GROUNDWATER SCIENCES CORPORATION

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September 14, 2017

Ms. Jessica LaClair
Program Manager
New York State Department of
Environmental Conservation
Division of Environmental Remediation
Remedial Bureau D, 12th Floor
625 Broadway
Albany, New York 12233-7017

Mr. Henry Wilkie
Environmental Engineer 1
New York State Department of
Environmental Conservation
Division of Environmental Remediation
Remedial Bureau A, 11th Floor
625 Broadway
Albany, New York 12233-7015

Re: *Extraction Well 032B Shutdown Test Findings*
Area D Remediation Area (Operable Unit 4)
Former IBM East Fishkill Facility, East Fishkill, New York

Dear Ms. LaClair and Mr. Wilkie:

On behalf of the IBM Corporation (IBM), Groundwater Sciences Corporation (GSC) has prepared this letter report describing the findings of a shutdown test of groundwater extraction well GW-032B located within the Area D Remediation Area of the former IBM East Fishkill Facility in East Fishkill, New York (Site). A 2015 review of groundwater monitoring results collected over more than three decades indicated improvements to groundwater quality had occurred in the area and the more recent decade of data suggested continued operation of the Area D groundwater extraction system was no longer necessary. Based on the findings of that review, GSC submitted a request on behalf of IBM to the New York State Department of Environmental Conservation (NYSDEC) to perform a two-year long shutdown test consisting of discontinuing extraction well GW-032B withdrawals and monitoring of Area D groundwater[1]. The purpose of the test was to confirm that the operation of GW-032B groundwater extraction and treatment could be discontinued without a meaningful change in Area D Remediation Area groundwater quality. The shutdown test was initiated in August 2015, shortly after IBM's receipt of approval for the shutdown test request in a letter from the NYSDEC[2]. The shutdown test was performed as part of IBM's groundwater Corrective Action (CA) program which is regulated by the NYSDEC under the Site's New York State Part 373 permit[3].

[1] Groundwater Sciences Corporation, June 18, 2015, *Shutdown Test Request, Extraction Well032B, Area D Remediation Area (Operable Unit 4).*
[2] NYSDEC to IBM Corporate Environmental Affairs, July 9, 2015, *Shutdown Test Request – Extraction Well 032B, Area D Remediation Area (OU-4).*
[3] New York State Department of Environmental Conservation, November 2, 2011, *6NYCRR Part 373 Hazardous Waste Management Permit, IBM Corporation East Fishkill Facility*.

BACKGROUND

The Site consists of a semiconductor manufacturing and development facility located in south-central Dutchess County within the Town of East Fishkill, New York. As shown on the Site Location Map (Figure 1), the Site is located between Interstate 84 to the south and New York State Route 52 to the north. Area D is located near the northwestern limits of the Site between the Wastewater Pollution Control Facility (WPCF) and Gildersleeve Brook. Remediation Area D is also referred to as Operable Unit #4 (OU4) in the Final Statement of Basis, dated September 2013 (effective date of April 16, 2014), that was developed by the NYSDEC in consultation with the New York State Department of Health (NYSDOH) under the authority of RCRA. On July 1, 2015, the Site was acquired by GLOBALFOUNDRIES U.S. 2LLC (GF). GF is listed as the facility owner under the current NYSDEC Part 373 Permit, with IBM maintaining responsibility for the CA program[4]. The Site was subsequently subdivided, with National Resources acquiring several parcels on September 1, 2017. Area D is located on a parcel owned by GF.

Overburden (soil) conditions in Area D include a downward sequence of soil fill, alluvial sandy soils, and a glaciolacustrine silt and clay which serves to inhibit vertical movement of groundwater and contaminants. The glaciolacustrine silt/clay layer is widespread but discontinuous across the Site, with perched groundwater typically found in the overlying alluvial sandy soils. Beneath the glaciolacustrine unit and overlying the bedrock is a layer of dense glacial till. As shown on Figure 2, groundwater in the alluvium flows westerly from the WPCF toward Gildersleeve Brook.

