Progress Report No. 1
J&H Holding Company, LLC
491 Wortman Avenue, Brooklyn, NY 11208
Brownfield Cleanup Program Site No. C224139
Reporting Period: July 2015

1. Introduction

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. (Langan) submits this monthly progress report on behalf of J&H Holding Company, LLC (the "Participant"). Monthly progress report submittal to the New York State Department of Environmental Conservation (NYSDEC) is performed in accordance with the Brownfield Cleanup Agreement and Section 3.2 of the NYSDEC-approved Interim Remedial Measures Work Plan (IRMWP), prepared by Langan, dated April 28, 2015, and revised June 16, 2015. This monthly progress report summarizes work performed at 491 Wortman Avenue, Brooklyn, New York (the "site") during July 2015.

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 (i.e. the eastern portion).

Environmental site investigations began in November 2008. The most recent environmental activity was Langan's submittal of the IRMWP, which the NYSDEC approved on June 18, 2015. Implementation of the IRMWP and the pending environmental activities are described further in this progress report.

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

In accordance with the NYSDEC-approved IRMWP, the following wells were installed between July 22 and 30, 2015:

- Seven air sparge wells
- Nine soil vapor extraction wells
- One nested groundwater monitoring well with three sampling points
- Two vent wells
- Two vapor points, and
- Two piezometers.

The air sparge wells, nested groundwater monitoring well and piezometers were developed with a surge block and pump between July 29 and 30, 2015.

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

The following activities are planned:

- Baseline sample collection from select monitoring wells, piezometers and vapor points.
- Disposal of investigation-derived waste.

- Begin installation of AS/SVE pipe network

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

An updated schedule is included for your records.

5. Results of Sampling, Testing and Other Relevant Data

During each day of well installation, two Community Air Monitoring Program (CAMP) stations were set up to monitor volatile organic compounds (VOCs) and particulates. 15-minute time-weighted average VOC concentrations and particulate concentrations were not detected at concentrations exceeding their respective action levels.

No sampling was performed during this reporting period.

6. Deliverables Submitted During This Reporting Period

No deliverables were submitted during this reporting period.

7. Information Regarding Percentage of Completion

Well drilling and installation field activities are complete. The air sparge and soil vapor extraction pipe networks need to be constructed and installed and the trailer housing the AS/SVE system needs to be delivered to the site. Investigation derived waste needs to be disposed of off-site. Installation of the AS/SVE system is approximately 30% complete.

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

None.

9. Citizen Participation Plan Activities during This Reporting Period

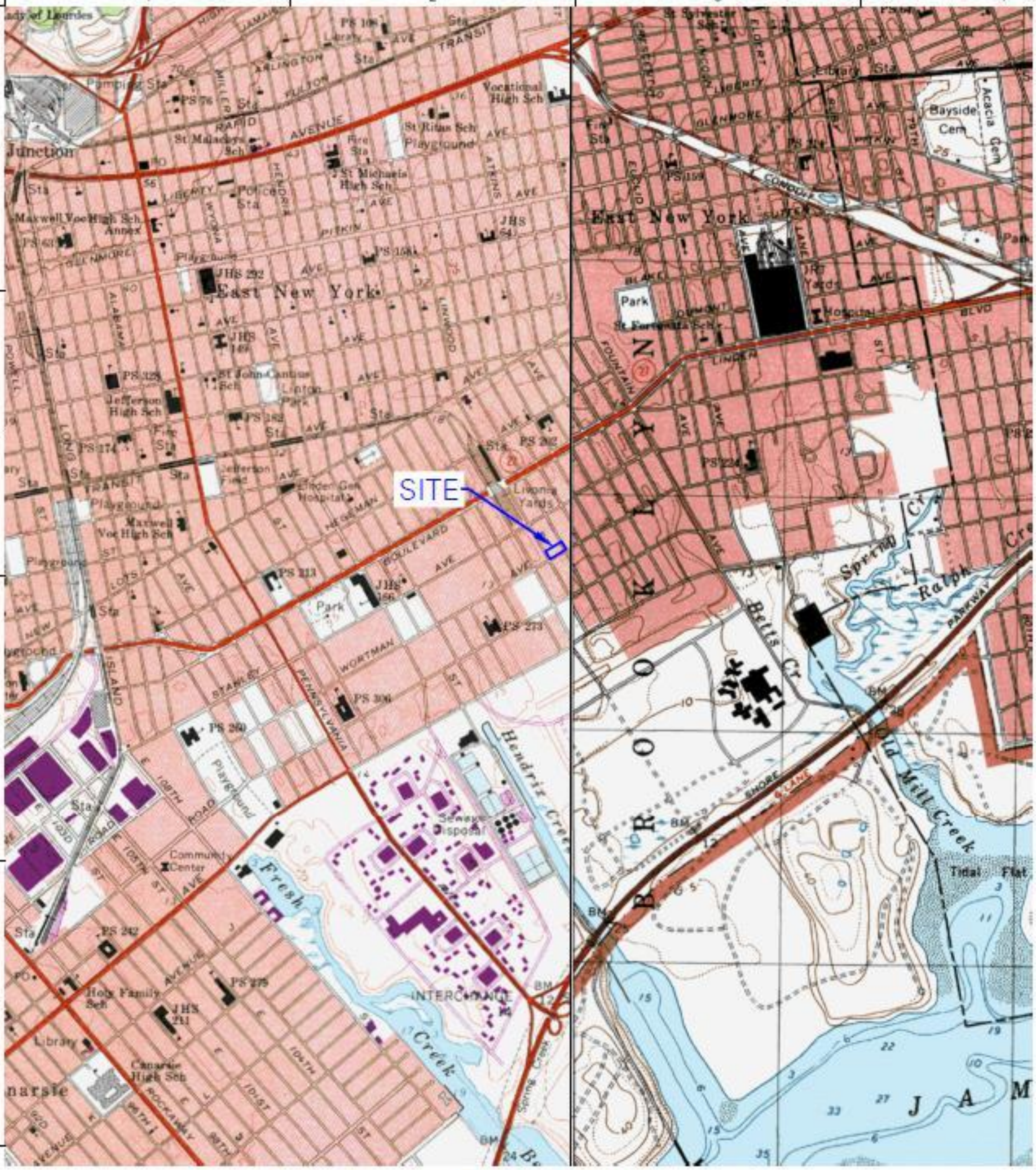
None.

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

None.

11. Miscellaneous Information

None.



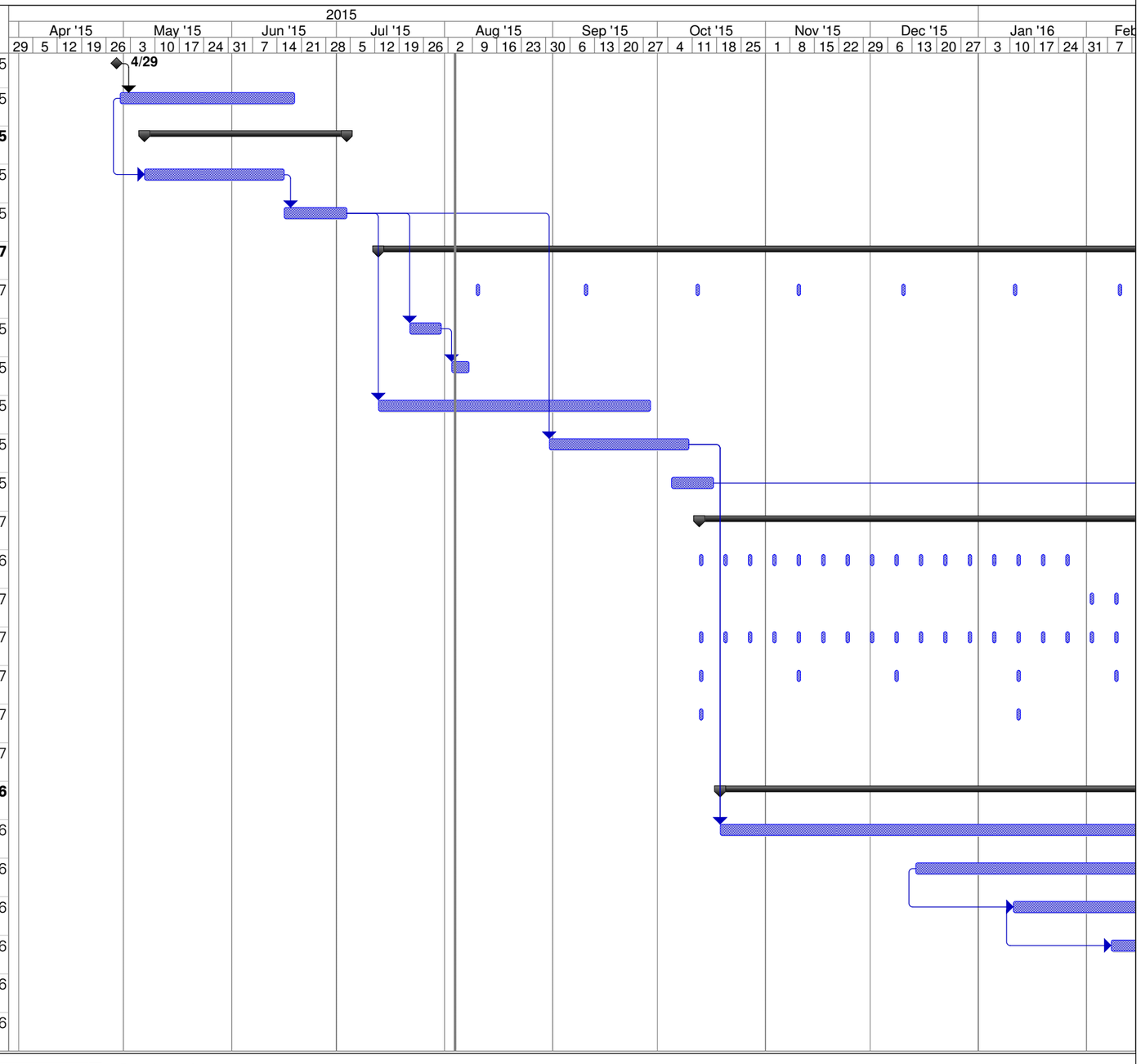
REFERENCE: USGS TOPOGRAPHIC QUADRANGLE MAPS FOR BROOKLYN AND JAMAICA.

LANGAN	Project	Figure Title	Project No. / Date / Scale / Drawn By / Checked By / Submission Date	Figure
21 Penn Plaza, 360 West 31st Street, 8th Floor New York, NY 10001 T: 212.479.5400 F: 212.479.5444 www.langan.com Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. Langan Engineering and Environmental Services, Inc. Langan CT, Inc. Langan International LLC Collectively known as Langan	**491 WORTMAN AVENUE** BLOCK No. 4384, LOT Nos. 31 & 36 BROOKLYN KINGS NEW YORK	**SITE LOCATION MAP**	Project No. 170329301 Date 04/18/2015 Scale N.T.S. Drawn By MLR Checked By GN Submission Date	**1** Sheet 1 of 7

Filename: \\langan.com\data\NY\data3\170329301\Cadd Data - 170329301\2D-DesignFiles\RMWP\Figure 1 - Site Location Map.dwg Date: 4/18/2015 Time: 11:35 User: mrogers Style Table: Langan.stb Layout: Site Location Map

IRM IMPLEMENTATION SCHEDULE
491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN NO. 170329301
REVISED 8/4/2015

ID	Task Name	Duration	Start	Finish
1	**IRM Work Plan Submittal to NYSDEC**	0 days	Wed 4/29/15	Wed 4/29/15
2	**IRM Work Plan Review and Approval**	36 days	Thu 4/30/15	Thu 6/18/15
3	**Construction Documents**	**42 days**	**Thu 5/7/15**	**Fri 7/3/15**
4	Prepare Bid Documents	28 days	Thu 5/7/15	Mon 6/15/15
5	Bid Out Work and Choose Contractor	14 days	Tue 6/16/15	Fri 7/3/15
6	**IRM Implementation**	**612 days**	**Mon 7/13/15**	**Tue 11/14/17**
7	Monthly Progress Reports	524 days	Mon 8/10/15	Thu 8/10/17
33	Drilling and Well Installation	7 days	Wed 7/22/15	Thu 7/30/15
34	Baseline Sampling	5 days	Mon 8/3/15	Fri 8/7/15
35	System Fabrication and Procurement	56 days	Mon 7/13/15	Mon 9/28/15
36	System Installation and Mechanical/Electrical Connections	30 days	Mon 8/31/15	Fri 10/9/15
37	System Startup and Optimization	10 days	Mon 10/5/15	Fri 10/16/15
38	System OM&M	546 days	Tue 10/13/15	Tue 11/14/17
39	Weekly Site Checks	76 days	Tue 10/13/15	Tue 1/26/16
56	Weekly Process Monitoring	451 days	Tue 2/2/16	Tue 10/24/17
148	DAR-1 Compliance Monitoring	531 days	Tue 10/13/15	Tue 10/24/17
256	Monthly Vapor Monitoring	546 days	Tue 10/13/15	Tue 11/14/17
283	Quarterly Groundwater Monitoring	546 days	Tue 10/13/15	Tue 11/14/17
292	Remediation Completion	0 days	Fri 10/27/17	Fri 10/27/17
293	**BCP Closeout Documents**	**220 days**	**Mon 10/19/15**	**Fri 8/19/16**
294	Construction Completion Report	90 days	Mon 10/19/15	Fri 2/19/16
295	Environmental Easement	180 days	Mon 12/14/15	Fri 8/19/16
296	Site Management Plan	90 days	Mon 1/11/16	Fri 5/13/16
297	Final Engineering Report	90 days	Mon 2/8/16	Fri 6/10/16
298	Revise and Finalize BCP Documents	30 days	Mon 6/13/16	Fri 7/22/16
299	Certificate of Completion	0 days	Fri 7/22/16	Fri 7/22/16



Date: Tue 8/4/15
Page 1 of 3

Task Milestone Summary Duration-only

LANGAN

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491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN NO. 170329301
REVISED 8/4/2015

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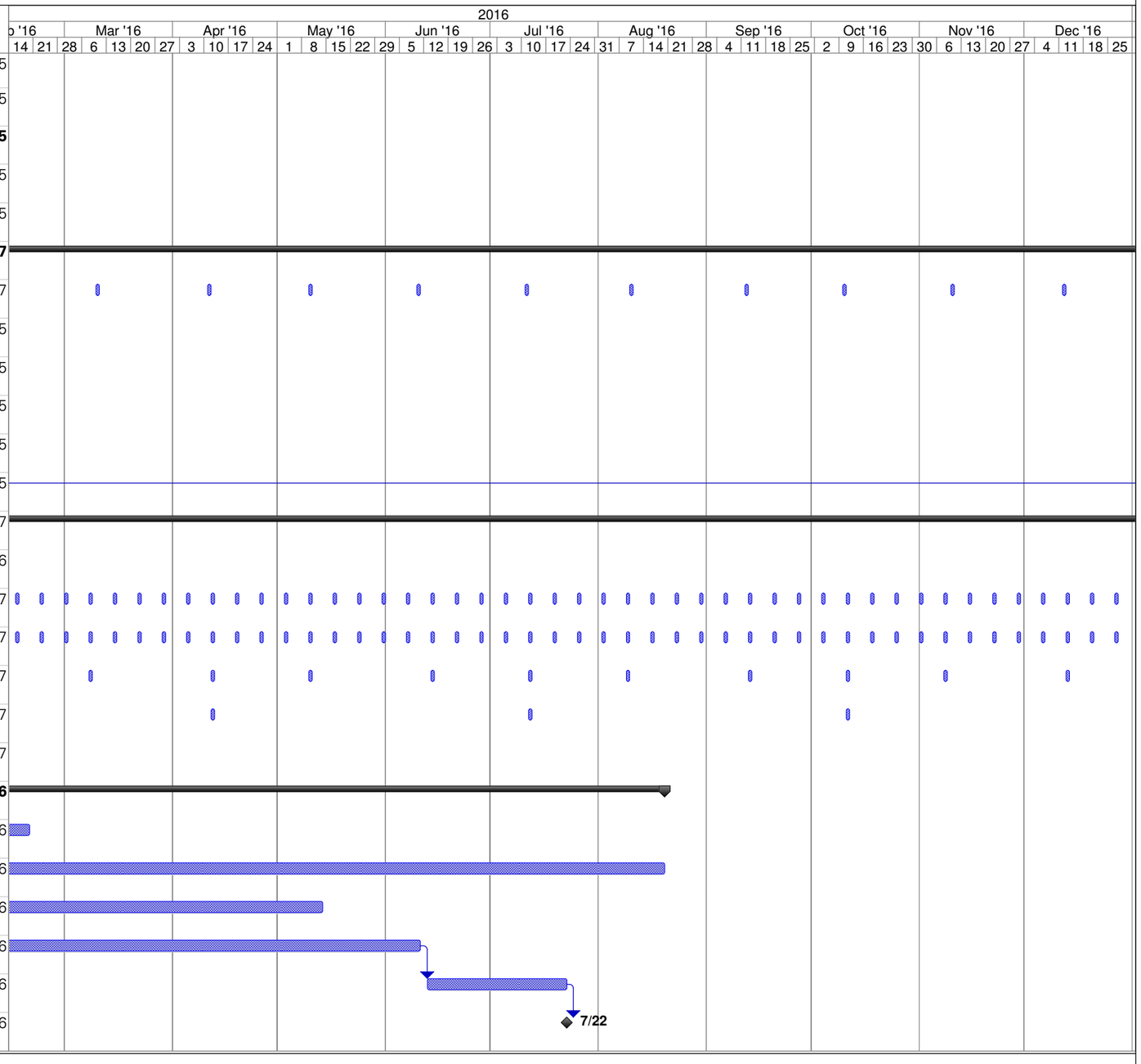

Task Milestone Summary Duration-only

LANGAN

IRM IMPLEMENTATION SCHEDULE
491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN NO. 170329301
REVISED 8/4/2015

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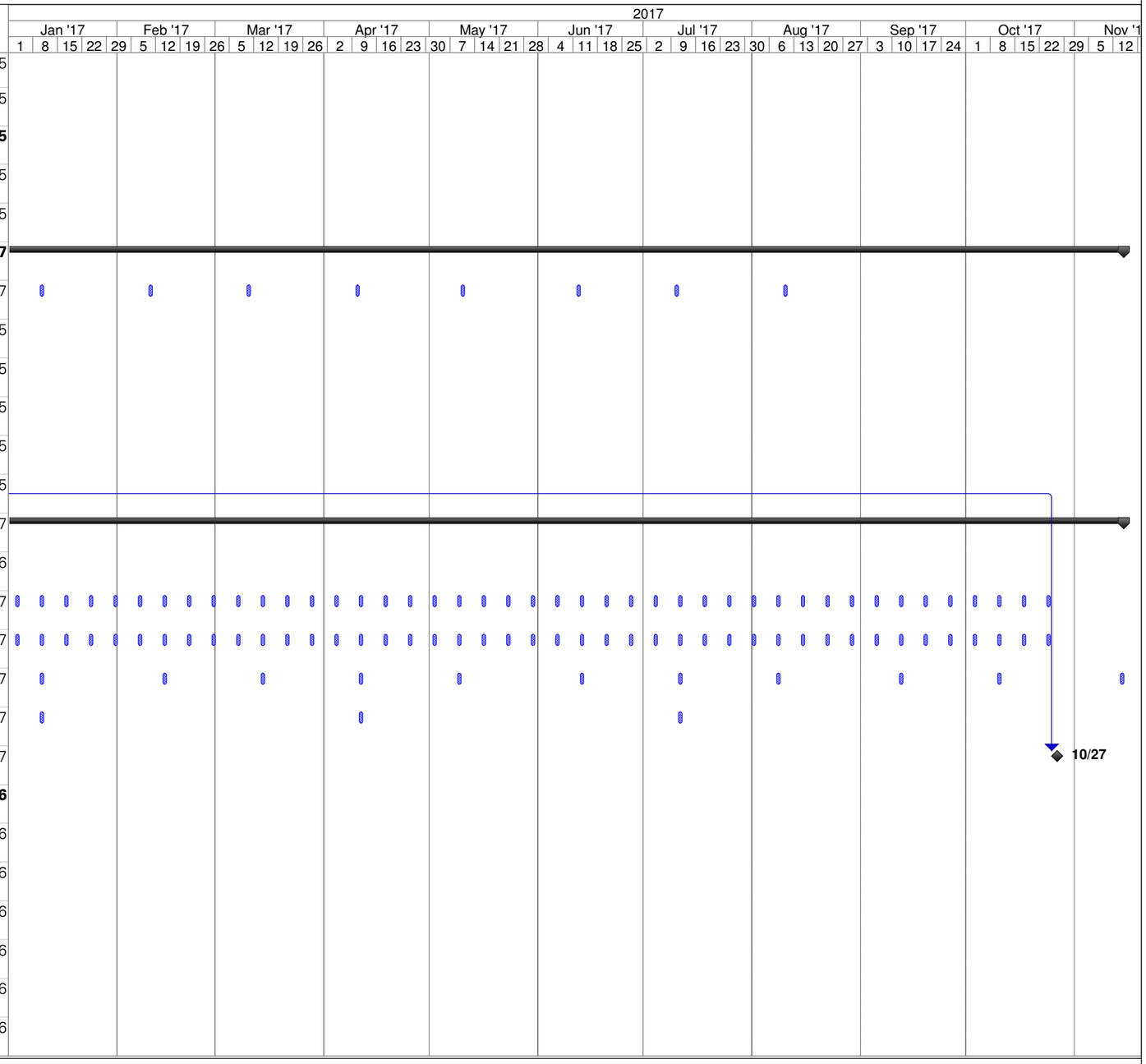


Task Milestone Summary Duration-only

LANGAN

Progress Report No. 2
J&H Holding Company, LLC
491 Wortman Avenue, Brooklyn, NY 11208
Brownfield Cleanup Program Site No. C224139
Reporting Period: August 2015

1. Introduction

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. (Langan) submits this monthly progress report on behalf of J&H Holding Company, LLC (the "Participant"). Monthly progress report submittal to the New York State Department of Environmental Conservation (NYSDEC) is performed in accordance with the Brownfield Cleanup Agreement (BCA) and Section 3.2 of the NYSDEC-approved Interim Remedial Measures Work Plan (IRMWP), prepared by Langan, dated April 28, 2015, and revised June 16, 2015. This monthly progress report summarizes work performed at 491 Wortman Avenue, Brooklyn, New York (the "site") during August 2015.

