

Exhibit 4



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Great Meadows National Wildlife Refuge

Weir Hill Road  
Sudbury, MA 01776  
February 20, 1991

Mr. Neil O'Leary  
Department of Environmental Protection  
75B Grove Street  
Worcester, MA 01605

REGIONAL SUPERVISOR  
RECEIVED

FEB 25 1991

U.S. DEPT. OF THE INTERIOR  
NORTHEAST REGION

Dear Mr. O'Leary:

During the course of routine characterization of contaminant levels on our Great Meadows National Wildlife Refuge, we discovered what appears to be an area of contamination of metals, PCBs and PAHs in a portion of the refuge in Wayland, MA (attached maps). While we are currently arranging for the further characterization of the site with respect to the extent (horizontal and vertical) and nature of contamination, we are notifying your agency of our preliminary findings and plans, in accordance with applicable State regulations. Additionally, we welcome your participation in our planning of the further investigation of the site.

The area of contamination is located in an almost inaccessible floodplain wetland of the Sudbury River, immediately north of Route 20 in Wayland. The results of our sampling are presented in the attached table, and represent individual core or dredge samples of sediments. Neither total organic carbon nor grain size are available for these data.

The sampling stations are associated with the small stream that drains the Raytheon property to the east of the National Wildlife Refuge boundary. We have no reason to believe that the refuge is a source area for the contaminants reported here. However, we are aware of several remote and adjacent potential source area for some of the contaminants reported. In this regard, we suspect that the mercury levels reported may be attributable, in part, to upstream sources, although other metals, PCBs and PAHs appear to have a local source.

If you have questions, comments or guidance regarding our findings,  
please call me at (508)443-4661.

Sincerely,



David J. Frisque  
Acting Refuge Manager

cc: Tamara Angel, FWS-Engineering, Denver, CO  
Mark Barash, DOI-SOL, Newton Corner, MA  
Don Frickie, ARW, Newton Corner, MA  
Arnie Julin, AFWE, Newton Corner, MA

# LAW ENVIRONMENTAL



**FINAL**  
**SITE INVESTIGATION**  
FOR  
**GREAT MEADOWS WILDLIFE REFUGE**  
**WAYLAND, MASSACHUSETTS**

PREPARED FOR:

**U.S. FISH AND WILDLIFE SERVICE**  
SERVICE ENGINEERING CENTER  
143 UNION BLVD. SUITE 400  
LAKEWOOD, COLORADO

UNDER CONTRACT TO:

**ARMOUR, CAPE AND POND**  
1797 NORTHEAST EXPRESSWAY  
ATLANTA, GEORGIA

PREPARED BY:

**LAW ENVIRONMENTAL, INC.**  
GOVERNMENT SERVICES BRANCH  
114 TOWNPARK DRIVE  
KENNESAW, GEORGIA

NOVEMBER, 1991

## TABLE OF CONTENTS

<b>1.0</b>	<b>INTRODUCTION</b> .....	<b>1</b>
<b>2.0</b>	<b>BACKGROUND</b> .....	<b>2</b>
2.1	SITE DESCRIPTION .....	2
2.2	PREVIOUS SITE ACTIVITIES .....	2
2.3	POTENTIAL SOURCES .....	4
<b>3.0</b>	<b>SITE CHARACTERIZATION</b> .....	<b>8</b>
3.1	SITE HYDROLOGY .....	8
3.2	GEOLOGY AND HYDROLOGY .....	8
<b>4.0</b>	<b>EXPOSURE CHARACTERIZATION</b> .....	<b>10</b>
<b>5.0</b>	<b>SITE INVESTIGATION</b> .....	<b>14</b>
5.1	SEDIMENT SAMPLING .....	14
5.2	SURFACE WATER SAMPLING .....	16
5.3	SAMPLE EQUIPMENT DECONTAMINATION .....	16
<b>6.0</b>	<b>ANALYTICAL RESULTS</b> .....	<b>17</b>
6.1	SEDIMENTS .....	17
6.1.1	Volatile Organics .....	17
6.1.2	Semi-volatile Organics .....	22
6.1.3	Metals .....	22
6.1.4	Pesticides and PCBs .....	23

