

Appendix B

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TABLE 1
Site Sample Descriptions
Murphy Property (263 Salem Street) Site
Woburn, Massachusetts
23 August 2006

Scribe Sample No. and Station No.	Sample Type and Matrix	Grab or Composite	Sample Depth * (Inches)	Color	Sample Description	Comments
01ZZ-0001 SS-01	Surface Soil	Grab	0-3	Light to dark brown	CLAY, trace fine to medium sand	Grid Sample
01ZZ-0002 SS-02	Surface Soil	Grab	0-3	Light to dark brown	Medium to fine SAND, trace gravel	Grid Sample
01ZZ-0003 SS-03	Surface Soil	Grab	0-3	Light brown	Fine SAND, trace organics	Grid Sample
01ZZ-0004 SS-04	Surface Soil	Grab	0-3	Dark brown	CLAY, trace fine sand	Grid Sample
01ZZ-0005 SS-05	Surface Soil	Grab	0-3	Light brown	Fine to medium SAND, trace clay	Grid Sample
01ZZ-0006 SS-06	Surface Soil	Grab	0-3	Light brown to grey	Fine SAND, trace clay	Grid Sample
01ZZ-0007 SS-07	Surface Soil	Grab	0-3	Dark brown	Find SAND and SILT, trace organics	Grid Sample
01ZZ-0008 SS-08	Surface Soil	Grab	0-3	Grey	SAND, trace silt and gravel	Grid Sample
01ZZ-0009 SS-09	Surface Soil	Grab	0-3	Brown	Fine to medium SAND, trace gravel, oily rag	Grid Sample
01ZZ-0010 SS-10	Surface Soil	Grab	0-3	Light brown	Fine to medium SAND, trace gravel	Grid Sample

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23 August 2006

Scribe Sample No. and Station No.	Sample Type and Matrix	Grab or Composite	Sample Depth * (Inches)	Color	Sample Description	Comments
01ZZ-0011 SS-11	Surface Soil	Grab	0-3	Brown, orange, and grey	Fine to medium SAND, trace gravel	Grid Sample
01ZZ-0012 SS-12	Surface Soil	Grab	0-3	Dark brown to black	Fine SAND and SILT, trace gravel and organics	Grid Sample
01ZZ-0013 SS-13	Surface Soil	Grab	0-3	Dark brown	Fine SAND and SILT, trace organics	Grid Sample
01ZZ-0014 SS-14	Surface Soil	Grab	0-3	Dark brown	Fine SAND and GRAVEL	Grid Sample
01ZZ-0015 SS-15	Surface Soil	Grab	0-3	Dark brown	Fine SAND, trace silt and organics	Grid Sample
01ZZ-0016 SS-16	Surface Soil	Grab	0-3	Dark brown	Fine SAND, some silt and gravel	Grid Sample
01ZZ-0017 SS-17	Surface Soil	Grab	0-3	Dark brown	Fine SAND, trace silt	Grid Sample
01ZZ-0018 SS-18	Surface Soil	Grab	0-3	Brown to light brown	Medium to fine SAND, trace gravel	Grid Sample
01ZZ-0019 SS-19	Surface Soil	Grab	0-3	Light brown	Fine SAND, trace gravel	Grid Sample
01ZZ-0020 SS-20	Surface Soil	Grab	0-3	Dark brown	Fine SAND, trace gravel	Grid Sample
01ZZ-0021 SS-21	Surface Soil	Grab	0-3	Dark brown	Fine SAND, trace silt	Grid Sample

