TABLE 1

FIELD-SCREENING RESULTS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Sample	Depth (feet)	VOC Headspace (ppm)	Comments
B-1	SS-1	0.5-2.5	<1	Sand and Gravel
	SS-2	2.5-4.5	4.0	Sand and Gravel, petroleum odor
	SS-3	4.5-6.5	7.0	"
	SS-4	6.5-8.5	<1	Sand and Gravel
	SS-5	8.5-10.5	2.0	"
	SS-6	10.5-12.5	4.0	"
B-2	SS-1	0.5-2.5	16	Sand and Gravel
	SS-2	2.5-4.5	24	"
	SS-3	4.5-6.5	160	Sand and Gravel, petroleum odor
	SS-4	6.5-8.5	100	"
	SS-5	8.5-10.5	100	"
	SS-6	10.5-12.5	150	"
B-4	SS-1	0-2	3.0	Sand and Gravel, petroleum odor
	SS-2	2-4	1.8	"
	SS-3	4-6	1.4	"
	SS-4	6-8	4.0	"
	SS-5	8-10	---	No recovery
	SS-6	10-12	>1,000	Sand and Gravel, petroleum odor
	SS-7	12-14	>1,000	"
B-5	SS-1	0-2	<1	Sand and Gravel
	SS-2	2-4	<1	"
	SS-3	4-6	<1	"
	SS-4	6-8	<1	Sand and Gravel
	SS-5	8-10	<1	Gravel
	SS-6	10-12	1.2	"
	SS-7	12-14	3.6	Sand and Gravel
B-6	SS-1	0-2	1.2	Sand and Gravel
	SS-2	2-4	19	"
	SS-3	4-6	<1	"
	SS-4	6-8	<1	Sand and Gravel
	SS-5	8-10	8.2	Sand and Gravel, petroleum odor
	SS-6	10-12	3.0	Sand, petroleum odor
B-7	SS-1	0-2	<1	Sand and Gravel
	SS-2	2-4	---	No recovery
	SS-3	4-6	<1	Sand and Gravel
	SS-4	6-8	48	Sand and Gravel, petroleum odor
	SS-5	8-10	>1,000	Sand
	SS-6	10-12	600	"
B-8	SS-1	0-2	<1	Sand and Gravel
	SS-2	2-4	<1	"
	SS-3	4-6	<1	"
	SS-4	6-8	>1,000	Sand, petroleum odor
	SS-5	8-10	>1,000	"
	SS-6	10-12	280	"

TABLE 1 (continued)

FIELD-SCREENING RESULTS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Sample	Depth (feet)	VOC Headspace (ppm)	Comments
B-9	SS-1	0-2	<1	Sand and Gravel
	SS-2	2-4	<1	"
	SS-3	4-6	<1	"
	SS-4	6-8	28	Sand with little Gravel, petroleum odor
	SS-5	8-10	850	Sand, petroleum odor
	SS-6	10-12	180	"
B-10	SS-1	0-2	<1	Sand and Gravel
	SS-2	2-4	<1	"
	SS-3	4-6	<1	"
	SS-4	6-8	1.8	Sand with little Gravel
	SS-5	8-10	2.0	Sand
	SS-6	10-12	30	Sand, petroleum odor
B-11	SS-1	0-2	<1	Sand and Gravel
	SS-2	2-4	<1	"
	SS-3	4-6	<1	"
	SS-4	6-8	12	Sand with little Gravel
	SS-5	8-10	32	"
	SS-6	10-12	325	Sand and Gravel, petroleum odor
B-12	SS-1	0-2	<1	Sand and Gravel
	SS-2	2-4	<1	"
	SS-3	4-6	<1	"
	SS-4	6-8	2.6	Sand with little Gravel, petroleum odor
	SS-5	8-10	4.2	Sand and Gravel
	SS-6	10-12	1.6	"
B-13	SS-1	0-2	40	Sand and Gravel, petroleum odor
	SS-2	2-4	17	"
	SS-3	4-6	38	"
	SS-4	6-8	>1,000	"
	SS-5	8-10	>1,000	Sand, petroleum odor
	SS-6	10-12	>1,000	Sand and Gravel, petroleum odor
B-14	SS-1	0.5-2.5	95	Sand, little Gravel, petroleum odor
	SS-2	2.5-4.5	>1,000	Sand, some Gravel, petroleum odor
	SS-3	4.5-6.5	>1,000	Sand, little Gravel, petroleum odor
	SS-4	6.5-8.5	>1,000	Sand, some Gravel, petroleum odor
	SS-5	8.5-10.5	>1,000	"
	SS-6	10.5-12.5	850	Sand, little Silt, petroleum odor
B-15	SS-1	0-2	<1	Sand and Gravel
	SS-2	2-4	3.0	Sand, trace Gravel
	SS-3	4-6	<1	"
	SS-4	6-8	<1	"
	SS-5	8-10	1.5	Sand, some Gravel, petroleum odor
	SS-6	10-12	3.5	"
	SS-7	12-14	18	"

TABLE 1 (continued)

FIELD-SCREENING RESULTS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Sample	Depth (feet)	VOC Headspace (ppm)	Comments
B-16	SS-1	0-2	<1	Sand and Gravel
	SS-2	2-4	<1	Sand, trace Gravel
	SS-3	4-6	<1	"
	SS-4	6-8	<1	Sand with little Gravel
	SS-5	8-10	<1	"
	SS-6	10-12	1.8	"
	SS-7	12-14	1.2	"
B-17	SS-1	0-2	8.2	Sand and Gravel, petroleum odor
	SS-2	2-4	70	"
	SS-3	4-6	14	"
	SS-4	6-8	1.5	"
	SS-5	8-10	3.8	"
	SS-6	10-12	1.4	Sand and Gravel
B-18	SS-1	0-2	5.8	Sand and Gravel, petroleum odor
	SS-2	2-4	2.6	"
	SS-3	4-6	2.0	"
	SS-4	6-8	4.6	"
	SS-5	8-10	3.2	"
	SS-6	10-12	6.4	Sand, some Gravel
B-19	SS-1	0-2	<1	Sand and Gravel
	SS-2	2-4	--	No recovery
	SS-3	4-6	<1	Sand with little Gravel
	SS-4	6-8	7.6	Sand, little Gravel, petroleum odor
	SS-5	8-10	<1	"
	SS-6	10-12	<1	"
B-20	SS-1	0-2	<1	Sand and Gravel
	SS-2	2-4	--	No recovery
	SS-3	4-6	<1	Sand, trace Gravel, petroleum odor
	SS-4	6-8	5.8	Sand, Gravel, wood, petroleum odor
	SS-5	8-10	1.2	Sand and Gravel, petroleum odor
	SS-6	10-12	<1	"
B-21	SS-1	0-2	<1	Sand and Gravel
	SS-2	2-4	<1	"
	SS-3	4-6	<1	Sand with little Gravel
	SS-4	6-8	19.0	Sand with little Gravel, petroleum odor
	SS-5	8-10	5.0	"
B-23	SS-1	0-2	<1	Sand and Gravel
	SS-2	2-4	<1	"
	SS-3	4-6	<1	Sand with little Gravel
	SS-4	6-8	<1	"
	SS-5	8-10	<1	"

TABLE 1 (continued)

FIELD-SCREENING RESULTS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Sample	Depth (feet)	VOC Headspace (ppm)	Comments
B-24	SS-1	0-2	<1	Sand, some organics
	SS-2	2-4	<1	"
	SS-3	4-6	<1	Sand and Gravel, some organics
	SS-4	6-8	<1	Sand and Gravel
	SS-5	8-10	<1	Sand
	SS-6	10-12	<1	Sand
B-25	SS-1	0-2	<1	Sand, some organics
	SS-2	2-4	<1	Sand and Gravel, some organics
	SS-3	4-6	168	Sand and Gravel, petroleum odor
	SS-4	6-8	56	Sand, petroleum odor
	SS-5	8-10	<1	Sand
B-26	SS-1	0-2	<1	Sand and Gravel
	SS-2	2-4	<1	"
	SS-3	4-6	<1	Sand with some Gravel
	SS-4	6-8	25	Sand with some Gravel, petroleum odor
	SS-5	8-10	10	"
B-27	SS-1	0-2	<1	Sand and Gravel, some organics
	SS-2	2-4	<1	Sand and Gravel
	SS-3	4-6	<1	"
	SS-4	6-8	<1	Sand, Gravel, possible petroleum odor
	SS-5	8-10	<1	Sand
MW-3D	SS-1	14-16	<1	Sand with little Gravel
	SS-2	19-21	<1	"
	SS-3	24-26	<1	"
	SS-4	29-31	<1	"
	SS-5	34-36	<1	"
	SS-6	39-41	1.2	"
	SS-7	44-46	<1	Gravel with trace Sand
	SS-8	49-51	<1	"
MW-7	SS-1	0.5-2.5	60	Sand and Gravel
	SS-2	2.5-4.5	230	"
	SS-3	4.5-6.5	350	"
	SS-4	6.5-8.5	460	"
	SS-5	8.5-10.5	70	Sand
	SS-6	10.5-12.5	100	"
MW-8	SS-1	0-2	1.6	Sand and Gravel
	SS-2	2-4	3.0	"
	SS-3	4-6	5.8	"
	SS-4	6-8	<1	"
	SS-5	8-10	<1	Sand with little Gravel
	SS-6	10-12	<1	"

TABLE 1 (continued)

FIELD-SCREENING RESULTS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Sample	Depth (feet)	VOC Headspace (ppm)	Comments
MW-9	SS-1	0-2	<1	Sand and Gravel
	SS-2	2-4	---	No recovery
	SS-3	4-6	2.3	"
	SS-4	6-8	---	No recovery
	SS-5	8-10	1.8	Sand, little Gravel
	SS-6	10-12	3.0	"
MW-10	SS-1	15-17	80	Sand and Gravel
	SS-2	17-19	68	"
	SS-3	24-26	2.7	"
	SS-4	29-31	5.0	"
	SS-5	34-36	2.8	"
	SS-6	39-41	4.0	"
	SS-7	41-46	1.7	"
MW-11	SS-1	0-2	<1	Sand and Loam
	SS-2	2-4	<1	"
	SS-3	4-6	4	Sand with little Gravel
	SS-4	6-8	18	"
	SS-5	8-10	740	"
	SS-6	10-12	58	"
MW-14	SS-1	0-2	<1	Sand and Gravel
	SS-2	2-4	---	No recovery
	SS-3	4-6	587	Sand, Gravel and roots, petroleum odor
	SS-4	6-8	364	Sand with little Gravel, petroleum odor
	SS-5	8-10	75	Sand, some Silt, petroleum odor
	SS-6	10-12	28	"
MW-15	SS-1	0-2	<1	Sand and Gravel
	SS-2	2-4	<1	"
	SS-3	4-6	<1	"
	SS-4	6-8	2.0	Sand, some Silt, petroleum odor
	SS-5	8-10	<1	"
	SS-6	10-12	<1	"
MW-16	SS-1	0-2	<1	Sand, Gravel and organics
	SS-2	2-4	---	No recovery
	SS-3	4-6	168	Sand with trace Silt, petroleum odor
	SS-4	6-8	57	Sand and organics, petroleum odor
	SS-5	8-10	85	Sand, petroleum odor
	SS-6	10-12	14	Sand, some Silt, petroleum odor
	SS-7	12-14	3.9	"

TABLE 1 (continued)

FIELD-SCREENING RESULTS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Sample	Depth (feet)	VOC Headspace (ppm)	Comments
MW-17	SS-1	0-2	<1	Sand with trace Gravel
	SS-2	2-4	<1	"
	SS-3	4-6	<1	"
	SS-4	6-8	---	No recovery
	SS-5	8-10	<1	Sand, trace Silt, organics, petroleum odor
	SS-6	10-12	1.4	Sand, petroleum odor
	SS-7	12-14	<1	"
MW-18D	SS-1	0-2	<1	Sand, little Silt, organics
	SS-2	2-4	5.0	Sand, trace Silt, petroleum odor
	SS-3	4-6	12	Sand, petroleum odor
	SS-4	6-8	<1	"
	SS-5	8-10	<1	"
	SS-6	14-16	---	No recovery
	SS-7	19-21	<1	Sand
	SS-8	24-26	---	No recovery
	SS-9	29-31	<1	Silty Clay, some Sand and Gravel
	SS-10	34-36	<1	Sand with trace Gravel
	SS-11	39-41	<1	Sand and Gravel
	SS-12	44-46	<1	"
	SS-13	49-51	<1	Drill cuttings
	SS-14	54-56	<1	Sand
	SS-15	58-60	<1	Till
MW-20	SS-1	0-2	---	Sand and Gravel
	SS-2	2-4	---	"
	SS-3	4-6	---	"
	SS-4	6-8	---	Sand, Gravel, organics, petroleum odor
	SS-5	8-10	---	Sand, petroleum odor
	SS-6	10-12	---	"

Notes:
1. Headspace VOCs measured using Foxboro 128 GC Flame Ionization Detector or a Photovac SE 2020 Photoionization Detector.
2. --- = Sample not screened.

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TABLE 2
SOIL ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, MA

Location	Depth	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Acetone	Chloro-ethane	PCE	1,1-DCA	1,1,1-TCA	TCE	t-1,2-DCE	Vinyl Chloride	2-Butanone
	(feet)	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*
B-1	4.5-6.5	ND (5)	ND (7.5)	ND (5)	ND (5)	ND (50)	ND (10)	ND (7.5)	ND (7.5)	ND (5)	ND (5)	ND (7.5)	ND (18)	ND (23)
B-1	8.5-10.5	ND (5)	ND (7.5)	ND (5)	ND (5)	ND (50)	ND (10)	ND (7.5)	ND (7.5)	ND (5)	ND (5)	ND (7.5)	ND (18)	ND (23)
B-2	4.5-6.5	ND (5)	ND (7.5)	ND (5)	ND (5)	ND (50)	ND (10)	ND (7.5)	ND (7.5)	ND (5)	ND (5)	ND (7.5)	ND (18)	ND (23)
B-4	0-2	ND (5)	ND (7.5)	ND (5)	ND (5)	ND (50)	ND (10)	ND (7.5)	ND (7.5)	ND (5)	ND (5)	ND (7.5)	ND (18)	ND (23)
B-4	10-12	ND (10)	ND (15)	ND (5)	**290**	ND (100)	ND (20)	ND (15)	ND (15)	ND (10)	ND (10)	ND (15)	ND (35)	ND (45)
B-6	8-10	ND (5)	ND (7.5)	ND (5)	ND (5)	ND (50)	ND (10)	ND (7.5)	ND (7.5)	ND (5)	ND (5)	ND (7.5)	ND (18)	ND (23)
B-7	8-10	ND (5)	ND (7.5)	ND (5)	ND (5)	ND (50)	ND (10)	ND (7.5)	ND (7.5)	ND (5)	ND (5)	ND (7.5)	ND (18)	ND (23)
B-8	0-2	ND (5)	ND (7.5)	ND (5)	ND (5)	ND (50)	ND (10)	ND (7.5)	ND (7.5)	ND (5)	ND (5)	ND (7.5)	ND (18)	ND (23)
B-8	6-8	ND (7.5)	ND (11)	ND (7.5)	ND (7.5)	ND (75)	ND (15)	ND (11)	ND (11)	ND (7.5)	ND (7.5)	ND (11)	ND (26)	ND (34)
B-9	8-10	ND (5)	ND (7.5)	ND (5)	ND (5)	ND (50)	ND (10)	ND (7.5)	ND (7.5)	ND (5)	ND (5)	ND (7.5)	ND (18)	ND (23)
B-10	10-12	ND (5)	ND (7.5)	ND (5)	ND (5)	ND (50)	ND (10)	ND (7.5)	ND (7.5)	ND (5)	ND (5)	ND (7.5)	ND (18)	ND (23)
B-11	6-8	ND (5)	ND (7.5)	ND (5)	ND (5)	ND (50)	ND (10)	ND (7.5)	ND (7.5)	ND (5)	ND (5)	ND (7.5)	ND (18)	ND (23)
B-11	10-12	ND (5)	ND (7.5)	ND (5)	ND (5)	ND (50)	ND (10)	ND (7.5)	ND (7.5)	ND (5)	ND (5)	ND (7.5)	ND (18)	ND (23)
B-12	8-10	ND (5)	ND (7.5)	ND (5)	ND (5)	ND (50)	ND (10)	ND (7.5)	ND (7.5)	ND (5)	ND (5)	ND (7.5)	ND (18)	ND (23)
B-13	0-2	ND (10)	ND (15)	ND (10)	ND (10)	ND (100)	ND (20)	**29**	**46**	**32**	**86**	**210**	ND (35)	ND (45)
B-13	8-10	ND (10)	ND (15)	ND (10)	ND (10)	ND (100)	ND (20)	ND (15)	ND (15)	ND (10)	ND (10)	ND (15)	ND (35)	ND (45)
B-14	2.5-4.5	ND (500)	ND (750)	ND (750)	**1,300**	ND (5000)	ND (1000)	ND (750)	ND (750)	ND (500)	ND (500)	ND (750)	ND (1800)	ND (2300)
B-14	8.5-10.5	ND (200)	**380**	ND (200)	**580**	ND (2000)	ND (400)	ND (300)	ND (300)	ND (200)	ND (200)	ND (300)	ND (700)	ND (900)
B-15	8-10	ND (5)	ND (7.5)	ND (5)	ND (5)	ND (50)	ND (10)	ND (7.5)	ND (7.5)	ND (5)	ND (5)	ND (7.5)	ND (18)	ND (23)
B-15	12-14	ND (5)	ND (7.5)	ND (5)	ND (5)	ND (50)	ND (10)	ND (7.5)	ND (7.5)	ND (5)	ND (5)	ND (7.5)	ND (18)	ND (23)
B-16	10-12	ND (5)	ND (7.5)	ND (5)	ND (5)	ND (50)	ND (10)	**68**	ND (7.5)	ND (5)	ND (5)	ND (7.5)	ND (18)	ND (23)
B-17	2-4	ND (250)	ND (250)	ND (250)	ND (250)	ND (980)	ND (490)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)	ND (490)	ND (980)
B-18	0-2	ND (230)	ND (230)	ND (230)	ND (230)	ND (910)	ND (450)	**240**	ND (230)	ND (230)	**1,300**	ND (230)	ND (450)	ND (910)
B-18	4-6	ND (250)	ND (250)	ND (250)	ND (250)	ND (990)	ND (490)	**300**	ND (250)	ND (250)	**680**	ND (250)	ND (490)	ND (990)
B-19	6-8	ND (990)	ND (990)	ND (990)	ND (990)	ND (4000)	ND (2000)	ND (990)	ND (990)	ND (990)	ND (990)	ND (990)	ND (2000)	ND (4000)
B-20	6-8	ND (5)	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (15)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
B-25	4-6	ND (250)	ND (250)	ND (250)	ND (250)	ND (1000)	ND (500)	ND (250)	**510**	ND (250)	ND (250)	**340**	ND (500)	ND (1000)
MW-1	8-10	ND (5)	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
MW-2	2-4	ND (5)	ND (5)	ND (5)	ND (5)	**210**	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	**50**
MW-3	10-12	ND (5)	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
MW-3D	39-41	ND (5)	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
MW-4	10-12	ND (5)	ND (5)	ND (5)	ND (5)	**23**	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (19)
MW-5S	10-12	ND (5)	ND (5)	ND (5)	ND (5)	ND (18)	ND (9)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (9)	ND (18)
MW-6	0-2	ND (5)	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
MW-7	2.5-4.5	ND (5)	ND (7.5)	ND (5)	ND (5)	ND (50)	ND (10)	ND (7.5)	ND (7.5)	ND (5)	ND (5)	ND (7.5)	ND (18)	ND (23)
MW-7	6.5-8.5	ND (750)	**12,000**	ND (1100)	**48,000**	ND (7500)	ND (1500)	ND (1100)	ND (1100)	ND (750)	ND (1100)	ND (1100)	ND (2600)	ND (3400)
MW-9	10-12	ND (5)	ND (7.5)	ND (5)	ND (5)	ND (50)	ND (10)	ND (7.5)	ND (7.5)	ND (5)	ND (5)	ND (7.5)	ND (18)	ND (23)
MW-10	17-19	ND (5)	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
MW-10	29-31	ND (5)	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
MW-11	4-6	ND (5)	ND (7.5)	ND (5)	ND (5)	ND (50)	ND (10)	ND (7.5)	ND (7.5)	ND (5)	ND (5)	ND (7.5)	ND (18)	ND (23)
MW-11	8-10	ND (5)	ND (7.5)	ND (5)	ND (5)	ND (50)	ND (10)	ND (7.5)	ND (7.5)	ND (5)	ND (5)	ND (7.5)	ND (18)	ND (23)
MW-14	4-6	**550**	**1,700**	**810**	**5,200**	ND (1000)	ND (510)	ND (260)	**870**	**2,100**	ND (260)	**2,400**	ND (510)	ND (1,000)
MW-16	4-6	ND (250)	ND (250)	ND (250)	ND (250)	ND (1000)	ND (500)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)	ND (500)	ND (1000)

