

20 March 2026

Christopher Allan  
New York State Department of Environmental Conservation  
Division of Environmental Remediation  
47-20 21<sup>st</sup> Street  
Long Island City, NY 11101

**Re: Remedial Design Investigation No. 2 Work Plan - NAPL Delineation  
BL27 SCA Parcel  
Long Island City, NY  
Proposed BCP Site No. C241175B  
Langan Project No.: 170340208**

Dear Chris:

As discussed on our project status call on 13 February 2026, we are providing this work plan for Remedial Design Investigation [RDI] No. 2 to delineate the extents of Non-Aqueous Phase Liquid (NAPL) observed in monitoring well C241175\_MW15S during the implementation of RDI No. 1 on February 3, 2026. Langan was asked by the Department to delineate the extent of the NAPL in the vicinity of C241175\_MW15S. Because NAPL was only observed in monitoring well C241175\_MW15S screened above the meadow mat<sup>1</sup> at approximately 9.5 feet below grade surface (bgs) (and not in the corresponding deep monitoring well [C241175\_MW15D] screened below the meadow mat [a low permeability confining layer]), and in the interest of reducing the risk of unnecessary vertical contaminant migration, this field effort is focused on horizontal delineation above the meadow mat only to inform the forthcoming Remedial Action Work Plan (RAWP) and the design of the support of excavation (SOE) system for the remedial action. No evidence of petroleum contamination was observed in soil boring SB15 below the meadow mat. The boring log for soil boring SB15 is included as Attachment 1.

This work plan briefly summarizes proposed supplemental pre-RDI field efforts and the procedures for the NAPL delineation effort. The investigation will be completed in general conformance with the site-specific Health and Safety Plan (HASP) and the NYSDEC-approved

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<sup>1</sup> The top of the meadow mat at the parent boring for C241175\_MW15S (SB15) was found at about 9.5 ft bgs (about -1.0 ft NAVD88).

Remedial Investigation Work Plan (RIWP) for ABC Block 27 dated 25 August 2016 (NYSDEC Site No. C241175), including protocols related to advancement of soil borings, construction of monitoring wells, decontamination between drilling locations, implementation of the community air monitoring plan (CAMP), and submission of daily field reports. In addition to customary private utility markouts and a geophysical survey, all soil borings will be hand cleared to 5 feet bgs. The soil borings will also be completed with 2-foot Macrocores® for better depth control.

#### Synoptic Gauging and Petroleum Hydrocarbon Analysis

To streamline the focus of RDI No. 2, Langan performed a synoptic gauging event of all wells on the SCA Parcel and selected wells near well C241175\_MW15S on 3 March 2026, as shown in Figure 1 and listed below, to see if NAPL had appeared in any other well on or near the site.

- C241175\_MW09S
- C241175\_MW09D
- C241175\_MW15S
- C241175\_MW15D
- C241175\_MW28D
- C241175\_MW29S
- C241175\_MW29D
- C241175\_MW34S
- C241175\_MW34D
- C241175\_MW39S
- C241175\_MW39D
- C241175\_MW40S
- C241175\_MW40D
- C241175\_MW46S
- C241175\_MW46D
- C241175\_MW60D

NAPL was again found in C241175\_MW15S, but was not observed in any of the other gauged wells. Please see attached summary table of the well gauging results. A sample of the NAPL was collected from C241175\_MW15S on 11 March 2026 for petroleum hydrocarbon identification (i.e., fingerprinting) to understand the type of NAPL and its potential source. Therefore, RDI No. 2 will focus on delineation of NAPL in the immediate vicinity of well C241175\_MW15S.

#### NAPL Delineation Approach

An environmental driller will advance four soil borings in the southern part of the site around monitoring well C241175\_MW15S. The borings will be advanced with a track-mounted or remote access drilling rig under the supervision of Langan field personnel who will document the

work and screen the soil samples for NAPL and other indicators of chemical or petroleum releases. The borings will be advanced until the top of the meadow mat is encountered, based on field observation; identifying and confirming the top of the meadow mat boring will also be an important focus of the delineation. Langan will screen continuously for organic vapors with a photoionization detector (PID) equipped with a 10.6 electron volt bulb, and for visual and olfactory indications of environmental impacts (i.e., staining and/or odors). Soil will be classified and descriptions will be recorded in a boring log.