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Scribe Sample No. and Station No.	Sample Type and Matrix	Grab or Composite	Sample Depth * (Inches)	Color	Sample Description	Comments
01ZZ-0022 SS-22	Surface Soil	Grab	0-3	Dark brown	Fine SAND, trace silt and organics	Grid Sample
01ZZ-0023 SS-23	Surface Soil	Grab	0-3	Light brown	Fine SAND	Grid Sample
01ZZ-0024 SS-24	Surface Soil	Grab	0-3	Dark brown	Medium to fine SAND, trace gravel	Grid Sample
01ZZ-0025 SS-25	Surface Soil	Grab	0-3	Dark brown, some rust color	Medium to fine SAND, trace gravel	Grid Sample
01ZZ-0026 SS-26	Surface Soil	Grab	0-3	Dark brown	Fine SAND and SILT, trace gravel and organics	Grid Sample
01ZZ-0027 SS-27	Surface Soil	Grab	0-3	Dark brown	Fine SAND and SILT, trace organics	Grid Sample
01ZZ-0028 SS-28	Surface Soil	Grab	0-3	Medium brown	Fine SAND and SILT, trace organics	Grid Sample
01ZZ-0029 SS-29	Surface Soil	Grab	0-3	Dark to medium brown	Fine SAND and SILT, trace organics	Grid Sample
01ZZ-0030 SS-30	Surface Soil	Grab	0-3	Brown and grey	Coarse to fine SAND, trace gravel	Grid Sample
01ZZ-0031 SS-31	Surface Soil	Grab	0-3	Dark brown and light brown to grey	Medium SAND, trace gravel and organics	Grid Sample

TABLE 1

Site Sample Descriptions

Murphy Property (263 Salem Street) Site

Woburn, Massachusetts

23 August 2006

Scribe Sample No. and Station No.	Sample Type and Matrix	Grab or Composite	Sample Depth * (Inches)	Color	Sample Description	Comments
01ZZ-0032 SS-32	Surface Soil	Grab	0-3	Light to orange brown	Coarse to medium SAND	Grid Sample
01ZZ-0033 SS-33	Surface Soil	Grab	0-3	Light brown	Fine SAND, trace silt	Grid Sample
01ZZ-0034 SS-34	Surface Soil	Grab	0-3	Light brown	Fine to medium SAND, trace clay	Grid Sample
01ZZ-0035 SS-35	Surface Soil	Grab	0-3	Light brown	CLAY, trace fine sand	Grid Sample
01ZZ-0036 SS-36	Surface Soil	Grab	0-3	Dark to light brown	Medium to coarse SAND, trace silt	Grid Sample
01ZZ-0037 SS-37	Surface Soil	Grab	0-3	Light brown	Fine to medium SAND, trace silt	Grid Sample
01ZZ-0038 SS-38	Surface Soil	Grab	0-3	Light brown	Coarse SAND, rotted wood fragments	Near Tank 4
01ZZ-0039 SS-39	Surface Soil	Grab	0-3	Light brown to grey	Coarse SAND	Near garage door
01ZZ-0040 SS-40	Surface Soil	Grab	0-3	Dark brown and grey	Fine to medium SAND, trace gravel	On dirt road leading to garage
01ZZ-0041 SS-41	Surface Soil	Grab	0-3	Light brown to grey	Medium to coarse SAND	On dirt road leading to garage

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Scribe Sample No. and Station No.	Sample Type and Matrix	Grab or Composite	Sample Depth * (Inches)	Color	Sample Description	Comments
01ZZ-0042 SS-42	Surface Soil	Grab	0-3	Light brown	Medium to coarse SAND, trace silt and organics	Near assumed fill spout on Tank 3
01ZZ-0043 SS-43	Surface Soil	Grab	0-3	Light brown	Fine to medium SAND, trace gravel	Near assumed fill spout on Tank 2
01ZZ-0044 SS-44	Surface Soil	Grab	0-3	Light brown	Medium SAND, trace silt and organics	Between 15K bunker and garage
01ZZ-0045 SS-45	Surface Soil	Grab	0-3	Dark brown	CLAY, trace fine sand	Near east side of Tank 3
01ZZ-0046 SS-46	Surface Soil	Grab	0-3	Dark brown	Fine to medium SAND, trace silt, sheen	Down-slope of 15K bunker
01ZZ-0047 SS-47	Surface Soil	Grab	0-3	Light brown	Medium to fine SAND, trace gravel	Between garage and 75K bunker
01ZZ-0048 SS-48	Surface Soil	Grab	0-3	Light brown to grey	Fine SAND, trace clay	Swale down-gradient of 75K bunker
01ZZ-0049 SS-49	Surface Soil	Grab	0-3	Light brown	Fine to medium SAND, trace silt	Swale down-gradient of Tanks 1, 2, and 3
01ZZ-0050 SS-50	Surface Soil	Grab	0-3	Light brown	Fine to medium SAND, trace silt	Next to drum sampled as DP-10

