On : 11 Oct 1999 6:08 pm Operator: ECL
Sample : 10-134-08 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:31 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.49	357339	11.653	UG/L
Spiked Amount 20.000		Recovery =	58.27%	
7) S DECACHLOROBIPHENYL	9.78	391048	16.788	UG/L
Spiked Amount 20.000		Recovery =	83.94%	
Target Compounds				
2) L1 PCB 1248-1	0.00	0	N.D.	UG/L
3) L1 PCB 1248-2	0.00	0	N.D.	UG/L
4) L1 PCB 1248-3	0.00	0	N.D.	UG/L
5) L1 PCB 1248-4	0.00	0	N.D.	UG/L
6) L1 PCB 1248-5	0.00	0	N.D.	UG/L
Sum PCB 1248-1		0	N.D.	UG/L
Average PCB 1248-1			0.000	UG/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\101199\4GF2301.D Vial: 12
Acq On : 11 Oct 1999 6:08 pm Operator: ECL
Sample : 10-134-08 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:31 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Data File : C:\HPCHEM\2\DATA\101199\4GF2304.D Vial: 15
Acq On : 11 Oct 1999 7:03 pm Operator: ECL
Sample : 10-134-09 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:31 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

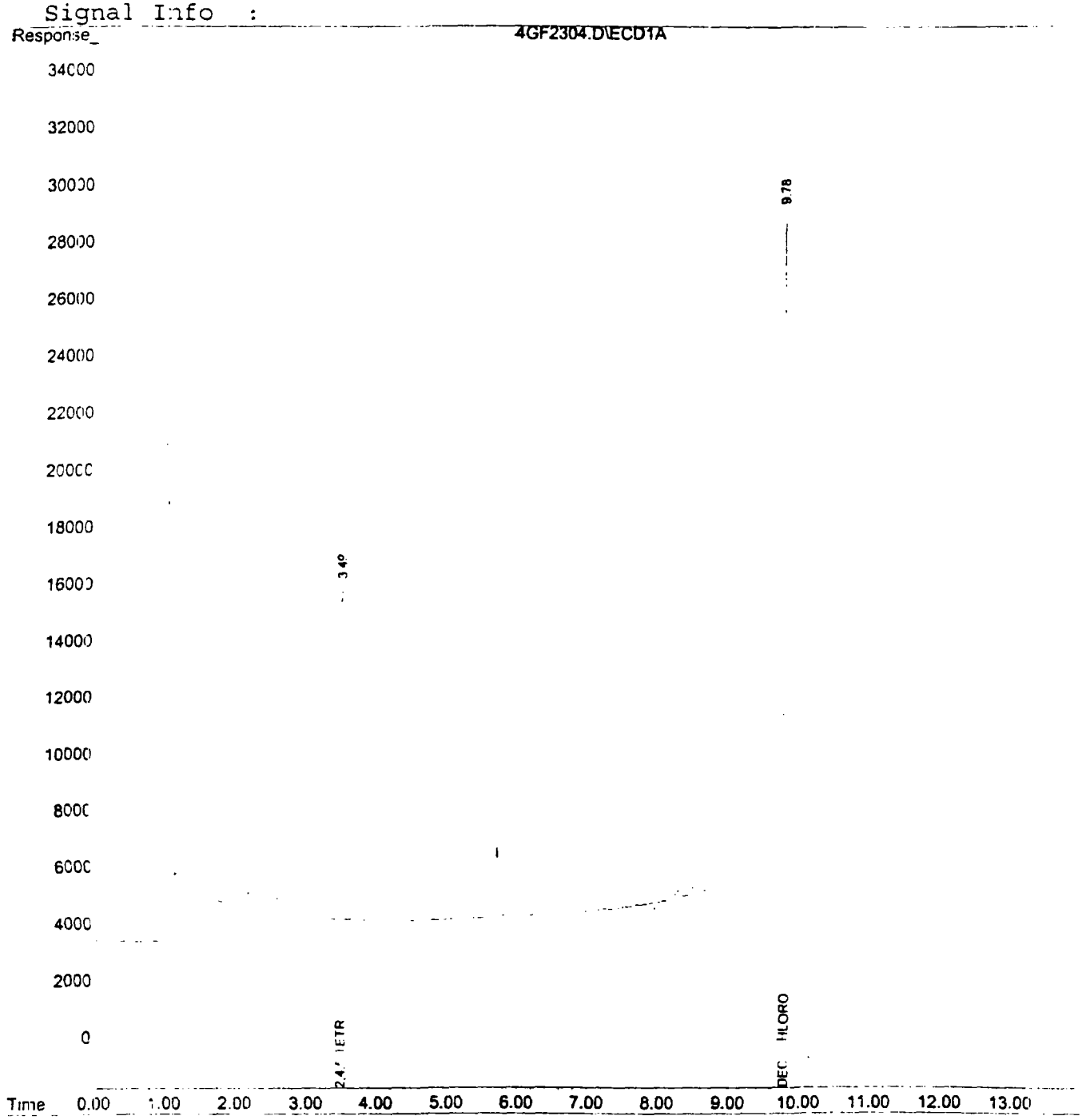
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.49	348795	11.374	UG/L
Spiked Amount 20.000		Recovery =	56.87%	
7) S DECACHLOROBIPHENYL	9.78	471421	20.238	UG/L
Spiked Amount 20.000		Recovery =	101.19%	
Target Compounds				
2) L1 PCB 1248-1	0.00	0	N.D.	UG/L
3) L1 PCB 1248-2	0.00	0	N.D.	UG/L
4) L1 PCB 1248-3	0.00	0	N.D.	UG/L
5) L1 PCB 1248-4	0.00	0	N.D.	UG/L
6) L1 PCB 1248-5	0.00	0	N.D.	UG/L
Sum PCB 1248-1		0	N.D.	UG/L
Average PCB 1248-1			0.000	UG/L

(f)=RT Delta > 1/2 Window (m)=manual-int.

Data File : C:\HPCHEM\2\DATA\101199\4GF2304.D Vial: 15
Acq On : 11 Oct 1999 7:03 pm Operator: ECL
Sample : 10-134-09 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:31 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101199\4GF2305.D Vial: 16
Acq On : 11 Oct 1999 7:22 pm Operator: ECL
Sample : 10-134-10 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:31 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

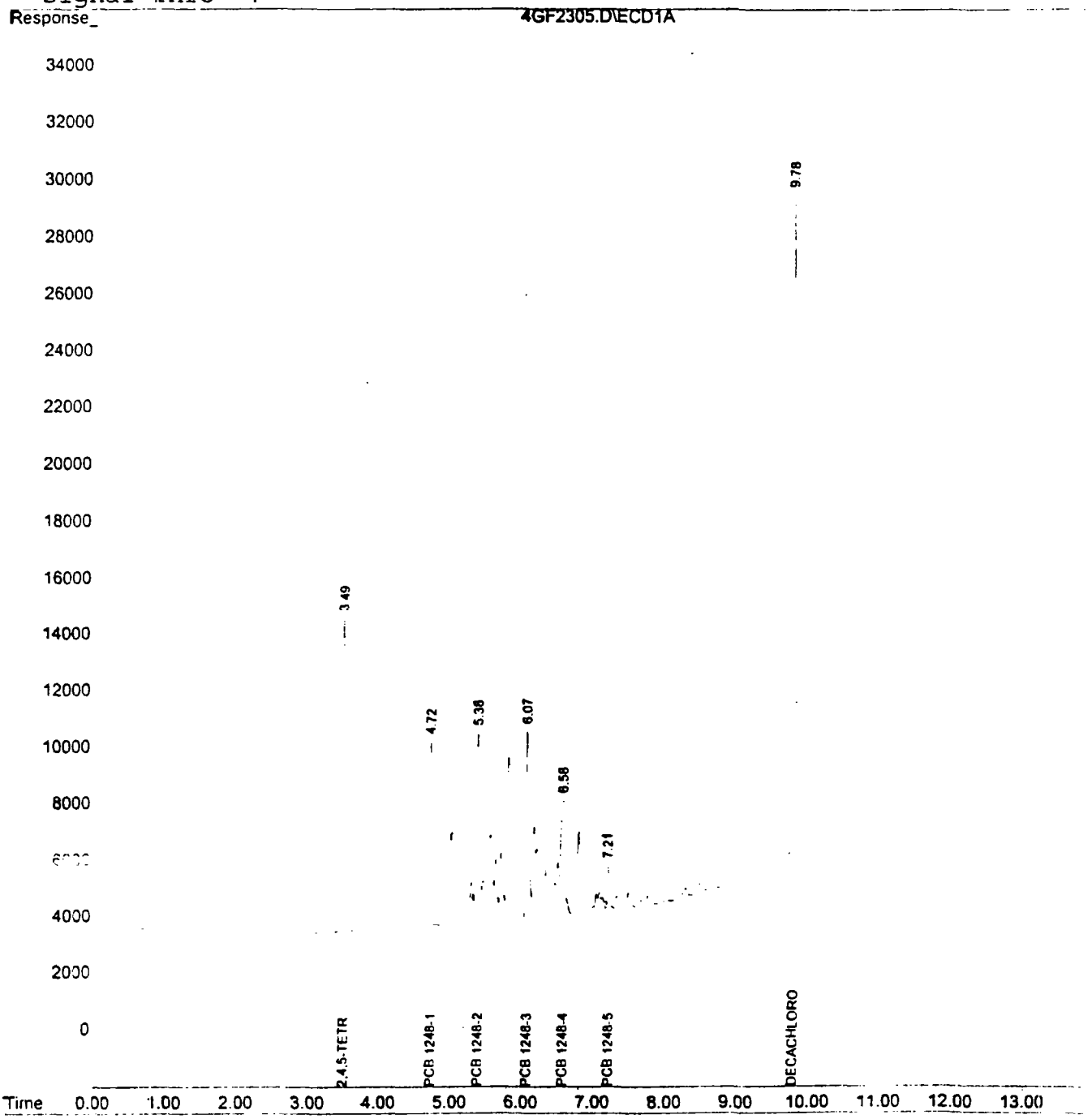
Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.49	345237	11.258 UG/L
Spiked Amount 20.000		Recovery =	56.29%
7) S DECACHLOROBIPHENYL	9.78	485212	20.830 UG/L
Spiked Amount 20.000		Recovery =	104.15%
Target Compounds			
2) L1 PCB 1248-1	4.72	200470	3.605 UG/L
3) L1 PCB 1248-2	5.38	186278	1.393 UG/L
4) L1 PCB 1248-3	6.07	178588	1.706 UG/L
5) L1 PCB 1248-4	6.58	110224	0.724 UG/L
6) L1 PCB 1248-5	7.21	27001	0.683 UG/L
Sum PCB 1248-1		702562	8.112 UG/L
Average PCB 1248-1			1.622 UG/L

Data File : C:\HPCHEM\2\DATA\101199\4GF2305.D Vial: 16
Acq On : 11 Oct 1999 7:22 pm Operator: ECL
Sample : 10-134-10 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:31 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101199\4GF2306.D Vial: 17
Acq On : 11 Oct 1999 7:41 pm Operator: ECL
Sample : 10-134-11 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:32 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

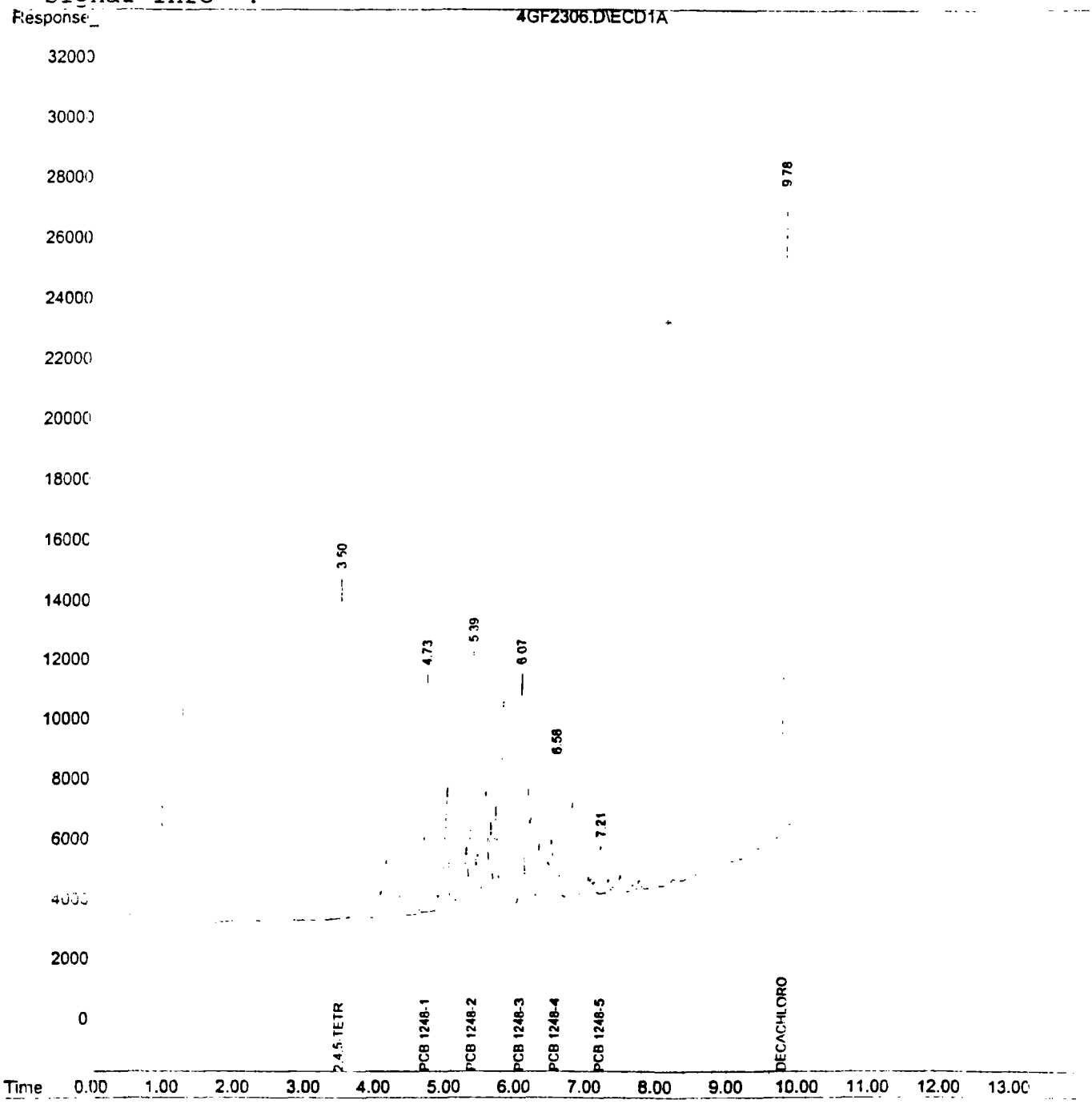
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.50	353722	11.535 UG/L
Spiked Amount 20.000		Recovery =	57.67%
7) S DECACHLOROBIPHENYL	9.78	448214	19.242 UG/L
Spiked Amount 20.000		Recovery =	96.21%
Target Compounds			
2) L1 PCB 1248-1	4.73	247189	4.446 UG/L
3) L1 PCB 1248-2	5.39	238338	1.783 UG/L
4) L1 PCB 1248-3	6.07	209279	1.999 UG/L
5) L1 PCB 1248-4	6.58	115348	0.758 UG/L
6) L1 PCB 1248-5	7.21	39498	1.000 UG/L
Sum PCB 1248-1		849651	9.985 UG/L
Average PCB 1248-1			1.997 UG/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\101199\4GF2306.D Vial: 17
Acq On : 11 Oct 1999 7:41 pm Operator: ECL
Sample : 10-134-11 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:32 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



22A

Data File : C:\HPCHEM\2\DATA\101199\4GF2307.D Vial: 18
Acq On : 11 Oct 1999 7:59 pm Operator: ECL
Sample : 10-134-12 MS Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:32 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

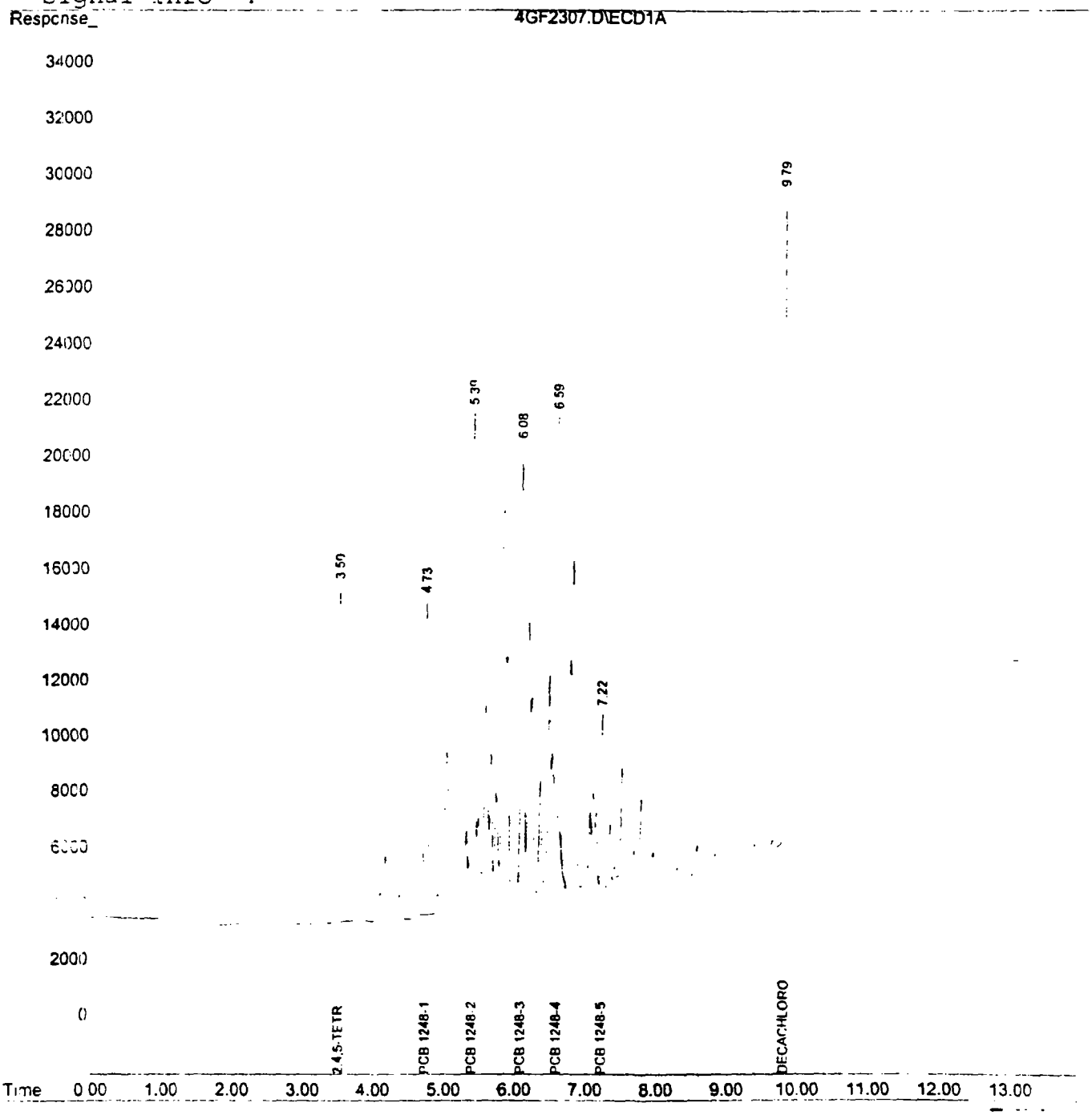
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.50	377313	12.304 UG/L
Spiked Amount 20.000		Recovery =	61.52%
7) S DECACHLOROBIPHENYL	9.79	486072	20.867 UG/L
Spiked Amount 20.000		Recovery =	104.33%
Target Compounds			
2) L1 PCB 1248-1	4.73	348534	6.268 UG/L
3) L1 PCB 1248-2	5.39	512166	3.831 UG/L
4) L1 PCB 1248-3	6.08	399033	3.812 UG/L
5) L1 PCB 1248-4	6.59	489870	3.219 UG/L
6) L1 PCB 1248-5	7.22	138466	3.504 UG/L
Sum PCB 1248-1		1888070	20.634 UG/L
Average PCB 1248-1			4.127 UG/L

(f)=RT Delta > 1/2 Window (m)=manual int.
23

Data File : C:\HPCHEM\2\DATA\101199\4GF2307.D Vial: 18
Acq On : 11 Oct 1999 7:59 pm Operator: ECL
Sample : 10-134-12 MS Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:32 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101199\4GF2308.D Vial: 19
Acq On : 11 Oct 1999 8:17 pm Operator: ECL
Sample : 10-134-13 MSD Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:32 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

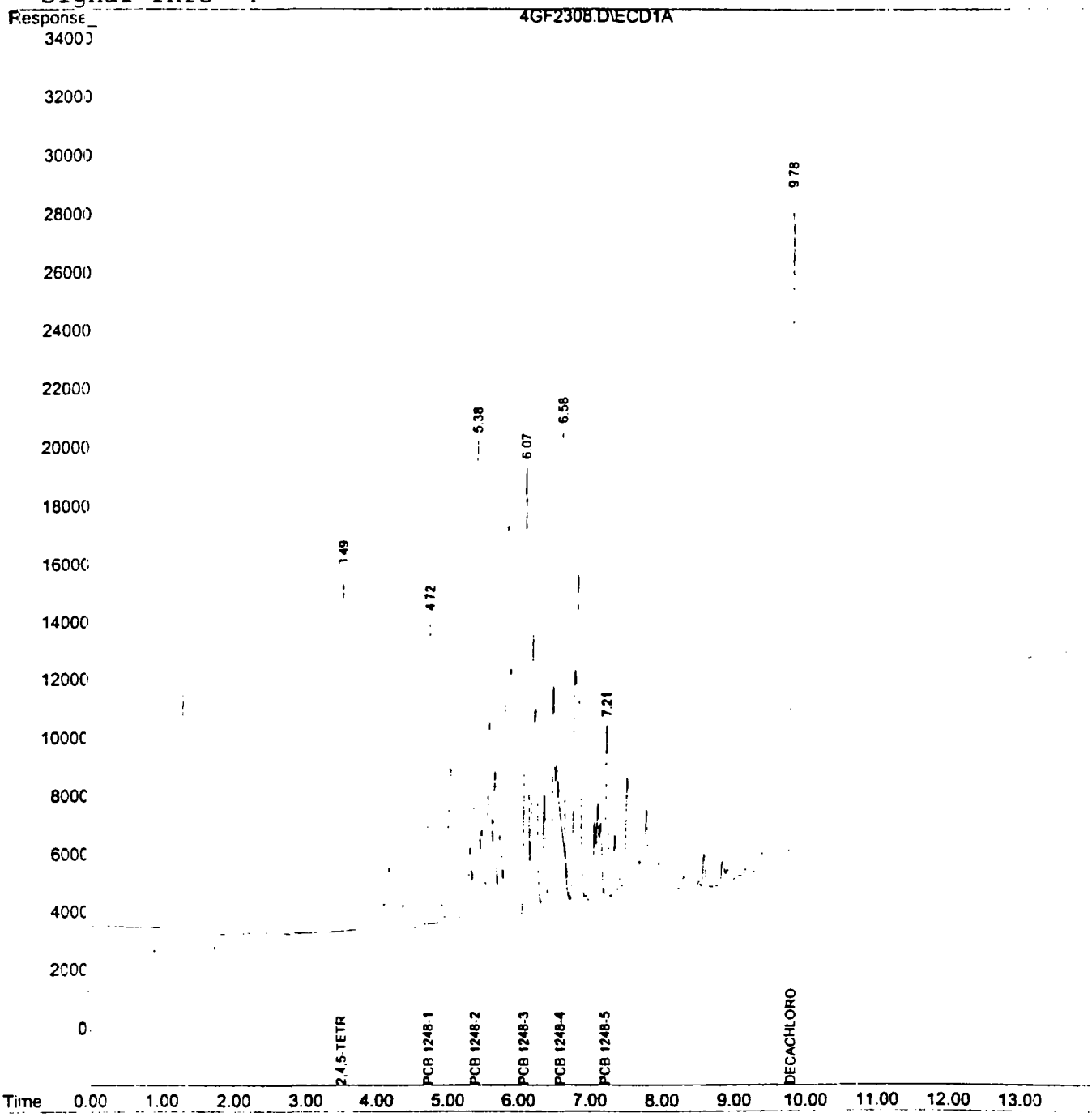
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.49	395370	12.893 UG/L
Spiked Amount 20.000		Recovery =	64.47%
7) S DECACHLOROBIPHENYL	9.78	473032	20.308 UG/L
Spiked Amount 20.000		Recovery =	101.54%
Target Compounds			
2) L1 PCB 1248-1	4.72	329174	5.920 UG/L
3) L1 PCB 1248-2	5.38	474798	3.552 UG/L
4) L1 PCB 1248-3	6.07	418053	3.994 UG/L
5) L1 PCB 1248-4	6.58	469401	3.084 UG/L
6) L1 PCB 1248-5	7.21	132530	3.354 UG/L
Sum PCB 1248-1		1823956	19.904 UG/L
Average PCB 1248-1			3.981 UG/L

(f)=RT Delta > 1/2 Window (m)=manual_int.