Area D investigation activities began in 1979 and continued into the early 1980s. Contamination found in Area D resulted from fire training operations which occurred during the mid-1970s. Groundwater contaminants consist of volatile organic compounds (VOCs), principally trichloroethene (TCE), tetrachloroethene (PCE) and cis-1,2-dichloroethene (cis-1,2-DCE). The presence of these VOCs is limited to the perched overburden aquifer. The fire training structures and contaminated surficial soils were removed and sent off-Site to an approved landfill in the early 1980s. Groundwater recovery operations have been ongoing in Area D since 1982. Groundwater extraction was initially performed using recovery well GW-032. In 1998, the well was replaced by well GW-032A, located about 40 feet to the southwest, due to construction of a new nitrification basin at the WPCF. In 2011, well GW-032A was replaced with a new nearby well, designated GW-032B, to address GW-032A extraction performance issues due to an apparent break in the well screen. When operating, the groundwater withdrawals from well GW-032B are piped to the WPCF, where they are combined with sanitary and treated industrial wastewater, treated, and discharged under a State Pollution Discharge Elimination System (SPDES) permit to the Gildersleeve Brook.

SHUTDOWN TEST FINDINGS

The shutdown test included a quarterly groundwater monitoring program consisting of the recording of water levels and the collection of groundwater samples at well locations GW-032B, GW-066, and

[4] NYSDEC, July 1, 2015, Facility Permit Transfer IBM Corporation to GLOBALFOUNDRIES U.S. 2LLC, East Fishkill Facility.

GW-757. Results of the water level monitoring are summarized in Table 1. Results of laboratory analyses for the presence of VOCs in the Area D groundwater samples are summarized in Table 2.

Prior to the shutdown test, GW-032B groundwater extraction created a localized depression in the potentiometric surface. Outside of the increase in groundwater elevations observed at GW-032B and nearby well GW-757 after the shutdown, there were no significant changes in Area D elevations or groundwater flow directions shown on Figure 2.

Figure 3 provides a well location map with semi-logarithmic concentration versus time graphs for wells in Area D from the beginning of 2010 through third quarter 2017 sampling. The well location map includes postings of the total concentrations of PCE and its daughter products TCE, cis-1,2-DCE, and vinyl chloride (hereinafter collectively referred to as PCE-Series) detected in groundwater samples collected in the second quarter of 2017. As indicated on the well location map, the presence of PCE-Series constituents greater than 1 microgram per liter (µg/L) is inferred to be limited to a small area encompassing the former and existing groundwater extraction wells GW-032, GW-032A, and GW-032B and nearby monitoring well GW-757.

The semi-logarithmic concentration versus time graphs on Figure 3 depict concentrations of PCE and its associated breakdown products using a log scale versus time in an arithmetic scale to assist in the identification of concentration trends. The graphs also include timelines depicting the startup of replacement extraction well GW-032B and the start of the shutdown test. As shown on the graphs, there appears to be a slight increase in TCE concentrations after the start of the shutdown test in wells GW-032B and GW-757, but the concentrations have stabilized during the shutdown test. Monitoring over the past two years indicates TCE concentration levels in groundwater samples collected from monitoring well GW-757 are between 2 and 4 µg/L and TCE concentrations in samples collected from inactive extraction well GW-032B are between 2.5 and 4.5 µg/L. PCE and cis-1,2-DCE concentrations during the shutdown test were generally less than 1 µg/L in GW-032B and GW-757. PCE, TCE, and cis-1,2-DCE were not detected in downgradient well GW-066 during the shutdown test. Groundwater quality in the area of former extraction well GW-032A, existing extraction well GW-032B, and monitoring well GW-757 met the applicable 6NYCRR Part 703 New York State Groundwater Quality Standard (NYSGQS) of 5 µg/L for TCE, PCE and cis-1,2-DCE for more than five years prior to the shutdown test and for the two-year period of the shutdown test.

