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Appendix A-2

RCRA Corrective Action
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Appendix A-2

Former Steel Gasoline Tank and Former Fiberglass Diesel Fuel Tank (AOC Nos. 7 and 8)

The former steel gasoline tank (AOC 7) was located underground at the northern end of the Production Building. It was in use from 1972 until removed in 1979. The former fiberglass diesel fuel tank was located underground at the same location as the steel gasoline tank. It was in use from 1979 until removed in 1982. Data addressing soil or groundwater quality at the time of the tank removals was not available. Subsequent to removal of the tanks, the building was expanded and covered the former tank locations.

Because documentation and post excavation sampling could not be located for the former underground storage tank locations, GZA installed groundwater monitoring well MW-14 to address these AOCs. A groundwater sample taken from MW-14 was analyzed for RCRA 8 metals, volatile organic compounds (VOCs - EPA Method 8260), and TPH. Analytical data is shown in Table 1-3, MW-14. Results did not exceed applicable criteria. Therefore, human exposures are controlled at this location.

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Appendix A-3

RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA725)

Current Human Exposures Under Control

Appendix A-3

Former NPDES Regulated Discharge Lagoons (SWMU No. 20)

Although SWMU No. 20 was not listed separately by CDM, it was considered a potential exposure source for human receptors and a potential source of contamination to groundwater because these lagoons were unlined. Whyco discontinued use of these lagoons in 1985 after the upgrade of the wastewater treatment system allowed permitted discharge of treated effluent to the Naugatuck River.

The actual influent pipe location into each lagoon was not shown on as-built plans. As a result, long-time employees were questioned as to the operation of the lagoons and the potential influent pipe locations. With this information, three soil samples were collected at locations approximately ten feet apart at the potential former influent pipe locations at each of the three former NPDES Infiltration Lagoons on January 27, 1998.

Initially, each sample was analyzed for copper, nickel, total cyanide and amenable cyanide. The sample containing the highest concentrations of the target metals from each lagoon was analyzed for Appendix 8 metals and PCBs. Antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, nickel, tin, vanadium, zinc, total cyanide, and amenable cyanide were detected below the I/C DEC in one or more samples. Analytical results are summarized in Table A-3a, Former Lagoon Outfall Pipe Locations, samples 1A, 1B, 1C, 2A, 2B, 2C, 3A, 3B, 3C. PCBs were not detected above the I/C DEC in Lagoons 1, 2, and 3.

On April 22 and 23, and May 1, 1998, grid sampling was performed over each of the three former NPDES Infiltration Lagoon areas using 20-foot grid spacing. Samples were collected from 0 to 12 inch and 12 to 24 inch depths. The 0 to 12 inch layer was analyzed for the Priority Pollutant Metals and PCBs. Analytical data is summarized in Tables A-3b, A-3c, and A-3d. Samples form the 12 to 24 inch depth were held pending the results of the surficial samples. Results from the surficial samples from the lagoons indicated no detection of Priority Pollutant Metals at concentrations exceeding the I/C DEC. Two exceedances of the I/C DEC for PCBs were indicated for Lagoon 2.

Further grid sampling was conducted on June 28, 1998 using a 10-foot grid to delineate the extent of PCB contamination in Lagoon 2. Background samples were also collected at this time. Twenty-one samples were collected from 0 to 12 inch and 12 to 24 inch depths and analyzed as shown in Table A-3e. The extent of PCB contamination was found to be limited to two samples which exceeded the I/C DEC during the April/May sampling round.

Metals were not detected within surficial soils at concentrations which exceeded the I/C DEC. PCBs were initially detected at concentrations which exceeded I/C criteria at two locations in Lagoon 2, but in the second round of sampling, none of the 21 samples collected contained concentrations which exceeded the I/C DEC. This more extensive sampling round did not confirm the results of the initial sampling round. Human exposures are, therefore, controlled for this AOC based on these results.

