



VIA ELECTRONIC MAIL

August 16, 2016

David Lates
Environmental Engineer 1
New York State Department of Environmental Conservation
RCRA Permitting
Division of Environmental Remediation
Albany, New York 12233-7013

Re: 2016 Semiannual Progress Report – January 2016 through June 2016
Former Dover Electronics Site, Kirkwood, Broome County, New York
NYSDEC Site No. 7-04-026

Dear Mr. Lates,

On behalf of Dover Corporation, Verina Engineering, P.C. (VERINA) has prepared this 2016 Semiannual Progress Report to summarize the remedial activities which have been performed from January through June 2016 at the above-referenced site (Figure 1).

The field activities completed during the reporting period included:

- Six rounds of monthly manual In-Situ Chemical Oxidation (ISCO) injection at select wells;
- Collection of two rounds of quarterly groundwater field parameter measurements from selected monitoring wells/points in February and May 2016;
- Site-wide groundwater gauging and well inspections in March 2016;
- Collection of annual indoor air samples in March 2016;
- Collection of groundwater samples for laboratory analysis from select monitoring wells/points in March 2016;
- Monthly inspection of seven areas associated with the environmental Deed Restrictions and their engineering controls;
- Maintenance of cap areas 3, 4, and 5 in April and May 2016;
- Monthly operation, monitoring and maintenance (OM&M) of the active sub-slab depressurization (ASD) system.



ISCO Injection System Operation – Manual Injection

Monthly manual ISCO injection events, utilizing a 10% sodium permanganate solution, began in December 2013. The goal of the ISCO injection events is to reduce the levels of the residual site compounds of concern (COCs) in groundwater.

Monthly manual injection occurred at wells IJ-1, IJ-2, IJ-3, IJ-4, IJ-7, IJ-10, MW-7A, MW-16, MW-24, MP-4, MP-5, MP-11, MP-12, and MP-14 located at the source area as well as IJ-6, MW-25, and MW-28 located in the Pilot Truck Stop area. During the reporting period, a total of 5,030 gallons of 10% sodium permanganate solution were injected into the groundwater. Typically approximate 900 to 1,000 gallons of permanganate solution was injected at the selected wells on a monthly basis. However, during the February 2016 injection event, only 230 gallons of the ISCO solution was injected into the wells MW-25, MP-4, and IJ-4 due to thick snow and ice cover as well as freezing temperatures encountered at the site during this event. A summary of each monthly injection event occurring between January and June 2016 is presented in Table 1.

Groundwater Monitoring Program

Site-wide groundwater elevation measurements were conducted on March 14, 2016 from all available monitoring wells and points at the site. These groundwater elevation measurements were then used to generate groundwater flow maps for both the shallow and intermediate aquifers at the site. The groundwater flow maps indicate groundwater in both the shallow and intermediate aquifers generally flows from northeast to southwest, which is consistent with previous observations. The groundwater elevation measurements are presented in Table 2. The groundwater flow maps for the March 2016 gauging event for the shallow aquifers and the intermediate aquifers are shown on Figure 2 and Figure 3, respectively.

Between March 15 and 16, 2016, groundwater samples were collected from a total of 13 wells and monitoring points in both the source area and Pilot Truck Stop and were submitted for laboratory analysis as part of the ISCO performance monitoring program. The wells and monitoring points sampled in this event are listed below:

- Source Area: MP-4, MP-5, MP-6S, MW-2, MW-7A, MP-11, MP-12, MP-14, MW-16, and injection points IJ-4 and IJ-10.
- The Pilot Truck Stop area: MW-25 and MW-28.

Groundwater samples were collected using the low flow sampling method. During purging, the groundwater was monitored using a calibrated YSI Model 600XL portable water quality meter for several parameters including dissolved oxygen (D.O.), temperature, pH, oxidation-reduction potential (ORP), and conductivity. A Lamotte Turbidity Meter 2020we was used to monitor the turbidity. The groundwater samples were analyzed for site-specific parameter list (SSPL) VOCs, which include tetrachloroethene (PCE), trichloroethene (TCE), 1,1,1-trichloroethane (1,1,1-TCA), cis- and trans-1,2-dichloroethene (1,2-DCE), 1,1-dichloroethane (1,1-DCA), and vinyl chloride (VC) via USEPA Method 8260C.

A summary of the March 2016 groundwater analytical results is provided in Table 3. Table 3 also includes a comparison with analytical results from the baseline (March 2010 and October 2011) sampling events. The distribution of VOCs is presented on Figure 4.

The following observations were made upon review of the groundwater quality data:

- SSPL VOCs detected in the groundwater samples collected from the monitoring wells and injection wells in the shallow and intermediate aquifers exhibited generally decreasing trends in comparison to the baseline sampling analytical results, with the exception of MP-14. Specifically
 - Monitoring point MP-14 exhibited an increase in SSPL VOC concentrations as compared to the baseline sampling analytical results but all detected VOCs are less than 100 µg/L.
 - Although monitoring well MW-7A, MP-4 and MP-5 reported an increase in SSPL VOC concentrations as compared with the 2015 sampling analytical results, all VOC concentrations have decreasing trends in comparison with the baseline sampling analytical results.
- The lack of permanganate solution injection in February 2016 may have impacted the degradation of VOCs in MW-7A, MP-4, MP-5, and MP-14, which were sampled before the March injection event.
- The analytical results show that the major daughter products resulting from the breakdown of PCE continue to be present within monitoring wells or points, particularly cis-1,2-DCE and TCE. The highest concentration of PCE in the source area was found in the groundwater sample collected at MP-4, and at MW-25 in the Pilot Truck Stop area.

During the February and May 2016 groundwater monitoring events, field parameter measurements were collected at 14 select monitoring and injection wells/points on site, including MW-7A, MW-16, MP-4, MP-5, MP-6S, MP-11, MP-12, MP-13, MP-14, IJ-1, IJ-4, IJ-5, IJ-6 and IJ-10. The field parameter measurements consisted of ORP, specific conductivity, and pH readings collected every two feet below static water level using a down-hole water quality instrument (in the two inch diameter wells). For the one inch diameter wells, one standing well volume of water was purged from near the middle of the screened interval for that given monitoring well or point. Once the one well volume was removed from the well or point, the field parameters were then collected from the final effluent using the water quality instrument. Additionally, the color of the water within each well or point was noted, as the presence of a purple or pink coloring to the water would indicate the presence of the permanganate ISCO solution in that well or point. If the water was purple or pink in color, the permanganate ion concentration was also measured using a field colorimeter

Field parameters measurements collected during the February and May 2016 groundwater monitoring events were compared with the previous vertical profiling data collected during 2015. A review of the field parameter measurements resulted in the following observations:

- An increase in ORP and/or specific conductivity, and/or a change in water color from clear to pink or purple were noted in several wells and points as compared to their 2015



data, which indicates the oxidant solution presence at that well or point. These changes were noted in MP-4, MP-5, MP-11, MP-12, MP-14, IJ-6 and IJ-10. Among these wells, monthly manual injections have been performed at MP-4, MP-5, MP-11, MP-12, and IJ-6 in 2016 with the exception of February due to snow and ice cover.

- For MW-7A, MW-16, MP-6S, MP-13, MP-14, IJ-1, IJ-4, and IJ-5 the measured field parameters and observed water color were generally consistent with previous data. Manual injections were performed at MW-7A, MW-16, MP-14, IJ-1 and IJ-4 monthly in 2016 with the exception of February due to snow and ice cover.
- Measured permanganate ion concentrations collected in February and May 2016 ranged from 36.2 mg/L at MW-16 in February 2016 to 381.3 mg/L at MP-5 in May 2016.

ISCO performance monitoring will be continued to assess the distribution of permanganate oxidant solution and to evaluate the effectiveness of the ISCO remediation.

Deed Restriction Area Inspections

Monthly inspections of the soil, asphalt, and concrete were performed over the seven deed restriction areas on, which included a visual evaluation of the condition and integrity of the capped deed restrictions areas and documentation with photos. All asphalt, concrete, or soil caps were noted to be in good condition in all deed restriction areas except at Area 3 (transformer pad location), Area 4 (drainage ditch along CR 181), and Area 5 (drainage ditch along CR 181), where bare patches in the vegetative cover at these areas were found. VERINA staff placed grass seed and topsoil at these areas in an attempt to reestablish the vegetative cover during April and May 2016. Additionally, VERINA will continue the monthly inspections of the deed restriction areas and will take action to repair such caps if poor condition is observed during inspection. The location of each deed restriction area is presented on Figure 5.