CONCLUSIONS AND RECOMMENDATIONS

Groundwater in the vicinity of groundwater extraction well GW-032B has not exceeded the NYSGQS for more than seven years, including the two-year long shutdown test. A review of the time versus concentrations graphs of GW-032B and GW-757 suggests that concentrations have stabilized during the two year period of the GW-032B shutdown test. The shutdown test confirms that operation of this system can be discontinued without a meaningful change in Area D Remediation Area groundwater quality. The permanent shutdown of extraction well GW-032B is expected to have no meaningful effects that would constitute a threat to human health and the environment.

Considering the above conclusions, GSC recommends termination of GW-032B groundwater extraction and treatment operations in Area D. We recommend that the water quality sampling frequency in the

approved Groundwater Monitoring Plan (GMP)[5] for well GW-032B be converted from monthly to quarterly, while all other sampling and hydraulic effectiveness frequencies in Area D GMP wells remain unchanged.

Should you have any questions concerning this shutdown test letter report, please contact Dean Chartrand of IBM at (703) 257-2583.

Very truly yours,
GROUNDWATER SCIENCES CORPORATION

C. Edward Stoner, P.G.
Project Manager

Attachments:

Table 1 – Groundwater Elevation Data, GW-032B Shutdown Test Groundwater Monitoring
Table 2 – Volatile Organic Compound Data, GW-032B Shutdown Test Groundwater Sampling
Figure 1 – Site Location Map
Figure 2 – Area D (OU4), Elevation Contour Map–Soil Groundwater Table, April 24-26, 2017
Figure 3 – Area D (OU4), Well Location Map and Time vs. Concentration Graphs, Soil

[5] IBM to NYSDEC via e-mail, Groundwater Sciences Corporation, September 17, 2015, *Groundwater Monitoring Plan, Former IBM East Fishkill Facility.*

Table 1
Groundwater Elevation Data, GW-032B Shutdown Test Groundwater Monitoring
Area D Remediation Area (Operable Unit 4)
Former IBM East Fishkill Facility, East Fishkill, New York

Well ID	TOC Elev. (ft. amsl)	Date	Depth to Water Below TOC (ft)	Groundwater Elevation (ft)	Date	Depth to Water Below TOC (ft)	Groundwater Elevation (ft)	Date	Depth to Water Below TOC (ft)	Groundwater Elevation (ft)	Date	Depth to Water Below TOC (ft)	Groundwater Elevation (ft)
032B	233.09	10/5/2015	6.24	226.85	1/5/2016	5.67	227.42	4/4/2016	5.56	227.53	7/6/2016	5.65	227.44
066	229.84	10/5/2015	5.92	223.92	1/5/2016	4.71	225.13	4/4/2016	4.53	225.31	7/6/2016	5.19	224.65
757	234.36	10/5/2015	7.59	226.77	1/5/2016	6.97	227.39	4/4/2016	6.86	227.50	7/6/2016	7.07	227.29

Well ID	TOC Elev. (ft. amsl)	Date	Depth to Water Below TOC (ft)	Groundwater Elevation (ft)	Date	Depth to Water Below TOC (ft)	Groundwater Elevation (ft)	Date	Depth to Water Below TOC (ft)	Groundwater Elevation (ft)	Date	Depth to Water Below TOC (ft)	Groundwater Elevation (ft)
032B	233.09	10/6/2016	6.38	226.71	1/4/2017	4.90	228.19	4/24/2017	4.58	228.51	7/11/2017	5.26	227.83
066	229.84	10/6/2016	4.14	225.70	1/4/2017	4.02	225.82	4/24/2017	4.53	225.31	7/11/2017	5.92	223.92
757	234.36	10/6/2016	7.72	226.64	1/4/2017	6.27	228.09	4/24/2017	5.47	228.89	7/11/2017	6.58	227.78

Table 2
Volatile Organic Compound Data, GW-032B Shutdown Test Groundwater Sampling
Area D Remediation Area (Operable Unit 4)
Former IBM East Fishkill Facility, East Fishkill, New York