Notes:
1. ND = None detected above Practical Quantitation Limit (PQL)
2. ug/kg = Micrograms per kilogram
3. Cis-1, 2-dichloroethene reported as trans-1, 2-dichlorothene

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TABLE 3
SOIL ANALYTICAL RESULTS
TPH & PAH COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, MA

Location	Sample	Depth	TPH	PCBs	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene
		(feet)	*(mg/kg)*	*(mg/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*
B-1	(SS-3)	4.5-6.5	23	---	45	ND (41)	ND (41)	ND (8.4)	28	ND (21)	41	29
B-1	(SS-5)	8.5-10.5	16	---	ND (78)	ND (78)	ND (78)	ND (16)	65	ND (40)	100	100
B-2	(SS-3)	4.5-6.5	94	---	ND (290)	ND (290)	ND (290)	ND (59)	350	ND (150)	920	540
B-4	(SS-1)	0-2	660	---	ND (3200)	ND (3200)	3,200	730	5,600	1,600	7,000	7,600
B-4	(SS-6)	10-12	7,700	---	ND (750)	ND (750)	ND (750)	180	560	ND (390)	430	310
B-6	(SS-5)	8-10	ND (10)	---	ND (40)	ND (40)	220	ND (8.1)	28	ND (21)	56	46
B-7	(SS-5)	8-10	11	---	ND (40)	ND (40)	ND (40)	ND (8.0)	ND (20)	ND (20)	9.3	ND (8.0)
B-8	(SS-1)	0-2	1,600	---	400	150	410	18	100	ND (22)	240	220
B-8	(SS-4)	6-8	38	---	ND (540)	940	580	ND (110)	660	ND (280)	1,200	730
B-9	(SS-5)	8-10	13	---	ND (40)	ND (40)	ND (40)	ND (8.1)	ND (20)	ND (20)	ND (8.1)	ND (8.1)
B-10	(SS-6)	10-12	14	---	ND (40)	ND (40)	ND (40)	ND (8.1)	ND (21)	ND (21)	9.5	ND (8.1)
B-11	(SS-4)	6-8	ND (10)	---	ND (40)	ND (40)	ND (40)	ND (8.2)	ND (21)	ND (21)	28	22
B-11	(SS-6)	10-12	ND (10)	---	ND (39)	ND (39)	ND (39)	ND (8.0)	ND (20)	ND (20)	ND (8.0)	ND (8.0)
B-12	(SS-5)	8-10	150	---	ND (39)	ND (39)	ND (39)	ND (7.9)	ND (20)	ND (20)	ND (7.9)	ND (7.9)
B-13	(SS-1)	0-2	4,700	---	ND (1400)	ND (1400)	ND (1,400)	ND (290)	2,200	ND (730)	3,600	4,300
B-13	(SS-5)	8-10	1,200	---	ND (160)	ND (160)	ND (160)	65	320	88	200	190
B-14	(SS-2)	2.5-4.5	6,400	---	ND (1500)	ND (1500)	ND (1500)	300	890	ND (750)	820	410
B-14	(SS-5)	8.5-10.5	3,000	---	ND (400)	ND (400)	ND (400)	120	570	ND (210)	560	410
B-15	(SS-5)	8-10	11	---	ND (39)	ND (39)	70	ND (7.8)	ND (20)	ND (20)	ND (7.8)	ND (7.8)
B-15	(SS-7)	12-14	ND (10)	---	ND (38)	ND (38)	38	ND (7.8)	ND (20)	ND (20)	ND (7.8)	ND (7.8)
B-16	(SS-6)	10-12	240	---	ND (39)	52	ND (39)	ND (7.8)	59	ND (20)	41	11
B-17	(SS-2)	2-4	730	---	ND (2900)	3,200	5,100	700	9,000	2,600	11,000	13,000
B-18	(SS-1)	0-2	1,100	---	ND (1400)	4,100	4,200	ND (280)	5,000	ND (710)	5,900	5,300
B-18	(SS-3)	4-6	86	---	ND (240)	730	580	ND (50)	820	ND (130)	1,100	940
B-19	(SS-4)	6-8	1,700	---	ND (4700)	ND (4700)	ND (4700)	ND (4700)	ND (4700)	ND (4700)	ND (470)	ND (470)
B-20	(SS-4)	6-8	450	---	ND (4400)	ND (4400)	ND (4400)	ND (4400)	ND (4400)	ND (4400)	660	480
B-21	(SS-4)	6-8	1,660	---	ND (17000)	ND (17000)	ND (17000)	ND (17000)	ND (17000)	ND (17000)	ND (17000)	ND (17000)
B-24	(SS-4)	6-8	---	ND (0.1)	---	---	---	---	---	---	---	---
B-25	(SS-3)	4-6	1,860	0.2	---	---	---	---	---	---	---	---
B-26	(SS-4)	6-8	8,950	---	ND (17000)	ND (17000)	ND (17000)	ND (17000)	ND (17000)	ND (17000)	ND (17000)	ND (17000)
MW-1	(SS-1)	0-2	130	---	---	---	---	---	---	---	---	---
MW-1	(SS-5)	8-10	ND (10)	---	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)
MW-2	(SS-1)	0-2	130	---	---	---	---	---	---	---	---	---
MW-2	(SS-2)	2-4	130	---	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (3,300)	ND (3,300)
MW-2	(SS-4A)	7.5-9.5	15	---	---	---	---	---	---	---	---	---
MW-3	(SS-1)	0-2	320	---	---	---	---	---	---	---	---	---
MW-3	(SS-4)	6-8	61	---	---	---	---	---	---	---	---	---
MW-3	(SS-6)	10-12	ND (10)	---	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)
MW-3D	(SS-6)	39-41	ND (10)	---	ND (42)	ND (42)	ND (42)	ND (8.5)	ND (21)	ND (21)	ND (8.5)	ND (8.5)

TABLE 3 (continued)
SOIL ANALYTICAL RESULTS
TPH & PAH COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, MA

Location	Samples	Depth	Benzo (a) anthracene	Chrysene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Indeno (1,2,3-cd) pyrene	Dibenzo (a,h) anthracene	Benzo (g,h,i) perylene
		(feet)	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*
B-1	(SS-3)	4.5-6.5	16	23	18	8.8	18	7.0	1.6	16
B-1	(SS-5)	8.5-10.5	44	59	44	22	60	14	10	64
B-2	(SS-3)	4.5-6.5	440	420	380	200	540	77	44	370
B-4	(SS-1)	0-2	3,000	3,700	2,300	1,300	2,800	6,500	210	2,300
B-4	(SS-6)	10-12	170	500	150	51	220	61	ND (23)	150
B-6	(SS-5)	8-10	24	37	25	13	31	17	3.3	27
B-7	(SS-5)	8-10	3.1	ND (6.0)	4.2	2.0	3.4	2.5	ND (1.2)	3.5
B-8	(SS-1)	0-2	58	100	72	36	58	8.9	5.4	41
B-8	(SS-4)	6-8	370	350	580	280	390	300	46	500
B-9	(SS-5)	8-10	1.0	ND (6.0)	3.2	1.2	2.8	ND (2.0)	ND (1.2)	4.1
B-10	(SS-6)	10-12	3.7	ND (6.0)	4.0	2.1	4.5	3.6	ND (1.2)	4.6
B-11	(SS-4)	6-8	11	12	9.4	4.8	8.7	2.9	ND (1.2)	6.2
B-11	(SS-6)	10-12	3.3	ND (5.9)	3.4	1.8	3.0	ND (2.0)	ND (1.2)	3.3
B-12	(SS-5)	8-10	0.83	ND (5.9)	2.7	1.3	3.6	2.8	ND (1.2)	5.8
B-13	(SS-1)	0-2	1,000	1,900	1,800	820	1,600	510	110	1,400
B-13	(SS-5)	8-10	74	250	75	33	93	88	12	48
B-14	(SS-2)	2.5-4.5	240	380	300	140	240	ND (75)	ND (44)	80
B-14	(SS-5)	8.5-10.5	210	700	290	120	320	32	19	190
B-15	(SS-5)	8-10	ND (0.78)	ND (5.8)	ND (0.78)	ND (0.78)	ND (0.78)	ND (2.0)	ND (1.2)	ND (2.0)
B-15	(SS-7)	12-14	ND (0.78)	ND (5.8)	ND (0.78)	ND (0.78)	0.93	ND (2.0)	ND (1.2)	2.7
B-16	(SS-6)	10-12	9.5	14	20	6.8	9.7	ND (2.0)	ND (1.2)	22
B-17	(SS-2)	2-4	4,900	7,100	4,100	2,300	5,900	420	380	4,000
B-18	(SS-1)	0-2	990	3,100	1,800	1,000	2,200	2,000	160	1,700
B-18	(SS-3)	4-6	170	620	410	200	400	670	30	310
B-19	(SS-4)	6-8	ND (470)	ND (470)	ND (470)	ND (470)	ND (470)	ND (470)	ND (470)	ND (470)
B-20	(SS-4)	6-8	ND (440)	ND (440)	ND (440)	ND (440)	ND (440)	ND (440)	ND (440)	ND (440)
B-21	(SS-4)	6-8	ND (17000)	ND (17000)	ND (17000)	ND (17000)	ND (17000)	ND (17000)	ND (17000)	ND (17000)
B-24	(SS-4)	6-8	---	---	---	---	---	---	---	---
B-25	(SS-3)	4-6	---	---	---	---	---	---	---	---
B-26	(SS-4)	6-8	ND (17000)	ND (17000)	ND (17000)	ND (17000)	ND (17000)	ND (17000)	ND (17000)	ND (17000)
MW-1	(SS-1)	0-2	---	---	---	---	---	---	---	---
MW-1	(SS-5)	8-10	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)
MW-2	(SS-1)	0-2	---	---	---	---	---	---	---	---
MW-2	(SS-2)	2-4	ND (3,300)	ND (3,300)	ND (3,300)	ND (3,300)	ND (3,300)	ND (3,300)	ND (3,300)	ND (3,300)
MW-2	(SS-4A)	7.5-9.5	---	---	---	---	---	---	---	---
MW-3	(SS-1)	0-2	---	---	---	---	---	---	---	---
MW-3	(SS-4)	6-8	---	---	---	---	---	---	---	---
MW-3	(SS-6)	10-12	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)
MW-3D	(SS-6)	39-41	ND (0.85)	ND (6.3)	ND (0.85)	ND (0.85)	ND (0.85)	ND (2.1)	ND (1.3)	ND (2.1)

TABLE 3 (continued)
SOIL ANALYTICAL RESULTS
TPH & PAH COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, MA

Location	Sample	Depth	TPH	PCBs	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene
		(feet)	*(mg/kg)*	*(mg/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*
MW-4	(SS-1)	0-2	**470**	---	---	---	---	---	---	---	---	---
MW-4	(SS-5)	8-10	**12**	---	---	---	---	---	---	---	---	---
MW-4	(SS-6)	10-12	ND (10)	---	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)
MW-5S	(SS-1)	0-2	**140**	---	---	---	---	---	---	---	---	---
MW-5S	(SS-6)	10-12	ND (10)	---	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)
MW-6	(SS-1)	0-2	**180**	---	ND (3,200)	ND (3,200)	ND (3,200)	ND (3,200)	ND (3,200)	ND (3,200)	ND (3,200)	ND (3,200)
MW-6	(SS-8)	18-20	ND (10)	---	---	---	---	---	---	---	---	---
MW-7	(SS-2)	2.5-4.5	**230**	---	**740**	ND (690)	ND (690)	ND (140)	**380**	ND (350)	**740**	**230**
MW-7	(SS-4)	6.5-8.5	**4,000**	---	ND (1500)	ND (1500)	ND (1500)	**310**	**1,900**	ND (750)	**3,700**	**3,100**
MW-9	(SS-6)	10-12	ND (10)	---	ND (41)	ND (41)	ND (41)	ND (8.3)	ND (21)	ND (21)	ND (8.3)	ND (8.3)
MW-10	(SS-2)	17-19	**94**	---	ND (190)	ND (190)	ND (190)	ND (39)	**130**	ND (98)	**240**	**250**
MW-10	(SS-4)	29-31	**11**	---	ND (37)	ND (37)	ND (37)	ND (7.5)	ND (19)	ND (19)	ND (7.5)	ND (7.5)
MW-11	(SS-3)	4-6	**49**	---	ND (230)	ND (230)	ND (230)	ND (47)	**200**	ND (120)	**100**	**90**
MW-11	(SS-5)	8-10	**26**	---	ND (40)	ND (40)	ND (40)	ND (8.2)	**35**	ND (21)	**10**	ND (8.2)
MW-14	(SS-3)	4-6	**18,570**	---	---	---	---	---	---	---	---	---
MW-16	(SS-3)	4-6	**10,100**	**0.8***	ND (340)	ND (340)	ND (340)	ND (340)	ND (340)	ND (340)	ND (340)	ND (340)
MW-18D	(SS-1)	0-2	---	**2.2**	---	---	---	---	---	---	---	---

TABLE 3 (continued)
SOIL ANALYTICAL RESULTS
TPH & PAH COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, MA

Location	Samples	Depth	Benzo (a) anthracene	Chrysene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Indeno (1,2,3-cd) pyrene	Dibenzo (a,h) anthracene	Benzo (g,h,i) perylene
		(feet)	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*
MW-4	(SS-1)	0-2	---	---	---	---	---	---	---	---
MW-4	(SS-5)	8-10	---	---	---	---	---	---	---	---
MW-4	(SS-6)	10-12	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)
MW-5S	(SS-1)	0-2	---	---	---	---	---	---	---	---
MW-5S	(SS-6)	10-12	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)
MW-6	(SS-1)	0-2	ND (3,200)	ND (3,200)	ND (3,200)	ND (3,200)	ND (3,200)	ND (3,200)	ND (3,200)	ND (3,200)
MW-6	(SS-8)	18-20	---	---	---	---	---	---	---	---
MW-7	(SS-2)	2.5-4.5	**300**	**220**	**320**	**170**	**400**	**140**	**34**	**350**
MW-7	(SS-4)	6.5-8.5	**1,500**	**1,600**	**1,600**	**890**	**2,000**	**450**	**220**	**1,200**
MW-9	(SS-6)	10-12	ND (0.83)	ND (6.2)	ND (0.83)	ND (0.83)	ND (0.83)	ND (2.1)	ND (1.2)	ND (2.1)
MW-10	(SS-2)	17-19	**100**	**130**	**120**	**62**	**160**	**23**	**20**	**160**
MW-10	(SS-4)	29-31	ND (0.75)	ND (5.6)	ND (0.75)	ND (0.75)	ND (0.75)	ND (1.9)	ND (1.1)	ND (1.9)
MW-11	(SS-3)	4-6	**34**	**41**	**37**	**16**	**37**	**15**	ND (7.1)	**53**
MW-11	(SS-5)	8-10	**4.1**	**7.1**	**4.3**	**2.1**	**5.1**	ND (2.1)	ND (1.2)	**4.5**
MW-14	(SS-3)	4-6	---	---	---	---	---	---	---	---
MW-16	(SS-3)	4-6	ND (340)	ND (340)	ND (340)	ND (340)	ND (340)	ND (340)	ND (340)	ND (340)
MW-18D	(SS-1)	0-2	---	---	---	---	---	---	---	---

Notes:
1. ( ) = number in parentheses is laboratory Practical Quantitation Limit (PQL)
2. ND = none detected above PQL
3. ug/kg = micrograms per kilogram
4. --- = Not analyzed for that parameter
5. All PCBs detected are Aroclor 1254 except those marked with an asterisk (*), which are Aroclor 1248
6. Results for MW-1, MW-2, MW-3, MW-4, MW-5S and MW-6 from October 1994