**TABLE OF CONTENTS (continued)**

6.2	SURFACE WATERS .....	23
	6.2.1 Volatile Organics .....	23
	6.2.2 Semi-volatile Organics .....	23
	6.2.3 Metals .....	25
	6.2.4 Pesticides and PCBs .....	25
6.3	QUALITY CONTROL .....	25
	6.3.1 Laboratory Quality Control .....	25
	6.3.2 Field Quality Control .....	30
6.4	DATA USABILITY .....	34
7.0	INVESTIGATION SUMMARY .....	36
7.1	SUMMARY OF SEDIMENT SAMPLING AND ANALYSES	36
7.2	SUMMARY OF SURFACE WATER SAMPLING AND ANALYSES .....	38
8.0	RECOMMENDATIONS .....	40
REFERENCES	.....	42

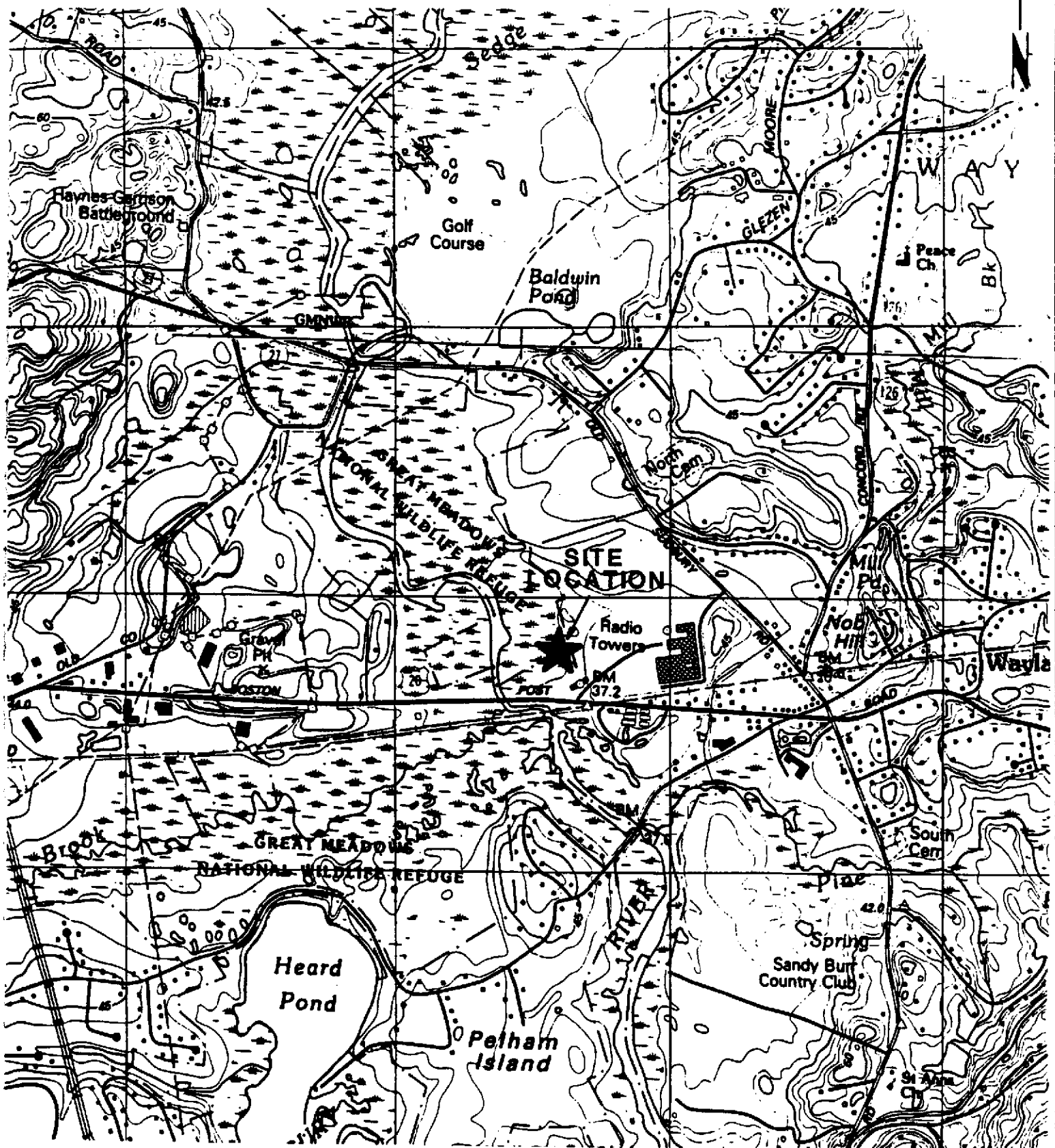
**APPENDIX A - ANALYTICAL DATA**

**LIST OF FIGURES**

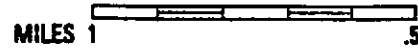
Figure 1	Site Location Map .....	3
Figure 2	Site Map .....	6
Figure 3	Public Water Well Location Map .....	11
Figure 4	Sample Location Map .....	15

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**FIGURE 1  
SITE LOCATION MAP  
GREAT MEADOWS NATIONAL WILDLIFE REFUGE  
WAYLAND, MASSACHUSETTS**






REFERENCE: 7.5 X 15 MINUTE QUADRANGLES  
FOR MAYNARD AND  
FRAMINGHAM, MASSACHUSETTS.



**FIGURE 2**  
**SITE MAP**  
**GREAT MEADOWS NATIONAL WILDLIFE REFUGE**  
**SUDBURY, MASSACHUSETTS**



**LEGEND**

-  RIVER ESTUARY
-  120 YEAR FLOOD PLAIN
-  USFWS SEDIMENT SAMPLE LOCATIONS JULY, 1988.