ASD System Inspection

Monthly inspections of the ASD system were conducted by VERINA between January and June 2016. The ASD system was also checked daily by MMC personnel to verify that it was operating. The monthly checks indicated that the system is operating as designed and satisfactorily. During this period there was no reported down time for the ASD system.

Indoor Air Sampling

Annual indoor air samples were taken from five locations within the site building on March 16, 2016 and two locations on March 23, 2016 (Figure 6). The sampling locations include areas where employees commonly work and areas where SSPL VOCs were detected in sub-slab vapor samples, consistent with the previous indoor air sampling locations. Additionally, one ambient air sample was collected from the exterior of the building.

The air samples were collected over an 8-hour period in 6-liter stainless steel Summa canisters and analyzed for VOCs by USEPA Method TO-15. The indoor air analytical results are presented in Table 4. A review of the indoor air analytical results indicated that all detected compounds were below the NYSDOH guidance values.



Proposed Schedule for the Second Half of 2016

VERINA is planning to perform the following work during the second half of 2016:

- A site-wide groundwater gauging event to determine site groundwater elevation and flow direction in September 2016;
- Continuation of the quarterly groundwater monitoring program in August and November 2016 to evaluate ISCO performance;
- Continuation of monthly ASD system inspection to ensure proper operation of the system;
- Refilling of the ISCO AST in September 2016 and continuation of monthly manual permanganate injections in both the source area and Pilot Truck Stop; and
- Continuation of the monthly inspections on the deed restriction areas in accordance with the approved OM&M Plan, with maintenance of such cap areas occurring as needed.

The annual progress report is scheduled for submittal in January 2017.

Please call if you have any questions or need additional information.

Very truly yours,

VERINA ENGINEERING, P.C.

A handwritten signature in blue ink, appearing to read "D. Robert Gan".

D. Robert Gan, Ph.D., P.E.
President

ATTACHMENTS:

- Figure 1 – Site Map with Monitoring Well Locations
- Figure 2 – Shallow Groundwater Isocontours, March 2016
- Figure 3 – Intermediate Groundwater Isocontours, March 2016
- Figure 4 – Groundwater Analytical Results
- Figure 5 – Deed Restriction Areas
- Figure 6 – ASD System and Indoor Air Sampling Locations
- Table 1 – Manual ISCO Injection Summary, January – June 2016
- Table 2 – Groundwater Elevation Data, March 2016
- Table 3 – Summary of SSPL VOC Groundwater Analytical Results
- Table 4 – Indoor Air Sampling Analytical Results, March 2016

cc: w/enc.: M. Post (DOVER)

CERTIFICATION

"For each institutional or engineering control identified for the site, I certify that all of the following statements are true:

- (a) *the institutional control and/or engineering control employed at this site is unchanged from the date the control was put in place, or last approved by DER;*
- (b) *nothing has occurred that would impair the ability of such control to protect public health and the environment;*
- (c) *nothing has occurred that would constitute a violation or failure to comply with any Site Management Plan for this control;*
- (d) *access to the site will continue to be provided to DER to evaluate the remedy, including access to evaluate the continued maintenance of this control"*

I D. Robert Gan at Verina Engineering, P.C., 1011 US Hwy. 22, Suite 302, Bridgewater, NJ 08807,
print name print business address

am certifying as Designated Representative of Dover Corporation (Owner or Remedial Party)

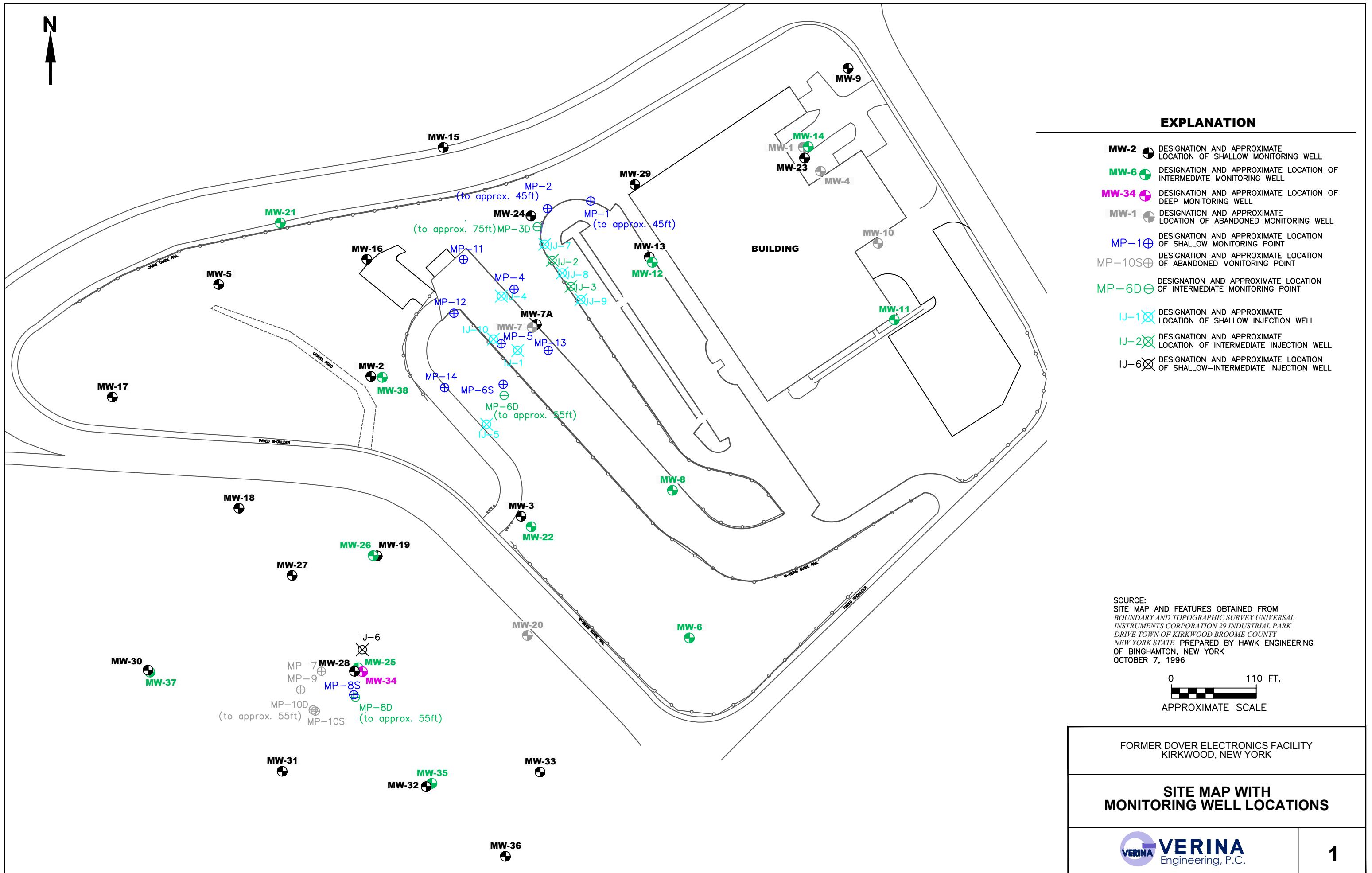
for the Former Dover Electronics Site (No. 7-04-026), Kirkwood, Broome County, New York