The proposed delineation borings, and the first set of conditional (or step-out) delineation borings are illustrated on Figure 1. The proposed delineation borings are about 6 to 12 feet off C241175\_MW15S and the conditional delineation borings are about 4 to 8 feet off the initial delineation borings. The general delineation approach is illustrated in the attached decision tree (Attachment 1). If NAPL is identified in any of the delineation borings, a monitoring well will be installed with well screen above the meadow mat, for future gauging and observations of NAPL mobility. Monitoring well construction and development will follow the methodology prescribed in the NYSDEC-approved Remedial Investigation Work Plan (RIWP) for ABC Block 27 dated 25 August 2016 (NYSDEC Site No. C241175). If NAPL is found in any of the completed monitoring wells, additional samples of NAPL will be collected for petroleum hydrocarbon identification to understand hydrocarbon signature and potential source(s).

Newly installed monitoring wells will be allowed to stabilize for at least two weeks before Langan field staff returns to the site to gauge the wells with an interface probe for NAPL.

### Reporting

Daily reports will be submitted to the NYSDEC within 24 hours of each completed field day throughout the investigation. The reports will include:

- Description and locations of work completed during the reporting day
- A summary of CAMP findings, including exceedances, if any, and mitigation measures
- An explanation of notable site conditions, including the location of PID readings above background conditions, if observed

The NYSDEC will be kept informed of our findings through the daily reports and regularly scheduled project status calls. The results of the delineation event will be formally documented in the forthcoming RAWP and used to develop the remedy presented in the RAWP.

### Schedule

Langan anticipates mobilizing to implement this NAPL Investigation Work Plan in the first week of April 2026, and anticipates completing the primary delineation effort (via soil borings) in about 10 days.