Parameter	Sample Location	032B	032B	032B	032B	032B	032B	032B	032B	032B	032B	066	066	066	066
	Sample Description	GW	GW	GW	GW	REP	GW	GW	GW	GW	REP	GW	GW	REP	GW
	Sample Date	10/16/2015	01/13/2016	04/11/2016	07/11/2016	07/11/2016	10/10/2016	01/10/2017	04/13/2017	07/06/2017	07/06/2017	10/16/2015	01/14/2016	01/14/2016	04/11/2016
	Laboratory Sample I.D.	8094236	8208360	8331069	8473063	8473064	8642540	8785340	8941206	9092399	9092400	8094233	8208364	8208365	8331036
1,1,1-TRICHLOROETHANE		ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE (Freon®TF)		ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5
1,2-DICHLORO-1,2,2-TRIFLUOROETHANE (Freon®123a)		ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5
1,2-DICHLOROBENZENE		ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5
ACETONE		ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0
CHLOROBENZENE		ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5
CIS-1,2-DICHLOROETHYLENE		1.0	0.9	0.7	0.9	0.9	1.0	0.7	0.4J	0.6	0.6	ND@0.5	ND@0.5	ND@0.5	ND@0.5
DICHLORODIFLUOROMETHANE (Freon®12)		ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5
ETHYLBENZENE		ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5
M,P-XYLENE		ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5
O-XYLENE		ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5
TETRACHLOROETHYLENE		1.0	0.9	0.7	0.9	0.9	1.1	0.7	0.6	0.8	0.8	ND@0.5	ND@0.5	ND@0.5	ND@0.5
TRICHLOROETHYLENE		3.3	3.1	2.7	3.4	3.4	4.4	3.2	2.6	3.4	3.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5
TRICHLOROFLUOROMETHANE		ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5
VINYL CHLORIDE		ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5

All Results reported in micrograms per liter (ug/L)

Parameter	Sample Location	066	066	066	066	066	066	757	757	757	757	757	757	757	757
	Sample Description	REP	GW	GW	GW	GW	GW	GW	REP	GW	GW	GW	GW	REP	GW
	Sample Date	04/11/2016	07/11/2016	10/11/2016	01/10/2017	04/05/2017	07/06/2017	10/16/2015	10/16/2015	01/13/2016	04/11/2016	07/11/2016	10/11/2016	10/11/2016	01/10/2017
	Laboratory Sample I.D.	8331037	8473062	8642527	8785323	8925547	9092421	8094234	8094235	8208361	8331070	8473065	8642503	8642504	8785341
1,1,1-TRICHLOROETHANE		ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE (Freon®TF)		ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5
1,2-DICHLORO-1,2,2-TRIFLUOROETHANE (Freon®123a)		ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5
1,2-DICHLOROBENZENE		ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5
ACETONE		ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0
CHLOROBENZENE		ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5
CIS-1,2-DICHLOROETHYLENE		ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	0.7	0.7	0.5J	0.3J	0.4J	0.6	0.6	0.4J
DICHLORODIFLUOROMETHANE (Freon®12)		ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5
ETHYLBENZENE		ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5
M,P-XYLENE		ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5
O-XYLENE		ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5
TETRACHLOROETHYLENE		ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	0.7	0.7	0.6	0.6	0.6	1.1	1.0	0.5J
TRICHLOROETHYLENE		ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	2.7	2.7	2.2	2.1	2.2	3.9	3.8	2.0
TRICHLOROFLUOROMETHANE		ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5
VINYL CHLORIDE		ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5	ND@0.5

All Results reported in micrograms per liter (ug/L)

Key:

GW Groundwater
REP Replicate
ND@X Not Detected at Detection Limit X
J Estimated Value