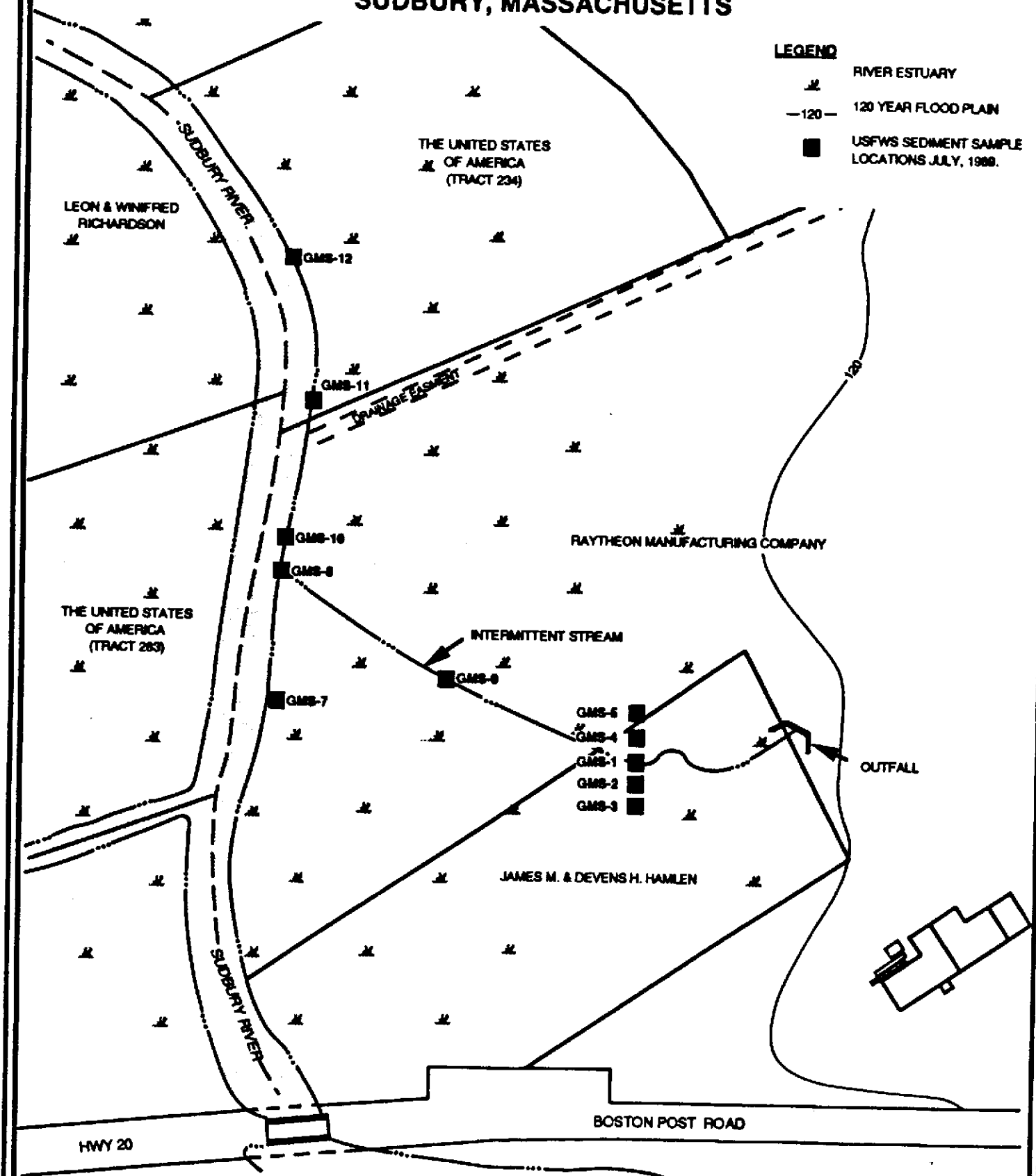




TABLE 4  
POSITIVE RESULTS TABLE - SEDIMENT SAMPLES

PARAMETER	SED1	SED2	SED3	SED4	SED5	SED6	SED7	SED8	SED9	SED10	SEDDUP
Aroclor-1254, ug/Kg	2200	3200	2100	500	95	2500	2700	2000	3700	2400	770
Dieldrin, ug/Kg	--	--	210	--	--	330	290	390	--	--	--

B1 - Component was detected in the method blank for this analysis. Result is less than five times the concentration detected in the method blank. In the case of acetone and methylene chloride, result is less than ten times the concentration detected in the method blank.

B2 - Component was detected in method blank. Sample result is greater than five (or ten for methylene chloride and acetone) times the method blank concentration.

J - Estimated value. This qualifier is used for results above the method detection limit but below the practical quantitation limit and all TTCs. The practical quantitation limit and all TTCs.

C - Component was detected in the trip blank. This indicates cross-contamination during shipment to the laboratory

E - Estimated value. Result exceeded the calibration range.

-- - Not detected

Note: All sample results are reported as dry weight.

