LEGEND

MW-01 MONITORING WELL LOCATION

SW-15 SURFACE WATER SAMPLE OR ELEVATION LOCATION

320 CONTOUR LINE (20 FT INTERVAL)

320 GROUNDWATER CONTOUR

GROUNDWATER FLOW

GEOPHYSICAL SURVEY

APPROXIMATE WETLAND AREA

NOTES:
1. MW-04D AND MW-07 WERE NOT INCLUDED IN THE CONTOURING BECAUSE THEY ARE SCREENED IN BEDROCK.

2. LOCATIONS OF FORMER MAGNA METALS BUILDING, 1 STORY CONCRETE BLOCK BUILDING, SHED, GEOPHYSICAL SURVEY AREA, AND MONITORING WELLS ARE BASED ON SURVEY DATA.

SOURCES:
1. CONTOUR LINES, FURNACE DOCK ROAD, AND FURNACE BROOK BELOW POND BASED ON MOHEGAN LAKE, NY AND PEEKSKILL, NY TOPOGRAPHIC QUADRANGLES, 7.5-MINUTE SERIES, DATED 1956 AND 1957, RESPECTIVELY, AND PHOTOREVISED IN 1981.

2. ADDITIONAL SURFACE FEATURES BASED ON WESTCHESTER COUNTY DEPARTMENT OF PLANNING AERIAL PHOTOGRAPH (SPRING 1990), DECEMBER 18, 1999 AERIAL PHOTOGRAPH, AND SURVEY DATA.

3. APPROXIMATE WETLAND AREA BASED ON FIELD OBSERVATIONS.

0 40 80
FEET

TETRA TECH FW, INC.

TITLE:
Overburden Groundwater Contours
Magna Metals
Cortlandt, New York

DWN: CTS	DES.: CTS	PROJECT NO.: 1172.0003
CHKD:	APPD:	FIGURE NO.: 3-2
DATE: 06/21/04	REV.: 0	

N:\GIS\GISKEY\GISPROJ31\MAGNA METALS\FIGURE 3-2 062104.DWG

BCLP02774

LEGEND

PHASE I SURFACE SOIL LOCATION

PHASE I SURFACE WATER AND SEDIMENT

PHASE I SOIL BORING LOCATION

LP-01 LEACH PIT LOCATION

SW-01 SUPPLEMENTAL RI SURFACE WATER SAMPLE OR ELEVATION LOCATION

SD-01 SUPPLEMENTAL RI SEDIMENT SAMPLE LOCATION

SS-01 SUPPLEMENTAL RI SOIL SAMPLE OR ELEVATION LOCATION

BA-01 SUPPLEMENTAL RI SOIL BORING LOCATION

SD-01 PROBE/ELEVATION LOCATION

GEOPHYSICAL SURVEY

APPROXIMATE REFUSE AREA

APPROXIMATE WETLAND AREA

NOTES:
1. PHASE I SAMPLE LOCATIONS AND SUPPLEMENTAL RI SOIL BORINGS ARE APPROXIMATE.

2. LOCATIONS OF FORMER MAGNA METALS BUILDING, 1 STORY CONCRETE BLOCK BUILDING, SHED, GEOPHYSICAL SURVEY AREA, AND MONITORING WELLS ARE BASED ON SURVEY DATA.

3. LOCATIONS OF LEACH PITS AND SUPPLEMENTAL RI SURFACE WATER SAMPLES, SEDIMENT SAMPLES, AND SURFACE SOIL SAMPLES ARE BASED ON GPS COORDINATES.

SOURCES:
1. CONTOUR LINES, FURNACE DOCK ROAD, AND FURNACE BROOK BELOW POND BASED ON MOHEGAN LAKE, NY AND PEEKSKILL, NY TOPOGRAPHIC QUADRANGLES, 7.5-MINUTE SERIES, DATED 1956 AND 1957, RESPECTIVELY, AND PHOTOREVISED IN 1981.

2. ADDITIONAL SURFACE FEATURES BASED ON WESTCHESTER COUNTY DEPARTMENT OF PLANNING AERIAL PHOTOGRAPH (SPRING 1990), DECEMBER 18, 1999 AERIAL PHOTOGRAPH, AND SURVEY DATA.

3. APPROXIMATE REFUSE AREA BASED ON NYSDEC DRAWING.

4. APPROXIMATE WETLAND AREA BASED ON FIELD OBSERVATIONS.

0 40 80
FEET

LOCATION	NORTHING (FT.)	EASTING (FT.)	ELEVATION (FT. MSL)
LP-02	889806.15	665099.69	
LP-03	889817.18	665084.14	
LP-04	889832.41	665084.36	
LP-05	889850.62	665071.88	
LP-06	889859.97	665059.52	
LP-07	[illegible]	[illegible]	
LP-08	[illegible]	[illegible]	
LP-09	889945.04	665002.1	
LP-10	889996.02	665005.39	
LP-04	889970.07	665003.64	
MW-01	889547.12	665389.57	365.75
MW-02	889760.21	665127.51	344.1
MW-03	889808.83	665009.90	353.57
MW-04	889848.29	665079.73	355.5
MW-04D	[illegible]	[illegible]	15.1
MW-05	890191.3	665491.01	340.42
MW-06	[illegible]	665025.06	[illegible]
MW-07	[illegible]	[illegible]	[illegible]
MW-08	[illegible]	[illegible]	17.[illegible]
BA	889960.991	665071.6	
SD-13	890234.23	664696.04	
SD-14	889953.07	664725.91	
SD-15	889968.6	664871.29	
SD-16	889795.69	664973.85	
SD-17	[illegible]	[illegible]	
SD-18	[illegible]	[illegible]	
SD-19	889847.99	664864	
SD-20	889810.38	664734.74	
SD-21	889590.471	664882.04	
SD-22	889494.73	664595.61	
SD-23	889448.52	664546.08	
SD-24	[illegible]	[illegible]	
SD-25	[illegible]	[illegible]	
SD-26	889971.03	664224.12	
SD-26	889994.06	663894.18	
SS-06	889890.38	664970.118	
SS-07	889845.039	665000.575	
SS-08	889779.93	665034.91	
SS-09	889852.49	664953.46	
SS-10	889732.339	665001.284	
SS-11	889819.767	665122.928	
SS-12	889792.665	665143.566	
SS-13	890248.88	664780.5	
SS-14	890215.401	665004.313	
SS-15	890421.99	664721.22	
ST-01	889752.07	665156.24	
ST-02	889761.92	665139.88	
SW-13	890234.23	664696.04	
SW-14	889953.07	664725.91	
SW-15	889903.6	664871.29	
SW-16	889795.69	664973.85	
SW-17	889499.24	665115.3	
SW-18	889785.9	664891.58	
SW-19	889847.99	664864	
SW-20	889810.38	664734.74	
SW-21	889752.64	664956.18	
SW-22	889973.65	664812.24	
SWEL-1	889844.39	664863.44	309.86
SWEL-2	889797.07	664799.56	309.83
SWEL-3	890262.07	664686.03	309.97
SWEL-4	890099.19	664725.83	309.93
SWEL-5	889492.49	665113.99	316.31

DWN: CTS	DES.: CTS	PROJECT NO.: 1172.0003
CHKD:	APPD:	FIGURE NO.: 2-1
DATE: 06/21/04	REV.: 0	

TETRA TECH FW, INC.

