

8 August 2016

Ruth Curley
Environmental Engineer 2
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, New York 12233

**RE: LNAPL Evaluation and Extraction Summary Report
Enclave on 241st Street Development
714 East 241st Street
Bronx, New York
NYSDEC BCP Site Number: C203077
Langan Project No.: 140115301**

Dear Ms. Curley:

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. (Langan) prepared this report to document the results of the light non-aqueous phase liquid (LNAPL) evaluation and extraction performed from 20 May to 15 June 2016 at the 714 East 241st Street property in the Wakefield section of the Bronx, New York (the "Site").

BACKGROUND

During the completion of our Remedial Investigation (RI) at the Site in October 2015, approximately 2 inches of LNAPL was detected in the 1-inch monitoring well (MW-29) with a Solinst Model 122 oil/water interface probe. A sample of the LNAPL was collected and submitted to York Analytical Laboratories. A gas chromatograph/flame ionization detector (GC/FID) fingerprint analysis (EPA method 8015D) completed on the LNAPL indicated that the pattern resembled weathered No. 2 fuel oil or diesel fuel.

During an April 2016 gauging of monitoring wells at the Site, Langan identified approximately 6 feet of apparent LNAPL within MW-29. A sample of the LNAPL was collected and submitted to York Analytical Laboratories for analysis and the results were consistent with the previous sampling in October 2015, confirming a weathered No. 2 fuel oil or diesel. On 6 May 2016, Langan submitted a LNAPL Extraction Work Plan to NYSDEC in connection with the discovery. The work plan was approved on 9 May 2016.

WELL INSTALLATION AND LNAPL GAUGING

Well Installation

In accordance with the NYSDEC-approved LNAPL Extraction Work Plan, Langan installed one 4-inch-diameter monitoring well directly over the well at MW-29 (see Figure 1). The well was installed on 20 May 2016 by AARCO Environmental Services Corp. (AARCO) of Lindenhurst, New York with a track-mounted Geoprobe rig. The well consists of 15 feet of 4-inch-diameter 0.02-inch slotted PVC screen and 5 feet of 4-inch-diameter PVC riser pipe to the surface. The top of the screened interval was set approximately 5 feet above the level of previously observed LNAPL. The annulus around the screen as filled with filter sand #2 and a hydrated bentonite plug was installed above the screened interval. Following installation, the well was developed by purging three well volumes and waiting until the water became clear. The well was completed with a locking plug and flush-mounted curb box grouted in place. Soil cuttings were placed in a 55-gallon drum, properly labeled, and stored on-site in a secure area. The well construction log can be found in Attachment A.

LNAPL Gauging Events

Following the well installation activities, Langan visited the Site four times to gauge the new monitoring well (25 May and 1, 8, & 15 June 2016). The general steps outlined below were followed during each event:

1. Gauge the well for LNAPL with a Solinst Model 122 oil/water interface probe and record LNAPL thickness;
2. Purge the well dry with a 3-inch bailer (extracted water was placed in a 55-gallon drum and stored on-site in a secure area);
3. Measure recharge rate of the well; and,
4. Gauge the well again for LNAPL following full recharge.

No measurable amount of LNAPL was identified during any of the four monitoring events performed by Langan. Groundwater recharge was measured at approximately 0.02 feet per minute during each of the gauging events. The following table presents our depth to water and headspace PID readings during each event:

Extraction Event	Headspace PID Reading (ppm)	Depth to Water (feet)	LNAPL Thickness
25 May 2016	152.9	10.1	N/A
1 June 2016	92.3	9.9	N/A
8 June 2016	148.3	9.45	N/A
15 June 2016	109	10.05	N/A

CLOSURE

Based on the findings of our LNAPL evaluation at MW29, Langan recommends no further action be required at this time. As detailed in the NYSDEC-approved March 2016 Remedial Action Work Plan (RAWP), redevelopment excavation activities at the Site will extend to a depth necessary to assure complete LNAPL removal, including in the area of MW29. Should you have any questions regarding the findings presented in this report, please feel free to call us at 203-784-3069.

Sincerely,
**Langan Engineering, Environmental, Surveying
and Landscape Architecture, D.P.C.**



