Progress/Inspection Report No. 6
J&H Holding Company, LLC
491 Wortman Avenue, Brooklyn, NY 11208
Brownfield Cleanup Program Site No. C224139
Reporting Period: October 2017

1. Introduction

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. (Langan) submits this progress/inspection report on behalf of J&H Holding Company, LLC (the "Participant"). In accordance with Section 7.1 of the Site Management Plan (SMP), which was approved by the New York State Department of Environmental Conservation (NYSDEC) on June 28, 2017, this progress/inspection report summarizes work performed at the Former Watermark Designs Facility (the "Site") during October 2017. The Final Engineering Report (FER) was submitted to the NYSDEC on May 25, 2017, and in accordance with the Brownfield Cleanup Agreement (BCA) submission of Monthly Brownfield Cleanup Program (BCP) Progress Reports is no longer required for the Site.

The Site (Block 4384, Lots 31 & 36) is located at 491 Wortman Avenue in Brooklyn, New York (Figure 1) and consists of a rectangular shaped lot that is about 19,000 square feet (±0.44 acres). The Site is located in an area zoned for industrial/manufacturing use and is bound by Wortman Street to the south, Linwood Street to the west, Essex Street to the east, and a one-story building to the north. Currently, a one-story building with a partial basement covers the entire Site footprint. The one-story building is comprised of a warehouse (i.e., the western portion) and office space and a smaller warehouse (i.e. the eastern portion).

2. Remedial Actions Relative to the Site during this Reporting Period

The eighth quarterly on-site groundwater sampling event was conducted on October 30 and 31, 2017. Depth-to-water, total depth, and photoionization detector (PID) measurements were collected at monitoring wells MW-1 through MW-9 and piezometers PZ-1 and PZ-2 (thirteen locations total). Following the collection of field data, groundwater samples were collected from each monitoring well and piezometer for laboratory analysis of Target Compound List (TCL) volatile organic compounds (VOCs). Groundwater sampling locations are shown on Figure 2.

The second round of semi-annual, near-field, off-site groundwater sampling was conducted on October 31, 2017. Depth-to-water, total depth, and PID measurements were collected at monitoring wells ML-002 (shallow, middle, and deep), MW-10, and MW-11 (five locations total). Following the collection of field data, groundwater samples were collected from each monitoring well for laboratory analysis of TCL VOCs. The near-field, off-site groundwater monitoring locations are shown on Figure 3.

On November 1, 2017, Langan recorded process and performance monitoring data for the air sparge and soil vapor extraction (AS/SVE) system. As part of the monthly inspection, vapor samples were collected prior to the lead vapor-phase granular activated carbon (vGAC) unit (i.e.,

influent) and after the lag vGAC unit (i.e., effluent). Routine equipment maintenance, including greasing the blower and checking the belt tensions, was performed.

3. Actions Relative to the Site Anticipated for the Next Reporting Period

The following activities are planned:

- Continued operation, maintenance and monitoring (OM&M) of the AS/SVE system

4. Approved Activity Modifications (changes of work scope and/or schedule)

None

5. Results of Sampling, Testing and Other Relevant Data

OM&M sampling was performed as follows:

- An influent vapor sample was collected from the AS/SVE system and analyzed for VOCs via USEPA Method TO-15.
- An effluent vapor sample was collected from the AS/SVE system and analyzed for VOCs via USEPA Method TO-15.
- Thirteen groundwater samples (plus one duplicate) were collected from on-site groundwater monitoring wells MW-1, MW-2, MW-3 (shallow, middle, and deep), MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, PZ-1, and PZ-2 and analyzed for TCL VOCs via USEPA Method 8260C.
- Five groundwater samples (plus one duplicate) were collected from near-field, off-site groundwater monitoring wells ML-002 (shallow, middle, and deep), MW-10, and MW-11 and analyzed for TCL VOCs via USEPA Method 8260C.

Samples were analyzed by Alpha Analytical of Westborough, MA. Alpha is a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP)-certified laboratory.

Based on the results of the most recent OM&M sampling, the AS/SVE system is functioning in compliance with Policy DAR-1: Guidelines for the Control of Toxic Ambient Air Contaminants (DAR-1).

The groundwater results from the eighth quarter of on-site groundwater sampling exhibit chlorinated VOC (CVOC) concentrations above the Title 6 of the New York Codes, Rules, and Regulations (6 NYCRR) Part 703.5 Water Quality Standards in three of the wells sampled (MW-3M, MW-3D, and MW-6). The groundwater results for all wells are less than the August 2015 baseline groundwater sampling results (reductions in total CVOC concentrations have been achieved). Based on the data collected, CVOC concentrations appear to have stabilized below the 6 NYCRR Part 703.5 Water Quality Standards in the following eight wells/piezometers: MW-1, MW-2, MW-3S, MW-4, MW-5, MW-7, MW-9, and PZ-2. Since October 2016, tetrachloroethene (PCE) concentrations observed at MW-3M (screen 30 to 40 feet below grade

surface [bgs]) and MW-3D (screened 50 to 60 feet bgs) have consistently ranged between about 19 and 10 micrograms per liter (µg/L) and concentrations of the remaining CVOCs (trichloroethene [TCE], cis-1,2-dichloroethene, and vinyl chloride) have not exceeded the 6 NYCRR Part 703.5 Water Quality Standards; indicating that CVOC concentrations in the middle- and deep-screened on-site wells have stabilized. When compared to last quarter's sampling results, a 64% reduction of the CVOC concentration observed at MW-6 was achieved. If this reduction does not continue into next quarter, appropriate measures targeting the remaining contamination in the vicinity of MW-6 will be evaluated.

The groundwater results from the second round of semi-annual, near-field, off-site groundwater sampling exhibit CVOC concentrations above the 6 NYCRR Part 703.5 Water Quality Standards in four of the five wells. When compared to the July 2016 sampling event, reductions in total CVOC concentrations have been achieved in two of the sampled wells. The October 2017 groundwater sampling results are consistent with April 2017 results and demonstrate that the off-site near-field concentrations have stabilized. The October 2017 PCE concentration range in the shallow wells is 1.1 to 8.8 µg/L, compared to the April 2017 range of 1.4 to 5.6 µg/L. Given the historical and current industrial uses of the area and the absence of CVOCs in shallow on-site wells, the concentrations of CVOCs in the off-site near-field wells can be attributed to area-wide groundwater quality and no longer appear to be significantly impacted by the former CVOC source beneath the site.

The following tables are attached to this progress report; analytical lab reports are available upon request. The tables summarize the data collected and the functionality of the AS/SVE system, including mass of VOCs removed from the subsurface based on PID readings and laboratory data, as well as, the alarm history.

- Table1: AS/SVE System Vapor Sampling Results
- Table 2: AS/SVE System Mass Removal – PID Data
- Table 3: AS/SVE System Mass Removal – Laboratory Data
- Table 4: AS/SVE System DAR-1 Compliance – November 1, 2017
- Table 5: AS/SVE System Alarm History
- Table 6: Quarterly Groundwater Sampling Results – Eighth Quarter
- Table 7: Quarterly Groundwater Sampling Results Summary
- Table 8: Semi-Annual, Near-Field, Off-Site Groundwater Sampling Results – October 2017 (Round 2)
- Table 9: Semi-Annual, Near-field, Off-Site Groundwater Sampling Results Summary

6. Deliverables Submitted During This Reporting Period

None

7. Information Regarding Percentage of Completion

OM&M of the AS/SVE system is ongoing.

As of November 10, 2017 and since inception, the SVE system operated for 16,637 hours (92% uptime), and the AS system operated for 16,167 hours (90% uptime).

8. Unresolved Delays Encountered or Anticipated That May Affect the Schedule and Mitigation Efforts

None

9. Citizen Participation Plan Activities during This Reporting Period

The Certificate of Completion Fact Sheet was distributed to the public on October 25, 2017.

10. Activities Anticipated in Support of the CPP for the Next Reporting Period

None

11. Miscellaneous Information

NYSDEC issued the Certificate of Completion on October 24, 2017.