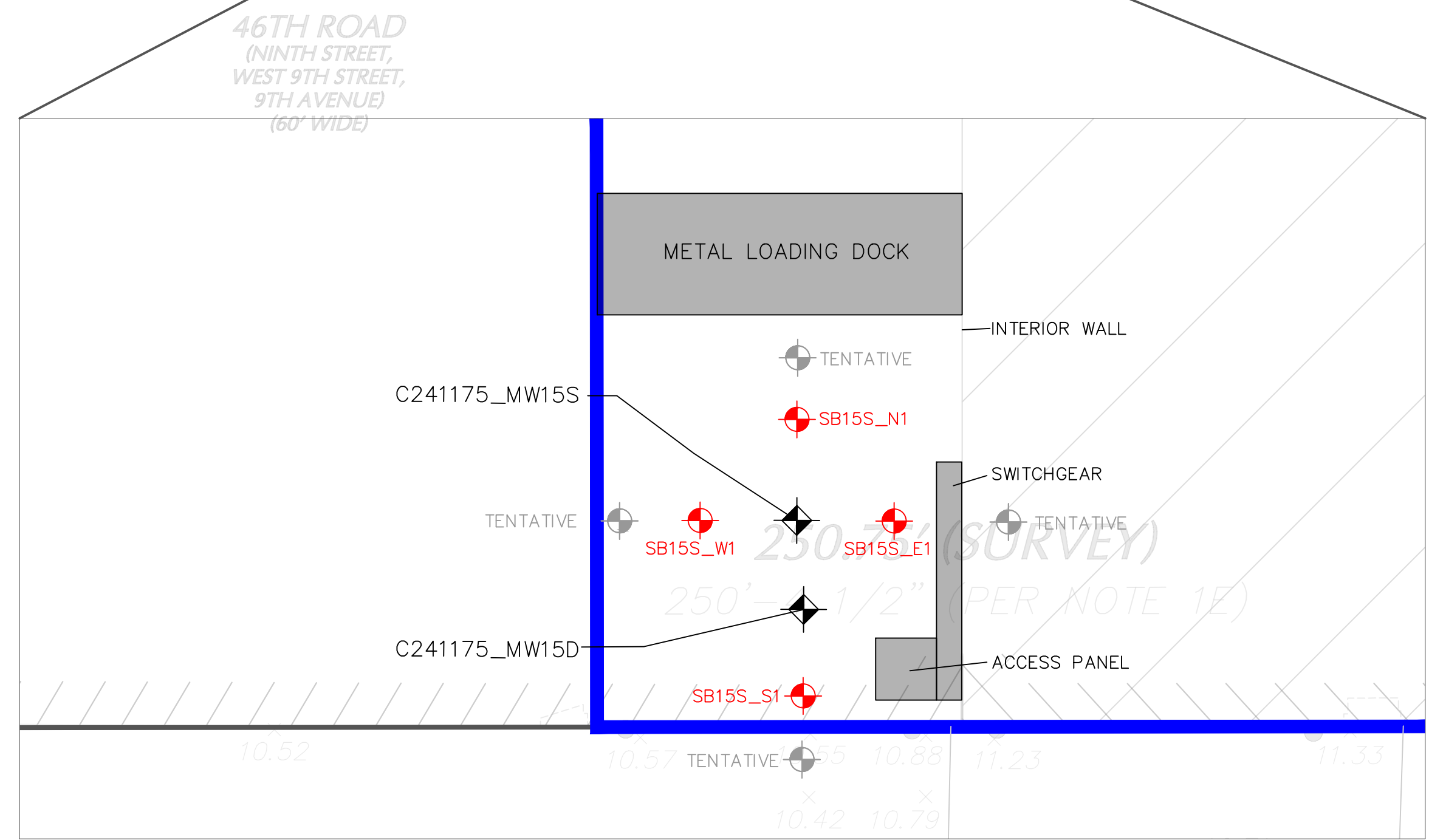
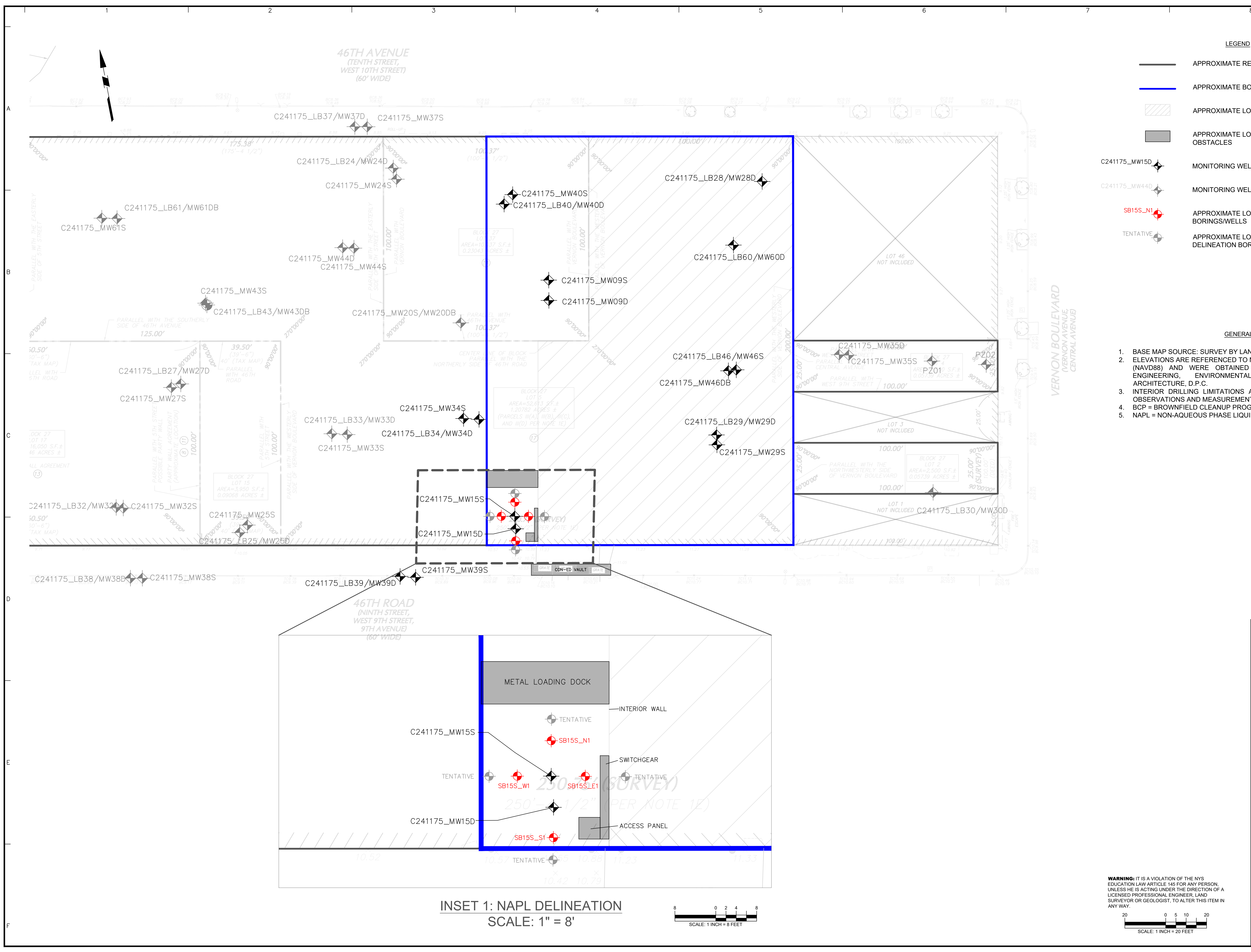
Sincerely,  
**Langan Engineering, Environmental, Surveying,  
Landscape Architecture and Geology, D.P.C.**