TABLE A-3a
Summary of Soil Analytical Data

Whyco Chromium
Thomaston, Connecticut

	Former Lagoons Area									Direct Exposure Criteria	
Sampling Location	1A	1B	1C	2A	2B	2C	3A	3B	3C	Residential	Industrial/
Sample Depth (feet)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		Commercial
Detected Compounds											
PCBs (ug/kg) [1254]	670	NA	NA	1,700	NA	NA	NA	NA	1,100	1,000	10,000
Metals (mg/kg)											
Antimony	12.8	NA	NA	ND	NA	NA	NA	NA	ND	27	8,200
Arsenic	1.26	NA	NA	1.63	NA	NA	NA	NA	0.870	10	10
Barium	40.6	NA	NA	45.8	NA	NA	NA	NA	42.0	4,700	140,000
Beryllium	0.344	NA	NA	0.350	NA	NA	NA	NA	0.326	2	2
Cadmium	**220**	NA	NA	3.03	NA	NA	NA	NA	6.09	34	1,000
Chromium (total)	**7060**	NA	NA	200	NA	NA	NA	NA	166	3,900	51,000
Cobolt	485	NA	NA	18.9	NA	NA	NA	NA	21.5	NE	NE
Copper	932	115	819	247	225	372	167	182	268	2,500	76,000
Lead	170	NA	NA	43.1	NA	NA	NA	NA	35.6	500	1,000
Mercury	0.0767	NA	NA	0.0804	NA	NA	NA	NA	0.0742	20	610
Nickel	**8120**	347	**2760**	116	77.2	26.9	128	179	120	1,400	7,500
Selenium	ND	NA	NA	ND	NA	NA	NA	NA	ND	340	10,000
Silver	ND	NA	NA	ND	NA	NA	NA	NA	ND	340	10,000
Thallium	ND	NA	NA	ND	NA	NA	NA	NA	ND	5.4	160
Tin	261	NA	NA	100	NA	NA	NA	NA	71.3	NE	NE
Vanadium	22.0	NA	NA	21.2	NA	NA	NA	NA	21.0	470	14,000
Zinc	1600	NA	NA	188	NA	NA	NA	NA	163	20,000	610,000
Cyanide (ppm)											
Total Cyanide	360	17	220	20	13	5	31	12	ND	1,400	41,000
Amenable Cyanide	300	ND	150	15	4	4	25	ND	ND	NE	NE
Oil & Grease/TPH (ppm)	NA	NA	NA	NA	NA	NA	NA	NA	NA	500	2,500

Notes:

1) Direct Exposure Criteria (DEC) Standards are the Connecticut Department of Environmental Protection (DEP) Remediation Standards (January 1996).
2) NE indicates a standard has not been established for that parmater.
3) Soil samples from the former lagoons area were analyzed by GZA's Environmental Chemistry Laboratory for metals and by Matrix Analytical for PCBs.
4) Soil samples from the borings were analyzed by Connecticut Testing Laboratories, Inc.
5) NA indicates a sample was not analyzed.
6) ND indicates a parameter was not detected above method detection limits.
7) Compounds detected above the Residential DEC are shaded; compounds detected above the Industrial/Commercial DEC are shaded and **bold**.

TABLE A-3b
LAGOON 1 SOIL SAMPLING
Whyco Chromium
Thomaston, Connecticut

ANALYTE	REFERENCE STANDARDS RES DE	REFERENCE STANDARDS I/C DE	UNITS	1A	2A	3A	4A	1B	2B	3B	4B	1C	2C	3C	4C	2D	3D	4D	2E	3E	4E			
Priority Pollutant Metals																								
Arsenic	10	10	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.6	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Silver	340	10,000	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Beryllium	2	2	mg/kg	0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	0.5	<0.4	<0.4	0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Cadmium	34	1,000	mg/kg	2.3	6.0	6.9	**145**	**36.4**	29.8	24.6	4.3	**45.4**	15.9	<0.5	10.1	13.9	19.2	6.3	13.1	23.0	3.7	**87.3**	14.0	1.3
Chromium (total)[1]	3,900	51,000	mg/kg	50.1	136	236	**6,010**	769	585	537	105	2,130	400	68.0	278	279	527	152	323	514	201	3,280	847	42.6
Copper	2,500	76,000	mg/kg	51.6	103	165	452	158	235	224	284	236	145	88.2	179	170	164	188	137	175	118	386	380	181
Lead	500	1,000	mg/kg	22.2	29.4	32.7	68.0	21.4	95.0	26.3	5.0	40.6	24.1	7.9	5.2	15.7	26.9	64.9	28.4	50.4	11.6	61.2	55.4	23.7
Mercury	20	610	mg/kg	0.05	0.06	0.13	0.05	<0.02	0.03	0.02	<0.02	0.24	0.03	<0.02	0.03	0.02	0.03	0.07	0.03	0.05	0.02	0.09	0.06	0.09
Nickel	1,400	7,500	mg/kg	52.5	133	186	**4,240**	684	696	824	475	**1,400**	317	48.0	883	391	466	166	378	605	459	2,490	846	52.7
Selenium	340	10,000	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Antimony	27	8,200	mg/kg	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Thallium	5.4	160	mg/kg	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Zinc	20,000	610,000	mg/kg	64.7	98.4	143	1,080	180	262	164	35.3	437	122	51.7	75.3	96.2	160	147	115	221	91.8	713	238	98.7
Barium	4,700	140,000	mg/kg	37.2	39.7	164	31.1	22.2	20.0	17.3	9.6	29.5	25.3	45.5	17.9	20.7	35.2	38.7	24.1	30.6	15.7	36.5	22.3	16.2
Cyanide	1,400	41,000	mg/kg	3.4	6.6	17	165	36	23	30	12	66	23	1.4	28	20	25	9.3	22	33	21	97	60	10
PCBs (total)	1	10	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	3	1	<1.0	<1.0	1	<1.0	<1.0