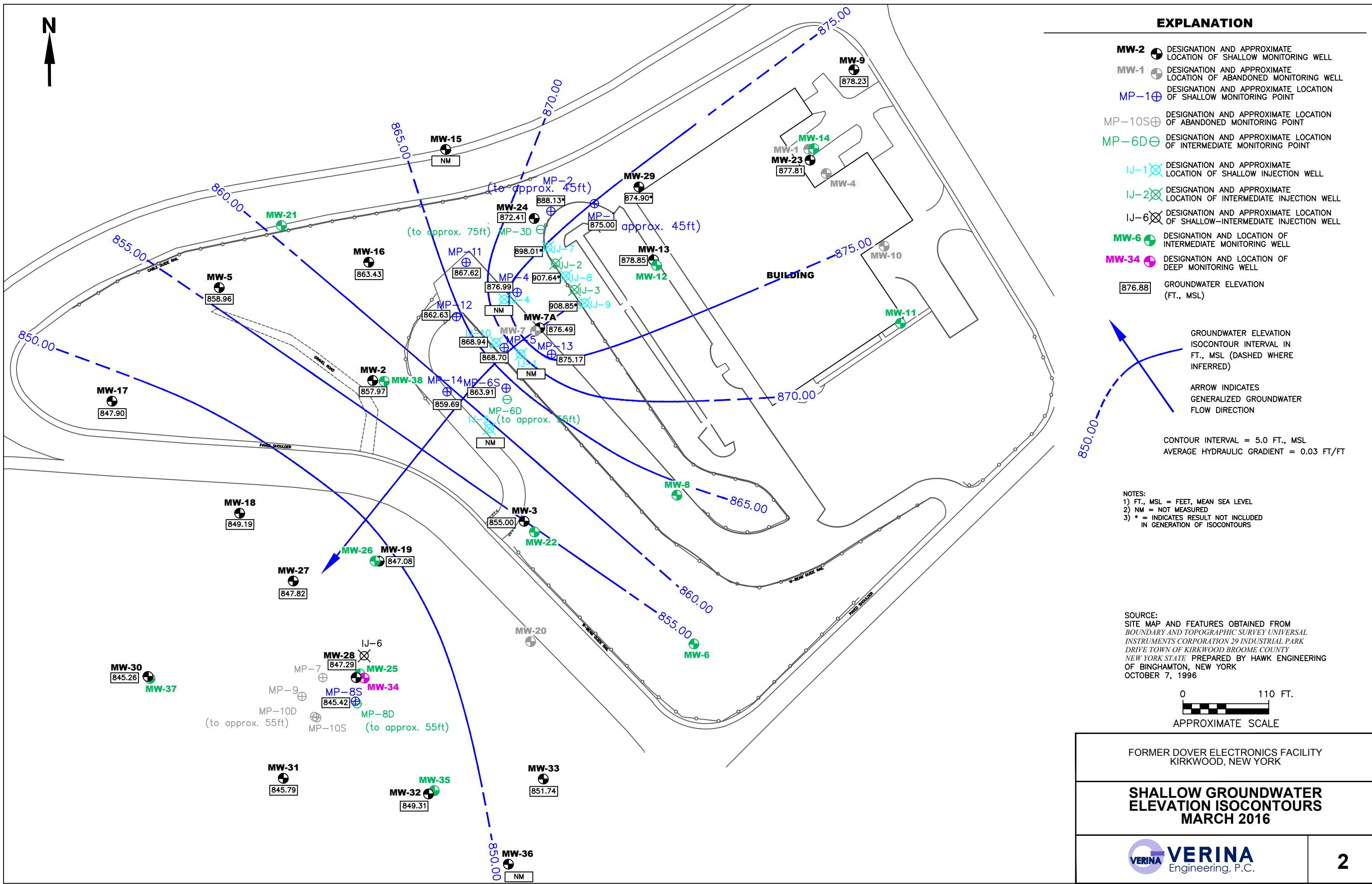


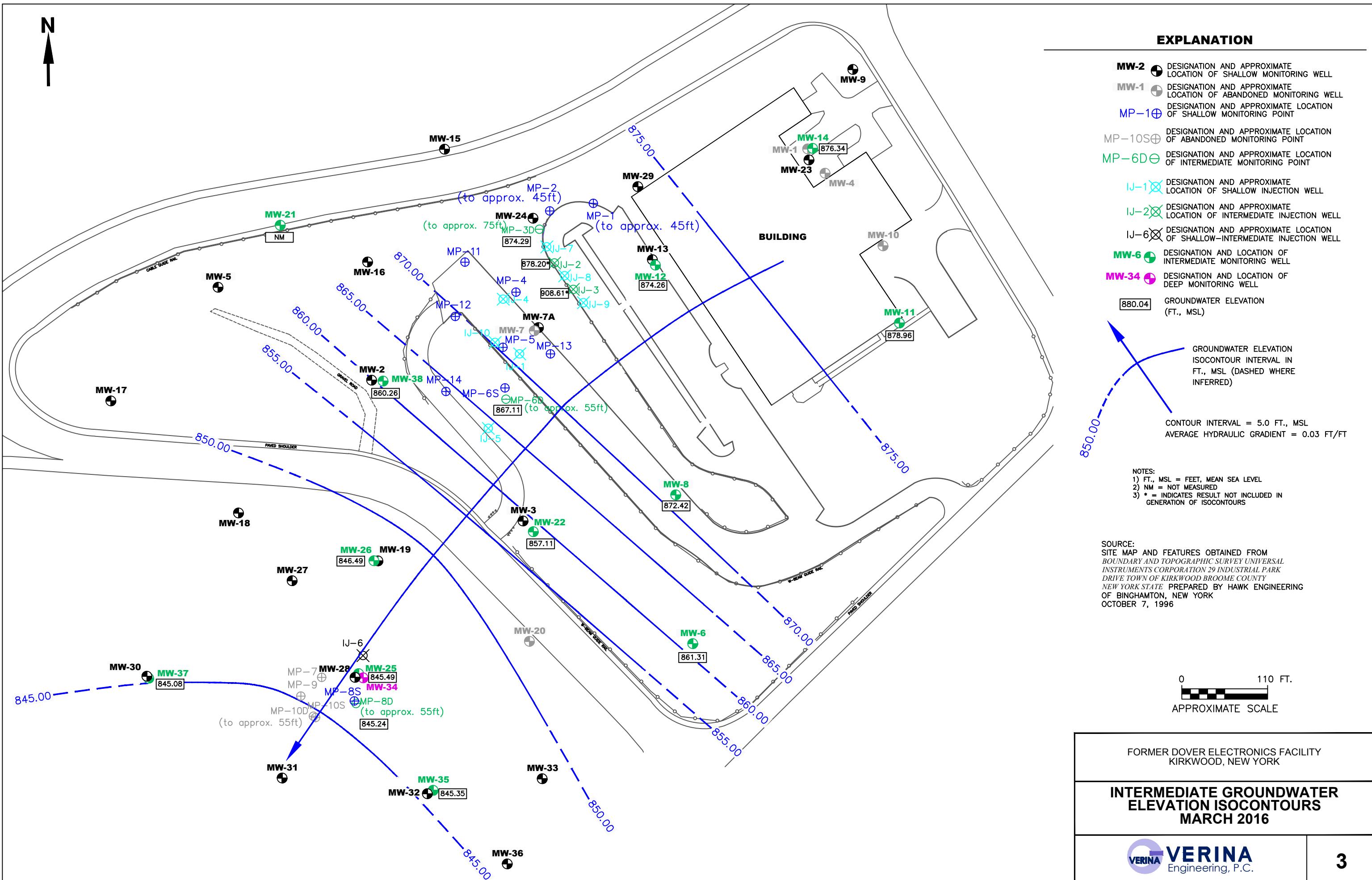
Signature of Owner, Remedial Party, or Designated Representative
Rendering Certification