TABLES

TABLE 1: AS/SVE SYSTEM VAPOR SAMPLING RESULTS
FORMER WATERMARK DESIGNS FACILITY
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM SITE NO. C224139

LOCATION SAMPLE ID LAB SAMPLE ID SAMPLE DATE	vGAC INFLUENT INFLUENT_110117 11/1/2017 L1739855-01		vGAC EFFLUENT EFFLUENT_110117 11/1/2017 L1739855-02	
Volatile Organic Compounds (ug/m^3)				
1,1,1-Trichloroethane	8.46		1.09	U
1,1,2,2-Tetrachloroethane	2.75	U	1.37	U
1,1,2-Trichloroethane	2.18	U	1.09	U
1,1-Dichloroethane	1.62	U	0.809	U
1,1-Dichloroethene	1.59	U	0.793	U
1,2,4-Trichlorobenzene	2.97	U	1.48	U
1,2,4-Trimethylbenzene	1.97	U	0.983	U
1,2-Dibromoethane	3.07	U	1.54	U
1,2-Dichlorobenzene	2.4	U	1.2	U
1,2-Dichloroethane	1.62	U	0.809	U
1,2-Dichloropropane	26.7		0.924	U
1,3,5-Trimethylbenzene	1.97	U	0.983	U
1,3-Butadiene	0.885	U	0.442	U
1,3-Dichlorobenzene	2.4	U	1.2	U
1,4-Dichlorobenzene	2.4	U	1.2	U
1,4-Dioxane	1.44	U	0.721	U
2,2,4-Trimethylpentane	1.87	U	0.934	U
2-Butanone	4.07		1.96	
2-Hexanone	1.64	U	0.82	U
3-Chloropropene	1.25	U	0.626	U
4-Ethyltoluene	1.97	U	0.983	U
4-Methyl-2-pentanone	4.1	U	2.05	U
Acetone	39.9		23.1	
Benzene	4.12		1.85	
Benzyl chloride	2.07	U	1.04	U
Bromodichloromethane	2.68	U	1.34	U
Bromoform	4.14	U	2.07	U
Bromomethane	1.55	U	0.777	U
Carbon disulfide	1.28		0.884	
Carbon tetrachloride	2.52	U	1.26	U
Chlorobenzene	1.84	U	0.921	U
Chloroethane	1.06	U	0.528	U
Chloroform	11.5		1.09	
Chloromethane	0.95		0.628	
cis-1,2-Dichloroethene	3.54		5.11	
cis-1,3-Dichloropropene	1.82	U	0.908	U
Cyclohexane	1.38	U	0.688	U
Dibromochloromethane	3.41	U	1.7	U
Dichlorodifluoromethane	1.98	U	1.48	
Ethanol	22.6		23.2	
Ethyl Acetate	16.9		1.8	U
Ethylbenzene	1.74	U	0.869	U
Freon-113	3.07	U	1.53	U
Freon-114	2.8	U	1.4	U
Heptane	1.64	U	0.82	U
Hexachlorobutadiene	4.27	U	2.13	U
Isopropanol	3.96		2.22	
Methyl tert butyl ether	1.44	U	0.721	U
Methylene chloride	3.47	U	2.7	
n-Hexane	3.59		2.17	
o-Xylene	1.74	U	0.869	U
p/m-Xylene	3.47	U	1.74	U
Styrene	1.7	U	0.852	U
Tertiary butyl Alcohol	25.6		17.2	
Tetrachloroethene	168		1.36	U
Tetrahydrofuran	2.95	U	1.47	U
Toluene	3.51		1.41	
trans-1,2-Dichloroethene	1.66		0.793	U
trans-1,3-Dichloropropene	1.82	U	0.908	U
Trichloroethene	881		1.07	U
Trichlorofluoromethane	2.25	U	1.12	U
Vinyl bromide	1.75	U	0.874	U
Vinyl chloride	1.02	U	0.511	U

NOTES:
1. ug/m^3 = micrograms per cubic meter
2. vGAC = vapor-phase granular activated carbon
3. Samples collected at the "vGAC INFLUENT" were collected before to the lead vGAC vessel.
4. Samples collected at the "vGAC EFFLUENT" were collected after the lag vGAC vessel.

Q is the Qualifier Column with definitions as follows:
U = The analyte was not detected at or above the level indicated.

TABLE 2: AS/SVE SYSTEM MASS REMOVAL - PID DATA
FORMER WATERMARK DESIGNS FACILITY
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM SITE NO. C224139

DATE	INFLUENT CONCENTRATION (ppmv)	SVE BLOWER FLOWRATE (scfm)	EFFLUENT CONCENTRATION (ppmv)	TOTAL OPERATIONAL HOURS	AVERAGE MOLECULAR WEIGHT	MASS REMOVAL RATE (lbs/hr)	TOTAL MASS REMOVED FROM SUBSURFACE (lbs)	CUMULATIVE MASS REMOVED FROM SUBSURFACE (lbs)
10/21/2015	55.0	688	1.8	30	100	0.57	17.02	17.02
10/26/2015	8.3	650	0.6	150	100	0.08	9.31	26.34
11/6/2015	5.5	560	0.0	383	100	0.05	11.13	37.46
11/30/2015	1.9	593	0.3	958	100	0.01	8.46	45.92
12/28/2015	3.7	570	0.0	1,548	100	0.03	19.29	65.21
1/27/2016	1.2	525	0.5	2,180	100	0.01	3.60	68.81
2/24/2016	2.5	578	0.0	2,854	100	0.02	15.10	83.91
3/30/2016	0.2	550	0.0	3,693	100	0.002	1.43	85.34
4/29/2016	2.0	571	0.0	4,322	100	0.018	11.14	96.48
5/26/2016	0.4	600	0.0	4,972	100	0.004	2.42	98.90
6/29/2016	0.5	600	0.0	5,784	100	0.005	3.78	102.68
7/28/2016	3.0	600	0.0	6,431	100	0.028	18.06	120.73
8/31/2016	2.7	600	0.0	7,110	100	0.025	17.05	137.79
9/29/2016	7.5	760	2.0	7,802	100	0.065	44.85	182.63
10/31/2016	0.0	520	0.0	8,516	100	0.000	0.00	182.63
11/29/2016	0.0	560	0.0	9,211	100	0.000	0.00	182.63
12/28/2016	0.0	520	0.0	9,884	100	0.000	0.00	182.63
1/25/2017	2.8	600	0.0	10,530	100	0.026	16.83	199.46
3/7/2017	0.1	360	0.0	11,186	100	0.001	0.37	199.82
4/27/2017	0.0	600	0.0	12,185	100	0.000	0.00	199.82
5/25/2017	0.8	600	0.0	12,760	100	0.008	4.42	204.24
6/28/2017	0.04	600	0.0	13,575	100	0.000	0.33	204.57
7/21/2017	0.0	600	0.0	14,060	100	0.000	0.00	204.57
8/25/2017	0.0	600	0.0	14,852	100	0.000	0.00	204.57
9/27/2017	0.7	600	0.08	15,641	100	0.006	4.55	209.12
11/1/2017	0.0	640	0.00	16,422	100	0.000	0.00	209.12

NOTES:
1. Blower flowrate is recorded from PDI-701 pitot tube flow indicator located on the blower discharge line.
2. The influent and effluent concentrations are based on the PID readings.
3. Mass Removal rate (lb/hr) = ((Conc in ppmv)(flowrate scfm)(MW)(60 min/hr)) / ((387)(1,000,000)).
4. PID = photoionization detector
5. ppmv = parts per million volume
6. scfm = standard cubic feet per minute
7. lbs/hr = pounds per hour
8. lbs = pounds
9. SVE = soil vapor extraction

TABLE 3: AS/SVE SYSTEM MASS REMOVAL - LABORATORY DATA
FORMER WATERMARK DESIGNS FACILITY
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM SITE NO. C224139