Data File : C:\HPCHEM\2\DATA\101199\4GF2308.D Vial: 19
Acq On : 11 Oct 1999 8:17 pm Operator: ECL
Sample : 10-134-13 MSD Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:32 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101199\4GF2309.D
Acq On : 11 Oct 1999 8:36 pm
Sample : 10-134-14
Misc : WATER
IntFile : events.e
Quant Time: Oct 12 12:32 1999 Quant Results File: 1248SF.RES

Vial: 20
Operator: ECL
Inst : HP 4
Multiplr: 0.01

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

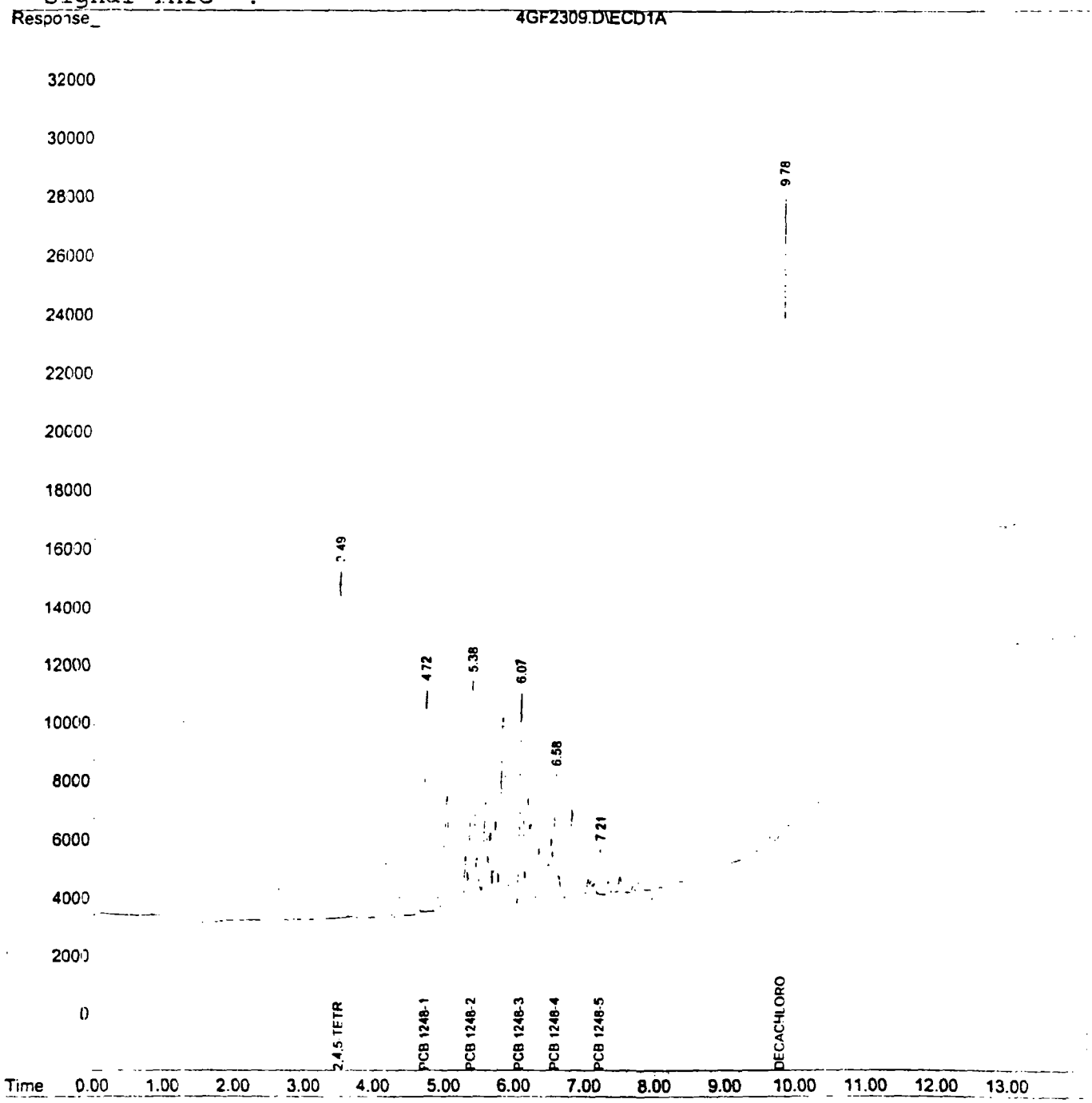
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.49	399968	13.043 UG/L
Spiked Amount 20.000		Recovery =	65.22%
7) S DECACHLOROBIPHENYL	9.78	464845	19.956 UG/L
Spiked Amount 20.000		Recovery =	99.78%
Target Compounds			
2) L1 PCB 1248-1	4.73	243061	4.371 UG/L
3) L1 PCB 1248-2	5.39	217642	1.628 UG/L
4) L1 PCB 1248-3	6.07	197910	1.891 UG/L
5) L1 PCB 1248-4	6.58	105936	0.696 UG/L
6) L1 PCB 1248-5	7.21	38137	0.965 UG/L
Sum PCB 1248-1		802686	9.551 UG/L
Average PCB 1248-1			1.910 UG/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\101199\4GF2309.D Vial: 20
Acq On : 11 Oct 1999 8:36 pm Operator: ECL
Sample : 10-134-14 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:32 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101199\4GF2310.D Vial: 21
Acq On : 11 Oct 1999 8:54 pm Operator: ECL
Sample : 10-134-15 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:32 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

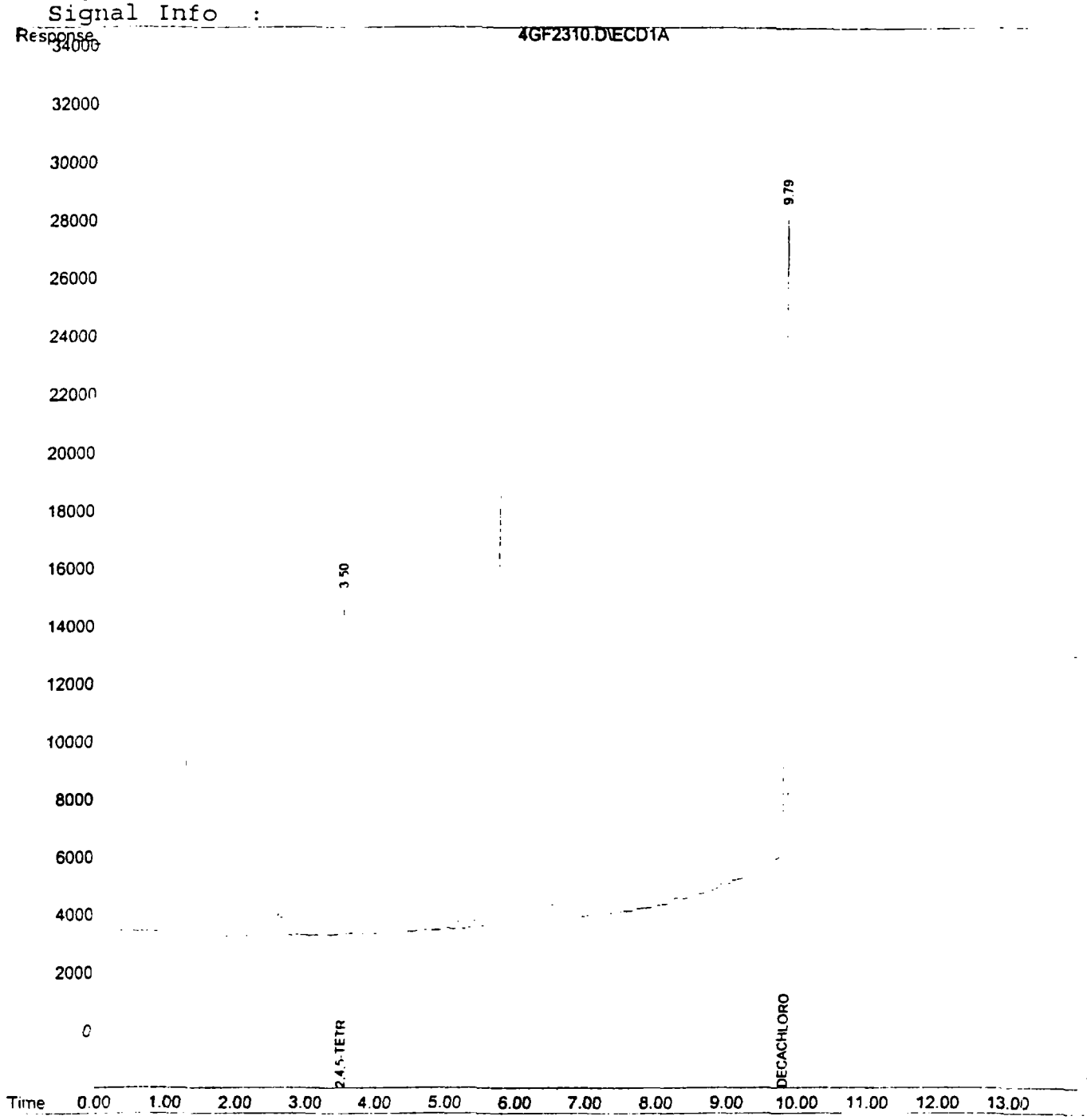
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.50	378897	12.356 UG/L
Spiked Amount 20.000		Recovery =	61.78%
7) S DECACHLOROBIPHENYL	9.79	465072	19.966 UG/L
Spiked Amount 20.000		Recovery =	99.83%
Target Compounds			
2) L1 PCB 1248-1	0.00	0	N.D. UG/L
3) L1 PCB 1248-2	0.00	0	N.D. UG/L
4) L1 PCB 1248-3	0.00	0	N.D. UG/L
5) L1 PCB 1248-4	0.00	0	N.D. UG/L
6) L1 PCB 1248-5	0.00	0	N.D. UG/L
Sum PCB 1248-1		0	N.D. UG/L
Average PCB 1248-1			0.000 UG/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\101199\4GF2310.D Vial: 21
Acq On : 11 Oct 1999 8:54 pm Operator: ECL
Sample : 10-134-15 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:32 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101199\4GF2311.D Vial: 22
Acq On : 11 Oct 1999 9:13 pm Operator: ECL
Sample : 10-134-16 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:32 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

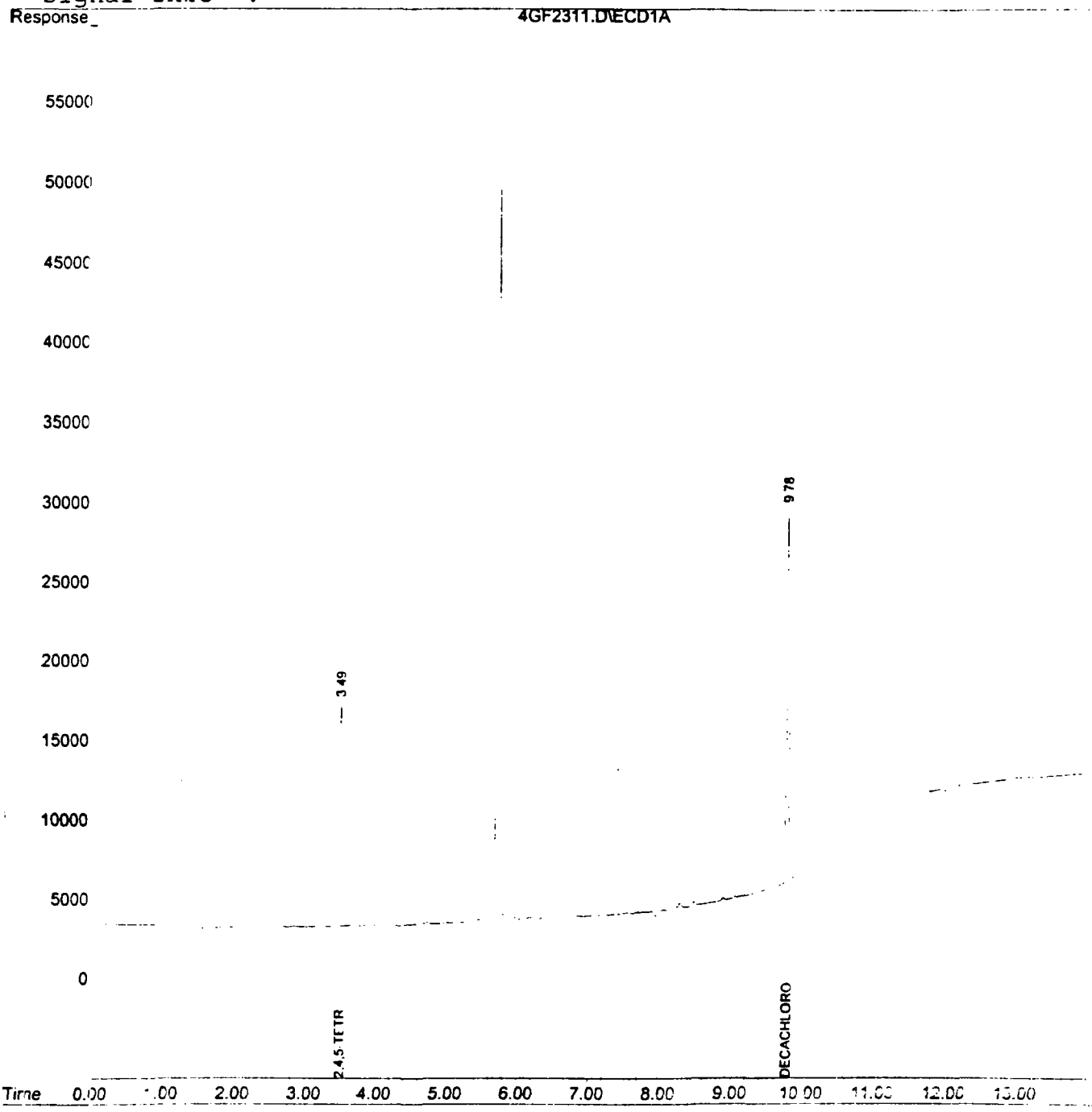
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.49	424176	13.833	UG/L
Spiked Amount 20.000	Recovery	=	69.16%	
7) S DECACHLOROBIPHENYL	9.78	492270	21.133	UG/L
Spiked Amount 20.000	Recovery	=	105.66%	
Target Compounds				
2) L1 PCB 1248-1	0.00	0	N.D.	UG/L
3) L1 PCB 1248-2	0.00	0	N.D.	UG/L
4) L1 PCB 1248-3	0.00	0	N.D.	UG/L
5) L1 PCB 1248-4	0.00	0	N.D.	UG/L
6) L1 PCB 1248-5	0.00	0	N.D.	UG/L
Sum PCB 1248-1		0	N.D.	UG/L
Average PCB 1248-1			0.000	UG/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\101199\4GF2311.D Vial: 22
Acq On : 11 Oct 1999 9:13 pm Operator: ECL
Sample : 10-134-16 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:32 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101199\4GF2312.D Vial: 23
Acq On : 11 Oct 1999 9:31 pm Operator: ECL
Sample : 10-134-17 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:32 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

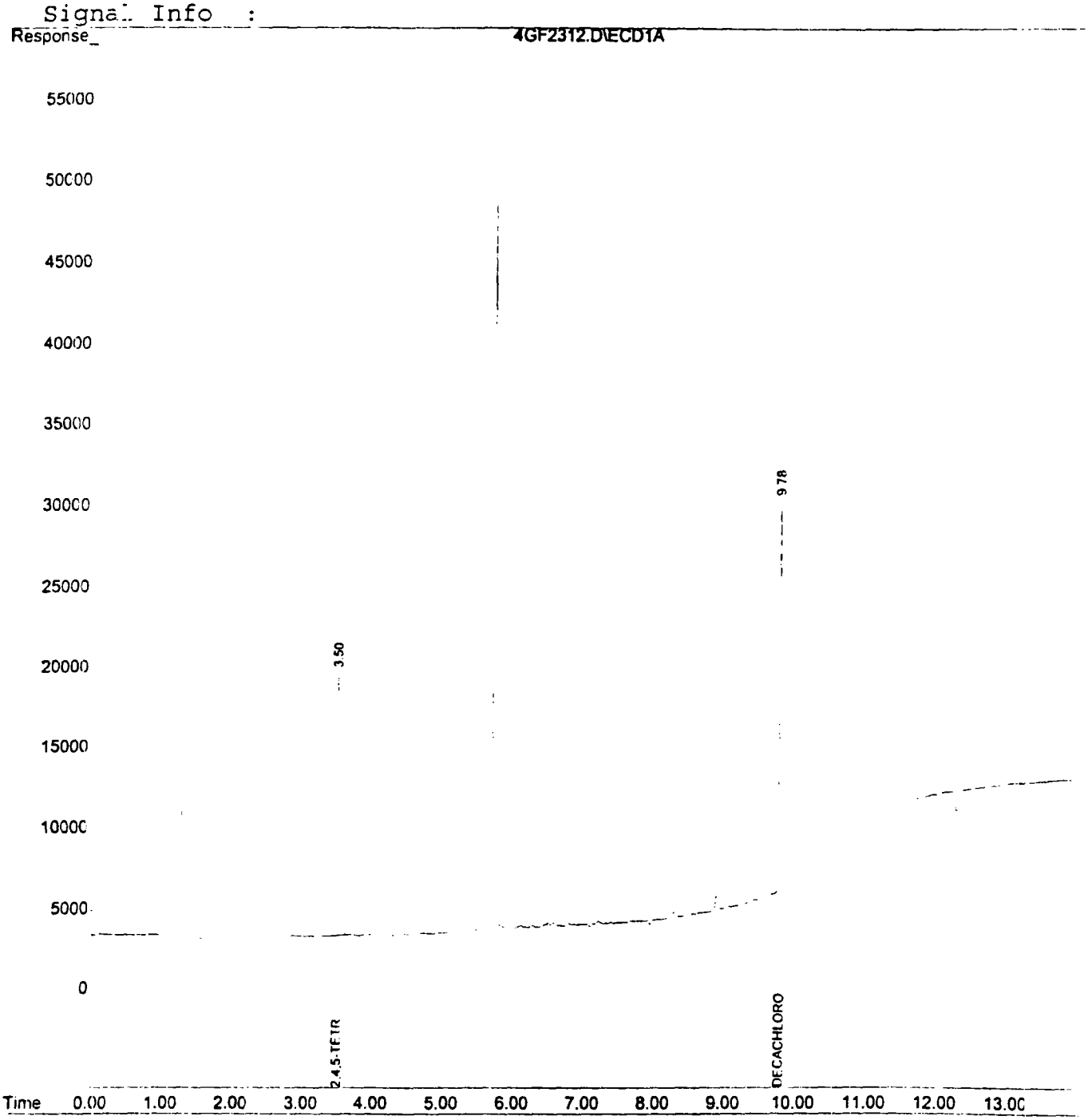
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.51	493599	16.097	UG/L
Spiked Amount 20.000	Recovery	=	80.49%	
7) S DECACHLOROBIPHENYL	9.78	505810	21.715	UG/L
Spiked Amount 20.000	Recovery	=	108.58%	
Target Compounds				
2) L1 PCB 1248-1	0.00	0	N.D.	UG/L
3) L1 PCB 1248-2	0.00	0	N.D.	UG/L
4) L1 PCB 1248-3	0.00	0	N.D.	UG/L
5) L1 PCB 1248-4	0.00	0	N.D.	UG/L
6) L1 PCB 1248-5	0.00	0	N.D.	UG/L
Sum PCB 1248-1		0	N.D.	UG/L
Average PCB 1248-1			0.000	UG/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\101199\4GF2312.D Vial: 23
Acq On : 11 Oct 1999 9:31 pm Operator: ECL
Sample : 10-134-17 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:32 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



C. STANDARDS DATA

Response Factor Report HP 4

Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 13:40:19 1999

Calibration Files

6	=4GF2155.D	5	=4GF2154.D	4	=4GF2153.D
3	=4GF2152.D	2	=4GF2151.D	1	=4GF2150.D

		Compound	6	5	4	3	2	1	Avg	%RSD
1)	S	2,4,5-TETRACHLORO-M	2.958	3.314	3.161	3.292	3.211	3.078	3.169#E4	4.25
2)	L1	PCB 1016-1	1.051	1.246	1.285	1.458	1.623	1.680	1.391#E3	17.30
3)	L1	PCB 1016-2	6.516	7.539	7.504	8.298	8.889	8.760	7.918#E2	11.40
4)	L1	PCB 1016-3	1.727	1.992	1.970	2.177	2.345	2.662	2.145#E3	15.29
5)	L1	PCB 1016-4	5.931	6.858	5.314	5.884	6.251	8.577	6.469#E2	17.77
6)	L1	PCB 1016-5	0.720	0.828	0.826	0.916	0.993	1.010	0.882#E3	12.65
7)	L2	PCB 1260-1	0.936	1.094	1.111	1.269	1.431	1.472	1.219#E3	17.15
8)	L2	PCB 1260-2	1.578	1.826	1.837	2.083	2.339	2.409	2.012#E3	16.08
9)	L2	PCB 1260-3	1.611	1.830	1.780	1.968	2.082	2.131	1.900#E3	10.38
10)	L2	PCB 1260-4	1.749	1.993	1.979	2.204	2.420	2.837	2.197#E3	17.61
11)	L2	PCB 1260-5	6.223	7.108	6.920	7.440	7.435	7.008	7.023#E2	6.37
12)	S	DECACHLOROBIPHENYL	1.527	1.810	1.844	2.059	2.162	2.074	1.913#E4	12.23

(#) = Out of Range

Data File : C:\HPCHEM\2\DATA\100499\4GF2150.D Vial: 1
Acq On : 4 Oct 1999 11:35 am Operator: ECL
Sample : 1660 0.05 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 13:40 1999 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 13:40:19 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.50	76961	2.429 UG/L
Spiked Amount 20.000		Recovery =	12.15%
12) S DECACHLOROBIPHENYL	9.80	51851	2.711 UG/L
Spiked Amount 20.000		Recovery =	13.56%
Target Compounds			
2) L1 PCB 1016-1	4.73	83990	60.400 UG/L
3) L1 PCB 1016-2	5.03	43800	55.320 UG/L
4) L1 PCB 1016-3	5.39	133110	62.045 UG/L
5) L1 PCB 1016-4	5.57	42883	66.290 UG/L
6) L1 PCB 1016-5	6.08	50488	57.237 UG/L
Sum PCB 1016-1		354271	301.292 UG/L
Average PCB 1016-1			60.258 UG/L
7) L2 PCB 1260-1	7.41	73587	60.381 UG/L
8) L2 PCB 1260-2	7.68	120448	59.873 UG/L
9) L2 PCB 1260-3	7.95	106546	56.067 UG/L
10) L2 PCB 1260-4	8.57	141849	64.561 UG/L
11) L2 PCB 1260-5	9.38	35041	49.898 UG/L
Sum PCB 1260-1		477472	290.780 UG/L
Average PCB 1260-1			58.156 UG/L

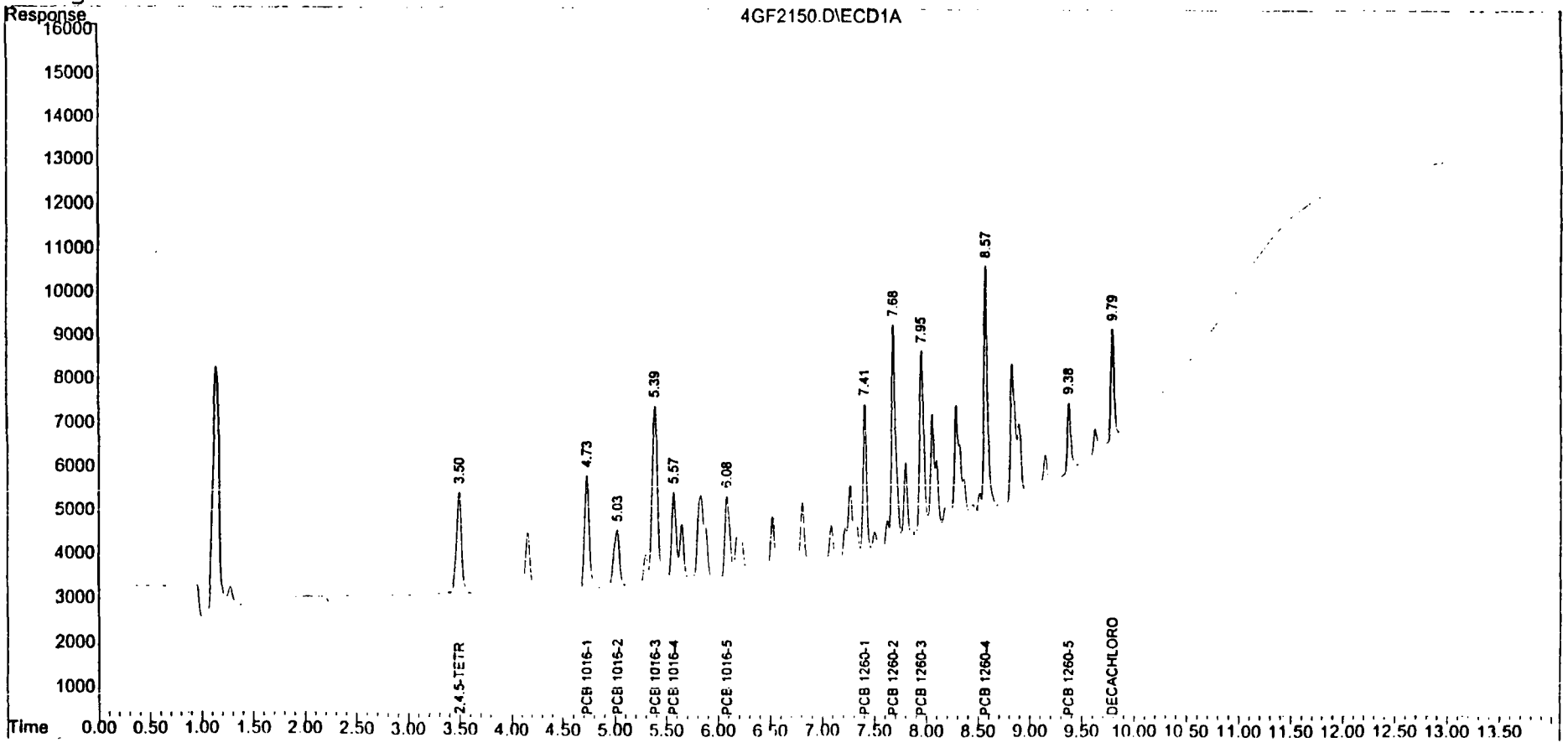
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\2\DATA\100499\4GF2150.D Vial: 1
Acq On : 4 Oct 1999 11:35 am Operator: ECL
Sample : 1660 0.05 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 13:40 1999 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 13:40:19 1999
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\100499\4GF2151.D Vial: 2
Acq On : 4 Oct 1999 11:53 am Operator: ECL
Sample : 1660 0.1 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 13:40 1999 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 13:40:19 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.49	160540	5.066	UG/L
Spiked Amount 20.000		Recovery =	25.33%	
12) S DECACHLOROBIPHENYL	9.78	108091	5.651	UG/L
Spiked Amount 20.000		Recovery =	28.25%	
Target Compounds				
2) L1 PCB 1016-1	4.72	162302	116.717	UG/L
3) L1 PCB 1016-2	5.01	88886	112.264	UG/L
4) L1 PCB 1016-3	5.38	234541	109.324	UG/L
5) L1 PCB 1016-4	5.56	62505	96.623	UG/L
6) L1 PCB 1016-5	6.07	99287	112.558	UG/L
Sum PCB 1016-1		647521	547.486	UG/L
Average PCB 1016-1			109.497	UG/L
7) L2 PCB 1260-1	7.39	143060	117.386	UG/L
8) L2 PCB 1260-2	7.66	233851	116.243	UG/L
9) L2 PCB 1260-3	7.93	208242	109.582	UG/L
10) L2 PCB 1260-4	8.55	242026	110.156	UG/L
11) L2 PCB 1260-5	9.36	74355	105.880	UG/L
Sum PCB 1260-1		901534	559.248	UG/L
Average PCB 1260-1			111.850	UG/L

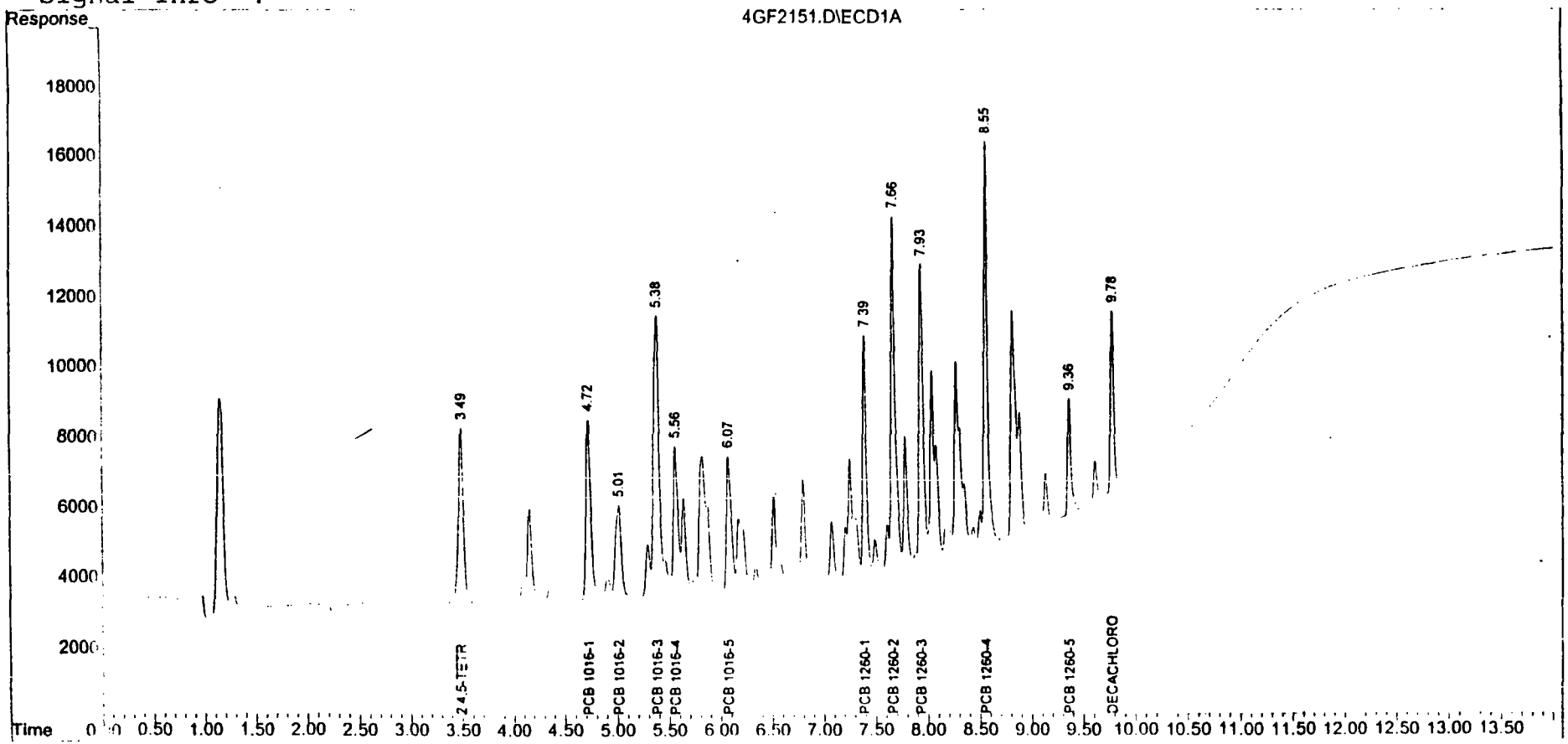
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\2\DATA\100499\4GF2151.D Vial: 2
Acq On : 4 Oct 1999 11:53 am Operator: ECL
Sample : 1660 0.1 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 13:40 1999 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 13:40:19 1999
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\100499\4GF2152.D Vial: 3
Acq On : 4 Oct 1999 12:12 pm Operator: ECL
Sample : 1660 0.25 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 13:41 1999 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 13:40:19 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.49	411465	12.984 UG/L
Spiked Amount 20.000		Recovery =	64.92%
12) S DECACHLOROBIPHENYL	9.77	257339	13.455 UG/L
Spiked Amount 20.000		Recovery =	67.27%
Target Compounds			
2) L1 PCB 1016-1	4.72	364489	262.116 UG/L
3) L1 PCB 1016-2	5.02	207444	262.006 UG/L
4) L1 PCB 1016-3	5.38	544132	253.630 UG/L
5) L1 PCB 1016-4	5.56	147103	227.397 UG/L
6) L1 PCB 1016-5	6.07	229048	259.665 UG/L
Sum PCB 1016-1		1492216	1264.814 UG/L
Average PCB 1016-1			252.963 UG/L
7) L2 PCB 1260-1	7.39	317174	260.254 UG/L
8) L2 PCB 1260-2	7.66	520641	258.801 UG/L
9) L2 PCB 1260-3	7.93	492085	258.947 UG/L
10) L2 PCB 1260-4	8.55	550973	250.770 UG/L
11) L2 PCB 1260-5	9.36	185998	264.858 UG/L
Sum PCB 1260-1		2066871	1293.630 UG/L
Average PCB 1260-1			258.726 UG/L