Gregory C. Wyka, PG  
Associate

Enclosure(s): Figure 1 – Monitoring Well Gauging Map and Proposed NAPL Delineation Plan  
Table 1 —Preliminary Synoptic Gauging  
Attachment 1 – Soil Boring Log - SB15  
Attachment 2 – NAPL Delineation Decision Tree

cc: J. O'Connell (NYSDEC)  
T. Pfohl, M. Quigley, P. Kirby, J. Hare (Plaxall)  
E. Knauer, K. Rogers (SPR)  
G. Wyka, R. Lo, C. Piretra (Langan)



**LANGAN**  
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Project  
**BL27 SCA PARCEL**  
BLOCK No. 27 P/O LOTS No. 5 AND 37  
LONG ISLAND CITY  
QUEENS NEW YORK  
Drawing Title  
**MONITORING WELL  
GAUGING MAP AND  
PROPOSED NAPL  
DELINEATION PLAN**

|                                 |                    |
|---------------------------------|--------------------|
| Project No.<br><b>170340208</b> | Figure<br><b>1</b> |
| Date<br><b>3/12/2026</b>        |                    |
| Drawn By<br><b>CP</b>           |                    |
| Checked By<br><b>RL</b>         | Sheet 1 of 1       |

**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, LAND SURVEYOR OR GEOLOGIST, TO ALTER THIS ITEM IN ANY WAY.

SCALE: 1 INCH = 20 FEET

SCALE: 1 INCH = 8 FEET

**Table 1**  
**NAPL Delineation For Remediation**  
**Synoptic Well Gauging Event**

**BL27 SCA Parcel**  
**NYSDEC BCP Site No. C241175B**  
**Long Island City, New York**  
**Langan Project No. 170340208**