Legend:

NE indicates that a standard is Not Established

ND indicates an analyte was Not Detected

Bold cells indicate an exceedance of the Residential Direct Exposure Criteria (RES DE)

Shaded cells indicate an exceedance of the Industrial/Commercial Direct Exposure Criteria (I/C DE)

Notes:

1. Since Reference Standards for Total Chromium have not been established, the sampling results were evaluating using Reference Standards for Trivalent Chromium.
2. Soil Samples were collected by GZA on May 3, 1998
3. Laboratory analyses were performed by Connecticut Testing Laboratories, Inc. in Meriden, Connecticut.
4. The Residential Direct Exposure Criteria (RES DE) and the Industrial/Commercial Direct Exposure Criteria (I/C DE) were taken from the Connecticut State Department of Environmental Protection Remediation Standard Regulations as updated in January 1996.

TABLE A-3c
LAGOON 2 SOIL SAMPLING
Whyco Chromium
Thomaston, Connecticut

ANALYTE	REFERENCE STANDARDS RES DE	REFERENCE STANDARDS I/C DE	UNITS	1A	2A	3A	1B	2B	3B	1C	2C	3C	1D	2D	3D	1E	2E	3E	1F	2F	3F
Priority Pollutant Metals																					
Arsenic	10	10	mg/kg	<1.0	1.9	2.3	2.6	1.7	<1.0	<1.0	<1.0	1.8	<1.0	1.9	2.9	<1.0	1.6	<1.0	1.3	1.3	1.7
Silver	340	10,000	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Beryllium	2	2	mg/kg	<0.4	<0.4	<0.4	0.5	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Cadmium	34	1,000	mg/kg	1.7	1.8	1.2	2.1	4.1	7.0	5.7	3.4	1.5	5.9	3.2	2.5	6.8	2.4	1.0	3.5	3.1	1.0
Chromium (total)[1]	3,900	51,000	mg/kg	47.7	79.8	77.6	67.9	114	247	228	128	77.8	212	91.7	98.5	278	158	35.2	128	132	70.2
Copper	2,500	76,000	mg/kg	115	499	367	79.6	212	244	179	253	198	128	183	290	256	216	37.7	342	216	146
Lead	500	1,000	mg/kg	26.4	64.8	48.4	22.6	34.4	41.4	35.2	43.3	44.9	24.0	32.8	35.5	36.8	84.4	8.9	38.8	35.2	24.2
Mercury	20	610	mg/kg	0.08	0.41	0.23	0.09	0.09	0.12	0.10	0.14	0.14	0.07	0.09	0.06	0.12	0.10	0.02	0.11	0.12	0.06
Nickel	1,400	7,500	mg/kg	37.3	51.5	34.2	61.3	78.2	170	173	99.9	56.4	163	81.0	91.0	233	93.6	30.0	107	93.1	47.1
Selenium	340	10,000	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Antimony	27	8,200	mg/kg	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Thallium	5.4	160	mg/kg	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Zinc	20,000	610,000	mg/kg	98.1	210	156	82.1	149	230	159	168	136	126	136	216	193	146	52.1	174	132	114
Barium	4,700	140,000	mg/kg	33.2	50.0	42.6	79.7	39.6	40.7	39.9	43.4	40.4	36.6	40.2	36.3	35.0	37.7	28.9	36.4	40.1	36.3
Cyanide	1,400	41,000	mg/kg	3.9	2.7	2.6	1.1	3.1	8.8	10	6.5	3.1	10	2.2	2.2	3.5	2.6	1.2	2.5	12.2	7.9
PCBs (total)	1	10	mg/kg	**2**	**9**	<1.0	<1.0	3	1	**76**	25	2	1	1	<1.0	1	**2**	<1.0	<1.0	1	1