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TABLE 4

SOIL ANALYTICAL RESULTS
INORGANIC CONSTITUENTS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, MA

cation	Sample	Depth (feet)	Antimony (mg/kg)	Arsenic (mg/kg)	Beryllium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Thallium (mg/kg)	Zinc (mg/kg)	Cyanide (mg/kg)
B-1	(SS-3)	4.5-6.5	ND (4)	ND (8)	ND (0.038)	ND (0.38)	11	5.8	9	ND (0.0708)	ND (1.1)	ND (8)	ND (0.86)	ND (10)	15	ND (2.4)
B-1	(SS-5)	8.5-10.5	ND (4)	ND (7)	ND (0.036)	ND (0.36)	8.0	6.8	6	ND (0.0620)	ND (1.1)	ND (7)	ND (0.74)	ND (10)	17	ND (2.0)
B-2	(SS-3)	4.5-6.5	ND (3)	ND (8)	ND (0.039)	ND (0.39)	18	22	40	ND (0.0696)	ND (1.2)	ND (8)	ND (0.68)	ND (10)	49	ND (2.0)
B-4	(SS-1)	0-2	ND (3)	8	0.329	0.56	29	38	100	ND (0.0676)	13	ND (7)	ND (0.64)	ND (10)	84	ND (1.9)
B-4	(SS-6)	10-12	5	ND (8)	0.266	ND (0.38)	16	27	60	ND (0.0600)	11	ND (8)	ND (0.81)	ND (10)	36	ND (1.5)
B-6	(SS-5)	8-10	ND (4)	ND (7)	0.222	ND (0.37)	11	12	10	ND (0.0667)	5.9	ND (7)	ND (0.75)	ND (10)	24	ND (2.1)
B-7	(SS-5)	8-10	ND (4)	ND (7)	0.109	ND (0.36)	6.1	3.6	ND (4)	ND (0.0639)	3.2	ND (7)	ND (0.77)	ND (10)	9.7	ND (2.4)
B-8	(SS-1)	0-2	ND (4)	10	0.309	0.83	24	48	1,900	0.3167	17	ND (6)	ND (0.70)	ND (9)	70	ND (1.9)
B-8	(SS-4)	6-8	ND (3)	ND (8)	0.205	ND (0.41)	5.8	1.9	10	ND (0.0818)	ND (1.2)	ND (8)	ND (0.66)	ND (10)	6.6	ND (1.5)
B-9	(SS-5)	8-10	ND (3)	ND (8)	0.122	ND (0.41)	5.1	3.9	5	ND (0.0692)	ND (1.2)	ND (8)	ND (0.70)	ND (10)	7.7	ND (1.4)
B-10	(SS-6)	10-12	ND (4)	ND (7)	0.073	ND (0.36)	4.8	2.8	4	ND (0.0745)	3.3	ND (7)	ND (0.86)	ND (10)	7.9	ND (1.8)
B-11	(SS-4)	6-8	5	ND (7)	0.108	ND (0.36)	5.8	3.4	ND (4)	ND (0.0603)	ND (1.1)	ND (7)	ND (0.70)	ND (10)	6.9	ND (1.5)
B-11	(SS-6)	10-12	ND (4)	ND (5)	0.105	ND (0.26)	5.7	5.2	ND (3)	ND (0.0681)	ND (0.79)	ND (5)	ND (0.73)	ND (8)	7.1	ND (1.9)
B-12	(SS-5)	8-10	ND (3)	ND (6)	0.161	ND (0.32)	10	5.2	20	ND (0.0644)	5.2	ND (6)	ND (0.63)	ND (10)	24	ND (1.9)
B-13	(SS-1)	0-2	ND (2)	9	0.232	0.43	15	16	70	0.5339	8.9	ND (7)	ND (0.47)	ND (10)	57	ND (1.8)
B-13	(SS-5)	8-10	ND (3)	ND (7)	0.140	ND (0.35)	6.5	6.0	10	ND (0.0773)	1.1	ND (7)	ND (0.68)	ND (10)	15	ND (1.3)
B-14	(SS-2)	2.5-4.5	ND (4)	ND (7)	ND (0.035)	ND (0.35)	7.8	20	170	0.1521	2.5	ND (7)	ND (0.81)	ND (10)	48	ND (1.4)
B-14	(SS-5)	8.5-10.5	ND (4)	ND (6)	ND (0.032)	ND (0.32)	9.4	12	60	ND (0.0653)	1.3	ND (6)	ND (0.75)	ND (10)	25	ND (1.4)
B-15	(SS-5)	8-10	ND (4)	ND (8)	ND (0.038)	ND (0.38)	9.6	4.2	ND (4)	ND (0.0743)	2.6	ND (8)	ND (0.77)	ND (10)	9.8	ND (1.7)
B-15	(SS-7)	12-14	ND (4)	ND (8)	ND (0.039)	ND (0.39)	6.6	4.6	ND (4)	ND (0.0676)	2.2	ND (8)	ND (0.85)	ND (10)	11	ND (2.0)
B-16	(SS-6)	10-12	ND (3)	ND (7)	ND (0.034)	ND (0.34)	6.9	3.5	8	ND (0.0672)	ND (1.0)	ND (7)	ND (0.67)	ND (10)	10	ND (1.9)
B-17	(SS-2)	2-4	5	ND (7)	0.460	0.43	22	270	120	0.0804	13	ND (7)	ND (0.62)	ND (10)	120	ND (2.3)
B-18	(SS-1)	0-2	ND (3)	ND (5)	0.243	3.5	24	23	560	0.0508	13	ND (5)	ND (0.60)	10	68	ND (2.2)
B-18	(SS-3)	4-6	ND (3)	ND (5)	0.203	0.23	8.0	4.7	40	ND (0.0508)	ND (0.68)	ND (5)	ND (0.68)	ND (7)	14	ND (2.4)
B-19	(SS-4)	6-8	ND (3)	ND (7)	ND (0.036)	ND (0.36)	33	34	240	0.0565	2.4	ND (7)	ND (0.59)	ND (10)	97	ND (1.9)
B-20	(SS-4)	6-8	ND (3)	ND (6)	ND (0.031)	ND (0.31)	14	28	260	ND (0.0601)	5.6	ND (6)	ND (0.62)	ND (9)	55	ND (1.9)
B-24	(SS-4)	6-8	---	---	---	---	---	---	50	---	---	---	---	---	---	---
B-25	(SS-3)	4-6	---	---	---	---	---	---	30	---	---	---	---	---	---	---
MW-1	(SS-5)	8-10	ND (3)	ND (6)	ND (0.031)	0.37	18	21	7	ND (0.0636)	8.1	ND (6)	ND (0.65)	ND (9)	34	ND (1.1)
MW-2	(SS-2)	2-4	ND (3)	7	ND (0.035)	0.42	20	20	60	0.1579	9.0	ND (7)	ND (0.69)	ND (10)	56	ND (1.1)
MW-3	(SS-6)	10-12	ND (3)	ND (7)	0.067	ND (0.34)	3.9	1.8	ND (3)	ND (0.0718)	ND (1.0)	ND (7)	ND (0.50)	ND (10)	5.5	ND (1.1)
MW-3D	(SS-6)	39-41	ND (3)	6	0.260	ND (0.29)	9.1	8.0	4	ND (0.0855)	6.7	ND (6)	ND (0.55)	ND (9)	14	ND (1.1)
MW-4	(SS-6)	10-12	ND (4)	ND (6)	ND (0.029)	ND (0.29)	4.9	1.9	ND (3)	ND (0.0622)	ND (0.88)	ND (6)	ND (0.80)	ND (9)	8.0	ND (1.1)
MW-5S	(SS-6)	10-12	ND (3)	ND (5)	ND (0.025)	0.30	13	30	4	ND (0.0640)	8.0	ND (5)	ND (0.56)	ND (7)	27	ND (1.0)
MW-6	(SS-1)	0-2	5	ND (7)	ND (0.034)	0.55	20	28	130	0.1533	7.5	ND (7)	ND (0.71)	ND (10)	97	ND (1.0)
MW-7	(SS-2)	2.5-4.5	ND (4)	ND (8)	ND (0.038)	ND (0.38)	13	20	120	ND (0.0754)	ND (1.1)	ND (8)	ND (0.78)	ND (10)	61	ND (2.1)
MW-7	(SS-4)	6.5-8.5	ND (4)	ND (6)	ND (0.032)	ND (0.32)	32	19	240	0.0792	9.3	ND (6)	ND (0.82)	ND (9)	88	ND (1.9)
MW-9	(SS-6)	10-12	ND (4)	ND (8)	0.127	ND (0.42)	6.0	3.0	ND (4)	ND (0.0742)	ND (1.3)	ND (8)	ND (0.79)	ND (10)	7.8	ND (2.0)
MW-10	(SS-2)	17-19	ND (2)	ND (4)	0.260	0.24	17	23	10	ND (0.0595)	13	ND (4)	ND (0.41)	ND (7)	38	ND (2.1)
MW-10	(SS-4)	29-31	3	ND (4)	0.246	0.31	15	28	9	ND (0.0559)	14	ND (4)	ND (0.57)	ND (7)	37	ND (1.8)
MW-11	(SS-3)	4-6	6	ND (8)	ND (0.038)	ND (0.38)	400	13	20	ND (0.0585)	ND (1.1)	ND (8)	ND (0.76)	ND (10)	41	ND (1.5)
MW-11	(SS-5)	8-10	ND (4)	ND (7)	ND (0.033)	ND (0.33)	38	1.5	4	ND (0.0463)	ND (1.0)	ND (7)	ND (0.78)	ND (10)	11	ND (1.7)
MW-16	(SS-3)	4-6	---	---	---	---	9.5	---	50	0.0921	---	---	---	---	6.8	---
MW-18D	(SS-1)	0-2	---	---	---	---	110	---	140	0.1357	---	---	---	---	55	---

Notes:
1. ND = None detected below laboratory Practical Quantitation Limit (PQL).
2. mg/kg - Milligrams per kilogram
3. --- = Not analyzed

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TABLE 5

WETLAND SAMPLING DATA SUMMARY

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Station ID	HNU (ppm)	Soil Description	Surrounding Area Description
P-1	<1	Dark brown fine SAND; and Silt; some organic matter.	Standing water, tree and scrub vegetation
P-2	<1	Dark brown fine SAND; and Silt; some organic matter. Strong organic odor.	Standing water, tree and scrub vegetation
P-3	<1	Dark to light brown fine SAND; and Silt.	Standing water, open area with cattails
P-4	<1	Dark brown to brownish-gray fine SAND; and Silt.	Standing water, reeds and scrub vegetation
P-5	<1	Dark brown fine SAND; and Silt; some organic matter.	Standing water, cattails and trees, plastic pail debris
P-6	<1	Dark to light brown fine SAND; and Silt.	Standing water, cattails and reeds
P-7	<1	Dark brown fine SAND; and Silt; some organic matter.	Standing water, open area
P-9	<1	Dark brown fine SAND; and Silt; some organic matter.	Standing water, cattails and reeds
P-10	<1	Dark brown to brownish-gray fine SAND; and Silt.	Standing water, open area with reeds
P-11	<1	Dark brown fine SAND; and Silt, some organic matter.	Standing water, tree and scrub vegetation
P-12	8	Dark brown fine SAND; and Silt, some organic matter. Heavily stained soil with strong petroleum odor.	Standing water, scrub vegetation
P-13	<1	Dark brown fine SAND; and Silt; some organic matter.	Standing water, tree and scrub vegetation
P-14	<1	Dark brown fine SAND; and Silt; some organic matter.	Standing water, tree and scrub vegetation
P-15	2	Dark brown fine SAND; and Silt; some organic matter. Heavily stained soil with strong petroleum odor.	Standing water, open area
P-17	<1	Dark brown fine SAND; and Silt; some organic matter.	Standing water, tree and scrub vegetation
P-18	<1	Dark brown fine SAND; and Silt; some organic matter. White ceramic (?) material in sample.	Standing water, tree and scrub vegetation
P-19	<1	Brown fine SAND; and Silt; some organic matter.	Dry ground, grass and scrub vegetation
P-20	<1	Dark brown fine SAND; and Silt; some organic matter.	Standing water, cattails and reeds
P-21	<1	Dark brown fine SAND; and Silt; some organic matter;	Standing water, tree and scrub vegetation
P-22	<1	Light brown medium to fine SAND; trace gravel; trace organic matter	Dry ground, gravel fill, tree vegetation
P-23	<1	Brown medium to fine SAND; and organic matter.	Standing water, reed and scrub vegetation, hydrogen sulfide odor
P-24	<1	Dark brown medium to fine SAND; and Silt; some organic matter	Standing water, reed and scrub vegetation,
P-24A	—	Dark brown medium to fine SAND; and Silt; some organic matter	Standing water, reed and scrub vegetation,
P-25	<1	Dark brown medium to fine SAND; and Silt; some organic matter	Standing water, reed tree and scrub vegetation
P-26	<1	Dark brown medium to fine SAND; and Silt; some organic matter	Standing water, tree and scrub vegetation
P-27	<1	Dark brown fine SAND; and Silt; some organic matter.	Standing water, open area with cattail and reeds
P-28	<1	Dark brown fine SAND; and Silt; some organic matter.	Wet ground, reed and tree vegetation
P-29	<1	Dark to light brown fine SAND; and Silt; some organic matter	Standing water, open area with reed vegetation

TABLE 5 (cont.)

WETLAND SAMPLING DATA SUMMARY

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Station ID	HNU (ppm)	Soil Description	Surrounding Area Description
P-30	<1	Dark brown fine SAND; and Silt; some organic matter.	Standing water, open area with cattail and reed vegetation
P-31	---	Dark brown medium to fine SAND; and Silt; some organic matter	Standing water, tree and scrub vegetation
P-32	---	Brown medium to fine SAND; and organic matter.	Standing water, reed and scrub vegetation
P-33	---	Dark brown medium to fine SAND; and Silt; some organic matter	Wet ground, scrub and tree vegetation
P-34	---	Dark brown medium to fine SAND; and Silt; some organic matter	Wet ground, scrub and tree vegetation
P-35	---	Dark brown medium to fine SAND; and Silt; some organic matter	Wet ground, scrub and tree vegetation
P-36	---	Dark brown medium to fine SAND; and Silt; some organic matter	Wet ground, scrub and tree vegetation
P-37	---	Dark brown medium to fine SAND; and Silt; some organic matter	Wet ground, scrub and tree vegetation
P-38	---	Dark brown fine SAND; and Silt; some organic matter.	Standing water, cattails and trees
P-39	---	Dark brown fine SAND; and Silt; some organic matter.	Standing water, cattails
P-40	---	Dark brown fine SAND; and Silt; some organic matter.	Standing water, cattails and trees
P-41	---	Dark brown fine SAND; and Silt; some organic matter.	Standing water, tree and scrub vegetation
P-42	---	Dark brown fine SAND; and Silt; some organic matter.	Standing water, tree and scrub vegetation
P-43	---	Dark brown medium to fine SAND; and Silt; some organic matter	Standing water, reed tree and scrub vegetation

Notes:
1. Samples P-1 through P-30 collected on 11/16/95 from a depth of 6 inches to 18 inches below grade.
2. Samples P-33 through P-43 (and P-24A) collected on 11/12-13/97 at a depth of 0 inches to 12 inches below grade.

Disk 3621

TABLE 6
SOIL ANALYTICAL RESULTS
WETLAND SAMPLING

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, MA

Location	TPH	Total PCB	Total Chromium	Total Lead
	(mg/kg)	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*
P-1	44	3.3	76	90
P-2	92	2.7	56	80
P-3	320	3.1	210	140
P-4	40	15	45.1	30
P-5	610	69	280	1,700
P-6	620	6.7	500	620
P-7	3,900	8.9	800	2,700
P-9	140	5.7	110	100
P-10	610	5.4	290	1,400
P-11	4,100	8.5	180	730
P-12	82,000	60	340	24,900
P-13	550	37	400	190
P-14	20,000	11 *	820	16,800
P-15	38,000	24 *	1,100	1,700
P-17	330	5.9	1,000	270
P-18	24,000	13 *	970	3,200
P-19	770	3.1 *	2,000	1,500
P-20	69	0.8 *	190	70
P-21	2,100	1.4 *	1,800	600
P-22	110	0.4 *	230	70
P-23	11,000	10	21,300	2,500
P-24	540	1.0 *	62,500	3,300
P-24A	---	4.9	2,100	1,800
P-25	260	2.9	12,400	380
P-26	270	6.6 *	66,500	1,400
P-27	230	0.2 *	14,000	600
P-28	22	ND (1.3)	3,100	90
P-29	130	0.2 *	760	120
P-30	77	ND (0.2)	9,400	280

TABLE 6 (continued)
SOIL ANALYTICAL RESULTS
WETLAND SAMPLING

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, MA

Location	TPH	Total PCB	Total Chromium	Total Lead
	(mg/kg)	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*
P-31	---	---	1,500	---
P-32	---	---	7,500	---
P-33	---	7.9*	750	1,700
P-34	---	0.4*	660	170
P-35	---	0.4	1,900	80
P-36	---	0.2*	170	60
P-37	---	ND (0.1)	2,900	150
P-38	---	450*	650	1,700
P-39	---	48	3,000	1,600
P-40	---	38*	2,100	1,300
P-41	1,480	3.4	160	2,200
P-42	12,480	9.0	190	1,800
P-43	---	0.5	26,800	11,100
P-44	---	---	24,000	950
P-45	---	---	3,400	---
P-46	---	17	---	---
P-47	---	42	---	---
P-48	472	---	---	---
MW-19	---	1.5*	4,100	670
SW-1	72	ND (0.1)	5,700	130
SW-2	97,000	220	1,100	35,100
SW-3	620	15	430	1,000
SW-4	74	0.8*	93	630

Notes:
1) Total Petroleum Hydrocarbons (TPH) by Gas Chromatogram/Flame Ionization Detector.
2) All samples collected at a depth of 0-2 feet below grade.
3) All PCBs detected are Aroclor 1254 except those marked with an asterisk(*), which are Aroclor 1260.
4) --- = Not analyzed.

Disk 3621

TABLE 7

WATER LEVEL DATA

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Sample Date: November 17, 1997

Location	Well Depth	Purge Volume	Reference Elevation	Depth to Water	Water Elevation
	(feet)	*(gal)*	*(feet)*	*(feet)*	*(feet)*
MW-1	15.0	---	53.29	9.22	**44.07**
MW-2	15.0	---	53.85	9.90	**43.95**
MW-3	14.0	6	52.86	8.57	**44.29**
MW-3D	49.0	20	52.41	8.46	**43.95**
MW-4	15.0	---	52.29	8.08	**44.21**
MW-5S	15.0	---	53.88	9.95	**43.93**
MW-5D	83.5	---	54.06	10.29	**43.77**
MW-6	18.0	---	55.71	11.84	**43.87**
MW-7	12.0	---	50.44	Not Found	---
MW-8	12.0	---	54.32	10.58	**43.74**
MW-9	12.0	---	51.82	7.70	**44.12**
MW-10	41.0	---	53.84	9.81	**44.03**
MW-11	12.0	6	50.04	6.14	**43.90**
MW-12	5.4	8	47.29	3.03	**44.26**
SW-A	---	---	47.29	Dry	---
MW-13	5.3	---	46.42	2.13	**44.29**
SW-B	---	---	46.42	1.71	**44.71**
MW-14	12.0	17	49.45	5.34	**44.11**
MW-15	12.0	20	51.46	7.49	**43.97**
MW-16	12.0	25	50.20	6.17	**44.03**
MW-17	14.0	20	52.53	8.39	**44.14**
MW-18S	10.0	20	47.39	3.42	**43.97**
MW-18D	58.0	30	47.55	3.64	**43.91**
MW-19	5.3	1	48.47	4.50	**43.97**
SW-C	---	---	46.46	2.37	**44.09**
MW-20	12.0	20	49.10	5.02	**44.08**
MR-1SS	13.0	20	50.31	6.98	**43.33**

TABLE 7 (continued)

WATER LEVEL DATA

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Sample Date: November 17, 1997

Location	Well Depth	Purge Volume	Reference Elevation	Depth to Water	Water Elevation
	(feet)	*(gal)*	*(feet)*	*(feet)*	*(feet)*
MR-2SS	15.0	28	50.80	6.89	**43.91**
MW-4S	11.6	8	46.53	2.88	**43.65**
MW-4M	45.2	25	46.91	3.29	**43.62**
MW-4D	94.4	15	47.59	7.33	**40.26**
BW-2R	95.8	45	47.78	4.10	**43.68**
BSW-2	20.3	10	48.04	4.45	**43.59**
BW-3	43.9	20	47.38	3.71	**43.67**
BW-4	42.8	25	46.46	2.55	**43.91**
OW-2	41.1	---	76.19	31.46	**44.73**
SMH-1	---	---	46.71	---	---
SMH-2	---	---	Not Found	---	---
SMH-3	---	---	43.42	---	---
SMH-4	---	---	39.26	---	---
SMH-5	---	---	38.07	---	---

NOTES:

1. Well reference elevations are PVC rim except MW-12, MW-13, MW-19, SW-A, SW-B, SW-C, BW-4, BSW-2, and OW-2 (protective casing rim).
2. Wells analyzed for VOCs (8260), MW-18S & MW-19 also PCBs, diss. Pb, Cr, Hg, Zn.
3. SW-A, SW-B, SW-C analyzed for TPH (GC/FID), diss. Pb, Cr, Hg, Zn.
4. SMH-3, SMH-4 and SMH-5 analyzed for VOCs (8260).
5. Reference elevations for SMH-1 through SMH-5 are invert elevations.