TITLE:
Site Plan with Sample, Pit and Monitoring Well Locations
Magna Metals
Cortlandt, New York

G:\GISKEY\GSPROJ31\MAGNA METALS\FIGURE 2-1_062104.DWG

BCLP02776

LEGEND

LEACH PIT LOCATION

SUPPLEMENTAL RI SURFACE SOIL SAMPLE LOCATION

SUPPLEMENTAL RI SOIL BORING LOCATION

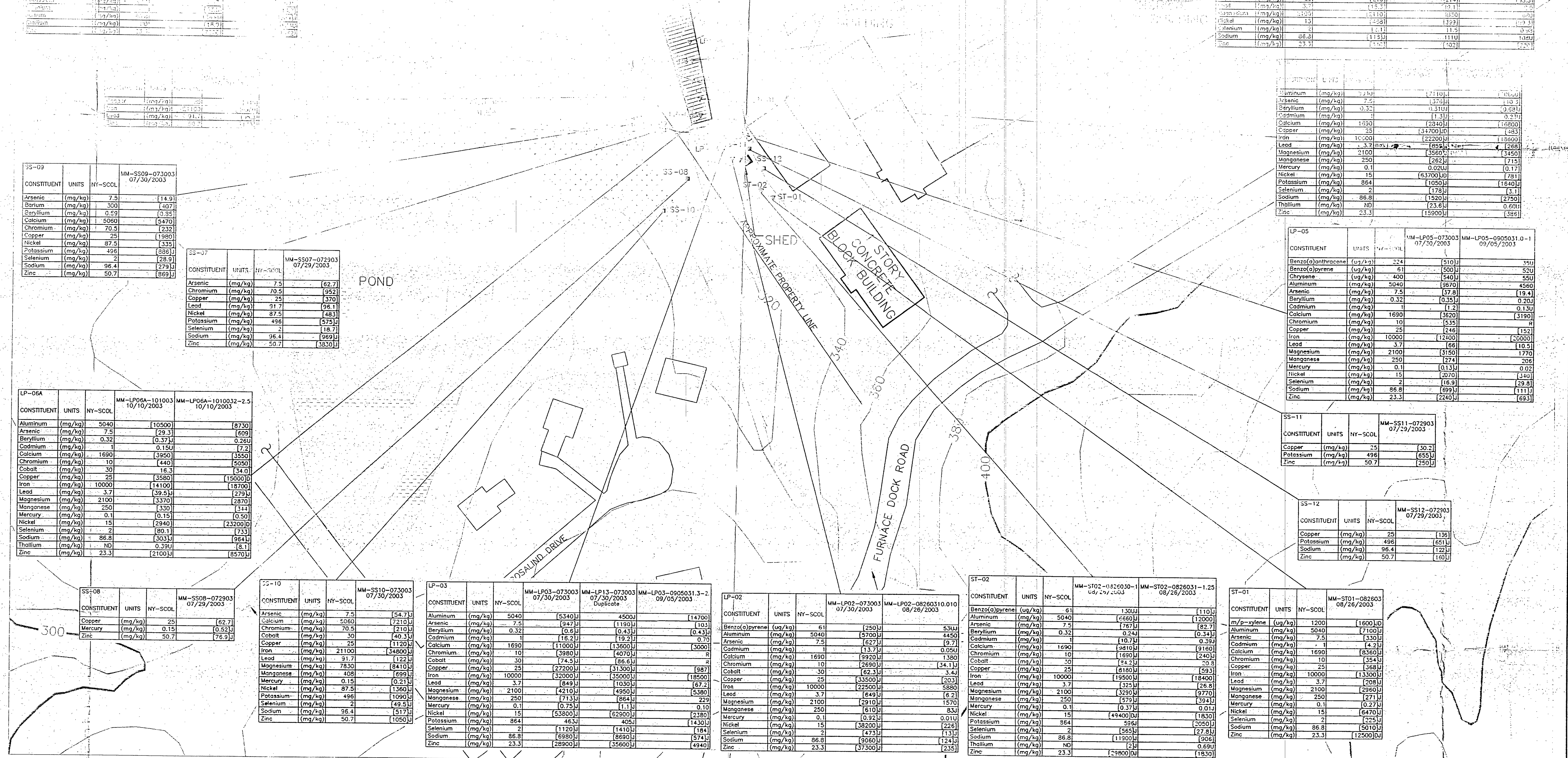
LOCATIONS OF FORMER MAGNA METALS BUILDING, 1 STORY CONCRETE BLOCK BUILDING, SHED, GEOPHYSICAL SURVEY AREA, AND MONITORING WELLS ARE BASED ON SURVEY DATA.

SOURCES:

1. CONTOUR LINES, FURNACE DOCK ROAD, AND FURNACE BROOK BELOW POND BASED ON MOHEGAN LAKE, NY AND PEEKSKILL, NY TOPOGRAPHIC QUADRANGLES, 7.5-MINUTE SERIES, DATED 1956 AND 1957, RESPECTIVELY, AND PHOTOREVISED IN 1981.

2. ADDITIONAL SURFACE FEATURES BASED ON WESTCHESTER COUNTY DEPARTMENT OF PLANNING AERIAL PHOTOGRAPH (SPRING 1990), DECEMBER 18, 1999 AERIAL PHOTOGRAPH, AND SURVEY DATA.