TABLE 4  
POSITIVE RESULTS TABLE - SEDIMENT SAMPLES

PARAMETER	SED1	SED2	SED3	SED4	SED5	SED6	SED7	SED8	SED9	SED10	SEDDUP
VOLATILES:											
1,1,1-Trichloroethane, ug/Kg	--	6 J	--	--	--	--	--	--	--	--	--
2-Butanone, ug/Kg	--	--	--	--	--	19 J	15 J	28 J	--	--	--
Acetone, ug/Kg	--	--	--	--	--	360 B2C	530 B2C	340 B2C	1700 B2C	510 B2C	33
Methylene chloride, ug/Kg	45 B2	34 B2	31 B2	17 B1	41 B2	120 B2	66 B2	58 B2	23 JB2	80 B2	17 B1
Toluene, ug/Kg	--	17 J	--	2 J	1 J	2 J	--	2 J	--	--	--
Xylenes (total), ug/Kg	--	--	--	--	--	--	--	--	13 J	--	--
VOLATILE TENTATIVELY IDENTIFIED COMPOUNDS:											
Cyclohexane, 1-methyl-4(1-methyl), ug/Kg	--	--	--	--	6 J	--	--	--	--	--	--
Dodecane, 6-methyl, ug/Kg	--	200 J	--	--	--	--	--	--	--	--	--
Naphthalene, ug/Kg	--	--	--	--	10 J	--	--	--	40 J	--	--
SEMI-VOLATILES:											
Acenaphthylene, mg/Kg	.190 J	--	.140 J	.110 J	--	.120 J	.240 J	.360 J	--	--	--
Anthracene, mg/Kg	.200 J	.110 J	.220 J	.087 J	--	.120 J	.110 J	.170 J	.280 J	--	--
Benzo[a]pyrene, mg/Kg	1.000 J	.510 J	.630 J	.510 J	.045 J	.430 J	.620 J	.780 J	.730 J	.510 J	.620 J
Benzo[b]fluoranthene, mg/Kg	2.000 J	1.000 J	.990 J	.960 J	.072 J	.760 J	1.100 J	1.300 J	1.000 J	1.200 J	1.300 J
Benzo[ghi]perylene, mg/Kg	1.100 J	.450 J	.450 J	.420 J	.038 J	--	.600 J	.590 J	.800 J	.550 J	.620 J
Benzo[k]fluoranthene, mg/Kg	.840 J	.430 J	.510 J	.390 J	--	.320 J	.440 J	.510 J	.610 J	.480 J	.350 J
Benzo[a]anthracene, mg/Kg	.590 J	.340 J	.660 J	.300 J	.045 J	.280 J	.450 J	.720 J	.490 J	.210 J	.520 J
butyl-2-Ethylhexyl)phthalate, mg/Kg	1.800 B2J	1.300 B2J	1.200 B2J	.440 B2J	.041 B2J	2.100 J	1.700 J	.940 J	2.500 J	.540 J	.390 B2J
Butyl benzyl phthalate, mg/Kg	--	1.900 J	.310 J	.220 J	--	2.000 J	--	--	--	--	--
Chrysene, mg/Kg	1.300 J	.550 J	1.100 J	.620 J	.056 J	.750 J	1.000 J	1.000 J	1.000 J	.650 J	1.100 J
Dibenzol[e,h]anthracene, mg/Kg	.440 J	--	.200 J	.190 J	--	--	.240 J	.280 J	--	--	.920 J
Di-n-butylphthalate, mg/Kg	240 B2J	8.100 B2J	--	4.200 B2J	2.800B2	5.000 B2J	1.50 B2J	.460 B2J	1.200 B2J	5.400 B2J	6.800 B2
Di-n-octylphthalate, mg/Kg	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene, mg/Kg	1.800 J	1.000 J	3.000 J	.750 J	.064 J	.680 J	1.200 J	1.600 J	1.300 J	.890 J	.130 J
Indeno[1,2,3-cd]pyrene, mg/Kg	.980 J	.540 J	.500 J	.450 J	.037 J	--	.540 J	.490 J	.650 J	.570 J	.620 J
Phenanthrene, mg/Kg	.770 J	.410 J	.980 J	.280 J	.028 J	.310 J	.540 J	.930 J	.590 J	.330 J	.360 J
Pyrene, mg/Kg	1.700 J	.850 J	2.000 J	.770 J	.069 J	.860 J	1.200 J	1.400 J	1.100 J	.720 J	1.100 J
SEMI-VOLATILE TENTATIVELY IDENTIFIED COMPOUNDS:											
Octacosane, mg/Kg	--	--	--	--	--	7.000 J	--	--	--	--	--