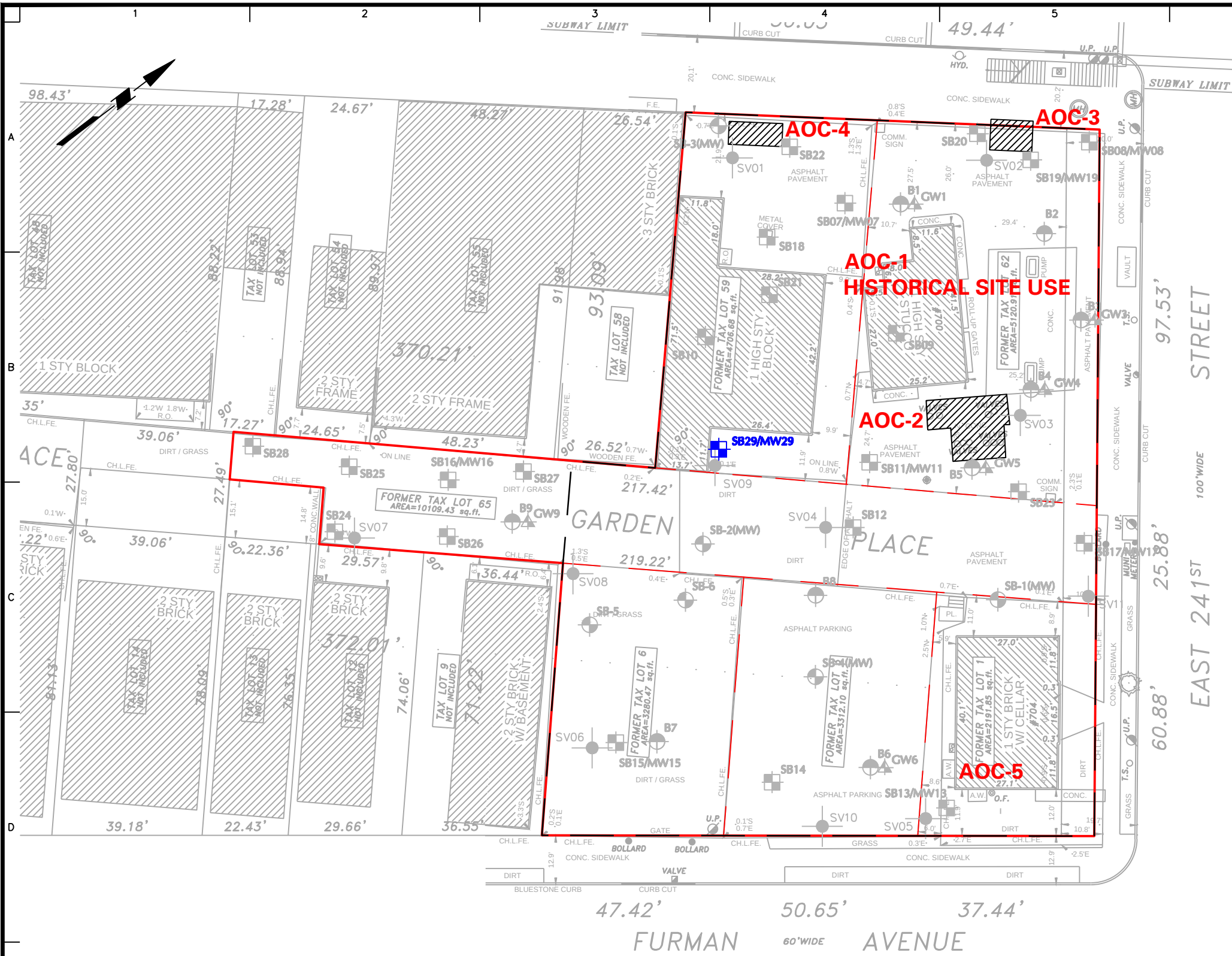
Ryan J. Wohlstrom
Project Engineer



Jamie P. Barr, L.E.P.
Senior Associate/Vice President

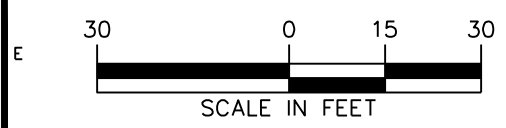
Enclosure(s): Figure 1 – LNAPL Extraction Well Location Map
Attachment A – Well Construction Log

cc: Jonathan Seplowitz – Enclave on 241 Street LLC
Frank Pavia – Harris Beach PLLC



- LEGEND:
- APPROXIMATE SITE BOUNDARY
 - FORMER INTERNAL LOT BOUNDARIES
 - PROPOSED BUILDING FOOTPRINT (APPROXIMATE)
 - SOIL BORING LOCATION. "MWXX" DENOTES A MONITORING WELL LOCATION.
 - SOIL VAPOR POINT LOCATION
 - SURFICIAL SOIL SAMPLE LOCATION
 - 2015 SOIL BORING LOCATION. (MW) DENOTES A TEMPORARY MONITORING WELL LOCATION [LANGAN LIMITED PHASE II ENVIRONMENTAL SITE INVESTIGATION, DATED 3 FEBRUARY 2015]
 - 2013 SOIL BORING LOCATION [EBC PHASE II SUBSURFACE INVESTIGATION, DATED 31 JANUARY 2015]
 - 2013 TEMPORARY MONITORING WELL LOCATION [EBC PHASE II SUBSURFACE INVESTIGATION, DATED 31 JANUARY 2015]
 - GPR ANOMALY INDICATIVE OF UST
 - LNAPL EXTRACTION WELL

- NOTES:
- BACKGROUND PLAN TAKEN FROM SURVEY CONDUCTED BY PERFECT POINT LAND SURVEYING RT ON MARCH 27, 2014.
 - THIS PLAN SHOULD BE VIEWED AS A COLOR COPY AS THE BORING LOCATIONS AND BOUNDARIES ARE COLOR COORDINATED.
 - DILLING WAS PERFORMED WITH A DIRECT-PUSH SAMPLER
 - A 2-INCH MACRO-CORE SAMPLER WAS USED TO OBTAIN SOIL SAMPLES FOR CLASSIFICATION AND LABORATORY TESTING. THE SAMPLES WERE OBTAINED CONTINUOUSLY AT 5-FOOT INTERVALS.
 - GROUNDWATER MONITORING WELLS WERE INSTALLED AT SELECT BORINGS. EACH WELL CONSISTS OF 10 FEET 1-INCH-DIAMETER SCHEDULE PVC SCREEN AND ATTACHED RISER. ANNULUS AROUND THE PVC WAS BACKFILLED WITH NO. 1 SAND.
 - AOC - AREA OF CONCERN



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

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Collectively known as Langan

Project

ENCLAVE ON 241ST STREET DEVELOPMENT

BRONX NEW YORK

Drawing Title LNAPL EXTRACTION WELL LOCATION MAP	Project No. 140115301		Drawing No. 1
	Date MAY 2016		
	Scale 1"=30'		
	Drawn By JPH	Checked By RJW	
	Submission Date MAY 2016		

WELL CONSTRUCTION SUMMARY

Well No. MW-29 (LNAPL Extraction Well)

[illegible]