Disk No. 3941

TABLE 8

GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Date	Benzene (ug/l)	Toluene (ug/l)	Ethyl-benzene (ug/l)	Total Xylenes (ug/l)	MTBE (ug/l)	Acetone (ug/l)	Chloro-ethane (ug/l)	PCE (ug/l)	1,1-DCA (ug/l)	1,1,1-TCA (ug/l)	TCE (ug/l)	t-1,2-DCE (ug/l)	Vinyl Chloride (ug/l)	4-Methyl-2-pentanone (ug/l)	2-Butanone (ug/l)
On-Site Wells																
MW-1	11/9/94	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	11/7/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	25	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
MW-2	11/9/94	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	11/7/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	24	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
MW-3	11/9/94	ND (13)	ND (13)	ND (13)	ND (13)	ND (25)	ND (50)	ND (25)	ND (5)	98	44	100	1,100	ND (25)	ND (5)	ND (50)
	11/7/95	ND (130)	ND (130)	ND (130)	ND (130)	ND (250)	ND (500)	ND (250)	ND (130)	ND(130)	160	140	2,200	ND(250)	ND (130)	ND(500)
	12/18/95	ND (25)	ND (25)	ND (25)	ND (25)	ND (50)	ND (100)	ND (50)	ND (25)	170	220	220	3,100	ND (50)	ND (25)	ND (100)
(Blind Dup.)	12/18/95	ND (250)	ND (250)	ND (250)	ND (250)	ND (500)	ND (1,000)	ND (500)	ND (250)	250	360	400	5,300	ND (500)	ND (250)	ND (500)
	11/17/97	ND (50)	ND (50)	ND (50)	ND (50)	ND (100)	ND (200)	ND (100)	ND (50)	77	65	110	1,700	ND (100)	ND (50)	ND (200)
MW-3D	11/7/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	25	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	11/17/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
MW-4	11/9/94	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	11/7/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
MW-5S	11/9/94	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	11/7/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
MW-5D	11/9/94	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	11/7/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	36	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
MW-6	11/9/94	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	11/7/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	32	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
MW-7	12/18/95	ND (25)	ND (25)	ND (25)	ND (25)	ND (50)	ND (100)	ND (50)	ND (25)	ND (25)	ND (25)	ND (25)	ND (25)	ND (50)	ND (25)	ND (100)
MW-8	11/7/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	29	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	6	ND (10)	ND (5)	ND (20)
MW-9	11/7/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	28	ND (10)	ND (5)	9	15	48	5	ND (10)	ND (5)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	5	12	31	ND (5)	ND (10)	ND (5)	ND (20)
MW-10	11/7/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	24	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)

TABLE 8 (Cont.)

GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Date	Benzene (ug/l)	Toluene (ug/l)	Ethyl-benzene (ug/l)	Total Xylenes (ug/l)	MTBE (ug/l)	Acetone (ug/l)	Chloro-ethane (ug/l)	PCE (ug/l)	1,1-DCA (ug/l)	1,1,1-TCA (ug/l)	TCE (ug/l)	t-1,2-DCE (ug/l)	Vinyl Chloride (ug/l)	4-Methyl-2-pentanone (ug/l)	2-Butanone (ug/l)
On-Site Wells																
MW-11	11/7/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	13	16	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
(Blind Dup.)	11/7/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	14	16	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	12/18/95	ND (25)	ND (25)	ND (25)	ND (25)	ND (50)	ND (100)	ND (50)	ND (25)	230	380	ND (25)	ND (25)	ND (50)	ND (25)	ND (100)
	11/17/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
MW-12	11/7/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	10	ND (5)	ND (5)	96	ND (10)	ND (5)	ND (20)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (20)	ND (40)	ND (20)	ND (10)	15	ND (10)	ND (10)	150	ND (20)	ND (10)	ND (40)
	11/17/97	ND (5)	ND (5)	ND (5)	ND (5)	14	ND (20)	ND (10)	ND (5)	9	ND (5)	ND (5)	60	ND (10)	ND (5)	ND (20)
MW-13	11/7/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
MW-14	11/17/97	27	14	7	23	ND (10)	ND (20)	120	ND (5)	200	67	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
MW-15	11/17/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
MW-16	11/17/97	45	130	75	220	ND (10)	57	49	13	280	92	11	620	210	52	26
MW-17	11/17/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	6	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
MW-18S	11/17/97	ND (50)	ND (50)	ND (50)	ND (50)	ND (100)	ND (200)	ND (100)	ND (50)	ND (50)	ND (50)	ND (50)	460	ND (100)	ND (50)	ND (200)
MW-18D	11/17/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
MW-19	11/18/97	ND (50)	ND (50)	ND (50)	ND (50)	ND (100)	ND (200)	ND (100)	ND (50)	51	ND (50)	ND (50)	1,200	ND (100)	ND (50)	ND (200)
	1/7/98	ND (25)	ND (25)	ND (25)	ND (25)	ND (50)	ND (100)	ND (50)	ND (25)	32	ND (25)	ND (25)	450	ND (50)	ND (25)	ND (100)
MW-20	11/17/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
MR-1SS	8/31/93	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (3.4)	2.6	3.7	1.4	ND (2)	ND (2)	ND (2)	ND (3.4)
	11/9/94	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (20)	ND (5)	10	ND (5)	ND (5)	ND (10)	ND (10)	ND (20)
	11/7/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (10)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (10)	ND (20)
	11/17/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (10)	ND (20)
MR-2SS	8/31/93	8.6	12.9	ND (5)	324	ND (10)	ND (10)	ND (10)	ND (17.4)	ND (10)	ND (10)	22.6	461	ND (10)	ND (10)	ND (17.4)
	11/9/94	9	9	ND (5)	9	ND (10)	ND (20)	ND (10)	ND (20)	ND (5)	ND (5)	ND (5)	240	15	ND (5)	ND (20)
	11/7/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	31	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	140	14	ND (5)	ND (20)
	12/18/95	5	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	140	12	ND (5)	ND (20)
	11/17/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (20)
(Blind Dup.)	11/17/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	22	ND (5)	ND (5)	ND (20)

TABLE 8 (Cont.)

GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Date	Benzene (ug/l)	Toluene (ug/l)	Ethyl-benzene (ug/l)	Total Xylenes (ug/l)	MTBE	Acetone (ug/l)	Chloro-ethane (ug/l)	PCE (ug/l)	1,1-DCA (ug/l)	1,1,1-TCA (ug/l)	TCE (ug/l)	t-1,2-DCE (ug/l)	Vinyl Chloride (ug/l)	4-Methyl-2-pentanone (ug/l)	2-Butanone (ug/l)
Off-Site Wells																
BSW-2	11/18/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
BW-2R	11/18/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
BW-3	11/18/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
BW-4	11/18/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
MW-4S	11/17/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
MW-4M	11/17/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
MW-4D	12/18/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	9	ND (5)	ND (10)	ND (5)	ND (20)
Surface Water																
SW-A	11/9/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
SW-B	11/9/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	43	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
SW-3	11/9/94	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
Trip Blank	11/9/94	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	11/7/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	11/17/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	11/18/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)

Notes:
1. Laboratory analyses by EPA Method 624, data shown in micrograms per liter (ug/l).
2. Practical Quantitation Limit shown in parenthese where compounds not detected (ND) or trace (Tr).
3. PW#2 = Riley Production Well #2.
4. Abbreviations are used for the following compounds:
   1,1-DCA = 1,1-Dichloroethane
   1,1,1-TCA = 1,1,1-Trichloroethane
   t-1,2-DCE = Trans 1,2-Dichloroethene
   PCE = Tetrachloroethene
   TCE = Trichloroethene
   MTBE = Methyl-t-butyl ether

Disk 3621

TABLE 9
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
PCB & POLYNUCLEAR AROMATIC HYDROCARBON COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, MA

Location	Date	PCB	Bis(2-ethylhexyl)-phthalate	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene
		ug/l	*(ug/l)*	*(ug/l)*	*(ug/l)*	*(ug/l)*	*(ug/l)*	*(ug/l)*	*(ug/l)*	*(ug/l)*	*(ug/l)*
On-Site Wells											
MW-1	11/9/94	ND (1.0)	ND (200)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)
	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-2	11/9/94	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-3	11/9/94	ND (1.0)	ND (200)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)
	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
(Blind Dup.)	12/18/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-3D	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-4	11/9/94	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-5S	11/9/94	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-5D	11/9/94	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-6	11/9/94	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-7	12/18/95	ND (1.0)	ND (190)	ND (94)	ND (94)	ND (94)	ND (94)	ND (94)	ND (94)	ND (94)	ND (94)
MW-8	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-9	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-10	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)

TABLE 9 (Cont.)
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
PCB & POLYNUCLEAR AROMATIC HYDROCARBON COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Date	Benzo (a) anthracene (ug/l)	Chrysene (ug/l)	Benzo (b) fluoranthene (ug/l)	Benzo (k) fluoranthene (ug/l)	Benzo (a) pyrene (ug/l)	Indeno (1,2,3-cd) pyrene (ug/l)	Dibenzo (a,h) anthracene (ug/l)	Benzo (g,h,i) perylene (ug/l)
On-Site Wells									
MW-1	11/9/94	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)
	11/7/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-2	11/9/94	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/7/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-3	11/9/94	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)
	11/7/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
(Blind Dup.)	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-3D	11/7/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-4	11/9/94	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/7/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-5S	11/9/94	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/7/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-5D	11/9/94	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/7/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-6	11/9/94	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/7/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-7	12/18/95	ND (94)	ND (94)	ND (94)	ND (94)	ND (94)	ND (94)	ND (94)	ND (94)
MW-8	11/7/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-9	11/7/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)

TABLE 9 (cont.)
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
PCB & POLYNUCLEAR AROMATIC HYDROCARBON COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, MA

Location	Date	PCB	Bis(2-ethylhexyl)-phthalate	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene
		ug/l	*(ug/l)*	*(ug/l)*	*(ug/l)*	*(ug/l)*	*(ug/l)*	*(ug/l)*	*(ug/l)*	*(ug/l)*	*(ug/l)*
On-Site Wells											
MW-11	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
(Blind Dup.)	11/8/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-12	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	23	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-13	11/7/95	1.6	ND (94)	ND (47)	ND (47)	ND (47)	ND (47)	ND (47)	ND (47)	ND (47)	ND (47)
	12/18/95	3.8	ND (38)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)
MW-18S	11/17/97	ND (1.0)	---	---	---	---	---	---	---	---	---
MW-19	12/18/97	ND (1.0)	---	---	---	---	---	---	---	---	---
MR-1SS	11/9/94	ND (1.0)	ND (200)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)
	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MR-2SS	11/9/94	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/7/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (1.0)	ND (38)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)
Surface Water											
SW-A	11/9/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
SW-B	11/9/95	ND (1.0)	ND (20)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
SW-3	11/9/94	ND (5.0)	ND (20)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)

TABLE 9 (Cont.)
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
PCB & POLYNUCLEAR AROMATIC HYDROCARBON COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Date	Benzo (a) anthracene (ug/l)	Chrysene (ug/l)	Benzo (b) fluoranthene (ug/l)	Benzo (k) fluoranthene (ug/l)	Benzo (a) pyrene (ug/l)	Indeno (1,2,3-cd) pyrene (ug/l)	Dibenzo (a,h) anthracene (ug/l)	Benzo (g,h,i) perylene (ug/l)
On-Site Wells									
MW-10	11/7/95	ND (100)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-11 (Blind Dup.)	11/7/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/8/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-12	11/7/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MW-13	11/7/95	ND (47)	ND (47)	ND (47)	ND (47)	ND (47)	ND (47)	ND (47)	ND (47)
	12/18/95	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)
MW-18S	11/17/97	---	---	---	---	---	---	---	---
MW-19		---	---	---	---	---	---	---	---
MR-1SS	8/31/93	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/9/94	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)
	11/7/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
MR-2SS	8/31/93	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/9/94	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	11/7/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
	12/18/95	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)	ND (19)
Surface Water									
SW-A	11/9/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
SW-B	11/9/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
SW-3	11/9/94	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)

Notes:
1. ( ) = number in parentheses is laboratory Practical Quantitation Limit (PQL)
2. ND = none detected above PQL
3. ug/l = micrograms per liter
4. --- = Not analyzed

TABLE 10
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
TOTAL PETROLEUM HYDROCARBON (GC/FID) ANALYSES

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Date	TPH
		(ug/l)
MW-19	11/24/97	**1,780**
SW-A	11/17/97	**1,170**
SW-B	11/9/97	**1,070**
SW-C	11/17/97	**1,320**
(Blind Dup.)	11/24/97	**1,380**

Notes:
1. ug/l = Micrograms per liter
2. GC/FID = Gas chromatograph/flame ionization detector

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TABLE 11
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
DISSOLVED INORGANIC ANALYSES

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Date	Arsenic (mg/l)	Cadmium (mg/l)	Chromium (mg/l)	Lead (mg/l)	Mercury (mg/l)	Zinc (mg/l)	Total Cyanide (mg/l)
MW-1	11/9/94	ND (0.002)	ND (0.002)	---	ND (0.002)	---	ND (0.04)	ND (0.04)
	11/7/95	---	---	---	ND (0.002)	---	---	---
	12/18/95	---	---	---	ND (0.005)	---	---	---
MW-2	11/9/94	ND (0.002)	ND (0.001)	---	ND (0.002)	---	ND (0.04)	ND (0.04)
	11/7/95	---	---	---	ND (0.002)	---	---	---
	12/18/95	---	---	---	ND (0.005)	---	---	---
MW-3	11/9/94	**0.003**	ND (0.001)	---	**0.002**	---	**0.04**	ND (0.04)
	11/7/95	---	---	---	ND (0.002)	---	---	---
	12/18/95	ND (0.002)	---	---	ND (0.005)	---	---	---
(Blind Dup.)	12/18/95	---	---	---	**0.013**	---	---	---
MW-3D	11/7/95	ND (0.002)	ND (0.001)	---	ND (0.002)	---	ND (0.04)	ND (0.02)
	12/18/95	---	---	---	ND (0.005)	---	---	---
MW-4	11/9/94	ND (0.002)	ND (0.001)	---	ND (0.002)	---	ND (0.04)	ND (0.02)
	11/7/95	---	---	---	ND (0.002)	---	---	---
	12/18/95	---	---	---	ND (0.005)	---	---	---
MW-5S	11/9/94	ND (0.002)	ND (0.001)	---	ND (0.002)	---	ND (0.04)	ND (0.02)
	11/7/95	---	---	---	ND (0.002)	---	---	---
	12/18/95	---	---	---	ND (0.005)	---	---	---
MW-5D	11/9/94	**0.003**	ND (0.001)	---	ND (0.002)	---	ND (0.04)	ND (0.02)
	11/7/95	---	---	---	ND (0.002)	---	---	---
	12/18/95	ND (0.002)	---	---	ND (0.005)	---	---	---
MW-6	11/9/94	ND (0.002)	**0.002**	---	**0.006**	---	ND (0.04)	ND (0.02)
	11/7/95	---	---	---	ND (0.002)	---	---	---
	12/18/95	---	---	---	ND (0.005)	---	ND (0.04)	---
MW-7	12/18/95	---	---	---	**0.006**	---	---	---
MW-8	11/7/95	ND (0.002)	ND (0.001)	---	ND (0.002)	---	ND (0.04)	ND (0.02)
	12/18/95	---	---	---	ND (0.005)	---	---	---
MW-9	11/7/95	ND (0.002)	ND (0.001)	---	ND (0.002)	---	ND (0.04)	ND (0.02)
	12/18/95	---	---	---	**0.006**	---	---	---
MW-10	11/7/95	ND (0.002)	ND (0.001)	---	ND (0.002)	---	ND (0.04)	ND (0.02)
	12/18/95	---	---	---	ND (0.001)	---	---	---
MW-11	11/7/95	ND (0.002)	ND (0.001)	---	ND (0.002)	---	ND (0.04)	ND (0.02)
(Blind Dup.)	11/7/95	**0.003**	ND (0.001)	---	ND (0.002)	---	ND (0.04)	ND (0.02)
	12/18/95	ND (0.002)	---	---	ND (0.001)	---	---	---
MW-12	11/7/95	**0.004**	ND (0.001)	---	ND (0.02)	---	**1.4**	ND (0.02)
	12/18/95	ND (0.002)	---	---	ND (0.001)	---	**2.0**	---
MW-13	11/7/95	**0.004**	ND (0.001)	---	**0.004**	---	**0.56**	ND (0.02)
---	12/18/95	---	---	---	ND (0.001)	---	---	---
MW-18S	11/17/97	---	---	ND (0.03)	ND (0.1)	ND (0.0002)	ND (0.4)	---

TABLE 11 (cont.)
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
DISSOLVED INORGANIC ANALYSES

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Date	Arsenic (mg/l)	Cadmium (mg/l)	Chromium (mg/l)	Lead (mg/l)	Mercury (mg/l)	Zinc (mg/l)	Total Cyanide (mg/l)
MW-19	11/24/97	---	---	ND (0.03)	ND (0.1)	ND (0.0002)	**1.3**	---
MR-1SS	8/31/93	ND (0.004)	ND (0.005)	---	ND (0.001)	---	ND (0.005)	ND (0.002)
	11/9/94	ND (0.002)	ND (0.001)	---	ND (0.002)	---	ND (0.04)	ND (0.04)
	11/7/95	---	---	---	ND (0.002)	---	---	---
	12/18/95	---	---	---	ND (0.001)	---	---	---
MR-2SS	8/31/93	ND (0.002)	ND (0.005)	---	**0.029**	---	**0.025**	ND (0.023)
	11/9/94	ND (0.002)	ND (0.001)	---	**0.020**	---	ND (0.04)	ND (0.02)
	11/7/95	---	---	---	**0.006**	---	---	---
	12/18/95	---	---	---	**0.009**	---	---	---
SW-A	11/9/95	**0.006**	ND (0.001)	---	**0.010**	---	**0.11**	ND (0.02)
	11/17/97	---	---	**0.03**	ND (0.1)	ND (0.0002)	**0.57**	---
SW-B	11/9/95	**0.003**	ND (0.001)	---	**0.005**	---	ND (0.04)	ND (0.02)
	11/17/97	---	---	ND (0.03)	ND (0.1)	ND (0.0002)	**0.06**	---
SW-C	11/17/97	---	---	ND (0.03)	ND (0.1)	ND (0.0002)	**0.08**	---
(Blind dup.)	11/24/97	ND (0.2)	---	ND (0.03)	ND (0.1)	ND (0.0002)	ND (0.04)	---
SW-3	11/9/94	ND (0.002)	ND (0.001)	---	**0.028**	---	ND (0.04)	ND (0.04)

Notes:
1. Practical Quantitation Limit shown in parentheses where compounds not detected (ND).
2. mg/l = Milligrams per liter
3. --- = Parameter not analyzed.

