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To: Douglas MacNeal, NYSDEC

From: Albert Tashji, Langan

Info: 76 Eleventh Avenue Property Owner
Steven Ciambuschini (Langan)

Date: April 18, 2023

Re: Quarterly DNAPL Recovery Report: Q1 2023
17th Street Development Project (BCP Site No. C231036)
76 Eleventh Avenue New York, NY 10011
Langan Project No.: 100513103

Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. is pleased to submit this quarterly dense non-aqueous phase liquid (DNAPL) recovery report on behalf of 76 Eleventh Avenue Property Owner LLC (owner), summarizing DNAPL recovery at the 17th Street Development Project ("Site") for the first quarter of 2023 (January to March 2023), in accordance with the DNAPL Recovery Plan outlined in Section 4.4-DNAPL Recovery Program and Section 7.1-DNAPL Recovery Reporting of the September 17, 2020 draft Site Management Plan (post-construction update).

Background

The Site is located at 501 – 515 West 17th Street/76 Eleventh Avenue, New York, New York (Tax block 689, lot 17) in the West Chelsea neighborhood of Manhattan, New York. A figure showing the Site location is attached as Figure 1. The Site is approximately 76,440 square feet (1.755 acres). Ground elevations range from 8 feet above mean sea level (MSL) along 11th Avenue to 10 feet above MSL along 10th Avenue.

Remedial action was completed on July 8, 2014 and included shallow excavation and off-site soil disposal, installation of a subsurface containment wall, in situ stabilization, DNAPL recovery, and backfilling/capping. DNAPL recovery operations, which were discontinued during remedial action because of limited access to the wells, resumed in August 2014, and will continue until the NYSDEC approves the end of recovery activities. Following approval of the initial Site Management Plan and Final Engineering Report, the NYSDEC issued a Certificate of Completion (COC) on December 17, 2014. The COC was transferred to 76 Eleventh Avenue Property Owner LLC on May 7, 2015 and the Notice of Transfer of COC was recorded.

DNAPL Recovery Standard Operations

Post-remedial action DNAPL recovery from four on-site recovery wells began in August 2014. Prior to extraction, each well was gauged for product thickness and then the three wells with the largest DNAPL thickness received a steel bailer. The bailers remained undisturbed for about a two-week period to allow DNAPL to collect. The bailers were then pulled and the volume of DNAPL was measured. After extraction, each bailer was cleaned with a degreaser solvent and stored in polyethylene sheeting until the next monthly event. Recovered DNAPL is stored in labeled, 55-gallon steel drums.

MEMO

Construction began on May 19, 2016 with the pile installation program. Recovery wells RW-D and RW-J were decommissioned because of location conflicts with building foundation elements; replacement recovery wells were reinstalled between June 21 and 22, 2017. Foundation slab construction was completed on April 26, 2019; superstructure construction and interior fit out is ongoing.

The NYSDEC provided an April 13, 2020 email approval to modify DNAPL recovery reporting from monthly to quarterly reports, which will include the results of monthly recovery events for the months that make up the reporting quarter. For recovery events beginning in August 2020, the bailers are removed and the extracted DNAPL volume is measured; after measurement, the bailers are immediately returned to the wells to remain undisturbed until the next recovery event.

Current DNAPL Recovery Summary

Because of conflicts with ongoing construction, the site was inaccessible during the end of the month in February and March 2023. Therefore, recovery for these months was measured in the beginning of the next respective month. The bailers were removed and DNAPL recovery was measured on January 23, 2023; March 9, 2023; and April 7, 2023. After measuring the recovered DNAPL, the bailers were returned to the wells until the next recovery period.