August 16, 2016

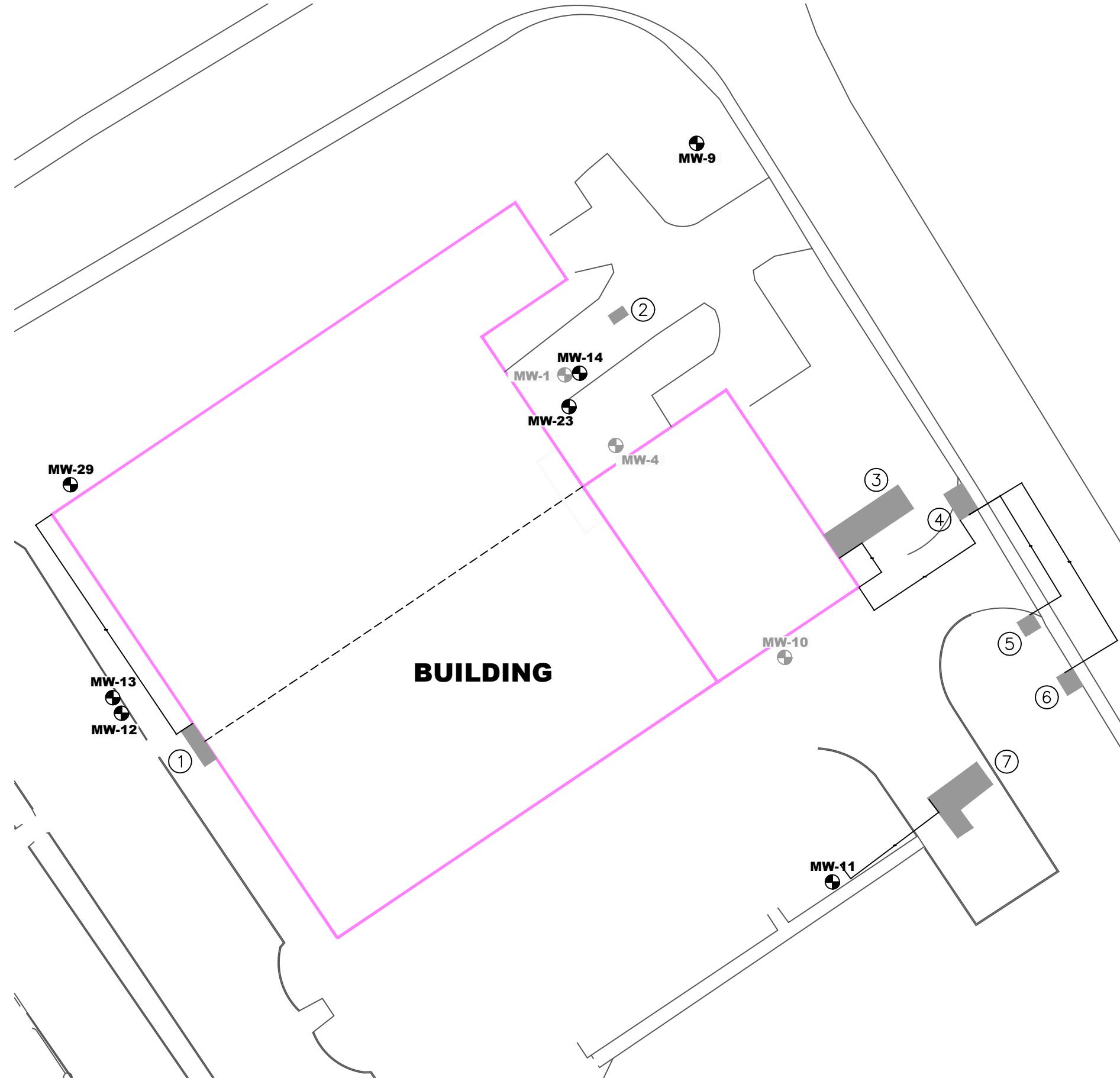
Date







N



EXPLANATION

- MW-2 ● DESIGNATION AND APPROXIMATE LOCATION OF MONITORING WELL
MW-1 ● DESIGNATION AND APPROXIMATE LOCATION OF ABANDONED MONITORING WELL
- PINK LINE BUILDING DEED NOTICE AREAS
GREY SHADED EXTERIOR DEED NOTICE AREAS

DEPTH TO PCE-AFFECTED SOIL

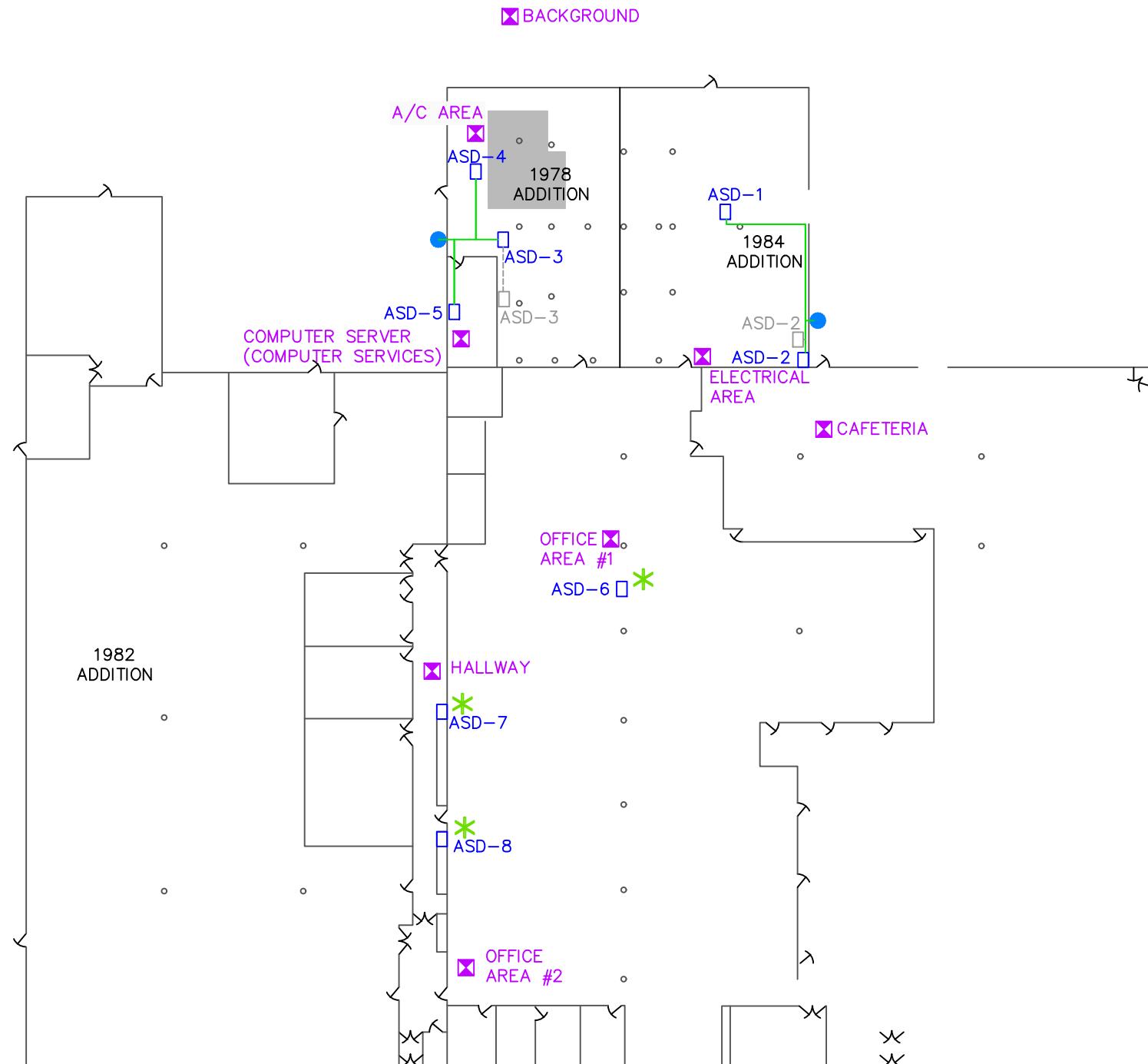
- (1) 4 FEET
- (2) 6 FEET
- (3) 8 FEET
- (4) 8 FEET
- (5) 5 FEET
- (6) 7 FEET
- (7) 3 FEET

SOURCE:
SITE MAP AND FEATURES OBTAINED FROM
BOUNDARY AND TOPOGRAPHIC SURVEY UNIVERSAL
INSTRUMENTS CORPORATION 29 INDUSTRIAL PARK
DRIVE TOWN OF KIRKWOOD BROOME COUNTY
NEW YORK STATE PREPARED BY HAWK ENGINEERING
OF BINGHAMTON, NEW YORK
OCTOBER 7, 1996

0 50 FT.
APPROXIMATE SCALE

FORMER DOVER ELECTRONICS FACILITY
KIRKWOOD, NEW YORK

DEED RESTRICTION AREAS



■ BACKGROUND



EXPLANATION

- EXISTING SUB-SLAB DEPRESSURIZATION POINT LOCATION
- EXISTING ASD PIPING RUN
- PREVIOUS SUB-SLAB DEPRESSURIZATION POINT LOCATION
- - - PREVIOUS ASD PIPING RUN
- EXTERIOR FAN AND EXHAUST LOCATION
- VERTICAL BUILDING POST
- INACCESSIBLE AREA
- INDOOR AIR SAMPLING LOCATION AND DESIGNATION
- * DEDICATED FAN LOCATED ON RISER PIPE

SOURCE:
BUILDING LAYOUT DIGITIZED FROM PHOTOCOPY
OF DRAWING FAXED FROM UNIVERSAL INSTRUMENTS
CORPORATION FACILITIES DEPARTMENT.
NO FILE NAME OR SCALE PROVIDED.

DRAWING NOT TO SCALE

FORMER DOVER ELECTRONICS FACILITY
KIRKWOOD, NEW YORK

ASD SYSTEM AND INDOOR AIR SAMPLING LOCATIONS

Table 1 - Manual ISCO Injection Summary, January - June 2016 - Former Dover Electronics Site, Kirkwood, New York

Injection Well ID	Injection Date(s)					
	January 12-15, 2016	February 8-9, 2016	March 22-24, 2016	April 12-14, 2016	May 3-5, 2016	June 20-22, 2016
	Volume Injected (gal)					
MW-7A	15	0	15	15	15	15
MW-16	80	0	80	80	80	80
MW-24	40	0	40	40	40	40
MW-25	347	180	300	300	300	126
MW-28	50	0	50	50	50	115
MP-4	28	45	40	52	40	50
MP-5	50	0	50	50	50	50
MP-11	5	0	5	5	5	5
MP-12	80	0	80	84	80	80
MP-14	30	0	30	35	30	30
IJ-1	50	0	50	60	50	59
IJ-2	34	0	37	30	32	38
IJ-3	0	0	0	0	0	10
IJ-4	10	5	5	8	5	15
IJ-6	100	0	101	100	100	131
IJ-7	21	0	14	0	21	34
IJ-10	50	0	53	51	52	72
Total Injected Volume (gal)	990	230	950	960	950	950

NOTES:

gal = Gallons

ISCO injection solution is a 10% by weight sodium permanganate solution.