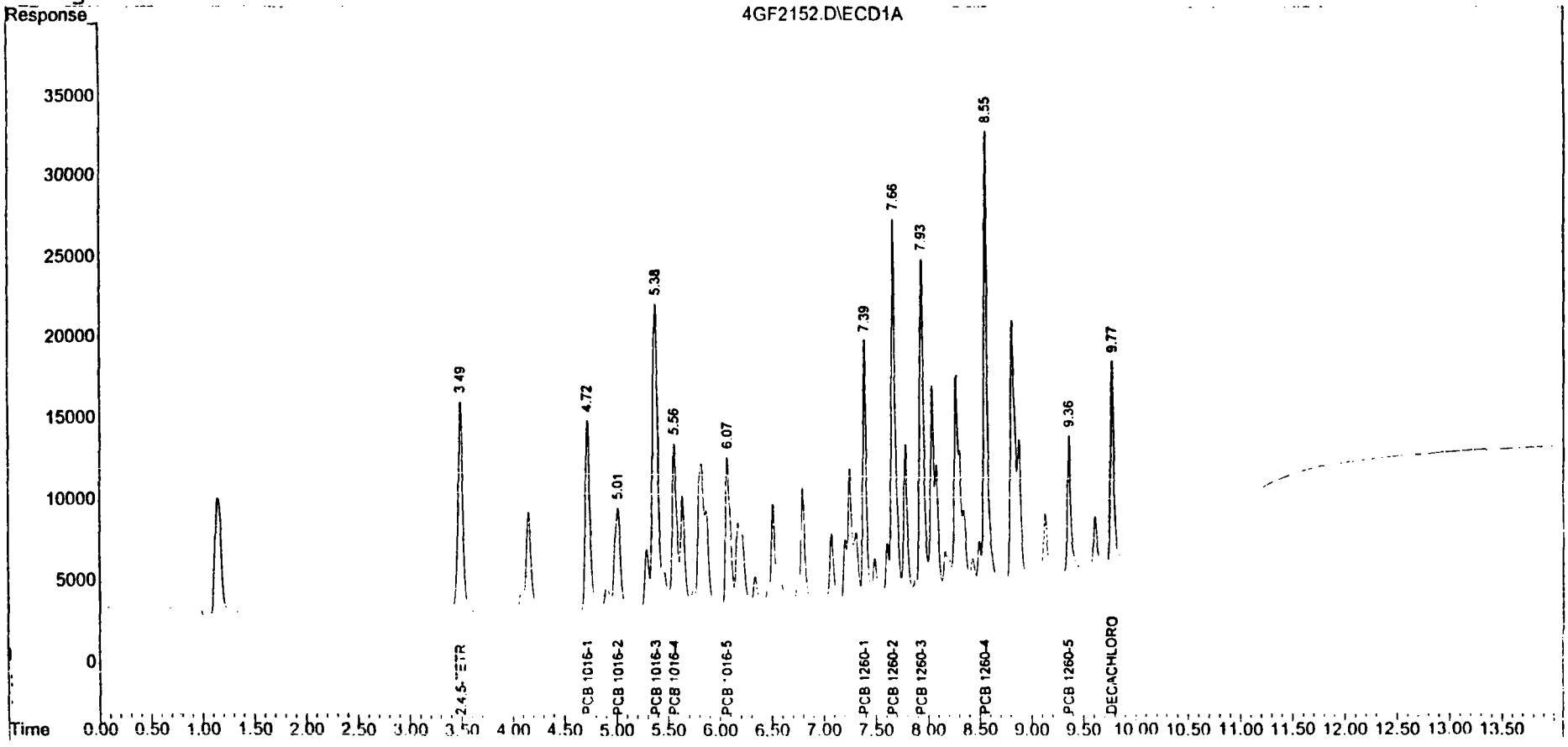
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\2\DATA\100499\4GF2152.D Vial: 3
Acq On : 4 Oct 1999 12:12 pm Operator: ECL
Sample : 1660 0.25 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 13:41 1999 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 13:40:19 1999
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\100499\4GF2153.D Vial: 4
Acq On : 4 Oct 1999 12:30 pm Operator: ECL
Sample : 1660 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 13:41 1999 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 13:40:19 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.48	790182	24.934 UG/L
Spiked Amount 20.000		Recovery =	124.67%
12) S DECACHLOROBIPHENYL	9.78	461043	24.105 UG/L
Spiked Amount 20.000		Recovery =	120.52%
Target Compounds			
2) L1 PCB 1016-1	4.72	642710	462.194 UG/L
3) L1 PCB 1016-2	5.01	375202	473.888 UG/L
4) L1 PCB 1016-3	5.38	984830	459.047 UG/L
5) L1 PCB 1016-4	5.56	265696	410.722 UG/L
6) L1 PCB 1016-5	6.07	413104	468.324 UG/L
Sum PCB 1016-1		2681542	2274.175 UG/L
Average PCB 1016-1			454.835 UG/L
7) L2 PCB 1260-1	7.39	555575	455.872 UG/L
8) L2 PCB 1260-2	7.67	918424	456.532 UG/L
9) L2 PCB 1260-3	7.93	890124	468.404 UG/L
10) L2 PCB 1260-4	8.55	989402	450.316 UG/L
11) L2 PCB 1260-5	9.36	346002	492.703 UG/L
Sum PCB 1260-1		3699527	2323.828 UG/L
Average PCB 1260-1			464.766 UG/L

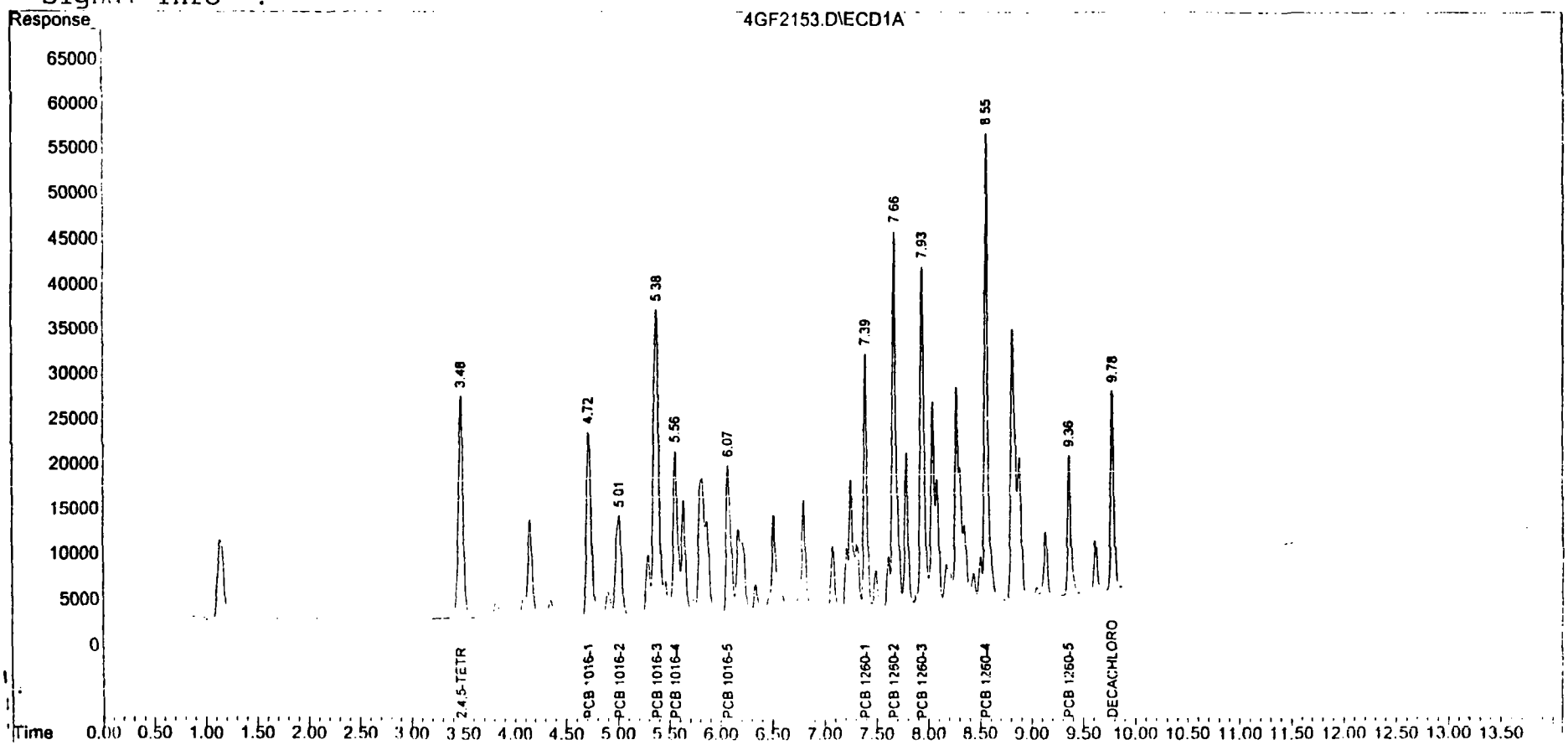
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\2\DATA\100499\4GF2153.D Vial: 4
Acq On : 4 Oct 1999 12:30 pm Operator: ECL
Sample : 1660 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 13:41 1999 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 13:40:19 1999
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\100499\4GF2154.D Vial: 5
Acq On : 4 Oct 1999 12:49 pm Operator: ECL
Sample : 1660 1.0 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 13:41 1999 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 13:40:19 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.48	1657176	52.292 UG/L
Spiked Amount 20.000		Recovery =	261.46%
12) S DECACHLOROBIPHENYL	9.77	905143	47.325 UG/L
Spiked Amount 20.000		Recovery =	236.63%
Target Compounds			
2) L1 PCB 1016-1	4.71	1246340	896.283 UG/L
3) L1 PCB 1016-2	5.00	753901	952.193 UG/L
4) L1 PCB 1016-3	5.37	1991668	928.354 UG/L
5) L1 PCB 1016-4	5.55	685780	1060.102 UG/L
6) L1 PCB 1016-5	6.06	828003	938.683 UG/L
Sum PCB 1016-1		5505692	4775.615 UG/L
Average PCB 1016-1			955.123 UG/L
7) L2 PCB 1260-1	7.38	1093738	897.457 UG/L
8) L2 PCB 1260-2	7.65	1825632	907.489 UG/L
9) L2 PCB 1260-3	7.92	1829547	962.751 UG/L
10) L2 PCB 1260-4	8.54	1993378	907.266 UG/L
11) L2 PCB 1260-5	9.35	710839	1012.226 UG/L
Sum PCB 1260-1		7453134	4687.189 UG/L
Average PCB 1260-1			937.438 UG/L

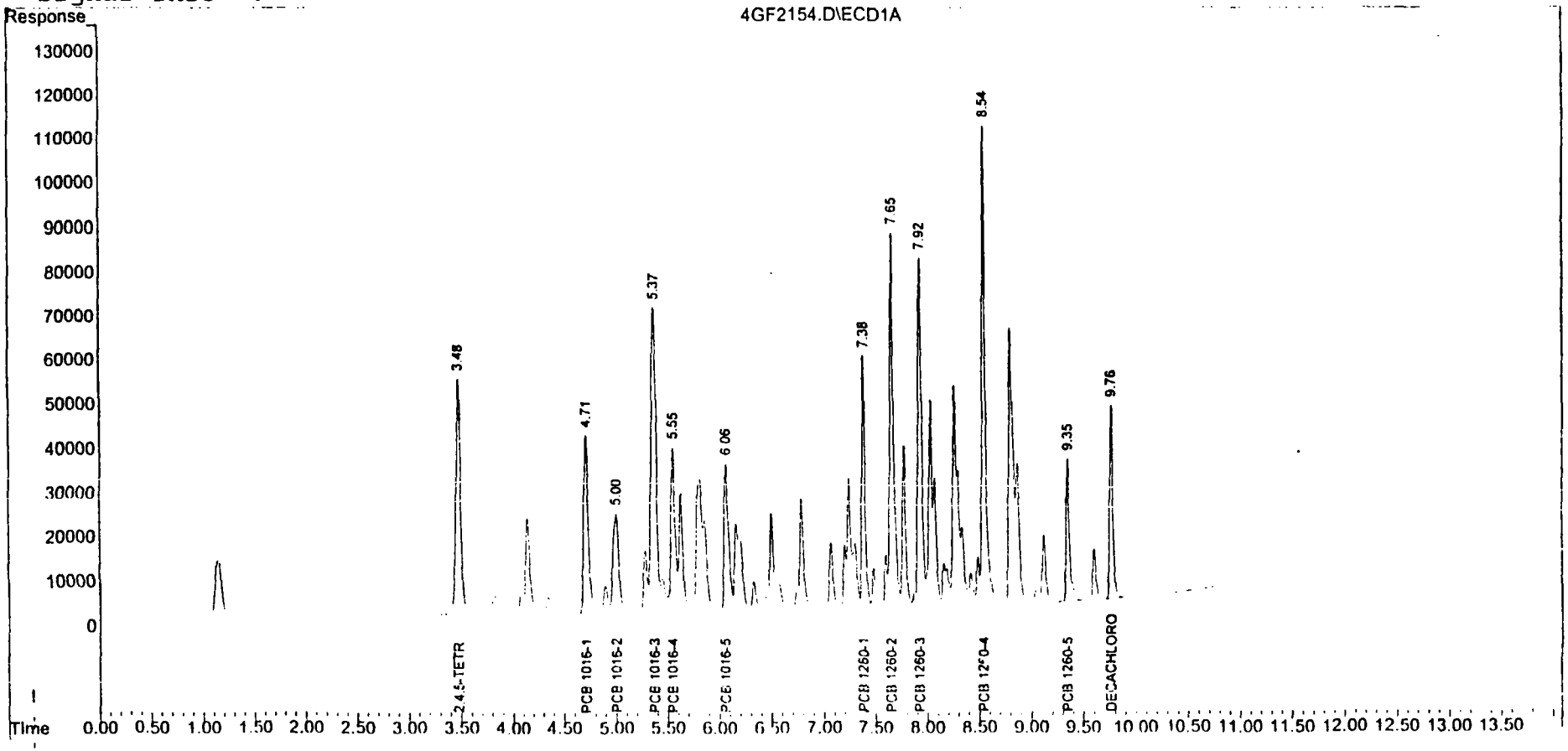
(F)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\2\DATA\100499\4GF2154.D Vial: 5
Acq On : 4 Oct 1999 12:49 pm Operator: ECL
Sample : 1660 1.0 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 13:41 1999 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 13:40:19 1999
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\100499\4GF2155.D Vial: 6
Acq On : 4 Oct 1999 1:07 pm Operator: ECL
Sample : 1660 2.0 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 13:41 1999 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 13:40:19 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.48	2958339	93.350 UG/L
Spiked Amount 20.000		Recovery =	466.75%
12) S DECACHLOROBIPHENYL	9.77	1526694	79.822 UG/L
Spiked Amount 20.000		Recovery =	399.11%
Target Compounds			
2) L1 PCB 1016-1	4.71	2101719	1511.414 UG/L
3) L1 PCB 1016-2	5.01	1303183	1645.946 UG/L
4) L1 PCB 1016-3	5.37	3453568	1609.773 UG/L
5) L1 PCB 1016-4	5.55	1186202	1833.673 UG/L
6) L1 PCB 1016-5	6.06	1439014	1631.369 UG/L
Sum PCB 1016-1		9483687	8232.175 UG/L
Average PCB 1016-1			1646.435 UG/L
7) L2 PCB 1260-1	7.38	1872652	1536.589 UG/L
8) L2 PCB 1260-2	7.65	3155827	1568.706 UG/L
9) L2 PCB 1260-3	7.92	3221017	1694.975 UG/L
10) L2 PCB 1260-4	8.54	3498898	1592.488 UG/L
11) L2 PCB 1260-5	9.35	1244638	1772.347 UG/L
Sum PCB 1260-1		12993032	8165.105 UG/L
Average PCB 1260-1			1633.021 UG/L

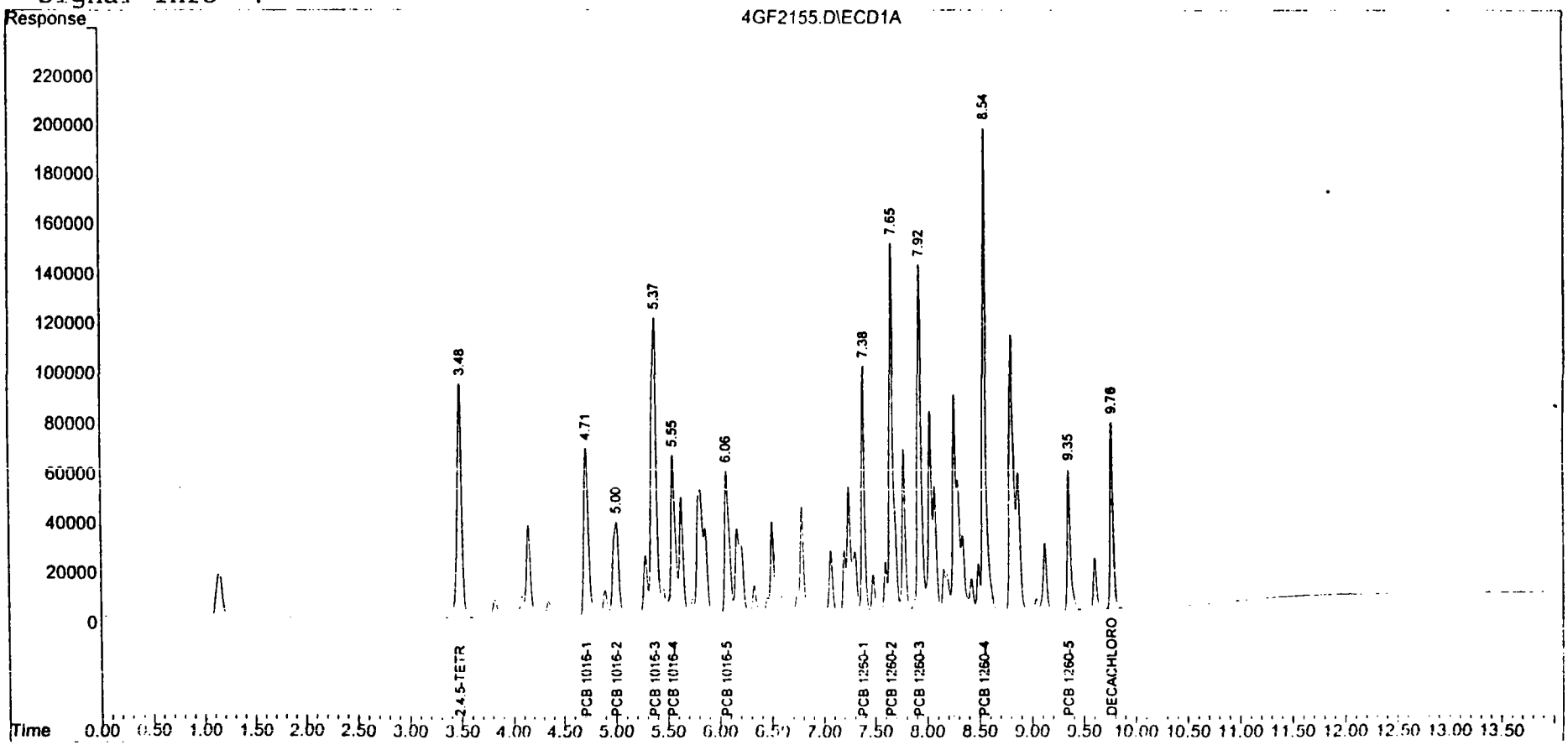
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\2\DATA\100499\4GF2155.D Vial: 6
Acq On : 4 Oct 1999 1:07 pm Operator: ECL
Sample : 1660 2.0 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 13:41 1999 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 13:40:19 1999
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\100499\4GF2156.D Vial: 7
Acq On : 4 Oct 1999 1:26 pm Operator: ECL
Sample : 1660 ALT 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 13:40:19 1999
Response via : Multiple Level Calibration

Min. RRF : 15.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	S	2,4,5-TETRACHLORO-M-XYLENE	31.691	31.086 E3	1.9	98	0.00
2	L1	PCB 1016-1	1.391	1.258#E3	9.6	98	0.00
3	L1	PCB 1016-2	791.753	736.472	7.0	98	0.00
4	L1	PCB 1016-3	2.145	1.936#E3	9.7	98	0.00
5	L1	PCB 1016-4	646.900	690.118	-6.7	130	0.00
6	L1	PCB 1016-5	882.090	815.683	7.5	99	0.00
7	L2	PCB 1260-1	1218.707	1116.141	8.4	100	0.00
8	L2	PCB 1260-2	2.012	1.843#E3	8.4	100	0.00
9	L2	PCB 1260-3	1.900	1.801#E3	5.2	101	0.00
10	L2	PCB 1260-4	2.197	1.991#E3	9.4	101	0.00
11	L2	PCB 1260-5	702.254	691.199	1.6	100	0.00
12	S	DECACHLOROBIPHENYL	19.126	18.280 E3	4.4	99	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data File : C:\HPCHEM\2\DATA\100499\4GF2156.D Vial: 7
Acq On : 4 Oct 1999 1:26 pm Operator: ECL
Sample : 1660 ALT 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 13:41 1999 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 13:40:19 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.48	777160	24.523 UG/L
Spiked Amount 20.000		Recovery =	122.62%
12) S DECACHLOROBIPHENYL	9.77	456995	23.894 UG/L
Spiked Amount 20.000		Recovery =	119.47%
Target Compounds			
2) L1 PCB 1016-1	4.72	628967	452.310 UG/L
3) L1 PCB 1016-2	5.01	368236	465.089 UG/L
4) L1 PCB 1016-3	5.38	968126	451.262 UG/L
5) L1 PCB 1016-4	5.56	345059	533.404 UG/L
6) L1 PCB 1016-5	6.07	407842	462.358 UG/L
Sum PCB 1016-1		2718230	2364.424 UG/L
Average PCB 1016-1			472.885 UG/L
7) L2 PCB 1260-1	7.39	558070	457.920 UG/L
8) L2 PCB 1260-2	7.66	921571	458.096 UG/L
9) L2 PCB 1260-3	7.93	900696	473.968 UG/L
10) L2 PCB 1260-4	8.55	995329	453.014 UG/L
11) L2 PCB 1260-5	9.36	345599	492.129 UG/L
Sum PCB 1260-1		3721265	2335.127 UG/L
Average PCB 1260-1			467.025 UG/L

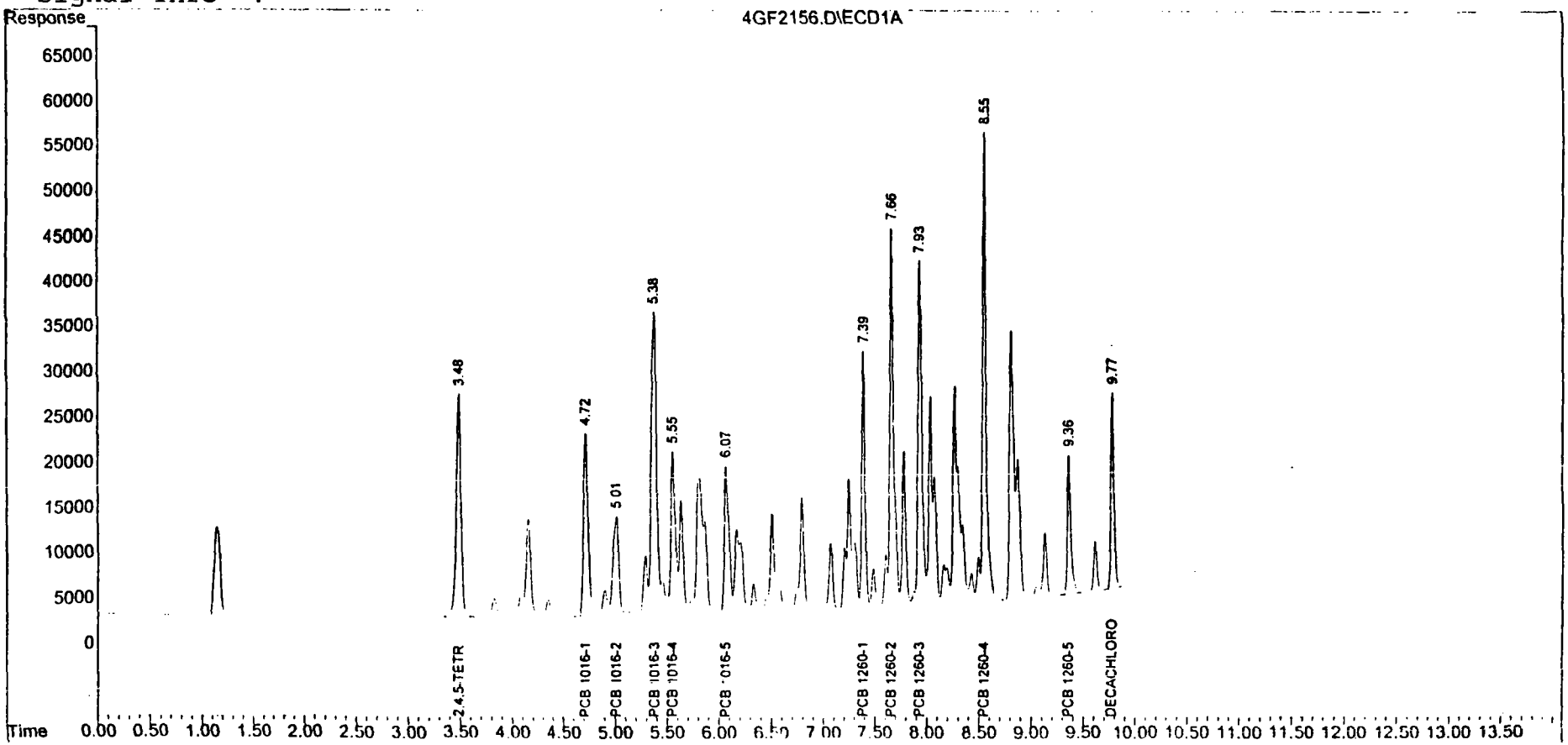
(f)=RT Delta > 1/2 Window (m)=manual int...