3. APPROXIMATE WETLAND AREA BASED ON FIELD OBSERVATIONS.



LP-09

CONSTITUENT	UNITS	NY-SCOL	MM-LP09-073003 07/30/2003
Benzo(a)pyrene	(ug/kg)	61	[68]J
Aluminum	(mg/kg)	5040	[10700]
Arsenic	(mg/kg)	7.5	[18.3]
Cadmium	(mg/kg)	1	[1.5]
Calcium	(mg/kg)	1690	[3600]
Chromium	(mg/kg)	10	[167]
Cobalt	(mg/kg)	30	[46.9]
Copper	(mg/kg)	25	[388]
Iron	(mg/kg)	10000	[34000]
Lead	(mg/kg)	3.7	[75.4]
Magnesium	(mg/kg)	2100	[illegible]
[illegible]	(mg/kg)	[illegible]	[illegible]
[illegible]	(mg/kg)	15	[illegible]
Potassium	(mg/kg)	864	[illegible]J
Selenium	(mg/kg)	2	[7.3]
Sodium	(mg/kg)	86.8	[432]J
Zinc	(mg/kg)	23.3	[1440]J

LP-0A

CONSTITUENT	UNITS	NY-SCOL	MM-LP0A-073003 07/30/2003
Benzo(a)anthracene	(ug/kg)	224	[illegible]
Benzo(a)pyrene	(ug/kg)	61	[illegible]J
Benzo(b)fluoranthene	(ug/kg)	1100	[2200]J
Chrysene	(ug/kg)	400	[illegible]J
Dibenzo(a,h)anthracene	(ug/kg)	14	[350]J
Aluminum	(mg/kg)	5040	[5390]
Arsenic	(mg/kg)	7.5	[15.6]
Cadmium	(mg/kg)	1	[1.4]
Calcium	(mg/kg)	[illegible]	[illegible]
[illegible]	(mg/kg)	[illegible]	[illegible]
[illegible]	(mg/kg)	[illegible]	[illegible]
Iron	(mg/kg)	[illegible]	[illegible]
Lead	(mg/kg)	[illegible]	[illegible]
Magnesium	(mg/kg)	[illegible]	[illegible]
Nickel	(mg/kg)	15	[158]
Selenium	(mg/kg)	2	[9.6]
Sodium	(mg/kg)	[illegible]	[illegible]
Zinc	(mg/kg)	[illegible]	[illegible]

[illegible]A

CONSTITUENT	UNITS	NY-SCOL	MM-[illegible]A-2.5-3.0-100703
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
Chromium	(mg/kg)	10	[35.0]
Copper	(mg/kg)	25	[2930]
Iron	(mg/kg)	10000	[30300]
Lead	(mg/kg)	3.7	[354]
Magnesium	(mg/kg)	2100	[3350]J
Manganese	(mg/kg)	250	[362]
Nickel	(mg/kg)	15	[32.1]
Potassium	(mg/kg)	864	[1470]J
Sodium	(mg/kg)	86.8	[2630]J
Zinc	(mg/kg)	[illegible]	[illegible]

LP-07

CONSTITUENT	UNITS	NY-SCOL	MM-LP07-0905030-0.5 09/05/2003	MM-LP07-[illegible] 09/05/2003
Benzo(a)anthracene	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Dibenzo(a,h)anthracene	(ug/kg)	14	[illegible]	[illegible]
Aluminum	(mg/kg)	5040	3270	[13300]
Arsenic	(mg/kg)	7.5	[79.1]	[18.7]
[illegible]	(mg/kg)	[illegible]	[illegible]	[illegible]
[illegible]	(mg/kg)	[illegible]	[1930]	[illegible]
Copper	(mg/kg)	25	[4710]D	[185]
Iron	(mg/kg)	10000	8260	[17500]
Lead	(mg/kg)	3.7	[197]	[22.7]
Magnesium	(mg/kg)	[illegible]	[illegible]	[illegible]
Manganese	(mg/kg)	[illegible]	[illegible]	[illegible]
Nickel	(mg/kg)	15	[17600]	[110]
Potassium	(mg/kg)	[illegible]	[illegible]	[illegible]
[illegible]	(mg/kg)	[illegible]	[illegible]	[illegible]
Sodium	(mg/kg)	[illegible]	[illegible]	[illegible]
Thallium	(mg/kg)	ND	[15.9]	[illegible]
Zinc	(mg/kg)	[illegible]	[illegible]	[illegible]

CONSTITUENT	UNITS	NY-SCOL	[illegible]
Copper	(mg/kg)	[illegible]	[illegible]
Iron	(mg/kg)	[illegible]	[illegible]
Lead	(mg/kg)	91.7	[illegible]
Zinc	(mg/kg)	[illegible]	[illegible]

[illegible]

CONSTITUENT	UNITS	NY-SCOL	MM-LP08-0905030-0.5 09/05/2003	MM-LP18-0905030-0.5 09/05/2003 Duplicate	MM-LP08-0905030.5-[illegible] 09/05/2003
Aluminum	(mg/kg)	5040	[5110]	4980	3780
Arsenic	(mg/kg)	7.5	[8.6]	[7.6]	3.8
Copper	(mg/kg)	25	[210]	[214]	[35.3]
Lead	(mg/kg)	3.7	[15.3]	[19.1]	[illegible]
Magnesium	(mg/kg)	2100	[2110]	1830	[illegible]
Nickel	(mg/kg)	15	[468]	[399]	[19.3]
Selenium	(mg/kg)	2	[illegible]	11.5	0.93
Sodium	(mg/kg)	86.8	[113]J	111U	108U
Zinc	(mg/kg)	23.3	[illegible]	[102]	[220]

[illegible]

CONSTITUENT	UNITS	NY-SCOL	[illegible]	[illegible]
Aluminum	(mg/kg)	5040	[7110]J	[illegible]
Arsenic	(mg/kg)	7.5	[376]J	[10.3]
Beryllium	(mg/kg)	0.32	0.31UJ	[0.68]J
Cadmium	(mg/kg)	1	[1.3]J	0.23U
Calcium	(mg/kg)	1690	[2840]J	[16800]
Copper	(mg/kg)	25	[34700]JD	[483]
Iron	(mg/kg)	10000	[22200]J	[18600]
Lead	(mg/kg)	3.7	[859]J	[268]
Magnesium	(mg/kg)	2100	[3560]J	[3450]
Manganese	(mg/kg)	250	[262]J	[715]
Mercury	(mg/kg)	0.1	0.02UJ	[0.17]
Nickel	(mg/kg)	15	[63700]JD	[781]
Potassium	(mg/kg)	864	[1050]J	[1640]J
Selenium	(mg/kg)	2	[178]J	[3.1]
Sodium	(mg/kg)	86.8	[1520]J	[2750]
Thallium	(mg/kg)	ND	[23.6]J	0.60U
Zinc	(mg/kg)	23.3	[15900]J	[386]

