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November 9, 2006

Mr. Michael J. Hinton, P.E.
Division of Hazardous Waste Remediation Region 9
New York State Department of Environmental Conservation
270 Michigan Avenue
Buffalo, New York 14203-2999

Re: 2006 Annual Groundwater Sampling Report
Ferro Electronic Material Systems
Niagara Falls, New York
Project #: 16342

Dear Mr. Hinton:

This letter report, prepared by Blasland, Bouck & Lee, Inc. (BBL), an ARCADIS company, on behalf of Ferro Electronic Material Systems (Ferro), presents the results of the annual groundwater sampling event conducted at Ferro's site located in Niagara Falls, New York. The annual groundwater monitoring program presented in the *Fourth Quarterly Ground-Water Sampling Report* (BBL, August 1996) was approved by the New York State Department of Environmental Conservation (NYSDEC) in its October 7, 1996 letter to TAM Ceramics, Inc. (former facility owner). At the request of the NYSDEC, the monitoring well network presently includes four wells: upgradient well NPW-H2U and downgradient wells MW-BBL1R, MW-BBL2R, and MW-BBL3R.

On July 26, 2006, BBL collected the annual round of groundwater samples from the above-referenced wells. The groundwater samples were analyzed for Target Analyte List inorganics (total) by Columbia Analytical Services, Inc. of Rochester, New York. The laboratory analytical results for this sampling event, as well as the results from previous sampling events, are presented in Tables 1-1, 1-2, 1-3, and 1-4. These tables also present the New York Codes, Rules, and Regulations (NYCRR) Part 703 groundwater standards (Standards) for inorganics. The laboratory report, which contains the practical quantitation limits and dilution factors, is also attached.

In addition, water-level measurements were taken at the four monitoring wells referenced above. Table 2 summarizes the groundwater elevations calculated using surveyed reference elevations for the wells. Figure 1 illustrates the potentiometric surface for the groundwater measurements taken at the site on July 26, 2006.

Approximately 0.03 feet of dense nonaqueous phase liquid (DNAPL) was measured in monitoring well MW-BBL2R during the 2006 annual monitoring event. As previously agreed, the DNAPL (also observed during the 2002, 2003, 2004, and 2005 annual events) is associated with an upgradient site

Letter. HQ32028. 2006-11-09.
2006 Annual GW Sampling
- Report.pdf

(Hyde Park Landfill) that is presently undergoing active remediation. As in the past, care was taken to not disturb the DNAPL observed at monitoring well MW-BBL2R during purging and sampling. Similar to past sampling events, the DNAPL was not collected for analysis because Ferro is required to analyze only for inorganics in groundwater.

Groundwater samples were collected following the low-flow sampling method, using a peristaltic pump with dedicated tubing in order to minimize sample turbidity. As discussed in a previous report, high turbidity values that were observed in the samples collected during previous sampling events could have been a factor in the higher concentrations of metals recorded. As a result of the modified sampling method, the concentrations of metals detected during the 2005 and 2006 annual groundwater events are considerably lower than the results of previous sampling events. The 2006 sampling results are summarized below.

Upgradient Monitoring Well NPW-H2U

Metals detected at concentrations greater than the Standards in groundwater samples collected from NPW-H2U dropped from seven in October 2004 (cadmium, chromium, copper, iron, lead, nickel, and sodium) to four in August 2005 (cadmium, chromium, iron, and sodium) and to two in July 2006 (iron and sodium). In NPW-H2U, the concentrations of iron dropped from 4.3 milligrams per liter (mg/L) to 1.7 mg/L, and sodium increased from 45.8 mg/L to 96.2 mg/L. The two metals detected at elevated concentrations in groundwater samples collected from monitoring well NPW-H2U may be associated with an upgradient source. Evidence supporting this include the location of NPW-H2U being upgradient from the Ferro site, and the presence of offsite contamination (e.g., the presence of DNAPL at MW-BBL2R from the Hyde Park Landfill) from an upgradient source impacting the Ferro site.

Downgradient Monitoring Well MW-BBL1R

Metals detected at concentrations greater than the Standards in groundwater samples collected from MW-BBL1R dropped from four in October 2004 (iron, lead, manganese, and sodium) to one in August 2005 and July 2006 (sodium). In MW-BBL1R, the concentrations of sodium continued to decrease from 231 mg/L to 47.4 mg/L from August 2005 to July 2006.