Quantitation Report

Data File : C:\HPCHEM\2\DATA\100499\4GF2156.D Vial: 7
Acq On : 4 Oct 1999 1:26 pm Operator: ECL
Sample : 1660 ALT 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 13:41 1999 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 13:40:19 1999
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:51:57 1999

Calibration Files

6	=4GF2162.D	5	=4GF2161.D	4	=4GF2160.D
3	=4GF2159.D	2	=4GF2158.D	1	=4GF2157.D

		Compound	6	5	4	3	2	1	Avg		%RSD
1)	S	2,4,5-TETRACHLORO-M	3.056	3.081	3.121	3.294	3.284	3.245	3.180	E4	3.35
2)	L1	PCB 1254-1	0.701	0.764	0.841	0.963	1.072	1.124	0.911	E3	18.66
3)	L1	PCB 1254-2	1.991	2.131	2.301	2.649	2.991	3.216	2.546	E3	19.23
4)	L1	PCB 1254-3	1.326	1.393	1.487	1.660	1.819	1.895	1.597	E3	14.52
5)	L1	PCB 1254-4	0.869	0.923	1.002	1.144	1.293	1.381	1.102	E3	18.71
6)	L1	PCB 1254-5	1.240	1.288	1.340	1.492	1.620	1.695	1.446	E3	12.87
7)	S	DECACHLOROBIPHENYL	1.979	2.148	2.353	2.675	2.927	2.920	2.500	E4	16.07

Data File : C:\HPCHEM\2\DATA\100499\4GF2157.D Vial: 8
Acq On : 4 Oct 1999 1:44 pm Operator: ECL
Sample : 1254 0.05 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 14:52 1999 Quant Results File: 1254F.RES

Quant Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:51:57 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.47	81129	2.551 UG/L
Spiked Amount 20.000		Recovery =	12.75%
7) S DECACHLOROBIPHENYL	9.78	73007	2.920 UG/L
Spiked Amount 20.000		Recovery =	14.60%
Target Compounds			
2) L1 PCB 1254-1	5.79	56189	61.696 UG/L
3) L1 PCB 1254-2	6.78	160807	63.149 UG/L
4) L1 PCB 1254-3	7.20	94737	59.330 UG/L
5) L1 PCB 1254-4	7.66	69032	62.651 UG/L
6) L1 PCB 1254-5	7.93	84768	58.625 UG/L
Sum PCB 1254-1		465533	305.452 UG/L
Average PCB 1254-1			61.090 UG/L

(f)=RT Delta > 1/2 Window (m)=manual int.
4GF2157.D 1254F.M Tue Oct 05 14:52:26 1999 Page 1

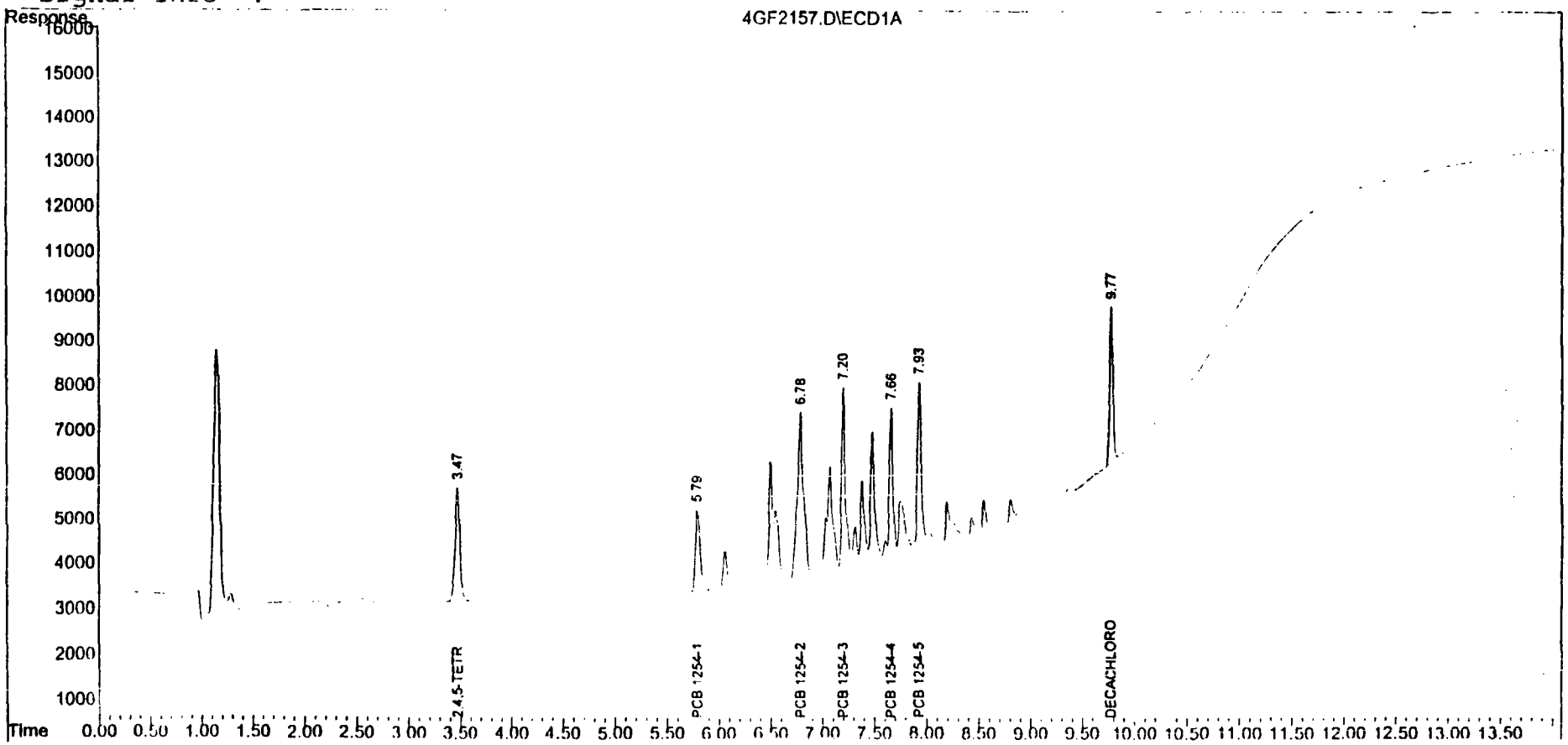
Quantitation Report

Data File : C:\HPCHEM\2\DATA\100499\4GF2157.D
Acq On : 4 Oct 1999 1:44 pm
Sample : 1254 0.05 PPM
Misc :
IntFile : events.e
Quant Time: Oct 5 14:52 1999 Quant Results File: 1254F.RES

Vial: 8
Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:51:57 1999
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\100499\4GF2158.D Vial: 9
Acq On : 4 Oct 1999 2:02 pm Operator: ECL
Sample : 1254 0.1 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct .5 14:52 1999 Quant Results File: 1254F.RES

Quant Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:51:57 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.48	164177	5.163 UG/L
Spiked Amount 20.000		Recovery =	25.81%
7) S DECACHLOROBIPHENYL	9.77	146357	5.853 UG/L
Spiked Amount 20.000		Recovery =	29.26%
Target Compounds			
2) L1 PCB 1254-1	5.79	107165	117.669 UG/L
3) L1 PCB 1254-2	6.78	299115	117.462 UG/L
4) L1 PCB 1254-3	7.20	181930	113.936 UG/L
5) L1 PCB 1254-4	7.66	129321	117.368 UG/L
6) L1 PCB 1254-5	7.92	162004	112.041 UG/L
Sum PCB 1254-1		879534	578.475 UG/L
Average PCB 1254-1			115.695 UG/L

(f)=RT Delta > 1/2 Window (m)=manual_int.
4GF2158.D 1254F.M Tue Oct 05 14:52:29 1999 Page 1
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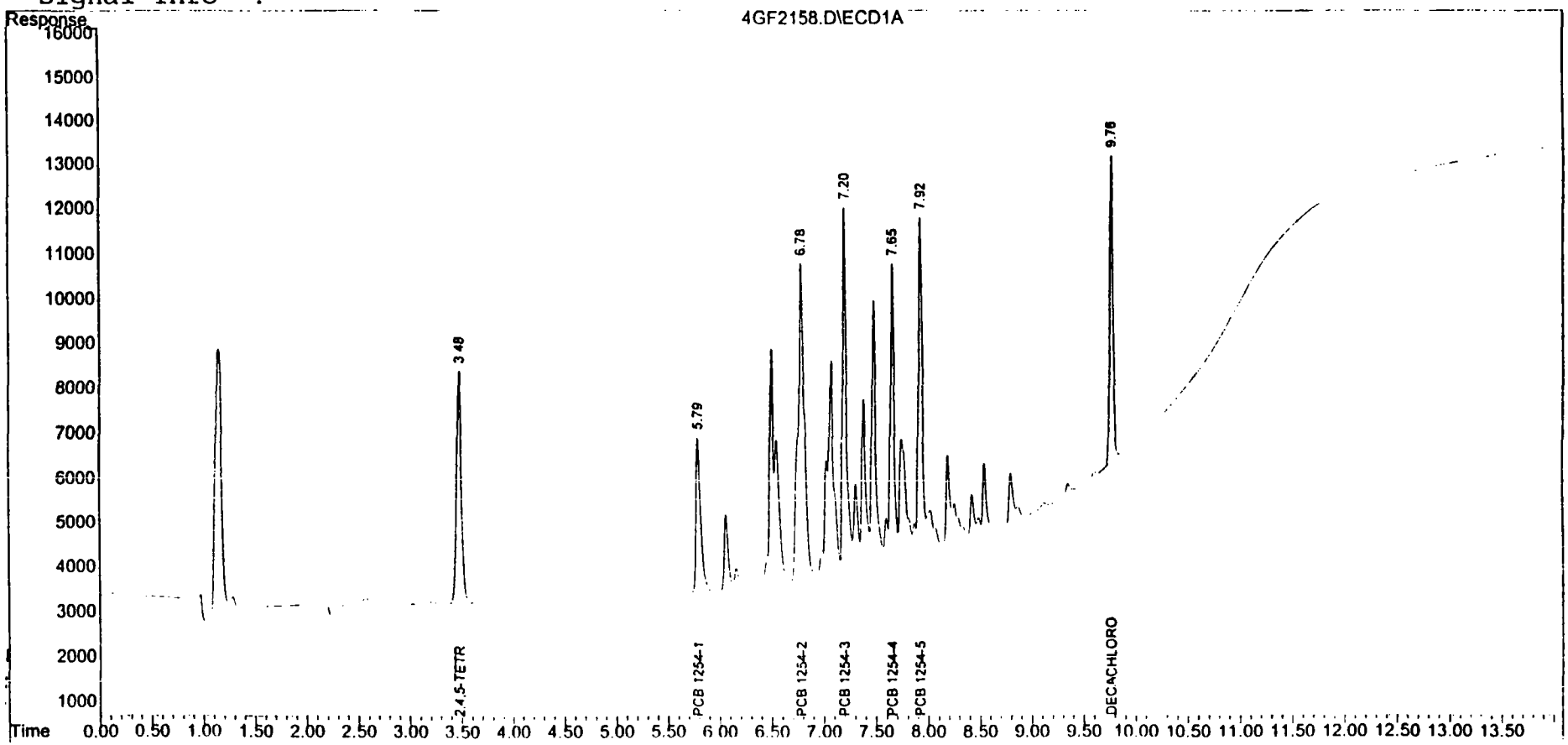
Quantitation Report

Data File : C:\HPCHEM\2\DATA\100499\4GF2158.D Vial: 9
Acq On : 4 Oct 1999 2:02 pm Operator: ECL
Sample : 1254 0.1 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 14:52 1999 Quant Results File: 1254F.RES

Quant Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:51:57 1999
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\100499\4GF2159.D Vial: 10
Acq On : 4 Oct 1999 2:21 pm Operator: ECL
Sample : 1254 0.25 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 14:52 1999 Quant Results File: 1254F.RES

Quant Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:51:57 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.49	411735	12.947 UG/L
Spiked Amount 20.000		Recovery =	64.73%
7) S DECACHLOROBIPHENYL	9.78	334417	13.374 UG/L
Spiked Amount 20.000		Recovery =	66.87%
Target Compounds			
2) L1 PCB 1254-1	5.80	240749	264.347 UG/L
3) L1 PCB 1254-2	6.79	662276	260.075 UG/L
4) L1 PCB 1254-3	7.21	414975	259.882 UG/L
5) L1 PCB 1254-4	7.67	285971	259.538 UG/L
6) L1 PCB 1254-5	7.93	373029	257.985 UG/L
Sum PCB 1254-1		1977000	1301.828 UG/L
Average PCB 1254-1			260.366 UG/L

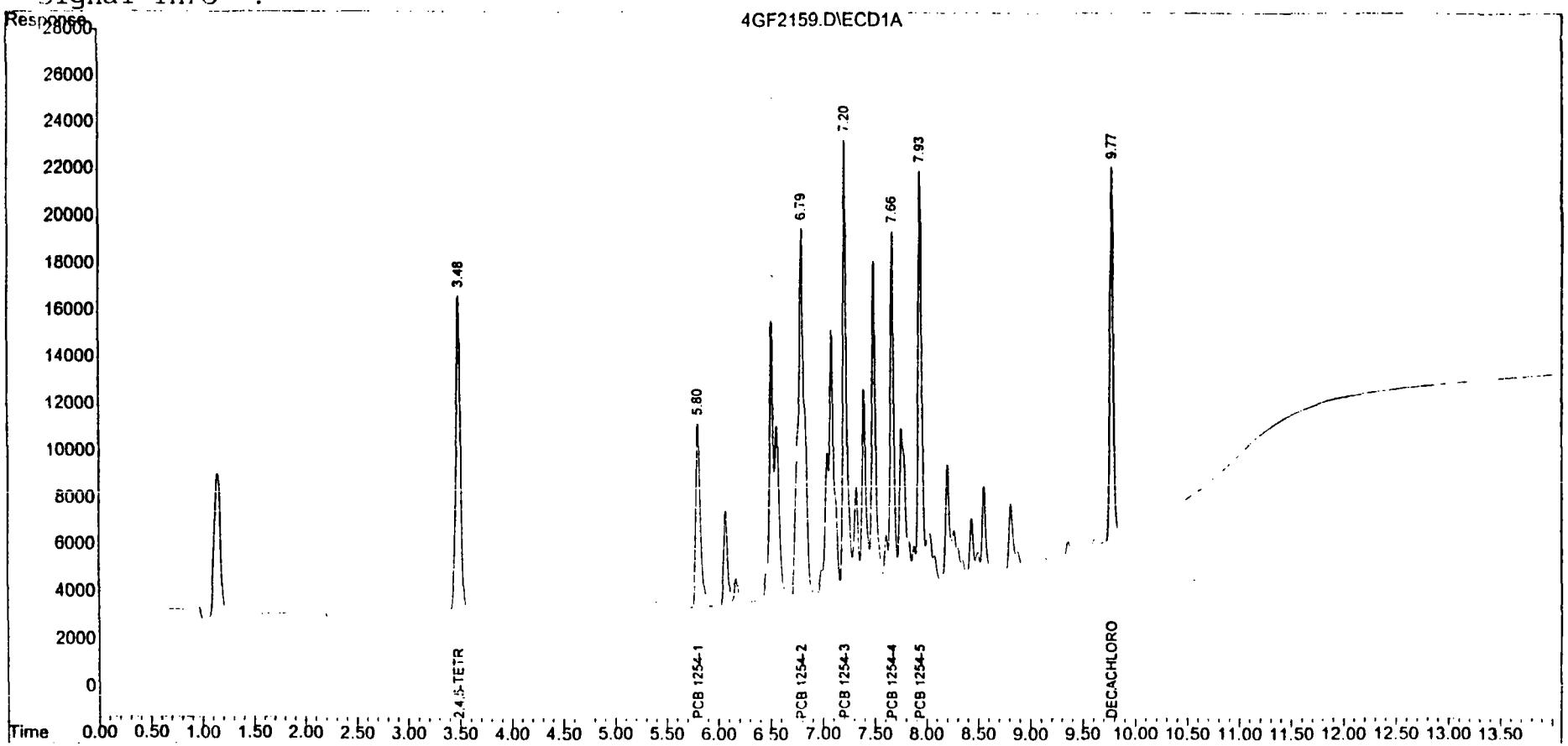
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\2\DATA\100499\4GF2159.D Vial: 10
Acq On : 4 Oct 1999 2:21 pm Operator: ECL
Sample : 1254 0.25 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 14:52 1999 Quant Results File: 1254F.RES

Quant Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:51:57 1999
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\100499\4GF2160.D Vial: 11
Acq On : 4 Oct 1999 2:39 pm Operator: ECL
Sample : 1254 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 14:52 1999 Quant Results File: 1254F.RES

Quant Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:51:57 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.47	780305	24.538	UG/L
Spiked Amount 20.000		Recovery =	122.69%	
7) S DECACHLOROBIPHENYL	9.77	588229	23.525	UG/L
Spiked Amount 20.000		Recovery =	117.63%	
Target Compounds				
2) L1 PCB 1254-1	5.79	420301	461.499	UG/L
3) L1 PCB 1254-2	6.78	1150484	451.794	UG/L
4) L1 PCB 1254-3	7.19	743703	465.751	UG/L
5) L1 PCB 1254-4	7.65	500909	454.610	UG/L
6) L1 PCB 1254-5	7.92	670139	463.464	UG/L
Sum PCB 1254-1		3485536	2297.118	UG/L
Average PCB 1254-1			459.424	UG/L

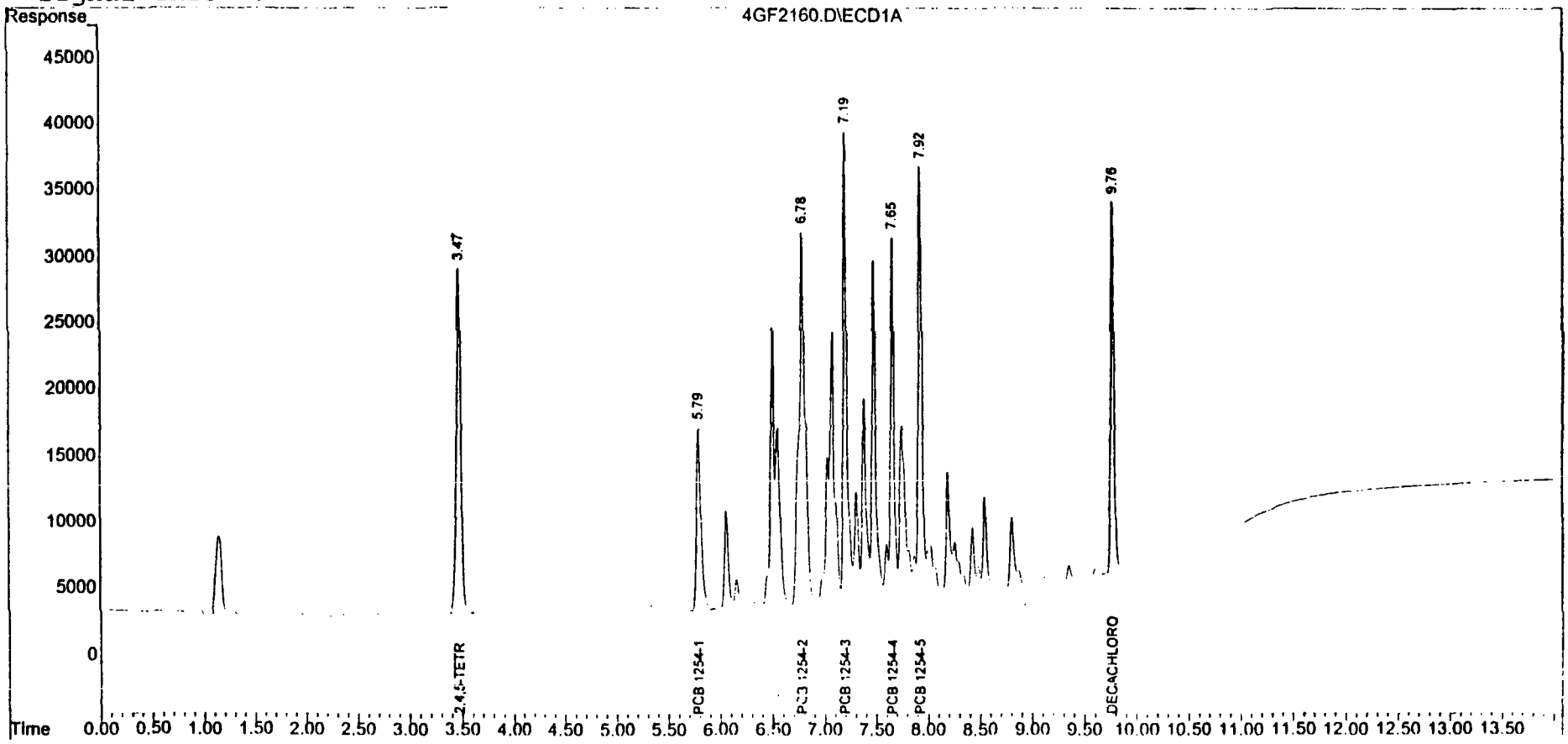
(f)=RT Delta > 1/2 Window (m)=manual int.
4GF2160.D 1254F.M Tue Oct 05 14:52:35 1999 Page 1

Quantitation Report

Data File : C:\HPCHEM\2\DATA\100499\4GF2160.D Vial: 11
Acq On : 4 Oct 1999 2:39 pm Operator: ECL
Sample : 1254 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 14:52 1999 Quant Results File: 1254F.RES

Quant Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:51:57 1999
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\100499\4GF2161.D Vial: 12
Acq On : 4 Oct 1999 2:57 pm Operator: ECL
Sample : 1254 1.0 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 14:52 1999 Quant Results File: 1254F.RES

Quant Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:51:57 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.48	1540319	48.437 UG/L
Spiked Amount 20.000		Recovery =	242.19%
7) S DECACHLOROBIPHENYL	9.77	1074238	42.962 UG/L
Spiked Amount 20.000		Recovery =	214.81%
Target Compounds			
2) L1 PCB 1254-1	5.79	764434	839.363 UG/L
3) L1 PCB 1254-2	6.78	2130812	836.768 UG/L
4) L1 PCB 1254-3	7.20	1393379	872.618 UG/L
5) L1 PCB 1254-4	7.66	922687	837.401 UG/L
6) L1 PCB 1254-5	7.92	1288173	890.893 UG/L
Sum PCB 1254-1		6499485	4277.043 UG/L
Average PCB 1254-1			855.409 UG/L

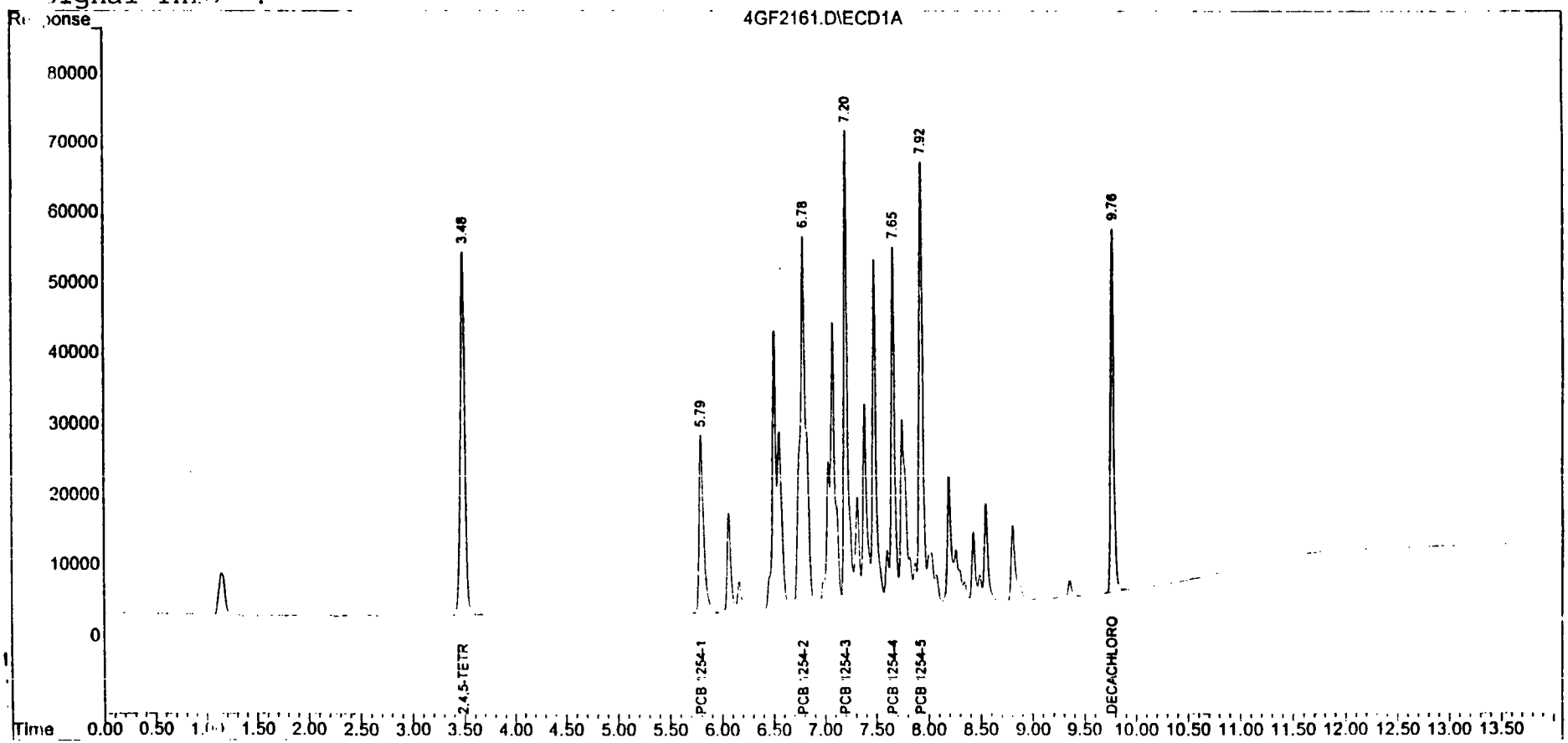
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\2\DATA\100499\4GF2161.D Vial: 12
Acq On : 4 Oct 1999 2:57 pm Operator: ECL
Sample : 1254 1.0 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time : Oct 5 14:52 1999 Quant Results File: 1254F.RES

Quant Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:51:57 1999
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\100499\4GF2162.D Vial: 13
Acq On : 4 Oct 1999 3:16 pm Operator: ECL
Sample : 1254 2.0 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 14:52 1999 Quant Results File: 1254F.RES

Quant Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:51:57 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.47	3055843	96.094 UG/L
Spiked Amount 20.000		Recovery =	480.47%
7) S DECACHLOROBIPHENYL	9.77	1978563	79.128 UG/L
Spiked Amount 20.000		Recovery =	395.64%
Target Compounds			
2) L1 PCB 1254-1	5.79	1401856	1539.264 UG/L
3) L1 PCB 1254-2	6.79	3981412	1563.497 UG/L
4) L1 PCB 1254-3	7.20	2651914	1660.789 UG/L
5) L1 PCB 1254-4	7.66	1737660	1577.045 UG/L
6) L1 PCB 1254-5	7.93	2479281	1714.656 UG/L
Sum PCB 1254-1		12252124	8055.251 UG/L
Average PCB 1254-1			1611.050 UG/L

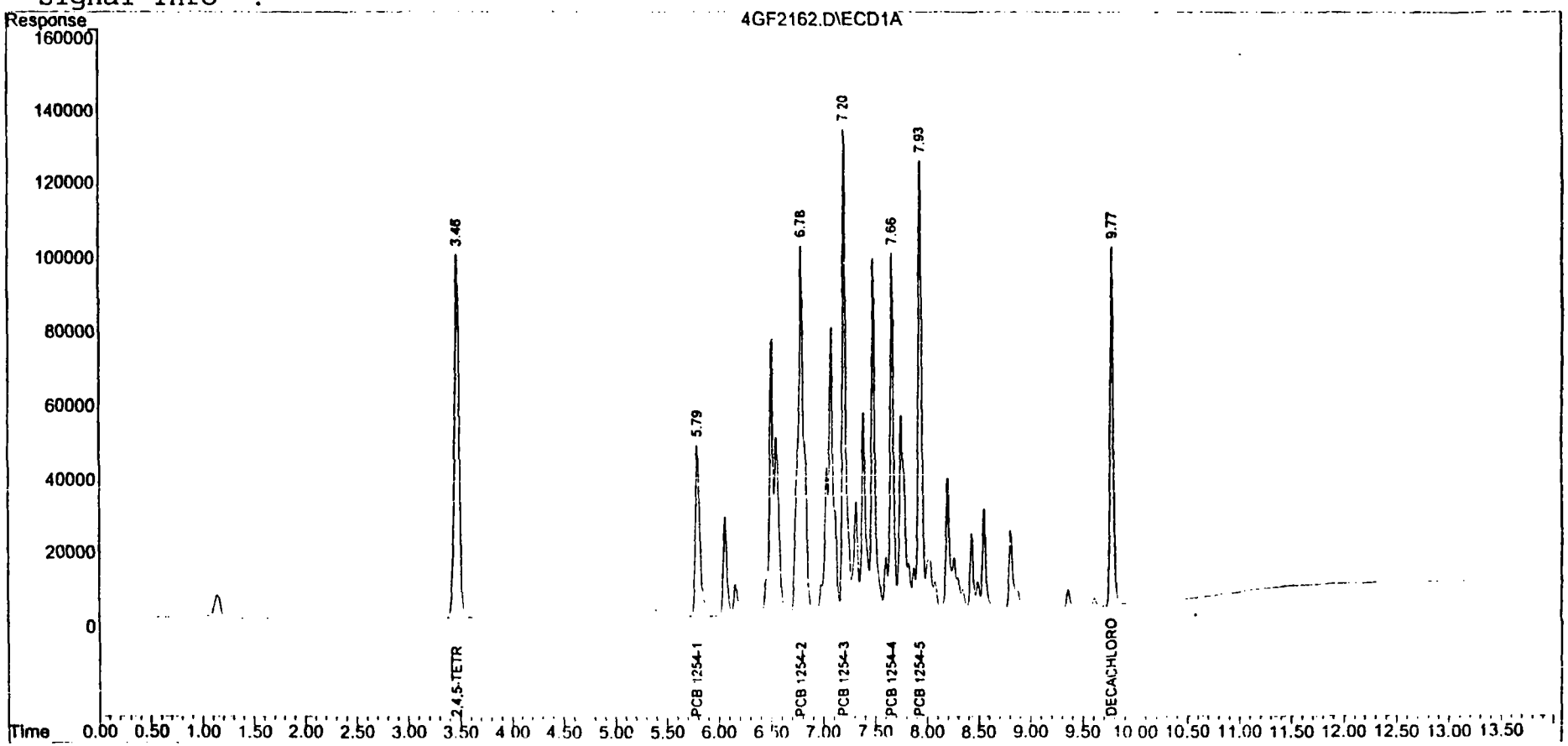
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\2\DATA\100499\4GF2162.D Vial: 13
Acq On : 4 Oct 1999 3:16 pm Operator: ECL
Sample : 1254 2.0 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 14:52 1999 Quant Results File: 1254F.RES