Legend:

NE indicates that a standard is **N**ot **E**stablished

ND indicates an analyte was **N**ot **D**etected

Bold cells indicate an exceedance of the Residential Direct Exposure Criteria (RES DE)

Shaded cells indicate an exceedance of the Industrial/Commercial Direct Exposure Criteria (I/C DE)

Notes:

1. Since Reference Standards for Total Chromium have not been established, the sampling results were evaluating using Reference Standards for Trivalent Chromium.
2. Soil Samples were collected by GZA on May 3, 1998.
3. Laboratory analyses were performed by Connecticut Testing Laboratories, Inc. in Meriden, Connecticut.
4. The Residential Direct Exposure Criteria (RES DE) and the Industrial/Commercial Direct Exposure Criteria (I/C DE) were taken from the Connecticut State Department of Environmental Protection Remediation Standard Regulations as updated in January 1996.

TABLE A-3d
LAGOON 3 SOIL SAMPLING
Whyco Chromium
Thomaston, Connecticut

ANALYTE	REFERENCE STANDARDS RES DE	I/C DE	UNITS	1A	2A	3A	1B	2B	3B	1C	2C	3C	2D	3D	2E	3E	3F
Priority Pollutant Metals																	
Arsenic	10	10	mg/kg	<1.0	1.4	<1.0	<1.0	<1.0	2.9	1.5	1.8	1.7	1.5	<1.0	<1.0	<1.0	1.3
Silver	340	10,000	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Beryllium	2	2	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	0.4	<0.4	<0.4	<0.4	<0.4
Cadmium	34	1,000	mg/kg	<0.5	1.9	<0.5	3.1	3.7	5.9	5.8	3.7	6.9	4.4	<0.5	2.2	11.2	3.8
Chromium (total)[1]	3,900	51,000	mg/kg	10.9	70.6	8.1	94.1	134	328	160	138	97.1	140	26.5	74.9	312	108
Copper	2,500	76,000	mg/kg	243	144	9.7	121	272	268	230	235	228	175	50.8	151	239	216
Lead	500	1,000	mg/kg	18.9	31.8	3.3	30.6	40.9	41.4	36.8	46.6	34.0	31.2	10.7	24.2	35.5	71.8
Mercury	20	610	mg/kg	0.05	0.08	<0.02	0.09	0.13	0.11	0.09	0.08	0.12	0.11	0.03	0.07	0.12	0.10
Nickel	1,400	7,500	mg/kg	9.5	54.6	8.2	174	96.7	183	135	99.6	60.3	103	42.3	55.4	228	160
Selenium	340	10,000	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Antimony	27	8,200	mg/kg	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Thallium	5.4	160	mg/kg	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Zinc	20,000	610,000	mg/kg	136	106	21.0	79.5	144	187	150	160	135	149	56.9	111	176	248
Barium	4,700	140,000	mg/kg	18.0	45.6	13.9	33.4	42.9	41.5	35.5	40.1	38.7	46.4	31.0	34.1	34.8	35.7
Cyanide	1,400	41,000	mg/kg	4.5	7.4	<1.0	4.8	8.4	10.5	12.3	9.3	7.8	9.4	1.7	4.5	24	10.7
PCBs (total)	1	10	mg/kg	<1.0	**9**	<1.0	<1.0	**2**	1	1	**2**	<1.0	**2**	<1.0	<1.0	**2**	**2**

Legend:

NE indicates that a standard is Not Established

ND indicates an analyte was Not Detected

Bold cells indicate an exceedance of the Residential Direct Exposure Criteria (RES DE)

Shaded cells indicate an exceeedance of the Industrial/Commercial Direct Exposure Criteria (I/C DE)

Notes:

1. Since Reference Standards for Total Chromium have not been established, the sampling results were evaluating using Reference Standards for Trivalent Chromium.
2. Soil Samples were collected by GZA on May 3, 1998.
3. Laboratory analyses were performed by Connecticut Testing Laboratories, Inc. in Meriden, Connecticut.
4. The Residential Direct Exposure Criteria (RES DE) and the Industrial/Commercial Direct Exposure Criteria (I/C DE) were taken from the Connecticut State Department of Environmental Protection Remediation Standard Regulations as updated in January 1996