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Scribe Sample No. and Station No.	Sample Type and Matrix	Grab or Composite	Sample Depth * (Inches)	Color	Sample Description	Comments
01ZZ-0051 SS-51	Surface Soil	Grab	0-3	Brown	Fine to medium SAND, trace gravel, oily rag	Grid Sample duplicate of SS-09
01ZZ-0052 SS-52	Surface Soil	Grab	0-3	Dark brown	Medium to fine SAND, trace gravel	Grid Sample duplicate of SS-24
01ZZ-0053 SS-53	Surface Soil	Grab	0-3	Light brown to grey	Coarse SAND	Near garage door Duplicate of SS-39
01ZZ-0054 DP-01	Liquid Waste (75K Bunker)	Grab	N/A	Clear	Non-viscous liquid, possibly water	pH 6-7 FID = 3.5
01ZZ-0055 DP-02	Liquid Waste (15K Bunker)	Grab	N/A	Clear	Non-viscous liquid, possibly water	pH 6
01ZZ-0056 DP-03	Liquid Waste (15K Bunker)	Grab	N/A	Clear	Non-viscous liquid, possibly water	pH 6 Duplicate of DP-02
01ZZ-0057 DP-04	Liquid Waste (Tank 3)	Grab	N/A	Black	Viscous, oily liquid	NA
01ZZ-0058 DP-05	Liquid Waste (Tank 2)	Grab	N/A	Black	Sludgy, oily liquid	FID = 3.5
01ZZ-0059 DP-06	Liquid Waste (Tank 1)	Grab	N/A	Black	Sludge	FID = 12 PID = 1.5
01ZZ-0060 DP-07	Liquid Waste (Truck Tank)	Grab	N/A	Black	Thin, oily liquid	FID = 50 PID = 50

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Scribe Sample No. and Station No.	Sample Type and Matrix	Grab or Composite	Sample Depth * (Inches)	Color	Sample Description	Comments
01ZZ-0061 DP-08	Liquid Waste (Tank 4)	Grab	N/A	Black	Oily liquid	FID = 30 PID = 8
01ZZ-0062 DP-09	Liquid Waste (Tank 6)	Grab	N/A	Dark brown	Oily liquid with turpentine odor	FID = 735 PID = 250
01ZZ-0063 DP-10	Liquid Waste (Drum)	Grab	N/A	Yellowish-clear on top, then silvery-black	Multi-phase liquid, very sticky when dried, strong tar/mothball odor	FID = 2400+ PID = 1600

* – If applicable. N/A – Not applicable.

PID – Photoionization Detector
FID – Flame Ionization Detector
75K – 75,000-gallon
15K – 15,000-gallon

TABLE 2

**SUMMARY OF VOLATILE ORGANIC COMPOUND RESULTS
SURFACE SOIL SAMPLES
MURPHY PROPERTY (263 SALEM STREET) SITE
WOBURN, MASSACHUSETTS**

ANALYTE	SS-23	SS-24	SS-25	SS-26	SS-30	SS-42	SS-43	SS-45	RCS-1
2-Propanone (acetone)	ND	ND	ND	246.7	ND	232	ND	ND	3000
2-Butanone (MEK)	99.7	64.9	86.1	133.3	ND	ND	ND	ND	300
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	341.1	30000
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	120.8	ND	2000
Naphthalene	ND	78.8	ND	ND	84.8	ND	98.6	ND	4000
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	ND	153.7	ND	NL

NOTES:

- 1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) using EPA Region I SOP, EIASOP-VOAGCMS7, VOAs in Soil High Level Method.
- 2) All Results in Micrograms per Kilogram ($\mu\text{g/kg}$).
- 3) RCS-1 = Massachusetts Department of Environmental Protection Reportable Concentration for Soil Category 1.

ND = Not Detected.

NL = Not Listed.