Quant Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:51:57 1999
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\100499\4GF2163.D Vial: 14
Acq On : 4 Oct 1999 3:34 pm Operator: ECL
Sample : 1254 ALT 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:51:57 1999
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	S	2,4,5-TETRACHLORO-M-XYLENE	31.800	30.554 E3	3.9	98	0.00
2	L1	PCB 1254-1	910.731	896.441	1.6	107	0.00
3	L1	PCB 1254-2	2.546	2.377 E3	6.6	103	0.00
4	L1	PCB 1254-3	1.597	1.459 E3	8.6	98	0.00
5	L1	PCB 1254-4	1101.845	993.412	9.8	99	0.00
6	L1	PCB 1254-5	1.446	1.277 E3	11.7	95	0.00
7	S	DECACHLOROBIPHENYL	25.005	17.390 E3	30.5#	74	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data File : C:\HPCHEM\2\DATA\100499\4GF2163.D Vial: 14
Acq On : 4 Oct 1999 3:34 pm Operator: ECL
Sample : 1254 ALT 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 14:53 1999 Quant Results File: 1254F.RES

Quant Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:51:57 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.47	763843	24.020 UG/L
Spiked Amount 20.000		Recovery =	120.10%
7) S DECACHLOROBIPHENYL	9.76	434761	17.387 UG/L
Spiked Amount 20.000		Recovery =	86.94%
Target Compounds			
2) L1 PCB 1254-1	5.79	448220	492.154 UG/L
3) L1 PCB 1254-2	6.78	1188732	466.814 UG/L
4) L1 PCB 1254-3	7.19	729399	456.794 UG/L
5) L1 PCB 1254-4	7.65	496706	450.794 UG/L
6) L1 PCB 1254-5	7.92	638722	441.736 UG/L
Sum PCB 1254-1		3501779	2308.293 UG/L
Average PCB 1254-1			461.659 UG/L

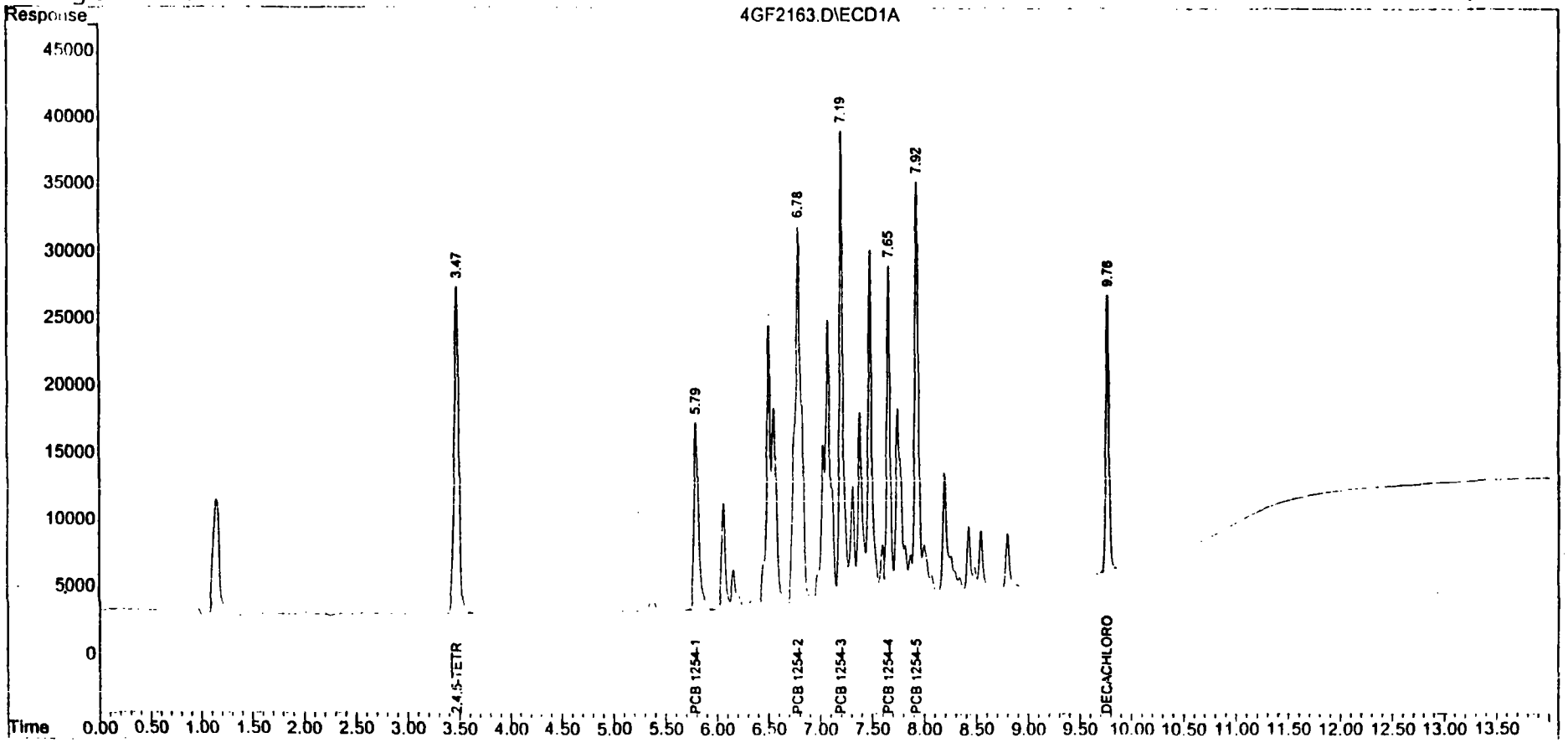
(f)=RT Delta > 1/2 Window (m)=manual int.
4GF2163.D 1254F.M Tue Oct 05 14:53:46 1999 Page 65

Quantitation Report

Data File : C:\HPCHEM\2\DATA\100499\4GF2163.D Vial: 14
Acq On : 4 Oct 1999 3:34 pm Operator: ECL
Sample : 1254 ALT 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 14:53 1999 Quant Results File: 1254F.RES

Quant Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:51:57 1999
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999

Calibration Files

=	=		=	
=	=	1	=4GF2164.D	

		Compound		1	Avg	%RS
1)	S	2,4,5-TETRACHLORO-M	3.066		3.066#E4	0.0
2)	L1	PCB 1248-1	5.560		5.560#E2	0.0
3)	L1	PCB 1248-2	1.337		1.337#E3	0.0
4)	L1	PCB 1248-3	1.047		1.047#E3	0.0
5)	L1	PCB 1248-4	1.522		1.522#E3	0.0
6)	L1	PCB 1248-5	3.951		3.951#E2	0.0
7)	S	DECACHLOROBIPHENYL	2.329		2.329#E4	0.0

(#) = Out of Range

Data File : C:\HPCHEM\2\DATA\100499\4GF2164.D Vial: 15
Acq On : 4 Oct 1999 3:52 pm Operator: ECL
Sample : 1248 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 14:54 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

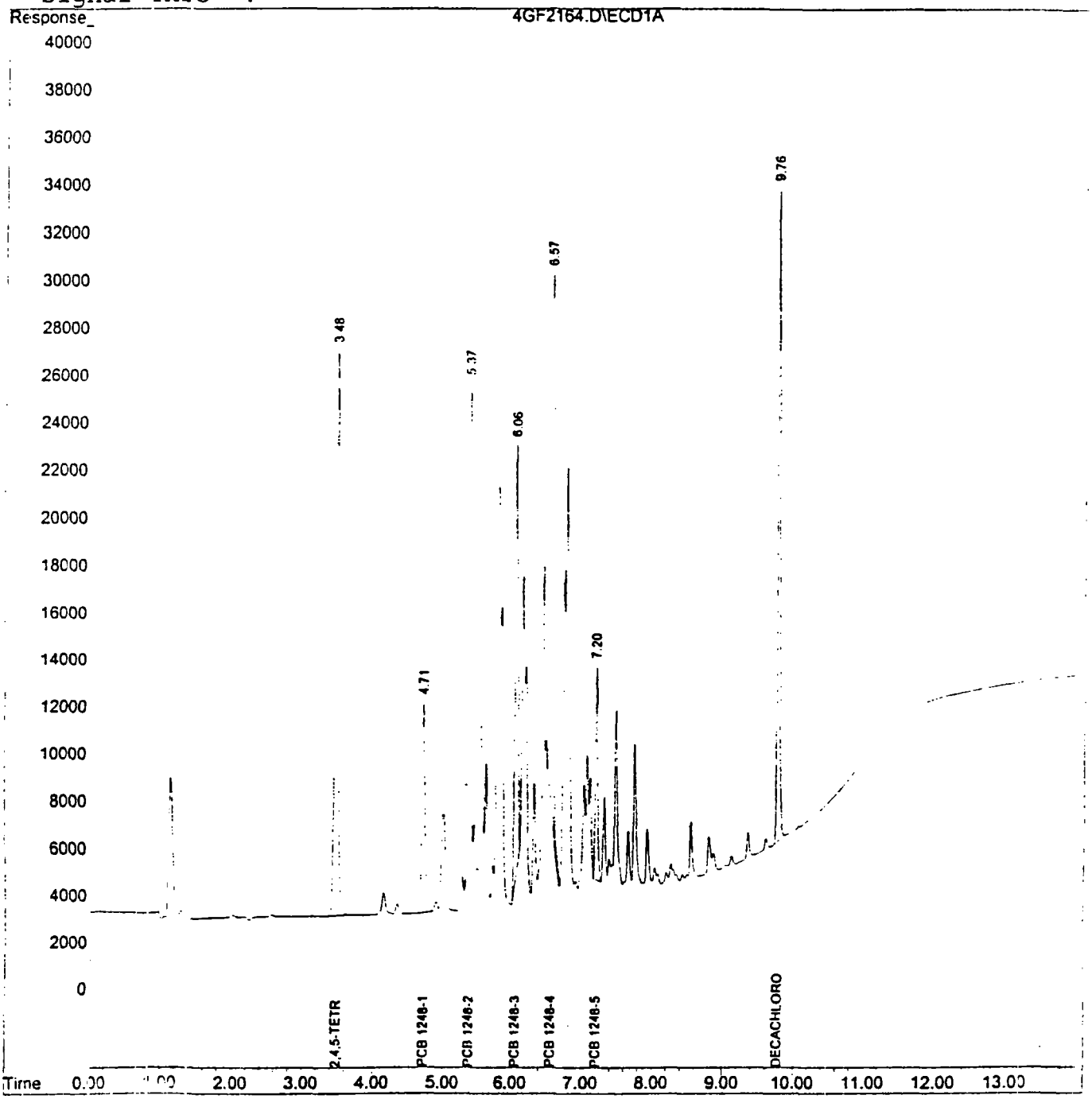
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.48	766625	25.000 UG/L
Spiked Amount 20.000		Recovery =	125.00%
7) S DECACHLOROBIPHENYL	9.77	582335	25.000 UG/L
Spiked Amount 20.000		Recovery =	125.00%
Target Compounds			
2) L1 PCB 1248-1	4.71	278019	500.000 UG/L
3) L1 PCB 1248-2	5.37	668430	500.000 UG/L
4) L1 PCB 1248-3	6.06	523358	500.000 UG/L
5) L1 PCB 1248-4	6.57	760991	500.000 UG/L
6) L1 PCB 1248-5	7.20	197571	500.000 UG/L
Sum PCB 1248-1		2428368	2500.000 UG/L
Average PCB 1248-1			500.000 UG/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\100499\4GF2164.D Vial: 15
Acq On : 4 Oct 1999 3:52 pm Operator: ECL
Sample : 1248 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 14:54 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\100499\4GF2165.D Vial: 16
Acq On : 4 Oct 1999 4:11 pm Operator: ECL
Sample : 1248 ALT 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Single Level Calibration

Min. RRF : 15.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	S	2,4,5-TETRACHLORO-M-XYLENE	30.665	30.883 E3	-0.7	101	0.00
2	L1	PCB 1248-1	556.037	523.091	5.9	94	0.00
3	L1	PCB 1248-2	1.337	0.998#E3	25.4#	75	0.00
4	L1	PCB 1248-3	1.047	1.097#E3	-4.8	105	0.00
5	L1	PCB 1248-4	1.522	1.369#E3	10.1	90	0.00
6	L1	PCB 1248-5	395.142	492.241	-24.6#	125	0.00
7	S	DECACHLOROBIPHENYL	23.293	16.347 E3	29.8#	70	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data File : C:\HPCHEM\2\DATA\100499\4GF2165.D Vial: 16
Acq On : 4 Oct 1999 4:11 pm Operator: ECL
Sample : 1248 ALT 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 14:54 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

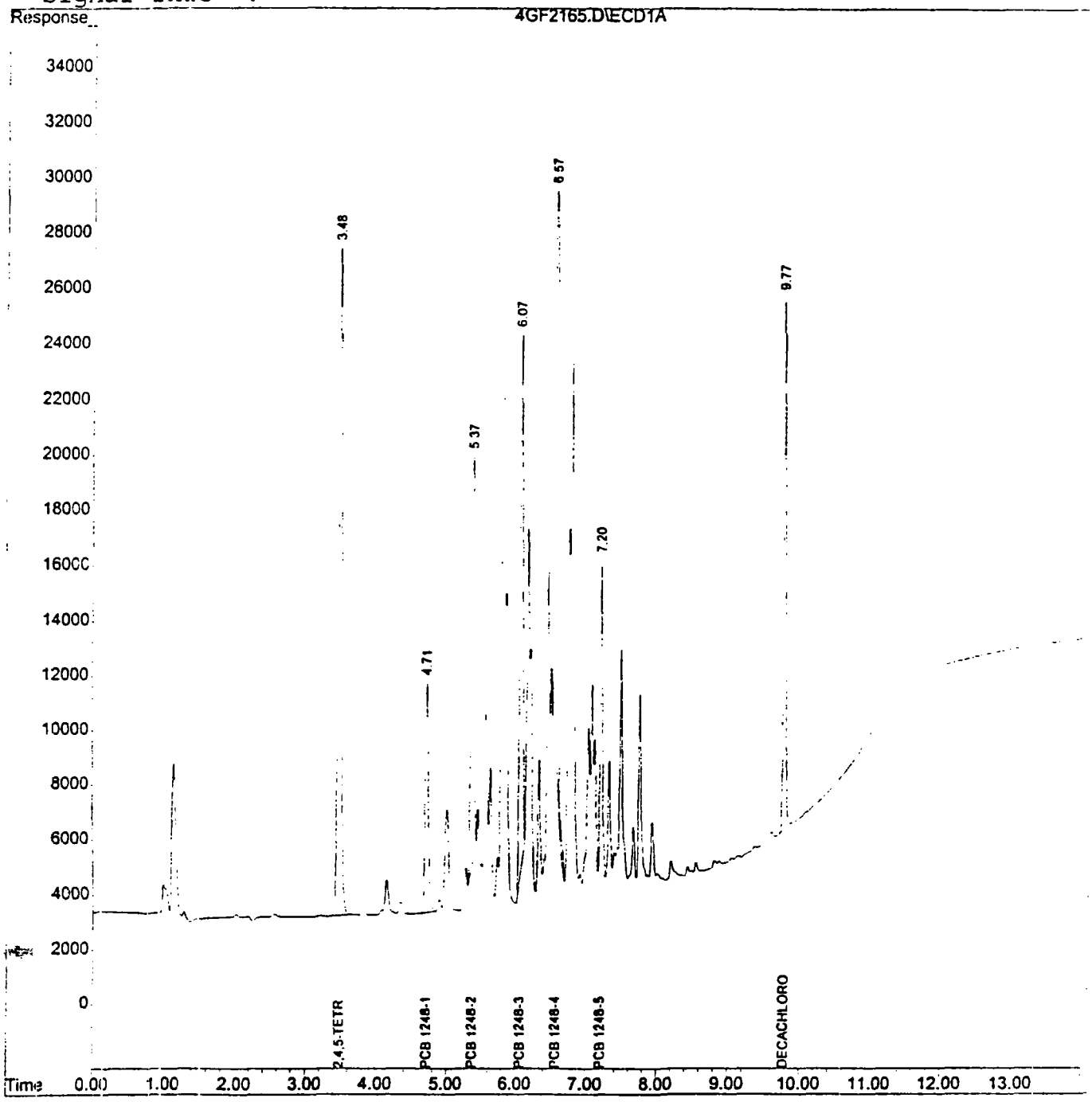
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.48	772084	25.178 UG/L
Spiked Amount 20.000		Recovery =	125.89%
7) S DECACHLOROBIPHENYL	9.77	408665	17.544 UG/L
Spiked Amount 20.000		Recovery =	87.72%
Target Compounds			
2) L1 PCB 1248-1	4.72	261545	470.374 UG/L
3) L1 PCB 1248-2	5.37	498869	373.165 UG/L
4) L1 PCB 1248-3	6.07	548286	523.815 UG/L
5) L1 PCB 1248-4	6.57	684342	449.639 UG/L
6) L1 PCB 1248-5	7.21	246120	622.865 UG/L
Sum PCB 1248-1		2239162	2439.858 UG/L
Average PCB 1248-1			487.972 UG/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\100499\4GF2165.D Vial: 16
Acq On : 4 Oct 1999 4:11 pm Operator: ECL
Sample : 1248 ALT 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 14:54 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Method : C:\HPCHEM\2\METHODS\1242SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:55:37 1999

Calibration Files

=	=		=	
=	=	1	=4GF2166.D	

		Compound		1	Avg	%RS
1)	S	2,4,5-TETRACHLORO-M	3.211		3.211#E4	0.0
2)	L1	PCB 1242-1	4.055		4.055#E2	0.0
3)	L1	PCB 1242-2	1.019		1.019#E3	0.0
4)	L1	PCB 1242-3	1.554		1.554#E3	0.0
5)	L1	PCB 1242-4	2.932		2.932#E2	0.0
6)	L1	PCB 1242-5	9.768		9.768#E2	0.0
7)	S	DECACHLOROBIPHENYL	2.333		2.333#E4	0.0

(#) = Out of Range

Data File : C:\HPCHEM\2\DATA\100499\4GF2166.D Vial: 17
Acq On : 4 Oct 1999 4:29 pm Operator: ECL
Sample : 1242 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 14:55 1999 Quant Results File: 1242SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1242SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:55:37 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.47	802762	25.000 UG/L
Spiked Amount 20.000		Recovery =	125.00%
7) S DECACHLOROBIPHENYL	9.77	583281	25.000 UG/L
Spiked Amount 20.000		Recovery =	125.00%
Target Compounds			
2) L1 PCB 1242-1	4.14	202766	500.000 UG/L
3) L1 PCB 1242-2	4.70	509434	500.000 UG/L
4) L1 PCB 1242-3	5.36	776890	500.000 UG/L
5) L1 PCB 1242-4	5.62	146612	500.000 UG/L
6) L1 PCB 1242-5	6.56	488392	500.000 UG/L
Sum PCB 1242-1		2124094	2500.000 UG/L
Average PCB 1242-1			500.000 UG/L

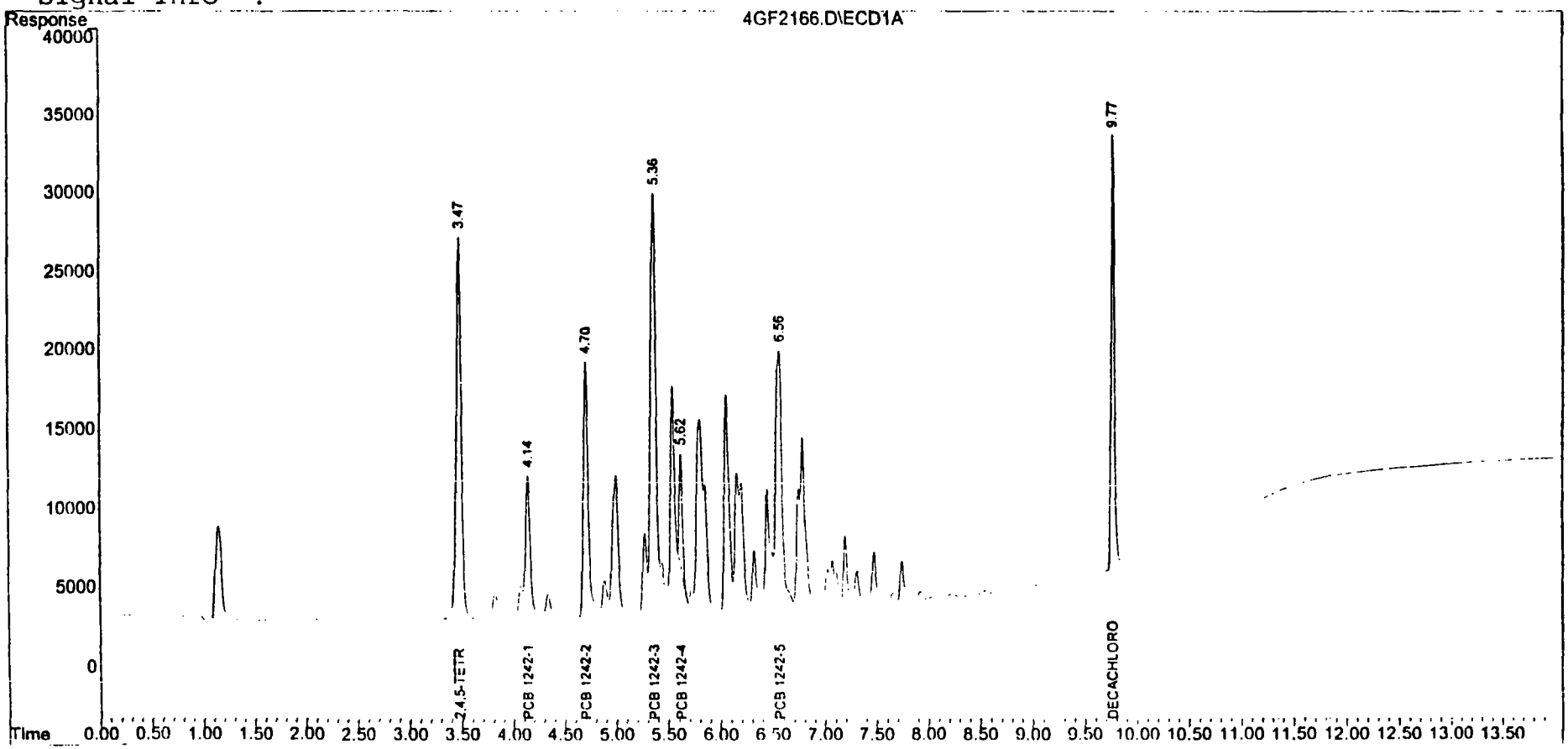
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\2\DATA\100499\4GF2166.D Vial: 17
Acq On : 4 Oct 1999 4:29 pm Operator: ECL
Sample : 1242 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 14:55 1999 Quant Results File: 1242SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1242SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:55:37 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



75

Data File : C:\HPCHEM\2\DATA\100499\4GF2167.D Vial: 18
Acq On : 4 Oct 1999 4:47 pm Operator: ECL
Sample : 1242 ALT 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\2\METHODS\1242SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:55:37 1999
Response via : Single Level Calibration

Min. RRF : 15.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	S	2,4,5-TETRACHLORO-M-XYLENE	32.110	31.872 E3	0.7	99	0.00
2	L1	PCB 1242-1	405.532	420.279	-3.6	104	0.00
3	L1	PCB 1242-2	1.019	0.985#E3	3.3	97	0.00
4	L1	PCB 1242-3	1.554	1.512#E3	2.7	97	0.00
5	L1	PCB 1242-4	293.224	289.919	1.1	99	0.00
6	L1	PCB 1242-5	976.783	947.803	3.0	97	0.00
7	S	DECACHLOROBIPHENYL	23.331	17.483 E3	25.1#	75	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data File : C:\HPCHEM\2\DATA\100499\4GF2167.D Vial: 18
Acq On : 4 Oct 1999 4:47 pm Operator: ECL
Sample : 1242 ALT 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct .5 14:56 1999 Quant Results File: 1242SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1242SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:55:37 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.48	796793	24.814 UG/L
Spiked Amount 20.000		Recovery =	124.07%
7) S DECACHLOROBIPHENYL	9.77	437082	18.734 UG/L
Spiked Amount 20.000		Recovery =	93.67%
Target Compounds			
2) L1 PCB 1242-1	4.15	210140	518.183 UG/L
3) L1 PCB 1242-2	4.71	492345	483.227 UG/L
4) L1 PCB 1242-3	5.37	755962	486.531 UG/L
5) L1 PCB 1242-4	5.63	144959	494.365 UG/L
6) L1 PCB 1242-5	6.57	473901	485.165 UG/L
Sum PCB 1242-1		2077308	2467.471 UG/L
Average PCB 1242-1			493.494 UG/L

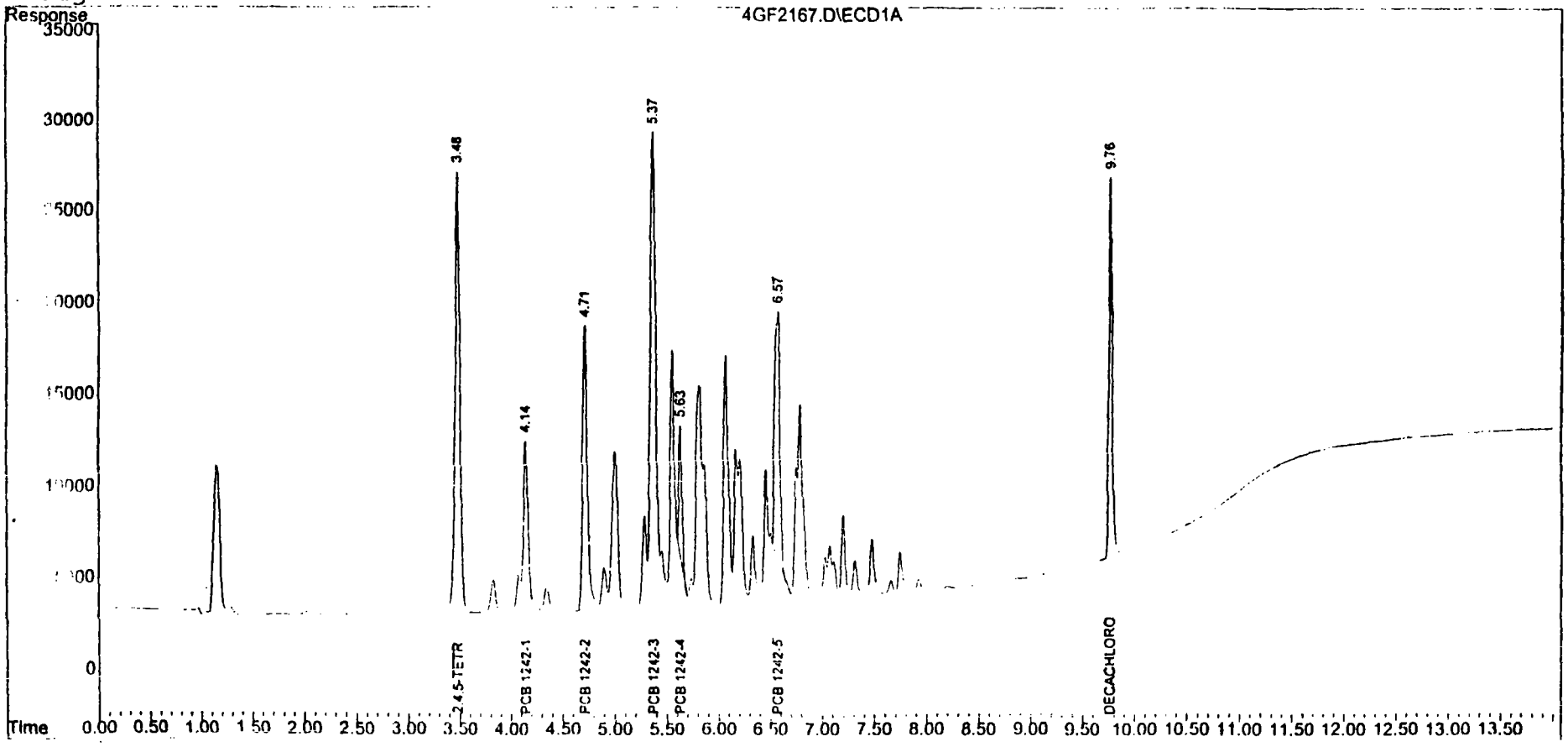
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantification Report