SS-09

CONSTITUENT	UNITS	NY-SCOL	MM-SS09-073003 07/30/2003
Arsenic	(mg/kg)	7.5	[14.9]
Barium	(mg/kg)	300	[407]
Beryllium	(mg/kg)	0.59	[0.85]
Calcium	(mg/kg)	5060	[5470]
Chromium	(mg/kg)	70.5	[232]
Copper	(mg/kg)	25	[1980]
Nickel	(mg/kg)	87.5	[335]
Potassium	(mg/kg)	496	[886]J
Selenium	(mg/kg)	2	[28.9]
Sodium	(mg/kg)	96.4	[279]J
Zinc	(mg/kg)	50.7	[869]J

SS-07

CONSTITUENT	UNITS	NY-SCOL	MM-SS07-072903 07/29/2003
Arsenic	(mg/kg)	7.5	[62.7]
Chromium	(mg/kg)	70.5	[952]
Copper	(mg/kg)	25	[370]
Lead	(mg/kg)	91.7	[96.1]
Nickel	(mg/kg)	87.5	[483]
Potassium	(mg/kg)	496	[575]J
Selenium	(mg/kg)	2	[18.7]
Sodium	(mg/kg)	96.4	[969]J
Zinc	(mg/kg)	50.7	[3830]J

LP-05

CONSTITUENT	UNITS	NY-SCOL	MM-LP05-073003 07/30/2003	MM-LP05-0905031.0-1 09/05/2003
Benzo(a)anthracene	(ug/kg)	224	[510]J	35U
Benzo(a)pyrene	(ug/kg)	61	[500]J	52U
Chrysene	(ug/kg)	400	[540]J	55U
Aluminum	(mg/kg)	5040	[9670]	4560
Arsenic	(mg/kg)	7.5	[37.8]	[19.4]
Beryllium	(mg/kg)	0.32	[0.35]J	0.20J
Cadmium	(mg/kg)	1	[1.2]	0.13U
Calcium	(mg/kg)	1690	[3620]	[3190]
Chromium	(mg/kg)	10	[535]	R
Copper	(mg/kg)	25	[246]	[152]
Iron	(mg/kg)	10000	[12400]	[20000]
Lead	(mg/kg)	3.7	[66]	[10.5]
Magnesium	(mg/kg)	2100	[3150]	1770
Manganese	(mg/kg)	250	[274]	206
Mercury	(mg/kg)	0.1	[0.13]J	0.02
Nickel	(mg/kg)	15	[2070]	[340]
Selenium	(mg/kg)	2	[16.9]	[29.8]
Sodium	(mg/kg)	86.8	[699]J	[111]J
Zinc	(mg/kg)	23.3	[2240]J	[693]

SS-11

CONSTITUENT	UNITS	NY-SCOL	MM-SS11-072903 07/29/2003
Copper	(mg/kg)	25	[30.2]
Potassium	(mg/kg)	496	[655]J
Zinc	(mg/kg)	50.7	[250]J

LP-06A

CONSTITUENT	UNITS	NY-SCOL	MM-LP06A-101003 10/10/2003	MM-LP06A-1010032-2.5 10/10/2003
Aluminum	(mg/kg)	5040	[10500]	[8730]
Arsenic	(mg/kg)	7.5	[29.3]	[609]
Beryllium	(mg/kg)	0.32	[0.37]J	0.26U
Cadmium	(mg/kg)	1	0.15U	[7.2]
Calcium	(mg/kg)	1690	[3950]	[3550]
Chromium	(mg/kg)	10	[440]	[5050]
Cobalt	(mg/kg)	30	16.3	[34.0]
Copper	(mg/kg)	25	[3580]	[15000]D
Iron	(mg/kg)	10000	[14100]	[18700]
Lead	(mg/kg)	3.7	[39.5]J	[279]J
Magnesium	(mg/kg)	2100	[3370]	[2870]
Manganese	(mg/kg)	250	[330]	[344]
Mercury	(mg/kg)	0.1	[0.15]	[0.50]
Nickel	(mg/kg)	15	[2940]	[23200]D
Selenium	(mg/kg)	2	[80.1]	[733]
Sodium	(mg/kg)	86.8	[303]J	[964]J
Thallium	(mg/kg)	ND	0.39U	[8.1]
Zinc	(mg/kg)	23.3	[2100]J	[8570]J

SS-12

CONSTITUENT	UNITS	NY-SCOL	MM-SS12-072903 07/29/2003
Copper	(mg/kg)	25	[136]
Potassium	(mg/kg)	496	[651]J
Sodium	(mg/kg)	96.4	[122]J
Zinc	(mg/kg)	50.7	[160]J

SS-08

CONSTITUENT	UNITS	NY-SCOL	MM-SS08-072903 07/29/2003
Copper	(mg/kg)	25	[62.7]
Mercury	(mg/kg)	0.15	[0.52]J
Zinc	(mg/kg)	50.7	[76.9]J

SS-10

CONSTITUENT	UNITS	NY-SCOL	MM-SS10-073003 07/30/2003
Arsenic	(mg/kg)	7.5	[54.7]J
Calcium	(mg/kg)	5060	[7210]J
Chromium	(mg/kg)	70.5	[210]J
Cobalt	(mg/kg)	30	[40.3]J
Copper	(mg/kg)	25	[1120]J
Iron	(mg/kg)	21100	[34800]J
Lead	(mg/kg)	91.7	[122]J
Magnesium	(mg/kg)	7830	[8410]J
Manganese	(mg/kg)	408	[699]J
Mercury	(mg/kg)	0.15	[0.21]J
Nickel	(mg/kg)	87.5	[1360]J
Potassium	(mg/kg)	496	[1090]J
Selenium	(mg/kg)	2	[49.5]J
Sodium	(mg/kg)	96.4	[517]J
Zinc	(mg/kg)	50.7	[1050]J