TABLE 3

**SUMMARY OF POLYCHLORINATED BIPHENYL RESULTS
SURFACE SOIL SAMPLES
MURPHY PROPERTY (263 SALEM STREET) SITE
WOBBURN, MASSACHUSETTS**

ANALYTE	SS-01	SS-02	SS-03	SS-06	SS-08	SS-10	SS-11	SS-12	SS-13	SS-14	SS-16	SS-17	RCS-1
Aroclor-1016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
Aroclor-1221	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
Aroclor-1232	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
Aroclor-1242	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
Aroclor-1248	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
Aroclor-1254	0.12	0.09	0.16	2.1	0.65	0.13	0.13	5.2	6.6	0.57	ND	0.14	2
Aroclor-1260	ND	0.12	0.16	1	0.87	0.19	0.21	4	2.1	0.64	0.12	0.23	2
Aroclor-1262	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
Aroclor-1268	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2

ANALYTE	SS-18	SS-19	SS-20	SS-21	SS-22	SS-24	SS-25	SS-26	SS-27	SS-28	SS-29	SS-30	RCS-1
Aroclor-1016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
Aroclor-1221	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
Aroclor-1232	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
Aroclor-1242	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
Aroclor-1248	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
Aroclor-1254	0.12	1.6	1.3	ND	0.21	0.5	0.35	15	ND	ND	ND	0.2	2
Aroclor-1260	0.19	1.7	0.95	0.13	0.17	0.89	1	2.2	0.1	0.1	0.13	0.32	2
Aroclor-1262	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
Aroclor-1268	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2

TABLE 3

**SUMMARY OF POLYCHLORINATED BIPHENYL RESULTS
SURFACE SOIL SAMPLES
MURPHY PROPERTY (263 SALEM STREET) SITE
WOBBURN, MASSACHUSETTS**

ANALYTE	SS-31	SS-32	SS-33	SS-35	SS-36	SS-37	SS-38	SS-39	SS-40	SS-41	SS-42	SS-43	RCS-1
Aroclor-1016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
Aroclor-1221	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
Aroclor-1232	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
Aroclor-1242	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
Aroclor-1248	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
Aroclor-1254	0.95	0.12	0.27	1.3	0.11	0.21	0.13	1.3	0.95	1.3	52	53	2
Aroclor-1260	0.82	0.75	0.29	1.5	0.16	0.24	ND	1.1	0.38	0.6	6.1	6.4	2
Aroclor-1262	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
Aroclor-1268	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2

ANALYTE	SS-44	SS-45	SS-46	SS-47	SS-48	SS-50	SS-52	SS-53	RCS-1
Aroclor-1016	ND	ND	ND	ND	ND	ND	ND	ND	2
Aroclor-1221	ND	ND	ND	ND	ND	ND	ND	ND	2
Aroclor-1232	ND	ND	ND	ND	ND	ND	ND	ND	2
Aroclor-1242	ND	ND	ND	ND	ND	ND	ND	ND	2
Aroclor-1248	ND	ND	ND	ND	ND	ND	ND	ND	2
Aroclor-1254	5.8	8.2	9800	3.2	1	4.6	0.37	3.1	2
Aroclor-1260	2.1	3	850	7.7	1.5	2.4	0.82	2.4	2
Aroclor-1262	ND	ND	ND	ND	ND	ND	ND	ND	2
Aroclor-1268	ND	ND	ND	ND	ND	ND	ND	ND	2

NOTES:

- 1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME)
EIASOP-PESTSOIL2, PCBs Medium Level in Soils and Sediments.
- 2) All Results in Milligrams per Kilogram (mg/kg).
- 3) RCS-1 = Massachusetts Department of Environmental Protection Reportable Concentration for Soil Category 1.
- 4) Concentrations that are bolded and shaded exceed MassDEP RCS-1 values.

ND = Not Detected.