DATE	INFLUENT CONCENTRATION (ug/m3)	SVE BLOWER FLOWRATE (scfm)	EFFLUENT CONCENTRATION (ug/m3)	TOTAL OPERATIONAL HOURS	INFLUENT RATE (mg/min)	EFFLUENT RATE (mg/min)	REMOVAL RATE (mg/min)	MASS REMOVED FROM SUBSURFACE (lbs)	TOTAL MASS REMOVED FROM SUBSURFACE (lbs)	MASS REMOVED BY CARBON (lbs)	TOTAL MASS REMOVED BY CARBON (lbs)
10/20/2015	114,348	640	9,241	12	2049.12	165.60	1883.52	3.25	3.25	2.99	2.99
10/21/2015	32,758	688	1,129	30	631.05	21.75	609.30	1.50	4.76	1.45	4.44
10/26/2015	7,027	650	383	150	127.89	6.97	120.92	2.03	6.79	1.92	6.36
11/30/2015	3,144	593	426	958	52.20	7.07	45.13	5.58	12.36	4.82	11.18
12/28/2015	3,357	570	230	1,548	53.58	3.67	49.91	4.18	16.55	3.89	15.08
1/27/2016	621	525	183	2,180	9.13	2.69	6.44	0.76	17.31	0.54	15.62
2/24/2016	1,454	578	283	2,854	23.53	4.58	18.94	2.10	19.41	1.69	17.31
3/30/2016	825	550	75	3,693	12.71	1.16	11.55	1.41	20.82	1.28	18.59
4/29/2016	482	571	112	4,322	7.70	1.79	5.91	0.64	21.46	0.49	19.08
5/26/2016	1,169	600	162	4,972	19.64	2.73	16.91	1.69	23.15	1.45	20.53
6/29/2016	1,865	600	190	5,784	31.33	3.19	28.14	3.37	26.51	3.02	23.56
7/28/2016	3,706	600	232	6,431	62.26	3.90	58.36	5.33	31.84	4.99	28.55
8/31/2016	4,798	600	135	7,110	80.61	2.26	78.35	7.24	39.08	7.04	35.59
9/29/2016	1,045	760	179	7,802	22.24	3.81	18.43	2.04	41.12	1.69	37.27
10/31/2016	922	520	91	8,516	13.42	1.32	12.10	1.27	42.38	1.14	38.42
11/29/2016	790	560	167	9,211	12.38	2.62	9.76	1.14	43.52	0.90	39.31
12/28/2016	282	520	123	9,884	4.11	1.79	2.32	0.37	43.89	0.21	39.52
1/25/2017	4.7	600	5.6	10,530	0.08	0.09	-0.02	0.01	43.89	0.00	39.52
3/7/2017	762	360	120	11,186	7.68	1.21	6.47	0.67	44.56	0.56	40.08
4/27/2017	1,008	600	86	12,185	16.93	1.44	15.49	2.24	46.80	2.05	42.13
5/25/2017	771	600	48	12,760	12.95	0.81	12.15	0.99	47.78	0.92	43.05
6/28/2017	754	600	69	13,575	12.66	1.16	11.50	1.36	49.15	1.24	44.29
7/21/2017	2,434	600	235	14,060	40.89	3.95	36.94	2.62	51.77	2.37	46.66
8/25/2017	1,334	600	246	14,852	22.41	4.13	18.28	2.35	54.12	1.91	48.58
9/27/2017	1,059	600	83	15,641	17.79	1.39	16.40	1.86	55.98	1.71	50.29
11/1/2017	1,227	640	85	16,422	21.99	1.52	20.47	2.27	58.25	2.11	52.40

NOTES:
1. Blower flowrate is recorded from PDI-701 pitot tube flow indicator located on the blower discharge line.
2. The influent and effluent concentrations are based on the lab analytical data and not the PID readings.
3. ug/m3 = micrograms per cubic meter
4. scfm = standard cubic feet per minute
5. mg/min = milligrams per minute
6. lbs = pounds
7. SVE = soil vapor extraction
8. VGAC = vapor-phase granular activated carbon

TABLE 4: AS/SVE SYSTEM DAR-1 COMPLIANCE
FORMER WATERMARK DESIGNS FACILITY
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM NO. C224139

SAMPLING DATE: **11/1/2017**

CHEMICAL COMPOUND	CARBON EFFLUENT CONCENTRATION MEASURED ($\mu g/m^3$)	EMISSION FLOWRATE MEASURED (SCFM)	(m^3/min)	OUTLET CONCENTRATION (Q_p) (lb/hr)	OUTLET CONCENTRATION (Q_a) (lb/yr)	MAX ANNUAL IMPACT (C_a) ($\mu g/m^3$)	MAX POTENTIAL IMPACT (C_p) ($\mu g/m^3$)	MAX SHORT-TERM IMPACT (C_{st}) ($\mu g/m^3$)	DAR-1 STANDARDS SGC ($\mu g/m^3$)	AGC ($\mu g/m^3$)	EMISSION RESTRICTION REQUIRED (if C_p>AGC and C_a<AGC)	SGC EMISSION EXCEEDANCE (if C_{st}>SGC)	AGC EMISSION EXCEEDANCE (if C_a>AGC)
Volatile Organics, USEPA TO-15 Full List (ug/m^3)													
2-Butanone	1.96	640	18.12288	4.69E-06	4.11E-02	3.69E-04	3.69E-04	2.40E-02	13000	5000	NO	NO	NO
Acetone	23.1	640	18.12288	5.53E-05	4.84E-01	4.35E-03	4.35E-03	2.83E-01	180,000	30,000	NO	NO	NO
Benzene	1.85	640	18.12288	4.43E-06	3.88E-02	3.49E-04	3.48E-04	2.26E-02	1,300	0.13	NO	NO	NO
Carbon disulfide	0.88	640	18.12288	2.11E-06	1.85E-02	1.67E-04	1.66E-04	1.08E-02	6,200	700	NO	NO	NO
Chloroform	1.09	640	18.12288	2.61E-06	2.28E-02	2.05E-04	2.05E-04	1.33E-02	150	0.04	NO	NO	NO
Chloromethane	0.63	640	18.12288	1.50E-06	1.32E-02	1.18E-04	1.18E-04	7.68E-03	6,200	700	NO	NO	NO
cis-1,2-Dichloroethylene	5.11	640	18.12288	1.22E-05	1.07E-01	9.63E-04	9.62E-04	6.25E-02	--	63	NO	No Standard	NO
Dichlorodifluoromethane	1.48	640	18.12288	3.54E-06	3.10E-02	2.79E-04	2.79E-04	1.81E-02	--	12,000	NO	No Standard	NO
Ethanol	23.2	640	18.12288	5.55E-05	4.86E-01	4.37E-03	4.37E-03	2.84E-01	--	45,000	NO	No Standard	NO
Isopropanol	2.22	640	18.12288	5.31E-06	4.65E-02	4.18E-04	4.18E-04	2.72E-02	98,000	7,000	NO	NO	NO
Methylene chloride	2.7	640	18.12288	6.46E-06	5.66E-02	5.09E-04	5.08E-04	3.30E-02	14,000	60	NO	NO	NO
n-Hexane	2.17	640	18.12288	5.19E-06	4.55E-02	4.09E-04	4.08E-04	2.65E-02	--	700	NO	No Standard	NO
Tertiary Butyl Alcohol	17.2	640	18.12288	4.11E-05	3.60E-01	3.24E-03	3.24E-03	2.10E-01	--	720	NO	No Standard	NO
Toluene	1.41	640	18.12288	3.37E-06	2.95E-02	2.66E-04	2.65E-04	1.72E-02	37,000	5,000	NO	NO	NO

NOTES AND QUALIFIERS:
1. Table only displays chemical compounds with detectable concentrations.
2. Concentrations below reporting limit (non detect) are assumed to be zero.
3. Air samples were analyzed for USEPA TO-15 compounds
4. All equations are referenced in NYSDEC, Division of Air Resources, Air Guide 1, Guidelines for the Control of Toxic Ambient Air Contaminants (11/12/97). Standard Point Source Method calculations were used.
5. Values in table are compared to DAR-1 Annual Guideline Concentrations (AGC)/Short-Term Guideline Concentrations (SGC) Tables dated February 28, 2014.
6. DAR-1 AGC and/or SGC values listed as "--" means there is no AGC or SGC standard for that compound.
7. SCFM = standard cubic feet per minute
8. Blower flowrate is recorded from PDI-701 pitot tube flow indicator located on the blower discharge line.
9. ug/m^3 = micrograms per cubic meter
10. m^3/min = cubic meter per minute
11. lb/hr = pounds per hour
12. lb/yr = pounds per year

TABLE 5: AS/SVE SYSTEM ALARM HISTORY
FORMER WATERMARK DESIGNS FACILITY
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM NO. C224139