Table 2 - Groundwater Elevation Data, March 2016 - Former Dover Electronics Site, Kirkwood, New York

Monitoring Well/Point	Top of Casing (ft, msl)	Date	Depth to Water (ft, btoc)	Groundwater Elevation (ft, msl)	Total Depth (ft, btoc)	Screened Interval (ft, btoc)	Water Bearing Unit
MW-2	863.28	3/14/2016	5.31	857.97	16.37	5-15	Shallow
MW-3	859.16	3/14/2016	4.16	855.00	14.21	5-15	Shallow
MW-5	864.68	3/14/2016	5.72	858.96	9.94	5-20	Shallow
MW-6	863.67	3/14/2016	2.36	861.31	34.56	15-35	Intermediate
MW-7A	882.74	3/14/2016	6.25	876.49	16.11	7-17	Shallow
MW-8	899.21	3/14/2016	26.79	872.42	58.71	30-60	Intermediate
MW-9	923.94	3/14/2016	45.71	878.23	59.68	30-60	Shallow
MW-11	918.87	3/14/2016	39.91	878.96	61.45	52-62	Intermediate
MW-12	912.31	3/14/2016	38.05	874.26	72.62	63-73	Intermediate
MW-13	912.14	3/14/2016	33.29	878.85	48.52	39-49	Shallow
MW-14	915.40	3/14/2016	39.06	876.34	71.95	62-72	Intermediate
MW-15	899.38	3/14/2016	-	-	28.03	36-46	Shallow
MW-16	878.87	3/14/2016	15.44	863.43	29.96	18-28	Shallow
MW-17	859.29	3/14/2016	11.39	847.90	19.98	8-18	Shallow
MW-18	857.34	3/14/2016	8.15	849.19	14.77	8-18	Shallow
MW-19	859.59	3/14/2016	12.51	847.08	19.02	8-18	Shallow
MW-21	883.22	3/14/2016	-	-	-	31-41	Intermediate
MW-22	861.62	3/14/2016	4.51	857.11	21.37	17-22	Intermediate
MW-23	916.62	3/14/2016	38.81	877.81	49.96	40.5-50.5	Shallow
MW-24	907.66	3/14/2016	35.25	872.41	42.75	35-45	Shallow
MW-25*	857.01	3/14/2016	11.52	845.49	39.52	34-39	Intermediate
MW-26	859.04	3/14/2016	12.55	846.49	27.97	22.5-27.5	Intermediate
MW-27	860.01	3/14/2016	12.19	847.82	26.69	16.5-26.5	Shallow
MW-28	859.09	3/14/2016	11.80	847.29	25.78	15-25	Shallow
MW-29	917.36	3/14/2016	42.46	874.90	48.65	39-49	Shallow
MW-30*	857.69	3/14/2016	12.43	845.26	20.85	15-25	Shallow
MW-31	856.90	3/14/2016	11.11	845.79	21.12	13-23	Shallow
MW-32	861.18	3/14/2016	11.87	849.31	23.25	15.1-25.1	Shallow
MW-33	863.64	3/14/2016	11.90	851.74	22.44	15-25	Shallow
MW-34	857.03	3/14/2016	0.87	856.16	53.95	53-58	Deep
MW-35	856.89	3/14/2016	11.54	845.35	36.48	32-37	Intermediate
MW-36	857.19	3/14/2016	-	-	-	14-24	Shallow
MW-37	857.71	3/14/2016	12.63	845.08	35.98	31-36	Intermediate
MW-38*	862.70	3/14/2016	2.44	860.26	23.65	20-25	Intermediate
MP-1	912.63	3/14/2016	37.63	875.00	39.42	31-41	Shallow
MP-2	911.00	3/14/2016	22.87	888.13	35.94	34-44	Shallow
MP-3D	910.59	3/14/2016	36.30	874.29	73.75	46-56	Intermediate
MP-4	883.65	3/14/2016	6.66	876.99	25.50	17-27	Shallow
MP-5	881.66	3/14/2016	12.96	868.70	23.81	14-24	Shallow
MP-6S	875.67	3/14/2016	11.76	863.91	24.75	14-24	Shallow
MP-6D	873.83	3/14/2016	6.72	867.11	48.53	39-49	Intermediate
MP-8S	857.40	3/14/2016	11.98	845.42	16.56	13-23	Shallow
MP-8D	857.20	3/14/2016	11.96	845.24	53.37	44-54	Intermediate
MP-11	875.80	3/14/2016	8.18	867.62	29.09	20-30	Shallow
MP-12	876.60	3/14/2016	13.97	862.63	24.60	15-25	Shallow
MP-13	884.30	3/14/2016	9.13	875.17	24.52	15-25	Shallow
MP-14	867.80	3/14/2016	8.11	859.69	23.89	15-25	Shallow
IJ-1	-	3/14/2016	12.68	-	24.21	15-25	Shallow
IJ-2	908.90	3/14/2016	30.70	878.20	44.60	30-45	Intermediate
IJ-3	909.40	3/14/2016	0.79	908.61	44.50	30-45	Intermediate
IJ-4	-	3/14/2016	3.80	-	24.92	10-25	Shallow
IJ-5	-	3/14/2016	3.46	-	24.79	10-25	Shallow
IJ-6	-	3/14/2016	11.74	-	38.12	10-20, 30-40	Shallow-Intermediate
IJ-7	909.00	3/14/2016	10.99	898.01	41.85	10-25	Shallow
IJ-8	909.20	3/14/2016	1.56	907.64	42.40	10-25	Shallow
IJ-9	909.50	3/14/2016	0.65	908.85	44.48	10-25	Shallow
IJ-10	880.70	3/14/2016	11.76	868.94	24.03	10-25	Shallow

Notes:

NM: Not Measured

-: Not Applicable

* = Well resurveyed by Hulbert Enginerring in August 2015.

ft, btoc = Feet below top of inner well casing.

ft, msl = Feet above mean sea level.

Table 3 - Summary of SSPL VOC Groundwater Analytical Results - Former Dover Electronics Site, Kirkwood, New York

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Table 3 - Summary of SSPL VOC Groundwater Analytical Results - Former Dover Electronics Site, Kirkwood, New York

See notes on last page.

Table 3 - Summary of SSPL VOC Groundwater Analytical Results - Former Dover Electronics Site, Kirkwood, New York

Sample Location	FB-03110	FB-031210	FB-031510	FB-031610	FB-031710	FB-031810	FB-031910	TB-031110	TB-031210	TB-031510	TB-031610	TB-031710	TB-031810	TB-031910	FB-102811	FB-103111	TRIP BLANK	TRIP BLANK	FB-121911	FB-122111	TRIP BLANK 1	TRIP BLANK 2	TRIP BLANK 3	
Sampling Date	3/12/2010	3/12/2010	3/5/2010	3/16/2010	3/17/2010	3/8/2010	3/9/2010	3/16/2010	3/12/2010	3/15/2010	3/16/2010	3/17/2010	3/8/2010	3/9/2010	10/28/2011	10/28/2011	10/28/2011	10/28/2011	12/19/2011	12/20/2011	1107129-009	1107129-020	1107129-027	
Laboratory ID	NYSDEC	R1001332-003	R1001332-010	R1001332-023	R1001332-032	R1001332-040	R1001332-052	R1001332-059	R1001332-064	R1001332-074	R1001332-084	R1001332-094	R1001332-099	R1001332-099	R1001332-099	10/28/2011	10/28/2011	10/28/2011	10/28/2011	12/20/2011	12/21/2011	1107129-009	1107129-020	1107129-027
Units	GW/QS	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L													
Volatile Organic Compounds																								
1,1,1-Trichloroethane	5	0.45	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23												
1,1-Dichloroethane	5	0.64	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20												
1,1-Dichloropropane	5	0.59	U	0.29	U	0.29	U	0.29	U	0.29	U	0.29												
Tetrachloroethene	5	0.43	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20												
Trichloroethene	5	0.63	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23												
Vinyl Chloride	2	0.52	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23												
cis-1,2-Dichloroethene	5	0.48	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20												
trans-1,2-Dichloroethene	5	0.45	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20												