TABLE 4
SUMMARY OF METAL RESULTS
SURFACE SOIL SAMPLES
MURPHY PROPERTY (263 SALEM STREET) SITE
WOBURN, MASSACHUSETTS

METAL	SS-01	SS-02	SS-03	SS-04	SS-05	SS-06	SS-07	SS-08	SS-09	SS-10	SS-11	RCS-1
Silver	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100
Aluminum	11,000	10,000	10,000	9,500	11,000	6,100	9,200	7,600	16,000	9,800	7,100	NL
Arsenic	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	20
Barium	59	88	62	36	79	60	32	75	93	35	25	1,000
Beryllium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.7
Calcium	3,200	2,200	2,800	1,300	4,700	3,500	2,500	3,100	7,100	3,700	1,800	NL
Cadmium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
Cobalt	5.2	11	7.4	ND	13	5.9	4.6	8.5	22	10	7.5	500
Chromium	18	26	27	12	24	19	28	27	27	23	20	30
Copper	26	45	22	12	31	230	26	40	30	35	29	1,000
Iron	11,000	16,000	15,000	9,000	21,000	10,000	12,000	17,000	31,000	19,000	12,000	NL
Magnesium	2,400	5,300	2,500	1,400	6,100	3,200	2,200	3,800	10,000	4,700	3,200	NL
Manganese	170	260	380	90	270	270	130	170	460	190	150	NL
Nickel	ND	18	15	ND	19	13	17	15	27	16	16	20
Lead	130	230	130	83	110	200	120	380	17	210	110	300
Antimony	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	20
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	400
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8
Vanadium	21	33	44	16	41	23	50	37	61	46	27	600
Zinc	98	65	120	63	81	72	69	96	70	93	58	2,500
Sodium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NL
Potassium	910	1,900	800	ND	2,400	800	650	1,100	4,400	1,100	910	NL

TABLE 4
SUMMARY OF METAL RESULTS
SURFACE SOIL SAMPLES
MURPHY PROPERTY (263 SALEM STREET) SITE
WOBURN, MASSACHUSETTS

ANALYTE	SS-12	SS-13	SS-14	SS-15	SS-16	SS-17	SS-18	SS-19	SS-20	SS-21	SS-22	RCS-1
Silver	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100
Aluminum	6,700	8,100	9,800	11,000	8,800	9,600	7,900	6,900	12,000	11,000	11,000	NL
Arsenic	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	20
Barium	120	82	92	72	24	23	35	91	170	59	66	1,000
Beryllium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.7
Calcium	4,500	4,100	5,000	2,000	1,800	1,200	3,000	2,900	4,200	2,800	3,900	NL
Cadmium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
Cobalt	9.1	9.9	12	5.3	5.3	4	9.2	13	15	6.4	6.3	500
Chromium	34	33	25	22	22	46	19	35	44	27	31	30
Copper	63	48	47	30	76	61	32	81	67	27	38	1,000
Iron	15,000	15,000	23,000	12,000	12,000	11,000	15,000	17,000	27,000	13,000	12,000	NL
Magnesium	3,500	4,000	5,700	2,300	2,500	2,100	4,400	4,200	8,000	2,800	2,600	NL
Manganese	190	270	220	200	150	100	240	190	310	220	200	NL
Nickel	23	20	15	ND	12	ND	14	38	25	12	14	20
Lead	720	390	810	300	1,700	1,500	59	670	930	1,100	1,400	300
Antimony	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	20
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	400
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8
Vanadium	32	38	60	30	52	57	27	30	60	35	35	600
Zinc	150	120	150	120	150	90	63	130	99	120	300	2,500
Sodium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NL
Potassium	950	1,500	1,300	520	ND	ND	1,200	870	2,000	ND	650	NL

TABLE 4

SUMMARY OF METAL RESULTS
SURFACE SOIL SAMPLES
MURPHY PROPERTY (263 SALEM STREET) SITE
WOBURN, MASSACHUSETTS

ANALYTE	SS-23	SS-24	SS-25	SS-26	SS-27	SS-28	SS-29	SS-30	SS-31	SS-32	SS-33	RCS-1
Silver	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100
Aluminum	8,700	12,000	10,000	9,300	11,000	9,900	9,900	8,600	6,400	7,400	11,000	NL
Arsenic	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	20
Barium	38	88	72	67	43	38	39	47	98	43	46	1,000
Beryllium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.7
Calcium	1,600	4,200	2,700	2,600	1,200	1,300	1,100	2,500	2,700	2,500	1,400	NL
Cadmium	ND	ND	5	ND	ND	ND	ND	ND	ND	ND	ND	2
Cobalt	6.4	14	10	8.7	4.4	5.2	4.6	8.7	7.8	7.7	6	500
Chromium	19	33	38	33	35	25	24	30	31	23	29	30
Copper	28	56	120	32	20	23	20	37	48	28	34	1,000
Iron	11,000	20,000	18,000	16,000	11,000	11,000	11,000	19,000	16,000	15,000	13,000	NL
Magnesium	3,100	6,000	5,200	3,900	2,200	2,300	2,200	3,700	3,200	3,600	2,500	NL
Manganese	150	310	190	220	140	160	150	190	160	170	190	NL
Nickel	11	22	18	17	10	10	10	17	18	10	11	20
Lead	230	520	2,200	300	91	120	86	150	420	230	170	300
Antimony	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	20
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	400
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8
Vanadium	25	51	35	38	33	29	28	35	28	29	31	600
Zinc	73	120	130	78	54	62	59	74	120	51	74	2,500
Sodium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NL
Potassium	780	1,600	2,000	1,300	520	ND	ND	920	940	1,200	ND	NL