DATE	ALARM	ALARM DESCRIPTION	REASON	REMEDY
10/23/2015	PAL-2501	Compressor Low Pressure Alarm	Uncertain of the reason. There may be a power fluctuation that trips the low pressure alarm, which shuts the AS system down.	On-site observation confirmed that this was a false alarm and was not caused by compressor failure or a breach in the air sparge manifold. The alarm was manually reset.
10/28/2015	LAH-7301	Storage Tank High Level Alarm	The SVE system began to extract a larger volume of water than previously anticipated.	The storage tank was emptied into nine 55-gallon drums, and the SVE system vacuum has been optimized to extract a lesser volume of water.
11/5/2015	PAL-2501	Compressor Low Pressure Alarm	Caused by the air sparge compressor on/off time, which won't allow "OFF" time to be set to zero and therefore, the compressor cannot run continuously.	The air compressor timer has been by-passed and the compressor operation is linked to the SVE system operation. If the SVE system is operational, the compressor will operate unless a different AS system alarm has been triggered.
11/17/2015	PAL-2501	Compressor Low Pressure Alarm	This was an alarm test that was performed to ensure that the update to the Programmable Logic Controller (PLC) was successful.	The PLC update was successful and the air sparge compressor can run continuously. The air compressor timer is no longer being bypassed.
12/23/2015	LAH-7301	Storage Tank High Level Alarm	Following optimization, which included increasing the AS rate and the SVE system flow rate, the SVE system began to extract a larger volume of water than previously anticipated.	The storage tank was emptied into three 55-gallon drums. Both the AS and SVE system flow rates were adjusted in an effort to reduce excess water collection by the SVE system.
12/25/2015	LAH-7301	Storage Tank High Level Alarm	Following optimization, which included increasing the AS rate and the SVE system flow rate, the SVE system began to extract a larger volume of water than previously anticipated.	The storage tank was emptied into three 55-gallon drums. Both the AS and SVE system flow rates were adjusted in an effort to reduce excess water collection by the SVE system.
1/7/2016	LAH-7301	Storage Tank High Level Alarm	Following continued optimization of AS/SVE system, the SVE system began to extract a larger volume of water than anticipated.	The storage tank was emptied into eight 55-gallon drums. Both the AS and SVE system flow rates were adjusted in an effort to reduce excess water collection by the SVE system.
1/17/2016	LAH-7301	Storage Tank High Level Alarm	Following continued optimization of AS/SVE system, the SVE system began to extract a larger volume of water than anticipated.	The storage tank was emptied. Both the AS and SVE system flow rates were adjusted in an effort to reduce excess water collection by the SVE system.
2/1/2016	TAH-2501	Air Compressor High Temperature Alarm	The AS system is operating close to the alarm set point so that as much warm air as possible is continuously injected into the subsurface. A slight change in the air flow rate and/or ambient temperature most likely caused the rise in discharge air temperature.	The alarm was cleared and the AS system was restarted at a lower speed. The compressor speed was ramped up incrementally throughout the day until the previous set point was reached. The heat exchanger flow and AS manifold temperature are being monitored on a daily basis in an effort to prevent tripping the high temperature alarm again.
4/3/2016	PAL-701	Blower Influent High Pressure Alarm	The alarm was most likely triggered due to power fluctuations caused by high wind conditions.	The alarm was cleared and the SVE system was restarted at a higher frequency. The system was monitored remotely for the remainder of the day.
4/29/2016	TAH-2501	Air Compressor High Temperature Alarm	The AS system is operating close to the alarm set point so that as much warm air as possible is continuously injected into the subsurface. A slight change in the air flow rate and/or ambient temperature most likely caused the rise in discharge air temperature.	The alarm was cleared and the AS system was restarted. At restart, the allowable flow through the AS system was increased to alleviate the pressure on the air compressor discharge line. The heat exchanger flow and AS manifold temperature are being monitored on a daily basis in an effort to prevent tripping the high temperature alarm again.
8/9/2016	PAH-702	SVE System Effluent High Pressure Alarm	Anomalously high pressures were not noted on the SVE system discharge during the remote or on-site inspections. It is likely that the SVE effluent pressure switch needs to be recalibrated following almost a year's worth of continuous use.	The SVE system was restarted at a lower frequency and monitored on-site for about two hours.
8/26/2016	FAL-701	Blower Low Flow Alarm	The alarm was triggered due to a loose relay switch.	The switch was tightened during the August 31, 2016 monthly inspection and the system was restarted without further issue.
12/27/2016	PAL-2501	Compressor Low Pressure Alarm	The alarm was triggered due to a mechanical failure at the air compressor (i.e., the belts tore).	The air compressor belts were replaced on January 9, 2017 and the system was restarted.
3/7/2017	FAL-401	Transfer Pump Low Flow Alarm	The alarm was likley triggered due to the fluctuating volume of water extracted by the SVE system.	The AS/SVE system was restarted. Both the AS and SVE system flow rates were adjusted in an effort to reduce excess water collection by the SVE system.
3/8/2017	Low PLC Battery	Low Programmable Loigc Controller (PLC) Battery	The alarm was triggered because the PLC battery can no longer hold a charge.	The PLC battery was replaced on March 10, 2017.
3/24/2017	VFDA-701	SVE System Variable Frequency Drive (VFD) Alarm	The alarm was triggered because the SVE system blower was not functioning within the intended parameters.	The blower was visually inspected, a piece of debris caught in the belts was removed, and the system was restarted.
7/4/2017	TAH-2501	Air Compressor High Temperature Alarm	The AS system is operating close to the alarm set point so that as much warm air as possible is continuously injected into the subsurface. A slight change in the air flow rate and/or ambient temperature most likely caused the rise in discharge air temperature.	The alarm was cleared and the AS system was restarted. At restart, the allowable flow through the AS system was increased to alleviate the pressure on the air compressor discharge line. The heat exchanger flow and AS manifold temperature are being monitored on a daily basis in an effort to prevent tripping the high temperature alarm again.
8/2/2017	FAL-701	Blower Low Flow Alarm	The alarm was likely triggered by a momentary power surge.	The alarm was cleared and the AS/SVE system was restarted. The system was monitored remotely for the remainder of the day.

TABLE 6: QUARTERLY GROUNDWATER SAMPLING RESULTS – EIGHTH QUARTER
FORMER WATERMARK DESIGNS FACILITY
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM NO. C224139

Sample ID Laboratory ID Sampling Date	NYSDEC TOGS STANDARDS AND GUIDANCE VALUES	MW01_103017 L1739493-09 10/30/2017		MW02_103017 L1739493-10 10/30/2017		MW3AS_103017 L1739493-01 10/30/2017		MW3AM_103017 L1739493-02 10/30/2017		GWDUP01_103017 L1739493-11 10/30/2017		MW3AD_103017 L1739493-03 10/30/2017		MW04_103017 L1739493-13 10/30/2017		MW05_103017 L1739493-07 10/30/2017	
Volatile Organic Compounds (µg/L)																	
1,1-Dichloroethene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichloroethene, Total	~	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2-Dichloropropane	1	0.23	J	0.58	J	0.39	J	1	U	1	U	1	U	0.49	J	0.64	J
Acetone	50	5	U	5	U	5	U	2	J	5	U	5	U	5	U	5	U
cis-1,2-Dichloroethene	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Tetrachloroethene	5	0.5	U	0.42	J	0.5	U	**15**		**14**		**15**		0.5	U	0.36	J
trans-1,2-Dichloroethene	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Trichloroethene	5	0.5	U	0.47	J	0.5	U	1.8		1.8		0.81		0.27	J	0.22	J
Vinyl chloride	2	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U

Notes:
1. Groundwater sample analytical results are compared to New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values for Class GA water.
2. Results equal to or exceeding the NYSDEC TOGS standards and guidance values are shaded and bolded.
3. µg/L = micrograms per liter
4. ~ = regulatory criteria have not been established for this compound
5. GWDUP01_103017 is a duplicate sample of MW3AM_103017.
6. Eleven monitoring wells and two piezometers associated with the air sparge and soil vapor extraction system (AS/SVE) system were sampled as part of the eighth round of quarterly groundwater sampling.

Qualifiers:
J = Analyte detected at or above the MDL (Method Detection Limit) but below the RL (Reporting Limit) - data is estimated.
U = Analyte not detected at or above the level indicated.

TABLE 6: QUARTERLY GROUNDWATER SAMPLING RESULTS – EIGHTH QUARTER
FORMER WATERMARK DESIGNS FACILITY
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM NO. C224139

Sample ID Laboratory ID Sampling Date	NYSDEC TOGS STANDARDS AND GUIDANCE VALUES	MW06_103117 L1739752-01 10/31/2017		MW07_103117 L1739752-02 10/31/2017		MW08_103017 L1739493-06 10/30/2017		MW09_103017 L1739493-08 10/30/2017		PZ01_103017 L1739493-04 10/30/2017		PZ02_103017 L1739493-05 10/30/2017	
Volatile Organic Compounds (µg/L)													
1,1-Dichloroethene	5	2.3		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichloroethene, Total	~	33		2.5	U	5		2.5	U	2.5	U	2.5	U
1,2-Dichloropropane	1	0.65	J	0.5	J	0.6	J	0.66	J	0.41	J	0.38	J
Acetone	50	10	U	5	U	5	U	5	U	5	U	5	U
cis-1,2-Dichloroethene	5	**21**		2.5	U	**5**		2.5	U	2.5	U	2.5	U
Tetrachloroethene	5	**160**		0.5	U	0.78		1.8		0.5	U	0.5	U
trans-1,2-Dichloroethene	5	**12**		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Trichloroethene	5	**93**		0.5	U	3.3		0.88		0.5	U	0.5	U
Vinyl chloride	2	**2**	U	1	U	1	U	1	U	1	U	1	U

Notes:
1. Groundwater sample analytical results are compared to New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values for Class GA water.
2. Results equal to or exceeding the NYSDEC TOGS standards and guidance values are shaded and bolded.
3. µg/L = micrograms per liter
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5. GWDUP01_103017 is a duplicate sample of MW3AM_103017.
6. Eleven monitoring wells and two piezometers associated with the air sparge and soil vapor extraction system (AS/SVE) system were sampled as part of the eighth round of quarterly groundwater sampling.