LP-03

CONSTITUENT	UNITS	NY-SCOL	MM-LP03-073003 07/30/2003	MM-LP13-073003 07/30/2003 Duplicate	MM-LP03-0905031.3-2. 09/05/2003
Aluminum	(mg/kg)	5040	[5340]J	4500J	[14700]
Arsenic	(mg/kg)	7.5	[947]J	[1190]J	[103]
Beryllium	(mg/kg)	0.32	[0.6]J	[0.43]J	[0.43]J
Cadmium	(mg/kg)	1	[16.2]J	[19.2]J	0.70
Calcium	(mg/kg)	1690	[11000]J	[13600]J	[3000]
Chromium	(mg/kg)	10	[3980]J	[4070]J	R
Cobalt	(mg/kg)	30	[74.5]J	[86.6]J	R
Copper	(mg/kg)	25	[27200]J	[31300]J	[987]
Iron	(mg/kg)	10000	[32000]J	[35000]J	[18500]
Lead	(mg/kg)	3.7	[849]J	[1030]J	[67.2]
Magnesium	(mg/kg)	2100	[4210]J	[4950]J	[5380]
Manganese	(mg/kg)	250	[713]J	[864]J	229
Mercury	(mg/kg)	0.1	[0.75]J	[1.1]J	0.10
Nickel	(mg/kg)	15	[53800]J	[62900]J	[2380]
Potassium	(mg/kg)	864	463J	405J	[1430]J
Selenium	(mg/kg)	2	[1120]J	[1410]J	[184]
Sodium	(mg/kg)	86.8	[6980]J	[8690]J	[574]J
Zinc	(mg/kg)	23.3	[28900]J	[35600]J	[4940]

LP-02

CONSTITUENT	UNITS	NY-SCOL	MM-LP02-073003 07/30/2003	MM-LP02-08260310.010 08/26/2003
Benzo(a)pyrene	(ug/kg)	61	[250]J	53UJ
Aluminum	(mg/kg)	5040	[5700]J	4450
Arsenic	(mg/kg)	7.5	[627]J	[9.7]
Cadmium	(mg/kg)	1	[13.7]J	0.05U
Calcium	(mg/kg)	1690	[9920]J	1380
Chromium	(mg/kg)	10	[2690]J	[34.1]J
Cobalt	(mg/kg)	30	[62.3]J	3.4J
Copper	(mg/kg)	25	[33500]J	[203]
Iron	(mg/kg)	10000	[22500]J	5880
Lead	(mg/kg)	3.7	[649]J	[6.2]
Magnesium	(mg/kg)	2100	[2910]J	1570
Manganese	(mg/kg)	250	[610]J	83J
Mercury	(mg/kg)	0.1	[0.92]J	0.01U
Nickel	(mg/kg)	15	[38200]J	[226]
Selenium	(mg/kg)	2	[473]J	[13]J
Sodium	(mg/kg)	86.8	[9060]J	[124]J
Zinc	(mg/kg)	23.3	[37300]J	[235]

ST-02

CONSTITUENT	UNITS	NY-SCOL	MM-ST02-0826030-1 08/26/2003	MM-ST02-0826031-1.25 08/26/2003
Benzo(a)pyrene	(ug/kg)	61	130UJ	[110]J
Aluminum	(mg/kg)	5040	[6660]J	[12000]
Arsenic	(mg/kg)	7.5	[767]J	[82.7]
Beryllium	(mg/kg)	0.32	0.24J	[0.34]J
Cadmium	(mg/kg)	1	[10.7]J	0.39J
Calcium	(mg/kg)	1690	[9810]J	[9160]
Chromium	(mg/kg)	10	[1690]J	[240]J
Cobalt	(mg/kg)	30	[94.2]J	20.8
Copper	(mg/kg)	25	[8180]J	[593]
Iron	(mg/kg)	10000	[19500]J	[18400]
Lead	(mg/kg)	3.7	[325]J	[26.8]
Magnesium	(mg/kg)	2100	[3290]J	[9770]
Manganese	(mg/kg)	250	[579]J	[394]J
Mercury	(mg/kg)	0.1	[0.37]J	0.01J
Nickel	(mg/kg)	15	[49400]DJ	[1830]
Potassium	(mg/kg)	864	596J	[2050]J
Selenium	(mg/kg)	2	[565]J	[27.8]J
Sodium	(mg/kg)	86.8	[11900]J	[906]
Thallium	(mg/kg)	ND	[2]J	0.69U
Zinc	(mg/kg)	23.3	[29800]DJ	[1830]

ST-01

CONSTITUENT	UNITS	NY-SCOL	MM-ST01-082603 08/26/2003
m/p-xylene	(ug/kg)	1200	[1600]JD
Aluminum	(mg/kg)	5040	[7100]J
Arsenic	(mg/kg)	7.5	[330]J
Cadmium	(mg/kg)	1	[4.2]J
Calcium	(mg/kg)	1690	[8360]J
Chromium	(mg/kg)	10	[354]J
Copper	(mg/kg)	25	[368]J
Iron	(mg/kg)	10000	[13300]J
Lead	(mg/kg)	3.7	[208]J
Magnesium	(mg/kg)	2100	[2960]J
Manganese	(mg/kg)	250	[271]J
Mercury	(mg/kg)	0.1	[0.27]J
Nickel	(mg/kg)	15	[6470]J
Selenium	(mg/kg)	2	[225]J
Sodium	(mg/kg)	86.8	[5010]J
Zinc	(mg/kg)	23.3	[12500]DJ

TETRA TECH FW, INC.

TITLE:

Soil Exceedances
Magna Metals
Cortlandt, New York

DWN.: CTS	DES.: CTS	PROJECT NO.: 1172.0003
CHKD:	APPD:	
DATE: 06/22/04	REV.: 0	FIGURE NO.: 4-1

\GIS\GESKEY\GISPROJ31\MAGNA METALS\FIGURE 4-1 062204.DWG

BCLP02776

LEGEND

MW-01 MONITORING WELL LOCATION

520 CONTOUR LINE (20 FT INTERVAL)

GEOPHYSICAL SURVEY

APPROXIMATE WETLAND AREA

NOTES:
1. ALL GROUNDWATER RESULTS ARE REPORTED IN UG/L.

2. QUALIFIERS ARE DEFINED ON TABLE 4-2.

3. BRACKETS INDICATE AN EXCEEDANCE OF NYSDEC GROUNDWATER QUALITY STANDARDS (NY-GWQS).

4. LOCATIONS OF FORMER MAGNA METALS BUILDING, 1 STORY CONCRETE BLOCK BUILDING, SHED, GEOPHYSICAL SURVEY AREA, AND MONITORING WELLS ARE BASED ON SURVEY DATA.

SOURCES:
1. CONTOUR LINES, FURNACE [illegible] ROAD, AND FURNACE BROOK BELOW POND BASED ON MOHEGAN LAKE, NY AND PEEKSKILL, NY TOPOGRAPHIC QUADRANGLES, 7.5-MINUTE SERIES, DATED 195[illegible] AND 1957, RESPECTIVELY, ARE PHOTOREVISED IN 1981.