Downgradient Monitoring Well MW-BBL2R

Sodium continued to be the only metal detected at concentrations greater than the Standards in groundwater samples collected from MW-BBL2R in July 2006. In MW-BBL2R, the concentrations of sodium concentrations decreased from 39.0 mg/L in August 2005 to 30.4 mg/L in July 2006.

Downgradient Monitoring Well MW-BBL3R

Metals detected at concentrations greater than the Standards in groundwater samples collected from MW-BBL3R dropped from four in October 2004 (iron, lead, manganese, and sodium) to one in August 2005 and July 2006 (sodium). In MW-BBL3R, the concentrations of sodium decreased from 700 mg/L to 57.3 mg/L from August 2005 to July 2006.

Groundwater elevations, measured on July 26, 2006, are consistent with previous data (see Figure 1).

Ferro has been monitoring this site for over 10 years. Based on the continued improvement in the inorganic groundwater quality at the site, specifically noting the consistency demonstrated by the low-flow sampling results for August 2005 and July 2006, we are requesting that the annual groundwater sampling program be revised to biannual.

If you have any questions please contact me at (585) 385-0090, ext. 22.

Very truly yours,

BLASLAND, BOUCK & LEE, INC.



William B. Popham
Vice President

RAW/mey
Attachments

cc: Mr. Russell Steiger, Ferro Electronic Material Systems
Mr. Lyndon LaBrake, Ferro Electronic Material Systems
Mr. David Fetzer, Ferro Electronic Material Systems
Mr. David Kingsley, Blasland, Bouck & Lee, Inc.
Mr. Raymond Wagner, Blasland, Bouck & Lee, Inc.

TABLE 1-1

GROUNDWATER SAMPLES
ANALYTICAL RESULTS - INORGANICS
FERRO ELECTRONIC MATERIAL SYSTEMS
NIAGARA FALLS, NEW YORK

ANALYTE	NPW-H2U (upgradient)																PART 703 GROUND WATER STANDARD	
	01/06/95	09/27/95	12/13/95	03/22/96	06/24/96	12/26/96	07/08/97	01/12/98	07/01/98	07/21/99	08/15/00	07/27/01	07/18/02	10/28/03	10/26/04	08/19/05		07/26/06
Aluminum	2.96	4.78	3.99	2.81	2.83	2.32	2.59	0.985	0.306	7.28	4.38	2.85	3	0.239	24.3	2.28	0.100 U	N/A
Antimony	0.100 U	0.010 U	0.0100 U	0.0600 U	0.060 U	0.060 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.003
Arsenic	0.0094	0.0165	0.0050 U	0.0100 U	0.0113	0.010 U	0.0122	0.0173	0.0136	0.0100 U	0.0600 U	0.0205	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.025
Barium	0.0355	0.239	0.0348	0.0372	0.0316	0.0292	0.153	0.136	0.116	0.193	0.131	0.146	0.0719	0.13	0.233	0.106	0.140	1
Beryllium	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	N/A
Cadmium	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00742	0.00500 U	0.00669	0.016	0.00500 U	0.005
Calcium	129	192	145	117	128	106	144	129	131	187	181	158	102	128	150	97.5	127	N/A
Chromium	0.010 U	0.010 U	0.0100 U	0.0100 U	0.010 U	0.010 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.345	0.0837	1.64	0.792	0.0100 U	0.05
Cobalt	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.050 U	0.050 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	N/A
Copper	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.020 U	0.020 U	0.0209	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0523	0.02	0.209	0.0791	0.0200 U	0.2
Iron	5.64	19.9	6.83	5.8	5.8	3.63	9.11	3.4	5.41	21.8	13.3	24.9	6.56	5.08	18.6	4.3	1.73	0.3
Lead	0.103	2.5	0.181	0.197	0.149	0.0378	0.915	0.423	0.907	1.66	0.457	3.04	0.0323	0.242	0.542	0.0114	0.0178	0.025
Magnesium	57.3	80.1	61.2	49.4	48.5	41.5	59.7	50.4	46.2	88.2	82.8	62.2	16	46.5	56.2	33.9	45.6	N/A
Manganese	0.127	0.294	0.178	0.131	0.107	0.0826	0.161	0.0875	0.0764	0.43	0.398	0.166	0.237	0.192	0.287	0.0848	0.0931	0.3
Mercury	0.0020 U	0.0020 U	0.0020 U	0.003358	0.0002	0.00020 U	0.000300 U	0.000300 U	0.000300 U	0.000300 U	0.000300 U	0.000300 U	0.000300 U	0.000300 U	0.000300 U	0.000300 U	0.000300 U	0.0007
Nickel	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.040 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.238	0.0454	0.336	0.0839	0.0400 U	0.1
Potassium	1.57	3.23	1.8	1.92	1.85	1.97	2.42	2.00 U	2.00 U	3.16	2.56	4.08	5.15	2.05	3.61	2.00 U	2.00 U	N/A
Selenium	0.0050 U	0.010 U	0.0050 U	0.0050 U	0.0050 U	0.00839	0.0100 U	0.0166	0.00500 U	0.0113	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.0100 U	0.01
Silver	0.010 U	0.010 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.05
Sodium	12.1	155	8.72	8.72	9.24	4.97	88.1	107	84.4	101	90.7	69.8	121	88.3	92.4	45.8	96.2	20
Thallium	0.010 U	0.010 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0111	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	N/A
Vanadium	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	N/A
Zinc	0.364	2.94	0.277	0.285	0.25	0.137	2.02	1.2	1.83	1.83	2.06	2.67	0.637	1.34	2.37	0.672	1.05	N/A