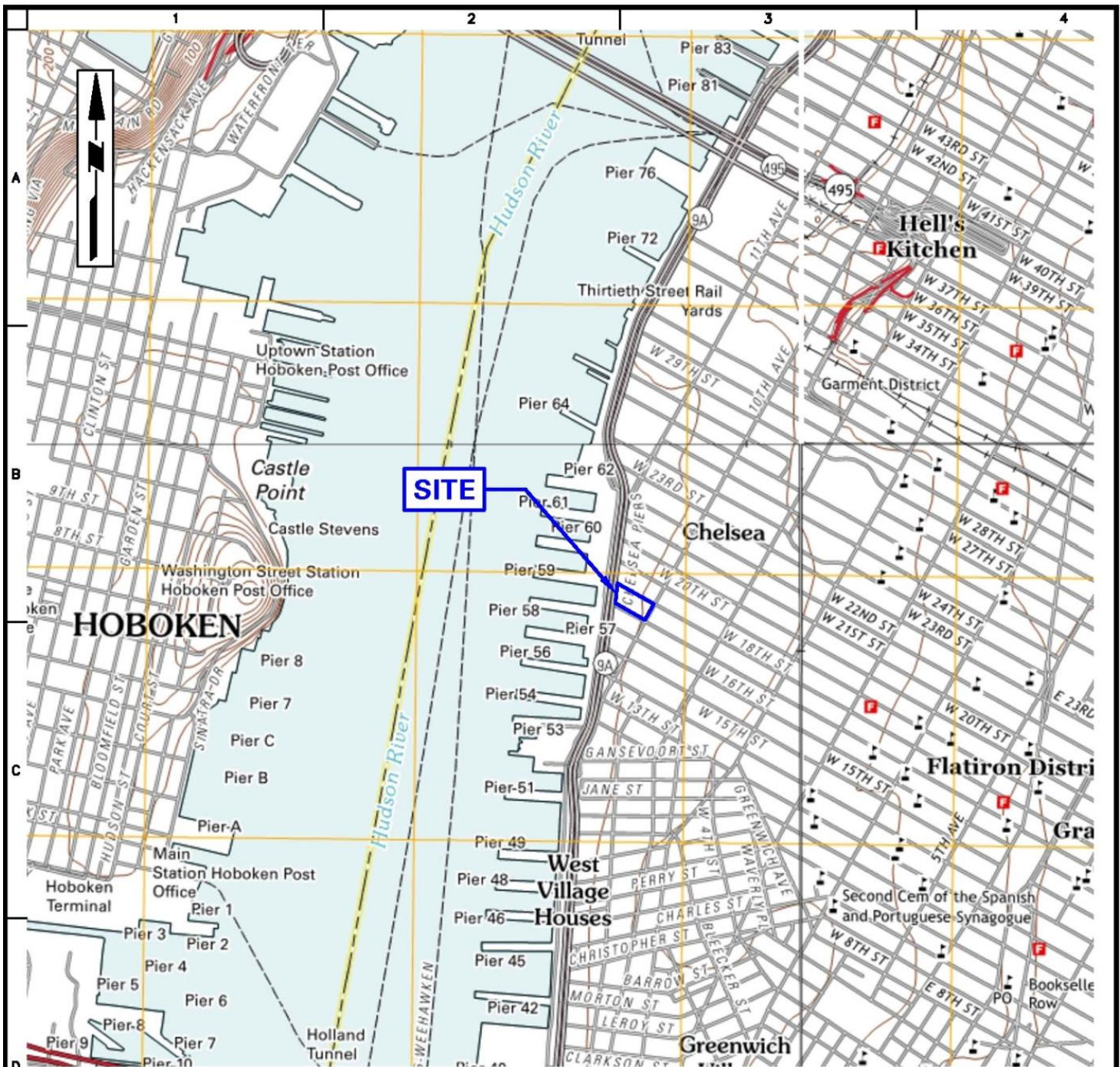
The following table summarizes the monthly DNAPL well thickness and recovery volumes for the 2023 first quarter (January to March) reporting period. The attached Table 1 includes a complete post-remedial action DNAPL recovery summary.

Recovery Well	DNAPL Recovery (gallons)			Quarterly DNAPL Recovery (gallons)
	January	February	March	January-March 2023
	1/23/2023	3/9/2023	4/7/2023	
RW-D	1.00	1.50	0.25	2.75
RW-E	2.00	2.00	2.25	6.25
RW-J	2.00	1.00	1.50	4.50
RW-K	0.05	0.10	0.05	0.20
Totals:	5.05	4.60	4.05	13.70

The volume of recovered DNAPL, since inception of recovery activities, is about 560 gallons.

Anticipated Activities for Next Period


76 Eleventh Avenue Property Owner LLC will conduct monthly bailing activities during construction, as practicable. The next recovery events are expected to take place in April, May, and June 2023.



NOTE: BASE MAP IS TAKEN FROM USGS 7.5 MINUTE TOPOGRAPHIC MAPS FOR THE CENTRAL PARK, BROOKLYN, JERSEY CITY, AND WEEKHAWKEN QUADRANGLES.