TABLE 4
SUMMARY OF METAL RESULTS
SURFACE SOIL SAMPLES
MURPHY PROPERTY (263 SALEM STREET) SITE
WOBURN, MASSACHUSETTS

ANALYTE	SS-34	SS-35	SS-36	SS-37	SS-38	SS-39	SS-40	SS-41	SS-42	SS-43	SS-44	RCS-1
Silver	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100
Aluminum	9,500	9,700	5,500	4,300	5,700	12,000	11,000	7,400	10,000	12,000	13,000	NL
Arsenic	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	20
Barium	45	70	38	40	51	60	58	60	300	390	400	1,000
Beryllium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.7
Calcium	1,600	2,600	2,700	1,700	1,500	3,400	2,000	2,200	2,800	3,600	4,600	NL
Cadmium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
Cobalt	5	7.7	7.8	5.1	4.9	14	8.2	7.5	14	15	17	500
Chromium	38	77	23	25	26	41	27	18	30	36	67	30
Copper	28	54	30	46	24	45	54	52	61	53	80	1,000
Iron	12,000	18,000	18,000	14,000	12,000	19,000	18,000	12,000	21,000	21,000	27,000	NL
Magnesium	2,700	3,300	3,100	2,300	3,300	6,900	3,600	3,400	5,200	6,600	7,900	NL
Manganese	180	150	170	160	130	240	210	190	360	350	330	NL
Nickel	12	19	14	12	15	25	15	11	21	21	31	20
Lead	230	440	150	110	120	79	230	140	1,300	2,000	2,100	300
Antimony	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	20
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	400
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8
Vanadium	32	93	31	23	17	39	29	25	46	45	67	600
Zinc	100	92	66	100	72	50	210	74	220	240	470	2,500
Sodium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NL
Potassium	ND	800	910	800	1,200	2,300	900	1,300	1,500	2,900	3,000	NL

TABLE 4

SUMMARY OF METAL RESULTS
SURFACE SOIL SAMPLES
MURPHY PROPERTY (263 SALEM STREET) SITE
WOBURN, MASSACHUSETTS

ANALYTE	SS-45	SS-46	SS-47	SS-48	SS-49	SS-50	SS-51	SS-52	SS-53	RCS-1
Silver	ND	7	ND	ND	ND	ND	ND	ND	ND	100
Aluminum	6,400	5,400	11,000	6,300	8,000	6,400	15,000	13,000	12,000	NL
Arsenic	ND	ND	ND	ND	ND	ND	ND	ND	ND	20
Barium	620	6,800	92	73	34	130	82	82	62	1,000
Beryllium	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.7
Calcium	16,000	2,800	2,700	3,400	2,100	3,600	8,100	4,500	3,400	NL
Cadmium	10	22	ND	ND	ND	ND	ND	ND	ND	2
Cobalt	16	24	12	6.6	7.6	7.7	22	14	15	500
Chromium	97	920	30	26	24	440	28	33	36	30
Copper	140	3,900	49	25	34	75	31	49	62	1,000
Iron	32,000	45,000	16,000	11,000	13,000	16,000	30,000	23,000	21,000	NL
Magnesium	3,600	3,900	4,800	3,500	3,400	2,700	9,200	6,900	7,200	NL
Manganese	710	250	470	300	220	170	460	350	300	NL
Nickel	56	91	20	15	16	20	23	23	27	20
Lead	13,000	37,000	520	300	47	730	27	390	170	300
Antimony	ND	36	ND	ND	ND	ND	ND	ND	ND	20
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND	400
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	8
Vanadium	59	25	40	25	28	38	59	52	43	600
Zinc	16,000	3,400	280	85	100	180	87	110	78	2,500
Sodium	ND	ND	ND	ND	ND	ND	ND	ND	ND	NL
Potassium	1,300	700	1,500	1,000	1,400	950	3,600	1,700	2,200	NL