Data File : C:\HPCHEM\2\DATA\100499\4GF2167.D Vial: 18
Acq On : 4 Oct 1999 4:47 pm Operator: ECL
Sample : 1242 ALT 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 14:56 1999 Quant Results File: 1242SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1242SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:55:37 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Response Factor Report RF 4

Method : C:\HPCHEM\2\METHODS\1232SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:56:55 1999

Calibration Files

=		=		=
=		=	1	=4GF2168.D

		Compound		1	Avg	%RS
1)	S	2,4,5-TETRACHLORO-M	3.335		3.335#E4	0.0
2)	L1	PCB 1232-1	2.156		2.156#E2	0.0
3)	L1	PCB 1232-2	5.810		5.810#E2	0.0
4)	L1	PCB 1232-3	3.047		3.047#E2	0.0
5)	L1	PCB 1232-4	8.471		8.471#E2	0.0
6)	L1	PCB 1232-5	4.223		4.223#E2	0.0
7)	S	DECACHLOROBIPHENYL	1.691		1.691#E4	0.0

(#) = Out of Range

Data File : C:\HPCHEM\2\DATA\100499\4GF2168.D Vial: 19
Acq On : 4 Oct 1999 5:05 pm Operator: ECL
Sample : 1232 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 14:56 1999 Quant Results File: 1232SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1232SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:56:55 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

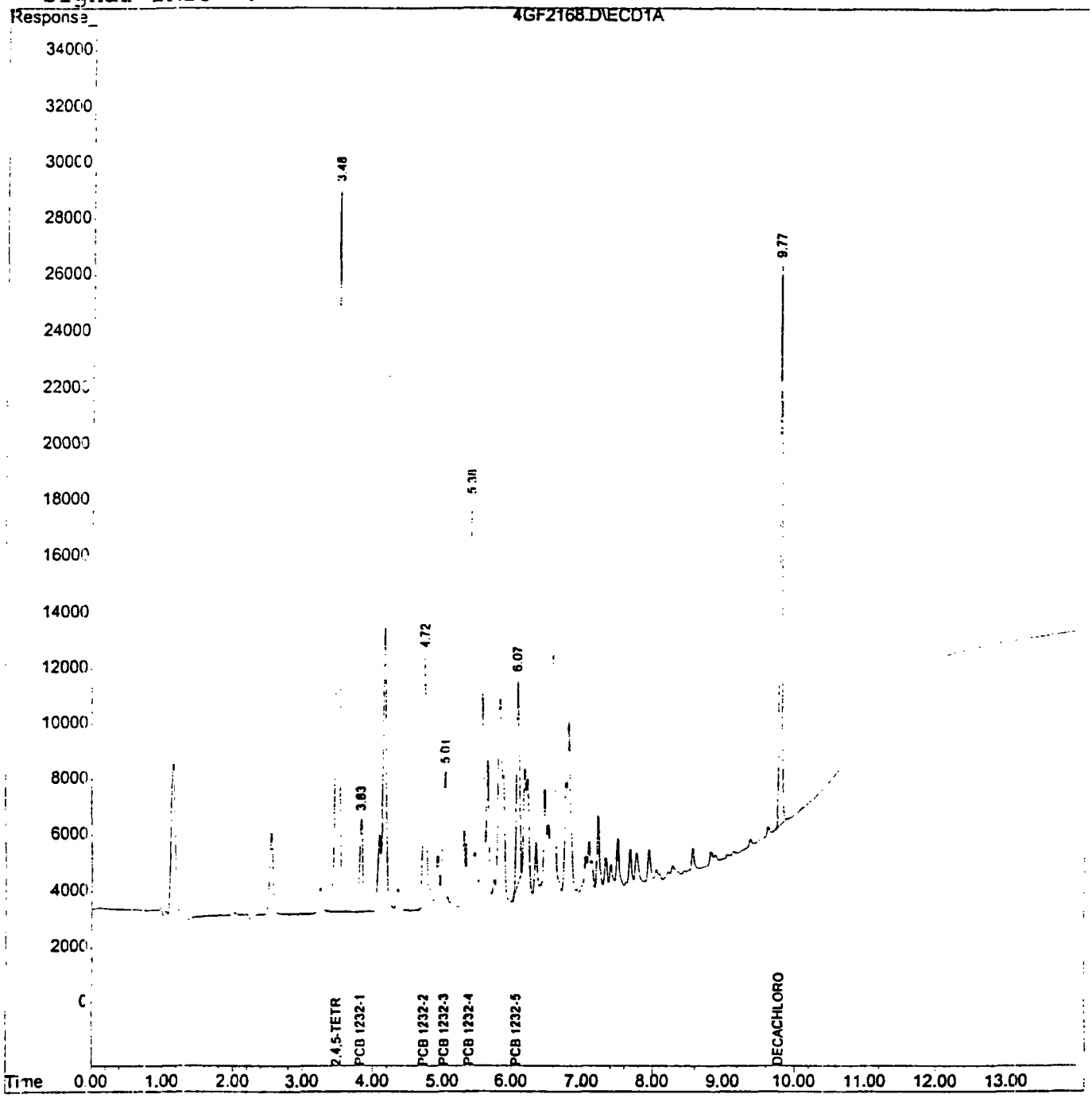
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.49	833652	25.000 UG/L
Spiked Amount 20.000		Recovery =	125.00%
7) S DECACHLOROBIPHENYL	9.78	422654	25.000 UG/L
Spiked Amount 20.000		Recovery =	125.00%
Target Compounds			
2) L1 PCB 1232-1	3.83	107810	500.000 UG/L
3) L1 PCB 1232-2	4.72	290523	500.000 UG/L
4) L1 PCB 1232-3	5.01	152360	500.000 UG/L
5) L1 PCB 1232-4	5.38	423566	500.000 UG/L
6) L1 PCB 1232-5	6.07	211130	500.000 UG/L
Sum PCB 1232-1		1185389	2500.000 UG/L
Average PCB 1232-1			500.000 UG/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\100499\4GF2168.D Vial: 19
Acq On : 4 Oct 1999 5:05 pm Operator: ECL
Sample : 1232 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 14:56 1999 Quant Results File: 1232SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1232SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:56:55 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\100499\4GF2169.D Vial: 20
Acq On : 4 Oct 1999 5:24 pm Operator: ECL
Sample : 1232 ALT 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\2\METHODS\1232SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:56:55 1999
Response via : Single Level Calibration

Min. RRF : 15.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF		%Dev	Area%	Dev(min)
1	S	2,4,5-TETRACHLORO-M-XYLENE	33.346	33.440	E3	-0.3	100	-0.01
2	L1	PCB 1232-1	215.621	273.532		-26.9#	127	-0.01
3	L1	PCB 1232-2	581.045	526.741		9.3	91	-0.01
4	L1	PCB 1232-3	304.720	317.750		-4.3	104	-0.01
5	L1	PCB 1232-4	847.132	897.966		-6.0	106	-0.01
6	L1	PCB 1232-5	422.260	368.822		12.7	87	0.00
7	S	DECACHLOROBIPHENYL	16.906	20.568	E3	-21.7#	122	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

C:\HPCHEM\2\DATA\100499\4GF2169.D Vial: 20

Acq On : 4 Oct 1999 5:24 pm Operator: ECL
Sample : 1232 ALT 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 14:57 1999 Quant Results File: 1232SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1232SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:56:55 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

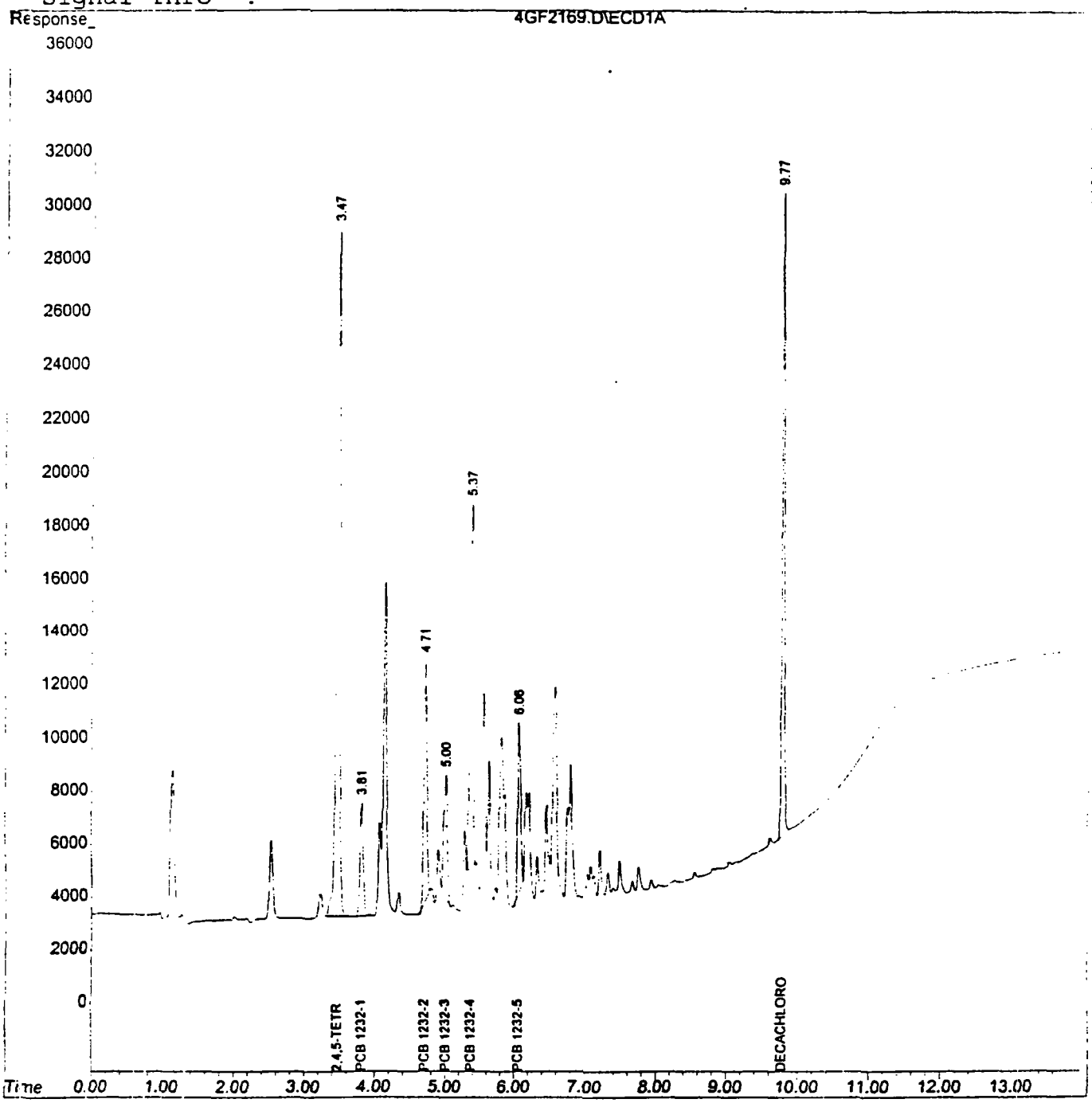
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.47	836008	25.071 UG/L
Spiked Amount 20.000		Recovery =	125.36%
7) S DECACHLOROBIPHENYL	9.77	514190	30.414 UG/L
Spiked Amount 20.000		Recovery =	152.07%
Target Compounds			
2) L1 PCB 1232-1	3.81	136766	634.289 UG/L
3) L1 PCB 1232-2	4.71	263370	453.270 UG/L
4) L1 PCB 1232-3	5.00	158875	521.381 UG/L
5) L1 PCB 1232-4	5.37	448983	530.003 UG/L
6) L1 PCB 1232-5	6.06	184411	436.724 UG/L
Sum PCB 1232-1		1192405	2575.667 UG/L
Average PCB 1232-1			515.133 UG/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\100499\4GF2169.D Vial: 20
Acq On : 4 Oct 1999 5:24 pm Operator: ECL
Sample : 1232 ALT 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 14:57 1999 Quant Results File: 1232SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1232SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:56:55 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Method : C:\HPCHEM\2\METHODS\1221SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:58:14 1999

Calibration Files

=		=		=
=		=	1	=4GF2170.D

		Compound		1	Avg	%RS
1)	S	2,4,5-TETRACHLORO-M	3.372		3.372#E4	0.0
2)	L1	PCB 1221-1	3.285		3.285#E2	0.0
3)	L1	PCB 1221-2	4.152		4.152#E2	0.0
4)	L1	PCB 1221-3	5.828		5.828#E2	0.0
5)	L1	PCB 1221-4	1.067		1.067#E2	0.0
6)	L1	PCB 1221-5	1.831		1.831#E2	0.0
7)	S	DECACHLOROBIPHENYL	1.665		1.665#E4	0.0

(#) = Out of Range

Data File : C:\HPCHEM\2\DATA\100499\4GF2170.D Vial: 21
Acq On : 4 Oct 1999 5:43 pm Operator: ECL
Sample : 1221 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 14:58 1999 Quant Results File: 1221SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1221SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:58:14 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

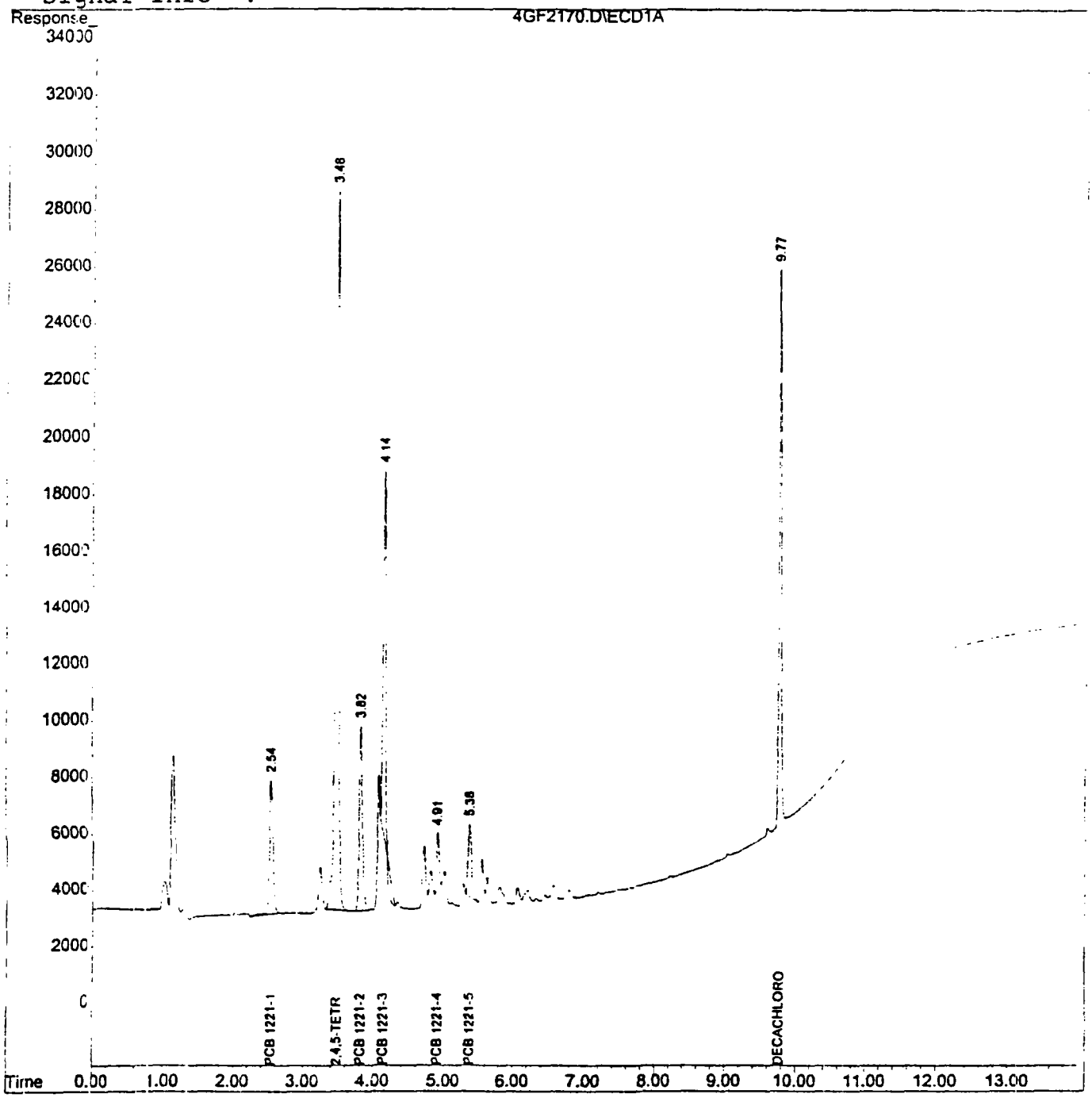
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.48	843112	25.000 UG/L
Spiked Amount 20.000		Recovery =	125.00%
7) S DECACHLOROBIPHENYL	9.77	416176	25.000 UG/L
Spiked Amount 20.000		Recovery =	125.00%
Target Compounds			
2) L1 PCB 1221-1	2.54	164275	500.000 UG/L
3) L1 PCB 1221-2	3.82	207582	500.000 UG/L
4) L1 PCB 1221-3	4.15	291399	500.000 UG/L
5) L1 PCB 1221-4	4.91	53343	500.000 UG/L
6) L1 PCB 1221-5	5.38	91557	500.000 UG/L
Sum PCB 1221-1		808156	2500.000 UG/L
Average PCB 1221-1			500.000 UG/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\100499\4GF2170.D Vial: 21
Acq On : 4 Oct 1999 5:43 pm Operator: ECL
Sample : 1221 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 14:58 1999 Quant Results File: 1221SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1221SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:58:14 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\100499\4GF2171.D Vial: 22
Acq On : 4 Oct 1999 6:01 pm Operator: ECL
Sample : 1221 ALT 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\2\METHODS\1221SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:58:14 1999
Response via : Single Level Calibration

Min. RRF : 15.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF		%Dev	Area%	Dev(min)
1	S	2,4,5-TETRACHLORO-M-XYLENE	33.724	33.035	E3	2.0	98	0.00
2	L1	PCB 1221-1	328.550	332.496		-1.2	101	0.00
3	L1	PCB 1221-2	415.165	391.080		5.8	94	0.00
4	L1	PCB 1221-3	582.797	535.349		8.1	92	0.00
5	L1	PCB 1221-4	106.687	101.704		4.7	95	0.01
6	L1	PCB 1221-5	183.114	107.936		41.1#	59	0.01
7	S	DECACHLOROBIPHENYL	16.647	22.474	E3	-35.0#	135	0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data File : C:\HPCHEM\2\DATA\100499\4GF2171.D Vial: 22
Acq On : 4 Oct 1999 6:01 pm Operator: ECL
Sample : 1221 ALT 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 14:58 1999 Quant Results File: 1221SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1221SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:58:14 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

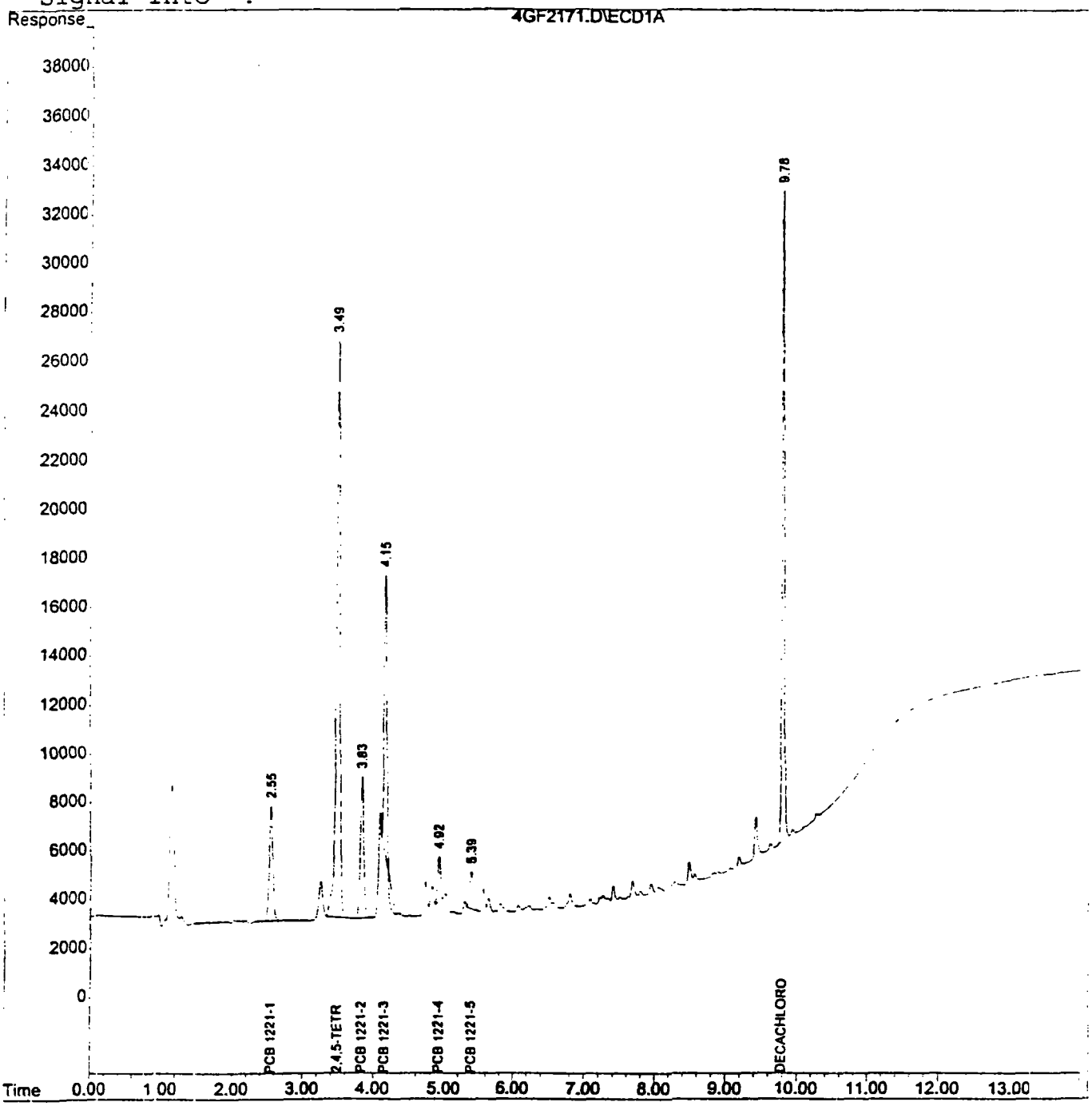
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.49	825871	24.489 UG/L
Spiked Amount 20.000		Recovery =	122.45%
7) S DECACHLOROBIPHENYL	9.78	561846	33.751 UG/L
Spiked Amount 20.000		Recovery =	168.76%
Target Compounds			
2) L1 PCB 1221-1	2.55	166248	506.006 UG/L
3) L1 PCB 1221-2	3.83	195540	470.994 UG/L
4) L1 PCB 1221-3	4.16	267675	459.293 UG/L
5) L1 PCB 1221-4	4.92	50852	476.646 UG/L
6) L1 PCB 1221-5	5.39	53968	294.723 UG/L
Sum PCB 1221-1		734283	2207.662 UG/L
Average PCB 1221-1			441.532 UG/L

(f)=RT Delta > 1/2 Window (m)=manual int..

Data File : C:\HPCHEM\2\DATA\100499\4GF2171.D Vial: 22
Acq On : 4 Oct 1999 6:01 pm Operator: ECL
Sample : 1221 ALT 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 5 14:58 1999 Quant Results File: 1221SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1221SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:58:14 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101199\4GF2290.D
Acq On : 11 Oct 1999 1:42 pm
Sample : 1660 CHECK 0.5 PPM
Misc :
IntFile : events.e

Vial: 1
Operator: ECL
Inst : HP 4
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 11 14:16:39 1999
Response via : Multiple Level Calibration

Min. RRF : 15.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	S	2,4,5-TETRACHLORO-M-XYLENE	25.000	24.105	3.6	97	0.00
2	L1	PCB 1016-1	500.000	449.534	10.1	97	0.00
3	L1	PCB 1016-2	500.000	464.208	7.2	98	0.00
4	L1	PCB 1016-3	500.000	456.823	8.6	100	0.00
5	L1	PCB 1016-4	500.000	539.679	-7.9	131	0.00
6	L1	PCB 1016-5	500.000	467.566	6.5	100	0.00
7	L2	PCB 1260-1	500.000	459.641	8.1	101	-0.01
8	L2	PCB 1260-2	500.000	461.723	7.7	101	-0.01
9	L2	PCB 1260-3	500.000	479.107	4.2	102	-0.01
10	L2	PCB 1260-4	500.000	460.492	7.9	102	-0.01
11	L2	PCB 1260-5	500.000	498.623	0.3	101	-0.01
12	S	DECACHLOROBIPHENYL	25.000	24.264	2.9	101	-0.01

Data File : C:\HPCHEM\2\DATA\101199\4GF2290.D Vial: 1
Acq On : 11 Oct 1999 1:42 pm Operator: ECL
Sample : 1660 CHECK 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 11 14:16 1999 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 11 14:16:39 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.53	763913	24.105 UG/L
Spiked Amount 20.000		Recovery =	120.52%
12) S DECACHLOROBIPHENYL	9.80	464075	24.264 UG/L
Spiked Amount 20.000		Recovery =	121.32%
Target Compounds			
2) L1 PCB 1016-1	4.75	625107	449.534 UG/L
3) L1 PCB 1016-2	5.05	367538	464.208 UG/L
4) L1 PCB 1016-3	5.41	980057	456.823 UG/L
5) L1 PCB 1016-4	5.59	349118	539.679 UG/L
6) L1 PCB 1016-5	6.10	412435	467.566 UG/L
Sum PCB 1016-1		2734254	2377.809 UG/L
Average PCB 1016-1			475.562 UG/L
7) L2 PCB 1260-1	7.41	560168	459.641 UG/L
8) L2 PCB 1260-2	7.69	928867	461.723 UG/L
9) L2 PCB 1260-3	7.95	910463	479.107 UG/L
10) L2 PCB 1260-4	8.57	1011760	460.492 UG/L
11) L2 PCB 1260-5	9.38	350160	498.623 UG/L
Sum PCB 1260-1		3761417	2359.586 UG/L
Average PCB 1260-1			471.917 UG/L