Sample Location		TRIP BLANK	FB-092015	FB-092015	FB-092015	TRIP BLANK	FB-031516	FB-031616
Sampling Date		9/20/2015	9/20/2015	9/21/2015	9/22/2015	3/15/2016	3/15/2016	3/16/2016
Laboratory ID	NYSDEC	R1507987-032	R1507987-005	R1207987-012	R1207987-029	R1602496-001	R1602496-004	R1602496-014
Units	GWQS	µg/L						
Volatile Organic Compounds								
1,1,1-Trichloroethane	5	0.36	U	0.36	U	0.36	U	0.36
1,1-Dichloroethane	5	0.20	U	0.20	U	0.20	U	0.20
1,1-Dichloroethene	5	0.57	U	0.57	U	0.57	U	0.57
Tetrachloroethene	5	0.30	U	0.30	U	0.30	U	0.30
Trichloroethene	5	0.22	U	0.22	U	0.22	U	0.22
Vinyl Chloride	2	0.32	U	0.32	U	0.32	U	0.32
cis-1,2-Dichloroethene	5	0.30	U	0.30	U	0.30	U	0.30
trans-1,2-Dichloroethene	5	0.33	U	0.33	U	0.33	U	0.33

Notes:
All results presented in micrograms per liter ($\mu\text{g/l}$)
D = Compound identified in an analysis at a second level
J = Estimated value, reported concentration is less than detection limit
U = Constituent analyzed for but not detected above detection limit
BD-121911 is a blind duplicate of MP-6S
NS = Not sampled
DUP-021512 is a blind duplicate of MP-14

DUP-031612 is a blind duplicate of MP-8D	DUP-090413 is a blind duplicate of MW-7A	Bold = confirmed
DUP-041912 is a blind duplicate of MW-16	DUP-031914 is a blind duplicate of MP-5	* Sample F
DUP-061912 is a blind duplicate of MP-13	DUP-091814 is a blind duplicate of MW-6	
DUP-092012 is a blind duplicate of MP-5	DUP-111814 is a blind duplicate of MW-31	
DUP-122912 is a blind duplicate of MW-26	DUP-031715 is a blind duplicate of MW-7A	
DUP-031413 is a blind duplicate of MP-4	DUP-092215 is a blind duplicate of MP-4	
DUP-122012 is a blind duplicate of MW-7A	DUP-031516 is a blind duplicate of L-10	
** Sample shown as "MP-30" is laboratory report		

Table 4 - Indoor Air Sampling Analytical Results, March 2016 - Former Dover Electronics Site, Kirkwood, New York

Sample Location Sampling Date Laboratory ID Units	Background 3/16/2016 P1601502-008				AC Area 3/16/2016 P1601502-001				Cafeteria 3/23/2016 P1601605-001			
	ppbv	Q	µg/m³	Q	ppbv	Q	µg/m³	Q	ppbv	Q	µg/m³	Q
	Volatile Organic Compounds											
Dichlorodifluoromethane (CFC 12)	0.41		2.1		0.59		2.9		0.46		2.3	
Chloromethane	0.42	U	0.87	U	0.36	U	0.75	U	0.31	U	0.64	U
1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	0.12	U	0.87	U	0.11	U	0.75	U	0.092	U	0.64	U
Vinyl Chloride	0.34	U	0.87	U	0.29	U	0.75	U	0.25	U	0.64	U
1,3-Butadiene	0.39	U	0.87	U	0.34	U	0.75	U	0.29	U	0.64	U
Bromomethane	0.22	U	0.87	U	0.19	U	0.75	U	0.16	U	0.64	U
Chloroethane	0.33	U	0.87	U	0.28	U	0.75	U	0.24	U	0.64	U
Ethanol	6.7		13		54		100		41		76	
Acetonitrile	0.52	U	0.87	U	0.45	U	0.75	U	0.38	U	0.64	U
Acrolein	1.5	U	3.5	U	1.3	U	3.0	U	1.1	U	2.6	U
Acetone	4.1		9.8		22		53		7.9		19	
Trichlorofluoromethane	0.21		1.2		0.67		3.8		0.26		1.4	
2-Propanol (Isopropyl Alcohol)	3.5	U	8.7	U	7.2		18		3.9		9.5	
Acrylonitrile	0.40	U	0.87	U	0.35	U	0.75	U	0.30	U	0.64	U
1,1-Dichloroethene	0.22	U	0.87	U	0.19	U	0.75	U	0.16	U	0.64	U
Methylene Chloride	0.25	U	0.87	U	0.22	U	0.75	U	0.18	U	0.64	U
3-Chloro-1-propene (Allyl Chloride)	0.28	U	0.87	U	0.24	U	0.75	U	0.20	U	0.64	U
Trichlorotrifluoroethane	0.110	U	0.87	U	0.098	U	0.75	U	0.084	U	0.64	U
Carbon Disulfide	2.8	U	8.7	U	2.4	U	7.5	U	2.1	U	6.4	U
trans-1,2-Dichloroethene	0.22	U	0.87	U	0.19	U	0.75	U	0.16	U	0.64	U
1,1-Dichloroethane	0.21	U	0.87	U	0.19	U	0.75	U	0.16	U	0.64	U
Methyl tert-Butyl Ether	0.24	U	0.87	U	0.21	U	0.75	U	0.18	U	0.64	U
Vinyl Acetate	2.5	U	8.7	U	2.1	U	7.5	U	1.8	U	6.4	U
2-Butanone (MEK)	2.9	U	8.7	U	2.5	U	7.5	U	2.2	U	6.4	U
cis-1,2-Dichloroethene	0.22	U	0.87	U	0.19	U	0.75	U	0.16	U	0.64	U
n-Hexane	0.25	U	0.87	U	0.21	U	0.75	U	0.18	U	0.64	U
Chloroform	0.18	U	0.87	U	0.15	U	0.75	U	0.13	U	0.64	U
1,2-Dichloroethane	0.21	U	0.87	U	0.19	U	0.75	U	0.16	U	0.64	U
1,1,1-Trichloroethane	0.16	U	0.87	U	0.14	U	0.75	U	0.12	U	0.64	U
Benzene	0.27	U	0.87	U	0.23	U	0.75	U	0.20	U	0.64	U
Carbon Tetrachloride	0.061		0.38		0.052		0.33		0.072		0.46	
1,2-Dichloropropane	0.19	U	0.87	U	0.16	U	0.75	U	0.14	U	0.64	U
Bromodichloromethane	0.13	U	0.87	U	0.11	U	0.75	U	0.096	U	0.64	U
Trichloroethene (TCE)	0.032	U	0.17	U	0.028	U	0.75	U	0.024	U	0.13	U
1,4-Dioxane	0.24	U	0.87	U	0.21	U	0.75	U	0.18	U	0.64	U
cis-1,3-Dichloropropene	0.19	U	0.87	U	0.17	U	0.75	U	0.14	U	0.64	U
4-Methyl-2-pentanone	0.21	U	0.87	U	0.18	U	0.75	U	0.16	U	0.64	U
trans-1,3-Dichloropropene	0.19	U	0.87	U	0.17	U	0.75	U	0.14	U	0.64	U
1,1,2-Trichloroethane	0.16	U	0.87	U	0.14	U	0.75	U	0.12	U	0.64	U
Toluene	0.23		0.50		1.9		0.45		1.7			
2-Hexanone	0.21	U	0.87	U	0.18	U	0.75	U	0.16	U	0.64	U
Dibromochloromethane	0.100	U	0.87	U	0.088	U	0.75	U	0.075	U	0.64	U
1,2-Dibromoethane	0.110	U	0.87	U	0.098	U	0.75	U	0.083	U	0.64	U
n-Butyl Acetate	0.18	U	0.87	U	0.22		1.1		0.13	U	0.64	U
Tetrachloroethene (PCE)	0.32		2.2		0.86		5.8		0.22		1.5	
Chlorobenzene	0.19	U	0.87	U	0.16	U	0.75	U	0.14	U	0.64	U
Ethylbenzene	0.20	U	0.87	U	0.19		0.82		0.15	U	0.64	U
m,p-Xylenes	0.20	U	0.87	U	0.62		2.7		0.15	U	0.64	U
Bromoform	0.084	U	0.87	U	0.073	U	0.75	U	0.062	U	0.64	U
Styrene	0.20	U	0.87	U	0.18	U	0.75	U	0.15	U	0.64	U
o-Xylene	0.20	U	0.87	U	0.17	U	0.75	U	0.15	U	0.64	U
n-Nonane	0.16	U	0.87	U	0.14	U	0.75	U	0.12	U	0.64	U
1,1,2,2-Tetrachloroethane	0.13	U	0.87	U	0.11	U	0.75	U	0.093	U	0.64	U
Cumene	0.18	U	0.87	U	0.15	U	0.75	U	0.13	U	0.64	U
alpha-Pinene	0.16	U	0.87	U	0.13	U	0.75	U	0.11	U	0.64	U
4-Ethyltoluene	0.18	U	0.87	U	0.15	U	0.75	U	0.13	U	0.64	U
1,3,5-Trimethylbenzene	0.18	U	0.87	U	0.15	U	0.75	U	0.13	U	0.64	U
1,2,4-Trimethylbenzene	0.18	U	0.87	U	0.15	U	0.75	U	0.13	U	0.64	U
Benzyl Chloride	0.17	U	0.87	U	0.14	U	0.75	U	0.12	U	0.64	U
1,3-Dichlorobenzene	0.14	U	0.87	U	0.12	U	0.75	U	0.11	U	0.64	U
1,4-Dichlorobenzene	0.14	U	0.87	U	0.12	U	0.75	U	0.11	U	0.64	U
1,2-Dichlorobenzene	0.14	U	0.87	U	0.12	U	0.75	U	0.11	U	0.64	U
d-Limonene	0.25		1.4		0.33		1.8		0.14		0.75	
1,2-Dibromo-3-chloropropane	0.090	U	0.87	U	0.078	U	0.75	U	0.64	U	0.066	U
1,2,4-Trichlorobenzene	0.120	U	0.87	U	0.10	U	0.75	U	0.64	U	0.086	U
Naphthalene	0.17	U	0.87	U	0.14	U	0.75	U	0.64	U	0.12	U
Hexachlorobutadiene	0.081	U	0.87	U	0.070	U	0.75	U	0.64	U	0.060	U