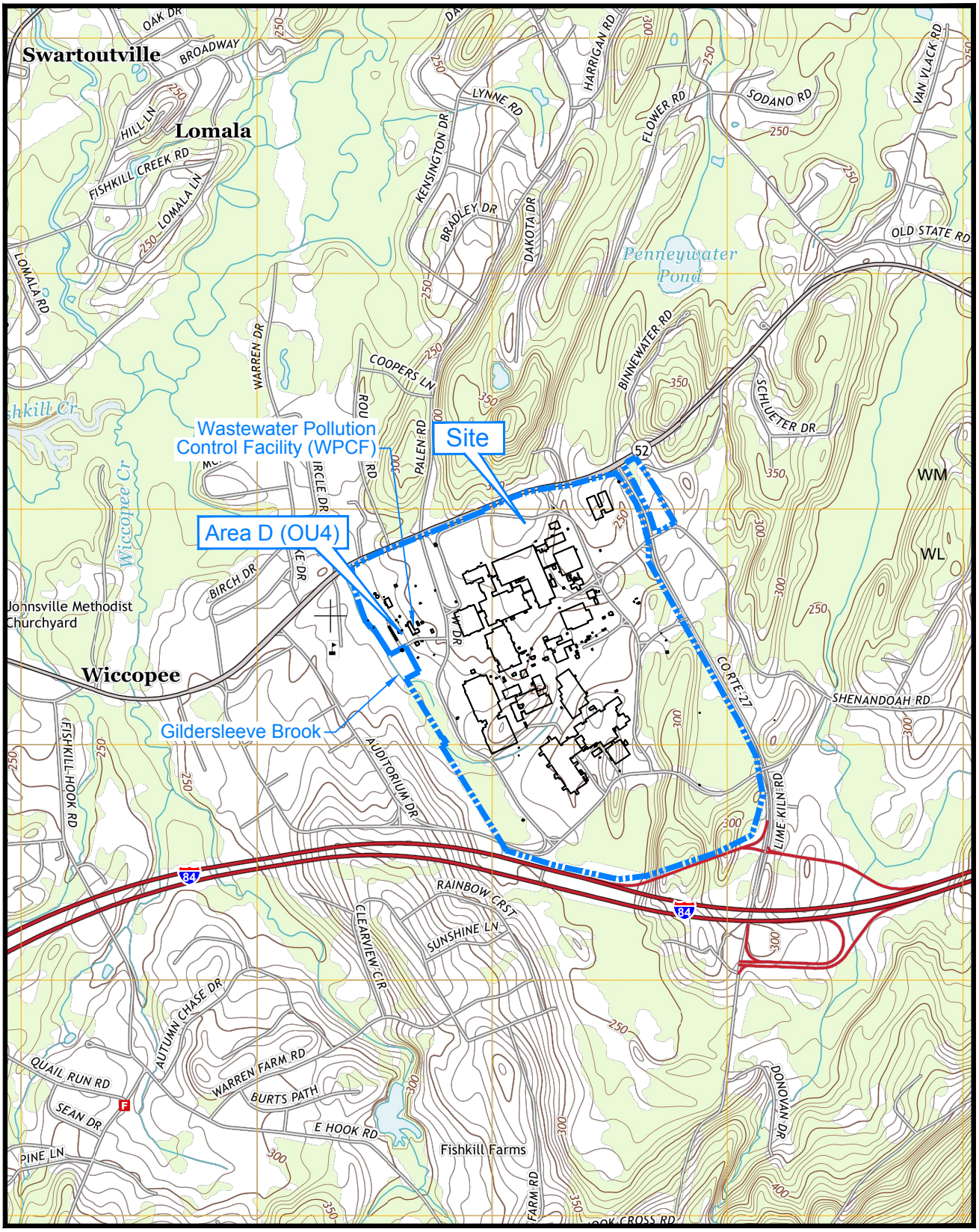
Table 2
Volatile Organic Compound Data, GW-032B Shutdown Test Groundwater Sampling
Area D Remediation Area (Operable Unit 4)
Former IBM East Fishkill Facility, East Fishkill, New York

Parameter	Sample Location	757	757
	Sample Description	GW	GW
	Sample Date	04/19/2017	07/06/2017
	Laboratory Sample I.D.	8952419	9092403
1,1,1-TRICHLOROETHANE		ND@0.5	ND@0.5
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE (Freon®TF)		ND@0.5	ND@0.5
1,2-DICHLORO-1,2,2-TRIFLUOROETHANE (Freon®123a)		ND@0.5	ND@0.5
1,2-DICHLOROBENZENE		ND@0.5	ND@0.5
ACETONE		ND@5.0	ND@5.0
CHLOROBENZENE		ND@0.5	ND@0.5
CIS-1,2-DICHLOROETHYLENE		0.3J	0.3J
DICHLORODIFLUOROMETHANE (Freon®12)		ND@0.5	ND@0.5
ETHYLBENZENE		ND@0.5	ND@0.5
M,P-XYLENE		ND@0.5	ND@0.5
O-XYLENE		ND@0.5	ND@0.5
TETRACHLOROETHYLENE		0.5	0.7
TRICHLOROETHYLENE		2.0	2.5
TRICHLOROFLUOROMETHANE		ND@0.5	ND@0.5
VINYL CHLORIDE		ND@0.5	ND@0.5