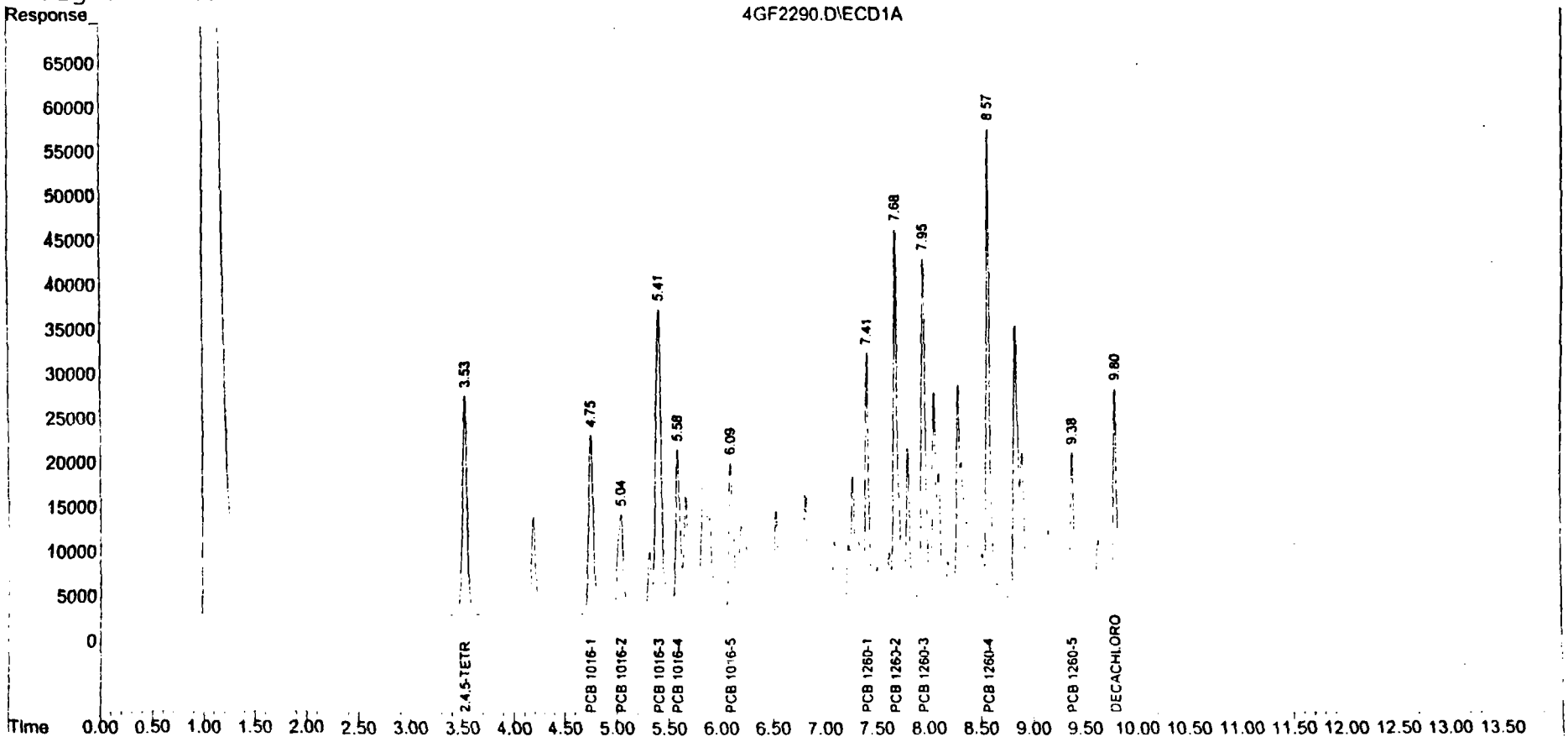
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\2\DATA\101199\4GF2290.D Vial: 1
Acq On : 11 Oct 1999 1:42 pm Operator: ECL
Sample : 1660 CHECK 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 11 14:16 1999 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 11 14:16:39 1999
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101199\4GF2291.D Vial: 2
Acq On : 11 Oct 1999 3:02 pm Operator: ECL
Sample : 1248 CHECK 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Single Level Calibration

Min. RRF : 15.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	S	2,4,5-TETRACHLORO-M-XYLENE	30.665	29.789 E3	2.9	97	0.04
2	L1	PCB 1248-1	556.037	540.164	2.9	97	0.04
3	L1	PCB 1248-2	1.337	1.341#E3	-0.3	100	0.04
4	L1	PCB 1248-3	1.047	1.033#E3	1.3	99	0.04
5	L1	PCB 1248-4	1.522	1.517#E3	0.3	100	0.04
6	L1	PCB 1248-5	395.142	390.616	1.1	99	0.04
7	S	DECACHLOROBIPHENYL	23.293	23.059 E3	1.0	99	0.03

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data File: C:\HPCHEM\2\DATA\101199\4GF2291.D Vial: 2
Acq On : 11 Oct 1999 3:02 pm Operator: ECL
Sample : 1248 CHECK 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 12 12:22 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

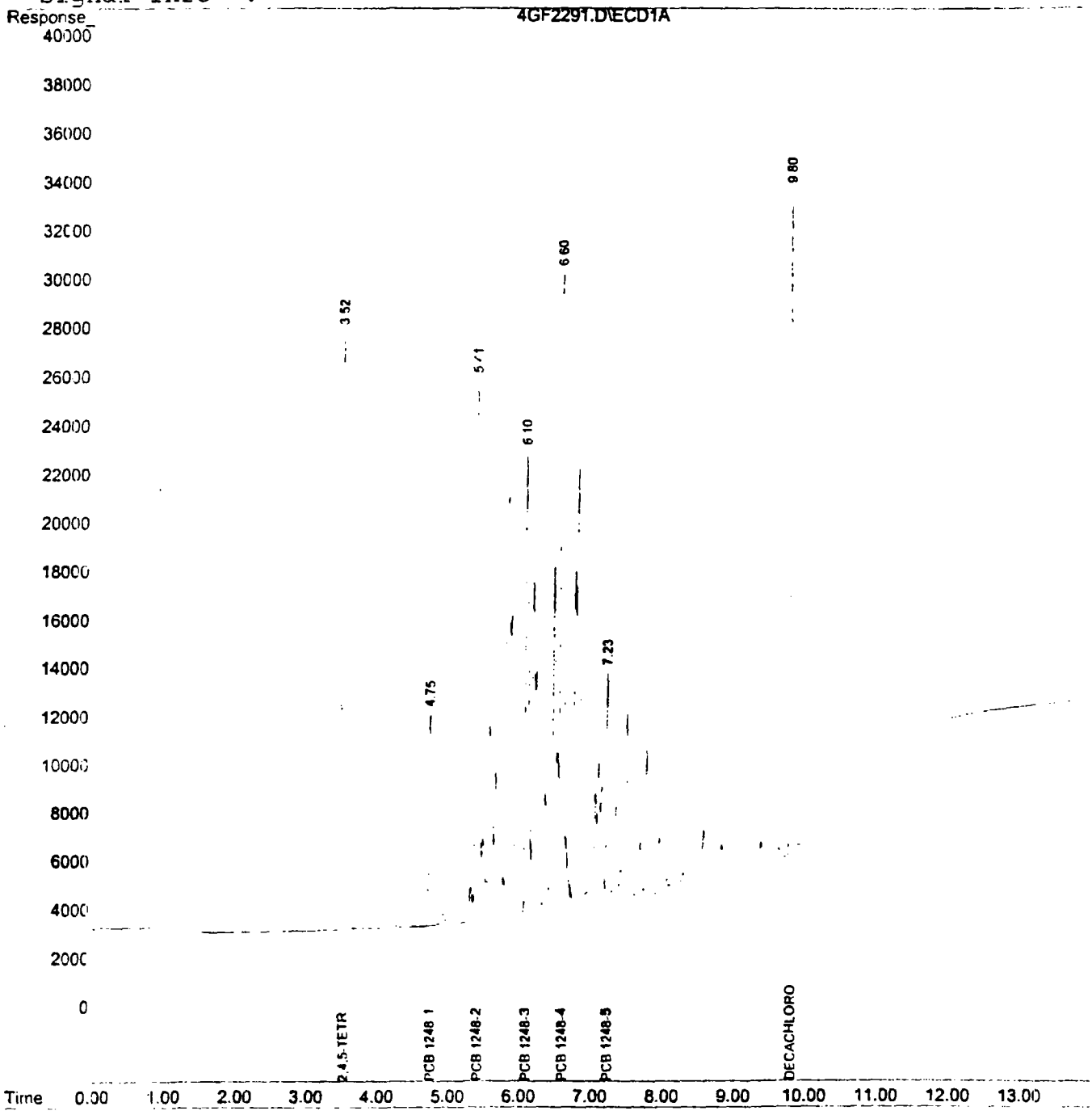
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.52	744724	24.286	UG/L
Spiked Amount 20.000		Recovery =	121.43%	
7) S DECACHLOROBIPHENYL	9.80	576467	24.748	UG/L
Spiked Amount 20.000		Recovery =	123.74%	
Target Compounds				
2) L1 PCB 1248-1	4.75	270082	485.726	UG/L
3) L1 PCB 1248-2	5.41	670703	501.700	UG/L
4) L1 PCB 1248-3	6.10	516302	493.259	UG/L
5) L1 PCB 1248-4	6.61	758291	498.226	UG/L
6) L1 PCB 1248-5	7.23	195308	494.273	UG/L
Sum PCB 1248-1		2410686	2473.185	UG/L
Average PCB 1248-1			494.637	UG/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\101199\4GF2291.D Vial: 2
Acq On : 11 Oct 1999 3:02 pm Operator: ECL
Sample : 1248 CHECK 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 12 12:22 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101199\4GF2302.D Vial: 13
Acq On : 11 Oct 1999 6:26 pm Operator: ECL
Sample : 1248 CHECK 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Single Level Calibration

Min. RRF : 15.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	S	2,4,5-TETRACHLORO-M-XYLENE	30.665	30.647 E3	0.1	100	0.03
2	L1	PCB 1248-1	556.037	557.851	-0.3	100	0.02
3	L1	PCB 1248-2	1.337	1.329#E3	0.6	99	0.02
4	L1	PCB 1248-3	1.047	1.078#E3	-3.0	103	0.02
5	L1	PCB 1248-4	1.522	1.538#E3	-1.1	101	0.02
6	L1	PCB 1248-5	395.142	414.814	-5.0	105	0.02
7	S	DECACHLOROBIPHENYL	23.293	24.191 E3	-3.9	104	0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data File : C:\HPCHEM\2\DATA\101199\4GF2302.D Vial: 13
Acq On : 11 Oct 1999 6:26 pm Operator: ECL
Sample : 1248 CHECK 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 12 12:23 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

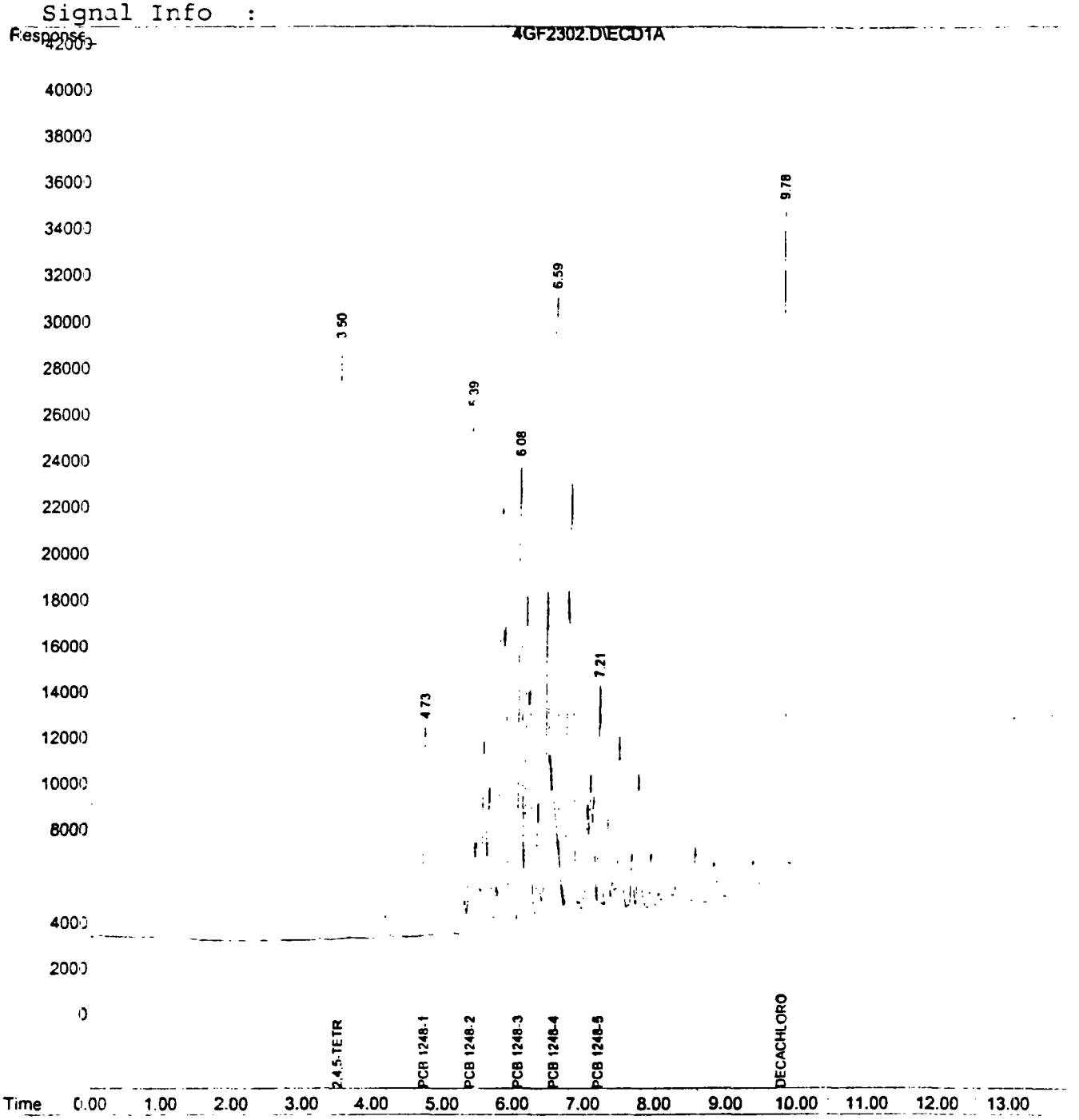
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.51	766187	24.986 UG/L
Spiked Amount 20.000		Recovery =	124.93%
7) S DECACHLOROBIPHENYL	9.78	604786	25.964 UG/L
Spiked Amount 20.000		Recovery =	129.82%
Target Compounds			
2) L1 PCB 1248-1	4.73	278926	501.631 UG/L
3) L1 PCB 1248-2	5.39	664370	496.964 UG/L
4) L1 PCB 1248-3	6.08	539071	515.012 UG/L
5) L1 PCB 1248-4	6.59	769224	505.409 UG/L
6) L1 PCB 1248-5	7.21	207407	524.891 UG/L
Sum PCB 1248-1		2458997	2543.907 UG/L
Average PCB 1248-1			508.781 UG/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\101199\4GF2302.D Vial: 13
Acq On : 11 Oct 1999 6:26 pm Operator: ECL
Sample : 1248 CHECK 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 12 12:23 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101199\4GF2303.D Vial: 14
Acq On : 11 Oct 1999 6:45 pm Operator: ECL
Sample : 1660 CHECK 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 13:40:19 1999
Response via : Multiple Level Calibration

Min. RRF : 15.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	S	2,4,5-TETRACHLORO-M-XYLENE	25.000	25.464	-1.9	102	0.01
2	L1	PCB 1016-1	500.000	473.213	5.4	102	0.02
3	L1	PCB 1016-2	500.000	488.144	2.4	103	0.02
4	L1	PCB 1016-3	500.000	467.549	6.5	102	0.02
5	L1	PCB 1016-4	500.000	551.208	-10.2	134	0.02
6	L1	PCB 1016-5	500.000	492.577	1.5	105	0.02
7	L2	PCB 1260-1	500.000	496.444	0.7	109	0.02
8	L2	PCB 1260-2	500.000	499.339	0.1	109	0.02
9	L2	PCB 1260-3	500.000	504.630	-0.9	108	0.02
10	L2	PCB 1260-4	500.000	491.521	1.7	109	0.02
11	L2	PCB 1260-5	500.000	537.058	-7.4	109	0.02
12	S	DECACHLOROBIPHENYL	25.000	25.957	-3.8	108	0.02

Data File : C:\HPCHEM\2\DATA\101199\4GF2303.D Vial: 14
Acq On : 11 Oct 1999 6:45 pm Operator: ECL
Sample : 1660 CHECK 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 12 12:25 1999 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 13:40:19 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

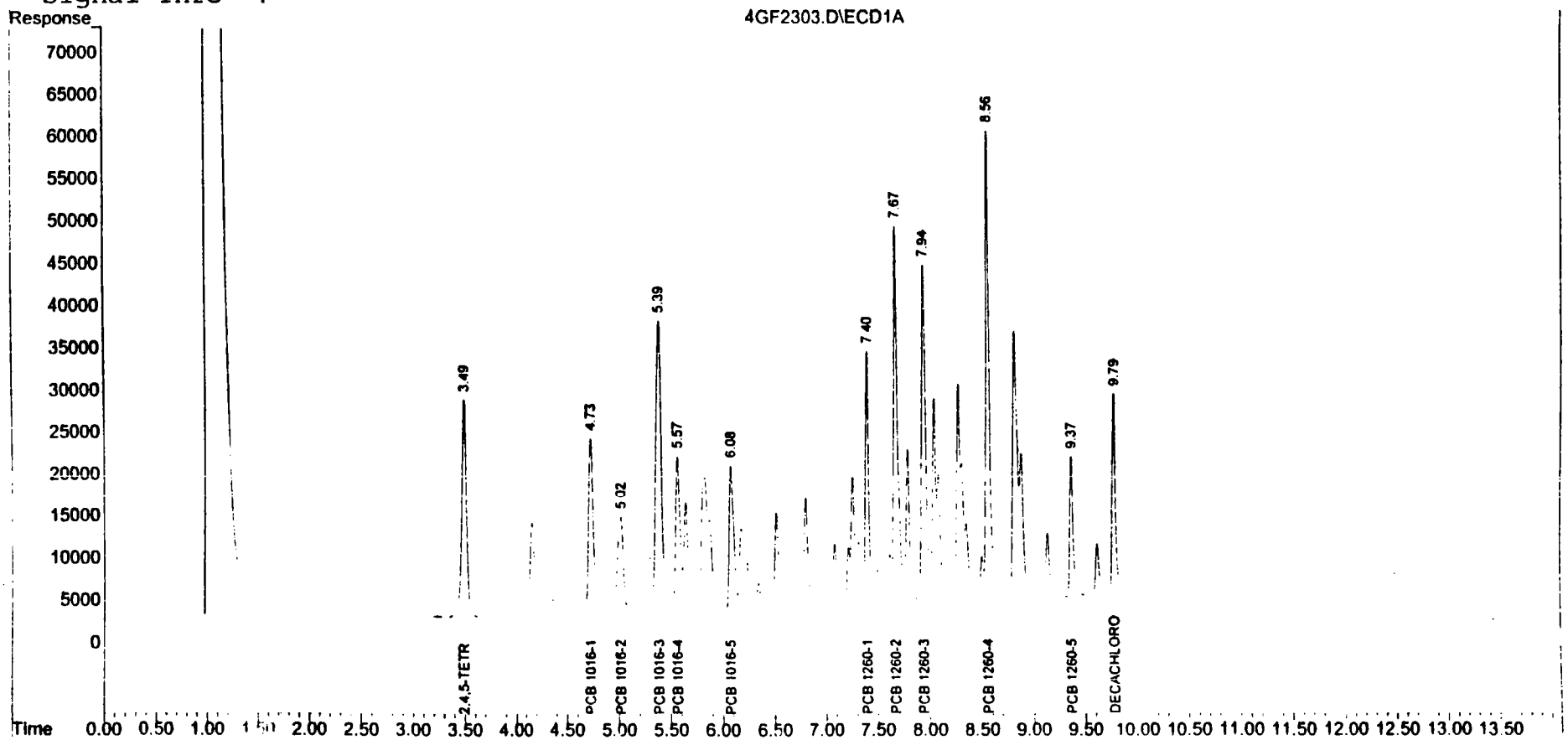
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.49	806983	25.464	UG/L
Spiked Amount 20.000		Recovery =	127.32%	
12) S DECACHLOROBIPHENYL	9.79	496467	25.957	UG/L
Spiked Amount 20.000		Recovery =	129.79%	
Target Compounds				
2) L1 PCB 1016-1	4.73	658034	473.213	UG/L
3) L1 PCB 1016-2	5.02	386490	488.144	UG/L
4) L1 PCB 1016-3	5.39	1003069	467.549	UG/L
5) L1 PCB 1016-4	5.57	356576	551.208	UG/L
6) L1 PCB 1016-5	6.08	434497	492.577	UG/L
Sum PCB 1016-1		2838665	2472.691	UG/L
Average PCB 1016-1			494.538	UG/L
7) L2 PCB 1260-1	7.40	605020	496.444	UG/L
8) L2 PCB 1260-2	7.67	1004541	499.339	UG/L
9) L2 PCB 1260-3	7.94	958966	504.630	UG/L
10) L2 PCB 1260-4	8.56	1079935	491.521	UG/L
11) L2 PCB 1260-5	9.37	377151	537.058	UG/L
Sum PCB 1260-1		4025613	2528.993	UG/L
Average PCB 1260-1			505.799	UG/L

Quantitation Report

Data File : C:\HPCHEM\2\DATA\101199\4GF2303.D Vial: 14
Acq On : 11 Oct 1999 6:45 pm Operator: ECL
Sample : 1660 CHECK 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 12 12:25 1999 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 13:40:19 1999
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101199\4GF2313.D Vial: 24
Acq On : 11 Oct 1999 9:50 pm Operator: ECL
Sample : 1248 CHECK 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Single Level Calibration

Min. RRF : 15.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	S	2,4,5-TETRACHLORO-M-XYLENE	30.665	31.028 E3	-1.2	101	0.02
2	L1	PCB 1248-1	556.037	565.276	-1.7	102	0.02
3	L1	PCB 1248-2	1.337	1.330#E3	0.5	99	0.02
4	L1	PCB 1248-3	1.047	1.085#E3	-3.6	104	0.02
5	L1	PCB 1248-4	1.522	1.543#E3	-1.4	101	0.02
6	L1	PCB 1248-5	395.142	419.000	-6.0	106	0.02
7	S	DECACHLOROBIPHENYL	23.293	24.654 E3	-5.8	106	0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data File : C:\HPCHEM\2\DATA\101199\4GF2313.D
Acq On : 11 Oct 1999 9:50 pm
Sample : 1248 CHECK 0.5 PPM
Misc :
IntFile : events.e
Quant Time: Oct 12 12:23 1999 Quant Results File: 1248SF.RES

Vial: 24
Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

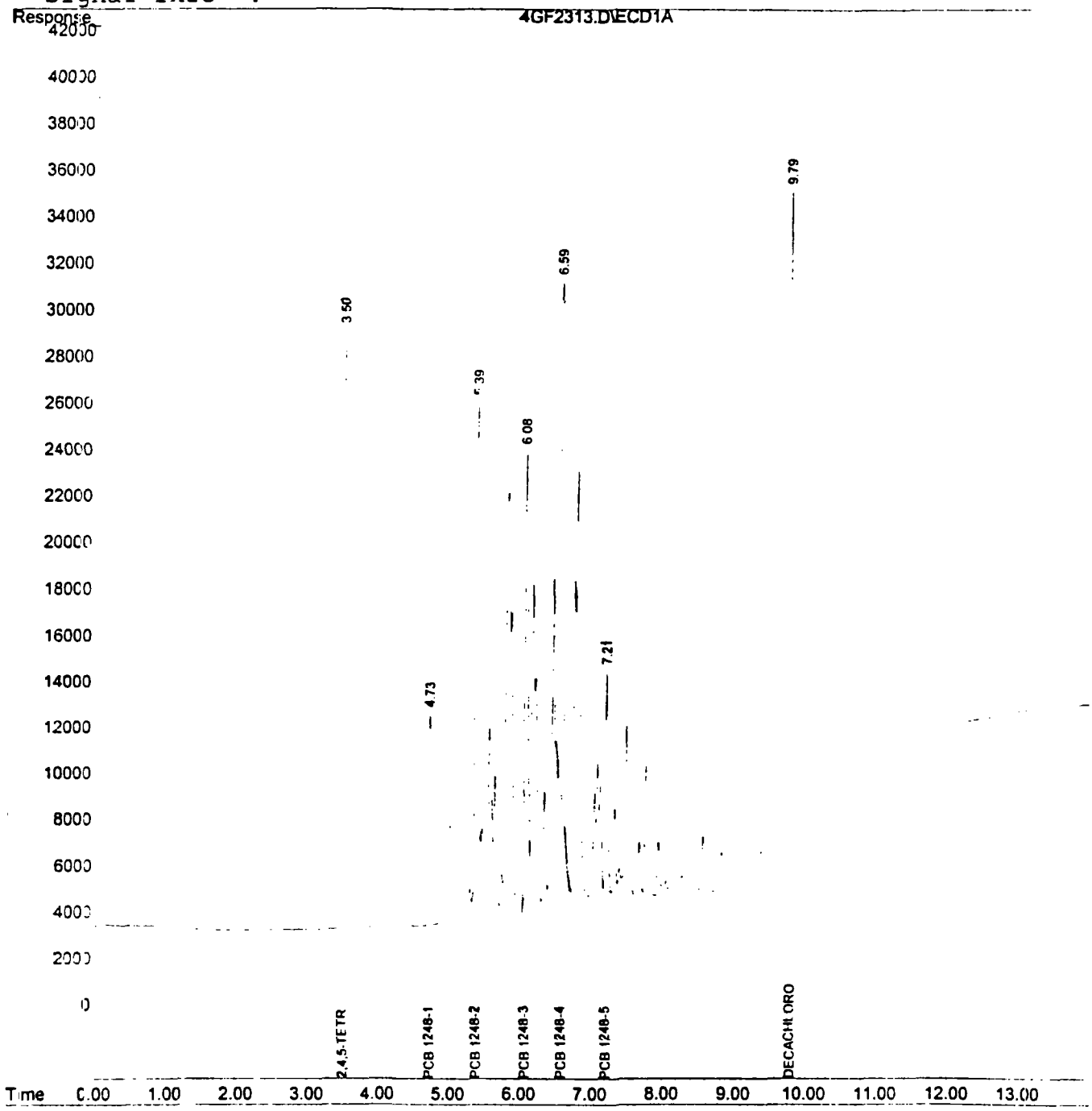
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.50	775702	25.296 UG/L
Spiked Amount 20.000		Recovery =	126.48%
7) S DECACHLOROBIPHENYL	9.79	616354	26.460 UG/L
Spiked Amount 20.000		Recovery =	132.30%
Target Compounds			
2) L1 PCB 1248-1	4.73	282638	508.307 UG/L
3) L1 PCB 1248-2	5.39	664836	497.312 UG/L
4) L1 PCB 1248-3	6.08	542677	518.457 UG/L
5) L1 PCB 1248-4	6.59	771260	506.747 UG/L
6) L1 PCB 1248-5	7.22	209500	530.188 UG/L
Sum PCB 1248-1		2470910	2561.011 UG/L
Average PCB 1248-1			512.202 UG/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\101199\4GF2313.D Vial: 24
Acq On : 11 Oct 1999 9:50 pm Operator: ECL
Sample : 1248 CHECK 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 12 12:23 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101199\4GF2314.D Vial: 25
Acq On : 11 Oct 1999 10:08 pm Operator: ECL
Sample : 1660 CHECK 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 13:40:19 1999
Response via : Multiple Level Calibration

Min. RRF : 15.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	S	2,4,5-TETRACHLORO-M-XYLENE	25.000	25.171	-0.7	101	0.01
2	L1	PCB 1016-1	500.000	472.302	5.5	102	0.01
3	L1	PCB 1016-2	500.000	485.684	2.9	102	0.01
4	L1	PCB 1016-3	500.000	464.735	7.1	101	0.01
5	L1	PCB 1016-4	500.000	554.654	-10.9	135	0.01
6	L1	PCB 1016-5	500.000	489.683	2.1	105	0.01
7	L2	PCB 1260-1	500.000	500.901	-0.2	110	0.01
8	L2	PCB 1260-2	500.000	503.410	-0.7	110	0.01
9	L2	PCB 1260-3	500.000	488.289	2.3	104	0.01
10	L2	PCB 1260-4	500.000	492.862	1.4	109	0.01
11	L2	PCB 1260-5	500.000	546.834	-9.4	111	0.02
12	S	DECACHLOROBIPHENYL	25.000	26.056	-4.2	108	0.02

Data File : C:\HPCHEM\2\DATA\101199\4GF2314.D Vial: 25
Acq On : 11 Oct 1999 10:08 pm Operator: ECL
Sample : 1660 CHECK 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 12 12:25 1999 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 13:40:19 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.49	797670	25.171	UG/L
Spiked Amount 20.000		Recovery =	125.86%	
12) S DECACHLOROBIPHENYL	9.78	498348	26.056	UG/L
Spiked Amount 20.000		Recovery =	130.28%	
Target Compounds				
2) L1 PCB 1016-1	4.72	656767	472.302	UG/L
3) L1 PCB 1016-2	5.02	384541	485.684	UG/L
4) L1 PCB 1016-3	5.38	997031	464.735	UG/L
5) L1 PCB 1016-4	5.56	358805	554.654	UG/L
6) L1 PCB 1016-5	6.07	431944	489.683	UG/L
Sum PCB 1016-1		2829089	2467.057	UG/L
Average PCB 1016-1			493.411	UG/L
7) L2 PCB 1260-1	7.39	610452	500.901	UG/L
8) L2 PCB 1260-2	7.67	1012729	503.410	UG/L
9) L2 PCB 1260-3	7.94	927912	488.289	UG/L
10) L2 PCB 1260-4	8.56	1082880	492.862	UG/L
11) L2 PCB 1260-5	9.37	384016	546.834	UG/L
Sum PCB 1260-1		4017990	2532.296	UG/L
Average PCB 1260-1			506.459	UG/L

