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May 16, 2024

VIA ELECTRONIC MAIL

Ms. Jennifer Gonzalez
Assistant Geologist
Division of Environmental Remediation, Region 2
New York State Department of Environmental Conservation
47-40 21st Street, Long Island City, New York 11101

Re: **Supplemental Remedial Investigation Work Plan**
Proposed Public School Facility K337
8802 5th Avenue and 429 89th Street
Brooklyn, New York 11209
Block 6065, Lots 28 and 39
NYSDEC BCP Site No. C224327

Dear Ms. Gonzalez:

The purpose of this Supplemental Remedial Investigation Work Plan (SRIWP) is to present to the New York State Department of Environmental Conservation (NYSDEC), for review and approval, the proposed plan for further investigation at 8802 5th Avenue and 429 89th Street, Brooklyn, New York 11209 (referred to as the "Site"). The legal description of the Site is Block 6065, Lots 28 and 39. The Site was accepted into the Brownfield Cleanup Program (BCP) as a Volunteer on May 26, 2022. The BCP Site name is "Former Giuffre Auto Group Site" and the BCP Site Number is C224327.

Site Description and Background

The Site encompasses approximately 31,659 square feet (sf) and is improved with a one-story commercial building with a basement and an asphalt-paved parking lot on Lot 28 (8802 5th Avenue), and a commercial building with a partial basement on Lot 39 (429 89th Street). The Site location is shown on *Figure 1*.

The Site is bordered to the north by 88th Street followed by a health care facility ("Langone Medical Arts"); to the east by 5th Avenue followed by institutional/commercial buildings (the United States Post Office and an automobile sales facility); to the south by 89th Street, followed by commercial buildings; and to the west by automobile showrooms with repair facilities, NYC Department of Education Superintendent Office (K989), and a commercial building (7-Eleven) followed by 4th Avenue. Beyond the properties immediately adjacent to the Site, property uses are commercial, residential, and institutional.

A Remedial Investigation (RI) was completed at the Site by TRC Engineers, Inc. on behalf of the NYCSCA, and the results were presented to NYSDEC in a Draft RI Report dated October 2022. Based on the presence of petroleum-impacted soils in soil from 19.5 feet below ground surface (bgs) to 24 feet bgs at TRC-SB-19, in a letter dated February 24, 2023, NYSDEC requested additional investigation. The purpose of this SRIWP is to delineate the nature and extent of contamination and characterize groundwater in this portion of the Site. Results of the Supplemental Remedial Investigation (SRI) will be included in the final Remedial Investigation (RI) Report.

NYCSCA has coordinated the above-grade demolition of both on-Site structures to facilitate the completion of the SRI. The demolition is expected to be completed in Summer 2025. The foundation slabs and walls

(partial basement) will remain in place. The SRI will commence following approval of this SRIWP and the above-grade demolition of the on-Site structures.

Supplemental Remedial Investigation Scope of Work

This SRIWP will be implemented in accordance with the protocols in NYSDEC Division of Environmental Remediation (DER) Technical Guidance for Site Investigation and Remediation (DER-10). Further, TRC will perform the following tasks in accordance with the Site-specific Health and Safety Plan (HASP), Community Air Monitoring Plan (CAMP), and the Quality Assurance Project Plan (QAPP) included as Appendices to the Remedial Investigation Work Plan dated March 2022.

Utility Clearance and Geophysical Survey
Required New York One Call notifications will be made at least three days prior to intrusive work, and the locations of underground utility lines in public roads and rights-of-way will be marked out.

Prior to intrusive work activities, a geophysical survey will be performed to confirm the proposed sampling locations are clear of underground utilities. A geophysical subcontractor, under the supervision by TRC, will survey a 20-foot by 20-foot maximum area around each proposed boring location for the purpose of identifying subsurface utilities prior to drilling. A narrative description of the results of the geophysical survey will be included in the RI Report. In addition, the RI Report will include a geophysical report, which provides a detailed summary of the geophysical activities as well as a site map noting the results of the survey.