Notes:

All results are reported in milligrams per liter.
 Ambient water quality standards from 6 New York Codes, Rules, and Regulations Part 703.5, effective date April 7, 1999, as amended.
 Concentration greater than Part 703 ambient water quality standard.
 U - Not detected.

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TABLE 1-2
GROUNDWATER SAMPLES
ANALYTICAL RESULTS - INORGANICS
FERRO ELECTRONIC MATERIAL SYSTEMS
NIAGARA FALLS, NEW YORK

ANALYTE	MW-BBL IR (downgradient)																PART 703 GROUND WATER STANDARD	
	01/06/95	09/27/95	12/13/95	03/22/96	06/24/96	12/26/96	07/08/97	01/12/98	07/01/98	07/21/99	08/15/00	07/27/01	07/18/02	10/28/03	10/26/04	08/19/05		07/28/06
Aluminum	0.242	16.5	7.61	12.7	22.4	5.52	17.6	1.67	6.84	1.86	2.1	10.4	2.37	5.69	2.85	0.100 U	0.100 U	N/A
Antimony	0.100 U	0.0107	0.0100 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.003
Arsenic	0.0066	0.0601	0.0050 U	0.0267	0.0275	0.0122	0.0541	0.0155	0.0103	0.0100 U	0.0100 U	0.0102	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.025
Barium	0.0200 U	0.35	0.148	0.22	0.239	0.178	0.246	0.11	0.131	0.0728	0.0708	0.146	0.136	0.102	0.105	0.068	0.0603	1
Beryllium	0.0050 U	0.0050 U	0.0050 U	0.00500 U	0.0050 U	0.0050 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	N/A
Cadmium	0.0050 U	0.0173	0.0050 U	0.0071	0.0116	0.00565	0.0158	0.00500 U	0.00733	0.00500 U	0.00500 U	0.00579	0.00500 U	0.00773	0.00500 U	0.00500 U	0.00500 U	0.005
Calcium	90.9	627	256	372	690	424	420	142	277	140	118	238	166	162	165	106	144	N/A
Chromium	0.010 U	0.0283	0.0292	0.021	0.0318	0.0118	0.0223	0.0100 U	0.0126	0.0100 U	0.0100 U	0.0125	0.0102	0.0131	0.0100 U	0.0100 U	0.0100 U	0.05
Cobalt	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0536	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	N/A
Copper	0.0200 U	0.0216	0.0200 U	0.0251	0.0486	0.0203	0.0385	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0228	0.0200 U	0.0200 U	0.0200 U	0.2
Iron	0.318	25.5	10.4	19.9	35.6	10.6	26.8	2.46	14.4	3.89	11.8	20.6	4.73	15	3.98	0.100 U	0.100 U	0.3
Lead	0.0068	0.315	0.111	0.14	0.307	0.075	0.747	0.0125	0.32	0.104	0.261	0.693	0.13	0.541	0.324	0.00575	0.00500 U	0.025
Magnesium	35	572	244	355	495	428	474	195	210	98.8	78.7	146	192	105	186	119	231	N/A
Manganese	0.010 U	1.34	0.431	0.719	1.49	0.601	1.51	0.11	0.814	0.342	1.02	3.82	0.511	2.43	1.91	0.0181	0.0100 U	0.3
Mercury	0.00020 U	0.000332	0.000423	0.000546	0.00020 U	0.00030 U	0.000357	0.000300 U	0.000300 U	0.000300 U	0.000300 U	0.000300 U	0.000300 U	0.000300 U	0.000300 U	0.000300 U	0.000300 U	0.0007
Nickel	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.1
Potassium	1.00 U	27.5	19.5	27.4	28.6	50.5	32	14.2	21	6.61	5.35	12	11.9	6.52	15.0	10.4	23.5	N/A
Selenium	0.0050 U	0.010 U	0.00500 U	0.00500 U	0.00500 U	0.0247	0.0100 U	0.0256	0.00500 U	0.00579	0.00579	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.0100 U	0.01
Silver	0.010 U	0.0218	0.0100 U	0.011	0.013	0.0100 U	0.0115	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.05
Sodium	7.83	890	392	625	558	885	771	393	238	93.4	71	91.9	364	72.8	300	231	47.4	20
Thallium	0.010 U	0.010 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0252	0.0192	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	N/A
Vanadium	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	N/A
Zinc	0.0634	3.17	1.4	2.18	2.39	1.49	2.73	0.709	1.5	0.642	0.912	2.13	0.754	1.55	1.21	0.493	0.438	N/A