NOTES:

- 1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) using EPA Region I SOP EIASOP-INGICP6, Metals in Soil Medium Level by ICP.
- 2) All Results in Milligrams per Kilogram (mg/kg).
- 3) RCS-1 = Massachusetts Department of Environmental Protection Reportable Concentration for Soil Category 1.
- 4) Concentrations that are bolded and shaded exceed MassDEP RCS-1 values.

ND = Not Detected.

NL = Not Listed.

TABLE 5

**SUMMARY OF VOLATILE ORGANIC COMPOUND RESULTS
DRUM/TANK PRODUCT SAMPLES
MURPHY PROPERTY (263 SALEM STREET) SITE
WOBURN, MASSACHUSETTS**

ANALYTE	DP-02	DP-03	DP-07	DP-09	DP-10
Vinyl Chloride	2	2	ND	ND	ND
1,1,2-Trichloro-1,2,2-Trifluoroethane	2	2	ND	ND	ND
cis-1,2-Dichloroethylene	44	49	ND	ND	ND
1,1,1-Trichloroethane	15	17	ND	ND	ND
Benzene	ND	ND	ND	ND	17,455
Toluene	ND	ND	ND	ND	63,896
Trichloroethylene	78	100	ND	ND	ND
Tetrachloroethylene	2	2	ND	ND	ND
M/P Xylene	ND	ND	ND	212,337	38,044
Ortho Xylene	ND	ND	ND	136,957	14,971
Styrene	ND	ND	ND	ND	93,987
Isopropylbenzene	ND	ND	ND	178,377	ND
1,2,4-Trimethylbenzene	ND	ND	24,342	668,587	ND
Naphthalene	ND	ND	ND	472,647	260,000

NOTES:

- 1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) using EPA Region I SOP, EIASOP-VOAGCMS7, VOAs in Soil High Level Method.
- 2) All Results in Micrograms per Kilogram ($\mu\text{g}/\text{kg}$).

ND = Not Detected.

TABLE 6

**SUMMARY OF POLYCHLORINATED BIPHENYL RESULTS
DRUM/TANK PRODUCT SAMPLES
MURPHY PROPERTY (263 SALEM STREET) SITE
WOBURN, MASSACHUSETTS**

ANALYTE	DP-01	DP-02	DP-03	DP-04	DP-05	DP-06	DP-07	DP-08	DP-09	DP-10
Aroclor-1016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1221	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1232	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1242	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1248	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1254	ND	ND	ND	ND	680	820	ND	ND	ND	ND
Aroclor-1260	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1262	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1268	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NOTES:

- 1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) using EPA EIASOP-PCBOIL1, PCBs in Oils.
- 2) All Results in Milligrams per Kilogram (mg/kg).

ND = Not Detected.

TABLE 7

**SUMMARY OF METALS RESULTS
DRUM/TANK PRODUCT SAMPLES
MURPHY PROPERTY (263 SALEM STREET) SITE
WOBURN, MASSACHUSETTS**

ANALYTE	DP-01	DP-04	DP-05	DP-07	DP-08	DP-09	DP-10
Silver	ND	ND	ND	ND	ND	ND	ND
Arsenic	ND	ND	ND	ND	ND	ND	ND
Barium	ND	ND	ND	ND	350	ND	ND
Cadmium	ND	ND	ND	ND	ND	ND	ND
Chromium	ND	ND	ND	ND	ND	ND	ND
Mercury	ND	ND	ND	ND	ND	ND	ND
Lead	18	410	540	330	320	57	10
Selenium	ND	ND	ND	ND	ND	ND	ND

NOTES:

- 1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) using EPA SOP EIASOP-INGXRF2, Metals by XRF.
- 2) All Results in Milligrams per Kilogram (mg/kg).

ND = Not Detected.