Qualifiers:
J = Analyte detected at or above the MDL (Method Detection Limit) but below the RL (Reporting Limit) - data is estimated.
U = Analyte not detected at or above the level indicated.

TABLE 7: QUARTERLY GROUNDWATER SAMPLING RESULTS SUMMARY
FORMER WATERMARK DESIGNS FACILITY
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM SITE NO. C224139

Compound	NYSDEC TOGS STANDARDS AND GUIDANCE VALUES	Sampling Location												
		MW-1	MW-2	MW-3S	MW-3M	MW-3D	MW-4	MW-5	MW-6*	MW-7*	MW-8*	MW-9	PZ-1	PZ-2
Baseline Sampling Results Summary (µg/L) - August 2015														
CVOCs	~	1274.9	2314	873.3	23.4	27.8	653	175	1236.3	1272	458	602	903.6	438.2
PCE	5	750	480	380	14	8.3	79	110	710	460	180	400	310	230
TCE	5	500	1800	480	5.9	16	540	55	500	780	240	190	580	200
cis-1,2- DCE	5	19	14	8.3	2.5	2.5	29	9	22	27	36	10	8.6	6.2
vinyl chloride	2	5.9	20	5	1	1	5	1	4.3	5	2	2	5	2
First Quarter Sampling Results Summary (µg/L) - January 2016														
CVOCs	~	12.8	2.14	7.6	23.4	16.13	14.8	1.87	676	11.41	184.56	5.8	10	2.6
PCE	5	6	1	2	20	14	3	1	240	2	15	4	3	1
TCE	5	5.3	0.74	5.2	3	1.7	11	0.37	400	9	130	1.4	5.4	1.2
cis-1,2- DCE	5	1.3	0.2	0.2	0.2	0.23	0.6	0.3	35	0.21	39	0.2	1.4	0.2
vinyl chloride	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1	0.2	0.56	0.2	0.2	0.2
Q1 Percent CVOC Reduction		*99%*	*99.9%*	*99%*	*0%*	*42%*	*98%*	*99%*	*45%*	*99%*	*60%*	*99%*	*99%*	*99%*
Second Quarter Sampling Results Summary (µg/L) - April 2016														
CVOCs	~	3.8	1.99	4.3	18.5	9.3	3.28	1.64	401	2.46	71.96	0.91	1.45	1.79
PCE	5	1.7	0.87	1.2	16	7.6	0.48	0.67	160	0.26	5.7	0.31	0.3	0.61
TCE	5	1.7	0.72	2.7	2.1	1.3	2.4	0.38	220	1.8	43	0.2	0.75	0.78
cis-1,2- DCE	5	0.2	0.2	0.2	0.2	0.2	0.2	0.39	19	0.2	23	0.2	0.2	0.2
vinyl chloride	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	0.26	0.2	0.2	0.2
Q2 Percent CVOC Reduction from Last Quarter (Q1)		*70%*	*7%*	*43%*	*21%*	*42%*	*78%*	*12%*	*41%*	*78%*	*61%*	*84%*	*86%*	*31%*
Q2 Percent CVOC Reduction from Baseline		*99.7%*	*99.9%*	*99.5%*	*21%*	*67%*	*99.5%*	*99%*	*68%*	*99.8%*	*84%*	*99.8%*	*99.8%*	*99.6%*
Third Quarter Sampling Results Summary (µg/L) - July 2016														
CVOCs	~	1.65	4.26	7.69	24.5	14.01	6.26	3.48	1249.5	4.21	53.5	1.49	1.97	4.15
PCE	5	0.68	2.2	3	22	12	2.2	1.6	570	0.71	5.3	0.76	0.47	2
TCE	5	0.57	1.6	4.2	2.1	1.6	3.5	0.76	640	3.1	27	0.33	1.1	1.6
cis-1,2- DCE	5	0.2	0.26	0.29	0.2	0.21	0.36	0.92	39	0.2	21	0.2	0.2	0.35
vinyl chloride	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.2	0.2	0.2	0.2	0.2
Q3 Percent CVOC Reduction from Last Quarter (Q2)		*57%*	*Increased*	*Increased*	*Increased*	*Increased*	*Increased*	*Increased*	*Increased*	*Increased*	*26%*	*Increased*	*Increased*	*Increased*
Q3 Percent CVOC Reduction from Baseline		*99.9%*	*99.8%*	*99.1%*	*Increased*	*50%*	*99%*	*98%*	*Increased*	*99.7%*	*88%*	*99.8%*	*99.8%*	*99.1%*

Notes:

1. Groundwater sample analytical results are compared to New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values for Class GA water.
2. Results equal to or exceeding the NYSDEC TOGS standards and guidance values are shaded.
3. PCE = tetrachlorothylene
4. TCE = trichloroethylene
5. cis-1,2-DCE = cis-1,2-Dichloroethylene
6. µg/L = microgram per liter
7. CVOC = chlorinated volatile organic compounds
8. * = Monitoring well is located in the sidewalk adjacent to the warehouse.

TABLE 7: QUARTERLY GROUNDWATER SAMPLING RESULTS SUMMARY
FORMER WATERMARK DESIGNS FACILITY
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM SITE NO. C224139

Compound	NYSDEC TOGS STANDARDS AND GUIDANCE VALUES	Sampling Location												
		MW-1	MW-2	MW-3S	MW-3M	MW-3D	MW-4	MW-5	MW-6*	MW-7*	MW-8*	MW-9	PZ-1	PZ-2
Fourth Quarter Sampling Results Summary (µg/L) - October 2016														
CVOCs	~	0.91	8.39	18.59	18.1	11.36	3.38	0.84	158.4	1.1	33.9	0.99	0.81	1.57
PCE	5	0.22	4.6	8.8	16	10	0.98	0.24	67	0.2	2.7	0.39	0.2	0.54
TCE	5	0.29	3.2	9	1.7	0.96	2	0.2	87	0.5	19	0.2	0.21	0.63
cis-1,2- DCE	5	0.2	0.39	0.59	0.2	0.2	0.2	0.2	4.2	0.2	12	0.2	0.2	0.2
vinyl chloride	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Q4 Percent CVOC Reduction from Last Quarter (Q3)		*45%*	*Increased*	*Increased*	*26%*	*19%*	*46%*	*76%*	*87%*	*74%*	*37%*	*34%*	*59%*	*62%*
Q4 Percent CVOC Reduction from Baseline		*99.9%*	*100%*	*98%*	*23%*	*59%*	*99%*	*100%*	*87%*	*99.9%*	*93%*	*99.8%*	*99.9%*	*99.6%*
Fifth Quarter Sampling Results Summary (µg/L) - January 2017														
CVOCs	~	0.8	1.32	20.71	21.1	14.21	1.89	1.02	812.7	0.9	42.4	7.9	0.8	1.49
PCE	5	0.2	0.56	10	19	13	0.52	0.42	380	0.2	3.2	5.5	0.2	0.66
TCE	5	0.2	0.36	10	1.7	0.81	0.97	0.2	410	0.3	20	2	0.2	0.43
cis-1,2- DCE	5	0.2	0.2	0.51	0.2	0.2	0.2	0.2	22	0.2	19	0.2	0.2	0.2
vinyl chloride	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.7	0.2	0.2	0.2	0.2	0.2
Q5 Percent CVOC Reduction from Last Quarter (Q4)		*12%*	*84%*	*Increased*	*Increased*	*Increased*	*44%*	*Increased*	*Increased*	*18%*	*Increased*	*Increased*	*1%*	*5%*
Q5 Percent CVOC Reduction from Baseline		*99.9%*	*100%*	*98%*	*10%*	*49%*	*100%*	*99%*	*34%*	*99.9%*	*91%*	*98.7%*	*99.9%*	*99.7%*
Sixth Quarter Sampling Results Summary (µg/L) - April 2017														
CVOCs	~	4.5	11.6	6.4	24.4	16.35	6.8	4.5	57.3	4.4	17.5	4.15	4.5	4.09
PCE	5	0.5	5.5	1.2	19	12	1.5	0.5	26	0.5	2.1	0.4	0.5	0.26
TCE	5	0.5	2.6	1.7	1.9	0.85	1.8	0.5	28	0.4	5.5	0.25	0.5	0.33
cis-1,2- DCE	5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.3	2.5	8.9	2.5	2.5	2.5
vinyl chloride	2	1	1	1	1	1	1	1	1	1	1	1	1	1
Q6 Percent CVOC Reduction from Last Quarter (Q5)		*Increased*	*Increased*	*69%*	*Increased*	*Increased*	*Increased*	*Increased*	*93%*	*Increased*	*59%*	*47%*	*Increased*	*Increased*
Q6 Percent CVOC Reduction from Baseline		*99.6%*	*99%*	*99%*	*Increased*	*41%*	*99%*	*97%*	*95%*	*99.7%*	*96%*	*99.3%*	*99.5%*	*99.1%*
Seventh Quarter Sampling Results Summary (µg/L) - July 2017														
CVOCs	~	4.5	4.61	3.98	16	18.24	4.21	4.5	758	4.32	17.2	4.23	15.1	4.36
PCE	5	0.5	0.67	0.22	11	14	0.33	0.5	490	0.5	1.2	0.23	10	0.54
TCE	5	0.5	0.44	0.26	1.5	0.74	0.38	0.5	240	0.32	5.8	0.5	1.6	0.32
cis-1,2- DCE	5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	26	2.5	9.2	2.5	2.5	2.5
vinyl chloride	2	1	1	1	1	1	1	1	2	1	1	1	1	1
Q7 Percent CVOC Reduction from Last Quarter (Q6)		*None*	*60%*	*38%*	*34%*	*Increased*	*38%*	*None*	*Increased*	*2%*	*2%*	*Increased*	*Increased*	*Increased*
Q7 Percent CVOC Reduction from Baseline		*99.6%*	*100%*	*100%*	*32%*	*34%*	*99.4%*	*97%*	*39%*	*100%*	*96%*	*99.3%*	*98%*	*99%*