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 (i.e. the eastern portion).

Environmental site investigations began in November 2008. The most recent environmental activity was Langan's submittal of the IRMWP, which the NYSDEC approved on June 18, 2015. Implementation of the IRMWP and the pending environmental activities are described further in this progress report.

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

In accordance with the NYSDEC-approved IRMWP, the baseline sampling program was conducted on August 3 to 5, 2015. Eleven groundwater monitoring wells, five piezometers and seven vapor probes were sampled for the targeted parameters (i.e. volatile organic compounds [VOCs]).

At the same time, a drum inventory and sampling program were also undertaken to characterize the investigation-derived wastes accumulated to date. The proposed drum sampling program was approved by Henry Wilkie of the NYSDEC in an email dated August 4, 2015. The NYSDEC-approved sampling program included collection of one sample from each drum (i.e., wastewater and soil) for VOC analysis and one sample from every five soil drums for Toxicity Characteristic Leaching Procedure (TCLP) VOC analysis. For disposal facility approval, a sample was collected and analyzed for TCLP lead.

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

The following activities are planned:

- Disposal of investigation-derived waste,
- Installation of the AS/SVE pipe network and slab restoration, and
- Receipt of AS/SVE system trailer.

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

We request the removal of MW-1, PZ-1, PZ-3, PZ-4 and PZ-5 from the quarterly groundwater sampling program. Based on the requested removal, the quarterly groundwater sampling program would include 11 monitoring points (ten groundwater monitoring wells and one piezometer). The results of the baseline sampling program (provided in the following section) show that the analytical results for the sample points requested for removal are comparable or redundant to the results of the remaining sample points. The proposed 11-point monitoring will provide more than adequate data for remedial system performance evaluation.

5. Results of Sampling, Testing and Other Relevant Data

Baseline sampling was performed as follows:

- Sixteen groundwater samples were collected from eleven groundwater monitoring wells and five piezometers. One duplicate sample, two trip blanks and one field blank were collected for quality assurance/quality control (QA/QC) purposes. The groundwater samples were analyzed for Target Compound List (TCL) VOCs.
- Seven soil vapor samples were collected from seven soil vapor probes. The soil vapor samples were analyzed for VOCs via the United States Environmental Protection Agency (USEPA) Method TO-15.

Drum sampling was performed as follows:

- One sample was collected from each soil drum (i.e., 34 total) and analyzed for TCL VOCs. Six of the soil samples were also analyzed for TCLP VOCs.
- One sample was collected from each wastewater drum (i.e., 23 total) and analyzed for TCL VOCs.
- One five-point composite soil sample was collected and analyzed for TCLP lead. This sample was collected to satisfy the requirements of the proposed disposal facilities.

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

Please see the attached tables for the baseline sampling summary (Table 1), the baseline sampling results (Tables 2 and 3), the drum inventory and sampling summary (Table 4) and the drum sampling results (Tables 5 and 6). Lab analytical reports can be supplied upon request.

6. Deliverables Submitted During This Reporting Period

No deliverables were submitted during this reporting period.

7. Information Regarding Percentage of Completion

Well drilling and installation field activities are complete as is the baseline sampling program. The air sparge and soil vapor extraction pipe networks are being installed and the AS/SVE system trailer housing is being shipped to on September 30, 2015. Investigation derived waste disposal is ongoing. Installation of the AS/SVE system is approximately 40% complete.

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

None.

9. Citizen Participation Plan Activities during This Reporting Period

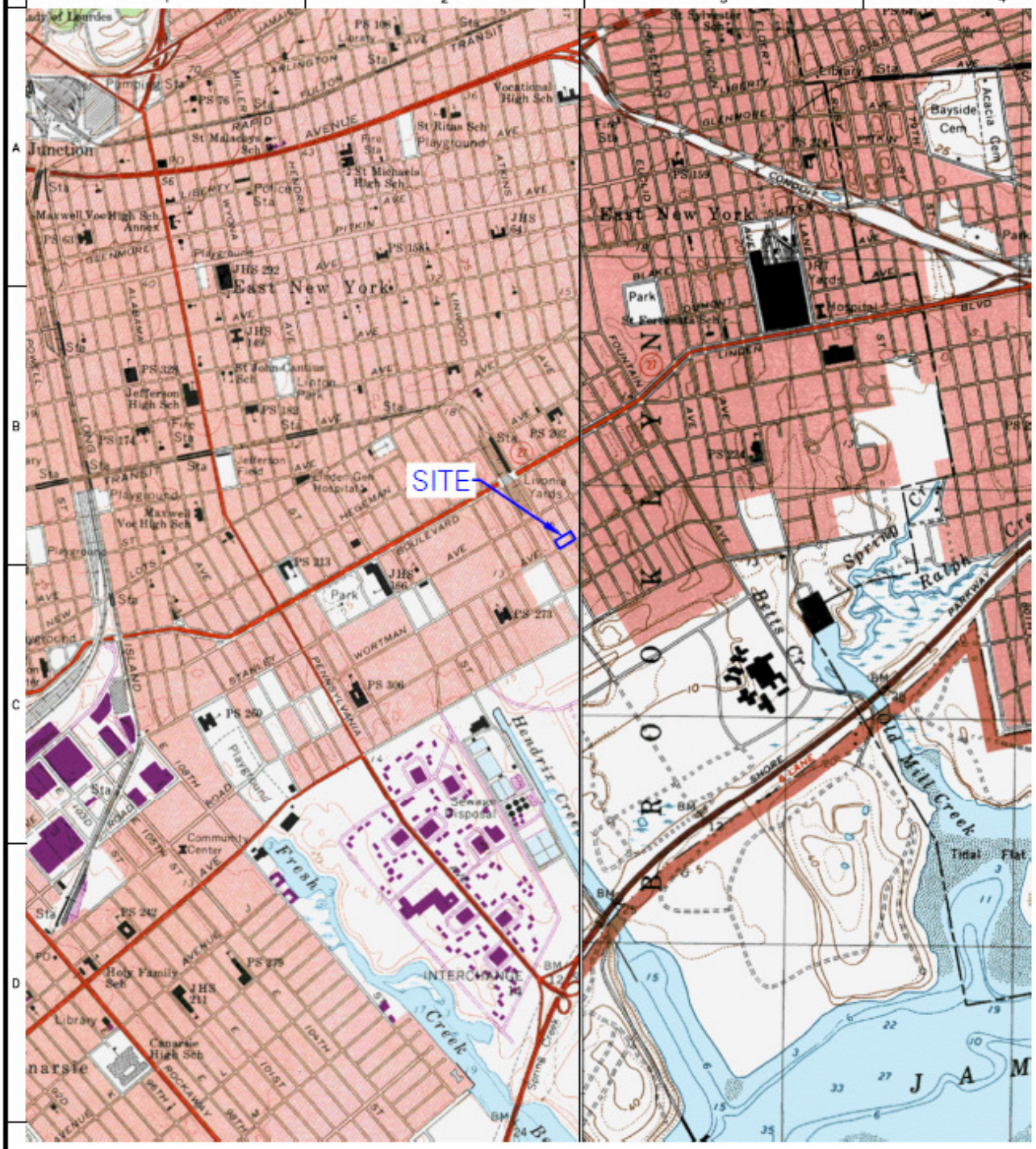
None.

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

A fact sheet will be distributed to the site contact list that describes start-up of the AS/SVE system (i.e., the cleanup action).

11. Miscellaneous Information

None.



REFERENCE: USGS TOPOGRAPHIC QUADRANGLE MAPS FOR BROOKLYN AND JAMAICA.

LANGAN

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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
Date	04/18/2015
Scale	N.T.S.
Drawn By	MLR
Checked By	GN
Submission Date	
Figure	1
Sheet	1 of 7

Filename: \\langan.com\data\NY\data3\170329301\Cadd Data - 170329301\2D-Design Files\RIMAP\Figure 1 - Site Location Map.dwg Date: 4/18/2015 Time: 11:35 User: mrogers Style Table: Langan.stb Layout: Site Location Map

TABLE 1: BASELINE SAMPLING SUMMARY
491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM SITE NO. C224139

SAMPLE NAME	SAMPLE DATE	SAMPLE TYPE	LOCATION	SCREENED INTERVAL (feet)	DEPTH TO WATER (feet bgs)	ANALYSIS
GROUNDWATER SAMPLES						
MW-1_080315	8/3/2015	DISCRETE	MW-1	9 to 19*	10.12	NYSDEC PART 375/TCL VOCs
MW-2_080315	8/3/2015	DISCRETE	MW-2	9 to 19*	10.00	NYSDEC PART 375/TCL VOCs
MW-3S_080415	8/4/2015	DISCRETE	MW-3 (shallow)	10 to 20	9.72	NYSDEC PART 375/TCL VOCs
MW-3M_080515	8/4/2015	DISCRETE	MW-3 (middle)	30 to 40	9.63	NYSDEC PART 375/TCL VOCs
MW-3D_080515	8/4/2015	DISCRETE	MW-3 (deep)	50 to 60	9.56	NYSDEC PART 375/TCL VOCs
MW-4_080415	8/4/2015	DISCRETE	MW-4	9 to 19*	9.63	NYSDEC PART 375/TCL VOCs
MW-5_080315	8/3/2015	DISCRETE	MW-5	9 to 19*	10.11	NYSDEC PART 375/TCL VOCs
MW-6_080415	8/4/2015	DISCRETE	MW-6	9 to 19*	10.31	NYSDEC PART 375/TCL VOCs
MW-7_080415	8/4/2015	DISCRETE	MW-7	9 to 19*	9.17	NYSDEC PART 375/TCL VOCs
MW-8_080415	8/4/2015	DISCRETE	MW-8	9 to 19*	9.29	NYSDEC PART 375/TCL VOCs
MW-9_080315	8/3/2015	DISCRETE	MW-9	7 to 17**	10.00	NYSDEC PART 375/TCL VOCs
PZ-01_080515	8/4/2015	DISCRETE	PZ-01	10 to 20	9.92	NYSDEC PART 375/TCL VOCs
PZ-02_080515	8/4/2015	DISCRETE	PZ-02	10 to 20	9.93	NYSDEC PART 375/TCL VOCs
PZ-03_080515	8/5/2015	DISCRETE	PZ-03	10 to 20	9.91	NYSDEC PART 375/TCL VOCs
PZ-04_080415	8/4/2015	DISCRETE	PZ-04	5 to 30	10.13	NYSDEC PART 375/TCL VOCs
PZ-05_080515	8/5/2015	DISCRETE	PZ-05	5 to 30	9.93	NYSDEC PART 375/TCL VOCs
SOIL VAPOR SAMPLES						
VP-01_080515	8/5/2015	2-HR, 6-L SUMMA®	VP-01	3 to 6	--	TO-15 VOCs
VP-02_080515	8/5/2015	2-HR, 6-L SUMMA®	VP-02	5 to 8	--	TO-15 VOCs
VP-03_080515	8/5/2015	2-HR, 6-L SUMMA®	VP-03	5 to 6	--	TO-15 VOCs
VP-04_080515	8/5/2015	2-HR, 6-L SUMMA®	VP-04	3 to 4	--	TO-15 VOCs
VP-05_080515	8/5/2015	2-HR, 6-L SUMMA®	VP-05	7 to 8	--	TO-15 VOCs
VP-06_080515	8/5/2015	2-HR, 6-L SUMMA®	VP-06	3 to 8	--	TO-15 VOCs
VP-07_080515	8/5/2015	2-HR, 6-L SUMMA®	VP-07	3 to 8	--	TO-15 VOCs
QUALITY ASSURANCE/QUALITY CONTROL SAMPLES						
TB-01_080315	8/3/2015	TRIP BLANK	--	--	--	NYSDEC PART 375/TCL VOCs
DUP01_080415	8/4/2015	GW DUPLICATE	MW-7	9 to 19	9.17	NYSDEC PART 375/TCL VOCs
TB-01_080515	8/5/2015	TRIP BLANK	--	--	--	NYSDEC PART 375/TCL VOCs
FB-01_080515	8/5/2015	FIELD BLANK	--	--	--	NYSDEC PART 375/TCL VOCs

Notes:

1. NYSDEC Part 375 = Title 6 of the Official Compilation of New York Codes, Rules and Regulations (NYCRR) Part 375 regulated VOCs.
2. TCL = Target Compound List
3. VOCs = volatile organic compounds
4. bgs = below grade surface
5. GW = groundwater
6. Discrete GW samples were collected via the United States Environmental Protection Agency (EPA) low-flow methodology.
7. *These wells were installed by Impact Environmental Remediation as part of their site characterization from 3/26/2011 to 3/30/2011.
8. **This well was installed by P.W. Grosser as part of their supplemental remedial investigation on 9/12/2013.

TABLE 2: BASELINE SAMPLING - MONITORING WELLS AND PIEZOMETERS
491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM SITE NO. C224139

										DUPLICATE		
Sample ID **Laboratory ID** **Sampling Date**	**NYSDEC TOGS STANDARDS AND GUIDANCE VALUES**	**MW-1_080315** **L1518160-01** **8/3/2015**	**MW-2_080315** **L1518160-02** **8/3/2015**	**MW-3D_080415** **L1518504-16** **8/4/2015**	**MW-3M_080415** **L1518504-15** **8/4/2015**	**MW-3S_080415** **L1518330-01** **8/4/2015**	**MW-4_080415** **L1518504-01** **8/4/2015**	**MW-5_080315** **L1518160-04** **8/3/2015**	**MW-6_080415** **L1518330-02** **8/4/2015**	**MW-7_080415** **L1518330-04** **8/4/2015**	**DUP01_080415** **L1518330-05** **8/4/2015**	**MW-8_080415** **L1518330-03** **8/4/2015**
Volatile Organic Compounds (ug/L)												
1,1,1-Trichloroethane	5	25 U	50 U	2.5 U	0.73 J	3.6 J	12 U	2.5 U	12 U	3.7 J	**7** J	1.5 J
1,1-Dichloroethane	5	25 U	50 U	2.5 U	2.5 U	12 U	12 U	0.78 J	12 U	12 U	25 U	1.8 J
1,1-Dichloroethene	5	3.2 J	10 U	0.5 U	0.5 U	2.5 U	2.5 U	0.26 J	1.3 J	1.2 J	5 U	0.54 J
1,2-Dichlorobenzene	3	25 U	50 U	2.5 U	2.5 U	12 U	12 U	2.5 U	12 U	12 U	25 U	5 U
Acetone	50	50 U	100 U	5 U	5 U	25 U	25 U	5 U	25 U	25 U	50 U	10 U
Bromodichloromethane	50	5 U	10 U	1.6	0.5 U	2.5 U	3.8	0.5 U	2.5 U	2.5 U	5 U	1 U
Chlorobenzene	5	25 U	50 U	2.5 U	2.5 U	12 U	12 U	2.5 U	12 U	12 U	25 U	5 U
Chloroform	7	25 U	50 U	**14**	1.6 J	5.2 J	**18**	2.5 U	12 U	12 U	25 U	2.4 J
cis-1,2-Dichloroethene	5	**19** J	**14** J	2.5 U	2.5 U	**8.3** J	**29**	**9**	**22**	**27**	**24** J	**36**
Dibromochloromethane	50	5 U	10 U	0.5 U	0.5 U	2.5 U	2.5 U	0.5 U	2.5 U	2.5 U	5 U	1 U
Methyl tert butyl ether	10	25 U	50 U	0.74 J	1.5 J	12 U	12 U	2.5 U	12 U	12 U	25 U	1.6 J
Tert-Butyl Alcohol	~	10 J	200 U	10 U	10 U	50 U	50 U	10 U	50 U	50 U	100 U	20 U
Tetrachloroethene	5	**750**	**480**	**8.3**	**14**	**380**	**79**	**110**	**710**	**460**	**310**	**180**
Toluene	5	25 U	50 U	2.5 U	2.5 U	12 U	12 U	2.5 U	12 U	12 U	25 U	5 U
Trichloroethene	5	**500**	**1,800**	**16**	**5.9**	**480**	**540**	**55**	**500**	**780**	**580**	**240**
Vinyl chloride	2	**5.9** J	20 U	1 U	1 U	5 U	5 U	1 U	**4.3** J	5 U	10 U	2 U

Notes:
1. Analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS) and guidance values for drinking water (class GA).
2. Only compounds with detections are shown in the table.
3. Results exceeding the NYSDEC TOGS standards and guidance values are shaded and bolded.
4. ug/L = micrograms per liter.
5. DUP01_080415 is a duplicate sample of MW-7_080415.
6. ~ = No regulatory limit has been established for this analyte.
7. Eleven monitoring wells and five piezometers associated with the air sparge and soil-vapor extraction (AS/SVE) system were sampled as part of the baseline sampling program.