[illegible]

DECEMBER 18, 1999 AERIAL PHOTOGRAPH, AND SURVEY [illegible]

[illegible]

MW-04 CONSTITUENT	NY-GWQS	MM-GWMW04-100803 10/08/2003
cis-1,2-Dichloroethylene	5	[7.7]
Tetrachloroethylene	5	[13]
Trichloroethylene	5	[910]D
Arsenic	25	[133]
Barium	1000	[1140]
Beryllium	3	[5.6]
Chromium	50	[139]
Copper	200	[240]
Iron	300	[37200]
Magnesium	35000	[38600]
Manganese	300	[6400]
Nickel	100	[108]
Selenium	10	[131]
Sodium	20000	[76900]J
Thallium	0.5	[10.5]
Cyanide	200	[555]
Arsenic - Dissolved	25	[46.8]
Iron - Dissolved	300	[14300]
Manganese - Dissolved	300	[5810]
Selenium - Dissolved	10	[71.1]
Sodium - Dissolved	20000	[77800]J

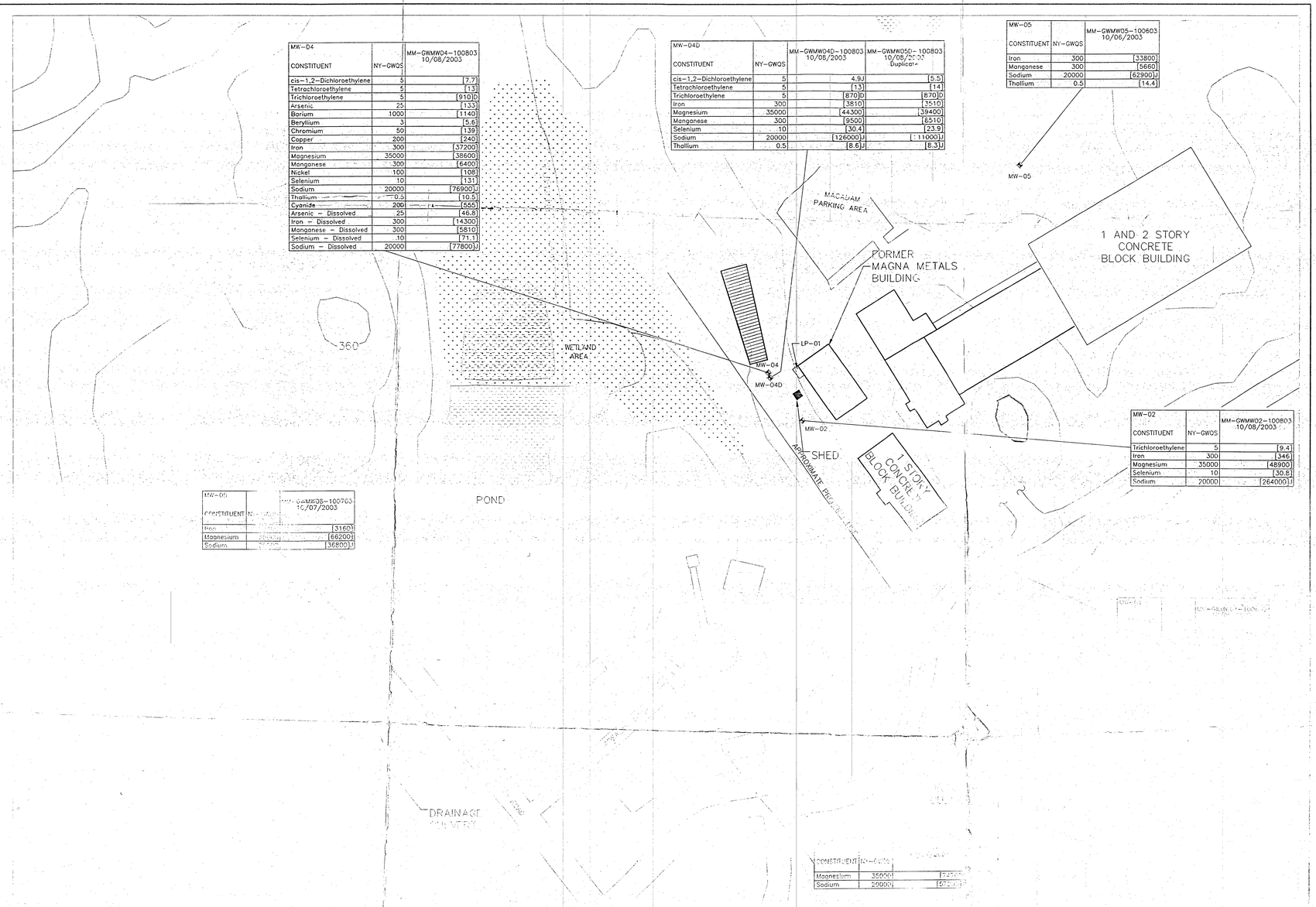
MW-04D CONSTITUENT	NY-GWQS	MM-GWMW04D-100803 10/08/2003	MM-GWMW05D-100803 10/08/2003 Duplicate
cis-1,2-Dichloroethylene	5	4.9J	[5.5]
Tetrachloroethylene	5	[13]	[14]
Trichloroethylene	5	[870]D	[870]D
Iron	300	[3810]	[3510]
Magnesium	35000	[44300]	[39400]
Manganese	300	[9500]	[8510]
Selenium	10	[30.4]	[23.9]
Sodium	20000	[126000]J	[111000]J
Thallium	0.5	[8.6]J	[8.3]J

MW-05 CONSTITUENT	NY-GWQS	MM-GWMW05-100603 10/06/2003
Iron	300	[33800]
Manganese	300	[5660]
Sodium	20000	[62900]J
Thallium	0.5	[14.4]

MW-02 CONSTITUENT	NY-GWQS	MM-GWMW02-100803 10/08/2003
Trichloroethylene	5	[9.4]
Iron	300	[346]
Magnesium	35000	[48900]
Selenium	10	[30.8]
Sodium	20000	[264000]J

MW-05 CONSTITUENT	NY-GWQS	MM-GWMW08-100703 10/07/2003
Iron	[illegible]	[3160]
Magnesium	[illegible]	[66200]
Sodium	[illegible]	[36800]J

CONSTITUENT	NY-GWQS	[illegible]
Magnesium	35000	[74700]
Sodium	20000	[57200]



TETRA TECH FW, INC.