Notes:

1. Groundwater sample analytical results are compared to New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values for Class GA water.
2. Results equal to or exceeding the NYSDEC TOGS standards and guidance values are shaded.
3. PCE = tetrachlorothylene
4. TCE = trichloroethylene
5. cis-1,2-DCE = cis-1,2-Dichloroethylene
6. µg/L = microgram per liter
7. CVOC = chlorinated volatile organic compounds
8. * = Monitoring well is located in the sidewalk adjacent to the warehouse.

TABLE 7: QUARTERLY GROUNDWATER SAMPLING RESULTS SUMMARY
FORMER WATERMARK DESIGNS FACILITY
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM SITE NO. C224139

Compound	NYSDEC TOGS STANDARDS AND GUIDANCE VALUES	Sampling Location											
		MW-1	MW-2	MW-3S	MW-3M	MW-3D	MW-4	MW-5	MW-6*	MW-7*	MW-8*	MW-9	PZ-1	PZ-2
Eighth Quarter Sampling Results Summary (µg/L) - October 2017														
CVOCs	~	4.5	4.39	4.5	20.3	19.31	4.27	4.08	276	4.5	10.08	6.18	4.5	4.5
PCE	5	0.5	0.42	0.5	15	15	0.5	0.36	160	0.5	0.78	1.8	0.5	0.5
TCE	5	0.5	0.47	0.5	1.8	0.81	0.27	0.22	93	0.5	3.3	0.88	0.5	0.5
cis-1,2- DCE	5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	21	2.5	5	2.5	2.5	2.5
vinyl chloride	2	1	1	1	1	1	1	1	2	1	1	1	1	1
Q8 Percent CVOC Reduction from Last Quarter (Q7)		*None*	*5%*	*Increased*	*Increased*	*Increased*	*Increased*	*9%*	*64%*	*Increased*	*41%*	*Increased*	*70%*	*Increased*
Q8 Percent CVOC Reduction from Baseline		*99.6%*	*100%*	*99%*	*13%*	*31%*	*99.3%*	*98%*	*78%*	*100%*	*98%*	*99.0%*	*100%*	*99%*

Notes:

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6. µg/L = microgram per liter
7. CVOC = chlorinated volatile organic compounds
8. * = Monitoring well is located in the sidewalk adjacent to the warehouse.

TABLE 8: SEMI-ANNUAL, NEAR-FIELD, OFF-SITE GROUNDWATER SAMPLING RESULTS - OCTOBER 2017 (ROUND 2)
491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM SITE NO. C224139

Sample ID Laboratory ID Sampling Date	NYSDEC TOGS STANDARDS AND GUIDANCE VALUES	ML002S_103117 L1739751-03 10/31/2017		ML002M_103117 L1739751-02 10/31/2017		ML002D_103117 L1739751-01 10/31/2017		MW10_103117 L1739751-05 10/31/2017		DUP02_103117 L1739751-06 10/31/2017		MW11_103117 L1739751-04 10/31/2017	
Volatile Organic Compounds (µg/L)													
1,2-Dichloroethane	0.6	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichloroethene, Total	~	2.5	U	2.5	U	2.5	U	0.93	J	0.87	J	2.5	U
Bromochloromethane	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Bromodichloromethane	50	0.5	U	0.5	U	0.5	U	1.4		1.4		0.5	U
Chloroethane	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Chloroform	7	5		2.5	U	2.5	U	**18**		**18**		2.6	
cis-1,2-Dichloroethene	5	2.5	U	2.5	U	2.5	U	0.93	J	0.87	J	2.5	U
tert-Butylbenzene	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Tetrachloroethene	5	1.1		**17**		**10**		**8.8**		**8.4**		**5.6**	
trans-1,4-Dichloro-2-butene	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Trichloroethene	5	0.31	J	**5.6**		1		4.2		3.8		1.6	
Vinyl chloride	2	1	U	1	U	1	U	1	U	1	U	1	U

Notes:
1. Groundwater sample analytical results are compared to New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS)
1.1.1 Ambient Water Quality Standards and Guidance Values for Class GA water.
2. With the exception of vinyl chloride, only compounds with detections are shown.
3. Results exceeding the NYSDEC TOGS standards and guidance values are shaded and bolded.
4. µg/L = micrograms per liter
5. DUP02_103117 is a duplicate sample of MW10_103117.
6. Five monitoring wells were sampled as part of the second round of semi-annual, near-field, off-site groundwater sampling.

Qualifiers:
J = Analyte detected at or above the MDL (Method Detection Limit) but below the RL (Reporting Limit) - data is estimated.
U = Analyte not detected at or above the level indicated.