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TABLE 12
SEWER MANHOLE WATER ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	Acetone	Chloro-ethane	PCE	1,1-DCA	1,1,1-TCA	TCE	t-1,2-DCE	Vinyl Chloride	4-Methyl-2-pentanone	2-Butanone
		(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
SMH-3	12/18/97	ND (25)	ND (25)	ND (25)	ND (25)	ND (50)	ND (100)	ND (50)	ND (25)	ND (25)	ND (25)	ND (25)	ND (25)	ND (50)	ND (25)	ND (100)
SMH-4	12/18/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	32	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
SMH-5	12/18/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	110	ND (10)	ND (5)	ND (5)	ND (5)	19	23	ND (10)	ND (5)	ND (20)

Notes:
1. Laboratory analyses by EPA Method 8260, data shown in micrograms per liter (ug/l).
2. Practical Quantitation Limit shown in parenthese where compounds not detected (ND) or trace (Tr).
3. Abbreviations are used for the following compounds:
   1,1-DCA = 1,1-Dichloroethane
   1,1,1-TCA = 1,1,1-Trichloroethane
   t-1,2-DCE = Trans 1,2-Dichloroethene
   PCE = Tetrachloroethene
   TCE = Trichloroethene
   MTBE = Methyl-t-butyl ether

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Table 1
Soil Analytical Results - Organic Analyses
Northern Section (December 1987)

Sample ID Sample Depth (ft)	CHI-1/87 0-8	CHI-2/87 0-10	CHI-3/87 0-10	CHI-4/87 0-10	CHI-5/87 0-8	CHI-6/87 0-10	CHI-7/87 0-8	CHI-8/87 0-8	CHI-9/87 0-8
VOCs, ug/kg									
Acetone	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Benzene	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Toluene	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Ethylbenzene	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Xylenes	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
1,1-Dichloroethane	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Tetrachloroethene	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
1,1,1-Trichloroethane	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	12
Trichloroethene	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	13
BNAs, ug/kg	---	---	---	---	ND(330)	---	---	---	---
Petroleum Hydrocarbons, mg/kg	700	1,600	750	3,500	3,800	1,100	380	1,600	490
PCBs, mg/kg									
Aroclor 1260	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	0.21	0.11	ND (0.1)	ND(0.1)
Sulfides, mg/kg	2.9	7.2	6.1	3.6	6	19	9.4	4.6	17
pH	5.6	7.2	6.5	5.9	6.8	6.2	5.2	5.6	5.6

Notes:
VOCs = Volatile Organic Compounds
BNAs = Base/Neutral and Acid Extractible Semi-Volatile Organic Compounds
PCBs = Polychlorinated biphenyl compounds
ug/kg = Micrograms per kilogram
mg/kg = Milligrams per kilogram
( ) = Number in parentheses is laboratory method detection limit (MDL)
ND = None detected above MDL
--- = Not analyzed

Table 2
Soil Analytical Results - Organic Analyses
Northern Section (February 1988)

Sample ID Sample Depth (ft)	CHI-1/88 2-4	CHI-2/88 4-6	CHI-3/88 6-8	CHI-4/88 2-4	CHI-5/88 2-4	CHI-6/88 2-4	CHI-7/88 0-2	CHI-8/88 5-7
VOCs, ug/kg								
Acetone	ND(40)	ND(40)	150	ND(40)	ND(40)	ND(40)	ND(40)	ND(40)
Benzene	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Toluene	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Ethylbenzene	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Xylenes	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	580	ND(10)	ND(10)
1,1-Dichloroethane	ND(10)	ND(10)	200	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Tetrachloroethene	TR(10)	TR(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
1,1,1-Trichloroethane	30	20	13	ND(10)	ND(10)	ND(10)	ND(10)	20
Trichloroethene	ND(10)	ND(10)	ND(10)	ND(10)	14	ND(10)	ND(10)	ND(10)
BNAs*, ug/kg								
bis(2-ethylhexyl)phthalate	2,500	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
Petroleum Hydrocarbons*, mg/kg	930	4,600	7,900	2,600	460	16,000	22	120
PCBs*, mg/kg								
Aroclor 1260	0.61	ND(1.0)	0.47	ND(0.1)	ND(0.1)	0.6	ND(0.1)	ND(1.0)
Sulfides*, mg/kg	12	15	22	23	32	26	22	21
pH	5.7	5.6	6.4	6.3	5.7	6.0	5.2	5.1

Notes:
VOCs = Volatile Organic Compounds
BNAs = Base/Neutral and Acid Extractible Semi-Volatile Organic Compounds
PCBs = Ploychlorinated biphenyl compounds
ug/kg = Micrograms per kilogram
mg/kg = Milligrams per kilogram
( ) = Number in parentheses is laboratory method detection limit (MDL)
ND = None detected above MDL
-- = Not analyzed
TR = Compound detected but below MDL
* = Sample composited from approximately 0-10 feet

Table 3
Soil Analytical Results - Inorganic Analyses
Northern Section (December 1987)

Sample ID Sample Depth (ft)	CHI-1/87 0-8	CHI-2/87 0-10	CHI-3/87 0-10	CHI-4/87 0-8	CHI-5/87 0-8	CHI-6/87 0-10	CHI-7/87 0-8	CHI-8/87 0-8	CHI-9/87 0-8
13 Metals, mg/kg									
Antimony	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (9)	ND (10)	ND (9)	ND (10)
Arsenic	2.83	1.85	2.69	2.26	2.35	1.96	3.32	1.13	2.9
Barium	30	30	30	20	50	---	---	---	---
Beryllium	0.149	0.196	0.207	0.319	0.29	0.09	0.11	0.11	0.14
Cadmium	0.75	ND (.9)	ND (1.0)	2.1	2.9	ND (.9)	ND (1.1)	ND (1.1)	ND (1.4)
Chromium	10	11	16	12	15	10	12	12	13
Copper	13	15	29	27	27	16	16	16	19
Total Cyanide	ND (.49)	ND (.48)	ND (.47)	ND (.44)	ND (.45)	ND (.42)	ND (.49)	ND (.53)	ND (.65)
Lead	10	70	40	400	200	60	70	70	40
Mercury	0.084	ND (0.08)	ND (.07)	0.073	0.44	0.17	0.09	ND (.09)	0.14
Nickel	6.0	7.8	10	7.4	9.7	7.4	7.9	9	12
Selenium	ND (.1)	ND (.06)	1.24	ND (.1)	ND (.1)	1.4	1.8	1.4	1.9
Silver	ND (.4)	ND (.5)	ND (.5)	ND (.6)	ND (.6)	ND (.4)	ND (.5)	ND (.5)	ND (.5)
Thallium	ND (10)	ND (20)	20	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (30)
Zinc	29	120	88	30	69	43	49	39	42

Notes:
( ) Number in parentheses is laboratory method detection limit (MDL)
mg/kg = Milligrams per kilogram
ND = below MDL
--- = Not Tested

Table 4
Soil Analytical Results - Inorganic Analyses
Northern Section (February 1988)

Sample ID Sample Depth (ft)	CHI-1/88 0-8	CHI-2/88 0-10	CHI-3/88 0-10	CHI-4/88 0-8	CHI-5/88 0-8	CHI-6/88 0-10	CHI-7/88 0-8	CHI-8/88 0-8
VOCs ug/kg								
Antimony (10)	ND (7)	ND (10)	ND (10)	ND (9)	ND (7)	ND (9)	ND (9)	ND (9)
Arsenic	2.14	2.12	2.12	2.26	2.13	2.37	3.22	2.09
Barium	ND (20)	30	20	ND (20)	30	50	20	30
Beryllium	0.09	0.19	0.19	0.24	0.25	0.36	0.36	0.21
Cadmium	1.9	0.98	0.94	1.2	1.9	11	1.8	1.1
Chromium	10	13	12	66	22	74	37	9.5
Copper	19	14	16	15	20	63	18	14
Total Cyanide	ND (.78)	ND (.78)	ND (.76)	ND (.86)	ND (.72)	ND (.84)	ND (.77)	ND (.89)
Lead	30	50	70	60	60	100	20	40
Mercury	ND (.06)	ND (.06)	ND (.06)	ND (.06)	ND (.07)	ND (.07)	ND (.07)	ND (.07)
Nickel	5.6	6.9	4.7	11	10	11	10	3.2
Selenium	ND (.1)	ND (.08)	ND (.09)	ND (.11)	ND (.09)	16	ND (.08)	0.16
Silver	0.41	0.52	0.46	ND(0.47)	ND (.5)	ND (.41)	ND (.33)	ND (.52)
Thallium	ND (20)	ND (20)	ND (20)	ND (20)	10	20	ND (20)	20
Zinc	23	51	39	23	40	60	25	23
Hexavalent Chromium	0.7	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	1.5	0.5

Notes:
( ) Number in parentheses is laboratory method detection limit (MDL)
mg/kg = Milligrams per kilogram
ND = below MDL
--- = Not Tested

Table 5
Soil Analytical Results - Organic Analyses
Central Section (July 1988)

Sample ID	B-1	B-2		B-3	B-4	B-5			B-6		B-7	
Sample Depth (ft)	0-4 & 14-16	0-8	8-16	0-13	0-10	0-7	7-10	13-15	7-11	14-20	4-10	12-17
VOCs, ug/kg												
Benzene	TR (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	TR (10)	ND (10)	13	ND (10)	31	ND (10)
Toluene	95	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	32	ND (10)	90	ND (10)	35	ND (10)
Ethylbenzene	29	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	TR (10)	ND (10)	36	ND (10)	ND (10)	ND (10)
Xylene	210	ND (10)	ND (10)	13	ND (10)	ND (10)	58	TR (10)	230	ND (10)	16	ND (10)
Trichloroethene	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	TR (10)	ND (10)
Acetone	55	ND (10)	ND (10)	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	93	ND (40)	110	ND (40)
MTBE	24	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)
trans-1,2-Dichloroethene	ND (10)	ND (10)	ND (10)	40	ND (10)	ND (10)	120	ND (10)	290	ND (10)	TR (10)	ND (10)
Petroleum Hydrocarbons, mg/kg	3,700	230	870	5,700	150	570	160	400	72,000	56	6,100	450
PCBs, mg/kg												
Aroclor 1242	ND (0.1)	ND (0.1)	ND (0.1)	0.2	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)
Sulfides, ug/kg	---	---	---	---	---	---	---	---	49	15	20	6.9

Table 5
Soil Analytical Results - Organic Analyses
Central Section (July 1988)
(Continued)

Sample ID	B-8				B-9		B-10			B-11		B-12		
Depth (ft)	0-6	7-8	8-12	12-18	6-10	10-16	4-6	6-10	10-14	6-14	15-22	4-8	8-12	14-16&18-20
VOCs, ug/kg														
Benzene	ND (10)	TR (10)	TR (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	TR (10)	ND (10)	ND (10)	ND (10)	ND (10)
Toluene	ND (10)	54	210	TR (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	43	ND (10)	ND (10)	ND (10)	ND (10)
Ethylbenzene	ND (10)	ND (10)	150	TR (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	56	ND (10)	ND (10)	ND (10)	ND (10)
Xylene	ND (10)	73	790	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	180	ND (10)	ND (10)	ND (10)	ND (10)
Trichloroethene	ND (10)	TR (10)	ND (10)	ND (10)	TR (10)	ND (10)	ND (10)	ND (10)	ND (10)	20	ND (10)	ND (10)	ND (10)	ND (10)
Acetone	ND (40)	160	ND (40)	ND (40)	ND (40)	ND (40)	ND (40)	70	ND (40)	85	ND (40)	ND (40)	ND (40)	ND (40)
MTBE	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)
trans-1,2-Dichloroethene	ND (10)	210	120	ND (10)	13	ND (10)	ND (10)	ND (10)	ND (10)	43	ND (10)	ND (10)	ND (10)	ND (10)
Petroleum Hydrocarbons, mg/kg	110	21,000	7,700	1,600	6,000	44	1,600	5,900	770	10,000	160	250	55	17
PCBs, mg/kg														
Aroclor 1242	ND (0.1)	ND (1)	ND (0.1)	ND (0.1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)
Sulfides, mg/kg	13	31	14	11	13	12	11	20	30	15	17	7	3	3

Notes:
VOCs = Volatile Organic Compounds
PCBs = Polychlorinated biphenyl compounds
ug/kg = Micrograms per kilogram
mg/kg = Milligrams per kilogram
ND = Below MDL
( ) = Number in parentheses is laboratory method detection limit (MDL)

Table 6
Soil Analytical Results - Semi-Volatile Organic Analyses
Central Section (July 1988)

Sample ID	B-1	B-2		B-3	B-4	B-5			B-6		B-7	
Depth (ft)	0-10-14-16	0-8	8-16	0-13	0-10	0-7	7-10	13-15	7-11	14-20	4-10	12-17
BNA, ug/kg												
Naphthalene	1,400	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	800	ND (330)	ND (3,300)	ND (330)	6,900	390
2-Methylnaphthalene	2,300	ND (330)	ND (330)	ND (330)	ND (330	ND (330)	760	ND (330)	ND (3,300)	ND (330)	3,500	ND (330)
Fluorene	410	ND (330)	ND (330)	ND (330)	ND (330)	600	ND (330)	ND (330)	ND (3,300)	ND (330)	12,000	ND (330)
Phenanthrene	2,000	2,500	ND (330)	700	360	5,700	ND (330)	ND (330)	ND (3,300)	ND (330)	50,000	720
Anthracene	470	ND (330)	ND (330)	ND (330)	ND (330)	1,600	ND (330)	ND (330)	ND (3,300)	ND (330)	18,000	TR (330)
Fluoranthene	2,200	3,300	ND (330)	1,700	590	10,000	2,000	ND (330)	ND (3,300)	ND (330)	50,000	790
Pyrene	3,700	3,500	ND (330)	2,000	940	7,100	1,700	ND (330)	ND (3,300)	ND (330)	87,000	460
Chrysene	1,300	1,600	ND (330)	770	520	4,900	660	ND (330)	ND (3,300)	ND (330)	24,000	ND (330)
Benzo(b) Fluoranthene	1,900	2,400	ND (330)	1,000	920	5,900	ND (330)	ND (330)	ND (3,300)	ND (330)	27,000	TR (330)
Benzo(a) Pyrene	1,100	1,200	ND (330)	640	480	3,700	ND (330)	ND (330)	ND (3,300)	ND (330)	31,000	ND (330)
Indeno(1,2,3-cd) Pyrene	ND (330)	520	ND (330)	ND (330)	ND (330)	3,000	ND (330)	ND (330)	ND (3,300)	ND (330)	12,000	ND (330)
Benzo (g,h,i) Perylene	ND (330)	520	ND (330)	ND (330)	380	3,100	ND (330)	ND (330)	ND (3,300)	ND (330)	13,000	ND (330)
Acenaphthene	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (3,300)	ND (330)	3,500	ND (330)
Dibenz(a,h)Anthracene	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	1,800	ND (330)	ND (330)	ND (3,300)	ND (330)	TR (3,300)	ND (330)
Acenaphthylene	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	380	ND (330)	ND (330)	ND (3,300)	ND (330)	9,800	ND (330)
Dibenzofuran	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (3,300)	ND (330)	9,000	ND (330)
Benzo(a) Anthracene	1,200	1,500	ND (330)	670	940	5,200	600	ND (330)	ND (3,300)	ND (330)	27,000	ND (330)
bis(2-Ethylhexyl)Phthalate	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (3,300)	ND (330)	ND (3,300)	ND (330)
Dimethylphthalate	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (3,300)	ND (330)	ND (3,300)	ND (330)

Table 6
Soil Analytical Results - Semi-Volatile Organic Analyses
Central Section (July 1988)
(Continued)

Sample ID	B-8				B-9		B-10			B-11		B-12		
Depth (ft)	0-6	7-8	8-12	12-18	6-10	10-16	4-6	6-10	10-14	6-14	15-22	4-8	8-12	14-16&18-20
BNA, ug/kg														
Naphthalene	ND (330)	ND (3,300)	390	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	2,600	ND (330)	TR (330)	TR (330)	ND (330)
2-Methylnaphthalene	ND (330)	ND (3,300)	2,200	TR (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	4,600	ND (330)	ND (330)	ND (330)	ND (330)
Fluorene	TR (330)	ND (3,300)	380	TR (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	3,500	ND (330)	TR (330)	TR (330)	ND (330)
Phenanthrene	2,800	ND (3,300)	700	ND (330)	ND (330)	ND (330)	1,200	ND (330)	ND (330)	7,300	ND (330)	5,900	1,100	TR (330)
Anthracene	785	ND (3,300)	ND (330)	TR (330)	ND (330)	ND (330)	340	ND (330)	ND (330)	910	ND (330)	1,900	TR (330)	TR (330)
Fluoranthene	5,200	ND (3,300)	2,100	ND (330)	ND (330)	ND (330)	1,600	ND (330)	480	5,900	490	9,600	1,600	300
Pyrene	3,000	ND (3,300)	880	464	TR (330)	ND (330)	2,200	TR (330)	500	5,300	TR (330)	5,200	920	TR (330)
Chrysene	2,200	ND (3,300)	360	168	ND (330)	ND (330)	1,200	ND (330)	ND (330)	1,700	ND (330)	4,900	640	TR (330)
Benzo(b) Fluoranthene	5,400	ND (3,300)	ND (330)	ND (330)	ND (330)	ND (330)	2,500	ND (330)	ND (330)	340	ND (330)	5,200	490	TR (330)
Benzo(a) Pyrene	2,000	ND (3,300)	ND (330)	TR (330)	ND (330)	ND (330)	980	ND (330)	ND (330)	480	ND (330)	5,500	650	TR (330)
Indeno(1,2,3-cd) Pyrene	1,300	ND (3,300)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND	ND (330)	2,300	TR (330)	ND (330)
Benzo (g,h,i) Perylene	1,500	ND (3,300)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND	ND (330)	2,100	TR (330)	ND (330)
Acenaphthene	ND (330)	ND (3,300)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	1,400	ND (330)	TR (330)	TR (330)	ND (330)
Dibenz(a,h)Anthracene	340	ND (3,300)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND	ND (330)	TR (330)	TR (330)	ND (330)
Acenaphthylene	TR (330)	ND (3,300)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	480	ND (330)	1,000	TR (330)	ND (330)
Dibenzofuran	ND (330)	ND (3,300)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND	ND (330)	TR (330)	TR (330)	ND (330)
Benzo(a) Anthracene	2,200	ND (3,300)	ND (330)	ND (330)	ND (330)	ND (330)	1,000	ND (330)	430	960	ND (330)	4,900	660	TR (330)
bis(2-Ethylhexyl)Phthalate	ND (330)	ND (3,300)	ND (330)	401	TR (330)	ND (330)	380	TR (330)	ND (330)	ND	ND (330)	33,000	720	320
Dimethylphthalate	ND (330)	ND (3,300)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND	1,200	ND (330)	ND (330)	ND (330)

Notes:

BNAs = Base/Neutral and Acid Extractible Semi-Volatile Organic Compounds

( ) = Number in parentheses is laboratory method detection limit (MDL)

MDL = Laboratory method detection level

ND = Below MDL

TR = Trace

Table 7
Soil Analytical Results - Inorganic Analyses
Central Section (July 1988)

Sample ID	B-1	B-2		B-3	B-4	B-5			B-6		B-7	
Depth (ft)	0-4 & 14-16	0-8	8-16	0-13	0-10	0-7	7-10	13-15	7-11	14-20	4-10	12-17
Total Metals, mg/kg												
Antimony	190	ND (6)	ND (4)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	4	ND (4)	ND (6)	5
Arsenic	2.85	4.91	2.11	3.61	4.65	7.28	2.76	1.39	2.28	1.25	5.44	2.69
Barium	100	60	40	100	50	80	110	70	980	30	100	50
Beryllium	ND (.04)	ND (.06)	ND (.04)	ND (.05)	ND (.05)	0.17	ND (.05)	ND (.04)	0.08	0.043	0.17	0.08
Cadmium	3.6	3.6	2.6	3	2.5	3.5	2.7	3.3	4.8	1.7	4.6	2.9
Chromium	20	23	15	17	18	21	29	21	18	8.1	36	19
Copper	38	26	27	33	32	27	19	43	37	14	51	36
Lead	1,500	120	10	340	130	60	260	40	6,500	7	320	30
Mercury	0.104	0.09	ND (.06)	0.25	0.44	0.09	ND (.07)	ND (0.06)	0.103	ND (.06)	0.08	ND (.07)
Nickel	17	19	12	15	15	18	14	17	12	8.1	30	15
Selenium	ND (.132)	ND (.16)	ND (.14)	ND (.15)	ND (.15)	ND (.14)	ND (.14)	ND (.14)	ND (.124)	ND (.12)	ND (.13)	ND (.11)
Silver	ND (.89)	ND (1.1)	ND (.9)	ND (.9)	ND (1.1)	ND (.8)	ND (.8)	ND (.7)	ND (.95)	ND (.95)	ND (1.1)	1.5
Thallium	20	20	ND (10)	10	ND (10)	20	ND (20)	20	ND (10)	ND (10)	ND (10)	ND (10)
Zinc	89	58	36	66	80	71	53	52	210	22	99	36
EP Toxicity, mg/kg												
Cadmium	0.2	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Chromium	0.47	0.43	0.2	ND (0.2)	ND (0.2)	0.19	0.24	0.02	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)
Barium	0.2	0.2	0.1	0.8	0.3	0.2	0.3	ND (0.1)	1.0	ND (0.1)	0.3	ND (0.1)
Lead	ND (0.1)	ND (0.1)	ND (0.1)	0.1	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	1.0	ND (0.1)	ND (0.1)	ND (0.1)
Mercury	ND (.0002)	ND (.0002)	ND (.0002)	ND (.0002)	ND (.0002)	ND (.0002)	ND (.0002)	ND (.0002)	ND (.0002)	ND (.0002)	ND (.0002)	0.0002