| Well ID      | Well Location (On-Site/Off-Site) | Date Gauged     | Time Gauged | DTW (ft bgs) | DTB (ft bgs) | DTP (ft bgs) | Product Thickness (ft) | Approx. Elevation of Grade (NAVD88) | Well Headspace Reading (ppm) |
|--------------|----------------------------------|-----------------|-------------|--------------|--------------|--------------|------------------------|-------------------------------------|------------------------------|
| MW28D        | On-site                          | 3/4/2026        | 11:00       | 6.22         | 14.15        | N/A          | N/A                    | 5.42                                | 75.5                         |
| MW60D        | On-site                          | 3/4/2026        | 10:50       | 6.50         | 12.8         | N/A          | N/A                    | 5.42*                               | 15                           |
| MW46S        | On-site                          | 3/4/2026        | 8:52        | 0.50         | 5.5          | N/A          | N/A                    | 7.82                                | 0.1                          |
| MW46DB       | On-site                          | 3/4/2026        | 9:01        | 6.10         | 21.2         | N/A          | N/A                    | 7.82                                | 0.1                          |
| MW29D        | On-site                          | 3/4/2026        | 10:30       | 5.85         | 17.05        | N/A          | N/A                    | 5.12                                | 0.2                          |
| MW29S        | On-site                          | 3/4/2026        | 10:35       | 2.87         | 4.89         | N/A          | N/A                    | 5.13                                | 0.1                          |
| MW15D        | On-site                          | 3/4/2026        | 8:32        | 11.42        | 20.87        | N/A          | N/A                    | 9.18                                | 0.1                          |
| <b>MW15S</b> | <b>On-site</b>                   | <b>3/4/2026</b> | <b>8:35</b> | <b>8.60</b>  | <b>8.7</b>   | <b>8.60</b>  | <b>0.10</b>            | <b>9.18</b>                         | <b>2</b>                     |
| MW09D        | On-site                          | 3/4/2026        | 10:09       | 11.58        | 18.03        | N/A          | N/A                    | 7.80                                | 0                            |
| MW09S        | On-site                          | 3/4/2026        | 10:07       | 8.30         | 10.42        | N/A          | N/A                    | 7.80                                | 0                            |
| MW40S        | On-site                          | 3/4/2026        | 10:00       | 7.82         | 10.59        | N/A          | N/A                    | 9.45                                | 0                            |
| MW40D        | On-site                          | 3/4/2026        | 10:05       | 11.98        | 18.12        | N/A          | N/A                    | 9.47                                | 0                            |
| MW34S        | Off-site                         | 3/4/2026        | 10:19       | 10.75        | 11.4         | N/A          | N/A                    | 11.25                               | 0.1                          |
| MW34D        | Off-site                         | 3/4/2026        | 10:25       | 13.69        | 22.81        | N/A          | N/A                    | 11.26                               | 2                            |
| MW39D        | Off-site                         | 3/4/2026        | 11:34       | 13.3         | 22.42        | N/A          | N/A                    | 10.50                               | 0                            |
| MW39S        | Off-site                         | 3/4/2026        | 11:23       | 7.90         | 13.4         | N/A          | N/A                    | 10.52                               | 0                            |

**Notes:**

1. bgs = below grade surface
2. DTW = depth to water
3. DTB = depth to bottom
4. ft = feet
5. DTP = depth to product
6. N/A = not applicable
7. ppm = parts per million
8. NAVD88 = The North American Vertical Datum 1988
9. \* = approximated elevation

|  |  |                          |  |                                       |  |                                    |                    |
|--|--|--------------------------|--|---------------------------------------|--|------------------------------------|--------------------|
| Project<br>ABC - Block 27                  |  |                          |  | Project No.<br>170340201              |  |                                    |                    |
| Location<br>Long Island City, New York     |  |                          |  | Elevation and Datum<br>N/A            |  |                                    |                    |
| Drilling Company<br>AARCO Environmental    |  |                          |  | Date Started<br>4/22/15               |  | Date Finished<br>4/22/15           |                    |
| Drilling Equipment<br>Geoprobe 7822 DT     |  |                          |  | Completion Depth<br>35 ft             |  | Rock Depth<br>N/A                  |                    |
| Size and Type of Bit<br>2-inch Direct Push |  |                          |  | Number of Samples                     |  | Disturbed<br>1                     | Undisturbed<br>N/A |
| Casing Diameter (in)<br>N/A                |  | Casing Depth (ft)<br>N/A |  | Water Level (ft.)<br>First<br>8       |  | Completion<br>N/A                  | Core<br>N/A        |
| Casing Hammer<br>N/A                       |  | Weight (lbs)<br>N/A      |  | Drop (in)<br>N/A                      |  | Drilling Foreman<br>Thomas Seickel |                    |
| Sampler<br>4-foot Steel Macrocore          |  |                          |  | Inspecting Engineer<br>Luke McCartney |  |                                    |                    |
| Sampler Hammer<br>N/A                      |  | Weight (lbs)<br>N/A      |  | Drop (in)<br>N/A                      |  |                                    |                    |