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 2: BASELINE SAMPLING - MONITORING WELLS AND PIEZOMETERS
491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM SITE NO. C224139

																		QUALITY ASSURANCE/QUALITY CONTROL SAMPLES					
Sample ID	**NYSDEC TOGS**	**MW-9_080315**		**PZ-01_080415**		**PZ-02_080415**		**PZ-03_080515**		**PZ-04_08042015**		**PZ-05_080515**		**FB01_080515**		**TB-01_080315**		**TB01_080515**	
Laboratory ID	**STANDARDS AND**	**L1518160-03**		**L1518504-14**		**L1518504-13**		**L1518504-02**		**L1518330-06**		**L1518504-03**		**L1518504-12**		**L1518160-05**		**L1518504-11**	
Sampling Date	**GUIDANCE VALUES**	**8/3/2015**		**8/4/2015**		**8/4/2015**		**8/5/2015**		**8/4/2015**		**8/5/2015**		**8/5/2015**		**8/3/2015**		**8/5/2015**	
Volatile Organic Compounds (ug/L)																			
1,1,1-Trichloroethane	5	5	U	3.8	J	1.6	J	**7.1**	J	2	J	0.76	J	2.5	U	2.5	U	2.5	U
1,1-Dichloroethane	5	5	U	12	U	5	U	25	U	6.2	U	2.5	U	2.5	U	2.5	U	2.5	U
1,1-Dichloroethene	5	0.28	J	2.5	U	0.29	J	5	U	1.2	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichlorobenzene	3	5	U	12	U	5	U	25	U	6.2	U	0.71	J	2.5	U	2.5	U	2.5	U
Acetone	50	10	U	25	U	10	U	50	U	12	U	5	U	5	U	5	U	5	U
Bromodichloromethane	50	1	U	2.5	U	1	U	5	U	1.2	U	0.5	U	0.5	U	0.5	U	0.5	U
Chlorobenzene	5	5	U	12	U	5	U	25	U	6.2	U	0.93	J	2.5	U	2.5	U	2.5	U
Chloroform	7	5	U	6.8	J	1.9	J	**11**	J	6.2	U	2.5	U	2.5	U	2.5	U	2.5	U
cis-1,2-Dichloroethene	5	**10**		**8.6**	J	**6.2**		**14**	J	6.2	U	3.5		2.5	U	2.5	U	2.5	U
Dibromochloromethane	50	1	U	2.5	U	1	U	5	U	1.2	U	0.5	U	0.5	U	0.5	U	0.5	U
Methyl tert butyl ether	10	5	U	12	U	1.5	J	25	U	6.2	U	1	J	2.5	U	2.5	U	2.5	U
Tert-Butyl Alcohol	~	20	U	21	J	20	U	100	U	25	U	10	U	10	U	10	U	10	U
Tetrachloroethene	5	**400**		**310**		**230**		**180**		**36**		**30**		0.5	U	0.5	U	0.5	U
Toluene	5	5	U	12	U	5	U	25	U	6.2	U	2.5	U	2.5	U	2.5	U	2.5	U
Trichloroethene	5	**190**		**580**		**200**		**710**		**240**		**14**		0.5	U	0.5	U	0.5	U
Vinyl chloride	2	2	U	5	U	2	U	10	U	2.5	U	1	U	1	U	1	U	1	U

Notes:
1. Analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS) and guidance values for drinking water (class GA).
2. Only compounds with detections are shown in the table.
3. Results exceeding the NYSDEC TOGS standards and guidance values are shaded and bolded.
4. ug/L = micrograms per liter.
5. DUP01_080415 is a duplicate sample of MW-7_080415.
6. ~ = No regulatory limit has been established for this analyte.
7. Eleven monitoring wells and five piezometers associated with the air sparge and soil-vapor extraction (AS/SVE) system were sampled as part of the baseline sampling program.

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 3: BASELINE SAMPLING - VAPOR PROBES
491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM SITE NO. C224139

Sample ID	VP-01_080515		VP-02_080515		VP-03_080515		VP-04_080515		VP-05_080515		VP-06_080515		VP-07_080515	
Laboratory ID	L1518548-01		L1518548-02		L1518548-03		L1518548-04		L1518548-05		L1518548-06		L1518548-07	
Sampling Date	8/5/2015		8/5/2015		8/5/2015		8/5/2015		8/5/2015		8/5/2015		8/5/2015	
Volatile Organic Compounds (ug/m^3)														
1,1,1-Trichloroethane	2,640		8,240		8,020		1,690		465		949		606	
1,1-Dichloroethane	757	U	745	U	838		233		122	U	107	U	119	U
Bromodichloromethane	1,250	U	1,230	U	1,390	U	2,220		202	U	178	U	197	U
Chloroform	3,190		6,300		6,250		571		179		129	U	442	
cis-1,2-Dichloroethene	741	U	730	U	821	U	151	U	120	U	105	U	145	
Tetrachloroethene	18,000		32,800		22,700		10,400		2,400		5,250		6,850	
Toluene	705	U	693	U	780	U	144	U	114	U	100	U	208	
Trichloroethene	1,890,000	E	3,380,000	E	2,020,000	E	299,000	E	369,000	E	42,500		383,000	E

Notes:

1. ug/m^3 = micrograms per cubic meter.
2. Seven vapor probes associated with the air sparge and soil vapor extraction (AS/SVE) system were sampled as part of the baseline sampling program.
3. Only compounds with detections are shown in the table.

Qualifiers:

U = analyte not detected at or above the level indicated.
E = Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument; sample was retested with capable equipment, and that result is reported.

TABLE 4: DRUM INVENTORY AND SAMPLE SUMMARY
491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM SITE NO. C224139

DRUM #	ASSOCIATED SAMPLE(S)	HAZARDOUS WASTE DETERMINATION	DRUM CONDITION	TRANSFER STATION	DISPOSAL FACILITY
SOIL (NONWASTEWATER)					
1	DS-01_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
2	DS-02_080515 DS-COMP_081315	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
3	DS-03_080515 DS-COMP_081315	**HAZARDOUS**	GOOD	VEOLIA	WAYNE DISPOSAL
4	DS-04_080515 DS-COMP_081315	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
5	DS-05_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
6	DS-06_080515 DS-COMP_081315	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
7	DS-07_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
8	DS-08_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
9	DS-09_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
10	DS-10_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
11	DS-11_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
12	DS-12_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
13	DS-13_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
14	DS-14_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
15	DS-15_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
16	DS-16_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
17	DS-17_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
18	DS-18_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
20	DS-20_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
21	DS-21_080515	NONHAZARDOUS	FAIR (REQUIRES NEW LID)	CLEAN WATER OF NEW YORK	GROWS LANDFILL
22	DS-22_080515 DUP-DS-01_080615	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
23	DS-23_080515 DUP-DS-02_080615	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
24	DS-24_080515	NONHAZARDOUS	FAIR (REQUIRES NEW LID)	CLEAN WATER OF NEW YORK	GROWS LANDFILL
25	DS-25_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
26	DS-26_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
27	DS-27_080515	**HAZARDOUS**	GOOD	VEOLIA	WAYNE DISPOSAL
28	DS-28_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
29	DS-29_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
30	DS-30_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
31	DS-31_080515	NONHAZARDOUS	FAIR (REQUIRES NEW LID)	CLEAN WATER OF NEW YORK	GROWS LANDFILL
32	DS-32_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
33	DS-33_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
34	DS-34_080515 DS-COMP_081315	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
36	DS-36_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
WASTEWATER					
35	DS-35_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
37	DS-37_080515 DUP-DS-03_080615	**HAZARDOUS**	GOOD	VEOLIA	WAYNE DISPOSAL
38	DS-38_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
39	DS-39_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
40	DS-40_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
41	DS-41_080515	**HAZARDOUS**	GOOD	VEOLIA	WAYNE DISPOSAL
42	DS-42_080515	**HAZARDOUS**	GOOD	VEOLIA	WAYNE DISPOSAL
43	DS-43_080615	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
44	DS-44_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
45	DS-45_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
46	DS-46_080615	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
47	DS-47_080615	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
48	DS-48_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
49	DS-49_080615 DUP-DS-04_080615	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
50	DS-50_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
51	DS-51_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
52	DS-52_080615	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
53	DS-53_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
54	DS-54_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
55	DS-55_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
56	DS-56_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
57	DS-57_080515	NONHAZARDOUS	GOOD	CLEAN WATER OF NEW YORK	GROWS LANDFILL
58	DS-58_080515	**HAZARDOUS**	GOOD	VEOLIA	WAYNE DISPOSAL

NOTES:
1. All drums were analyzed for volatile organic compounds (VOCs).
2. Approximately 1/5 of the drums (Drum Nos. 4, 7, 14, 15, 23 and 26) containing soil (nonwastewater) were analyzed for Toxicity Characteristic Leaching Procedure (TCLP) VOCs.
3. Duplicate samples were collected at a rate of 1 per 20 drums for each type of media.
4. Drums labeled as "hazardous" contain media with hazardous concentrations of one or more VOC as compared to the applicable New York State Department of Environment Conservation (NYSDEC) regulatory criteria. For further details concerning the laboratory analysis refer to Tables 2 and 3.
5. VOC analytical results were compared to the NYSDEC Title 6 of the Official Compilation of New York Codes, Rules Regulations (NYCRR) Part 376 Universal Treatment Standards (UTS) for wastewater and nonwasterwater (i.e. soil).
6. TCLP VOC analytical results were compared to the NYSDEC 6 NYCRR Part 371 Maximum Concentration of Contaminants for the Toxicity Characteristic.
7. Soil from Drum Nos. 2, 3, 4, 6 and 34 comprised the five-point composite sample analyzed for TCLP lead.

TABLE 5: DRUM INVENTORY - SOIL SAMPLE RESULTS
491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM NO. C224139

Sample ID Laboratory ID Sampling Date	NYSDEC Hazardous Waste Criteria	DS-01_080515 L1518504-04 8/5/2015		DS-02_080515 L1518504-05 8/5/2015		DS-03_080515 L1518504-06 8/5/2015		DS-04_080515 L1518504-07 8/5/2015		DS-05_080515 L1518504-08 8/5/2015		DS-06_080515 L1518504-09 8/5/2015		DS-07_080515 L1518504-10 8/5/2015		DS-08_080515 L1518504-17 8/5/2015		DS-09_080515 L1518504-18 8/5/2015		DS-10_080515 L1518504-19 8/5/2015		DS-11_080515 L1518504-20 8/5/2015		DS-12_080515 L1518504-21 8/5/2015	
Volatile Organic Compounds (mg/kg)																									
1,1,1-Trichloroethane	6	0.0013	U	0.0014	U	0.17	U	0.0057		0.0015	U	0.0013	U	0.0012	U	0.0012	U	0.0014	U	0.0013	U	0.0012	U	0.00032	J
1,4-Dichlorobenzene	N/A	0.0067	U	0.0068	U	0.85	U	0.00046	J	0.0076	U	0.0064	U	0.0061	U	0.006	U	0.0073	U	0.0065	U	0.0059	U	0.0061	U
Acetone	160	0.013	U	0.004	J	1.7	U	0.016	U	0.0039	J	0.0038	J	0.0058	J	0.0045	J	0.014	U	0.0065	J	0.012	U	0.012	U
Chloroform	6	0.002	U	0.002	U	0.26	U	0.00061	J	0.0023	U	0.0019	U	0.0018	U	0.0018	U	0.0022	U	0.0019	U	0.0018	U	0.0018	U
cis-1,2-Dichloroethene	N/A	0.0013	U	0.0014	U	0.17	U	0.0016	U	0.0015	U	0.0013	U	0.0012	U	0.0012	U	0.0014	U	0.0013	U	0.0012	U	0.0012	U
Ethylbenzene	10	0.0013	U	0.0014	U	0.017	U	0.0016	U	0.0015	U	0.0013	U	0.0012	U	0.0012	U	0.0014	U	0.0013	U	0.0012	U	0.0012	U
Methyl cyclohexane	N/A	0.0054	U	0.0054	U	0.68	U	0.0064	U	0.0061	U	0.0051	U	0.0049	U	0.0048	U	0.0058	U	0.0052	U	0.0048	U	0.0049	U
Naphthalene	5.6	0.0067	U	0.0068	U	0.85	U	0.044	J	0.0076	U	0.0013	J	0.0061	U	0.006	U	0.0073	U	0.0065	U	0.0059	U	0.0061	U
p/m-Xylene	30	0.0027	U	0.0027	U	0.34	U	0.0032	U	0.00061	J	0.00037	J	0.0024	U	0.0024	U	0.0029	U	0.0026	U	0.0024	U	0.0024	U
o-Xylene	N/A	0.0027	U	0.0027	U	0.34	U	0.0032	U	0.003	U	0.0026	U	0.0024	U	0.0024	U	0.0029	U	0.0026	U	0.0024	U	0.0024	U
Tert-Butyl Alcohol	N/A	0.005	J	0.015	J	10	U	0.096	U	0.027	J	0.01	J	0.05	J	0.0039	J	0.059	J	0.032	J	0.046	J	0.025	J
Tetrachloroethene	6	0.0047		0.0051		1.4		0.061	J	0.0034		0.0079		0.0012	U	0.0054		0.0014	U	0.0011	J	0.001	J	0.00086	J
Toluene	10	0.002	U	0.002	U	0.26	U	0.0024	U	0.0016	J	0.00058	J	0.0018	U	0.0018	U	0.0022	U	0.00071	J	0.00037	J	0.0005	J
Trichloroethene	6	0.0036		0.066		**79**		5.1		0.01		0.12		0.00047	J	0.034		0.0019		0.0036		0.0075		0.06	
1,2,4-Trimethylbenzene	N/A	0.0067	U	0.0068	U	0.85	U	0.008	U	0.0076	U	0.0064	U	0.0061	U	0.006	U	0.0073	U	0.0065	U	0.0059	U	0.0061	U
TCLP Volatile Organic Compounds (mg/L)																									
2-Butanone	200	NT		NT		NT		0.031	J	NT		NT		0.032	J	NT		NT		NT		NT		NT	
Trichloroethene	0.5	NT		NT		NT		0.022		NT		NT		0.005	U	NT		NT		NT		NT		NT	
TCLP Metals (mg/L)																									
Lead	5	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	

Notes:
1. mg/kg = milligrams per kilogram
2. mg/L = milligrams per liter
3. DUP-DS-01_080515 is a duplicate sample of DS-22_080515.
4. DUP-DS-02_080615 is a duplicate sample of DS-23_080515.
5. Toxicity Characteristic Leaching Procedure (TCLP) volatile organic compound (VOC) samples were collected from 1/5 of the drums.
6. Volatile organic compound (VOC) analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules and Regulations (NYCRR) Part 376 Universal Treatment Standards (UTS) for nonwastewater.
7. TCLP VOC analytical results are compared to the NYSDEC 6 NYCRR Part 371 Maximum Concentration of Contaminants for the Toxicity Characteristic.
8. Results above the NYSDEC Part 376 UTS are shaded and bold.
9. None of the TCLP VOC results were above the NYSDEC Part 371 criteria.

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

TABLE 5: DRUM INVENTORY - SOIL SAMPLE RESULTS
491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM NO. C224139

												DUPLICATE				DUPLICATE			
Sample ID **Laboratory ID** **Sampling Date**	**NYSDEC Hazardous Waste Criteria**	**DS-13_080515** **L1518707-02** **8/5/2015**		**DS-14_080515** **L1518707-01** **8/5/2015**		**DS-15_080515** **L1518504-22** **8/5/2015**		**DS-16_080515** **L1518504-23** **8/5/2015**		**DS-17_080515** **L1518504-24** **8/5/2015**		**DS-18_080515** **L1518504-25** **8/5/2015**		**DS-20_080515** **L1518504-26** **8/5/2015**		**DS-21_080515** **L1518504-27** **8/5/2015**		**DS-22_080515** **L1518504-28** **8/5/2015**		**DUP-DS-01_080615** **L1518504-38** **8/5/2015**		**DS-23_080515** **L1518504-29** **8/5/2015**		**DUP-DS-02_080615** **L1518706-04** **8/6/2015**	
Volatile Organic Compounds (mg/kg)																									
1,1,1-Trichloroethane	6	0.07	U	0.0012	U	0.0012	U	0.0012	U	0.003	U	0.0014	U	0.0012	U	0.0012	U	0.0011	U	0.064	U	0.001	U	0.0012	U
1,4-Dichlorobenzene	N/A	0.35	U	0.0063	U	0.0058	U	0.0063	U	0.015	U	0.0072	U	0.0058	U	0.0063	U	0.0056	U	0.320	U	0.0052	U	0.0062	U
Acetone	160	0.7	U	0.012	U	0.012	U	0.012	U	0.03	U	0.014	U	0.012	U	0.012	U	0.011	U	0.64	U	0.0058	J	0.012	U
Chloroform	6	0.1	U	0.0019	U	0.0017	U	0.0019	U	0.0046	U	0.0022	U	0.0012	J	0.0024		0.0017	U	0.096	U	0.0016	U	0.0018	U
cis-1,2-Dichloroethene	N/A	0.07	U	0.00041	J	0.0012	U	0.0012	U	0.003	U	0.0014	U	0.0012	U	0.0012	U	0.0011	U	0.064	U	0.001	U	0.0012	U
Ethylbenzene	10	0.07	U	0.0012	U	0.0012	U	0.0012	U	0.003	U	0.0014	U	0.0012	U	0.0012	U	0.0011	U	0.028	J	0.001	U	0.0012	U
Methyl cyclohexane	N/A	0.28	U	0.005	U	0.0047	U	0.005	U	0.012	U	0.0058	U	0.0047	U	0.005	U	0.0045	U	0.046	J	0.0042	U	0.005	U
Naphthalene	5.6	0.016	J	0.0063	U	0.0058	U	0.0063	U	0.015	U	0.0072	U	0.00067	J	0.0016	J	0.0056	U	0.032	J	0.0052	U	0.0062	U
p/m-Xylene	30	0.02	J	0.0025	U	0.0023	U	0.0025	U	0.0061	U	0.0029	U	0.0023	U	0.0025	U	0.0022	U	0.023	J	0.0021	U	0.0025	U
o-Xylene	N/A	0.03	J	0.0025	U	0.0023	U	0.0025	U	0.0061	U	0.0029	U	0.0023	U	0.0025	U	0.0022	U	0.13	U	0.0021	U	0.0025	U
Tert-Butyl Alcohol	N/A	4.2	U	0.0063	J	0.006	J	0.012	J	0.019	J	0.038	J	0.0062	J	0.075	U	0.0067	J	3.8	U	0.063	U	0.074	U
Tetrachloroethene	6	0.094		0.00072	J	0.0012	U	0.0012	U	0.0027	J	0.0028		0.005		0.0075		0.0022		0.065		0.001	U	0.0012	
Toluene	10	0.1	U	0.0019	U	0.0017	U	0.0019	U	0.0046	U	0.0022	U	0.0018	U	0.0019	U	0.00052	J	0.096	U	0.0016	U	0.0018	U
Trichloroethene	6	1.1		0.049		0.0012	U	0.0012	U	0.14		0.042		0.18		0.13		0.24		5.2		0.001	U	0.0016	
1,2,4-Trimethylbenzene	N/A	0.35	U	0.0063	U	0.0058	U	0.0063	U	0.015	U	0.0072	U	0.0058	U	0.0063	U	0.0056	U	0.023	J	0.0052	U	0.0062	U
TCLP Volatile Organic Compounds (mg/L)																									
2-Butanone	200	NT		0.037	J	0.035	J	NT		NT		NT		NT		NT		NT		NT		0.037	J	NT	
Trichloroethene	0.5	NT		0.0041	J	0.005	U	NT		NT		NT		NT		NT		NT		NT		0.005	U	NT	
TCLP Metals (mg/L)																									
Lead	5	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	

Notes:
1. mg/kg = milligrams per kilogram
2. mg/L = milligrams per liter
3. DUP-DS-01_080515 is a duplicate sample of DS-22_080515.
4. DUP-DS-02_080615 is a duplicate sample of DS-23_080515.
5. Toxicity Characteristic Leaching Procedure (TCLP) volatile organic compound (VOC) samples were collected from 1/5 of the drums.
6. Volatile organic compound (VOC) analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules and Regulations (NYCRR) Part 376 Universal Treatment Standards (UTS) for nonwastewaters.
7. TCLP VOC analytical results are compared to the NYSDEC 6 NYCRR Part 371 Maximum Concentration of Contaminants for the Toxicity Characteristic.
8. Results above the NYSDEC Part 376 UTS are shaded and bold.
9. None of the TCLP VOC results were above the NYSDEC Part 371 criteria.