Table 7
Soil Analyisis Results - Inorganic Results
Central Section (July 1988)
(Continued)

Sample ID	B-8				B-9		B-10			B-11		B-12		
Depth (ft)	0-6	7-8	8-12	12-18	6-10	10-16	4-6	6-10	10-14	6-14	15-22	4-8	8-12	14-16&18-20
Total Metals, mg/kg														
Antimony	5	ND (4)	5	ND (4)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (4)	ND (4)	ND (5)	ND (4)	ND (4)
Arsenic	5.1	4.77	1.43	1.81	1.83	0.77	7.73	2.95	1.4	1.8	1.6	6.2	1.25	1.42
Barium	60	170	50	40	70	40	50	360	60	50	50	70	30	50
Beryllium	0.04	0.04	0.05	0.05	ND (.05)	ND (.05)	0.05	ND (.05)	ND (.05)	ND (.05)	ND	ND (.04)	ND (.05)	ND (.041)
Cadmium	3.3	3	2.9	2.8	3.3	2.9	2.2	3.4	3.2	1.9	3	2.9	2.4	2.9
Chromium	24	18	21	17	15	17	16	29	19	17	16	18	11	23
Copper	24	20	37	29	32	32	32	39	36	26	41	27	24	37
Lead	50	970	20	9	100	9	280	2,500	20	199	10	30	20	10
Mercury	0.1284	ND (.07)	ND (.07)	ND (.07)	ND (.07)	ND (.07)	0.33	ND (.07)	ND (.07)	ND (.06)	ND (.07)	ND (.06)	ND (.07)	ND (.07)
Nickel	17	12	16	14	18	14	12	14	16	12	14	14	9.6	16
Selenium	ND (.13)	ND (.14)	ND (.12)	ND (.14)	ND (.16)	ND (.15)	ND (.14)	ND (.16)	ND (.17)	ND (.11)	ND (.14)	ND (.14)	ND (.15)	ND (.14)
Silver	ND (.92)	ND (.9)	ND (.86)	ND (.9)	ND (1.1)	ND (.99)	ND (1.1)	ND (1.1)	ND (.9)	ND (1.0)	0.9	ND (.9)	ND (.76	ND (.97)
Thallium	10	10	10	20	20	20	ND (20)	30	30	20	20	ND (10)	ND (10)	ND (10)
Zinc	68	96	46	33	46	36	120	120	41	35	40	70	33	37
EP Toxicity, mg/kg														
Cadmium	ND (.01)	ND (.01)	ND (.01)	ND (.01)	ND (.01)	ND (.01)	ND (.01)	ND (.01)	ND (.01)	ND (.01)	ND (.01)	ND (.01)	ND (.01)	ND (.01)
Chromium	ND (.02)	ND (.02)	ND (.02)	0.25	ND (.02)	0.46	0.05	0.09	0.06	ND (.02)	0.13	ND (.02)	ND (.02)	ND (.02)
Barium	0.3	0.6	ND (0.1)	ND (0.1)	0.4	ND (0.1)	0.2	0.7	ND (0.1)	ND (0.1)	ND (0.1)	0.2	ND (0.1)	ND (0.1)
Lead	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	1	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)
Mercury	ND (.0002)	ND (.0002)	ND (.0002)	ND (.0002)	0.0004	ND (.0002)	ND (.0002)	ND (.0002)	ND (.0002)	ND (.0002)	ND (.0002)	ND (.0002)	ND (.0002)	ND (.0002)

Notes:

( ) Number in parentheses is laboratory method detection limit (MDL)

mg/kg = Milligrams per kilogram

ND = below MDL

Table 8
Soil Analytical Results - Organic Analyses
Central Section (February 1989)

Sample ID	Sample Depth (ft)	Methylene Chloride (ug/kg)	Toluene (ug/kg)	Xylenes (ug/kg)	Petroleum Hydrocarbons (mg/kg)	PCBs (mg/kg)
W-89-S1	0-2	ND (5)	ND (5)	ND (5)	250	---
	2-4	---	---	---	360	---
	6-8	ND (10)	ND (10)	ND (10)	370	ND (.1)
	8-10	---	---	---	18,000	ND (.1)
	10-12	ND (5)	10	ND (5)	85	---
W-89-S3	0-2	18	ND (10)	ND (10)	380	---
	4-6	---	---	---	62	---
	6-8	ND (10)	ND (10)	ND (10)	ND (10)	---
	8-10	---	---	---	ND (10)	---
	10-12	---	---	---	ND (10)	---
W-89-S4	0-2	ND (5)	ND (5)	ND (5)	19	---
	4-6	---	---	---	1,500	---
	6-8	ND (10)	ND (10)	TR (10)	280	---
	8-10	ND (10)	ND (10)	ND (10)	63	0.2*
	15-17	ND (5)	ND (5)	ND (5)	---	---
W-89-S14	0-2	TR (10)	ND (10)	ND (10)	67	---
	4-6	---	---	---	4,300	ND (1)
	6-8	---	---	---	6,500	---
	8-10	---	---	---	87	---

Table 8
Soil Analytical Results - Organic Analyses
Central Section (February 1989)
(continued)

Sample ID	Sample Depth (ft)	Methylene Chloride (ug/kg)	Toluene (ug/kg)	Xylenes (ug/kg)	Petroleum Hydrocarbons (mg/kg)	PCBs (mg/kg)
W-89-S15	0-2	ND (10)	ND (10)	ND (10)	200	---
	4-6	---	---	---	37	---
	6-8	---	---	---	13	---
	8-10	ND (10)	ND (10)	ND (10)	ND (10)	---
	15-17	---	---	---	13	---
W-89-S16	0-2	TR (10)	ND (10)	ND (10)	13	---
	4-6	---	---	---	ND (10)	---
	6-8	ND (10)	ND (10)	ND (10)	ND (10)	---
	8-10	---	---	---	14	---
	10-12	---	---	---	ND (10)	---
W-89-S17	0-2	12	ND (10)	ND (10)	350	---
	4-6	---	---	---	510	---
	6-8	---	---	TR (10)	3,600	ND (1.0)
	8-10	---	---	---	14,000	---
W-89-S18	0-2	ND (10)	ND (10)	ND (10)	31	---
	4-6	---	ND (2)	ND (2)	140	---
	6-8	---	---	---	20,000	ND (1.0)
	8-10	---	---	---	5,100	---

Notes:
ug/kg = Micrograms per kilogram
mg/kg = Milligrams per kilogram
ND = None detected above MDL
( ) = Number in parentheses is laboratory method detection limit (MDL)
PCBs = Polychlorinated biphenyl compounds (*Aroclor 1254)
--- = Not analyzed

Table 9
Soil Analytical Results - Semi-Volatile Organic Analyses
Central Section (February 1989)

Compound	W-89-S17 6 - 8 feet	W-809-S4 6 - 8 feet	W-89-S4 8 - 10 feet	W-89-S18 6 - 8 feet
BNAs, ug/kg				
Phenanthrene	TR (330)	ND (330)	ND (330)	ND (1,600)
Fluoranthene	480	ND (330)	ND (330)	ND (1,600)
Pyrene	910	ND (330)	ND (330)	ND (1,600)
Benzo(a)Anthracene	TR (330)	ND (330)	ND (330)	ND (1,600)
Chrysene	TR (330)	ND (330)	ND (330)	ND (1,600)
Benzo(b)Fluoranthene	430	ND (330)	ND (330)	ND (1,600)
Benzo(a)Pyrene	TR (330)	ND (330)	ND (330)	ND (1,600)
Indeno(1,2,3-cd)Pyrene	1,300	ND (330)	ND (330)	ND (1,600)
Benzo(g,h,i)Perylene	350	ND (330)	ND (330)	ND (1,600)

Notes:
ug/kg = Micrograms per kilogram
BNAs = Base/Neutral and Acid Extractible Semi-Volatile Organic Compounds

Table 10
Groundwater Analytical Results

	W-89-S1	W-89-S3	W-89-S4	W-89-S14	W-89-S15	W-89-S16	W-89-S17	W-89-S18	CHI 6/88
VOCs, ug/l									
Benzene	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	TR (5)	ND (5)	TR (50)
Toluene	TR (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	9	ND (5)	ND (50)
Ethylbenzene	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (50)
Xylenes	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	19	ND (5)	ND (50)
Acetone	ND (20)	ND (20	ND (20)	ND (20)	ND (20)	99	ND (20)	ND (20)	ND (200)
Chloroethane	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10	ND (10)	160
1,1-Dichloroethane	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	1,700
1,1,1-Trichloroethane	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	1,400
2-Butanone	ND (20	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (5)	850
Trans 1,2-Dichloroethene	20	ND (5)	ND (5)	6	ND (5)	TR (5)	93	8	ND (50)
Tetrachloroethene	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	6	ND (5)	ND (5)	ND (50)
Trichloroethene	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	TR (5)	TR (5)	ND (50)
BNAs, ug/l	ND	---	---	---	---	---	ND	---	---
Petroleum Hydrocarbons, mg/l	56	ND (0.1)	1.3	1.7	ND (0.1)	2.9	---	40	30

Notes:
Samples collected on February 3, 1989
VOCs - Volatile Organic Compounds
BNAs - Base/Neutral and Acid Extractible Semi-Volaitle Organic Compounds
PCBs Polychlorinated biphenyl compounds
ug/l = Micrograms per liter
mg/l = Milligrams per liter
( ) = Number in parentheses is laboratory method detection limit (MDL)
ND = None detected above MDL
--- = Not analyzed
TR = Compound detected but below MDL

LEGEND

- PROPERTY LINE
- WATER LINE
- GUARD RAIL
- WOOD RAIL FENCE
- UTILITY POLE
- UTILITY BOX
- E.P. EDGE OF PAVEMENT
- HYDRANT
- SMH SEWER MANHOLE
- CHI-5/88 STRUCTURAL BORING NORTHERN SECTION DECEMBER 1987 AND FEBRUARY 1988
- W89-S3 ENVIRONMENTAL BORING (COMPLETED AS MONITORING WELL)
- B-6 STRUCTURAL BORING CENTRAL SECTION JULY 1988
- CHI-6/88 MONITORING WELL
- APPROXIMATE LOCATION OF EXISTING SEPTIC SYSTEM & WATER SERVICE

NOTES:

1. PROPERTY LINE AND FEATURES TAKEN FROM "PLAN OF LAND IN WOBURN, MASSACHUSETTS" BY NORTHEAST SURVEY, INC. 730 BOSTON POST ROAD, SUDBURY, MASSACHUSETTS 01776, SHEET 1 OF 1, JOB NO. 30688, DATED APRIL 1, 1988. WETLAND DELINEATED BY SANFORD ECOLOGICAL SERVICES (SEE APPENDIX E), DATED MARCH, 1988.
2. THE SITE IS LOCATED OUTSIDE THE 100-YEAR & 500-YEAR FLOODPLAIN ZONES. (REF. FIRM MAP NO. 250229 0003B, JUNE 2, 1980) LAND SUBJECT TO FLOODING, ELEVATION 46.00 N.G.V.D. WAS TAKEN FROM THE 100 YEAR FLOOD ELEVATION IN PROXIMITY TO THE SITE.
3. ALL WATER SERVICE CONNECTIONS ARE MADE PER CITY OF WOBURN, MASSACHUSETTS, DEPARTMENT OF PUBLIC WORKS RULES AND REGULATIONS FOR THEIR INSTALLATION.

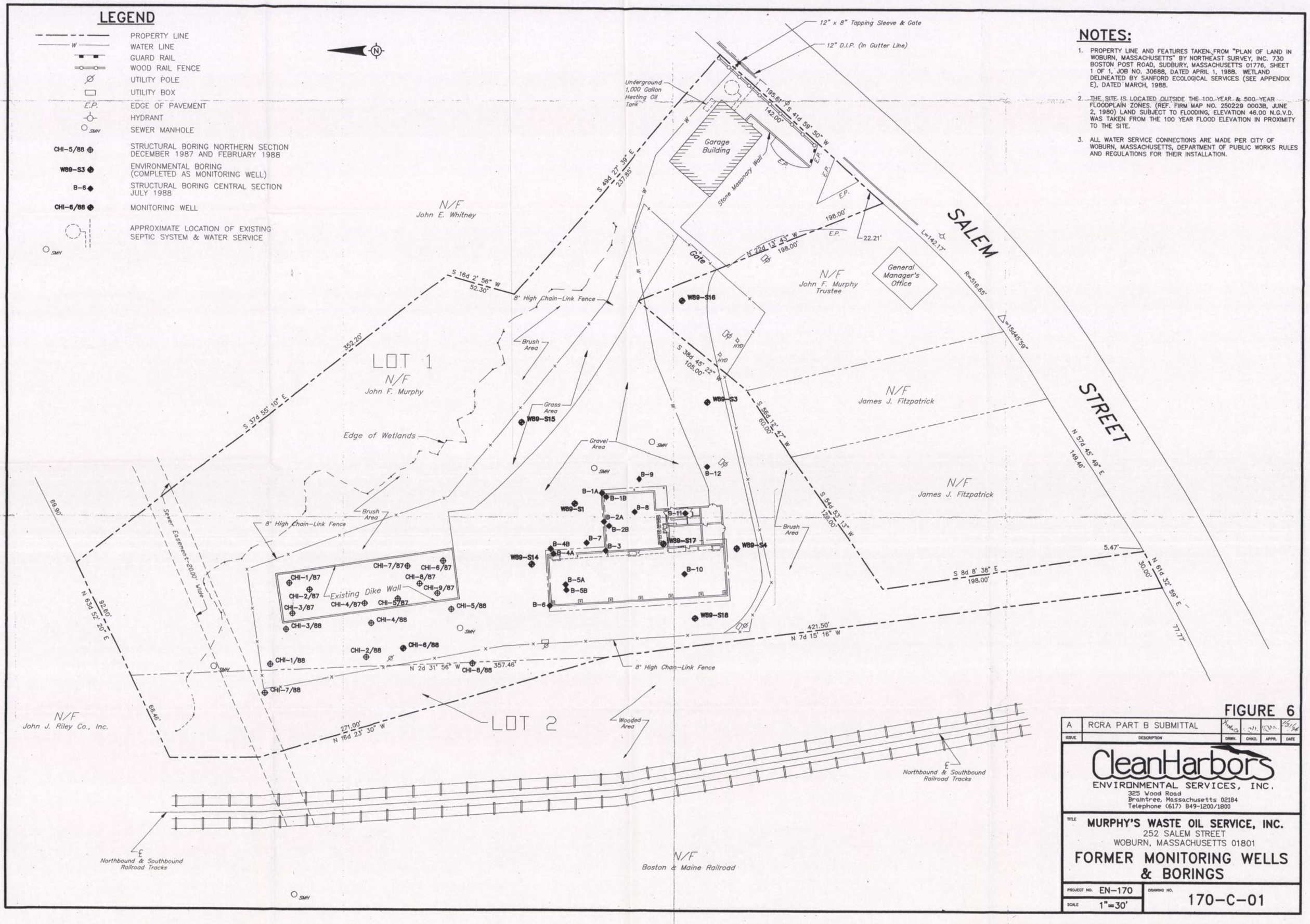


FIGURE 6

ISSUE	DESCRIPTION	DRWN.	CHKD.	APPR.	DATE
A	RCRA PART B SUBMITTAL	[illegible]	[illegible]	[illegible]	[illegible]

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
325 Wood Road
Braintree, Massachusetts 02184
Telephone (617) 849-1200/1800

TITLE
MURPHY'S WASTE OIL SERVICE, INC.
252 SALEM STREET
WOBURN, MASSACHUSETTS 01801

FORMER MONITORING WELLS & BORINGS

PROJECT NO.	EN-170	DRAWING NO.	170-C-01
SCALE	1"=30'		

TABLE 1

FIELD-SCREENING RESULTS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Sample	Depth (feet)	VOC Headspace (ppm)	Comments
MW-1	SS-1	0-2	7	Fill
	SS-2	2-4	0.2	"
	SS-3	4-6	3.6	"
	SS-4	6-8	0.4	"
	SS-5	8-9.2	5.4	Sand and Gravel
	SS-6	10-11	5.3	"
MW-2	SS-1	0-2	700	Fill
	SS-2	2-4	>1,000	"
	SS-3	4-6	720	"
	SS-4	6-6.6	ND	"
	SS-4A	7.5-9.5	260	"
	SS-5	10-12	220	Sand and Gravel
	SS-6	12-14	185	"
	SS-7	14-16	ND	"
MW-3	SS-1	0-2	2.0	Fill
	SS-2	2-4	2.2	"
	SS-3	4-6	ND	"
	SS-4	6-8	26	"
	SS-5	8-10	100	Sand
	SS-6	10-12	460	"
	SS-7	12-14	140	"
MW-4	SS-1	0-2	0.2	Fill
	SS-2	2-4	ND	"
	SS-3	4-6	2.2	"
	SS-4	6-8	28	"
	SS-5	8-10	46	Upper Sand & Gravel Layer
	SS-6	10-12	92	Sand & Gravel
	SS-7	12-14	53	"
MW-5S	SS-1	0-2	ND	Upper Fill Layer
	SS-2	2-4	0.4	Fill
	SS-3	4-6	ND	"
	SS-4	6-8	0.4	Fill
	SS-5	8-10	1.2	Bottom of Fill Layer
	SS-6	10-12	2.3	Upper Sand Layer
	SS-7	12-14	2.4	Sand

TABLE 1
(Continued)

FIELD-SCREENING RESULTS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Sample	Depth (feet)	VOC Headspace (ppm)	Comments
MW-5D	SS-1	19-21	4.2	Upper Sand Layer
	SS-2	24-26	1.2	"
	SS-3	29-31	2.6	Sand
	SS-4	34-36	ND	"
	SS-5	39-41	6.2	"
	SS-6	44-46	3.3	"
	SS-7	49-51	2.0	"
	SS-8	54-56	2.0	"
	SS-9	59-61	3.0	Bottom of Sand Layer
	SS-10	64-66	0.6	Upper Fine Sand Layer
	SS-11	69-71	0.8	Fine Sand
	SS-12	74-76	1.6	"
	SS-13	79-81	0.3	Bottom of Fine Sand Layer
MW-6	SS-1	0-2	3.8	Top of Fill Layer
	SS-2	2-4	1.8	Fill
	SS-3	4-6	0.8	"
	SS-4	6-8	0.7	"
	SS-5	8-10	1.3	"
	SS-6	10-12	3.5	"
	SS-7	12-14	4.7	Bottom of Fill Layer
	SS-8	18-20	6.3	Sand & Gravel Layer

TABLE 2

AQUIFER TEST DATA SUMMARY

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Well	L (ft)	L (cm)	T_0 (sec)	K (cm/sec)	i ($ft_{vert.}/ft_{hor}$)	V_x (ft/day)
MW-1	7.8	238	1.6	2.7×10^{-2}	1.5×10^{-3}	6.1×10^{-11}
MW-2	7.0	213	1.0	4.6×10^{-2}	1.4×10^{-3}	9.8×10^{-11}
MW-3	6.8	207	4.6	1.0×10^{-2}	1.8×10^{-3}	2.7×10^{-11}
MW-4	8.4	256	2.4	1.7×10^{-2}	1.8×10^{-3}	4.6×10^{-11}
MW-5S	6.8	207	1.4	3.4×10^{-2}	2.2×10^{-3}	1.1×10^{-10}
MW-5D	10.0	305	190	1.9×10^{-4}	5.3×10^{-3}*	1.5×10^{-12}
MW-6	7.6	232	0.5	8.7×10^{-2}	2.5×10^{-3}	3.3×10^{-10}
MR-1SS	6.0	183	5.9	8.6×10^{-3}	---	---
MR-2SS	7.8	238	4.2	1.0×10^{-2}	1.5×10^{-3}	2.3×10^{-11}

Hydraulic conductivity (K) was calculated using the Hvorslev method which is valid for unconfined conditions where the length of the well screen is greater than eight times the effective radius of the well screen. K was calculated by the formula:

$$K = \frac{r^2 \ln (L/R)}{2 L T_0}$$

Where:

K is hydraulic conductivity
r is the radius of the well casing = 2.54 cm
R is the effective radius of boring = 10.2 cm for soil borings
L is the average length of well screen through which water passed during the test
T_0 is the time it takes for the water level to rise to 37 percent of the initial change (corrected for test start time)

Average linear velocities were calculated using measured hydraulic conductivity, hydraulic gradients and an assumed value of effective porosity. Using the equation,

$$V_x = \frac{K i}{n_e}$$

Where:

V_x is average linear velocity
i is hydraulic gradient (*all gradients are horizontal except MW-5D, which is vertical)
n_e is effective porosity (assumed to be 0.25 for soil)

References:

Dunne, T. and Leopold, L.B., 1978. Water in Environmental Planning. W.H. Freeman and Company.
Freeze, R.A. and J.A. Cherry, 1979. Groundwater. Prentice-Hall, Inc.
Fetter, C.W., 1988. Applied Hydrogeology, Second Edition. Merrill Publishing Company.