Soil Sampling
TRC will advance six (6) soil borings (TRC-SB-22, TRC-SB-22-N, TRC-SB-22-E, TRC-SB-22-S, TRC-SB-22-W, and TRC-SB-22-SW). Refer to *Figure 1* for the proposed boring locations. Presented below is a rationale for each boring location:

- TRC-SB-22 will be advanced to the observed groundwater depth as close as feasible to previously advanced boring TRC-SB-19 in pursuit of vertical delineation of the previously observed petroleum contaminated material.

- To horizontally delineate the extent of petroleum contamination, the following soil borings will be advanced:

    - TRC-SB-22-N will be advanced approximately 10 feet north-northeast of former soil boring TRC-SB-19-N.
    - TRC-SB-22-E will be advanced approximately 10 feet east-southeast of former soil boring TRC-SB-19-E.
    - TRC-SB-22-S will be advanced approximately 10 feet south-southwest of former soil boring TRC-SB-19-S.
    - TRC-SB-22-W will be advanced approximately 10 feet to the west-northwest of former soil boring TRC-SB-19-W.
    - TRC-SB-22-SW will be advanced approximately 10 feet to the southwest of former soil boring TRC-SB-19-W.

The soil sample program will include the following:

- A Sonic drill rig will be used to advance a single wall core barrel. Continuous soil sampling will be performed from the ground surface to the terminal depths of each boring and soil samples will be retrieved in 5-foot long 3.5-inch diameter polyethylene bags.
    - TRC-SB-22, TRC-SB-22-S, and TRC-SB-22-W will be advanced to the groundwater surface (approximately 76 feet bgs).
    - TRC-SB-22-N, TRC-SB-22-E, and TRC-SB-22-SW will be advanced to depths of approximately 10 feet below the groundwater surface (approximately 86 feet bgs).

- Soil samples collected from each boring will be screened with a photoionization detector (PID) and inspected for indications of contamination (e.g., staining, odors, etc.). Geologic descriptions of the soil and field screening results will be recorded in field logs.

- To vertically and horizontally delineate the contamination identified during the RI between 19.5 and 24 feet bgs, soil samples from the soil borings will be selected for laboratory analysis based on the following rationale:
    - If impacted soils are identified, soil samples will be selected from the following depth intervals for laboratory analysis:
        - One soil sample will be selected from the most impacted zone (based on field screening).
        - One soil sample will be selected from the first underlying apparent clean interval below 25 feet bgs.
        - A third soil sample will be selected from the interval directly above the groundwater table and submitted to the laboratory to be placed on hold.
        - Note that if indications of contamination are identified, additional soil borings may be advanced to horizontally delineate the extent of impacts.
    - If no apparent impacted soils are identified below 25 feet bgs, soil samples will be selected from the following depth intervals for laboratory analysis:
        - One soil sample will be selected from 25 to 27 feet bgs.
        - A second soil sample will be selected from the interval directly above the groundwater table and submitted to the laboratory to be placed on hold.

- Soil samples will be analyzed for Target Compound List (TCL) and NYSDEC CP-51-listed VOCs plus the 10 highest concentration tentatively identified compounds (TICs)[1] will be reported, and TCL and CP-51-listed semivolatile organic compounds (SVOCs) (including 1,4- dioxane) plus the 20 highest concentration TICs will be reported[2].

  As part of demolition activities, an aboveground storage tank (AST) encased in concrete and cinder block located on the northern portion of Lot 28 will be removed. Following removal of the AST, TRC will perform a visual inspection of the concrete surface beneath the AST. If there is evidence

[1] Results of analyses for VOCs will include all TCL VOCs and CP-51-listed VOCs. Included on the TCL and CP-51 list are the 6 NYCRR Part 375-listed VOCs.
[2] Results of analyses for SVOCs will include all TCL SVOCs and CP-51-listed SVOCs. Included on the TCL and CP-51 list are the 6 NYCRR Part 375-listed SVOCs.

of a release (i.e., staining), TRC will advance a shallow boring for collection of one (1) soil sample for analysis of TCL/NYSDEC CP-51-listed VOCs + TICs and TCL/CP-51 SVOCs + TICs.