Notes: All results are reported in milligrams per liter.
Ambient water quality standards from New York Codes, Rules, and Regulations Part 703.5, effective date April 7, 1999, as amended.
Concentration greater than Part 703 ambient water quality standard.
U - Not detected.

TABLE 1-3

GROUNDWATER SAMPLES
ANALYTICAL RESULTS - INORGANICS
FERRO ELECTRONIC MATERIAL SYSTEMS
NIAGARA FALLS, NEW YORK

ANALYTE	MW-BBL2R (downgradient)																	PART 703 GROUND WATER STANDARD
	01/06/95	09/27/95	12/13/95	03/22/96	06/24/96	12/26/96	07/03/97	01/21/98	07/01/98	07/21/99	08/15/00	07/27/01	07/18/02	10/28/03	10/26/04	08/19/05	07/26/06	
Aluminum	0.118	28.4	7.78	4.71	11.3	0.528	13.1	0.512	6.64	0.288	0.817	4.26	0.545	1.44	0.100 U	0.100 U	0.100 U	N/A
Antimony	0.103	0.010 U	0.0100 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.003
Arsenic	0.03	0.0224	0.00500 U	0.0100 U	0.0117	0.0100 U	0.0194	0.0116	0.0169	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.025
Barium	0.0812	0.151	0.0497	0.102	0.068	0.0200 U	0.086	0.0200 U	0.0618	0.0376	0.0241	0.0495	0.0453	0.0385	0.0282	0.0304	0.0263	1
Beryllium	0.0050 U	0.0050 U	0.0050 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	N/A
Cadmium	0.0050 U	0.0105	0.0050 U	0.00500 U	0.00500 U	0.00500 U	0.00655	0.00500 U	0.00587	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.005
Calcium	192	280	129	102	103	88.1	181	98	184	111	86.8	136	105	107	96.7	98.1	97.9	N/A
Chromium	0.010 U	0.0388	0.0102	0.0100 U	0.0129	0.0100 U	0.0194	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.05
Cobalt	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	N/A
Copper	0.0200 U	0.0295	0.0200 U	0.0205	0.0200 U	0.0200 U	0.037	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.2
Iron	0.0973	27.8	5.76	3.94	9.44	0.398	12.1	0.527	7.01	0.305	0.925	3.53	0.418	1.31	0.143	0.100 U	0.100 U	0.3
Lead	0.0050 U	0.27	0.0997	0.0681	0.135	0.00814	0.197	0.00779	0.0626	0.00500 U	0.026	0.0501	0.00542	0.0129	0.00500 U	0.00500 U	0.00500 U	0.025
Magnesium	152	179	56.4	41.6	41.8	32.7	103	36.4	98.7	67.7	39.6	76.4	70	61	48.8	55.2	51.8	N/A
Manganese	0.010 U	0.705	0.12	0.0771	0.133	0.0100 U	0.313	0.0127	0.277	0.0159	0.0176	0.119	0.017	0.0478	0.0100 U	0.0100 U	0.0100 U	0.3
Mercury	0.0020 U	0.0022	0.00020 U	0.000392	0.00020 U	0.00030 U	0.000300 U	0.000300 U	0.000300 U	0.000300 U	0.000300 U	0.000300 U	0.000300 U	0.000300 U	0.000300 U	0.000300 U	0.000300 U	0.0007
Nickel	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.1
Potassium	6.3	36.5	4.33	1.84	3.94	1.00 U	8.96	2.00 U	17.8	17.2	3.22	15.7	22.4	12.8	8.87	10.9	8.81	N/A
Selenium	0.0050 U	0.010 U	0.0050 U	0.00500 U	0.00500 U	0.00500 U	0.0100 U	0.0112	0.00500 U	0.0069	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.01
Silver	0.010 U	0.010 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.05
Sodium	284	74.8	12.6	5.86	7.7	4.8	28.4	6.14	44.8	54	13.8	40	57.8	34.9	30.9	39	30.4	20
Thallium	0.010 U	0.010 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0125	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	N/A
Vanadium	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	N/A
Zinc	0.703	3.12	0.337	0.231	0.308	0.0763	0.942	0.104	1.25	0.828	0.157	1.07	0.982	0.922	0.768	0.881	0.877	N/A