TABLE 3

SOIL ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, MA

Location	Depth (feet)	Benzene (ug/kg)	Toluene (ug/kg)	Total Xylenes (ug/kg)	Acetone (ug/kg)	Chloro-ethane (ug/kg)	PCE (ug/kg)	1,1-DCA (ug/kg)	1,1,1-TCA (ug/kg)	TCE (ug/kg)	t-1,2-DCE (ug/kg)	Vinyl Chloride (ug/kg)	2-Butanone (ug/kg)
MW-1	8-10	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
MW-2	2-4	ND (5)	ND (5)	ND (5)	210	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	50
MW-3	10-12	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
MW-4	10-12	ND (5)	ND (5)	ND (5)	23	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (19)
MW-5S	10-12	ND (5)	ND (5)	ND (5)	ND (18)	ND (9)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (9)	ND (18)
MW-6	0-2	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
SW-1	0-0.5	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
SW-2	0-0.5	ND (250)	ND (250)	1,300	ND (990)	ND (500)	ND (250)	ND (250)	ND (250)	ND (250)	ND (250)	ND (500)	ND (990)
SW-3	0-0.5	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
SW-4	0-0.5	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)

Notes:
1. ( ) = Number in parentheses is laboratory Practical Quantitation Limit (PQL)
2. ND = None detected above PQL
3. ug/kg = Micrograms per kilogram

TABLE 4

SOIL ANALYTICAL RESULTS
OTHER ORGANIC COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, MA

		Semi-Volatile Organic Compounds							
Location	Depth	Benzo(a) Pyrene	Benzo(b) Fluoranthene	Fluoranthene	Pyrene	Di-n-butylphthalate	TPH	PCB	Pesticides
	(feet)	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(ug/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*
MW-1	0-2	---	---	---	---	---	130	---	---
	8-10	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (10)	ND (0.1)	ND (0.5)
MW-2	0-2	---	---	---	---	---	130	---	---
	2-4	ND (3,300)	ND (3,300)	ND (3,300)	ND (3,300)	ND (3,300)	130	ND (1.0)	ND (0.5)
	7.5-9.5	---	---	---	---	---	15	---	ND (0.5)
MW-3	0-2	---	---	---	---	---	320	---	---
	6-8	---	---	---	---	---	61	---	---
	10-12	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (10)	ND (0.1)	ND (0.5)
MW-4	0-2	---	---	---	---	---	470	---	---
	8-10	---	---	---	---	---	12	---	---
	10-12	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (10)	ND (0.1)	ND (0.5)
MW-5S	0-2	---	---	---	---	---	140	---	---
	10-12	ND (330)	ND (330)	ND (330)	ND (330)	ND (330)	ND (10)	ND (0.1)	ND (0.5)
MW-6	0-2	ND (3,200)	ND (3,200)	3,300	ND (3,200)	ND (3,200)	180	ND (0.1)	ND (0.5)
	18-20	---	---	---	---	---	ND (10)	---	---
SW-1	0-0.5	340	680	640	430	ND (330)	72	ND (0.1)	ND (0.5)
SW-2	0-0.5	ND (66,000)	ND (66,000)	ND (66,000)	---	ND (66,000)	97,000	220	ND (0.5)
SW-3	0-0.5	ND (1,600)	ND (1,600)	ND (1,600)	ND (1,600)	ND (1,600)	620	15	ND (0.5)
SW-4	0-0.5	ND (1,600)	2,000	2,000	ND (1,600)	ND (1,600)	74	0.8	ND (0.5)

Notes:
Only those semi-volatile organic compounds detected are shown.
PCBs = Polychlorinated biphenyl compounds
( ) = Number in parentheses is laboratory Practical Quantitation Limit (PQL)
ND = None detected above PQL
--- = Not analyzed
TPH = Total Petroleum Hydrocarbons
mg/kg = Milligrams per kilogram
ug/kg = Micrograms per kilogram

TABLE 5

SOIL ANALYTICAL RESULTS
INORGANIC ANALYSES

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, MA

Location	Depth (feet)	Antimony (mg/kg)	Arsenic (mg/kg)	Beryllium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Thallium (mg/kg)	Zinc (mg/kg)	Cyanide (mg/kg)
MW-1	8-10	ND (3)	ND (6)	ND (0.031)	0.37	18	21	7	ND (0.0636)	8.1	ND (6)	ND (0.65)	ND (9)	34	ND (1.1)
MW-2	2-4	ND (3)	7	ND (0.035)	0.42	20	20	60	0.1579	9.0	ND (7)	ND (0.69)	ND (10)	56	ND (1.1)
MW-3	10-12	ND (3)	ND (7)	0.067	ND (0.34)	3.9	1.8	ND (3)	ND (0.0718)	ND (1.0)	ND (7)	ND (0.50)	ND (10)	5.5	ND (1.1)
MW-4	10-12	ND (4)	ND (6)	ND (0.029)	ND (0.29)	4.9	1.9	ND (3)	ND (0.0622)	ND (0.88)	ND (6)	ND (0.80)	ND (9)	8.0	ND (1.1)
MW-5S	10-12	ND (3)	ND (5)	ND (0.025)	0.30	13	30	4	ND (0.0640)	8.0	ND (5)	ND (0.56)	ND (7)	27	ND (1.0)
MW-6	0-2	5	ND (7)	ND (0.034)	0.55	20	28	130	0.1533	7.5	ND (7)	ND (0.71)	ND (10)	97	ND (1.0)
SW-1	0-0.5	80	ND (10)	ND (0.055)	ND (0.55)	5,700	36	130	1.568	ND (1.7)	ND (10)	ND (1.1)	ND (20)	310	2.2
SW-2	0-0.5	20	ND (10)	ND (0.060)	11	1,100	180	35,100	2.081	ND (1.8)	ND (10)	1.5	ND (20)	5,200	3.6
SW-3	0-0.5	10	ND (10)	ND (0.070)	2.9	430	68	1,000	0.9238	ND (2.1)	ND (10)	ND (1.7)	ND (20)	600	ND (3.1)
SW-4	0-0.5	ND (5)	10	0.169	2.0	93	72	630	1.006	ND (1.7)	ND (10)	ND (1.0)	ND (20)	450	ND (1.6)

Notes:
1. ( ) = Number in parentheses is laboratory Practical Quantitation Limit (PQL).
2. mg/kg - Milligrams per kilogram
3. ND = Below PQL

TABLE 6

Field Data

November 9, 1994

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Well Depth (feet)	Reference Elevation (feet)	Water Level (feet)	Water Elevation (feet)	pH (Standard Units)	Water Temp (Centigrade)	Specific Conductance (µmhos/cm)
MW-1	15.0	53.29	9.75	43.54	6.84	13.1	348
MW-2	15.0	53.77	10.29	43.48	6.26	13.5	528
MW-3	14.0	52.87	9.33	43.54	5.77	13.7	333
MW-4	15.0	52.23	8.88	43.35	6.08	13.8	525
MW-5S	15.0	53.97	10.42	43.55	6.17	14.9	587
MW-5D	83.5	53.79	10.58	43.21	7.09	13.0	980
MW-6	18.0	55.55	12.19	43.36	6.60	12.3	435
MR-1SS	13.0	50.34	7.15	43.19	6.41	14.8	493
MR-2SS	15.0	50.80	7.25	43.55	6.69	14.8	606
SW-3	NA	46.14	2.71	43.43	6.31	12.7	319

NOTES:

1. Well reference elevations determined at top of PVC well rim, measured in feet relative to benchmark (pin in power pole = 51.38 feet NGVD).
2. Well depth in feet below standpipe/roadbox rim.
3. Water level measured from reference elevation down (+) or up (-) to water level.
4. Conductivity in micromhos per centimeter corrected to 25 degrees Centigrade.

TABLE 7

Field Data

December 13, 1994

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Well Depth (feet)	Reference Elevation (feet)	Water Level (feet)	Water Elevation (feet)	pH (Standard Units)	Water Temp (Centigrade)	Specific Conductance (µmhos/cm)
MW-1	15.0	53.29	8.25	45.04	--	--	--
MW-2	15.0	53.77	9.05	44.72	--	--	--
MW-3	14.0	52.87	7.81	45.06	--	--	--
MW-4	15.0	52.23	7.36	44.87	--	--	--
MW-5S	15.0	53.97	9.14	44.83	--	--	--
MW-5D	83.5	53.79	9.32	44.47	--	--	--
MW-6	18.0	55.55	11.04	44.51	--	--	--
MR-1SS	13.0	50.34	5.43	44.91	--	--	--
MR-2SS	15.0	50.80	--	--	--	--	--
SW-3	NA	46.14	1.35	44.79	--	--	--

NOTES:

1. Well reference elevations determined at top of PVC well rim, measured in feet relative to benchmark (pin in power pole = 51.38 feet NGVD).
2. Well depth in feet below standpipe/roadbox rim.
3. Water level measured from reference elevation down (+) or up (-) to water level.
4. Conductivity in micromhos per centimeter corrected to 25 degrees Centigrade.

TABLE 8

GROUNDWATER ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, MA

Location	Date	Benzene (ug/l)	Toluene (ug/l)	Total Xylenes (ug/l)	Acetone (ug/l)	Chloro-ethane (ug/l)	PCE (ug/l)	1,1-DCA (ug/l)	1,1,1-TCA (ug/l)	TCE (ug/l)	t-1,2-DCE (ug/l)	Vinyl Chloride (ug/l)	2-Butanone (ug/l)
MW-1	11/9/94	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (20)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
MW-2	11/9/94	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (20)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
MW-3	11/9/94	ND (13)	ND (13)	ND (13)	ND (50)	ND (25)	ND (50)	**98**	**44**	**100**	**1,100**	ND (25)	ND (50)
MW-4	11/9/94	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (20)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
MW-5S	11/9/94	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (20)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
MW-5D	11/9/94	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (20)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
MW-6	11/9/94	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (20)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
MR-1SS	8/31/93	ND (2)	ND (2)	ND (2)	ND (2)	ND (2)	ND (3.4)	**2.6**	**3.7**	**1.4**	ND (2)	ND (2)	ND (3.4)
	11/9/94	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (20)	ND (5)	**10**	ND (5)	ND (5)	ND (10)	ND (20)
MR-2SS	8/31/93	**8.6**	**12.9**	**324**	ND (10)	ND (10)	ND (17.4)	ND (10)	ND (10)	**22.6**	**461**	ND (10)	ND (17.4)
	11/9/94	**9**	**9**	**9**	ND (20)	ND (10)	ND (20)	ND (5)	ND (5)	ND (5)	**240**	**15**	ND (20)
SW-3	11/9/94	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (20)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)
Trip Blank	11/9/94	ND (5)	ND (5)	ND (5)	ND (20)	ND (10)	ND (20)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)

Notes:
1. Laboratory analyses by EPA Method 624, data shown in micrograms per liter (ug/l).
2. Practical Quantitation Limit shown in parenthese where compounds not detected (ND) or trace (Tr).
3. Abbreviations are used for the following compounds:

1,1-DCA = 1,1-Dichloroethane
1,1,1-TCA = 1,1,1-Trichloroethane
t-1,2-DCE = Trans 1,2-Dichloroethene
PCE = Tetrachloroethene
TCE = Trichloroethene

TABLE 9

GROUNDWATER ANALYTICAL RESULTS
OTHER ORGANIC COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, MA

Location	Date	Semi-Volatile Organic Compounds					TPH	PCBs	Pesticides
		Benzo(a) Pyrene (ug/l)	Benzo(b) Fluoranthene (ug/l)	Fluoranthene (ug/l)	Pyrene (ug/l)	Di-n-butylphthalate (ug/l)	(mg/l)	(ug/l)	(ug/)
MW-1	11/9/94	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	0.3	ND (1.0)	ND (0.5)
MW-2	11/9/94	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	0.1	ND (1.0)	ND (0.5)
MW-3	11/9/94	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	1.3	ND (1.0)	ND (2.6)
MW-4	11/9/94	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	0.3	ND (1.0)	ND (0.5)
MW-5S	11/9/94	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	0.3	ND (1.0)	ND (0.5)
MW-5D	11/9/94	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	0.2	ND (1.0)	ND (0.5)
MW-6	11/9/94	ND (10)	ND (10)	ND (10)	ND (10)	12	0.1	ND (1.0)	ND (0.5)
MR1-SS	11/9/94	ND (100)	ND (100)	ND (100)	ND (100)	220	0.4	ND (1.0)	ND (2.4)
MR2-SS	11/9/94	ND (10)	ND (10)	ND (10)	ND (10)	12	3.4	ND (1.0)	ND (2.4)
SW-3	11/9/94	ND (100)	ND (100)	ND (100)	ND (100)	120	3.0	ND (5.0)	ND (2.5)

Notes:
Only those semi-volatile organic compounds detected are shown.
PCBs = Polychlorinated biphenyl compounds
( ) = Number in parentheses is laboratory Practical Quantitation Limit (PQL)
ND = None detected above PQL
TPH = Total Petroleum Hydrocarbons
ug/l = Micrograms per liter
mg/l = Milligrams per liter

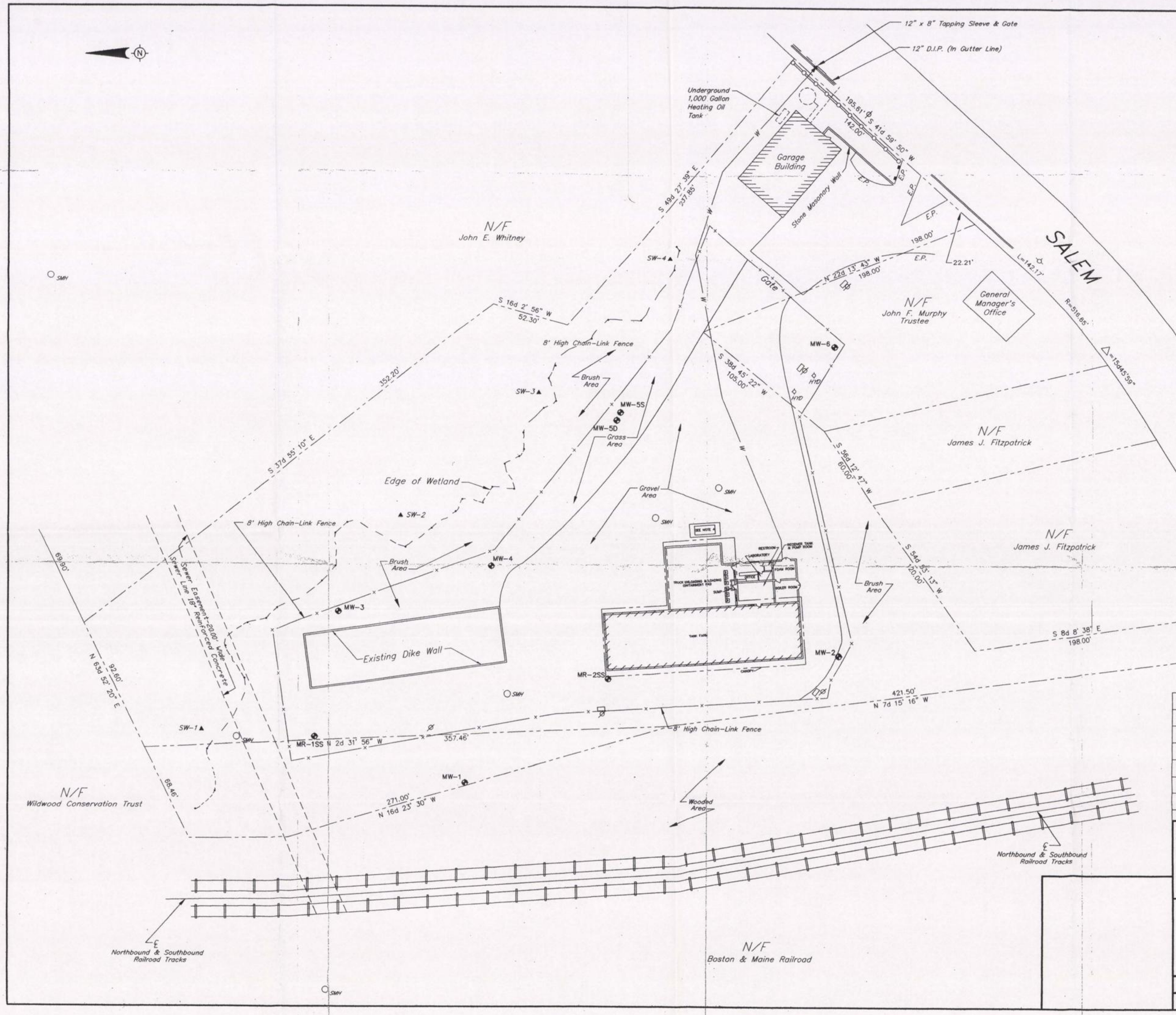
TABLE 10

GROUNDWATER ANALYTICAL RESULTS
DISSOLVED INORGANIC ANALYSES

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, MA

Location	Date	Antimony (mg/l)	Arsenic (mg/l)	Beryllium (mg/l)	Cadmium (mg/l)	Chromium (mg/l)	Copper (mg/l)	Lead (mg/l)	Mercury (mg/l)	Nickel (mg/l)	Selenium (mg/l)	Silver (mg/l)	Thallium (mg/l)	Zinc (mg/l)	Total Cyanide (mg/l)
MW-1	11/9/94	ND (0.003)	ND (0.002)	ND (0.001)	ND (0.001)	ND (0.03)	ND (0.03)	ND (0.002)	ND (0.0002)	ND (0.03)	ND (0.003)	ND (0.001)	ND (0.003)	ND (0.04)	ND (0.04)
MW-2	11/9/94	ND (0.003)	ND (0.002)	ND (0.001)	ND (0.001)	ND (0.03)	ND (0.03)	ND (0.002)	ND (0.0002)	ND (0.03)	ND (0.003)	ND (0.001)	ND (0.003)	ND (0.04)	ND (0.04)
MW-3	11/9/94	ND (0.003)	**0.003**	ND (0.001)	ND (0.001)	ND (0.03)	ND (0.03)	**0.002**	ND (0.0002)	ND (0.03)	ND (0.003)	ND (0.001)	ND (0.003)	**0.04**	ND (0.04)
MW-4	11/9/94	ND (0.003)	ND (0.002)	ND (0.001)	ND (0.001)	ND (0.03)	ND (0.03)	ND (0.002)	ND (0.0002)	ND (0.03)	ND (0.003)	ND (0.001)	ND (0.003)	ND (0.04)	ND (0.02)
MW-5S	11/9/94	ND (0.003)	ND (0.002)	ND (0.001)	ND (0.001)	ND (0.03)	ND (0.03)	ND (0.002)	ND (0.0002)	ND (0.03)	ND (0.003)	ND (0.001)	ND (0.003)	ND (0.04)	ND (0.02)
MW-5D	11/9/94	ND (0.003)	**0.003**	ND (0.001)	ND (0.001)	ND (0.03)	ND (0.03)	ND (0.002)	ND (0.0002)	ND (0.03)	ND (0.003)	ND (0.001)	ND (0.003)	ND (0.04)	ND (0.02)
MW-6	11/9/94	ND (0.003)	ND (0.002)	ND (0.001)	**0.002**	ND (0.03)	ND (0.03)	**0.006**	ND (0.0002)	ND (0.03)	ND (0.003)	ND (0.001)	ND (0.003)	ND (0.04)	ND (0.02)
MR-1SS	8/31/93	ND (.056)	ND (.004)	ND (.004)	ND (.005)	ND (.002)	ND (.004)	ND (.001)	ND (.0002)	ND (.005)	ND (.003)	ND (.005)	ND (.001)	ND (.005)	ND (.002)
	11/9/94	ND (0.003)	ND (0.002)	ND (0.001)	ND (0.001)	ND (0.03)	ND (0.03)	ND (0.002)	ND (0.0002)	ND (0.03)	ND (0.003)	ND (0.001)	ND (0.003)	ND (0.04)	ND (0.04)
MR-2SS	8/31/93	ND (.056)	ND (.002)	ND (.001)	ND (.005)	ND (.002)	ND (.004)	**0.029**	ND (.0002)	ND (.005)	ND (.003)	ND (.005)	ND (.001)	**0.025**	ND (.023)
	11/9/94	**0.004**	ND (0.002)	ND (0.001)	ND (0.001)	ND (0.03)	ND (0.03)	**0.020**	ND (0.0002)	ND (0.03)	ND (0.003)	ND (0.001)	ND (0.003)	ND (0.04)	ND (0.02)
SW-3	11/9/94	ND (0.003)	ND (0.002)	ND (0.001)	ND (0.01)	ND (0.03)	ND (0.03)	**0.028**	ND (0.0002)	ND (0.03)	ND (0.003)	ND (0.001)	ND (0.003)	ND (0.04)	ND (0.04)