- Duplicate samples will be collected at a frequency of 1 per 20 soil samples and analyzed for the parameters listed above. Equipment blank samples will be collected at a frequency of 1 per day and analyzed for the parameters listed above.

- Soil samples will be containerized in laboratory prepared jars, labeled, sealed, and placed in a chilled cooler for shipment to a NYSDOH Environmental Laboratory Approval Program (ELAP)-certified laboratory for analysis. NYSDEC Analytical Services Protocol (ASP) Category B deliverable packages will be provided.

Monitoring Well Installation and Development and Groundwater Sampling

The work under this task includes the installation, development, and sampling of three (3) permanent monitoring wells to assess groundwater conditions at the Site. Refer to *Figure 1* for the proposed monitoring well locations.

Groundwater monitoring well installation and sampling will include the following:

- Soil borings TRC-SB-22-N, TRC-SB-22-E, and TRC-SB-22-SW will be converted to permanent monitoring wells TRC-GW-22-N, TRC-GW-22-E, and TRC-GW-22-SW as described further below. Note that if contamination is identified in TRC-SB-22, a permanent monitoring well may also be installed in that location. Monitoring wells will be installed to approximately 10 feet below the observed water table. Each monitoring well will be constructed using 2-inch diameter polyvinyl chloride (PVC) monitoring well riser and screen. Each well will be screened from approximately 5 feet above the observed water table to 10 feet below the observed water table.

- Clean silica sand, Morie No. 1, or similar, will be placed in the annular space around each groundwater monitoring well to a minimum of 2 feet above the top of the well screen. A 2-foot bentonite seal will be placed above the sand pack. The remaining annular space around the well riser will be tremie grouted from the top of the bentonite seal to approximately 12 inches below the top of the well casing. The monitoring wells will be completed with a flush-mounted outer protective casing.

- Well construction diagrams will be prepared for each well.

- Following installation, the groundwater monitoring wells will be developed using backwashing or mechanical surging methods until three to five well volumes are removed, and the water is reasonably free of turbidity and field parameter readings (temperature, conductivity, oxidation reduction potential (ORP), pH, and dissolved oxygen [DO]) sufficiently stabilize. During well development, TRC will actively monitor and track the volume of water purged and the field parameter readings. Field measurements will be recorded in a field logbook. Fifty nephelometric turbidity units (NTUs) or less will be the turbidity goal, but not an absolute value. The groundwater monitoring wells will be allowed to equilibrate for at least one week prior to sampling.

- Prior to groundwater sampling, up to two synoptic rounds of water level measurements will be collected from the Site monitoring wells (TRC-GW-22-N, TRC-GW-22-E, and TRC-GW-22-SW, TRC-GW-04, TRC-GW-14, TRC-GW-15, and TRC-GW-21) and each well will be gauged for nonaqueous phase liquid. The water table elevations will be used to determine Site-specific groundwater flow. Additionally, a headspace reading will be collected, using a PID, from each monitoring well location.

- Although not anticipated, if light non-aqueous phase liquid (LNAPL) or dense nonaqueous phase liquid (DNAPL) is encountered, groundwater from that well will not be analyzed.

- Prior to sampling, groundwater from each new monitoring well (TRC-GW-22-N, TRC-GW-22-E, and TRC-GW-22-SW) will be purged until field parameters have stabilized in accordance with USEPA Low-Stress (Low-Flow) sampling procedures. A turbidity level of 50 NTUs or less is the well purging goal. Other field parameters including temperature, conductivity, ORP, pH, and DO will also be monitored and, prior to sampling, field parameters should generally be within ±10% for three consecutive readings, 3 to 5 minutes apart. A minimum of three well volumes will be purged prior to sample collection. Ideally, pumping rates will be maintained between 100 and 500 milliliters per minute (ml/min) so that no drawdown of the groundwater level occurs (i.e., pumping rate is less than recharge rate). During purging, TRC will actively monitor and track the volume of water purged and the field parameter readings. Field measurements will be recorded in a field logbook. Once groundwater conditions have stabilized and groundwater levels have recovered, the samples will be collected.