Notes:

Bold = compound detected in sample

Red = compounds of concern

µg/m³ = micrograms per cubic meter

ppbv = parts per billion by volume

Q = Qualifier

U = Constituent not detected above reporting limit given

CAS = Columbia Analytical Services

Gray shading indicates compound exceeds respective NYSDOH Indoor Air Guidance Value

NYSDOH = New York State Department of Health

NYSDOH Indoor Air Guidance Values in µg/m³ are:

Methylene Chloride - 60

PCE - 100

TCE - 5

Table 4 - Indoor Air Sampling Analytical Results, March 2016 - Former Dover Electronics Site, Kirkwood, New York

Sample Location Sampling Date Laboratory ID Units	Electrical Area 3/16/2016 P1601502-007				Office Area 1 3/16/2016 P1601502-004				Office Area 2 3/16/2016 P1601502-005			
	ppbv	Q	µg/m³	Q	ppbv	Q	µg/m³	Q	ppbv	Q	µg/m³	Q
	Volatile Organic Compounds											
Dichlorodifluoromethane (CFC 12)	0.55		2.7		0.44		2.2		0.42		2.1	
Chloromethane	0.40	U	0.83	U	0.40	U	0.84	U	0.51	U	1.1	U
1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	0.12	U	0.83	U	0.12	U	0.84	U	0.15	U	1.1	U
Vinyl Chloride	0.32	U	0.83	U	0.33	U	0.84	U	0.41	U	1.1	U
1,3-Butadiene	0.37	U	0.83	U	0.38	U	0.84	U	0.48	U	1.1	U
Bromomethane	0.21	U	0.83	U	0.22	U	0.84	U	0.27	U	1.1	U
Chloroethane	0.31	U	0.83	U	0.32	U	0.84	U	0.40	U	1.1	U
Ethanol	67		130		120		220		140		260	
Acetonitrile	0.49	U	0.83	U	0.50	U	0.84	U	0.63	U	1.1	U
Acrolein	1.4	U	3.3	U	1.5	U	3.3	U	1.8	U	4.2	U
Acetone	120		280		6.5		15		7.4		18	
Trichlorofluoromethane	1.0		5.7		2.3		13		3.1		17	
2-Propanol (Isopropyl Alcohol)	9.0		22		7.7		19		6.9		17	
Acrylonitrile	0.38	U	0.83	U	0.38	U	0.84	U	0.49	U	1.1	U
1,1-Dichloroethene	0.21	U	0.83	U	0.21	U	0.84	U	0.27	U	1.1	U
Methylene Chloride	0.24	U	0.83	U	0.24	U	0.84	U	0.31	U	1.1	U
3-Chloro-1-propene (Allyl Chloride)	0.26	U	0.83	U	0.27	U	0.84	U	0.34	U	1.1	U
Trichlorotrifluoroethane	0.11	U	0.83	U	0.11	U	0.84	U	0.14	U	1.1	U
Carbon Disulfide	2.7	U	8.3	U	2.7	U	8.4	U	3.4	U	1.1	U
trans-1,2-Dichloroethene	0.21	U	0.83	U	0.21	U	0.84	U	0.27	U	1.1	U
1,1-Dichloroethane	0.20	U	0.83	U	0.21	U	0.84	U	0.26	U	1.1	U
Methyl tert-Butyl Ether	0.23	U	0.83	U	0.23	U	0.84	U	0.29	U	1.1	U
Vinyl Acetate	2.3	U	8.3	U	2.4	U	8.4	U	3.0	U	11	U
2-Butanone (MEK)	2.8	U	8.3	U	2.8	U	8.4	U	3.6	U	11	U
cis-1,2-Dichloroethene	0.21	U	0.83	U	0.21	U	0.84	U	0.27	U	1.1	U
n-Hexane	0.23	U	0.83	U	0.24	U	0.84	U	0.30	U	1.1	U
Chloroform	0.17	U	0.83	U	0.17	U	0.84	U	0.22	U	1.1	U
1,2-Dichloroethane	0.20	U	0.83	U	0.21	U	0.84	U	0.26	U	1.1	U
1,1,1-Trichloroethane	0.15	U	0.83	U	0.15	U	0.84	U	0.19	U	1.1	U
Benzene	0.26	U	0.83	U	0.26	U	0.84	U	0.33	U	1.1	U
Carbon Tetrachloride	0.059		0.37		0.066		0.41		0.061		0.39	
1,2-Dichloropropane	0.18	U	0.83	U	0.18	U	0.84	U	0.23	U	1.1	U
Bromodichloromethane	0.12	U	0.83	U	0.12	U	0.84	U	0.16	U	1.1	U
Trichloroethene (TCE)	0.031	U	0.17	U	0.03	U	0.17	U	0.039	U	0.21	U
1,4-Dioxane	0.23	U	0.83	U	0.23	U	0.84	U	0.3	U	1.1	U
cis-1,3-Dichloropropene	0.18	U	0.83	U	0.18	U	0.84	U	0.23	U	1.1	U
4-Methyl-2-pentanone	0.20	U	0.83	U	0.20	U	0.84	U	0.26	U	1.1	U
trans-1,3-Dichloropropene	0.18	U	0.83	U	0.18	U	0.84	U	0.23	U	1.1	U
1,1,2-Trichloroethane	0.15	U	0.83	U	0.15	U	0.84	U	0.19	U	1.1	U
Toluene	0.60		2.3		0.25		0.95		0.29		1.1	
2-Hexanone	0.20	U	0.83	U	0.20	U	0.84	U	0.26	U	1.1	U
Dibromochloromethane	0.10	U	0.83	U	0.098	U	0.84	U	0.12	U	1.1	U
1,2-Dibromoethane	0.11	U	0.83	U	0.11	U	0.84	U	0.14	U	1.1	U
n-Butyl Acetate	0.27		1.3		0.35		1.7		0.22		1.1	
Tetrachloroethene (PCE)	0.73		4.9		0.14		0.93		0.16		1.1	
Chlorobenzene	0.18	U	0.8	U	0.18	U	0.84	U	0.23	U	1.1	U
Ethylbenzene	1.2		5.1		0.19	U	0.84	U	0.24	U	1.1	U
m,p-Xylenes	3.9		17		0.19	U	0.84	U	0.24	U	1.1	U
Bromoform	0.080	U	0.83	U	0.081	U	0.84	U	0.10	U	1.1	U
Styrene	0.19	U	0.83	U	0.20	U	0.84	U	0.25	U	1.1	U
o-Xylene	0.90		3.9		0.19	U	0.84	U	0.24	U	1.1	U
n-Nonane	0.16	U	0.83	U	0.16	U	0.84	U	0.20	U	1.1	U
1,1,2,2-Tetrachloroethane	0.12	U	0.83	U	0.12	U	0.84	U	0.15	U	1.1	U
Cumene	0.17	U	0.83	U	0.17	U	0.84	U	0.22	U	1.1	U
alpha-Pinene	0.15		0.83		0.15	U	0.84	U	0.19	U	1.1	U
4-Ethyltoluene	0.17	U	0.83	U	0.17	U	0.84	U	0.22	U	1.1	U
1,3,5-Trimethylbenzene	0.17	U	0.83	U	0.17	U	0.84	U	0.22	U	1.1	U
1,2,4-Trimethylbenzene	0.17	U	0.83	U	0.17	U	0.84	U	0.22	U	1.1	U
Benzyl Chloride	0.16	U	0.83	U	0.16	U	0.84	U	0.20	U	1.1	U
1,3-Dichlorobenzene	0.14	U	0.83	U	0.14	U	0.84	U	0.18	U	1.1	U
1,4-Dichlorobenzene	0.14	U	0.83	U	0.14	U	0.84	U	0.18	U	1.1	U
1,2-Dichlorobenzene	0.14	U	0.83	U	0.14	U	0.84	U	0.18	U	1.1	U
d-Limonene	0.32		1.8		0.92		5.1		0.71		4.0	
1,2-Dibromo-3-chloropropane	0.09	U	0.83	U	0.086	U	0.84	U	0.110	U	1.1	U
1,2,4-Trichlorobenzene	0.11	U	0.83	U	0.110	U	0.84	U	0.14	U	1.1	U
Naphthalene	0.16	U	0.83	U	0.160	U	0.84	U	0.20	U	1.1	U
Hexachlorobutadiene	0.08	U	0.83	U	0.078	U	0.84	U	0.099	U	1.1	U