TABLE A-3e
Analytical Results of PCBs in Soil
SWMU 20 (Lagoon 2)
Whyco Chromium
Thomaston, Connecticut

Sample Location	Sample Depth (ft)	Units	AROCLOR 1262	1260	1254	1248	1242/1016	1232	1221	Total
L2-SB1BC	0-1	µg/kg	<50	280	610	<50	<50	<50	<50	890
L2-SB1BC	1-2	µg/kg	<50	290	880	<50	<50	<50	<50	**1170**
L2-SB1C	0-1	µg/kg	<50	480	1100	<50	<50	<50	<50	**1580**
L2-SB1C	1-2	µg/kg	<75	82	290	<75	<75	<75	<75	372
L2-SB1CD	0-1	µg/kg	<50	380	1100	<50	<50	<50	<50	**1480**
L2-SB1CD	1-2	µg/kg	<50	290	910	<50	<50	<50	<50	**1200**
L2-SB1.5BC	0-1	µg/kg	<250	<250	960	<250	<250	<250	<250	960
L2-SB1.5BC	1-2	µg/kg	<250	<250	920	<250	<250	<250	<250	920
L2-SB1.5C	0-1	µg/kg	<250	<250	980	<250	<250	<250	<250	980
L2-SB1.5C	1-2	µg/kg	<250	<250	960	<250	<250	<250	<250	960
L2-SB1.5CD	0-1	µg/kg	<50	330	950	<50	<50	<50	<50	**1280**
L2-SB1.5CD	1-2	µg/kg	<250	600	2100	<250	<250	<250	<250	**2700**
L2-SB2BC	0-1	µg/kg	<50	220	730	<50	<50	<50	<50	950
L2-SB2BC	1-2	µg/kg	<50	390	1400	<50	<50	<50	<50	**1790**
L2-SB2C	0-1	µg/kg	<50	410	1100	<50	<50	<50	<50	**1510**
L2-SB2C	1-2	µg/kg	<250	<250	990	<250	<250	<250	<250	990
L2-SB2CD	0-1	µg/kg	<600	850	2400	<600	<600	<600	<600	**3250**
L2-SB2CD	1-2	µg/kg	<50	140	490	<50	<50	<50	<50	630
TT-SS1	0-1	µg/kg	<50	140	540	<50	<50	<50	<50	680
TT-SS2	0-1	µg/kg	<50	230	700	<50	<50	<50	<50	930
TT-SS3	0-1	µg/kg	<50	180	590	<50	<50	<50	<50	770

Notes:

1. Soil Samples were collected by GZA GeoEnvironmental, Inc. on June 28, 1998.
2. Laboratory analyses were performed by GZA GeoEnvironmental, Inc. Laboratories in Newton Upper Falls, Massachusetts.
3. According to the Connecticut Department of Environmental Protection Remediation Standard Regulations (January 1996) the Residential Direct Exposure Criteria (RES DE) for PCBs is 1 mg/kg and the Industrial/Commercial Direct Exposure Criteria (I/C DE) for PCBs is 10 mg/kg.

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Appendix A-4

RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA725)

Current Human Exposures Under Control

Appendix A-4

Surface Water Sampling

Surface water sampling was performed on August 31, 1999 in the Naugatuck River to assess the impact the Site may have had on surface water quality. Six samples were taken at locations shown on Figure 2. Samples were submitted for cadmium, chromium, hexavalent chromium, copper, nickel, lead, zinc, and cyanide. There was no detection of constituents at concentrations above method detection limits as shown in Table A-4a.

Due to regional drought conditions at the time the sampling was performed, water levels in the river were very low compared to normal conditions. This would increase the proportion of groundwater (and consequently, expected contaminant levels) in the river. Human exposures are therefore considered controlled at this location since contaminants from the Site do not appear to be affecting the water quality of the Naugatuck River.