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

TABLE 5: DRUM INVENTORY - SOIL SAMPLE RESULTS
491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM NO. C224139

Sample ID Laboratory ID Sampling Date	NYSDEC Hazardous Waste Criteria	DS-24_080515 L1518504-30 8/5/2015	DS-25_080515 L1518504-31 8/5/2015	DS-26_080515 L1518504-32 8/5/2015	DS-27_080515 L1518504-33 8/5/2015	DS-28_080515 L1518504-34 8/5/2015	DS-29_080515 L1518707-03 8/5/2015	DS-30_080515 L1518504-35 8/5/2015	DS-31_080515 L1518707-04 8/5/2015	DS-32_080515 L1518504-36 8/5/2015	DS-33_080515 L1518504-37 8/5/2015	DS-34_080515 L1518504-38 8/5/2015	DS-36_080515 L1518707-05 8/5/2015	DS-COMP_081315 L1519511-01 8/13/2015
Volatile Organic Compounds (mg/kg)														
1,1,1-Trichloroethane	6	0.0013 U	0.0011 U	0.0011 U	0.072 U	0.066 U	0.0012 U	0.0014 U	0.0014 U	0.0013 U	0.0014 U	0.08 U	0.0012 U	NT
1,4-Dichlorobenzene	N/A	0.0066 U	0.0057 U	0.0057 U	0.36 U	0.33 U	0.0061 U	0.0073 U	0.0072 U	0.0065 U	0.0068 U	0.4 U	0.0059 U	NT
Acetone	160	0.013 U	0.011 U	0.011 U	0.72 U	0.66 U	0.012 U	0.014 U	0.014 U	0.013 U	0.014 U	0.8 U	0.012 U	NT
Chloroform	6	0.002 U	0.0017 U	0.0017 U	0.028 J	0.099 U	0.0018 U	0.0022 U	0.0022 U	0.002 U	0.002 U	0.12 U	0.00061 J	NT
cis-1,2-Dichloroethene	N/A	0.0013 U	0.0011 U	0.00028 J	0.072 U	0.066 U	0.0014	0.0014 U	0.0023	0.0013 U	0.0014 U	0.08 U	0.00053 J	NT
Ethylbenzene	10	0.0013 U	0.0011 U	0.0011 U	0.072 U	0.066 U	0.0012 U	0.0014 U	0.0014 U	0.0013 U	0.0014 U	0.08 U	0.0012 U	NT
Methyl cyclohexane	N/A	0.0053 U	0.0046 U	0.0046 U	0.29 U	0.26 U	0.0048 U	0.0058 U	0.0057 U	0.0052 U	0.0054 U	0.32 U	0.0048 U	NT
Naphthalene	5.6	0.0066 U	0.0057 U	0.0057 U	0.36 U	0.037 J	0.0061 U	0.0073 U	0.0072 U	0.0065 U	0.0068 U	0.4 U	0.00097 J	NT
p/m-Xylene	30	0.00039 J	0.0023 U	0.0023 U	0.14 U	0.13 U	0.0024 U	0.0029 U	0.0029 U	0.0026 U	0.0027 U	0.16 U	0.0024 U	NT
o-Xylene	N/A	0.0026 U	0.0023 U	0.0023 U	0.14 U	0.13 U	0.0024 U	0.0029 U	0.0029 U	0.0026 U	0.0027 U	0.16 U	0.0024 U	NT
Tert-Butyl Alcohol	N/A	0.0068 J	0.014 J	0.068 U	4.3 U	4 U	0.073 U	0.024 J	0.086 U	0.012 J	0.012 J	4.8 U	0.0056 J	NT
Tetrachloroethene	6	0.0013 U	0.0011 U	0.0016	0.31	0.054 J	0.0034	0.0014 U	0.0041	0.0013 U	0.00085 J	0.079 J	0.019	NT
Toluene	10	0.0003 J	0.0017 U	0.0017 U	0.11 U	0.099 U	0.0018 U	0.0022 U	0.0022 U	0.002 U	0.002 U	0.12 U	0.0018 U	NT
Trichloroethene	6	0.026	0.0016	0.094	**7.4**	4.9	0.023	0.0056	0.032	0.015	0.016	2	0.22	NT
1,2,4-Trimethylbenzene	N/A	0.0066 U	0.0057 U	0.0057 U	0.36 U	0.33 U	0.0061 U	0.0073 U	0.0072 U	0.0065 U	0.0068 U	0.4 U	0.0059 U	NT
TCLP Volatile Organic Compounds (mg/L)														
2-Butanone	200	NT	NT	0.041 J	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Trichloroethene	0.5	NT	NT	0.016	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
TCLP Metals (mg/L)														
Lead	5	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	0.14 J

Notes:
1. mg/kg = milligrams per kilogram
2. mg/L = milligrams per liter
3. DUP-DS-01_080515 is a duplicate sample of DS-22_080515.
4. DUP-DS-02_080615 is a duplicate sample of DS-23_080515.
5. Toxicity Characteristic Leaching Procedure (TCLP) volatile organic compound (VOC) samples were collected from 1/5 of the drums.
6. Volatile organic compound (VOC) analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules and Regulations (NYCRR) Part 376 Universal Treatment Standards (UTS) for nonwastewaters.
7. TCLP VOC and TCLP Metals analytical results are compared to the NYSDEC 6 NYCRR Part 371 Maximum Concentration of Contaminants for the Toxicity Characteristic.
8. Results above the NYSDEC Part 376 UTS are shaded and bold.
9. None of the TCLP VOC results were above the NYSDEC Part 371 criteria.

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

TABLE 6: DRUM INVENTORY - WATER SAMPLE RESULTS
491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM NO. C224139

				DUPLICATE																	
Sample ID	**NYSDEC**	**DS-35_080515**		**DS-37_080515**		**DUP-DS-03_080615**		**DS-38_080515**		**DS-39_080515**		**DS-40_080515**		**DS-41_080515**		**DS-42_080515**		**DS-43_080615**	
Laboratory ID	**Hazardous Waste**	**L1518504-39**		**L1518504-45**		**L1518706-05**		**L1518504-47**		**L1518504-46**		**L1518504-44**		**L1518504-52**		**L1518504-49**		**L1518706-08**	
Sampling Date	**Criteria**	**8/5/2015**		**8/5/2015**		**8/6/2015**		**8/5/2015**		**8/5/2015**		**8/5/2015**		**8/5/2015**		**8/5/2015**		**8/6/2015**	
Volatile Organic Compounds (mg/L)																			
1,1,1-Trichloroethane	0.054	0.00074	J	0.01	U	0.002	J	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0062	U	0.0025	U
1,1,2-Trichloroethane	0.54	0.0015	U	0.006	U	0.0038	U	0.0015	U	0.0015	U	0.0015	U	0.0015	U	0.0038	U	0.0015	U
1,1-Dichloroethane	0.059	0.0025	U	0.01	U	0.0062	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0062	U	0.0025	U
1,1-Dichloroethene	0.025	0.0005	U	0.002	U	0.0012	U	0.0005	U	0.0005	U	0.0005	U	0.0005	U	0.0012	U	0.0005	U
1,2-Dichlorobenzene	N/A	0.0025	U	0.01	U	0.0062	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0062	U	0.0025	U
2-Butanone	0.28	0.005	U	0.02	U	0.012	U	0.005	U	0.005	U	0.005	U	0.005	U	0.012	U	0.005	U
Acetone	0.28	0.005	U	0.02	U	0.012	U	0.005	U	0.005	U	0.005	U	0.005	U	0.0063	J	0.005	U
Bromodichloromethane	0.35	0.0005	U	0.002	U	0.0012	U	0.0005	U	0.0005	U	0.0005	U	0.0005	U	0.0012	U	0.0005	U
Chlorobenzene	0.057	0.0025	U	0.01	U	0.0062	U	0.0025	U	0.001	J	0.0025	U	0.0025	U	0.0062	U	0.0025	U
Chloroform	0.046	0.0025	U	0.01	U	0.0062	U	0.0025	U	0.0025	U	0.0025	U	0.00085	J	0.019		0.0025	U
cis-1,2-Dichloroethene	N/A	0.0025	U	0.01	U	0.0062	U	0.0025	U	0.003		0.0025	U	0.0026		0.0062	U	0.002	J
Dibromochloromethane	N/A	0.0005	U	0.002	U	0.0012	U	0.0005	U	0.0005	U	0.0005	U	0.0005	U	0.0012	U	0.0005	U
Methyl tert butyl ether	N/A	0.00072	J	0.01	U	0.0062	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0062	U	0.00071	J
p/m-Xylene	0.32	0.0025	U	0.01	U	0.0062	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0062	U	0.0025	U
Tert-Butyl Alcohol	N/A	0.01	U	0.0069	J	0.025	U	0.01	U	0.01	U	0.01	U	0.01	U	0.0041	J	0.01	U
Tetrachloroethene	0.056	0.024		**0.068**		0.045		0.005		0.024		0.0068		0.006		**0.058**		0.0041	
Toluene	0.08	0.0025	U	0.01	U	0.0062	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0062	U	0.0025	U
Trichloroethene	0.054	0.014		**0.38**		**0.33**		0.0012		0.016		0.0029		**0.073**		**0.31**		0.008	
Vinyl chloride	0.27	0.001	U	0.004	U	0.0025	U	0.001	U	0.001	U	0.001	U	0.001	U	0.0025	U	0.001	U

Notes:
1. mg/L = milligrams per liter
2. DUP-DS-03_080615 is a duplicate sample of DS-37-080515.
3. DUP-DS-04_080615 is a duplicate sample of DS-49-080615.
4. Volatile organic compound (VOC) analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules and Regulations (NYCRR) Part 376 Universal Treatment Standards (UTS) for wastewater.
5. Results above the NYSDEC Part 376 UTS are shaded and bold.

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: DRUM INVENTORY - WATER SAMPLE RESULTS
491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM NO. C224139

														DUPLICATE							
Sample ID	**NYSDEC**	**DS-44_080515**		**DS-45_080515**		**DS-46_080615**		**DS-47_080615**		**DS-48_080515**		**DS-49_080615**		**DUP-DS-04_080615**		**DS-50_080515**		**DS-51_080515**	
Laboratory ID	**Hazardous Waste**	**L1518504-51**		**L1518504-50**		**L1518706-09**		**L1518706-10**		**L1518504-43**		**L1518706-01**		**L1518706-06**		**L1518504-41**		**L1518504-40**	
Sampling Date	**Criteria**	**8/5/2015**		**8/5/2015**		**8/6/2015**		**8/6/2015**		**8/5/2015**		**8/6/2015**		**8/6/2015**		**8/5/2015**		**8/5/2015**	
Volatile Organic Compounds (mg/L)																			
1,1,1-Trichloroethane	0.054	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U
1,1,2-Trichloroethane	0.54	0.0015	U	0.0015	U	0.0015	U	0.00063	J	0.0015	U	0.0015	U	0.0015	U	0.0015	U	0.0015	U
1,1-Dichloroethane	0.059	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0007	J	0.0025	U
1,1-Dichloroethene	0.025	0.0005	U	0.0005	U	0.0005	U	0.00038	J	0.0005	U	0.0005	U	0.0005	U	0.0005	U	0.0005	U
1,2-Dichlorobenzene	N/A	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U
2-Butanone	0.28	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U
Acetone	0.28	0.0029	J	0.0044	J	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U
Bromodichloromethane	0.35	0.0034		0.0005	U	0.0005	U	0.0005	U	0.0005	U	0.0005	U	0.0005	U	0.0005	U	0.0005	U
Chlorobenzene	0.057	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U
Chloroform	0.046	0.037		0.0054		0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U
cis-1,2-Dichloroethene	N/A	0.0025	U	0.0025	U	0.0025	U	0.0044		0.0025	U	0.0025	U	0.0025	U	0.004		0.00098	J
Dibromochloromethane	N/A	0.00028	J	0.0005	U	0.0005	U	0.0005	U	0.0005	U	0.0005	U	0.0005	U	0.0005	U	0.0005	U
Methyl tert butyl ether	N/A	0.0025	U	0.0025	U	0.0016	J	0.0025	U	0.00089	J	0.0011	J	0.0011	J	0.0017	J	0.0025	U
p/m-Xylene	0.32	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U
Tert-Butyl Alcohol	N/A	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U	0.0049	J	0.01	U
Tetrachloroethene	0.056	0.0084		0.0043		0.001		0.0043		0.00035	J	0.00046	J	0.00054		0.0045		0.00096	
Toluene	0.08	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.00096	J	0.0025	U
Trichloroethene	0.054	0.031		0.014		0.00061		0.053		0.00039	J	0.0019		0.0024		0.048		0.0062	
Vinyl chloride	0.27	0.001	U	0.001	U	0.001	U	0.001	U	0.001	U	0.001	U	0.001	U	0.001	U	0.001	U

Notes:
1. mg/L = milligrams per liter
2. DUP-DS-03_080615 is a duplicate sample of DS-37-080515.
3. DUP-DS-04_080615 is a duplicate sample of DS-49-080615.
4. Volatile organic compound (VOC) analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules and Regulations (NYCRR) Part 376 Universal Treatment Standards (UTS) for wastewater.
5. Results above the NYSDEC Part 376 UTS are shaded and bold.

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: DRUM INVENTORY - WATER SAMPLE RESULTS
491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM NO. C224139

Sample ID Laboratory ID Sampling Date	NYSDEC Hazardous Waste Criteria	DS-52_080615 L1518706-02 8/6/2015		DS-53_080515 L1518504-42 8/5/2015		DS-54_080515 L1518504-53 8/5/2015		DS-55_080515 L1518504-48 8/5/2015		DS-56_080515 L1518504-54 8/5/2015		DS-57_080515 L1518707-06 8/5/2015		DS-58_080615 L1518706-07 8/6/2015	
Volatile Organic Compounds (mg/L)															
1,1,1-Trichloroethane	0.054	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.012	U	0.0015	J
1,1,2-Trichloroethane	0.54	0.0015	U	0.0015	U	0.0015	U	0.0015	U	0.0015	U	0.0075	U	0.003	U
1,1-Dichloroethane	0.059	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.012	U	0.005	U
1,1-Dichloroethene	0.025	0.0005	U	0.0005	U	0.0005	U	0.0005	U	0.0005	U	0.0025	U	0.001	U
1,2-Dichlorobenzene	N/A	0.0025	U	0.0025	U	0.0025	U	0.00071	J	0.0025	U	0.012	U	0.005	U
2-Butanone	0.28	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.014	J	0.0042	J
Acetone	0.28	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.019	J	0.024	
Bromodichloromethane	0.35	0.0005	U	0.0005	U	0.0005	U	0.0005	U	0.0005	U	0.0025	U	0.001	U
Chlorobenzene	0.057	0.0025	U	0.0025	U	0.0025	U	0.0012	J	0.0025	U	0.012	U	0.005	U
Chloroform	0.046	0.0025	U	0.0025	U	0.0025	U	0.001	J	0.0025	U	0.012	U	0.005	
cis-1,2-Dichloroethene	N/A	0.0025	U	0.0025	U	0.0025	U	0.0018	J	0.0025	U	0.012	U	0.0082	
Dibromochloromethane	N/A	0.0005	U	0.0005	U	0.0005	U	0.0005	U	0.0005	U	0.0025	U	0.001	U
Methyl tert butyl ether	N/A	0.0018	J	0.00072	J	0.0025	U	0.0025	U	0.0025	U	0.012	U	0.005	U
p/m-Xylene	0.32	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0052	J	0.005	U
Tert-Butyl Alcohol	N/A	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U	0.022	J	0.02	U
Tetrachloroethene	0.056	0.0014		0.00057		0.0029		0.018		0.00089		0.015		**0.092**	
Toluene	0.08	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.012	U	0.005	U
Trichloroethene	0.054	0.0081		0.00047	J	0.0017		0.014		0.0013		0.03		**0.24**	
Vinyl chloride	0.27	0.001	U	0.001	U	0.001	U	0.001	U	0.001	U	0.005	U	0.00031	J

Notes:
1. mg/L = milligrams per liter
2. DUP-DS-03_080615 is a duplicate sample of DS-37-080515.
3. DUP-DS-04_080615 is a duplicate sample of DS-49-080615.
4. Volatile organic compound (VOC) analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules and Regulations (NYCRR) Part 376 Universal Treatment Standards (UTS) for wastewater.
5. Results above the NYSDEC Part 376 UTS are shaded and bold.

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

Progress Report No. 3
J&H Holding Company, LLC
491 Wortman Avenue, Brooklyn, NY 11208
Brownfield Cleanup Program Site No. C224139
Reporting Period: September 2015

1. Introduction

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. (Langan) submits this monthly progress report on behalf of J&H Holding Company, LLC (the "Participant"). Monthly progress report submittal to the New York State Department of Environmental Conservation (NYSDEC) is performed in accordance with the Brownfield Cleanup Agreement (BCA) and Section 3.2 of the NYSDEC-approved Interim Remedial Measures Work Plan (IRMWP), prepared by Langan, dated April 28, 2015, and revised June 16, 2015. This monthly progress report summarizes work performed at 491 Wortman Avenue, Brooklyn, New York (the "site") during September 2015.

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 (i.e. the eastern portion).

Environmental site investigations began in November 2008. The most recent environmental activity was Langan's submittal of the IRMWP, which the NYSDEC approved on June 18, 2015. Implementation of the IRMWP and the pending environmental activities are described further in this progress report.

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

In accordance with the NYSDEC-approved IRMWP, the majority of the AS/SVE system pipe network was installed during September 2015. Two-inch and 1.25-inch diameter schedule 40 polyvinyl chloride (PVC) pipes were connected to each soil vapor extraction (SVE) and air sparge (AS) wellhead, respectively, and each length of pipe was trenched to a stub-out location in the northwest corner of the warehouse awaiting the arrival of the AS/SVE system trailer.

Prior to installing the pipelines, each trench was lined with two layers of 6-mil polyethylene sheeting and backfilled with enough pea gravel to provide surface cover. Each pipeline was constructed from its respective wellhead to the approximate trailer location and before final connection to the wellhead was made; each pipeline underwent a leak-check test. Upon completion of the leak-check tests, the trenches were backfilled with pea gravel to approximately 4 inches below the top of concrete slab. The concrete slab was restored in-kind with an approximately 4-inch thick layer of concrete rated at a strength of 3,500 pounds per square inch (psi).

The trench excavation generated approximately 40 cubic yards of soil and 15 cubic yards of concrete waste. The concrete was transported off-site and disposed of at Atlas Disposal Facility in Brooklyn, New York on September 15, 2015. To determine whether the soil should be disposed of as hazardous or nonhazardous waste, one composite and two grab soil samples were collected. The first grab sample was analyzed for Total Compound List (TCL) volatile organic compounds (VOCs), and the

composite sample was analyzed for polychlorinated biphenyls (PCBs), total metals, and Resource Conservation and Recovery Act (RCRA) characteristics. Due to the elevated concentration of trichloroethene (TCE) detected in the first grab sample, a second grab sample was collected and analyzed for Toxicity Characteristic Leaching Procedure (TCLP) VOCs. The sampling program was approved by Henry Wilkie of the NYSDEC in an email dated September 15, 2015. The soil generated during trench excavation (i.e., the investigation-derived waste [IDW]) remains stockpiled on-site awaiting off-site disposal as a listed hazardous waste (F002).

In September 2015, 32 drums containing nonhazardous soil and 12 drums containing nonhazardous wastewater were transported off-site to Clean Water of New York. Seven drums containing nonhazardous wastewater remain on-site awaiting transport off-site to Clean Water of New York. Drums containing hazardous waste (i.e. two soil and four wastewater) remain staged on-site awaiting off-site disposal as listed hazardous waste (F002).

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

The following activities are planned:

- Continued disposal of IDW and drummed waste,
- Receipt of AS/SVE system trailer,
- Make final connections from the AS/SVE pipe network to the AS/SVE system trailer,
- Make the necessary electrical connections to the AS/SVE system trailer, and
- Complete start-up and shake-down of the AS/SVE system.

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

As part of Progress Report No. 2, the reporting period for which was August 2015, we requested the removal of MW-1, PZ-1, PZ-3, PZ-4 and PZ-5 from the quarterly groundwater sampling program. In a letter dated September 24, 2015, Alicia Barraza of the NYSDEC approved the removal of PZ-3, PZ-4 and PZ-5 from the quarterly groundwater sampling program. Per the letter, MW-1 and PZ-1 will remain in the quarterly groundwater sampling program.

5. Results of Sampling, Testing and Other Relevant Data

Investigation-derived waste sampling was performed as follows:

- One grab soil sample was collected from the IDW and analyzed for TCL VOCs and one composite soil sample was collected from the IDW and analyzed for PCBs, total metals and RCRA characteristics.
- The following week an additional grab soil sample was collected from the IDW and analyzed for TCLP VOCs.

Samples were analyzed by York Analytical Laboratories Inc. (York) of Stratford, CT. York is a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP)-certified laboratory.

Please see the attached tables for the IDW sampling summary (Table 1) and the IDW sampling results (Table 2). Lab analytical reports can be supplied upon request.