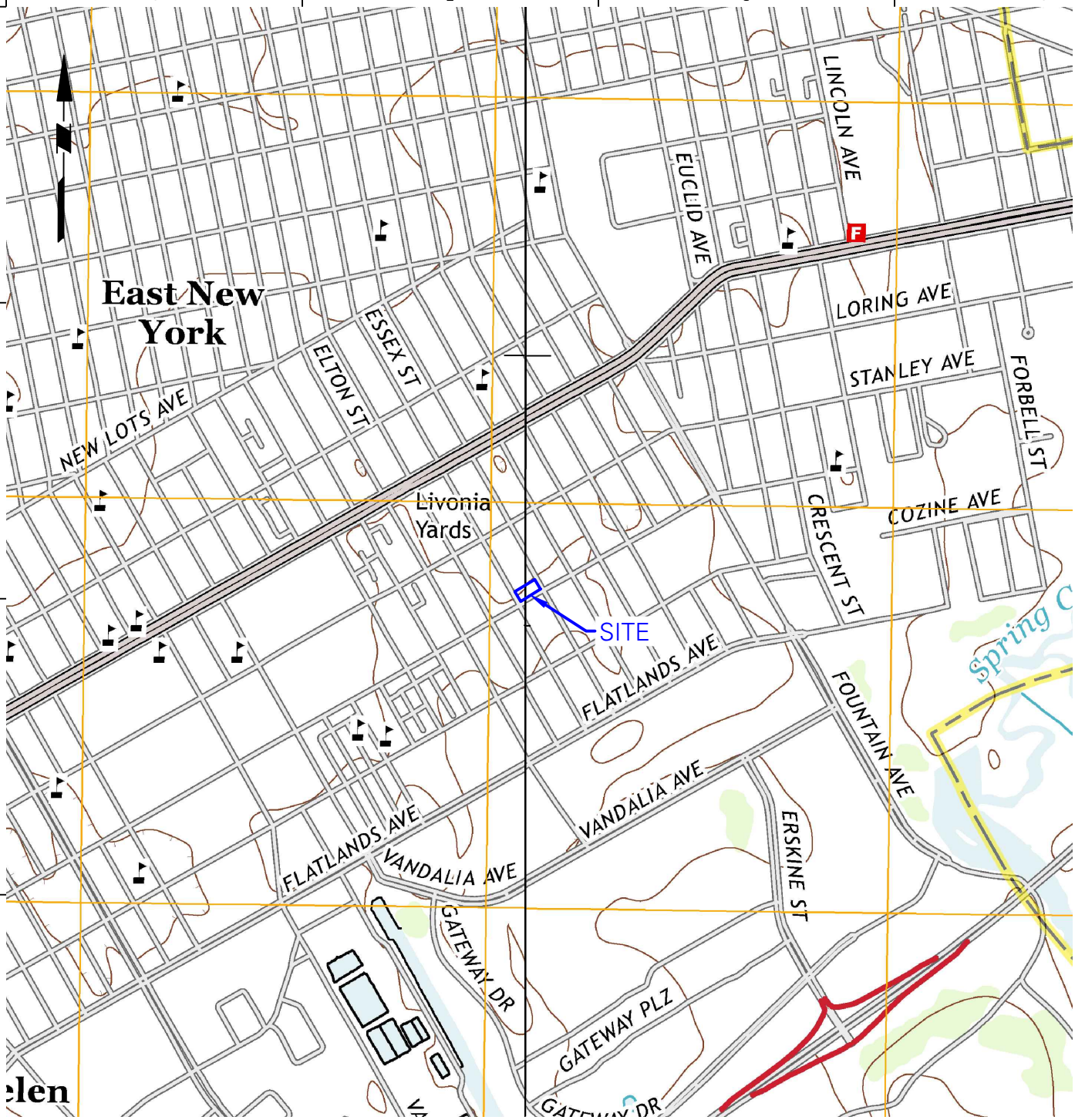
TABLE 9: SEMI-ANNUAL, NEAR-FIELD, OFF-SITE GROUNDWATER SAMPLING RESULTS SUMMARY
491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM SITE NO. C224139

Compound	NYSDEC TOGS STANDARDS AND GUIDANCE VALUES	Sampling Location				
		ML002S	ML002M	ML002D	MW10	MW11
NYSDEC-Requested Sample Results Summary (µg/L) - July 2016						
CVOCs	~	38.17	16.54	--	188.2	2.9
PCE	5	17	14	NS	120	1.50
TCE	5	20	2.10	NS	57	1
cis-1,2- DCE	5	0.97	0.24	NS	11	0.20
vinyl chloride	2	0.20	0.20	NS	0.20	0.20
First Round Sampling Results Summary (µg/L) - April 2017						
CVOCs	~	5.49	19.9	14.1	12.23	4.58
PCE	5	1.4	14	9.5	5.6	0.56
TCE	5	0.59	2.4	1.1	4.7	0.52
cis-1,2- DCE	5	2.5	2.5	2.5	0.93	2.5
vinyl chloride	2	1	1	1	1	1
Round 1 Percent CVOC Reduction		*86%*	*Increased*	--	*94%*	*Increased*
Second Round Sampling Results Summary (µg/L) - October 2017						
CVOCs	~	4.91	26.1	14.5	14.93	10.7
PCE	5	1.1	17	10	8.8	5.6
TCE	5	0.31	5.6	1	4.2	1.6
cis-1,2- DCE	5	2.5	2.5	2.5	0.93	2.5
vinyl chloride	2	1	1	1	1	1
Round 2 Percent CVOC Reduction from Round 1		*11%*	*Increased*	*Increased*	*Increased*	*Increased*
Round 2 Percent CVOC Reduction from NYSDEC-requested July 2016 Sampling		*87%*	*Increased*	--	*92%*	*Increased*

Notes:

1. Groundwater sample analytical results are compared to New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values for Class GA water.
2. Results exceeding the NYSDEC TOGS standards and guidance values are shaded.
3. PCE = tetrachlorothylene
4. TCE = trichloroethylene
5. cis-1,2-DCE = cis-1,2-Dichloroethylene
6. µg/L = microgram per liter
7. CVOC = chlorinated volatile organic compounds
8. NS = not sampled

FIGURES



LEGEND:

APPROXIMATE SITE BOUNDARY

NOTE: BASE MAPS ARE REFERENCED FROM THE UNITED STATES GEOLOGICAL SURVEY (USGS) TOPOGRAPHIC QUADRANGLE MAPS FOR BROOKLYN AND JAMAICA.

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Langan International LLC
Collectively known as Langan

Project

491 WORTMAN AVENUE

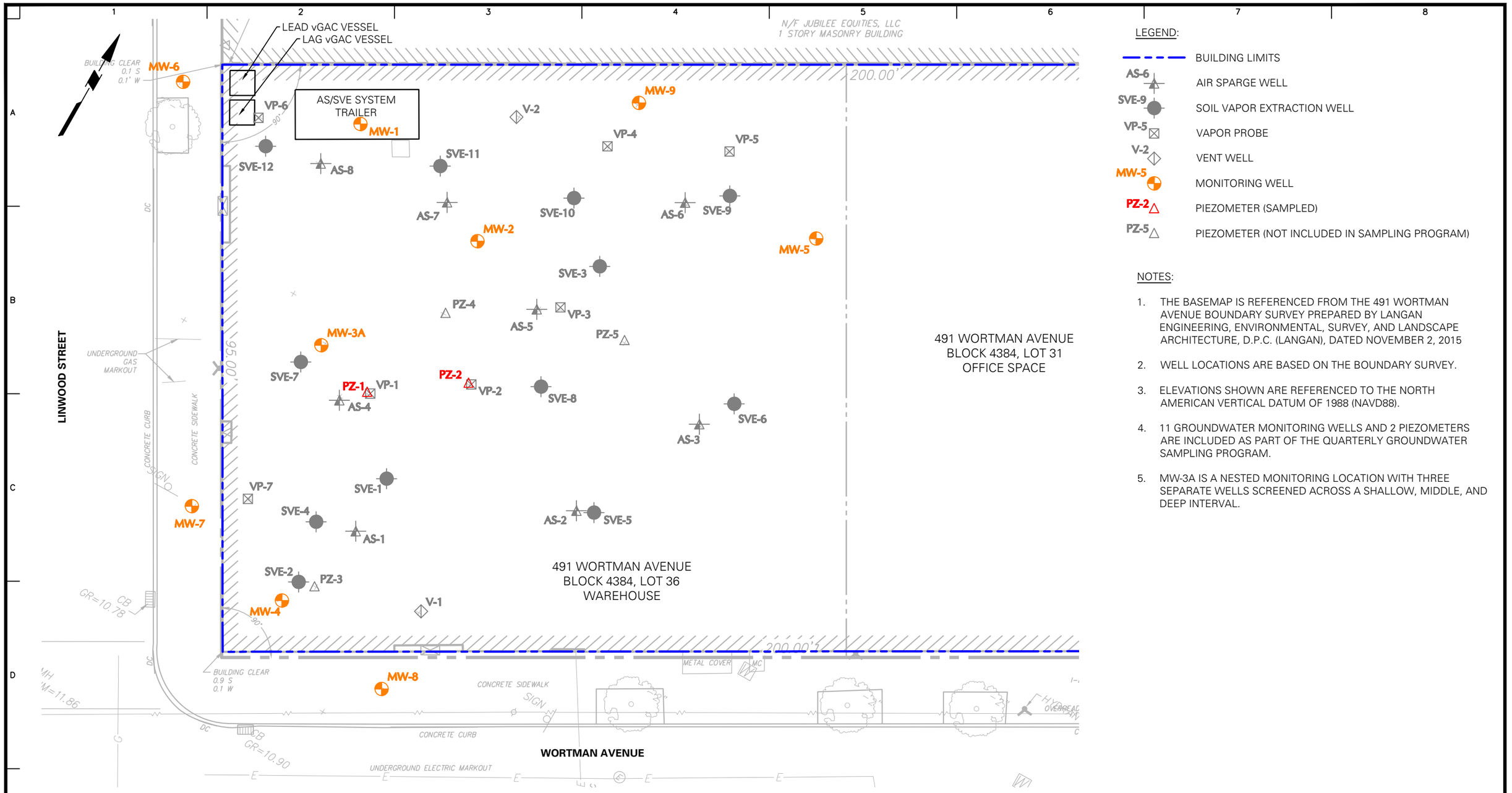
BLOCK No. 4384, LOT Nos. 31 & 36
BROOKLYN
KINGS NEW YORK