All Results reported in micrograms per liter (ug/L)

Key:

GW Groundwater
REP Replicate
ND@X Not Detected at Detection Limit X
J Estimated Value



Portion of the Hopewell Junction, NY
7.5-minute USGS Quadrangle
(The National Map US Topo, 2013)
Latitude/Longitude: 41°32'27"N, 73°49'28"W (41.540714, -73.824185)

N

Scale
0 1000' 2000'

Figure 1

Former IBM East Fishkill Facility

Site Location Map

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95007-044-E4 / 1-21-16

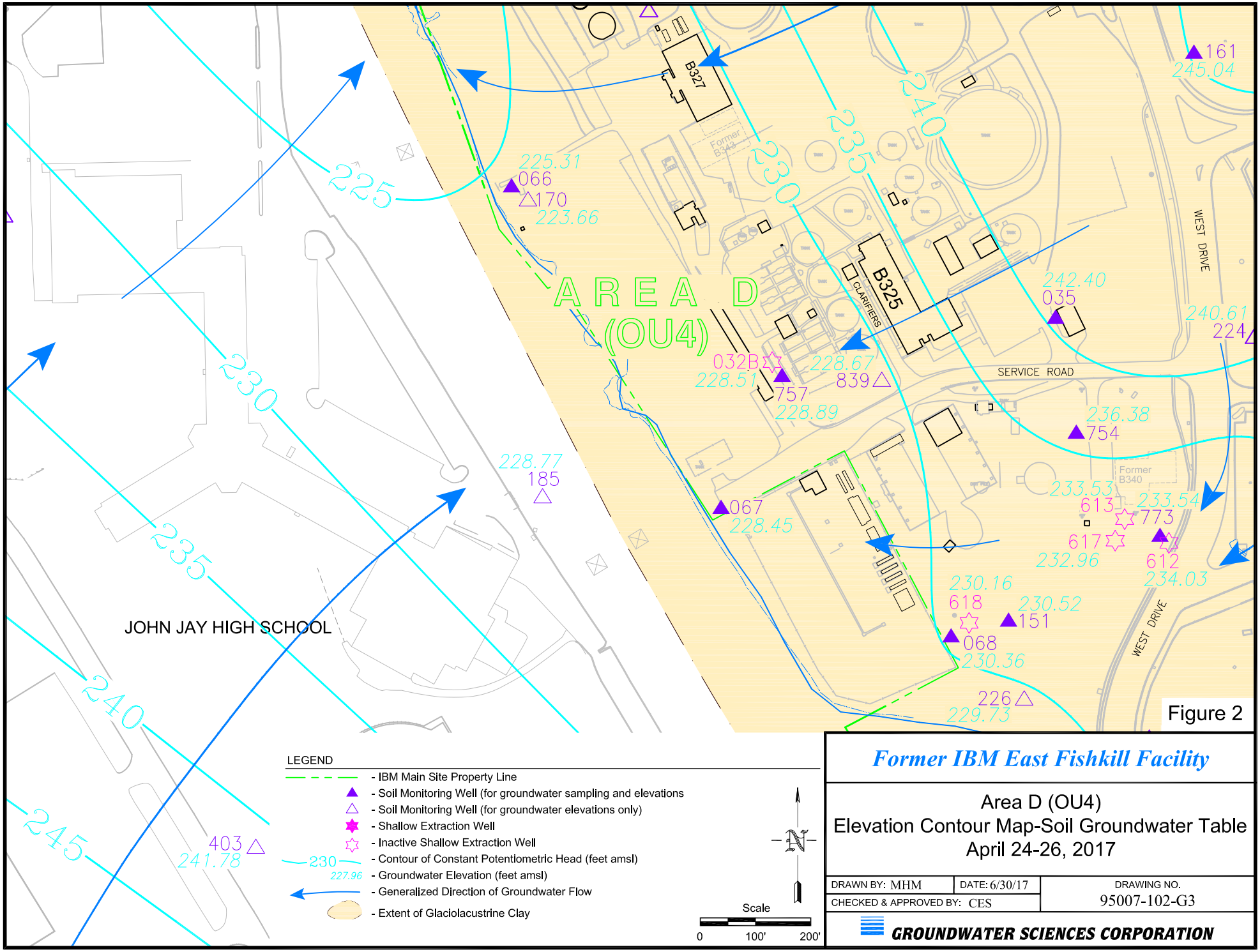


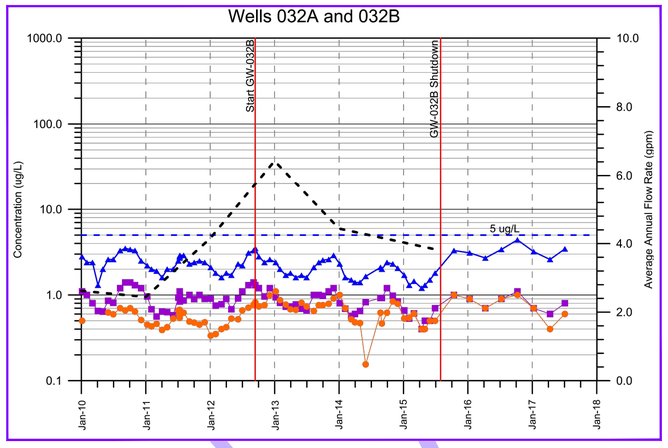
Figure 2

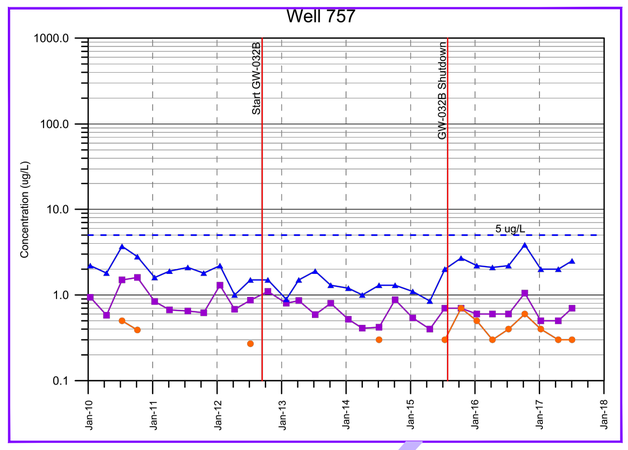
Former IBM East Fishkill Facility

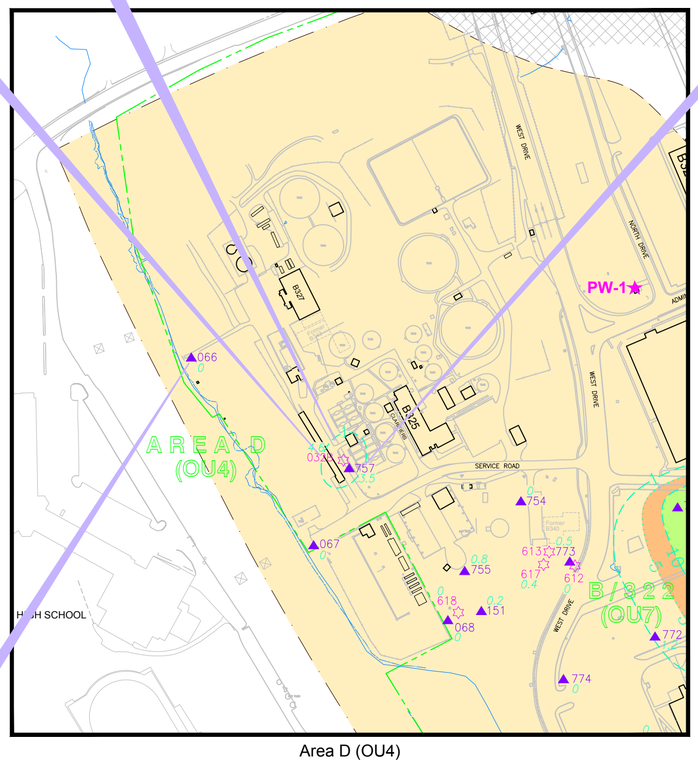
Area D (OU4)
Elevation Contour Map-Soil Groundwater Table
April 24-26, 2017