6. Deliverables Submitted During This Reporting Period

No deliverables were submitted during this reporting period.

7. Information Regarding Percentage of Completion

Well drilling and installation field activities and the baseline sampling program are complete. Installation of the AS/SVE pipe network is 95% complete and will be finished upon arrival of the AS/SVE system trailer. The AS/SVE system trailer is set to arrive on October 1, 2015. Investigation derived waste disposal is ongoing. Installation of the AS/SVE system is approximately 65% complete.

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

None.

9. Citizen Participation Plan Activities during This Reporting Period

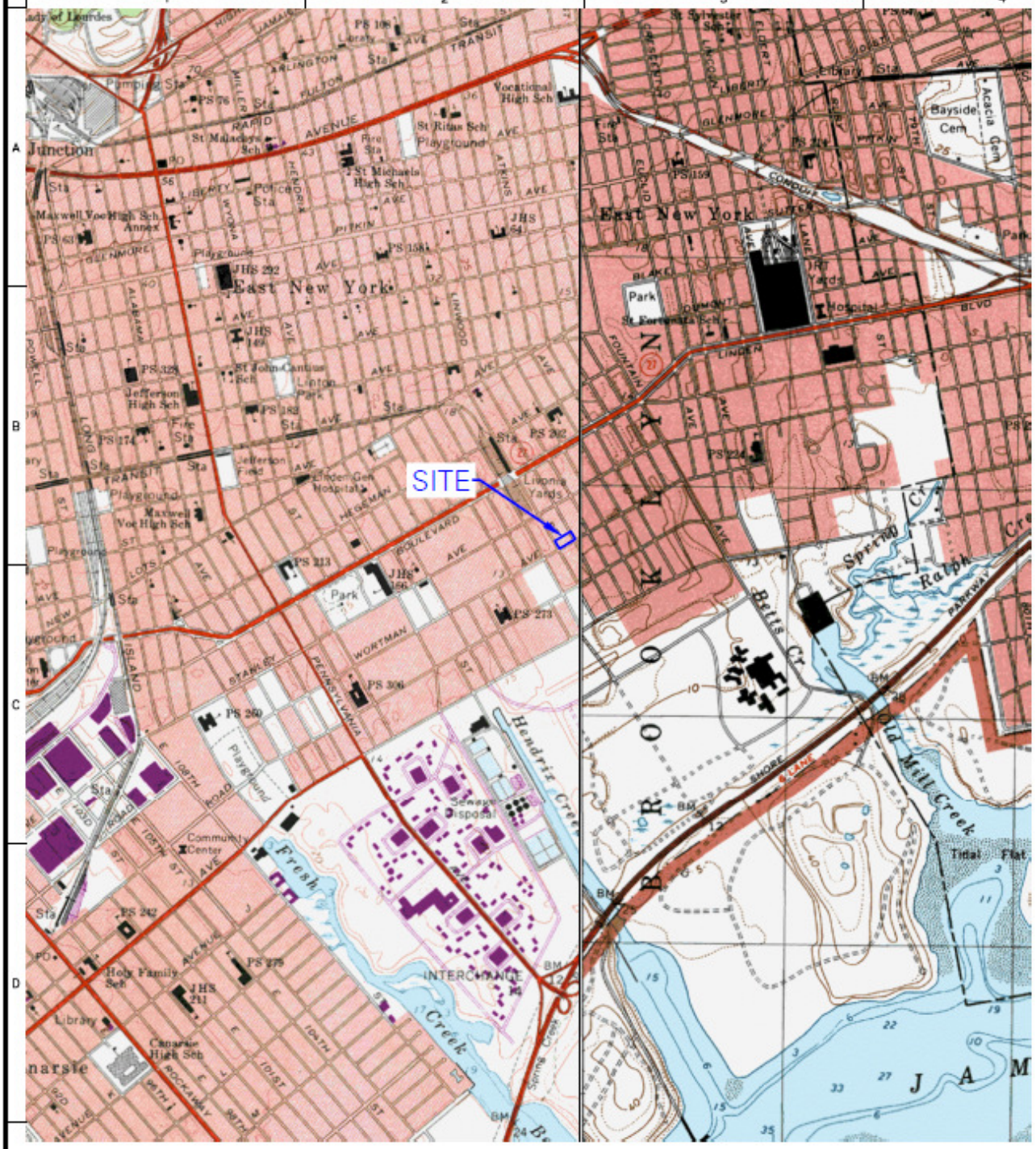
None.

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

A fact sheet will be distributed to the site contact list that describes start-up of the AS/SVE system (i.e., the cleanup action).

11. Miscellaneous Information

None.



REFERENCE: USGS TOPOGRAPHIC QUADRANGLE MAPS FOR BROOKLYN AND JAMAICA.

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Langan CT, Inc.
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
Date	04/18/2015
Scale	N.T.S.
Drawn By	MLR
Checked By	GN
Submission Date	
Figure	1
Sheet	1 of 7

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TABLE 1: IDW SAMPLING SUMMARY
491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM SITE NO. C224139

SAMPLE NAME	SAMPLE DATE	SAMPLE TYPE	LOCATION	ANALYSIS
SOIL SAMPLES				
491-WC	9/16/2015	COMPOSITE	STOCKPILED IDW	TOTAL METALS, PCBs, RCRA CHARACTERISTICS
491-WC-V	9/16/2015	GRAB	STOCKPILED IDW	TCL VOCs
SP-01_092315	9/23/2015	GRAB	STOCKPILED IDW	TCLP VOCs

Notes:

1. IDW = investigation-derived waste
2. TCL = Target Compound List
3. VOCs = volatile organic compounds
4. PCBs = polychlorinated biphenyls
5. RCRA = Resource Conservation and Recovery Act

TABLE 2: INVESTIGATION-DERIVED WASTE SAMPLING RESULTS
491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM SITE NO. C224139

Sample ID	491-WC	491-WC-V	SP-01_092315
Laboratory ID	15I0561-01	15I0556-01	15I0817-01
Sampling Date	9/16/2015	9/16/2015	9/23/2015
VOCs (mg/kg)			
Acetone	NA	0.038 E	NA
Tetrachloroethene	NA	0.007	NA
Trichloroethene	NA	37	NA
TCLP VOCs (mg/L)			
Trichloroethene	NA	NA	0.110
Metals (mg/kg)			
Aluminum	6,580	NA	NA
Antimony	1.20	NA	NA
Arsenic	5.16	NA	NA
Barium	111	NA	NA
Calium	18,200	NA	NA
Chromium	27.3	NA	NA
Cobalt	7.81	NA	NA
Copper	71.8	NA	NA
Iron	13,100	NA	NA
Lead	149	NA	NA
Magnesium	2,330	NA	NA
Manganese	303	NA	NA
Mercury	0.259	NA	NA
Nickel	39	NA	NA
Potassium	923	NA	NA
Sodium	320	NA	NA
Vanadium	21.7	NA	NA
Zinc	156	NA	NA
PCBs (mg/kg)			
Aroclor 1260	0.0415	NA	NA
Total PCBs	0.0415	NA	NA

Notes:

1. mg/kg = milligrams per kilogram
2. mg/L = milligrams per liter
3. NA = not analyzed
4. Only compounds with detections are shown in the table.
5. VOCs = volatile organic compounds
6. TCLP = toxicity characteristic leaching procedure
7. PCBs = polychlorinated biphenyls

Qualifiers:

E = Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument; sample was retested with capable equipment, and that result is reported.

Progress Report No. 4
J&H Holding Company, LLC
491 Wortman Avenue, Brooklyn, NY 11208
Brownfield Cleanup Program Site No. C224139
Reporting Period: October 2015

1. Introduction

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. (Langan) submits this monthly progress report on behalf of J&H Holding Company, LLC (the "Participant"). Monthly progress report submittal to the New York State Department of Environmental Conservation (NYSDEC) is performed in accordance with the Brownfield Cleanup Agreement (BCA) and Section 3.2 of the NYSDEC-approved Interim Remedial Measures Work Plan (IRMWP), prepared by Langan, dated April 28, 2015, and revised June 16, 2015. This monthly progress report summarizes work performed at 491 Wortman Avenue, Brooklyn, New York (the "site") during October 2015.

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 (i.e. the eastern portion).

Environmental site investigations began in November 2008. The most recent environmental activity was Langan's submittal of the IRMWP, which the NYSDEC approved on June 18, 2015. Implementation of the IRMWP and the pending environmental activities are described further in this progress report.

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

The air sparge and soil vapor extraction (AS/SVE) system trailer was delivered to the site on October 1, 2015. Between October 1 and 14, 2015, Brookside Environmental was on-site to complete the AS/SVE system mechanical connections and Arcadia Electrical was on-site to complete the electrical connection. On October 15, 2015, Langan completed a pre-start-up inspection to verify that the system would be ready for start-up/shake-down the following week. From October 19 through 29, 2015, Newterra (i.e., the AS/SVE system manufacturer) and Langan worked together, both on-site and remotely, to complete the start-up/shake-down of the system. The AS/SVE system has been fully operational since Thursday, October 29, 2015.

Baseline process and performance monitoring data was recorded on October 20, 21 and 26, 2015. Additionally, 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) on October 20, 21 and 26, 2015. On October 29, 2015, a wastewater sample was collected from the SVE system equalization tank and its contents were emptied into nine 55-gallon drums, which are currently staged on-site awaiting disposal as nonhazardous liquid. The analytical results for the tank sample were submitted to the NYSDEC in an email dated November 2, 2015.

On October 14, 2015, seven drums containing nonhazardous wastewater were transported off-site to Clean Water of New York. In October 2015, the contents of two drums containing hazardous soil were added to one of the on-site stockpiles awaiting off-site disposal.

Although not a part of this reporting period, on November 3, 2015, four drums containing hazardous wastewater were transported off-site to Veolia of Flanders, New Jersey, and the hazardous soil generated during trench excavation (i.e., the investigation-derived waste [IDW]) was loaded into two 20-cubic-yard containers and transported off-site to Wayne Disposal of Belleville, Michigan.

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

The following activities are planned:

- Disposal of nine drums containing nonhazardous wastewater, and
- 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

Baseline sampling was performed as follows:

- Three influent vapor samples were collected from the AS/SVE system and analyzed for volatile organic compounds (VOCs) via the United States Environmental Protection Agency (USEPA) Method TO-15.
- Three effluent vapor samples were collected from the AS/SVE system and analyzed for VOCs via the USEPA Method TO-15.

OM&M sampling was performed as follows:

- One wastewater sample was collected from the SVE system equalization tank and analyzed for Target Compound List (TCL) VOCs.

Samples were analyzed by York Analytical Laboratories Inc. (York) of Stratford, CT. York is a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP)-certified laboratory.

Please see the attached tables for the AS/SVE system sampling summary (Table 1), the vapor sampling results (Table 2) and the tank sampling results (Table 3). Lab analytical reports can be supplied upon request.

6. Deliverables Submitted During This Reporting Period

No deliverables were submitted during this reporting period.

7. Information Regarding Percentage of Completion

Installation and start-up of the AS/SVE system is 100% complete.

Operation, maintenance and monitoring of the AS/SVE system is ongoing.

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

None.

9. Citizen Participation Plan Activities during This Reporting Period

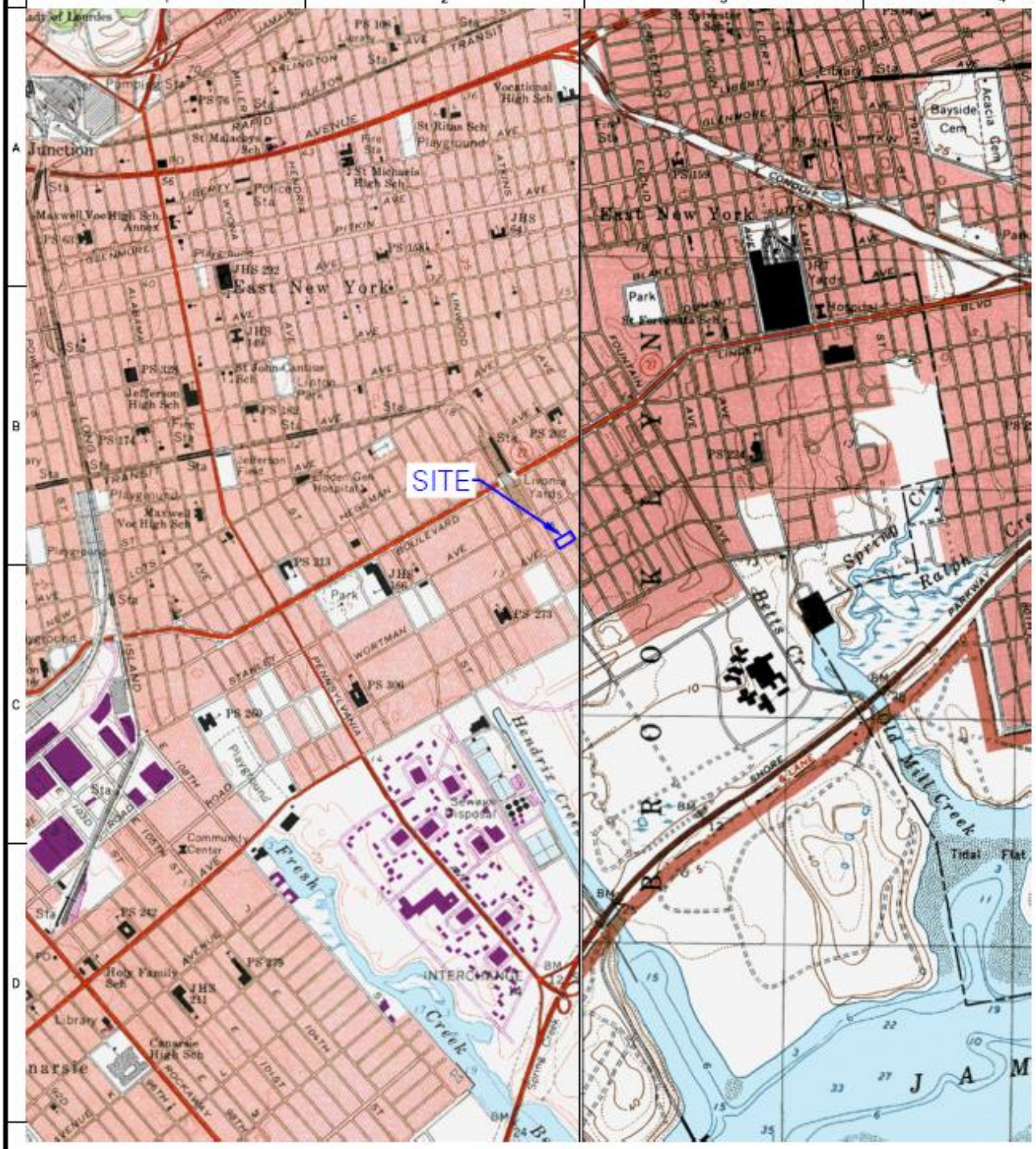
None.

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

None.

11. Miscellaneous Information

None.



REFERENCE: 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
Date	04/18/2015
Scale	N.T.S.
Drawn By	MLR
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Figure	1
Sheet	1 of 7

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TABLE 1: AS/SVE SYSTEM SAMPLING SUMMARY
491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM SITE NO. C224139

SAMPLE NAME	SAMPLE DATE	SAMPLE TYPE	LOCATION	ANALYSIS
AS/SVE SYSTEM WASTEWATER SAMPLES				
Tank_102915	10/29/2015	Discrete	SVE System Equalization Tank	TCL VOCs
AS/SVE SYSTEM VAPOR SAMPLES				
Influent 102015	10/20/2015	Three, 1-Liter Tedlar Bags	vGAC Vessel Influent	TO-15 VOCs
Effluent 102015	10/20/2015	Three, 1-Liter Tedlar Bags	vGAC Vessel Effluent	TO-15 VOCs
Influent_102115	10/21/2015	Three, 1-Liter Tedlar Bags	vGAC Vessel Influent	TO-15 VOCs
Effluent_102115	10/21/2015	Three, 1-Liter Tedlar Bags	vGAC Vessel Effluent	TO-15 VOCs
Influent_102615	10/26/2015	Three, 1-Liter Tedlar Bags	vGAC Vessel Influent	TO-15 VOCs
Effluent_102615	10/26/2015	Three, 1-Liter Tedlar Bags	vGAC Vessel Effluent	TO-15 VOCs

Notes:

1. The vapor samples were analyzed for VOCs via USEPA Method TO-15.
2. USEPA = United States Environmental Protection Agency
3. VOCs = volatile organic compounds
4. AS/SVE = air sparge/soil vapor extraction
5. vGAC = vapor-phase granular activated carbon
6. TCL = Target Compound List

Table 2: AS/SVE SYSTEM VAPOR SAMPLING RESULTS
491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM SITE NO. C224139