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

| MATERIAL SYMBOL | Elev. (ft) | Sample Description   | Depth Scale | Sample Data |       |             |                         | PID Reading (ppm) | Remarks<br>(Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.) |
|-----------------|------------|--|-------------|-------------|-------|-------------|-------------------------|-------------------|---|
|                 |            |  |             | Number      | Type  | Recov. (in) | Penetr. resist. BL/Join |                   |   |
|                 | 0          | CONCRETE SLAB  |             |             |       |             |                         |                   |   |
|                 | 1          | LIGHT BROWN, FINE - MEDIUM SAND, tr brick, concrete, gravel and fly ash [FILL]                                   | Hand clear  | HA          | N/A   |             |                         | 0.0               |   |
|                 | 2          |  |             |             |       |             |                         | 0.0               |   |
|                 | 3          | LIGHT BROWN TO BLACK, FINE - MEDIUM SAND, tr gravel, brick and concrete [FILL]                                   |             |             |       |             |                         |                   | 9:15: Start Run #1. Location is about 110' from southwest corner of building        |
|                 | 4          |  |             |             |       |             |                         |                   |   |
|                 | 5          |  | R1          | GP          | 26/48 |             |                         | 5.4               | Petroleum-like odor   |
|                 | 6          |  |             |             |       |             |                         | 41                |   |
|                 | 7          |  |             |             |       |             |                         | 389<br>537        |   |
|                 | 8          | R2A: BLACK, FINE - MEDIUM SAND, tr gravel and coal [FILL]  |             |             |       |             |                         | 449               | 9:25: Start Run #2<br>9:30: Collect SB15_6.5-7.5                                    |
|                 | 9          |  | R2          | GP          | 31/48 |             |                         | 247               | Petroleum-like odor and staining  |
|                 | 10         | R2B: BROWN PEAT, tr clay and fibers  |             |             |       |             |                         | 94<br>528         |   |
|                 | 11         |  |             |             |       |             |                         | 15.4              |   |
|                 | 12         | R3A: SOFT DARK GRAY TO BLACK ORGANIC SILT, so clay, tr fibers (moist)  |             |             |       |             |                         | 9.8               | 9:30: Start Run #3  |
|                 | 13         | R3B: FINE SILTY SAND   | R3          | GP          | 36/48 |             |                         | 9.1               | Organic decay-like odor   |
|                 | 14         |  |             |             |       |             |                         | 1.7               |   |
|                 | 15         |  |             |             |       |             |                         | 4.3               |   |
|                 | 16         |  |             |             |       |             |                         | 0.7               | 9:40: Start Run #4  |
|                 | 17         | R4A: SOFT TO FIRM BROWN CLAYEY SILT (moist)  | R4          | GP          | 24/48 |             |                         | 0.0               |   |
|                 | 18         |  |             |             |       |             |                         | 0.0               |   |
|                 | 19         | R4B: GRAY FINE SILTY SAND, tr gravel and clay (wet)<br>R4C: HARD FINE SAND, tr clay, silt and fine gravel [TILL] |             |             |       |             |                         | 0.0               |   |
|                 | 20         |  | R5          | GP          | 28/48 |             |                         | 0.0               | 9:50: Start Run #5  |