TITLE: Groundwater Exceedances
Magna Metals
Cortlandt, New York

DWN:	DES:	PROJECT NO.:
CTS	CTS	1172.0003
DATE: 06/21/04	REV.: 0	FIGURE NO.: 4-2

N:\GIS\GISKEY\GISPROJ31\MAGNA METALS\FIGURE 4-2 062104.DWG

BCLP02777

LEGEND

SW-5 SUPPLEMENTAL RI SURFACE WATER SAMPLE OR ELEVATION LOCATION

SD-15 SUPPLEMENTAL RI SEDIMENT SAMPLE LOCATION

320 CONTOUR LINE (20 FT INTERVAL)

GEOPHYSICAL SURVEY

APPROXIMATE WETLAND AREA

NOTES:
1. QUALIFIERS ARE DEFINED ON TABLES 4-4 AND 4-5.

2. BRACKETS INDICATE AN EXCEEDANCE OF NYSDEC SEDIMENT CRITERIA (NY-SC) OR NYSDEC WATER QUALITY STANDARDS – CLASS B (NYS-WQS-B).

3. SEDIMENT CRITERIA FOR PAHs WERE ADJUSTED BASED ON TOC SAMPLES TAKEN AT EACH LOCATION.

4. LOCATIONS OF FORMER MAGNA METALS BUILDING, 1 STORY CONCRETE BLOCK BUILDING, SHED, GEOPHYSICAL SURVEY AREA, AND MONITORING WELLS ARE BASED ON SURVEY DATA.

SOURCES:
1. CONTOUR LINES, FURNACE DOCK ROAD, AND FURNACE BROOK BELOW POND BASED ON MOHEGAN LAKE, NY AND PEEKSKILL, NY TOPOGRAPHIC QUADRANGLES, 7.5-MINUTE SERIES, DATED 1956 AND 1957, RESPECTIVELY, AND PHOTOREVISED IN 1981.

2. MANMADE PRIVATE FEATURES BASED ON WESTCHESTER COUNTY DEPARTMENT OF PLANNING AERIAL PHOTOGRAPHY [illegible] 1995 [illegible]

3. APPROXIMATE WETLAND AREA BASED ON FIELD OBSERVATION

SW-13			MM-SW13-032904 03/29/2004
CONSTITUENT	UNITS	NY-WQS-B	
Aluminum	(ug/l)	100	[366]
Iron	(ug/l)	300	[327]J

SD-13			MM-SD13-033004 03/30/2004
CONSTITUENT	UNITS	NY-SC	
Nickel	(mg/kg)	50	[63.5]J

SW-22			MM-SW22-032904 03/29/2004
CONSTITUENT	UNITS	NY-WQS-B	
Aluminum	(ug/l)	100	[381]J
Cobalt	(ug/l)	5	[5.1]J
Copper	(ug/l)	16	[772]J
Iron	(ug/l)	300	[2020]J
Nickel	(ug/l)	94	[161]
Selenium	(ug/l)	4.6	[8.7]J
Zinc	(ug/l)	150	[343]J

SW-15			MM-SW15-032904 03/29/2004
CONSTITUENT	UNITS	NY-WQS-B	
Aluminum	(ug/l)	100	[328]

SD-15			MM-SD15-033004 03/30/2004
CONSTITUENT	UNITS	NY-SC	
Benzo(a)anthracene	(ug/kg)	52	[470]J
Benzo(a)pyrene	(ug/kg)	52	[660]J
Benzo(b)fluoranthene	(ug/kg)	52	[1200]J
Benzo(k)fluoranthene	(ug/kg)	52	[600]J
Chrysene	(ug/kg)	52	[650]J
Chromium	(mg/kg)	110	[158]J
Copper	(mg/kg)	110	[1040]J
Nickel	(mg/kg)	50	[332]J
Zinc	(mg/kg)	270	[528]J

SW-14			MM-SW14-032904 03/29/2004
CONSTITUENT	UNITS	NY-WQS-B	
Aluminum	(ug/l)	100	[690]
Copper	(ug/l)	16	[57.6]J
Iron	(ug/l)	300	[1670]J

SD-14			MM-SD14-033004 03/30/2004
CONSTITUENT	UNITS	NY-SC	
Copper	(mg/kg)	110	[672]J
Nickel	(mg/kg)	50	[300]J

SD-20			MM-SD20-033104 03/31/2004
CONSTITUENT	UNITS	NY-SC	
Copper	(mg/kg)	110	[241]J
Nickel	(mg/kg)	50	[200]J

SW-20			MM-SW20-032904 03/29/2004
CONSTITUENT	UNITS	NY-WQS-B	
Aluminum	(ug/l)	100	[358]J
Iron	(ug/l)	300	[363]J

SD-21			MM-SD21-040304 04/03/2004
CONSTITUENT	UNITS	NY-SC	
Copper	(mg/kg)	110	[403]J
Lead	(mg/kg)	110	[112]J
Nickel	(mg/kg)	50	[180]J

SD-24			MM-SD24-040304 04/03/2004
CONSTITUENT	UNITS	NY-SC	
Copper	(mg/kg)	110	[216]J
Nickel	(mg/kg)	50	[161]

SD-26			MM-SD26-040304 04/03/2004
CONSTITUENT	UNITS	NY-SC	
Benzo(a)anthracene	(ug/kg)	13	[360]J
Benzo(a)pyrene	(ug/kg)	13	[410]J
Benzo(b)fluoranthene	(ug/kg)	13	[680]J
Chrysene	(ug/kg)	13	[510]J
Copper	(mg/kg)	110	[194]J
Nickel	(mg/kg)	50	[121]

SD-28			MM-SD28-040304 04/03/2004
CONSTITUENT	UNITS	NY-SC	
Benzo(b)fluoranthene	(ug/kg)	130	[180]
Chrysene	(ug/kg)	130	[150]
Copper	(mg/kg)	110	[130]
Nickel	(mg/kg)	50	[117]

SD-29			MM-SD29-040304 04/03/2004
CONSTITUENT	UNITS	NY-SC	
Copper	(mg/kg)	110	[415]J
Nickel	(mg/kg)	50	[170]J

SD-30			MM-SD30-040304 04/03/2004
CONSTITUENT	UNITS	NY-SC	
Aluminum	(mg/kg)	9600	[9420]
Iron	(mg/kg)	5000	[6630]

SD-31			MM-SD31-040304 04/03/2004	NY-SC	Duplicate
CONSTITUENT	UNITS	NY-SC			
Benzo(a)anthracene	(ug/kg)	98.8	[320]J	78	[300]
Benzo(a)pyrene	(ug/kg)	98.8	[320]J	78	[300]
Benzo(b)fluoranthene	(ug/kg)	98.8	260]J	78	900]J
Benzo(k)fluoranthene	(ug/kg)	98.8	220]J	78	220]J
Chrysene	(ug/kg)	98.8	180]J	78	550]J
Chromium	(mg/kg)	110	166]J	110	[123]
Copper	(mg/kg)	110	127]J	110	[220]
Nickel	(mg/kg)	50	[37]	50	[35]