TABLE A-4a
SURFACE WATER ANALYTICAL DATA
NAUGATUCK RIVER
Whyco Chromium

	SAMPLE LOCATION						RSR CRITERIA	
ANALYTE (mg/L)	**WC-DS1**	**WC-DS2**	**WC-MS1**	**WC-MS2**	**WC-US1**	**WC-US2**	**GA/GAA**	**SWPC**
Cadmium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	**0.005**	**0.006**
Chromium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**NE[1]**	**1.2**
Hexavalent Chromium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**NE[1]**	**0.11**
Copper	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**1.3**	**0.048**
Nickel	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**0.1**	**0.88**
Lead	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	**0.015**	**0.013**
Zinc	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**5**	**0.123**

[1] GA/GAA criteria for chromium and hexavalent chromium combined is 0.005 mg/L.
Samples taken by GZA on August 31, 1999.
Numerical criteria applied is from the Connecticut Department of Environmental Protection's Remediation Standard Regulations for GA/GAA Pollutant Mobility Criteria (GA/GAA PMC) and Surface Water Protection Criteria (SWPC).

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APPENDIX B

LIMITATIONS

1. The conclusions and recommendations submitted in this report are based in part upon the data obtained from a limited number of soil samples from widely spaced subsurface explorations. The nature and extent of variations between these explorations may not become evident until further investigation. If variations or other latent conditions then appear evident, it will be necessary to reevaluate the recommendations of this report.

2. The generalized soil profile described in the text is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized and have been developed by interpretations of widely spaced explorations and samples; actual soil transitions are probably more gradual. For specific information, refer to the boring logs.

3. Water level readings have been made in the test pits, borings and/or observation wells at times and under conditions stated on the exploration logs. These data have been reviewed and interpretations have been made in the text of this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall and other factors different from those prevailing at the time measurements were made.

4. Except as noted within the text of the report, no quantitative laboratory testing was performed as part of the site assessment. Where such analyses have been conducted by an outside laboratory, GZA has relied upon the data provided, and has not conducted an independent evaluation of the reliability of these data.

5. The conclusions and recommendations contained in this report are based in part upon various types of chemical data and are contingent upon their validity. These data have been reviewed and interpretations made in the report. As indicated within the report, some of these data are preliminary "screening" level data, and should be confirmed with quantitative analyses if more specific information is necessary. Moreover, it should be noted that variations in the types and concentrations of contaminants and variations in their flow paths may occur due to seasonal water table fluctuations, past disposal practices, the passage of time, and other factors. Should additional chemical data become available in the future, these data should be reviewed by GZA, and the conclusions and recommendations presented therein modified accordingly.

6. Chemical analyses have been performed for specific parameters during the course of this study, as detailed in the text. It must be noted that additional constituents not searched for during the current study may be present in soil and groundwater at the site.

7. It is recommended that this firm be retained to provide further engineering services during design, implementation, and/or construction of any remedial measures, if necessary. This is to observe compliance with the concepts and recommendations contained herein and to allow design changes in the event that subsurface conditions differ from those anticipated.

8. The costs on which the preliminary remediation estimate is based are limited to those conditions which were discovered in carrying out the assessment of subsurface contamination identified in this report. Actual quantities and unit costs will vary. While the preliminary estimate represents our best professional judgment in this matter, it does not represent an absolute worst-case remedial cost estimate. The preliminary estimate includes only those cost items identified, and should not be assumed to include other costs such as legal, administrative or permitting costs.

9. The estimate is based on limited data which may not be sufficient to identify each and every condition existing at the site which may constitute noncompliance with applicable governmental statutes, rules, and regulations or constitute a release of oil or hazardous materials.

10. The preliminary estimate does not include any element with respect to third-party claims, fines, penalties, or other charges which may be assessed against any responsible party because of either the existence of present conditions or the future existence or discovery of any such conditions.

11. Governmental agencies' interpretations, requirements, and enforcement policies vary from district office to district office, from state to state, and between federal and state agencies. In addition, statutes, rules, standards, and regulations may be legislatively changed and inter-agency and intra-agency policies may be changed form present practices. GZA has used its experience and judgment in making assumptions as to how anticipated changes in enforcement policies may affect remediation costs.

12. This report contains approximate cost estimates for purposes of evaluating alternative remedial programs. These estimates involve approximate quantity evaluations. A preliminary estimate of this nature is likely to vary substantially from Contractors' Bid Prices and is not to be considered the equivalent of nor as reliable as Contractors' Bid Prices. Prices for similar work undertaken in the future will be subject to general and sometimes erratic price increases. The costs of future environmental, technical, and engineering services which may be required to implement any corrective action or remediation or installation of any systems cannot be accurately estimated.

13. It is recommended that GZA be retained to provide engineering services during final design, construction and/or implementation of any remedial measures recommended in this report. This is to allow to observe compliance with the concepts and recommendations contained herein, and to allow the development of design changes in the event that subsurface conditions differ from those anticipated.