# LANGAN

Log of Boring

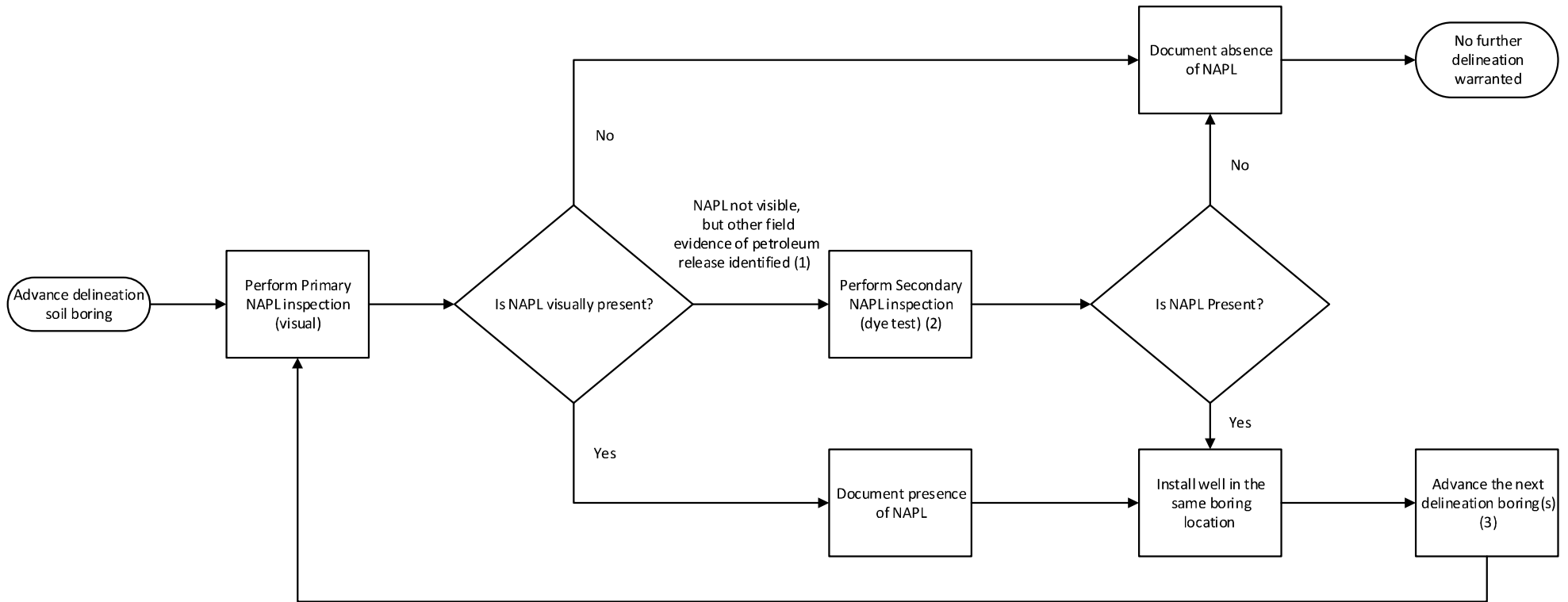
**SB-15**

Sheet 2 of 2

| Project  |            | Project No.   |             |             |      |             |                        |   |
|--|------------|---|-------------|-------------|------|-------------|------------------------|---|
| ABC - Block 27   |            | 170340201   |             |             |      |             |                        |   |
| Location   |            | Elevation and Datum   |             |             |      |             |                        |   |
| Long Island City, New York   |            | N/A   |             |             |      |             |                        |   |
| MATERIAL SYMBOL  | Elev. (ft) | Sample Description  | Depth Scale | Sample Data |      |             |                        | Remarks<br>(Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.) |
|  |            |   |             | Number      | Type | Recov. (in) | Penetr. resist. BL/6in |   |
|   |            | R5A: HARD FINE SAND, tr clay, silt and fine gravel [TILL]                             | 20          |             |      |             |                        |   |
|  |            | R5B: HIGHLY WEATHERED ROCK (SOFT LIGHT YELLOW ORANGE TO TAN) (moist)                  | 21          | R5          | GP   | 28/48       |                        | 0.0   |
|  |            | HIGHLY WEATHERED ROCK (SOFT LIGHT YELLOW TO LIGHT GRAY) (moist)                       | 22          |             |      |             |                        | 0.0   |
|  |            | HIGHLY WEATHERED ROCK (SOFT LIGHT YELLOW TO LIGHT GRAY) (moist)                       | 23          |             |      |             |                        | 0.0   |
|  |            | HIGHLY WEATHERED ROCK (SOFT LIGHT GRAY) (moist)                                       | 24          |             |      |             |                        | 0.0   |
|  |            | HIGHLY WEATHERED ROCK (SOFT LIGHT GRAY) (moist)                                       | 25          | R6          | GP   | 47/48       |                        | 0.0   |
|  |            | HIGHLY WEATHERED ROCK (SOFT LIGHT GRAY) (moist)                                       | 26          |             |      |             |                        | 0.0   |
|  |            | HIGHLY WEATHERED ROCK (SOFT LIGHT GRAY) (moist)                                       | 27          |             |      |             |                        | 0.0   |
|  |            | WEATHERED ROCK (LIGHT GRAY TO LIGHT GREEN SLIGHTLY GRANULAR, SLIGHTLY BANDED) (moist) | 28          |             |      |             |                        | 0.0   |
|  |            | WEATHERED ROCK (LIGHT GRAY TO LIGHT GREEN SLIGHTLY GRANULAR, SLIGHTLY BANDED) (moist) | 29          | R7          | GP   | 48/48       |                        | 0.0   |
|  |            | WEATHERED ROCK (LIGHT GRAY TO LIGHT GREEN SLIGHTLY GRANULAR, SLIGHTLY BANDED) (moist) | 30          |             |      |             |                        | 0.0   |