LOCATION	vGAC INFLUENT		vGAC EFFLUENT		vGAC INFLUENT		vGAC EFFLUENT		vGAC INFLUENT		vGAC EFFLUENT	
SAMPLE ID	Influent 102015		Effluent 102015		Influent_102115		Effluent_102115		Influent_102615		Effluent_102615	
LAB SAMPLE ID	15J0790-01		15J0790-02		15J0866-01		15J0866-02		15J0989-01		15J0989-02	
SAMPLE DATE	10/20/2015		10/20/2015		10/21/2015		10/21/2015		10/26/2015		10/26/2015	
Volatile Organic Compounds (ug/m^3)												
1,1,1,2-Tetrachloroethane	6.86	U	6.86	U	6.90	U	6.90	U	6.90	U	6.90	U
1,1,1-Trichloroethane	981.76	D	5.45	U	140	D	5.50	U	18	D	5.50	U
1,1,2,2-Tetrachloroethane	6.86	U	6.86	U	6.90	U	6.90	U	6.90	U	6.90	U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	7.66	U	7.66	U	7.70	U	7.70	U	7.70	U	7.70	U
1,1,2-Trichloroethane	8.73	D	5.45	U	5.50	U	5.50	U	5.50	U	5.50	U
1,1-Dichloroethane	117.33	D	4.05	U	15	D	4	U	4	U	4	U
1,1-Dichloroethylene	11.10	D	3.96	U	4	U	4	U	4	U	4	U
1,2,4-Trichlorobenzene	7.42	U	7.42	U	7.40	U	7.40	U	7.40	U	7.40	U
1,2,4-Trimethylbenzene	5.90	D	4.91	U	4.90	U	4.90	U	4.90	U	4.90	U
1,2-Dibromoethane	7.68	U	7.68	U	7.70	U	7.70	U	7.70	U	7.70	U
1,2-Dichlorobenzene	6.01	U	6.01	U	6	U	6	U	6	U	6	U
1,2-Dichloroethane	4.05	U	4.05	U	4	U	4	U	4	U	4	U
1,2-Dichloropropane	4.62	U	4.62	U	4.60	U	4.60	U	4.60	U	4.60	U
1,2-Dichlorotetrafluoroethane	6.99	U	6.99	U	7	U	7	U	7	U	7	U
1,3,5-Trimethylbenzene	4.91	U	4.91	U	4.90	U	4.90	U	4.90	U	4.90	U
1,3-Butadiene	13.00	U	13.00	U	13	U	13	U	13	U	13	U
1,3-Dichlorobenzene	6.01	U	6.01	U	6	U	6	U	6	U	6	U
1,3-Dichloropropane	4.62	U	4.62	U	4.60	U	4.60	U	4.60	U	4.60	U
1,4-Dichlorobenzene	6.01	U	6.01	U	6	U	6	U	6	U	6	U
1,4-Dioxane	7.20	U	7.20	U	7.20	U	7.20	U	7.20	U	7.20	U
2-Butanone	88.44	D	82.55	D	36	D	21	D	6	D	3	D
2-Hexanone	8.19	U	8.19	U	8.20	U	8.20	U	8.20	U	8.20	U
3-Chloropropene	15.64	U	15.64	U	16	U	16	U	16	U	16	U
4-Methyl-2-pentanone	5.32	D	4.09	U	4.50	D	4.10	U	4.10	U	4.10	U
Acetone	332.54	D	1,800	D	150	D	200	D	37	D	66	D
Acrylonitrile	2.17	U	2.17	U	2.20	U	2.20	U	2.20	U	2.20	U
Benzene	226.73	D	27.78	D	100	D	42	D	11	D	14	D
Benzyl chloride	5.17	U	5.17	U	5.20	U	5.20	U	5.20	U	5.20	U
Bromodichloromethane	6.21	U	6.21	U	6.20	U	6.20	U	6.20	U	6.20	U
Bromoform	10.33	U	10.33	U	10	U	10	U	10	U	10	U
Bromomethane	3.88	U	3.88	U	3.90	U	3.90	U	3.90	U	3.90	U
Carbon disulfide	9.65	D	3,600	D	7.50	D	200	D	3.10	U	34	D
Carbon tetrachloride	1.57	U	1.57	U	1.60	U	1.60	U	1.60	U	1.60	U
Chlorobenzene	4.60	U	4.60	U	4.60	U	4.60	U	4.60	U	4.60	U
Chloroethane	2.64	U	2.64	U	2.60	U	2.60	U	2.60	U	2.60	U
Chloroform	634.48	D	4.88	U	140	D	4.90	U	18	D	4.90	U
Chloromethane	3.51	D	13.42	D	2.10	U	2.10	U	2.10	U	2.10	U
cis-1,2-Dichloroethylene	39.63	D	3.96	U	28	D	4	U	13	D	4	U
cis-1,3-Dichloropropylene	4.54	U	4.54	U	4.50	U	4.50	U	4.50	U	4.50	U
Cyclohexane	3.44	U	14.45	D	3.40	U	11	D	3.40	U	5	D
Dibromochloromethane	8.02	U	8.02	U	8	U	8	U	8	U	8	U
Dichlorodifluoromethane	4.94	U	4.94	U	4.90	U	4.90	U	4.90	U	4.90	U
Ethyl acetate	7.20	U	7.20	U	7.20	U	7.20	U	7.20	U	7.20	U
Ethyl Benzene	24.31	D	4.34	U	21	D	4.30	D	4	D	4.30	U
Hexachlorobutadiene	10.66	U	10.66	U	11	U	11	U	11	U	11	U
Isopropanol	16.95	D	3,400	D	25	D	NT		10	D	57	D
Methyl Methacrylate	4.09	U	4.09	U	4.10	U	4.10	U	4.10	U	4.10	U
Methyl tert-butyl ether (MTBE)	3.60	U	3.60	U	3.60	U	3.60	U	3.60	U	3.60	U
Methylene chloride	90.28	D	13.54	D	35	D	12	D	32	D	34	D
n-Heptane	4.10	U	4.10	U	4.10	U	4.10	U	4.10	U	4.10	U
n-Hexane	42.28	D	10.57	D	17	D	9.90	D	5	D	8.80	D
o-Xylene	8.25	D	4.34	U	11	D	4.30	U	4	U	4.30	U
p- & m- Xylenes	23.87	D	8.68	U	26	D	8.70	U	9	U	8.70	U
p-Ethyltoluene	4.91	U	4.91	U	4.90	U	4.90	U	4.90	U	4.90	U
Propylene	1.72	U	1.72	U	1.70	U	1.70	U	36.00	D	1.70	U
Styrene	4.26	U	4.26	U	4.30	U	4.30	U	4.30	U	4.30	U
Tetrachloroethylene	680	U	13.56	D	2,800	D	48	D	1,200	D	26	D
Tetrahydrofuran	1,473.83	D	203.39	D	87	D	16	D	14	D	6	U
Toluene	124.31	D	34.28	D	110	D	35	D	22	D	15	D
trans-1,2-Dichloroethylene	10.70	D	3.96	U	5.20	D	4	U	4.00	U	4	U
trans-1,3-Dichloropropylene	4.54	U	4.54	U	4.50	U	4.50	U	4.50	U	4.50	U
Trichloroethylene	110,000	D	27.40	D	29,000	D	530	D	5,600	D	120	D
Trichlorofluoromethane (Freon 11)	5.62	U	5.62	U	5.60	U	5.60	U	5.60	U	5.60	U
Vinyl acetate	3.52	U	3.52	U	3.50	U	3.50	U	3.50	U	3.50	U
Vinyl bromide	4.37	U	4.37	U	4.40	U	4.40	U	4.40	U	4.40	U
Vinyl Chloride	2.56	U	2.56	U	2.60	U	2.60	U	2.60	U	2.60	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 prior 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:
D = The result is from an analysis that required a dilution.
NT = This indicates the analyte was not a target for this sample.
U = The analyte was not detected at or above the level indicated.

Table 3: SVE SYSTEM TANK SAMPLING RESULTS
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	Tank_102915 15J1122-01 10/29/2015 12:02:00 PM	
Volatile Organic Compounds (ug/L)			
1,1,1,2-Tetrachloroethane	5	0.20	U
1,1,1-Trichloroethane	5	0.20	U
1,1,2,2-Tetrachloroethane	5	0.20	U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	5	0.20	U
1,1,2-Trichloroethane	1	0.20	U
1,1-Dichloroethane	5	0.20	U
1,1-Dichloroethylene	5	0.20	U
1,2,3-Trichlorobenzene	5	0.20	U
1,2,3-Trichloropropane	0.04	0.20	U
1,2,4-Trichlorobenzene	5	0.20	U
1,2,4-Trimethylbenzene	5	0.20	U
1,2-Dibromo-3-chloropropane	0.04	0.20	U
1,2-Dibromoethane	5	0.20	U
1,2-Dichlorobenzene	3	0.20	U
1,2-Dichloroethane	0.6	0.20	U
1,2-Dichloropropane	1	0.20	U
1,3,5-Trimethylbenzene	5	0.20	U
1,3-Dichlorobenzene	3	0.20	U
1,4-Dichlorobenzene	3	0.20	U
1,4-Dioxane	~	40	U
2-Butanone	50	22	
2-Hexanone	50	0.20	U
4-Methyl-2-pentanone	~	0.20	U
Acetone	50	46	B
Acrolein	~	0.20	U
Acrylonitrile	~	0.20	U
Benzene	1	0.20	U
Bromochloromethane	5	0.20	U
Bromodichloromethane	50	0.20	U
Bromoform	50	0.20	U
Bromomethane	5	0.20	U
Carbon disulfide	~	0.20	U
Carbon tetrachloride	5	0.20	U
Chlorobenzene	5	0.20	U
Chloroethane	5	0.20	U
Chloroform	7	0.20	U
Chloromethane	5	0.20	U
cis-1,2-Dichloroethylene	5	0.20	U
cis-1,3-Dichloropropylene	0.4	0.20	U
Cyclohexane	~	0.20	U
Dibromochloromethane	50	0.20	U
Dibromomethane	~	0.20	U
Dichlorodifluoromethane	5	0.20	U
Ethyl Benzene	5	0.20	U
Hexachlorobutadiene	0.5	0.20	U
Isopropylbenzene	5	0.20	U
Methyl acetate	~	0.20	U
Methyl tert-butyl ether (MTBE)	10	0.20	U
Methylcyclohexane	~	0.20	U
Methylene chloride	5	1	U
n-Butylbenzene	5	0.20	U
n-Propylbenzene	5	0.20	U
o-Xylene	5	0.20	U
p- & m- Xylenes	5	0.50	U
p-Isopropyltoluene	5	0.20	U
sec-Butylbenzene	5	0.20	U
Styrene	5	0.20	U
tert-Butyl alcohol (TBA)	~	0.50	U
tert-Butylbenzene	5	0.20	U
Tetrachloroethylene	5	1.30	
Toluene	5	0.20	U
trans-1,2-Dichloroethylene	5	0.20	U
trans-1,3-Dichloropropylene	0.4	0.20	U
Trichloroethylene	5	**38**	
Trichlorofluoromethane	5	0.20	U
Vinyl Chloride	2	0.20	U
Xylenes, Total	5	0.60	U

Notes:
1. Analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS) and guidance values for drinking water (class GA).
2. Results exceeding the NYSDEC TOGS standards and guidance values are shaded and bolded.
3. ug/L = micrograms per liter.
4. ~ = No regulatory limit has been established for this analyte.
5. The soil vapor extraction (SVE) system equalization tank was sampled before being emptied into nine 55-gallon drums.

Qualifiers:
B = Analyte was found in the associated analysis batch blank. For volatiles, methylene chloride and acetone, data users should consider anything less than 10 times the blank value as artifact as they are common lab contaminants.
U = Analyte not detected at or above the level indicated.

Progress Report No. 5
J&H Holding Company, LLC
491 Wortman Avenue, Brooklyn, NY 11208
Brownfield Cleanup Program Site No. C224139
Reporting Period: November 2015

1. Introduction

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. (Langan) submits this monthly progress report on behalf of J&H Holding Company, LLC (the "Participant"). Monthly progress report submittal to the New York State Department of Environmental Conservation (NYSDEC) is performed in accordance with the Brownfield Cleanup Agreement (BCA) and Section 3.2 of the NYSDEC-approved Interim Remedial Measures Work Plan (IRMWP), prepared by Langan, dated April 28, 2015, and revised June 16, 2015. This monthly progress report summarizes work performed at 491 Wortman Avenue, Brooklyn, New York (the "site") during November 2015.

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 (i.e. the eastern portion).

Environmental site investigations began in November 2008. The most recent environmental activity was Langan's submittal of the IRMWP, which the NYSDEC approved on June 18, 2015. Implementation of the IRMWP and the pending environmental activities are described further in this progress report.

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

Process and performance monitoring data was recorded on November 6, 17 and 30, 2015. As of November 17, 2015, the initial four weekly monitoring events have been completed; therefore, monthly monitoring has been initiated. Additionally, 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) on November 30, 2015.

On November 18, 2015, nine drums containing nonhazardous wastewater were transported off-site to Clean Water of New York.

Although not a part of this reporting period, on December 2, 2015, routine equipment maintenance was performed per the manufacturer's specifications. The maintenance included greasing the blower, checking the compressor oil levels, refilling the auto-oiler to start-up level, and checking belt tensions.

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:

- Three influent vapor samples were collected from the AS/SVE system and analyzed for volatile organic compounds (VOCs) via the United States Environmental Protection Agency (USEPA) Method TO-15.
- Three effluent vapor samples were collected from the AS/SVE system and analyzed for VOCs via the USEPA Method TO-15.

Samples were analyzed by York Analytical Laboratories Inc. (York) of Stratford, CT. York 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 following tables are attached to this progress report. The tables summarize the data collected to date and the functionality of the AS/SVE system, including mass of VOCs removed from the subsurface based on photoionization detector (PID) readings and laboratory data, as well as, the alarm history.

- Table 1: AS/SVE System Vapor Sampling Summary
- Table 2: AS/SVE System Vapor Sampling Results (lab reports available upon request)
- Table 3: AS/SVE System Mass Removal – PID Data
- Table 4: AS/SVE System Mass Removal – Laboratory Data
- Table 5: AS/SVE System DAR-1 Compliance – November 30, 2015
- Table 6: AS/SVE System Alarm History

6. Deliverables Submitted During This Reporting Period

No deliverables were submitted during this reporting period.

7. Information Regarding Percentage of Completion

Operation, maintenance and monitoring of the AS/SVE system is ongoing.

As of November 30, 2015, the AS/SVE system operated for 958 hours.

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

None.

9. Citizen Participation Plan Activities during This Reporting Period

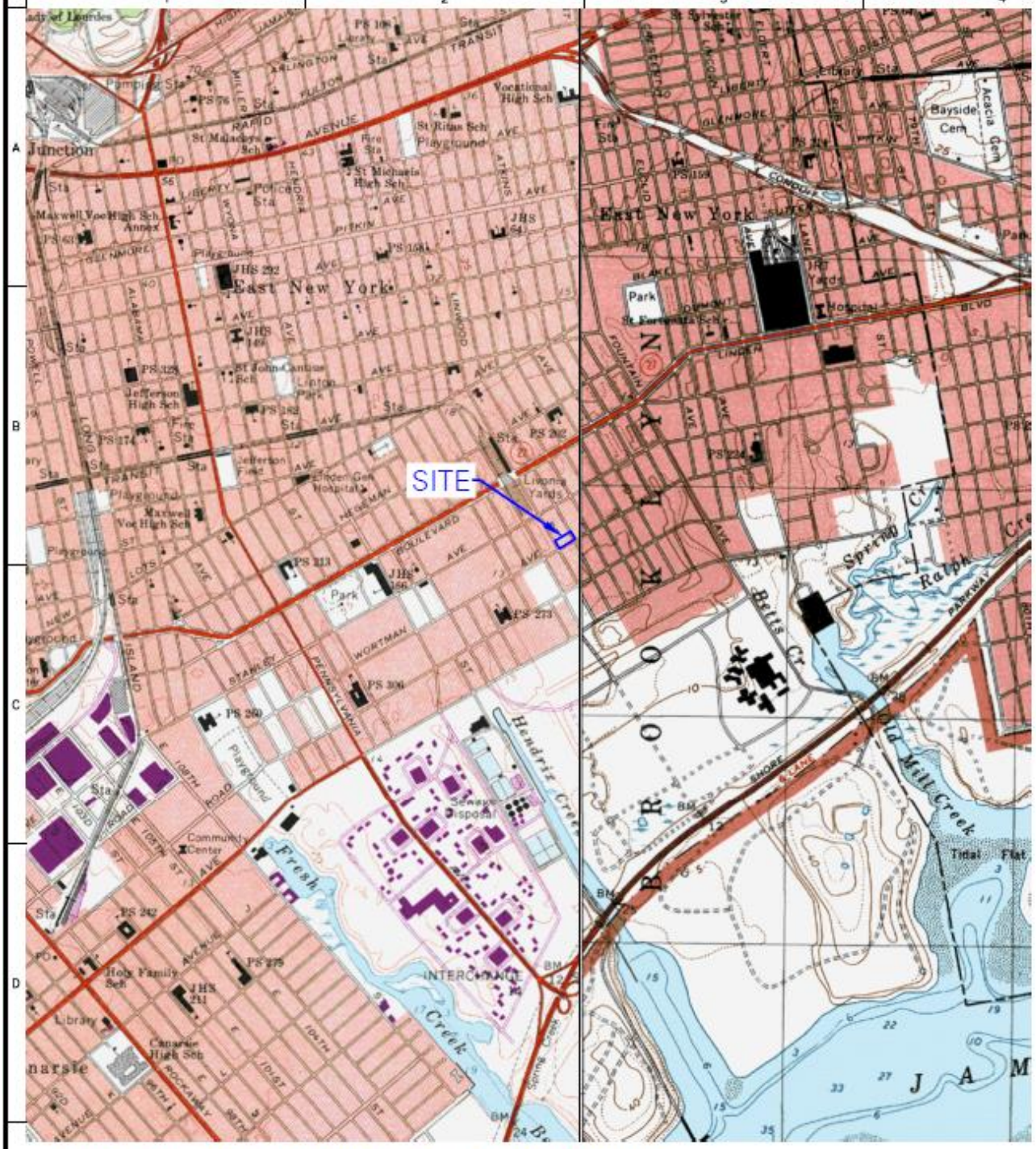
None.

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

None.

11. Miscellaneous Information

None.



REFERENCE: USGS TOPOGRAPHIC QUADRANGLE MAPS FOR BROOKLYN AND JAMAICA.

LANGAN

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Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
Langan Engineering and Environmental Services, Inc.
Langan CT, Inc.
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
Date	04/18/2015
Scale	N.T.S.
Drawn By	MLR
Checked By	GN
Submission Date	
Figure	1
Sheet	1 of 7

Filename: \\langan.com\data\NY\data3\170329301\Cadd Data - 170329301\2D-DesignFiles\RMWP\Figure 1 - Site Location Map.dwg Date: 4/18/2015 Time: 11:35 User: mrogers Style Table: Langan.stb Layout: Site Location Map

TABLE 1: AS/SVE SYSTEM VAPOR SAMPLING SUMMARY
491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM SITE NO. C224139

SAMPLE NAME	SAMPLE DATE	SAMPLE TYPE	LOCATION	ANALYSIS
AS/SVE SYSTEM VAPOR SAMPLES				
Influent 102015	10/20/2015	Three, 1-Liter Tedlar Bags	vGAC Vessel Influent	TO-15 VOCs
Effluent 102015	10/20/2015	Three, 1-Liter Tedlar Bags	vGAC Vessel Effluent	TO-15 VOCs
Influent_102115	10/21/2015	Three, 1-Liter Tedlar Bags	vGAC Vessel Influent	TO-15 VOCs
Effluent_102115	10/21/2015	Three, 1-Liter Tedlar Bags	vGAC Vessel Effluent	TO-15 VOCs
Influent_102615	10/26/2015	Three, 1-Liter Tedlar Bags	vGAC Vessel Influent	TO-15 VOCs
Effluent_102615	10/26/2015	Three, 1-Liter Tedlar Bags	vGAC Vessel Effluent	TO-15 VOCs
Influent_113015	11/30/2015	Three, 1-Liter Tedlar Bags	vGAC Vessel Influent	TO-15 VOCs
Effluent_113015	11/30/2015	Three, 1-Liter Tedlar Bags	vGAC Vessel Effluent	TO-15 VOCs

Notes:

1. The vapor samples were analyzed for VOCs via USEPA Method TO-15.
2. USEPA = United States Environmental Protection Agency
3. VOCs = volatile organic compounds
4. AS/SVE = air sparge/soil vapor extraction
5. vGAC = vapor-phase granular activated carbon

Table 2: AS/SVE SYSTEM VAPOR SAMPLING RESULTS
491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM SITE NO. C224139