Notes:
1. Practical Quantitation Limit shown in parentheses where compounds not detected (ND).
2. mg/l = Milligrams per liter



NOTES:

1. PROPERTY LINE AND FEATURES TAKEN FROM "PLAN OF LAND IN WOBURN, MASSACHUSETTS" BY NORTHEAST SURVEY, INC. 730 BOSTON POST ROAD, SUDBURY, MASSACHUSETTS 01776, SHEET 1 OF 1, JOB NO. 30688, DATED APRIL 1, 1988. WETLAND DELINEATED BY SANFORD ECOLOGICAL SERVICES (SEE APPENDIX E), DATED MARCH, 1988.
2. THE SITE IS LOCATED OUTSIDE THE 100 YEAR & 500 YEAR FLOODPLAIN ZONES. (REF. FIRM MAP NO. 250229 0003B, JUNE 2, 1980) LAND SUBJECT TO FLOODING, ELEVATION 46.00 N.G.V.D. WAS TAKEN FROM THE 100 YEAR FLOOD ELEVATION IN PROXIMITY TO THE SITE.
3. ALL WATER SERVICE CONNECTIONS ARE MADE PER CITY OF WOBURN, MASSACHUSETTS, DEPARTMENT OF PUBLIC WORKS RULES AND REGULATIONS FOR THEIR INSTALLATION.
4. 3,000 GALLON SELF CONTAINED ABOVEGROUND TANK USED FOR STORING VIRGIN DIESEL FUEL OIL.

LEGEND

SW-1 ▲	WETLAND SOIL AND SURFACE WATER SAMPLE LOCATION
MR-2SS	EXISTING MONITORING WELL BY OTHERS
	PROPERTY LINE
W	WATER LINE
	GUARD RAIL
	WOOD RAIL FENCE
Ø	UTILITY POLE
	UTILITY BOX
E.P.	EDGE OF PAVEMENT
	HYDRANT
SMH	SEWER MANHOLE
	APPROXIMATE LOCATION OF EXISTING SEPTIC SYSTEM & WATER SERVICE

FIGURE 3

ISSUE	DESCRIPTION	DRWN.	CHKD.	APPR.	DATE
G	ADDED MONITORING WELLS	KMC	[illegible]	[illegible]	1/24/96
F	ADDED TO PROPOSED SELF CONTAINED ABOVEGROUND 10,000 GAL. STORAGE TANKS	K.M.C.	J.A.M.	K.A.T.	10/16/89
E	REV'D PROPOSED SEWER & WATER LINES	K.M.C.	J.A.M.	K.A.T.	8/14/89
D	ADDED TAPPING SLEEVE & GATE, REV'D SEWER LINE SIZES & SCHEDULE, REMOVED 12" SEWER LINE	K.M.C.	J.A.M.	W.S.T.H.	2/10/89
C	ADDED PROPOSED SEWER LINE	K.M.C.	J.A.M.	W.S.T.H.	1/24/89
B	GENERAL REVISIONS	M.W.	J.E.H.	K.A.T.	8/4/88
A	PRELIMINARY	M.W.	J.E.H.	W.S.T.H.	7/8/88

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
325 Wood Road
Braintree, Massachusetts 02184
Telephone (617) 849-1200/1800

TITLE
MURPHY'S WASTE OIL SERVICE, INC.
252 SALEM STREET
WOBURN, MASSACHUSETTS 01801

SITE PLAN

PROJECT NO. E-1656
SCALE 1"=30'
DRAWING NO. 1656-C-02

TABLE 1
WATER LEVEL DATA

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Sample Date: September 1, 1998

Location	Well Depth	Purge Volume	Reference Elevation	Depth to Water	Water Elevation
	(feet)	*(gal)*	*(feet)*	*(feet)*	*(feet)*
MW-19	5.3	2	48.47	3.32	**45.15**
MW-21	5.5	2	47.74	2.17	**45.57**
MW-4S	11.6	6	46.53	1.28	**45.25**
BW-3	43.9	22	47.38	2.56	**44.82**

NOTES:

1. Well reference elevations are PVC rim except MW-19 and MW-21 (top of riser).
2. Wells analyzed for VOCs (8260).

Disk No. 3941

TABLE 2
SEWER MANHOLE WATER ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Date	Toluene	4-Isopropyl Toluene	Acetone	TCE	1,2-DCE	Chloroform
		(ug/l)	*(ug/l)*	*(ug/l)*	*(ug/l)*	*(ug/l)*	*(ug/l)*
SMH-3	12/18/97	ND (25)	---	ND (100)	ND (25)	ND (25)	ND (25)
SMH-4	12/18/97	ND (5)	---	**32**	ND (5)	ND (5)	ND (5)
	8/25/98	ND (5)	**13.5**	**106**	ND (2)	ND (5)	**5.1**
SMH-5	12/18/97	ND (5)	---	**110**	**19**	**23**	ND (5)
	8/25/98	ND (5)	ND (5)	**60.8**	**3.6**	**5.8**	**14.2**
SMH -6	8/25/98	**6.7**	ND (5)	**76.0**	**8.0**	**8.8**	**24.4**
Trip Blank	8/25/98	ND (5)	ND (5)	ND (50)	ND (2)	ND (5)	ND (2)

Disk 3621

TABLE 3

GROUNDWATER ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Date	Benzene (ug/l)	Toluene (ug/l)	Ethyl-benzene (ug/l)	Total Xylenes (ug/l)	MTBE (ug/l)	Acetone (ug/l)	Chloro-ethane (ug/l)	PCE (ug/l)	1,1-DCA (ug/l)	1,1,1-TCA (ug/l)	TCE (ug/l)	1,2-DCE (ug/l)	Vinyl Chloride (ug/l)	4-Methyl-2-pentanone (ug/l)	2-Butanone (ug/l)
MW-3	11/9/94	ND (13)	ND (13)	ND (13)	ND (13)	ND (25)	ND (50)	ND (25)	ND (5)	98	44	100	1,100	ND (25)	ND (5)	ND (50)
	11/7/95	ND (130)	ND (130)	ND (130)	ND (130)	ND (250)	ND (500)	ND (250)	ND (130)	ND(130)	160	140	2,200	ND(250)	ND (130)	ND(500)
	12/18/95	ND (25)	ND (25)	ND (25)	ND (25)	ND (50)	ND (100)	ND (50)	ND (25)	170	220	220	3,100	ND (50)	ND (25)	ND (100)
(Blind Dup.)	12/18/95	ND (250)	ND (250)	ND (250)	ND (250)	ND (500)	ND (1,000)	ND (500)	ND (250)	250	360	400	5,300	ND (500)	ND (250)	ND (500)
	11/17/97	ND (50)	ND (50)	ND (50)	ND (50)	ND (100)	ND (200)	ND (100)	ND (50)	77	65	110	1,700	ND (100)	ND (50)	ND (200)
MW-3D	11/7/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	25	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	11/17/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
MW-12	11/7/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	10	ND (5)	ND (5)	96	ND (10)	ND (5)	ND (20)
	12/18/95	ND (10)	ND (10)	ND (10)	ND (10)	ND (20)	ND (40)	ND (20)	ND (10)	15	ND (10)	ND (10)	150	ND (20)	ND (10)	ND (40)
	11/17/97	ND (5)	ND (5)	ND (5)	ND (5)	14	ND (20)	ND (10)	ND (5)	9	ND (5)	ND (5)	60	ND (10)	ND (5)	ND (20)
MW-16	11/17/97	45	130	75	220	ND (10)	57	49	13	280	92	11	620	210	52	26
MW-17	11/17/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	6	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
MW-18S	11/17/97	ND (50)	ND (50)	ND (50)	ND (50)	ND (100)	ND (200)	ND (100)	ND (50)	ND (50)	ND (50)	ND (50)	460	ND (100)	ND (50)	ND (200)
MW-18D	11/17/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
MW-19	11/18/97	ND (50)	ND (50)	ND (50)	ND (50)	ND (100)	ND (200)	ND (100)	ND (50)	51	ND (50)	ND (50)	1,200	ND (100)	ND (50)	ND (200)
	1/7/98	ND (25)	ND (25)	ND (25)	ND (25)	ND (50)	ND (100)	ND (50)	ND (25)	32	ND (25)	ND (25)	450	ND (50)	ND (25)	ND (100)
	9/1/98	ND (2)	ND (5)	ND (5)	ND (10)	ND (5)	ND (50)	ND (5)	ND (2)	107	73	20	1,661	61	ND (50)	ND (50)
MW-21	9/1/98	ND (2)	ND (5)	ND (5)	ND (10)	ND (5)	ND (50)	ND (5)	ND (2)	ND (5)	ND (5)	ND (2)	ND (5)	ND (1)	ND (50)	ND (50)
BW-3	11/18/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	9/1/98	ND (2)	ND (5)	ND (5)	ND (10)	ND (5)	ND (50)	ND (5)	ND (2)	ND (5)	ND (5)	ND (2)	ND (5)	ND (1)	ND (50)	ND (50)
MW-4S	11/17/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	9/1/98	ND (2)	ND (5)	ND (5)	ND (10)	ND (5)	ND (50)	ND (5)	ND (2)	ND (5)	ND (5)	ND (2)	ND (5)	ND (1)	ND (50)	ND (50)
MW-4M	11/17/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
MW-4D	12/18/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	9	ND (5)	ND (10)	ND (5)	ND (20)
Trip Blank	11/9/94	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	11/7/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	12/18/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	11/17/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	11/18/97	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
	9/1/98	ND (2)	ND (5)	ND (5)	ND (10)	ND (5)	ND (50)	ND (5)	ND (2)	ND (5)	ND (5)	ND (2)	ND (5)	ND (1)	ND (50)	ND (50)

TABLE 4

SURFACE WATER ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS

Murphy's Waste Oil Service, Inc.
252 Salem Street
Woburn, Massachusetts

Location	Date	Benzene (ug/l)	Toluene (ug/l)	Ethyl-benzene (ug/l)	Total Xylenes (ug/l)	MTBE (ug/l)	Acetone (ug/l)	Chloro-ethane (ug/l)	PCE (ug/l)	1,1-DCA (ug/l)	1,1,1-TCA (ug/l)	TCE (ug/l)	1,2-DCE (ug/l)	Vinyl Chloride (ug/l)	4-Methyl-2-pentanone (ug/l)	2-Butanone (ug/l)
SW-A	11/9/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
SW-B	11/9/95	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	43	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
SW-3	11/9/94	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)
Trip Blank	11/9/94	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (20)	ND (10)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)	ND (5)	ND (20)

Disk 3621

Notes for Analytical Data Tables:

1. Laboratory analyses by EPA Method 624 or 8260, data shown in micrograms per liter (ug/l).
2. Practical Quantitation Limit shown in parenthese where compounds not detected (ND) or trace (Tr).
3. Only those compounds detected are shown.
4. Abbreviations are used for the following compounds:
   1,1-DCA = 1,1-Dichloroethane
   1,1,1-TCA = 1,1,1-Trichloroethane
   1,2-DCE = Trans-1,2-Dichloroethene and cis-1,2 -Dichloroethene
   PCE = Tetrachloroethene
   TCE = Trichloroethene
   MTBE = Methyl-t-butyl ether

NOTE:

1. PROPERTY LINE AND FEATURES TAKEN FROM "PLAN OF LAND IN WOBURN, MASSACHUSETTS" BY NORTHEAST SURVEY, INC. 730 BOSTON POST ROAD, SUDBURY, MASSACHUSETTS 01776, SHEET 1 OF 1, JOB NO. 30688, DATED APRIL 1, 1988. WETLAND DELINEATED ON MURPHY'S PROPERTY BY SANFORD ECOLOGICAL SERVICES.

LEGEND

SW-3	WETLAND SOIL MONITORING LOCATION
MW-10	EXISTING MONITORING WELL
	PROPERTY LINE
S	SEWER LINE
W	WATER LINE
	GUARD RAIL
	WOOD RAIL FENCE
	UTILITY POLE
	UTILITY BOX
E.P.	EDGE OF PAVEMENT
	HYDRANT
SMH	SEWER MANHOLE
	APPROXIMATE LOCATION OF EXISTING SEPTIC SYSTEM & WATER SERVICE
1,000	TOTAL CHLORINATED VOLATILE ORGANIC COMPOUND (CVOC) CONCENTRATION CONTOUR (INFERRED) (ug/l)
1,275	TOTAL CVOC CONCENTRATIONS (SAMPLE DATE 11/17/97) (ug/l)
	TOTAL CVOC CONCENTRATIONS (SAMPLE DATE 12/18/95) (ug/l)
	TOTAL CVOC CONCENTRATIONS (SAMPLE DATE 9/1/98) (ug/l)

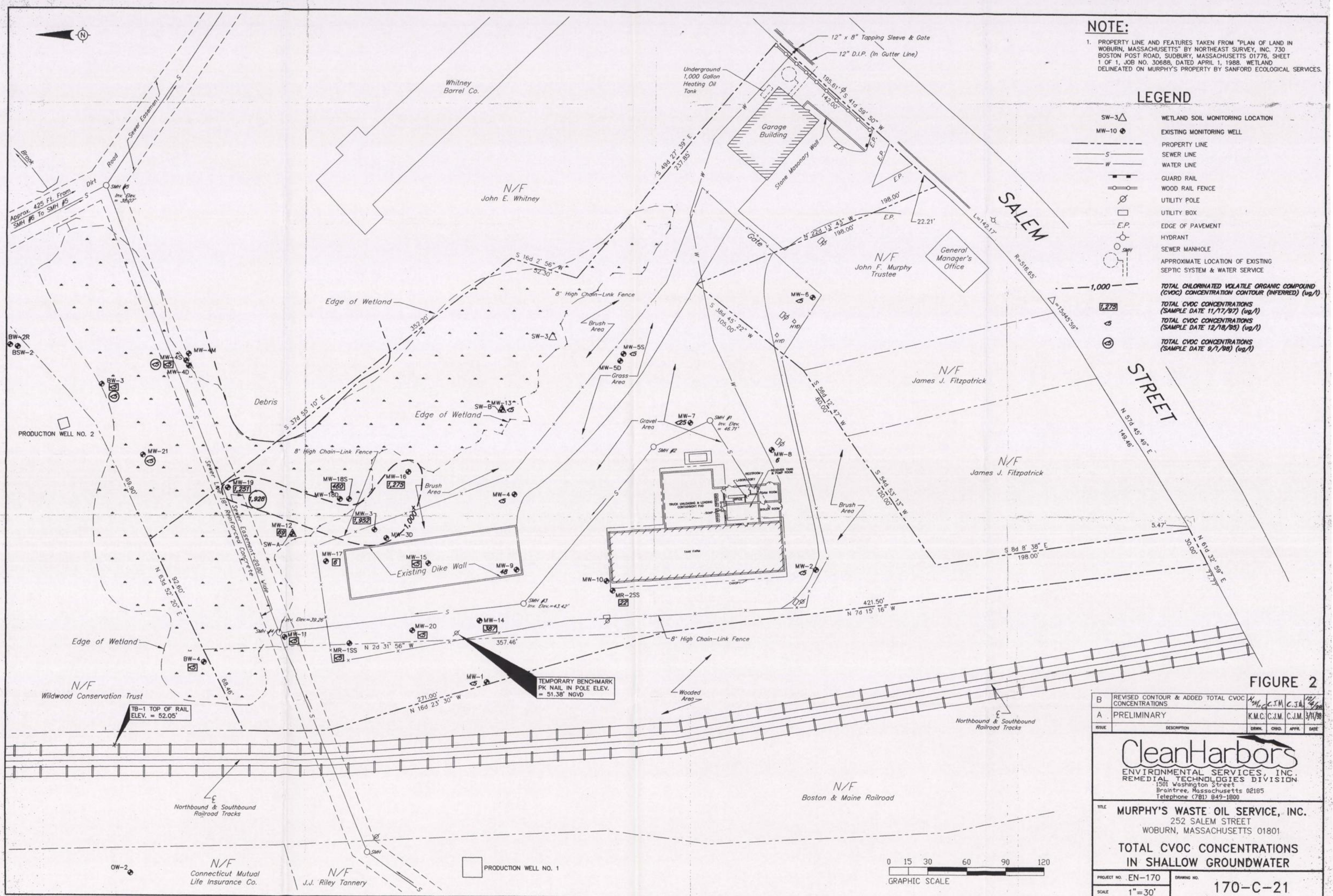


FIGURE 2

ISSUE	DESCRIPTION	DRWN.	CHKD.	APPR.	DATE
B	REVISED CONTOUR & ADDED TOTAL CVOC CONCENTRATIONS	K.M.C.	C.J.M.	C.J.M.	12/14/98
A	PRELIMINARY	K.M.C.	C.J.M.	C.J.M.	3/11/98

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
REMEDIAL TECHNOLOGIES DIVISION
1501 Washington Street
Braintree, Massachusetts 02185
Telephone (781) 849-1800

TITLE
MURPHY'S WASTE OIL SERVICE, INC.
252 SALEM STREET
WOBURN, MASSACHUSETTS 01801

TOTAL CVOC CONCENTRATIONS IN SHALLOW GROUNDWATER

PROJECT NO. EN-170
SCALE 1"=30'
DRAWING NO. 170-C-21