- Groundwater samples collected from TRC-GW-22-N, TRC-GW-22-E, and TRC-GW-22-SW will be analyzed for TCL and CP-51-listed VOCs plus TICs and TCL and CP-51-listed SVOCs (including 1,4-dioxane) plus TICs.

- One (1) duplicate groundwater sample, at a frequency of one (1) per 20 groundwater samples, will be collected and analyzed for the parameters listed above. Equipment blank samples will be collected at a frequency of one (1) per day and analyzed for the parameters listed above. One (1) trip blank sample will be analyzed for TCL and CP-51-listed VOCs plus TICs.

- Groundwater samples will be containerized in laboratory supplied jars, labeled, sealed, and placed in a chilled cooler for shipment to the laboratory. Groundwater samples will be analyzed by an ELAP-certified laboratory approved by the NYSDOH and NYSDEC ASP Category B deliverable packages will be provided.

Land Surveying

The locations and elevations of the top of the casing of the newly installed permanent monitoring wells and the adjacent ground surface will be surveyed to determine water table elevations and groundwater gradient. The survey will be performed by a land surveyor licensed to practice in the State of New York. Horizontal coordinates will be measured in the North American Datum 1983 State Plane coordinate system and elevations will be measured relative to the North American Vertical Datum 1988.

Investigation Derived Waste

Investigation-derived waste (IDW) is anticipated to include the following: decontamination fluids, well purge and development water, and soil cuttings. IDW will be containerized in New York State Department of Transportation-approved 55-gallon drums for off-site disposal. Used personal protective equipment

(PPE) and disposable sampling equipment will be bagged as regular refuse and disposed as solid waste, unless grossly contaminated.

Report Preparation
TRC will revise the draft RI Report dated October 2022 to include observations, sampling logs, analytical results, findings, and conclusions from the SRI. Validation of results of analyses will be performed in accordance with NYSDEC DER-10, Technical Guidance for Site Investigation and Remediation, Appendix 2B "Guidance for Data Deliverables and the Development of DUSRs. Tabulated sampling results will be submitted to NYSDEC electronically as an electronic data deliverable (EDD).

Schedule

Mobilization for the SRI will commence after this SRIWP is approved by the NYSDEC and following completion of the demolition of the on-Site structures (expected Summer 2025). Presented below are estimated completion dates for key milestones associated with the implementation of the Supplemental Remedial Investigation.

MILESTONE	ESTIMATED DATE OF COMPLETION
Demolition of Existing Structures	June 2025
Begin Supplemental Remedial Investigation Field Activities[1]	July 2025
Submit Revised Remedial Investigation Report	September 2025

Notes:
[1] – Implementation of the SRI is contingent on demolition of existing structures. As of May 2024, demolition of existing structures is delayed due to pending license agreements being negotiated with neighboring property owners. Both existing Site buildings are positioned directly on the property lines shared with the neighboring properties.

Certification

I, Emily (Ebert) Kessler, CHMM certify that I am currently a New York State Qualified Environmental Professional [as defined in 6 NYCRR Part 375] and that this Supplemental Remedial Investigation Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10)