DRAWN BY: MHM	DATE: 6/30/17	DRAWING NO. 95007-102-G3
CHECKED & APPROVED BY: CES		

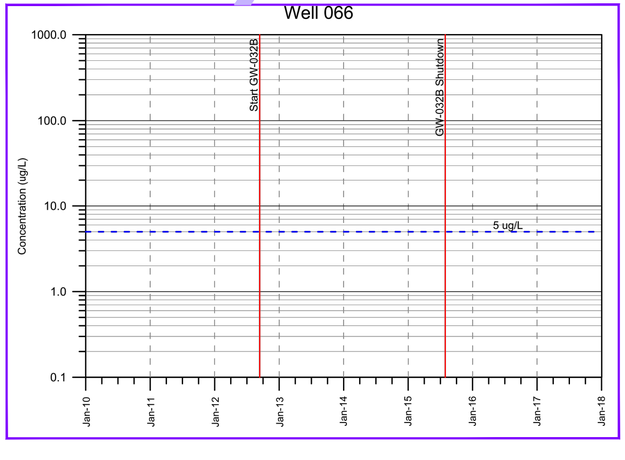
GROUNDWATER SCIENCES CORPORATION







Area D (OU4)



PCE - Tetrachloroethene
TCE - Trichloroethene
CIS12-DCE - cis-1,2-Dichlorothene
VC - Vinyl Chloride*
Average Annual Flow Rate (gpm)
Sampling for Vinyl Chloride began in 1990.

LEGEND

- Former IBM East Fishkill Facility Property Line
- GMP Soil Monitoring Well
- Bedrock Extraction Well
- Soil Extraction Well
- Inactive Soil Extraction Well
- Extent of Glaciolacustrine Clay (East Complex only)
- Inferred Areas of No Saturated Soil (approximate)
- 10 - PCE-Series Concentration Contour (ug/l)
- 5 - Approximate Limit of Plume as Defined by Annual Median Concentration Equal to 5 ug/l of PCE-Series Compounds
- 3.1 - PCE-Series Concentration (ug/l; April 4-May 12, 2017)

Note: All concentrations have been rounded to a maximum of two significant figures. "0" means not detected.

Concentrations greater than the MDL but less than the RL (which is 1.0 ug/l x DF for most compounds prior to 4/1/2016 and 0.5 ug/l x DF for most compounds after 4/1/2016) are also reported by the laboratory (MDL=Method Detection Limit, RL=Reporting Limit, and DF=Dillution Factor). Values greater than the MDL but less than the RL should be considered estimates that would typically be flagged with a "J" qualifier.

The PCE-series concentration is a calculated concentration that uses the weighted sum of four constituent VOC concentrations. In performing this calculation, compounds that were "not detected" are treated as zeroes, and the resulting PCE-series concentration is shown as "0" if none of the four PCE-series constituents was detected.

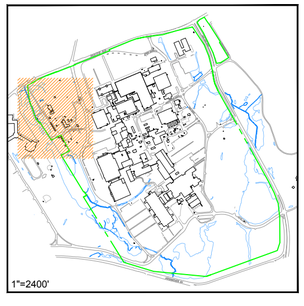


Figure 3

N

Scale
0 200' 300'

Former IBM East Fishkill Facility

Area D (OU4)
Well Location Map and
Time vs. Concentration Graphs
Soil

DRAWN BY: MHM	DATE: 8/31/17	DRAWING NO.
CHECKED & APPROVED BY: CES/RCW		95007-088-H3

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