|  |            | WEATHERED ROCK (LIGHT GRAY TO LIGHT GREEN SLIGHTLY GRANULAR, SLIGHTLY BANDED) (moist) | 31          |             |      |             |                        | 0.0   |
|  |            | WEATHERED ROCK (LIGHT GRAY TO LIGHT GREEN SLIGHTLY GRANULAR, SLIGHTLY BANDED) (moist) | 32          |             |      |             |                        | 0.0   |
|  |            | WEATHERED ROCK (LIGHT GRAY TO LIGHT GREEN SLIGHTLY GRANULAR, SLIGHTLY BANDED) (moist) | 33          | R8          | GP   | 48/48       |                        | 0.0   |
|  |            | WEATHERED ROCK (LIGHT GRAY TO LIGHT GREEN SLIGHTLY GRANULAR, SLIGHTLY BANDED) (moist) | 34          |             |      |             |                        | 0.0   |
|  |            | WEATHERED ROCK (LIGHT GRAY TO LIGHT GREEN SLIGHTLY GRANULAR, SLIGHTLY BANDED) (moist) | 35          |             |      |             |                        | 0.0   |
|  |            |   | 36          |             |      |             |                        |   |
|  |            |   | 37          |             |      |             |                        |   |
|  |            |   | 38          |             |      |             |                        |   |
|  |            |   | 39          |             |      |             |                        |   |
|  |            |   | 40          |             |      |             |                        |   |
|  |            |   | 41          |             |      |             |                        |   |
|  |            |   | 42          |             |      |             |                        |   |
|  |            |   | 43          |             |      |             |                        |   |
|  |            |   | 44          |             |      |             |                        |   |
|  |            |   | 45          |             |      |             |                        |   |

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# Attachment 2 - NAPL Delineation Decision Tree



## **NOTES**

(1) Staining, odors, and/or photoionization detector (PID) readings exceeding 100 parts per million (ppm).

(2) The presence of NAPL will be evaluated by performing a soil/dye test using the Oil in Soil™ field screening test kit and a soil/water shake test using disposal glass or polyethylene containers. A positive result will be indicated by a bright red color on container (dye test) or visible NAPL (shake test). The results will be documented and positive results will be photographed by Langan field staff. All extracted soil cores will be photographed by Langan field staff.

(3) The next delineation boring or step-out location will be placed about 5 to 10 feet off the last completed delineation boring, as practical based on interior building access and/or drilling constraints (i.e., identified utilities or other obstructions)