TABLE 4  
POSITIVE RESULTS TABLE - SEDIMENT SAMPLES

PARAMETER	SED1	SED2	SED3	SED4	SED5	SED6	SED7	SED8	SED9	SED10	SEDDUP
Pentadecane, mg/Kg	20 J	--	--	--	--	6,000 J	--	--	--	--	--
Docosane, mg/Kg	--	--	--	--	--	4,000 J	--	--	--	--	6,000 J
Tricosane, mg/Kg	--	--	--	--	--	7,000 J	--	--	--	--	--
Tetradecanoic acid, hexadecyl, mg/Kg	700 BJ	600 BJ	500 BJ	200 BJ	100 BJ	400 BJ	300 BJ	300 BJ	600 BJ	300 BJ	300 BJ
2-Pentanoic acid, 4-hydroxy-4-methyl, mg/Kg	--	--	--	--	--	9,000 J	7,000 J	--	--	--	--
Tricosane, mg/Kg	--	--	--	--	--	--	4,000J	--	--	--	--
Tetracosane, mg/Kg	--	--	--	--	1,000J	--	5,000J	--	--	--	--
Alpha-stigmaster-3-one, mg/Kg	10 J	7 J	--	--	--	--	--	4,000 J	--	4,000 J	--
Octadecane, mg/Kg	--	6 J	--	--	--	--	--	4,000 J	10 J	--	--
Heptacosane, mg/Kg	--	20 J	--	9,000 J	2,000 J	--	--	--	--	10 J	--
Neophytadiene, mg/Kg	--	--	--	--	--	--	--	--	--	2,000 J	--
Decanoic acid, decyl ester, mg/Kg	--	--	--	--	--	--	--	--	--	10 J	--
Heptadecane, mg/Kg	20 J	--	--	--	--	--	--	--	--	7,000 J	--
Hexadecane, 2,6,10,14-tetraene, mg/Kg	--	9,000 J	--	--	--	--	--	--	--	--	--
Eicosane, mg/Kg	--	5,000 J	6,000 J	--	--	--	--	--	--	--	--
(24R)-4-Stigmaster-3-one, mg/Kg	--	10 J	--	--	--	--	--	--	--	--	10 J
Hexadecane, mg/Kg	--	--	10 J	--	--	--	--	--	--	--	--
Tetradecanal, mg/Kg	--	--	--	--	800 J	--	--	--	--	--	--
Hexadecanal, mg/Kg	--	--	--	--	1,000 J	--	--	--	--	--	--
Heptacosane, mg/Kg	--	--	--	--	--	--	--	--	--	--	--
Stigmaster-5-en-3-O1, C3 Beta, mg/Kg	--	--	--	--	--	--	--	--	--	--	20 J

METALS:

Arsenic, mg/Kg	5.6 J	--	14	11	3.8	5.8	15	7.0	10 J	6.6	12
Barium, mg/Kg	150 J	130 J	110 J	76 J	16 J	200	230	260	200 J	79 J	91 J
Cadmium, mg/Kg	5.9	4.9	--	--	--	4.3	4.2	4.8	--	--	--
Chromium, mg/Kg	95	160	220	79	8.2	130	170	200	86	28	120
Lead, mg/Kg	270	240	310	120	9.7	300	360	490	240	91	170
Mercury, mg/Kg	3.0	2.7	2.3	0.7	--	4.0	6.1	5.5	2.6	0.9	0.75
Selenium, mg/Kg	2.6 J	1.2 J	1.7 J	1.1 J	--	1.9 J	2.1 J	1.1 J	2.1 J	0.9 J	1.0 J
Silver, mg/Kg	5.0 J	11	20	6.9	--	--	4.2 J	5.8 J	--	--	11

CHLORINATED PESTICIDES/PCBs:

4,4'-DDE, ug/Kg	--	--	--	50	--	--	--	110	--	--	71
-----------------	----	----	----	----	----	----	----	-----	----	----	----