LEGEND:

 APPROXIMATE SITE BOUNDARY

 21 Pann 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. S.A. 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 76 ELEVENTH AVENUE BLOCK No. 689, LOT No. 17 NEW YORK	Figure Title SITE LOCATION MAP	Project No. 100513101 Date 11/17/2015 Scale N.T.S. Drawn By AT Checked By GN	Figure No. 1
	NEW YORK	NEW YORK	Submission Date NOVEMBER 2015	Sheet 1 of 8

**TABLE 1
DNAPL RECOVERY SUMMARY
76 ELEVENTH AVENUE
NEW YORK, NEW YORK
LANGAN PROJECT NO. 100513101**

Date	RW-D		RW-E		RW-J		RW-K		Total Post-Remediation DNAPL Removed (gallons)
	Well Column Thickness (feet)	Recovery Volume (gallons)	Well Column Thickness (feet)	Recovery Volume (gallons)	Well Column Thickness (feet)	Recovery Volume (gallons)	Well Column Thickness (feet)	Recovery Volume (gallons)	
Aug-14	5.0	2	5.8	0.5	5.4	3	3.8	1.5	7.00
Sep-14	5.8	1.25	7.5	2.5	5.8	3.5	2.9	1	8.25
Oct-14	-	-	-	-	-	-	-	-	0.00
Dec-18	-	-	8.0	-	-	-	1.3	-	0.00
Jan-19	4.8	2.25	9.8	4.50	3.8	2.75	1.4	-	9.50
Feb-19	1.4	2.50	8.0	4.00	3.1	2.00	0.8	-	8.50
**Mar-19	-	-	-	-	-	-	-	-	0.00
Apr-19	1.2	1.50	8.8	4.00	4.0	2.00	5.3	-	7.50
May-19	1.3	1.50	7.4	4.50	3.8	-	1.0	-	6.00
Jun-19	1.8	-	7.3	-	-	-	0.9	-	0.00
Jul-19	-	1.50	-	4.00	-	1.50	-	-	7.00
Aug-19	1.8	1.50	7.3	4.00	-	1.50	0.9	-	7.00
Dec-19	-	-	8.1	2.75	3.9	1.50	1.3	1.0	5.25
Jan-20	2.2	1.0	7.5	2.75	3.5	1.50	1.8	-	5.25
Feb-20	1.8	1.5	3.0	2.50	7.0	5.00	1.8	-	9.00
Mar-20	1.8	1.0	7.3	3.00	2.5	1.50	1.6	-	5.50
^C Apr-20	-	-	-	-	-	-	-	-	0.00
^C May-20	-	-	-	-	-	-	-	-	0.00
Jun-20	2.0	2.0	7.1	3.00	2.8	2.50	1.5	-	7.50
Jul-20	0.0	0.5	0.0	3.00	0.0	1.50	0.0	-	5.00
Aug-20	-	1.0	-	3.00	-	1.50	-	-	5.50
Mar-21	-	1.75	-	2.50	-	3.00	-	-	7.25
Apr-21	-	2.5	-	3.00	-	5.00	-	-	10.50
May-21	-	1.0	-	2.50	-	1.50	-	0.5	5.50
Jun-21	-	1.5	-	2.50	-	2.00	-	1.5	7.50
Jul-21	-	1	-	2.25	-	0.5	-	0.75	4.50
Aug-21	-	2	-	2.75	-	3.5	-	3.5	11.75
Sep-21	-	1.75	-	2.75	-	3.75	-	4	12.25
Oct-21	-	1.0	-	2.0	-	0.75	-	0.25	4
Nov-21	-	1.5	-	0.5	-	2	-	2.5	6.5
Jan-22	-	1.0	-	2.5	-	1.5	-	-	5
Jan-22	-	1	-	3	-	4	-	2	10
Jul-22	-	-	-	2.5	-	2	-	1	5.5
Aug-22	-	-	-	2	-	1	-	0.1	3.1
Sep-22	-	1.41	-	3.75	-	2.35	-	1.06	8.57
Oct-22	-	0.5	-	2.5	-	1	-	0.5	4.5
Nov-22	-	0.56	-	2	-	2	-	0.26	4.82
Dec-22	-	1.25	-	2.5	-	3.75	-	3.25	10.75
Jan-23	-	1	-	2	-	2	-	0.05	5.05
Feb-23	-	1.5	-	2	-	1	-	0.1	4.6
Mar-23	-	0.25	-	2.25	-	1.5	-	0.05	4.05

Pre-remediation DNAPL Recovery Summary: 96.7
Post-remediation DNAPL Recovery Summary: 463.7
Total DNAPL Recovered to-date: 560

Notes

1. Pre-remediation DNAPL recovery includes activities during December 9, 2008 through January 13, 2014.
2. Recovery operations were delayed in October 2014 - April 2015 because of high water levels in the recovery well area.
3. * = Recovery wells were not accessible because of high water levels in the containment wall area.
4. ** = Recovery wells were not accessible because of construction in the immediate area.
5. ^C = Recovery wells were not accessible because of the New York State Executive Order 202.6, mandating temporary closure of non-essential construction sites in response to the COVID-19 pandemic.