Notes:

- All results are reported in milligrams per liter.
- Ambient water quality standards from 6 New York Codes, Rules, and Regulations Part 703.5, effective date April 7, 1999, as amended.
- Concentration greater than Part 703 ambient water quality standard.
- U - Not detected.

TABLE 1-4

GROUNDWATER SAMPLES
ANALYTICAL RESULTS - INORGANICS
FERRO ELECTRONIC MATERIAL SYSTEMS
NIAGARA FALLS, NEW YORK

ANALYTE	MW-BBL3R (downgradient)										PART 703 GROUND WATER STANDARD
	01/21/98	07/01/98	07/21/99	08/15/00	07/27/01	07/18/02	10/28/03	10/26/04	08/19/05	07/26/06	
Aluminum	0.202	2	0.349	1.7	5.73	1.46	0.656	7.14	0.100 U	0.100 U	N/A
Antimony	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.003
Arsenic	0.0142	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.025
Barium	0.0772	0.115	0.101	0.101	0.11	0.0957	0.0922	0.127	0.0631	0.059	1
Beryllium	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	N/A
Cadmium	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.005
Calcium	85.6	237	180	177	271	177	171	281	156	178	N/A
Chromium	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0161	0.0100 U	0.0100 U	0.05
Cobalt	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	N/A
Copper	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.2
Iron	0.321	3.69	0.737	2.49	5.66	1.34	0.893	9.23	0.100 U	0.100 U	0.3
Lead	0.00500 U	0.1	0.0109	0.0432	0.0777	0.0178	0.00925	0.151	0.00500 U	0.00500 U	0.025
Magnesium	379	571	403	452	428	450	439	438	313	262	N/A
Manganese	0.131	0.319	0.03	0.176	0.324	0.0733	0.0428	0.592	0.0100 U	0.0100 U	0.3
Mercury	0.000300 U	0.000200 U	0.000300 U	0.000300 U	0.000300 U	0.000300 U	0.000300 U	0.000300 U	0.000300 U	0.000300 U	0.0007
Nickel	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.1
Potassium	26.8	66.7	47.2	49.9	47	44.2	40.2	42.4	28.6	30.4	N/A
Selenium	0.0337	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.0100 U	0.01
Silver	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.05
Sodium	740	1040	1320	969	889	906	725	795	700	57.3	20
Thallium	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	N/A
Vanadium	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	N/A
Zinc	0.0903	0.748	0.558	0.619	0.83	0.584	0.47	1.13	0.464	0.452	N/A

Notes:

All results are reported in milligrams per liter.

Ambient water quality standards from 6 New York Codes, Rules, and Regulations Part 703.5, effective date April 7, 1999, as amended.

Concentration greater than Part 703 ambient water quality standard.

U - Not detected.