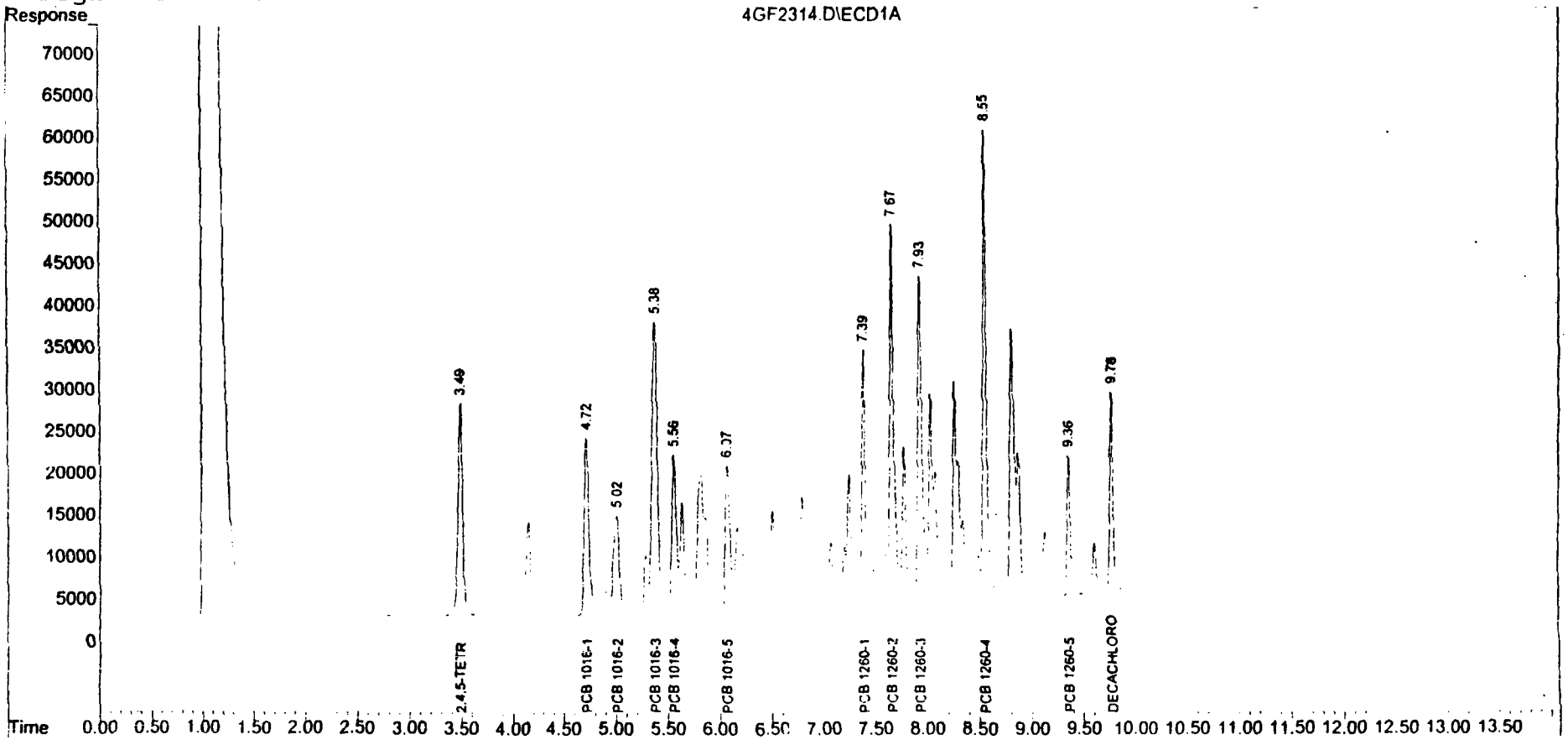
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantification Report

Data File : C:\HPCHEM\2\DATA\101199\4GF2314.D Vial: 25
Acq On : 11 Oct 1999 10:08 pm Operator: ECL
Sample : 1660 CHECK 0.5 PPM Inst : HP 4
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 12 12:25 1999 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 13:40:19 1999
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



4GF2314.D 1660F.M Tue Oct 12 12:26:09 1999

D. RAW QC DATA

Data File : C:\HPCHEM\2\DATA\101199\4GF2292.D Vial: 3
Acq On : 11 Oct 1999 3:21 pm Operator: ECL
Sample : BLANK V125 P35 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:31 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

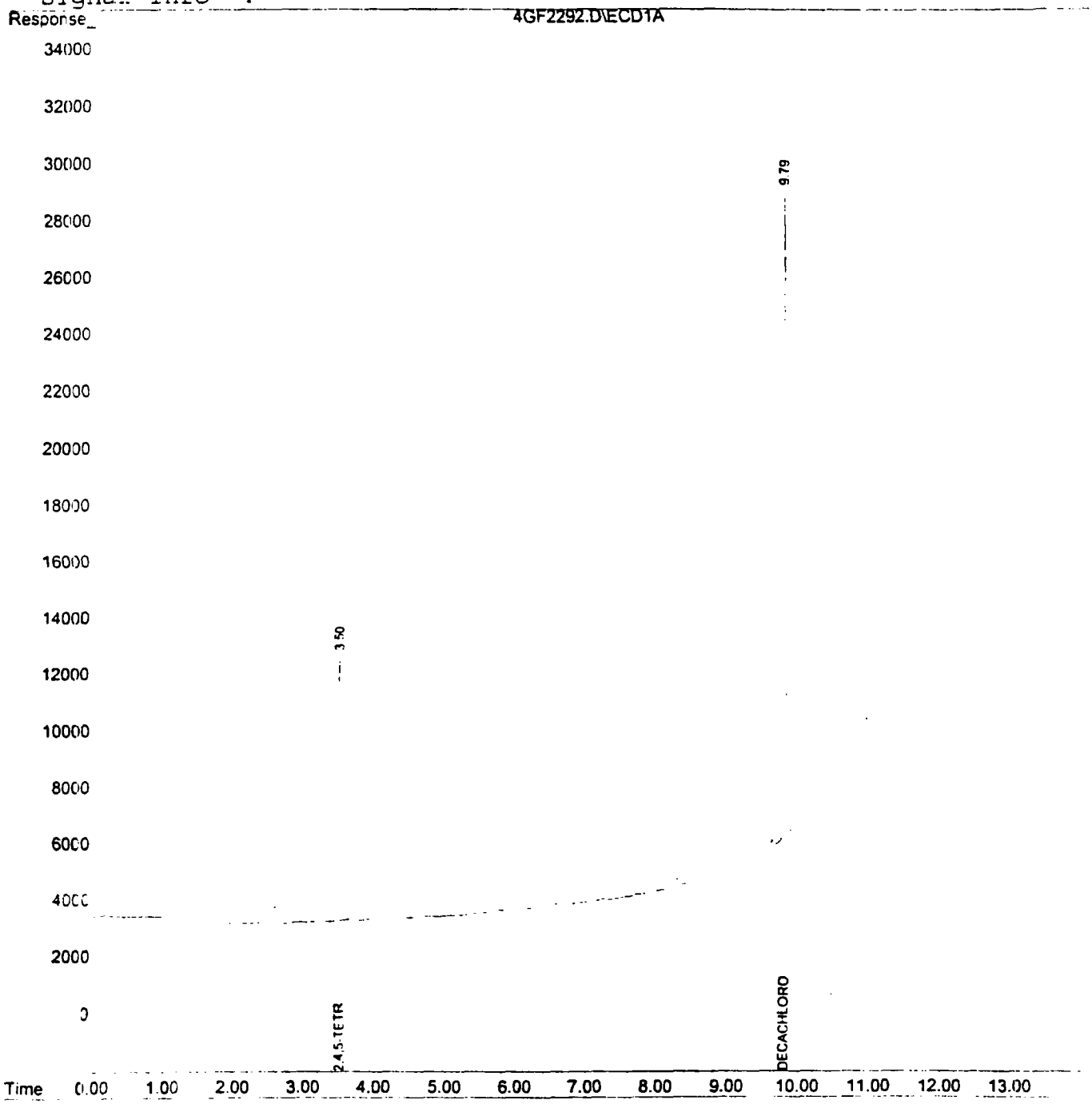
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.50	285709	9.317	UG/L
Spiked Amount 20.000		Recovery =	46.59%	
7) S DECACHLOROBIPHENYL	9.79	479855	20.600	UG/L
Spiked Amount 20.000		Recovery =	103.00%	
Target Compounds				
2) L1 PCB 1248-1	0.00	0	N.D.	UG/L
3) L1 PCB 1248-2	0.00	0	N.D.	UG/L
4) L1 PCB 1248-3	0.00	0	N.D.	UG/L
5) L1 PCB 1248-4	0.00	0	N.D.	UG/L
6) L1 PCB 1248-5	0.00	0	N.D.	UG/L
Sum PCB 1248-1		0	N.D.	UG/L
Average PCB 1248-1			0.000	UG/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\101199\4GF2292.D Vial: 3
Acq On : 11 Oct 1999 3:21 pm Operator: ECL
Sample : BLANK V125 P35 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:31 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101199\4GF2293.D Vial: 4
Acq On : 11 Oct 1999 3:39 pm Operator: ECL
Sample : LCS V125 P35 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:31 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

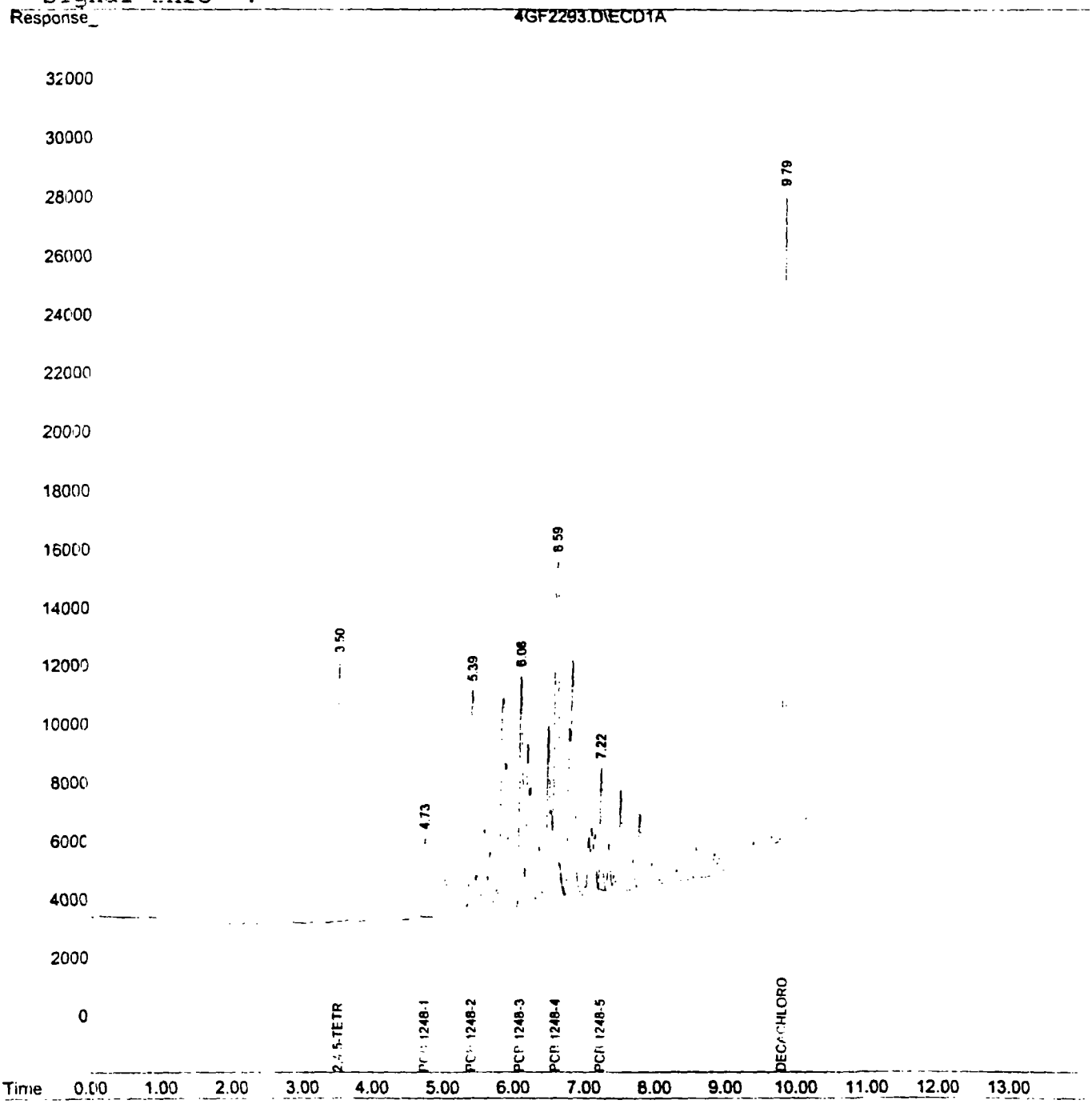
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5-TETRACHLORO-M-XYLENE	3.50	281632	9.184 UG/L
Spiked Amount 20.000		Recovery =	45.92%
7) S DECACHLOROBIPHENYL	9.79	464103	19.924 UG/L
Spiked Amount 20.000		Recovery =	99.62%
Target Compounds			
2) L1 PCB 1248-1	4.74	85364	1.535 UG/L
3) L1 PCB 1248-2	5.40	233382	1.746 UG/L
4) L1 PCB 1248-3	6.08	219289	2.095 UG/L
5) L1 PCB 1248-4	6.59	346820	2.279 UG/L
6) L1 PCB 1248-5	7.22	95479	2.416 UG/L
Sum PCB 1248-1		980335	10.071 UG/L
Average PCB 1248-1			2.014 UG/L

(f)=RT Delta > 1/2 Window (m)=manual int

Data File : C:\HPCHEM\2\DATA\101199\4GF2293.D Vial: 4
Acq On : 11 Oct 1999 3:39 pm Operator: ECL
Sample : LCS V125 P35 Inst : HP 4
Misc : WATER Multiplr: 0.01
IntFile : events.e
Quant Time: Oct 12 12:31 1999 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 05 14:54:21 1999
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



KEMRON ENVIRONMENTAL SERVICES
Semivolatile GC Laboratory Maintenance / Runlog

Date 10/4/99 Column ID RTX-CLP Analyst ECL SOP # GCS09 Rev. # 0 ____ 8081A
Instrument ID HP4 Data Subdirectory 100499 SOP # GCS10 Rev. # 1 ✓ 8082
SOP # GCS01 Rev. # 0 ____ 8100 SOP # GCS02 Rev. # 0 ____ 8015B Mod (DRO) SOP # GCS04 Rev. # 2 ____ 8151
SOP # GCS03 Rev. # 0 ____ PRO SOP # GCS02 Rev. # 0 ____ 8015B Mod (Alcohol) SOP # GCS07 Rev. # 0 ____ 8011

Daily Check	
gases >500 psi	✓
change liner	
change septum	
Preventative Maintenance	
change o-ring	
clip column (___ cm)	
injection port seal (goldseal)	
change gases	

Additional Maintenance

Problem: ____

Action Taken: ____

Returned to Control? Yes ____ No ____ Additional Discussion on Page ____

Run #	Sample Description	Dilution Factor	Method File	Analysis Complete	Comments
4GF2150	PCB 1660 0.05 PPM	NA	8082	✓	S41-50
51	0.1				
52	0.25				
53	0.5				
54	1.0				
55	2.0				
56	PCB 1660 Alt. ✓ 0.5 PPM				S41-48
57	PCB 1254 0.05 PPM				S43-16
58	0.1				
59	0.25				
60	0.5				
61	1.0				

Comments:

Reviewed By: [illegible] 10/5/99

√ = Compliant Analysis, Reanalysis complete
RR = Rerun
RR# = Rerun at a specified level

SMI = Sample matrix interference
MT = Missed Tune, beyound method tuning requirements
RE = Re-extraction analysis

IS or SS = Interference with internal and/or surrogate standards
CC = Continuing calibration failed

Semivolatile GC Laboratory Maintenance / Runlog

Date 10/4/99 Instrument ID HP 4 Data Subdirectory 100499 Column ID RTX-CLP

Run #	Sample Description	Dilution Factor	Method File	Analysis Complete	Comments
4GF 2162	PCB 1254 2.0 PPM	NA	8082	✓	
63	⊥ Alt. ✓ 0.5 PPM				S 41-25
64	PCB 1248 0.5 PPM				S 43-15
65	⊥ Alt. ✓ 0.5 PPM				S 42-28
66	PCB 1242 0.5 PPM				S 43-14
67	⊥ Alt. ✓ 0.5 PPM				S 41-24
68	PCB 1232 0.5 PPM				S 42-39
69	⊥ Alt. ✓ 0.5 PPM				S 42-40
70	PCB 1221 0.5 PPM				S 42-27
71	⊥ Alt ✓ 0.5 PPM				S 43-17
72	Blank V123 P185				
73	09-296-05				
74	⊥ 06			⊥	
75	PCB 1660 ✓ 0.5 PPM			✓	S 41-50

EC 10/5/99

Comments:

Reviewed By: [illegible] 10/5/99

√ = Compliant Analysis, Reanalysis complete
RR = Rerun
RR# = Rerun at a specified level

SMI = Sample matrix interference
MT = Missed Tune, beyound method tuning requirements
RE = Re-extraction analysis

IS or SS = Interference with internal and/or surrogate standards
CC = Continuing calibration failed

KEMRON ENVIRONMENTAL SERVICES
Semivolatile GC Laboratory Maintenance / Runlog

Date 10/11/99 Column ID RTX-CLP Analyst ECL SOP # GCS09 Rev. # 0 ____ 8081A
Instrument ID HP4 Data Subdirectory 101199 SOP # GCS10 Rev. # 1 ✓ 8082
SOP # GCS01 Rev. # 0 ____ 8100 SOP # GCS02 Rev. # 0 ____ 8015B Mod (DRO) SOP # GCS04 Rev. # 2 ____ 8151
SOP # GCS03 Rev. # 0 ____ PRO SOP # GCS02 Rev # 0 ____ 8015B Mod (Alcohol) SOP # GCS07 Rev. # 0 ____ 8011

Daily Check	
gases >500 psi Helium	✓
change liner	
change septum	
Preventative Maintenance	
change o-ring	
clip column (___ cm)	
injection port seal (goldseal)	
change gases Argon Methane	✓

Additional Maintenance

Problem: ____

Action Taken: ____

Returned to Control? Yes ____ No ____ Additional Discussion on Page ____

Run #	Sample Description	Dilution Factor	Method File	Analysis Complete	Comments
4GF2290	PCB 1660 ✓ 0.5 PPM	NA	8082	✓	S 41-50
91	PCB 1248 ✓ 0.5 PPM			✓	S 43-15
92	Blank V125 P35				
93	LCS V125 P35				
94	10-134-01				
95	02				
96	03				
97	04				
98	05				
99	06				
2300	07				
01	08				

115

Comments:

Reviewed By: mdc 10/13/99

✓ = Compliant Analysis, Reanalysis complete
RR = Rerun

SMI = Sample matrix interference

IS or SS = Interference with internal and/or surrogate standards

KEMRON ENVIRONMENTAL SERVICES
Semivolatile GC Laboratory Maintenance / Runlog

Date 10/11/99 Instrument ID HP 4 Data Subdirectory 10 11 99 Column ID RTX-CLP

Run #	Sample Description	Dilution Factor	Method File	Analysis Complete	Comments
4GF 2302	PCB 1248 ✓ 0.5 PPM	NA	8082	✓	
03	PCB 1660 ✓ 0.5 PPM			✓	
04	10 - 134 - 09				
05	10				
06	11				
07	12 MS				
08	13 MSD				
09	14				
10	15				
11	16				
12	17				
13	PCB 1248 ✓ 0.5 PPM			✓	S 43-15
14	PCB 1660 ✓ 0.5 PPM			✓	S 41-50
15	Blank V125 P13				
16	LCS V125 P13				
17	10 - 044 - 06				
18	10 - 059 - 07				
19	10 - 069 - 16				
20	Blank V125 P49				
21	LCS V125 P49				
22	10 - 176 - 01				
23	02				
24	03				
25	PCB 1660 ✓ 0.5 PPM			✓	

Comments:

Reviewed By: [illegible] 10/13/99

✓ = Compliant Analysis, Reanalysis complete
RR = Rerun
RR# = Rerun at a specified level

SMI = Sample matrix interference
MT = Missed Tune, beyound method tuning requirements
RE = Re-extraction analysis

IS or SS = Interference with internal and/or surrogate standards
CC = Continuing calibration failed

Sample Extract Log Sheet

Parameter: PCB H_2O SOP #: EXP01 Revision #: 8
Ext Analyst(s): REK, CSH TV/KD Analyst(s): CSH
Date/Time Ext: 10-2-99 @ 1530 Date TV/KD: 10-7-99
Spike/Surrogate Analyst: REK Witness: LKM
Extract Relinquished By: REK
Extract Received By: EC Date Ext. Received: 10/8/99

SW-846 Method			On	Off	On	Off
Continuous L-L	3520C					
Soxhlet	3540C					
ACE *	3545					
Separatory Funnel	3510C	✓				
Sonication	3550B					
Waste	3580A					

Extraction Work Group WG 66358
Analytical Work Group WG 66512

	Client ID	Sample ID	pH ✓ <2	N	>12	Test Code	Initial Vol. / Wt	Amount Surrogated	Amount Spike	Final Volume	Clean Up	Emulsions ✓ A	BN	N	Comments
1		Blank		✓			1L	200uL ESS-EXP29-43		10mL	ACID/FLORISIL				WG 66358-02
2		LCS		✓					100uL ESS-EXP28-14						WG 66358-03 *
3	OUTBOARD	10-134-01		✓		608-PCB-W									
4	10/13	-02		✓											
5		-03		✓											
6		-04		✓											
7		-05		✓											
8		-06		✓											
9		-07		✓											
10		-08		✓											
11		-09		✓											
12		-10		✓											
13		-11		✓											
14		-12 MS		✓					100uL ESS-EXP28-14						WG 66358-04 *
15		-13 MSD		✓											WG 66358-05 *
16		-14		✓											
17		-15		✓											
18		-16		✓											
19		-17		✓											
20															
21															
22															
23															
24															

CSH 10-7-99

Reviewed By: [signature] Date: 10/8/99

Sample Extract Log Sheet

Extraction Comments / Notes For Extraction Volume #: 125 Page #: 35

Work Group: WG359

Solvent: CH_2Cl_2 Lot #: BU359
Solvent: HEXANE Lot #: BU503
Acid: H_2SO_4 Lot #: M01022

Florisil Lot #: _____
Silica Gel Lot #: —
IR A/D/T: —

Reagent: 946 Lot #: ER778
Reagent: — Lot #: —

10-134-12 & 13 ARE MS & MSD OF 10-134-11
* Spiked with Aroclor 1248

CSH 10-7-99

Supervisor Review: _____ Date: _____

3b

SAMPLING FIELD LOG

From Page No. ___

10/5/99

PERSONNEL:		TIME
	MARC WILLIS	(0830 – 1015)
	DAVE WEGNER	(0700 – 1800)
	TOM BRANDT	(0700 – 1700)

WEATHER: P/CLDY 49°F WIND S @ 15

ACTIVITIES: CONDUCT GROUNDWATER SAMPLING OF HARBOR PROJECT WELLS, USING TRASH PUMP, PERISTALTIC PUMP, SEMI ANNUAL SAMPLING

CALIBRATION: pH 10 STD – 10.04
7 STD – 7.01

TURBIDITY STD – 0.00

SLIP #3

SET UP ON W-1 @ 0900

WATER LEVEL/W1 4.41
PI 16.48
FT TO BOTTOM 9.85
WELL VOLUME 1.0

GAL REMOVED	T (°F)	X1000 CONDUCTIVITY	pH	TURBIDITY
–	55.7	2.03	8.47	0.1
30 –	54.7	2.05	7.32	3.68
35 –	54.5	2.09	7.22	0.25
50 –	54.3	2.11	7.11	0.14
55 –	54.7	2.11	7.09	0.45

SAMPLED @ 0950

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by	

From Page No.

FEET TO BOTTOM 19.86

SET UP ON W2 @ 1000

WATER LEVEL W2 5.10

P2 18.86

WELL VOLUME (G) 2.35

GAL. REMOVED	T(°F)	COND	PH	TURB.
5	55.6	2.89	7.14	4.75
10	56.1	2.77	6.95	4.23
15	56.4	2.73	6.83	3.17
20	56.5	2.80	6.99	4.30

SAMPLED @ 10.10

FEET TO BOTTOM 24.14

WELL VOLUME 3.93 G

SET UP ON W3 @ 1045

WATER LEVEL W3 3.73

P3 18.64

GAL REMOVED	T(°F)	COND	PH	TURB
5	54.6	2.00	8.00	2.23
10	55.7	1.96	7.40	0.83
15	55.9	1.98	6.95	0.73
20	56.0	1.95	6.79	0.72

SAMPLED @ 1100

FEET TO BOTTOM 17.89

WELL VOLUME 2.90

SET UP ON W4 @ 1105

WATER LEVEL W4 2.10

P4 19.07

GAL REMOVED	T(°F)	COND	PH	TURB
2.5	59.9	1.49	7.89	2.60
5	60.2	1.63	7.13	1.40
10	59.3	1.62	7.04	0.67
15	59.3	1.60	7.03	0.72

SAMPLED @ _____

To Page No.

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by	

From Page No. WEST CELL

SET UP ON W5 @ 1250

WATER LEVEL PS 14.40
WS 7.35
FEET TO BOTTOM 29.36
WELL VOLUME 2.35

GAL REMOVED	T(°F)	COND.	pH	TURB
5	59.4	1.71	7.60	5.63
10	58.2	1.76	6.94	4.77
15	57.5	1.77	6.85	2.89
20	57.2	1.74	6.82	3.93

SAMPLED @ 1300

SET UP ON W6 @ 1405

WATER LEVEL W6 6.80
P6 19.21
FT TO BOTTOM 30.70
WELL VOLUME 4.38

GAL REMOVED	T(°F)	COND.	pH	TURB
5	60.2	3.22	6.72	1.96
10	59.4	3.04	6.47	1.24
15	58.5	3.01	6.61	1.16
20	58.2	3.01	6.55	1.20

SAMPLED @ 1415

Page No. _____

To Page No. _____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by	

From Page No.__

SET UP ON W8 @ 1330

FEET TO BOTTOM 25.42
WATER LEVEL-W8 5.82
P8 13.10
WELL VOLUME 4.14

GAL REMOVED	T(°F)	COND	PH	TURB
-5	60.7	1.30	7.91	0.91
-10	59.9	1.29	7.66	0.79
-15	58.9	1.25	7.48	0.57
-20	58.5	1.27	7.42	0.58

SAMPLED @ 1340

SET UP ON W7 @ 1350

FEET TO BOTTOM 28.74
WATER LEVEL-W7 6.57
P7 14.27
WELL VOLUME 4.62

GAL REMOVED	T(°F)	COND	PH	TURB
-5	61.6	1.61	7.32	5.23
-10	62.6	1.59	7.39	5.17
-15	61.3	1.59	7.20	5.77
-20	61.0	1.57	7.13	4.66

SAMPLED 1400

To Page No.__

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by	

From Page No. EAST CELL

SET UP ON W9 @ 1430

FEET TO BOTTOM 26.81
WATER LEVEL - W9 5.60
P9 13.05
WELL VOLUME 4.36

GAL REMOVED	T(°F)	COND	PH	TURB
5	64.1	2.37	6.98	0.15
10	64.9	2.41	6.83	0.12
15	65.2	2.41	6.82	0.16
20	65.2	2.40	6.82	0.05

SAMPLED AT 1440

SET UP ON W 10 @ 1450

FEET TO BOTTOM 25.08
WATER LEVEL - W10 5.82
P 10 12.65
WELL VOLUME 4.65

GAL REMOVED	T(°F)	COND	PH	TURB
5	64.4	2.26	7.31	1.61
10	64.8	2.17	6.80	1.76
15	66.6	2.21	6.69	0.92
20	64.5	2.21	6.67	1.60

SAMPLED @ 1510

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by	

From Page No.

SET UP ON W-10 1530

FEET TO BOTTOM 27.18
WATER LEVEL W-10 6.55
P-10 12.76
WELL VOLUME 4.38

GAL REMOVED	T(°F)	COND	PH	TURB
5	63.9	2.37	7.69	7.01
10	63.3	2.30	6.99	5.25
15	62.4	2.27	6.93	3.45
20	62.0	2.27	6.90	2.93

SAMPLED @ 1540

SET UP ON W-12 1555

FEET TO BOTTOM 28.42
WATER LEVEL W-12 5.72
P-12 11.00
WELL VOLUME 4.14

GAL REMOVED	T(°F)	COND	pH	TURB
5	63.0	1.63	7.40	0.49
10	62.8	1.55	7.24	0.35
15	62.7	1.63	7.11	0.33
20	62.6	1.51	7.10	0.43

SAMPLED @ 1615

To Page No.

Witnessed & Understood by me.	Date	Invented by	Date
		Recorded by	