SD-17			MM-SD17-033104 03/31/2004
CONSTITUENT	UNITS	NY-SC	
Benzo(a)anthracene	(ug/kg)	7.93	[370]
Benzo(a)pyrene	(ug/kg)	7.93	[430]J
Benzo(b)fluoranthene	(ug/kg)	7.93	[500]J
Benzo(k)fluoranthene	(ug/kg)	7.93	[360]J
Chrysene	(ug/kg)	7.93	[490]
Indeno(1,2,3-cd)pyrene	(ug/kg)	7.93	[48]J
Phenanthrene	(ug/kg)	732	[900]

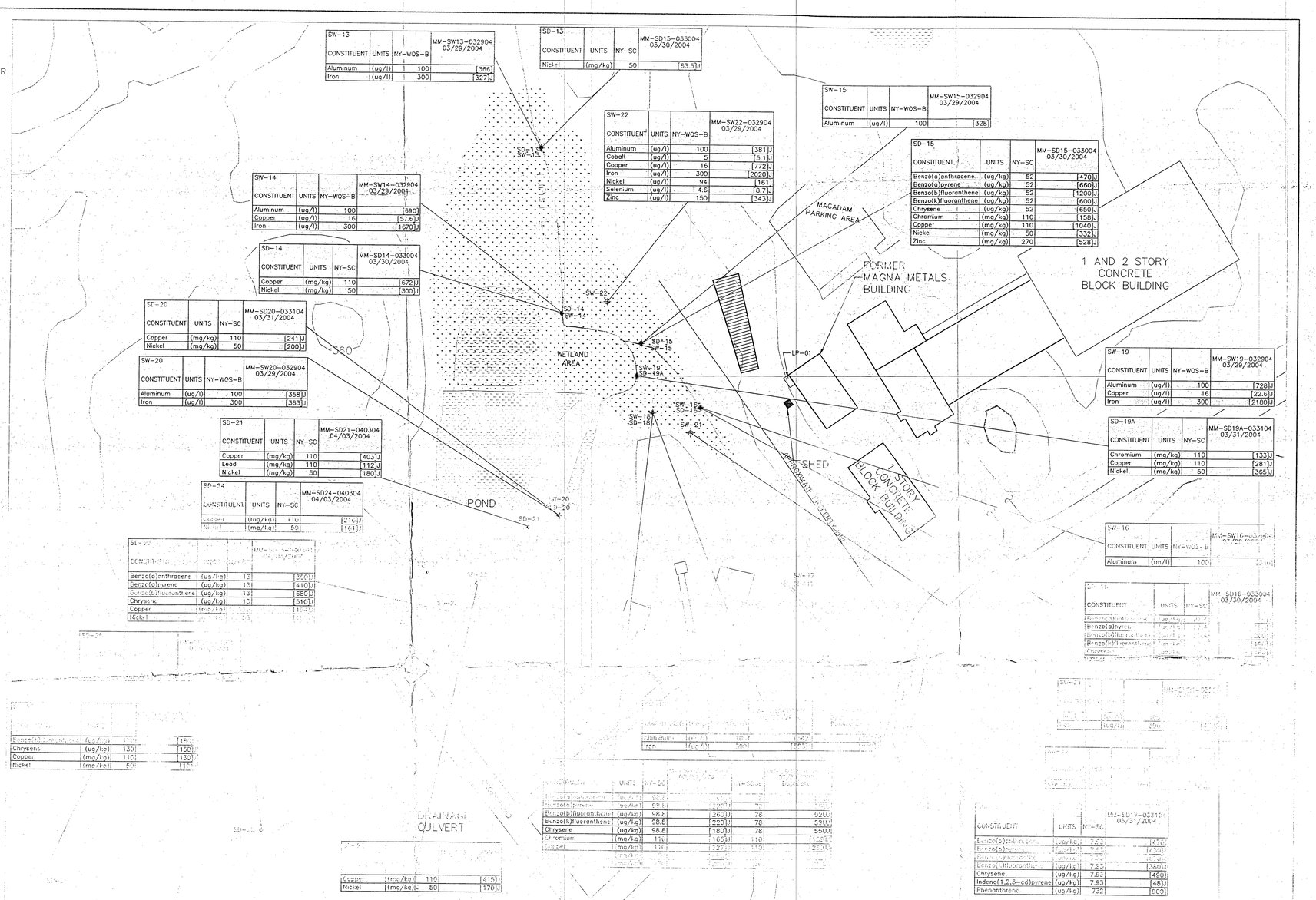
SW-19			MM-SW19-032904 03/29/2004
CONSTITUENT	UNITS	NY-WQS-B	
Aluminum	(ug/l)	100	[728]J
Copper	(ug/l)	16	[22.6]J
Iron	(ug/l)	300	[2180]J

SD-19A			MM-SD19A-033104 03/31/2004
CONSTITUENT	UNITS	NY-SC	
Chromium	(mg/kg)	110	[133]J
Copper	(mg/kg)	110	[281]J
Nickel	(mg/kg)	50	[365]J

SW-16			MM-SW16-032904 03/29/2004
CONSTITUENT	UNITS	NY-WQS-B	
Aluminum	(ug/l)	100	[31]J

SD-16			MM-SD16-033004 03/30/2004
CONSTITUENT	UNITS	NY-SC	
Benzo(a)anthracene	(ug/kg)	[illegible]	[illegible]
Benzo(a)pyrene	(ug/kg)	[illegible]	[illegible]
Benzo(b)fluoranthene	(ug/kg)	[illegible]	[illegible]
Benzo(k)fluoranthene	(ug/kg)	[illegible]	[illegible]
Chrysene	(ug/kg)	[illegible]	[illegible]
PAHs	(ug/kg)	[illegible]	[illegible]

SW-21			MM-SW21-033004 03/30/2004
CONSTITUENT	UNITS	NY-WQS-B	
Aluminum	(ug/l)	100	[illegible]
Iron	(ug/l)	300	[illegible]



TETRA TECH FW, INC.

TITLE:
Sediment and Surface Water Exceedances
Magna Metals
Cortlandt, New York

DWN: CTS	DSGN: CTS	PROJ. NO. 112G0002
CHK:		
DATE: 06/21/04	REV.: 0	FIGURE NO. 4-3

N:\GIS\GISKEY\CSPROJ31\MAGNA METALS\FIGURE 4-3 062104.DWG

BCLP02778