Notes:

Bold = compound detected in sample**Red = compounds of concern**

µg/m³ = micrograms per cubic meter

ppbv = parts per billion by volume

Q = Qualifier

U = Constituent not detected above reporting limit given

CAS = Columbia Analytical Services

Gray shading indicates compound exceeds respective NYSDOH Indoor Air Guidance Value

NYSDOH = New York State Department of Health

NYSDOH Indoor Air Guidance Values in µg/m³ are:

Methylene Chloride - 60

PCE - 100

TCE - 5

Table 4 - Indoor Air Sampling Analytical Results, March 2016 - Former Dover Electronics Site, Kirkwood, New York

Sample Location Sampling Date Laboratory ID Units	Hallway 3/16/2016 P1601502-006				Computer Servers 3/23/2016 P1601605-002			
	ppbv	Q	µg/m³	Q	ppbv	Q	µg/m³	Q
	Volatile Organic Compounds							
Dichlorodifluoromethane (CFC 12)	0.48		2.4		0.59		2.9	
Chloromethane	0.38	U	0.79	U	0.45	U	0.93	U
1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	0.11	U	0.79	U	0.13	U	0.93	U
Vinyl Chloride	0.31	U	0.79	U	0.36	U	0.93	U
1,3-Butadiene	0.36	U	0.79	U	0.42	U	0.93	U
Bromomethane	0.20	U	0.79	U	0.24	U	0.93	U
Chloroethane	0.30	U	0.79	U	0.82		2.2	
Ethanol	90		170		65		120	
Acetonitrile	0.47	U	0.79	U	0.55	U	0.93	U
Acrolein	1.4	U	3.2	U	1.6	U	3.7	U
Acetone	8.0		19		25		58	
Trichlorofluoromethane	0.63		3.5		0.39		2.2	
2-Propanol (Isopropyl Alcohol)	9.2		23		7.6		19	
Acrylonitrile	0.36	U	0.79	U	0.43	U	0.93	U
1,1-Dichloroethene	0.20	U	0.79	U	0.23	U	0.93	U
Methylene Chloride	0.23	U	0.79	U	0.27	U	0.93	U
3-Chloro-1-propene (Allyl Chloride)	0.25	U	0.79	U	0.30	U	0.93	U
Trichlorotrifluoroethane	0.10	U	0.79	U	0.12	U	0.93	U
Carbon Disulfide	2.5	U	7.9	U	3.0	U	9.3	U
trans-1,2-Dichloroethene	0.20	U	0.79	U	0.23	U	0.93	U
1,1-Dichloroethane	0.20	U	0.79	U	0.23	U	0.93	U
Methyl tert-Butyl Ether	0.22	U	0.79	U	0.26	U	0.93	U
Vinyl Acetate	2.2	U	7.9	U	2.6	U	9.3	U
2-Butanone (MEK)	2.7	U	7.9	U	3.2	U	9.3	U
cis-1,2-Dichloroethene	0.20	U	0.79	U	0.23	U	0.93	U
n-Hexane	0.22	U	0.79	U	0.26	U	0.93	U
Chloroform	0.16	U	0.79	U	0.19	U	0.93	U
1,2-Dichloroethane	0.20	U	0.79	U	0.23	U	0.93	U
1,1,1-Trichloroethane	0.14	U	0.79	U	0.17	U	0.93	U
Benzene	0.25	U	0.79	U	0.29	U	0.93	U
Carbon Tetrachloride	0.025		0.37		0.080		0.51	
1,2-Dichloropropane	0.17	U	0.79	U	0.20	U	0.93	U
Bromodichloromethane	0.12	U	0.79	U	0.14	U	0.93	U
Trichloroethene (TCE)	0.03	U	0.16	U	0.035	U	0.19	U
1,4-Dioxane	0.22	U	0.79	U	0.26	U	0.93	U
cis-1,3-Dichloropropene	0.17	U	0.79	U	0.20	U	0.93	U
4-Methyl-2-pentanone	0.19	U	0.79	U	0.23	U	0.93	U
trans-1,3-Dichloropropene	0.17	U	0.79	U	0.20	U	0.93	U
1,1,2-Trichloroethane	0.14	U	0.79	U	0.17	U	0.93	U
Toluene	0.30		1.1		2.1		7.8	
2-Hexanone	0.19	U	0.79	U	0.23	U	0.93	U
Dibromochloromethane	0.09	U	0.79	U	0.11	U	0.93	U
1,2-Dibromoethane	0.10	U	0.79	U	0.12	U	0.93	U
n-Butyl Acetate	0.17	U	0.79	U	0.20	U	0.93	U
Tetrachloroethene (PCE)	0.12	U	0.79	U	3.9		27	
Chlorobenzene	0.17	U	0.79	U	0.20	U	0.93	U
Ethylbenzene	0.18	U	0.79	U	0.30		1.3	
m,p-Xylenes	0.18	U	0.79	U	0.94		4.1	
Bromoform	0.08	U	0.79	U	0.090	U	0.93	U
Styrene	0.19	U	0.79	U	0.22	U	0.93	U
o-Xylene	0.18	U	0.79	U	0.27		1.2	
n-Nonane	0.15	U	0.79	U	0.18	U	0.93	U
1,1,2,2-Tetrachloroethane	0.12	U	0.79	U	0.14	U	0.93	U
Cumene	0.16	U	0.79	U	0.19	U	0.93	U
alpha-Pinene	0.14		0.93		0.17	U	0.93	U
4-Ethyltoluene	0.16	U	0.79	U	0.19	U	0.93	U
1,3,5-Trimethylbenzene	0.16	U	0.79	U	0.19	U	0.93	U
1,2,4-Trimethylbenzene	0.16	U	0.79	U	0.19	U	0.93	U
Benzyl Chloride	0.15	U	0.79	U	0.18	U	0.93	U
1,3-Dichlorobenzene	0.13	U	0.79	U	0.15	U	0.93	U
1,4-Dichlorobenzene	0.13	U	0.79	U	0.15	U	0.93	U
1,2-Dichlorobenzene	0.13	U	0.79	U	0.15	U	0.93	U
d-Limonene	0.84		4.7		0.44		2.5	
1,2-Dibromo-3-chloropropane	0.082	U	0.79	U	0.096	U	0.93	U
1,2,4-Trichlorobenzene	0.11	U	0.79	U	0.13	U	0.93	U
Naphthalene	0.15	U	0.79	U	0.18	U	0.93	U
Hexachlorobutadiene	0.074	U	0.79	U	0.087	U	0.93	U

Notes:**Bold = compound detected in sample****Red = compounds of concern**

µg/m³ = micrograms per cubic meter

ppbv = parts per billion by volume

Q = Qualifier

U = Constituent not detected above reporting limit given

CAS = Columbia Analytical Services

Gray shading indicates compound exceeds respective NYSDOH Indoor Air Guidance Value

NYSDOH = New York State Department of Health

NYSDOH Indoor Air Guidance Values in µg/m³ are:

Methylene Chloride - 60

PCE - 100

TCE - 5