LOCATION	vGAC INFLUENT		vGAC EFFLUENT		vGAC INFLUENT		vGAC EFFLUENT	
SAMPLE ID	Influent 102015		Effluent 102015		Influent_102115		Effluent_102115	
LAB SAMPLE ID	15J0790-01		15J0790-02		15J0866-01		15J0866-02	
SAMPLE DATE	10/20/2015		10/20/2015		10/21/2015		10/21/2015	
Volatile Organic Compounds (ug/m^3)								
1,1,1,2-Tetrachloroethane	6.86	U	6.86	U	6.90	U	6.90	U
1,1,1-Trichloroethane	981.76	D	5.45	U	140	D	5.50	U
1,1,2,2-Tetrachloroethane	6.86	U	6.86	U	6.90	U	6.90	U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	7.66	U	7.66	U	7.70	U	7.70	U
1,1,2-Trichloroethane	8.73	D	5.45	U	5.50	U	5.50	U
1,1-Dichloroethane	117.33	D	4.05	U	15	D	4	U
1,1-Dichloroethylene	11.10	D	3.96	U	4	U	4	U
1,2,4-Trichlorobenzene	7.42	U	7.42	U	7.40	U	7.40	U
1,2,4-Trimethylbenzene	5.90	D	4.91	U	4.90	U	4.90	U
1,2-Dibromoethane	7.68	U	7.68	U	7.70	U	7.70	U
1,2-Dichlorobenzene	6.01	U	6.01	U	6	U	6	U
1,2-Dichloroethane	4.05	U	4.05	U	4	U	4	U
1,2-Dichloropropane	4.62	U	4.62	U	4.60	U	4.60	U
1,2-Dichlorotetrafluoroethane	6.99	U	6.99	U	7	U	7	U
1,3,5-Trimethylbenzene	4.91	U	4.91	U	4.90	U	4.90	U
1,3-Butadiene	13.00	U	13.00	U	13	U	13	U
1,3-Dichlorobenzene	6.01	U	6.01	U	6	U	6	U
1,3-Dichloropropane	4.62	U	4.62	U	4.60	U	4.60	U
1,4-Dichlorobenzene	6.01	U	6.01	U	6	U	6	U
1,4-Dioxane	7.20	U	7.20	U	7.20	U	7.20	U
2-Butanone	88.44	D	82.55	D	36	D	21	D
2-Hexanone	8.19	U	8.19	U	8.20	U	8.20	U
3-Chloropropene	15.64	U	15.64	U	16	U	16	U
4-Methyl-2-pentanone	5.32	D	4.09	U	4.50	D	4.10	U
Acetone	332.54	D	1,800	D	150	D	200	D
Acrylonitrile	2.17	U	2.17	U	2.20	U	2.20	U
Benzene	226.73	D	27.78	D	100	D	42	D
Benzyl chloride	5.17	U	5.17	U	5.20	U	5.20	U
Bromodichloromethane	6.21	U	6.21	U	6.20	U	6.20	U
Bromoform	10.33	U	10.33	U	10	U	10	U
Bromomethane	3.88	U	3.88	U	3.90	U	3.90	U
Carbon disulfide	9.65	D	3,600	D	7.50	D	200	D
Carbon tetrachloride	1.57	U	1.57	U	1.60	U	1.60	U
Chlorobenzene	4.60	U	4.60	U	4.60	U	4.60	U
Chloroethane	2.64	U	2.64	U	2.60	U	2.60	U
Chloroform	634.48	D	4.88	U	140	D	4.90	U
Chloromethane	3.51	D	13.42	D	2.10	U	2.10	U
cis-1,2-Dichloroethylene	39.63	D	3.96	U	28	D	4	U
cis-1,3-Dichloropropylene	4.54	U	4.54	U	4.50	U	4.50	U
Cyclohexane	3.44	U	14.45	D	3.40	U	11	D
Dibromochloromethane	8.02	U	8.02	U	8	U	8	U
Dichlorodifluoromethane	4.94	U	4.94	U	4.90	U	4.90	U
Ethyl acetate	7.20	U	7.20	U	7.20	U	7.20	U
Ethyl Benzene	24.31	D	4.34	U	21	D	4.30	D
Hexachlorobutadiene	10.66	U	10.66	U	11	U	11	U
Isopropanol	16.95	D	3,400	D	25	D	NT	
Methyl Methacrylate	4.09	U	4.09	U	4.10	U	4.10	U
Methyl tert-butyl ether (MTBE)	3.60	U	3.60	U	3.60	U	3.60	U
Methylene chloride	90.28	D	13.54	D	35	D	12	D
n-Heptane	4.10	U	4.10	U	4.10	U	4.10	U
n-Hexane	42.28	D	10.57	D	17	D	9.90	D
o-Xylene	8.25	D	4.34	U	11	D	4.30	U
p- & m- Xylenes	23.87	D	8.68	U	26	D	8.70	U
p-Ethyltoluene	4.91	U	4.91	U	4.90	U	4.90	U
Propylene	1.72	U	1.72	U	1.70	U	1.70	U
Styrene	4.26	U	4.26	U	4.30	U	4.30	U
Tetrachloroethylene	680	U	13.56	D	2,800	D	48	D
Tetrahydrofuran	1,473.83	D	203.39	D	87	D	16	D
Toluene	124.31	D	34.28	D	110	D	35	D
trans-1,2-Dichloroethylene	10.70	D	3.96	U	5.20	D	4	U
trans-1,3-Dichloropropylene	4.54	U	4.54	U	4.50	U	4.50	U
Trichloroethylene	110,000	D	27.40	D	29,000	D	530	D
Trichlorofluoromethane (Freon 11)	5.62	U	5.62	U	5.60	U	5.60	U
Vinyl acetate	3.52	U	3.52	U	3.50	U	3.50	U
Vinyl bromide	4.37	U	4.37	U	4.40	U	4.40	U
Vinyl Chloride	2.56	U	2.56	U	2.60	U	2.60	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:
D = The result is from an analysis that required a dilution.
NT = This indicates the analyte was not a target for this sample.
U = The analyte was not detected at or above the level indicated.

Table 2: AS/SVE SYSTEM VAPOR SAMPLING RESULTS
491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM SITE NO. C224139

LOCATION	vGAC INFLUENT		vGAC EFFLUENT		vGAC INFLUENT		vGAC EFFLUENT	
SAMPLE ID	Influent_102615		Effluent_102615		Influent_113015		Effluent_113015	
LAB SAMPLE ID	15J0989-01		15J0989-02		15L0012-01		15L0012-02	
SAMPLE DATE	10/26/2015		10/26/2015		11/30/2015		11/30/2015	
Volatile Organic Compounds (ug/m^3)								
1,1,1,2-Tetrachloroethane	6.90	U	6.90	U	6.9	U	6.9	U
1,1,1-Trichloroethane	18	D	5.50	U	5.5	U	13	D
1,1,2,2-Tetrachloroethane	6.90	U	6.90	U	6.9	U	6.9	U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	7.70	U	7.70	U	7.7	U	7.7	U
1,1,2-Trichloroethane	5.50	U	5.50	U	5.5	U	5.5	U
1,1-Dichloroethane	4	U	4	U	4	U	4	U
1,1-Dichloroethylene	4	U	4	U	4	U	4	U
1,2,4-Trichlorobenzene	7.40	U	7.40	U	7.4	U	7.4	U
1,2,4-Trimethylbenzene	4.90	U	4.90	U	4.9	U	4.9	U
1,2-Dibromoethane	7.70	U	7.70	U	7.7	U	7.7	U
1,2-Dichlorobenzene	6	U	6	U	6	U	6	U
1,2-Dichloroethane	4	U	4	U	4	U	4	U
1,2-Dichloropropane	4.60	U	4.60	U	4.6	U	4.6	U
1,2-Dichlorotetrafluoroethane	7	U	7	U	7	U	7	U
1,3,5-Trimethylbenzene	4.90	U	4.90	U	4.9	U	4.9	U
1,3-Butadiene	13	U	13	U	13	U	13	U
1,3-Dichlorobenzene	6	U	6	U	6	U	6	U
1,3-Dichloropropane	4.60	U	4.60	U	4.6	U	4.6	U
1,4-Dichlorobenzene	6	U	6	U	6	U	6	U
1,4-Dioxane	7.20	U	7.20	U	7.2	U	7.2	U
2-Butanone	6	D	3	D	8	D	5.3	D
2-Hexanone	8.20	U	8.20	U	8.2	U	8.2	U
3-Chloropropene	16	U	16	U	16	U	16	U
4-Methyl-2-pentanone	4.10	U	4.10	U	4.1	U	4.1	U
Acetone	37	D	66	D	54	D	69	D
Acrylonitrile	2.20	U	2.20	U	2.2	U	2.2	U
Benzene	11	D	14	D	19	D	22	D
Benzyl chloride	5.20	U	5.20	U	5.2	U	5.2	U
Bromodichloromethane	6.20	U	6.20	U	6.2	U	6.2	U
Bromoform	10	U	10	U	10	U	10	U
Bromomethane	3.90	U	3.90	U	3.9	U	3.9	U
Carbon disulfide	3.10	U	34	D	3.1	U	31	D
Carbon tetrachloride	1.60	U	1.60	U	1.6	U	1.6	U
Chlorobenzene	4.60	U	4.60	U	4.6	U	4.6	U
Chloroethane	2.60	U	2.60	U	2.6	U	2.6	U
Chloroform	18	D	4.90	U	4.9	U	4.9	U
Chloromethane	2.10	U	2.10	U	2.1	U	2.1	U
cis-1,2-Dichloroethylene	13	D	4	U	4	U	4	U
cis-1,3-Dichloropropylene	4.50	U	4.50	U	4.5	U	4.5	U
Cyclohexane	3.40	U	5	D	3.4	U	3.4	U
Dibromochloromethane	8	U	8	U	8	U	8	U
Dichlorodifluoromethane	4.90	U	4.90	U	4.9	U	4.9	U
Ethyl acetate	7.20	U	7.20	U	7.2	U	7.2	U
Ethyl Benzene	4	D	4.30	U	5.2	D	4.3	U
Hexachlorobutadiene	11	U	11	U	11	U	11	U
Isopropanol	10	D	57	D	6.4	D	150	D
Methyl Methacrylate	4.10	U	4.10	U	4.1	U	4.1	U
Methyl tert-butyl ether (MTBE)	3.60	U	3.60	U	3.6	U	3.6	U
Methylene chloride	32	D	34	D	19	D	68	D
n-Heptane	4.10	U	4.10	U	4.1	U	4.1	U
n-Hexane	5	D	8.80	D	3.5	U	12	D
o-Xylene	4	U	4.30	U	4.3	U	4.3	U
p- & m- Xylenes	9	U	8.70	U	12	D	8.7	U
p-Ethyltoluene	4.90	U	4.90	U	4.9	U	4.9	U
Propylene	36.00	D	1.70	U	1.7	U	1.7	U
Styrene	4.30	U	4.30	U	4.3	U	4.3	U
Tetrachloroethylene	1,200	D	26	D	290	D	12	D
Tetrahydrofuran	14	D	6	U	5.9	U	5.9	U
Toluene	22	D	15	D	30	D	21	D
trans-1,2-Dichloroethylene	4.00	U	4	U	4	U	4	U
trans-1,3-Dichloropropylene	4.50	U	4.50	U	4.5	U	4.5	U
Trichloroethylene	5,600	D	120	D	2700	D	23	D
Trichlorofluoromethane (Freon 11)	5.60	U	5.60	U	5.6	U	5.6	U
Vinyl acetate	3.50	U	3.50	U	3.5	U	3.5	U
Vinyl bromide	4.40	U	4.40	U	4.4	U	4.4	U
Vinyl Chloride	2.60	U	2.60	U	2.6	U	2.6	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:
D = The result is from an analysis that required a dilution.
NT = This indicates the analyte was not a target for this sample.
U = The analyte was not detected at or above the level indicated.

TABLE 3: AS/SVE SYSTEM MASS REMOVAL - PID DATA
491 WORTMAN AVENUE
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

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 4: AS/SVE SYSTEM MASS REMOVAL - LABORATORY DATA
491 WORTMAN AVENUE
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)	VGAC MASS REMOVAL EFFICIENCY (%)
10/20/2015	114,348	640	9,241	12	2049.12	165.60	1883.52	3.25	3.25	2.99	2.99	92
10/21/2015	32,758	688	1,129	30	631.05	21.75	609.30	1.50	4.76	1.42	4.41	94
10/26/2015	7,027	650	383	150	127.89	6.97	120.92	2.03	6.79	1.89	6.30	93
11/30/2015	3,144	593	426	958	52.20	7.07	45.13	5.58	12.36	4.68	10.98	84

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 5: AS/SVE SYSTEM DAR-1 COMPLIANCE
491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM NO. C224139

SAMPLING DATE: **11/30/2015**

CHEMICAL COMPOUND	CARBON EFFLUENT CONCENRATION 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	5.3	593	16.791981	1.17E-05	1.03E-01	9.25E-04	9.24E-04	6.01E-02	13000	5000	NO	NO	NO
Acetone	69	593	16.791981	1.53E-04	1.34E+00	1.20E-02	1.20E-02	7.82E-01	180000	30000	NO	NO	NO
Benzene	22	593	16.791981	4.88E-05	4.27E-01	3.84E-03	3.84E-03	2.49E-01	1300	0.13	NO	NO	NO
Carbon disulfide	31	593	16.791981	6.87E-05	6.02E-01	5.41E-03	5.41E-03	3.51E-01	6200	700	NO	NO	NO
Isopropanol	150	593	16.791981	3.32E-04	2.91E+00	2.62E-02	2.62E-02	1.70E+00	98000.00	7,000	NO	NO	NO
Methylene chloride	68	593	16.791981	1.51E-04	1.32E+00	1.19E-02	1.19E-02	7.71E-01	14000	60	NO	NO	NO
n-Hexane	12	593	16.791981	2.66E-05	2.33E-01	2.09E-03	2.09E-03	1.36E-01	0.00	700	NO	No Standard	NO
Tetrachloroethylene	12	593	16.791981	2.66E-05	2.33E-01	2.09E-03	2.09E-03	1.36E-01	300	4	NO	NO	NO
Toluene	21	593	16.791981	4.65E-05	4.08E-01	3.67E-03	3.66E-03	2.38E-01	37,000	5,000	NO	NO	NO
Trichloroethylene	23	593	16.791981	5.10E-05	4.47E-01	4.02E-03	4.01E-03	2.61E-01	14,000	0.2	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 "0.00" 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 6: AS/SVE SYSTEM ALARM HISTORY
491 WORTMAN AVENUE
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.

Progress Report No. 6
J&H Holding Company, LLC
491 Wortman Avenue, Brooklyn, NY 11208
Brownfield Cleanup Program Site No. C224139
Reporting Period: December 2015

1. Introduction

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. (Langan) submits this monthly progress report on behalf of J&H Holding Company, LLC (the "Participant"). Monthly progress report submittal to the New York State Department of Environmental Conservation (NYSDEC) is performed in accordance with the Brownfield Cleanup Agreement (BCA) and Section 3.2 of the NYSDEC-approved Interim Remedial Measures Work Plan (IRMWP), prepared by Langan, dated April 28, 2015, and revised June 16, 2015. This monthly progress report summarizes work performed at 491 Wortman Avenue, Brooklyn, New York (the "site") during December 2015.

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 (i.e. the eastern portion).

Environmental site investigations began in November 2008. The most recent environmental activity was Langan's submittal of the IRMWP, which the NYSDEC approved on June 18, 2015. Implementation of the IRMWP and the pending environmental activities are described further in this progress report.

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

On December 22, 2015, in an effort to increase the efficiency of the AS/SVE system, the air sparge discharge temperature and flow rate were increased. Following the AS system adjustments, the SVE system began to extract a larger volume of water, which resulted in the equalization tank reaching capacity and the AS/SVE system shutting down. On December 23, 2015, in response to the system shutdown, wastewater from the equalization tank was pumped into three 55-gallon drums. The system was restarted and the AS and SVE flow rates were adjusted in an effort to maintain efficiency and minimize the capture of subsurface water.

Process and performance monitoring data was recorded on December 28, 2015. 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), and routine equipment maintenance was performed. The maintenance included greasing the blower and checking the belt tensions. Additionally, a wastewater sample was collected from the equalization tank and its contents were emptied into eight 55-gallon drums, which are currently staged on-site awaiting disposal as nonhazardous liquid. After the tank was emptied, the AS and SVE flow rates were balanced to achieve efficient and low-maintenance SVE system operation.

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:

- One wastewater sample was collected from the SVE system equalization tank and analyzed for Target Compound List (TCL) VOCs.
- Three influent vapor samples were collected from the AS/SVE system and analyzed for volatile organic compounds (VOCs) via the United States Environmental Protection Agency (USEPA) Method TO-15.
- Three effluent vapor samples were collected from the AS/SVE system and analyzed for VOCs via the USEPA Method TO-15.

Samples were analyzed by York Analytical Laboratories Inc. (York) of Stratford, CT. York 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 following tables are attached to this progress report. The tables summarize the data collected to date and the functionality of the AS/SVE system, including mass of VOCs removed from the subsurface based on photoionization detector (PID) readings and laboratory data, as well as, the alarm history.

- Table 1: AS/SVE System Vapor Sampling Summary
- Table 2: AS/SVE System Vapor Sampling Results (lab reports available upon request)
- Table 3: AS/SVE System Mass Removal – PID Data
- Table 4: AS/SVE System Mass Removal – Laboratory Data
- Table 5: AS/SVE System DAR-1 Compliance – December 28, 2015
- Table 6: AS/SVE System Alarm History

6. Deliverables Submitted During This Reporting Period

No deliverables were submitted during this reporting period.

7. Information Regarding Percentage of Completion

Operation, maintenance and monitoring of the AS/SVE system is ongoing.

As of December 28, 2015, the SVE system operated for 1,548 hours, and the AS system operated for 1,520 hours.

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

None.

9. Citizen Participation Plan Activities during This Reporting Period

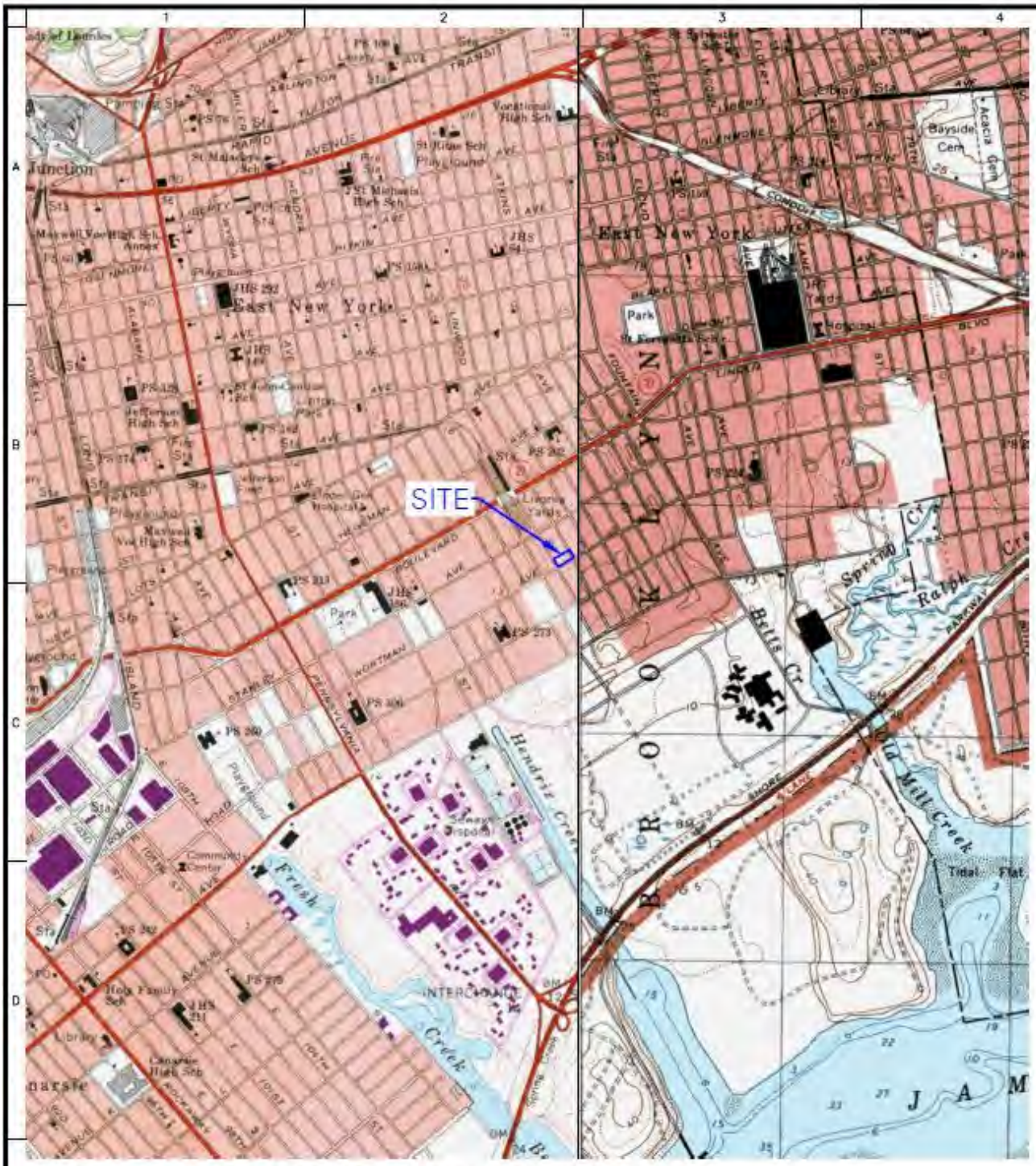
None.

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

None.

11. Miscellaneous Information

None.