Figure Title

SITE LOCATION MAP

Project No. 170329301	Figure 1
Date 04/18/2015	
Scale N.T.S.	
Drawn By MLR / Checked By GN	
Submission Date	Sheet 1 of 3

Filename: \\langan.com\data\NYC\data3\170329301\Cadd Data - 170329301\SheetFiles\Monthly Report 22\Figure 1 - Site Location Map - Updated.dwg Date: 5/9/2017 Time: 12:48 User: mrogers Style Table: Langan.stb Layout: Site Location Map



LEGEND:

- BUILDING LIMITS
- AS-6 — AIR SPARGE WELL
- SVE-9 — SOIL VAPOR EXTRACTION WELL
- VP-5 — VAPOR PROBE
- V-2 — VENT WELL
- MW-5 — MONITORING WELL
- PZ-2 — PIEZOMETER (SAMPLED)
- PZ-5 — PIEZOMETER (NOT INCLUDED IN SAMPLING PROGRAM)

NOTES:

1. THE BASEMAP IS REFERENCED FROM THE 491 WORTMAN AVENUE BOUNDARY SURVEY PREPARED BY LANGAN ENGINEERING, ENVIRONMENTAL, SURVEY, AND LANDSCAPE ARCHITECTURE, D.P.C. (LANGAN), DATED NOVEMBER 2, 2015
2. WELL LOCATIONS ARE BASED ON THE BOUNDARY SURVEY.
3. ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
4. 11 GROUNDWATER MONITORING WELLS AND 2 PIEZOMETERS ARE INCLUDED AS PART OF THE QUARTERLY GROUNDWATER SAMPLING PROGRAM.
5. MW-3A IS A NESTED MONITORING LOCATION WITH THREE SEPARATE WELLS SCREENED ACROSS A SHALLOW, MIDDLE, AND DEEP INTERVAL.

WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS ITEM IN ANY WAY.

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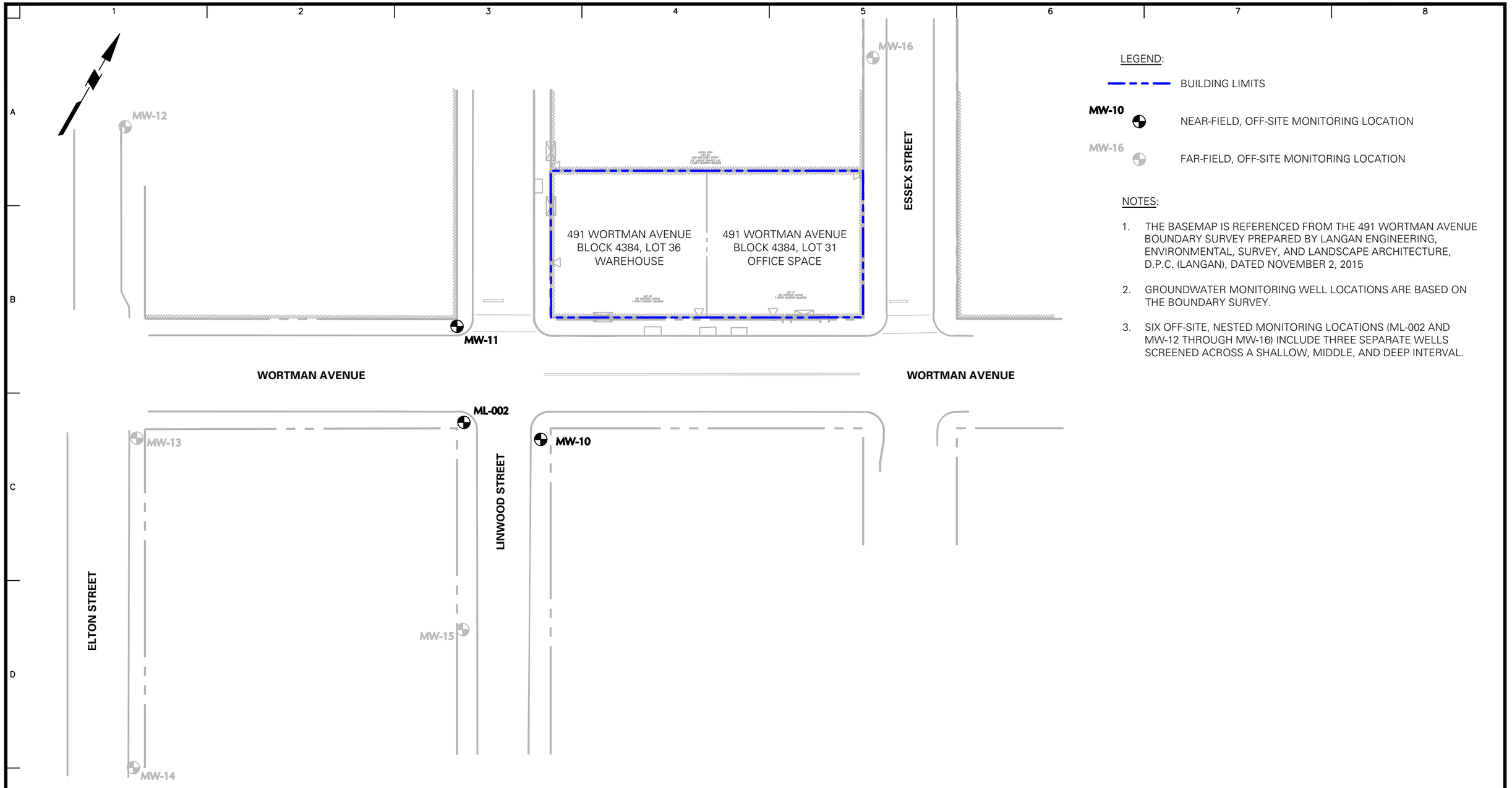
KINGS **NEW YORK**

Figure Title
ON-SITE GROUNDWATER MONITORING LOCATIONS

Project No. 170329301	Figure No. 2
Date 01/21/2016	
Scale AS SHOWN	
Drawn By TCS / Checked By GN	
Submission Date	Sheet 2 of 3

Filename: \\langan.com\data\NY\data3\170329301\Cadd Data - 170329301\SheetFiles\Inspection Report No. 6\Figure 2 - On-Site MW Locations.dwg Date: 11/10/2017 Time: 11:43 User: mrogers Style Table: Langan.stb Layout: ANSIB-BL



LEGEND:

- BUILDING LIMITS
- MW-10 — NEAR-FIELD, OFF-SITE MONITORING LOCATION
- MW-16 — FAR-FIELD, OFF-SITE MONITORING LOCATION

NOTES:

1. THE BASEMAP IS REFERENCED FROM THE 491 WORTMAN AVENUE BOUNDARY SURVEY PREPARED BY LANGAN ENGINEERING, ENVIRONMENTAL, SURVEY, AND LANDSCAPE ARCHITECTURE, D.P.C. (LANGAN), DATED NOVEMBER 2, 2015
2. GROUNDWATER MONITORING WELL LOCATIONS ARE BASED ON THE BOUNDARY SURVEY.
3. SIX OFF-SITE, NESTED MONITORING LOCATIONS (ML-002 AND MW-12 THROUGH MW-16) INCLUDE THREE SEPARATE WELLS SCREENED ACROSS A SHALLOW, MIDDLE, AND DEEP INTERVAL.

WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS ITEM IN ANY WAY.

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491 WORTMAN AVENUE
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KINGS **NEW YORK**

Figure Title
OFF-SITE GROUNDWATER MONITORING WELL LOCATIONS

Project No. 170329301	Figure No. 3
Date 10/03/2016	
Scale AS SHOWN	
Drawn By MLR / Checked By GN	
Submission Date	Sheet 3 of 3

Filename: \\langan.com\data\NYC\data3\170329301\Cadd Data - 170329301\SheetFiles\Inspection Report No. 6\Figure 3 - Off-Site MW Locations.dwg Date: 11/10/2017 Time: 11:40 User: mrogers Style Table: Langan.stb Layout: ANSIB-BL