REFERENCE: 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
Date	04/18/2015
Scale	N.T.S.
Drawn By	MLR
Checked By	GN
Submission Date	
Figure	1
Sheet	1 of 7

Filename: I:\langan.com\data\NY\data3\170329301\Cadd Data - 170329301\2D-Design\Xsit\RMWP\Figure 1 - Site Location Map.dwg Date: 4/18/2015 Time: 11:35 User: mrogers Style Table: Langan.stb Layout: Site Location Map

TABLE 1: AS/SVE SYSTEM VAPOR SAMPLING SUMMARY
491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM SITE NO. C224139

SAMPLE NAME	SAMPLE DATE	SAMPLE TYPE	LOCATION	ANALYSIS
AS/SVE SYSTEM VAPOR SAMPLES				
Influent 102015	10/20/2015	Three, 1-Liter Tedlar Bags	vGAC Vessel Influent	TO-15 VOCs
Effluent 102015	10/20/2015	Three, 1-Liter Tedlar Bags	vGAC Vessel Effluent	TO-15 VOCs
Influent_102115	10/21/2015	Three, 1-Liter Tedlar Bags	vGAC Vessel Influent	TO-15 VOCs
Effluent_102115	10/21/2015	Three, 1-Liter Tedlar Bags	vGAC Vessel Effluent	TO-15 VOCs
Influent_102615	10/26/2015	Three, 1-Liter Tedlar Bags	vGAC Vessel Influent	TO-15 VOCs
Effluent_102615	10/26/2015	Three, 1-Liter Tedlar Bags	vGAC Vessel Effluent	TO-15 VOCs
Influent_113015	11/30/2015	Three, 1-Liter Tedlar Bags	vGAC Vessel Influent	TO-15 VOCs
Effluent_113015	11/30/2015	Three, 1-Liter Tedlar Bags	vGAC Vessel Effluent	TO-15 VOCs
Influent_122815	12/28/2015	Three, 1-Liter Tedlar Bags	vGAC Vessel Influent	TO-15 VOCs
Effluent_122815	12/28/2015	Three, 1-Liter Tedlar Bags	vGAC Vessel Effluent	TO-15 VOCs

Notes:

1. The vapor samples were analyzed for VOCs via USEPA Method TO-15.
2. USEPA = United States Environmental Protection Agency
3. VOCs = volatile organic compounds
4. AS/SVE = air sparge/soil vapor extraction
5. vGAC = vapor-phase granular activated carbon

Table 2: AS/SVE SYSTEM VAPOR SAMPLING RESULTS
491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM SITE NO. C224139

LOCATION	vGAC INFLUENT		vGAC EFFLUENT		vGAC INFLUENT		vGAC EFFLUENT	
SAMPLE ID	Influent 102015		Effluent 102015		Influent_102115		Effluent_102115	
LAB SAMPLE ID	15J0790-01		15J0790-02		15J0866-01		15J0866-02	
SAMPLE DATE	10/20/2015		10/20/2015		10/21/2015		10/21/2015	
Volatile Organic Compounds (ug/m^3)								
1,1,1,2-Tetrachloroethane	6.86	U	6.86	U	6.90	U	6.90	U
1,1,1-Trichloroethane	981.76	D	5.45	U	140	D	5.50	U
1,1,2,2-Tetrachloroethane	6.86	U	6.86	U	6.90	U	6.90	U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	7.66	U	7.66	U	7.70	U	7.70	U
1,1,2-Trichloroethane	8.73	D	5.45	U	5.50	U	5.50	U
1,1-Dichloroethane	117.33	D	4.05	U	15	D	4	U
1,1-Dichloroethylene	11.10	D	3.96	U	4	U	4	U
1,2,4-Trichlorobenzene	7.42	U	7.42	U	7.40	U	7.40	U
1,2,4-Trimethylbenzene	5.90	D	4.91	U	4.90	U	4.90	U
1,2-Dibromoethane	7.68	U	7.68	U	7.70	U	7.70	U
1,2-Dichlorobenzene	6.01	U	6.01	U	6	U	6	U
1,2-Dichloroethane	4.05	U	4.05	U	4	U	4	U
1,2-Dichloropropane	4.62	U	4.62	U	4.60	U	4.60	U
1,2-Dichlorotetrafluoroethane	6.99	U	6.99	U	7	U	7	U
1,3,5-Trimethylbenzene	4.91	U	4.91	U	4.90	U	4.90	U
1,3-Butadiene	13.00	U	13.00	U	13	U	13	U
1,3-Dichlorobenzene	6.01	U	6.01	U	6	U	6	U
1,3-Dichloropropane	4.62	U	4.62	U	4.60	U	4.60	U
1,4-Dichlorobenzene	6.01	U	6.01	U	6	U	6	U
1,4-Dioxane	7.20	U	7.20	U	7.20	U	7.20	U
2-Butanone	88.44	D	82.55	D	36	D	21	D
2-Hexanone	8.19	U	8.19	U	8.20	U	8.20	U
3-Chloropropene	15.64	U	15.64	U	16	U	16	U
4-Methyl-2-pentanone	5.32	D	4.09	U	4.50	D	4.10	U
Acetone	332.54	D	1,800	D	150	D	200	D
Acrylonitrile	2.17	U	2.17	U	2.20	U	2.20	U
Benzene	226.73	D	27.78	D	100	D	42	D
Benzyl chloride	5.17	U	5.17	U	5.20	U	5.20	U
Bromodichloromethane	6.21	U	6.21	U	6.20	U	6.20	U
Bromoform	10.33	U	10.33	U	10	U	10	U
Bromomethane	3.88	U	3.88	U	3.90	U	3.90	U
Carbon disulfide	9.65	D	3,600	D	7.50	D	200	D
Carbon tetrachloride	1.57	U	1.57	U	1.60	U	1.60	U
Chlorobenzene	4.60	U	4.60	U	4.60	U	4.60	U
Chloroethane	2.64	U	2.64	U	2.60	U	2.60	U
Chloroform	634.48	D	4.88	U	140	D	4.90	U
Chloromethane	3.51	D	13.42	D	2.10	U	2.10	U
cis-1,2-Dichloroethylene	39.63	D	3.96	U	28	D	4	U
cis-1,3-Dichloropropylene	4.54	U	4.54	U	4.50	U	4.50	U
Cyclohexane	3.44	U	14.45	D	3.40	U	11	D
Dibromochloromethane	8.02	U	8.02	U	8	U	8	U
Dichlorodifluoromethane	4.94	U	4.94	U	4.90	U	4.90	U
Ethyl acetate	7.20	U	7.20	U	7.20	U	7.20	U
Ethyl Benzene	24.31	D	4.34	U	21	D	4.30	D
Hexachlorobutadiene	10.66	U	10.66	U	11	U	11	U
Isopropanol	16.95	D	3,400	D	25	D	NT	
Methyl Methacrylate	4.09	U	4.09	U	4.10	U	4.10	U
Methyl tert-butyl ether (MTBE)	3.60	U	3.60	U	3.60	U	3.60	U
Methylene chloride	90.28	D	13.54	D	35	D	12	D
n-Heptane	4.10	U	4.10	U	4.10	U	4.10	U
n-Hexane	42.28	D	10.57	D	17	D	9.90	D
o-Xylene	8.25	D	4.34	U	11	D	4.30	U
p- & m- Xylenes	23.87	D	8.68	U	26	D	8.70	U
p-Ethyltoluene	4.91	U	4.91	U	4.90	U	4.90	U
Propylene	1.72	U	1.72	U	1.70	U	1.70	U
Styrene	4.26	U	4.26	U	4.30	U	4.30	U
Tetrachloroethylene	680	U	13.56	D	2,800	D	48	D
Tetrahydrofuran	1,473.83	D	203.39	D	87	D	16	D
Toluene	124.31	D	34.28	D	110	D	35	D
trans-1,2-Dichloroethylene	10.70	D	3.96	U	5.20	D	4	U
trans-1,3-Dichloropropylene	4.54	U	4.54	U	4.50	U	4.50	U
Trichloroethylene	110,000	D	27.40	D	29,000	D	530	D
Trichlorofluoromethane (Freon 11)	5.62	U	5.62	U	5.60	U	5.60	U
Vinyl acetate	3.52	U	3.52	U	3.50	U	3.50	U
Vinyl bromide	4.37	U	4.37	U	4.40	U	4.40	U
Vinyl Chloride	2.56	U	2.56	U	2.60	U	2.60	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:
D = The result is from an analysis that required a dilution.
NT = This indicates the analyte was not a target for this sample.
U = The analyte was not detected at or above the level indicated.

Table 2: AS/SVE SYSTEM VAPOR SAMPLING RESULTS
491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM SITE NO. C224139

LOCATION	vGAC INFLUENT		vGAC EFFLUENT		vGAC INFLUENT		vGAC EFFLUENT	
SAMPLE ID	Influent_102615		Effluent_102615		Influent_113015		Effluent_113015	
LAB SAMPLE ID	15J0989-01		15J0989-02		15L0012-01		15L0012-02	
SAMPLE DATE	10/26/2015		10/26/2015		11/30/2015		11/30/2015	
Volatile Organic Compounds (ug/m^3)								
1,1,1,2-Tetrachloroethane	6.90	U	6.90	U	6.90	U	6.90	U
1,1,1-Trichloroethane	18	D	5.50	U	5.50	U	13	D
1,1,2,2-Tetrachloroethane	6.90	U	6.90	U	6.90	U	6.90	U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	7.70	U	7.70	U	7.70	U	7.70	U
1,1,2-Trichloroethane	5.50	U	5.50	U	5.50	U	5.50	U
1,1-Dichloroethane	4	U	4	U	4	U	4	U
1,1-Dichloroethylene	4	U	4	U	4	U	4	U
1,2,4-Trichlorobenzene	7.40	U	7.40	U	7.40	U	7.40	U
1,2,4-Trimethylbenzene	4.90	U	4.90	U	4.90	U	4.90	U
1,2-Dibromoethane	7.70	U	7.70	U	7.70	U	7.70	U
1,2-Dichlorobenzene	6	U	6	U	6	U	6	U
1,2-Dichloroethane	4	U	4	U	4	U	4	U
1,2-Dichloropropane	4.60	U	4.60	U	4.60	U	4.60	U
1,2-Dichlorotetrafluoroethane	7	U	7	U	7	U	7	U
1,3,5-Trimethylbenzene	4.90	U	4.90	U	4.90	U	4.90	U
1,3-Butadiene	13	U	13	U	13	U	13	U
1,3-Dichlorobenzene	6	U	6	U	6	U	6	U
1,3-Dichloropropane	4.60	U	4.60	U	4.60	U	4.60	U
1,4-Dichlorobenzene	6	U	6	U	6	U	6	U
1,4-Dioxane	7.20	U	7.20	U	7.20	U	7.20	U
2-Butanone	6	D	3	D	8	D	5.30	D
2-Hexanone	8.20	U	8.20	U	8.20	U	8.20	U
3-Chloropropene	16	U	16	U	16	U	16	U
4-Methyl-2-pentanone	4.10	U	4.10	U	4.10	U	4.10	U
Acetone	37	D	66	D	54	D	69	D
Acrylonitrile	2.20	U	2.20	U	2.20	U	2.20	U
Benzene	11	D	14	D	19	D	22	D
Benzyl chloride	5.20	U	5.20	U	5.20	U	5.20	U
Bromodichloromethane	6.20	U	6.20	U	6.20	U	6.20	U
Bromoform	10	U	10	U	10	U	10	U
Bromomethane	3.90	U	3.90	U	3.90	U	3.90	U
Carbon disulfide	3.10	U	34	D	3.10	U	31	D
Carbon tetrachloride	1.60	U	1.60	U	1.60	U	1.60	U
Chlorobenzene	4.60	U	4.60	U	4.60	U	4.60	U
Chloroethane	2.60	U	2.60	U	2.60	U	2.60	U
Chloroform	18	D	4.90	U	4.90	U	4.90	U
Chloromethane	2.10	U	2.10	U	2.10	U	2.10	U
cis-1,2-Dichloroethylene	13	D	4	U	4	U	4	U
cis-1,3-Dichloropropylene	4.50	U	4.50	U	4.50	U	4.50	U
Cyclohexane	3.40	U	5	D	3.40	U	3.40	U
Dibromochloromethane	8	U	8	U	8	U	8	U
Dichlorodifluoromethane	4.90	U	4.90	U	4.90	U	4.90	U
Ethyl acetate	7.20	U	7.20	U	7.20	U	7.20	U
Ethyl Benzene	4	D	4.30	U	5.20	D	4.30	U
Hexachlorobutadiene	11	U	11	U	11	U	11	U
Isopropanol	10	D	57	D	6.40	D	150	D
Methyl Methacrylate	4.10	U	4.10	U	4.10	U	4.10	U
Methyl tert-butyl ether (MTBE)	3.60	U	3.60	U	3.60	U	3.60	U
Methylene chloride	32	D	34	D	19	D	68	D
n-Heptane	4.10	U	4.10	U	4.10	U	4.10	U
n-Hexane	5	D	8.80	D	3.50	U	12	D
o-Xylene	4	U	4.30	U	4.30	U	4.30	U
p- & m- Xylenes	9	U	8.70	U	12	D	8.70	U
p-Ethyltoluene	4.90	U	4.90	U	4.90	U	4.90	U
Propylene	36.00	D	1.70	U	1.70	U	1.70	U
Styrene	4.30	U	4.30	U	4.30	U	4.30	U
Tetrachloroethylene	1,200	D	26	D	290	D	12	D
Tetrahydrofuran	14	D	6	U	5.90	U	5.90	U
Toluene	22	D	15	D	30	D	21	D
trans-1,2-Dichloroethylene	4.00	U	4	U	4	U	4	U
trans-1,3-Dichloropropylene	4.50	U	4.50	U	4.50	U	4.50	U
Trichloroethylene	5,600	D	120	D	2700	D	23	D
Trichlorofluoromethane (Freon 11)	5.60	U	5.60	U	5.60	U	5.60	U
Vinyl acetate	3.50	U	3.50	U	3.50	U	3.50	U
Vinyl bromide	4.40	U	4.40	U	4.40	U	4.40	U
Vinyl Chloride	2.60	U	2.60	U	2.60	U	2.60	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:
D = The result is from an analysis that required a dilution.
NT = This indicates the analyte was not a target for this sample.
U = The analyte was not detected at or above the level indicated.

Table 2: AS/SVE SYSTEM VAPOR SAMPLING RESULTS
491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM SITE NO. C224139

LOCATION	vGAC INFLUENT		vGAC EFFLUENT	
SAMPLE ID	Influent_122815		Effluent_122815	
LAB SAMPLE ID	15L1040-01		15L1040-02	
SAMPLE DATE	12/28/2015		12/28/2015	
Volatile Organic Compounds (ug/m^3)				
1,1,1,2-Tetrachloroethane	6.90	U	6.90	U
1,1,1-Trichloroethane	5.50	D	5.50	U
1,1,2,2-Tetrachloroethane	6.90	U	6.90	U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	7.70	U	16	D
1,1,2-Trichloroethane	5.50	U	5.50	U
1,1-Dichloroethane	4	U	4	U
1,1-Dichloroethylene	4	U	4	U
1,2,4-Trichlorobenzene	7.40	U	7.40	U
1,2,4-Trimethylbenzene	4.90	U	4.90	U
1,2-Dibromoethane	7.70	U	7.70	U
1,2-Dichlorobenzene	6	U	6	U
1,2-Dichloroethane	4	U	4	U
1,2-Dichloropropane	4.60	U	4.60	U
1,2-Dichlorotetrafluoroethane	7	U	7	U
1,3,5-Trimethylbenzene	4.90	U	4.90	U
1,3-Butadiene	13	U	13	U
1,3-Dichlorobenzene	6	U	6	U
1,3-Dichloropropane	4.60	U	4.60	U
1,4-Dichlorobenzene	6	U	6	U
1,4-Dioxane	7.20	U	7.20	U
2-Butanone	4.70	D	2.90	U
2-Hexanone	8.20	U	8.20	U
3-Chloropropene	16	U	16	U
4-Methyl-2-pentanone	4.10	U	4.10	U
Acetone	35	D	32	D
Acrylonitrile	2.20	U	2.20	U
Benzene	6.40	D	3.20	U
Benzyl chloride	5.20	U	5.20	U
Bromodichloromethane	6.20	U	6.20	U
Bromoform	10	U	10	U
Bromomethane	3.90	U	3.90	U
Carbon disulfide	3.10	U	13	D
Carbon tetrachloride	1.60	U	1.60	U
Chlorobenzene	4.60	U	4.60	U
Chloroethane	2.60	U	2.60	U
Chloroform	4.90	D	4.90	U
Chloromethane	2.10	U	2.10	U
cis-1,2-Dichloroethylene	7.90	D	4	U
cis-1,3-Dichloropropylene	4.50	U	4.50	U
Cyclohexane	3.40	U	3.40	U
Dibromochloromethane	8	U	8	U
Dichlorodifluoromethane	4.90	U	4.90	U
Ethyl acetate	7.20	U	7.20	U
Ethyl Benzene	4.30	U	4.30	U
Hexachlorobutadiene	11	U	11	U
Isopropanol	67	D	98	D
Methyl Methacrylate	4.10	U	7	D
Methyl tert-butyl ether (MTBE)	3.60	U	3.60	U
Methylene chloride	13	D	24	D
n-Heptane	4.10	U	4.10	U
n-Hexane	3.50	U	6	D
o-Xylene	4.30	U	4.30	U
p- & m- Xylenes	8.70	U	8.70	U
p-Ethyltoluene	4.90	U	4.90	U
Propylene	13	D	13	D
Styrene	4.30	U	4.30	U
Tetrachloroethylene	380	D	12	D
Tetrahydrofuran	6.80	D	5.90	U
Toluene	13	D	8.70	D
trans-1,2-Dichloroethylene	4	U	4	U
trans-1,3-Dichloropropylene	4.50	U	4.50	U
Trichloroethylene	2,800	D	1.3	U
Trichlorofluoromethane (Freon 11)	5.60	U	5.60	U
Vinyl acetate	3.50	U	3.50	U
Vinyl bromide	4.40	U	4.40	U
Vinyl Chloride	2.60	U	2.60	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:
D = The result is from an analysis that required a dilution.
NT = This indicates the analyte was not a target for this sample.
U = The analyte was not detected at or above the level indicated.

TABLE 3: AS/SVE SYSTEM MASS REMOVAL - PID DATA
491 WORTMAN AVENUE
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	1548	100	0.03	19.29	65.21

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 4: AS/SVE SYSTEM MASS REMOVAL - LABORATORY DATA
491 WORTMAN AVENUE
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)	VGAC MASS REMOVAL EFFICIENCY (%)
10/20/2015	114,348	640	9,241	12	2049.12	165.60	1883.52	3.25	3.25	2.99	2.99	92
10/21/2015	32,758	688	1,129	30	631.05	21.75	609.30	1.50	4.76	1.42	4.41	94
10/26/2015	7,027	650	383	150	127.89	6.97	120.92	2.03	6.79	1.89	6.30	93
11/30/2015	3,144	593	426	958	52.20	7.07	45.13	6.41	11.16	5.51	11.81	86
12/28/2015	3,357	570	230	1548	53.58	3.67	49.91	9.91	16.69	9.16	20.97	92

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 5: AS/SVE SYSTEM DAR-1 COMPLIANCE
491 WORTMAN AVENUE
BROOKLYN, NEW YORK
LANGAN PROJECT NO. 170329301
BROWNFIELD CLEANUP PROGRAM NO. C224139

SAMPLING DATE: **12/28/2015**

CHEMICAL COMPOUND	CARBON EFFLUENT CONCENRATION 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)													
Acetone	32	570	16.14069	6.82E-05	5.97E-01	5.37E-03	5.36E-03	3.49E-01	180,000	30,000	NO	NO	NO
Carbon disulfide	13	570	16.14069	2.77E-05	2.43E-01	2.18E-03	2.18E-03	1.42E-01	6,200	700	NO	NO	NO
Freon 113	16	570	16.14069	3.41E-05	2.99E-01	2.68E-03	2.68E-03	1.74E-01	960,000	180,000	NO	NO	NO
Isopropanol	98	570	16.14069	2.09E-04	1.83E+00	1.64E-02	1.64E-02	1.07E+00	98,000	7,000	NO	NO	NO
Methylene chloride	24	570	16.14069	5.11E-05	4.48E-01	4.03E-03	4.02E-03	2.61E-01	14,000	60	NO	NO	NO
Methyl methacrylate	7	570	16.14069	1.49E-05	1.31E-01	1.17E-03	1.17E-03	7.63E-02	41,000	700	NO	NO	NO
n-Hexane	6	570	16.14069	1.28E-05	1.12E-01	1.01E-03	1.01E-03	6.54E-02	0	700	NO	No Standard	NO
Propylene	13	570	16.14069	2.77E-05	2.43E-01	2.18E-03	2.18E-03	1.42E-01	0	3,000	NO	No Standard	NO
Tetrachloroethylene	12	570	16.14069	2.56E-05	2.24E-01	2.01E-03	2.01E-03	1.31E-01	300	4	NO	NO	NO
Toluene	8.7	570	16.14069	1.85E-05	1.62E-01	1.46E-03	1.46E-03	9.48E-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 "0.00" 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 6: AS/SVE SYSTEM ALARM HISTORY
491 WORTMAN AVENUE
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.