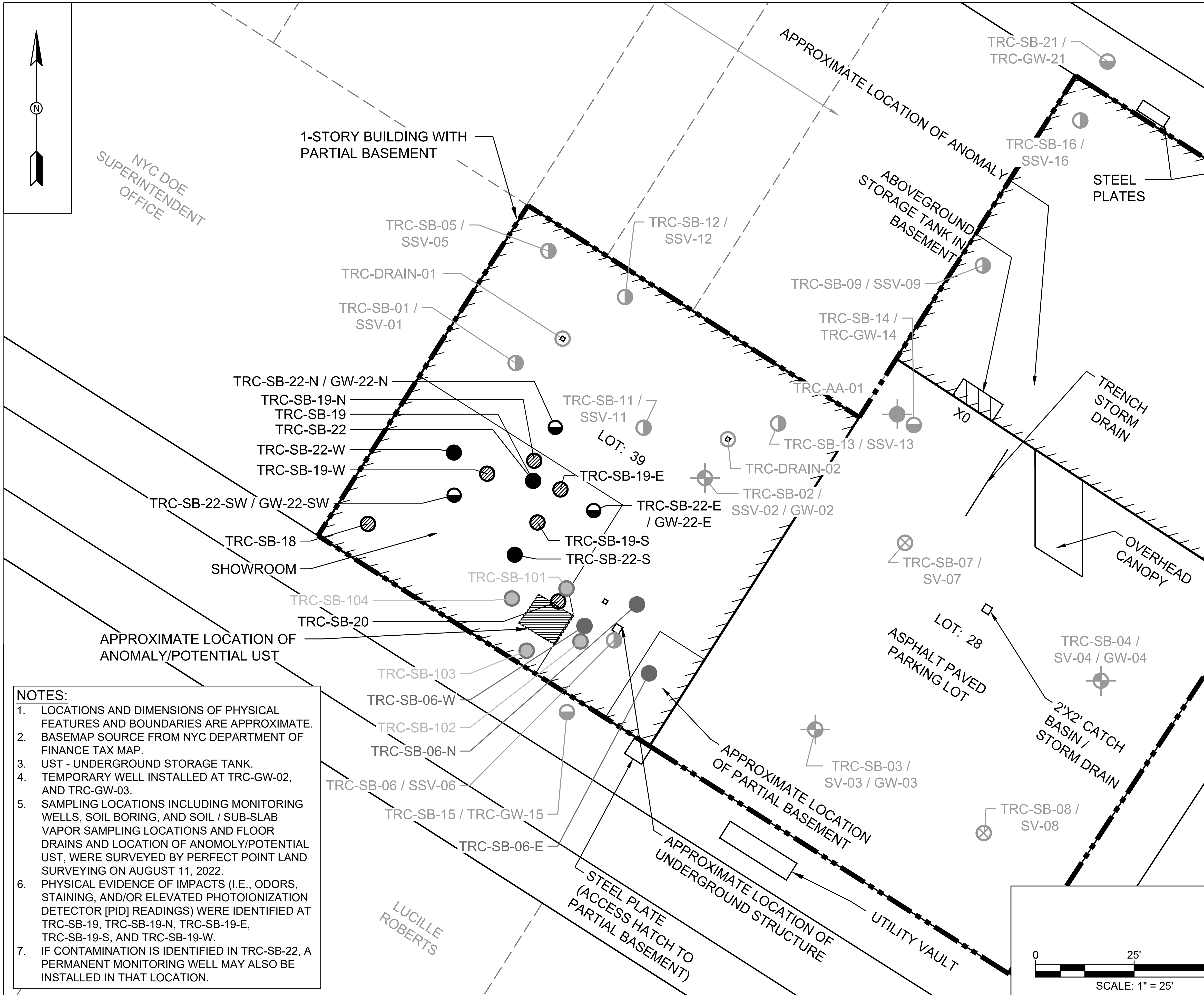
Emily Kessler
Signature

5/16/2024
Date

cc: L. Guterman, S. Kanaparthi, M. Sherwood; NYCSCA
P. Castellano, J. Raup; TRC

Enclosures:
Figure 1 – Proposed Sample Location Plan

FIGURES



SCALE: 1" = 25'

SHEET SIZE: 11" BY 17"

LEGEND (SYMBOLS NOT TO SCALE):

Symbol	Description
	SITE BOUNDARY
	LOT BOUNDARY
	BUILDING FOOTPRINT
X0	VENT LINE / FILL PORT
	FLOOR DRAIN
TRC-SB-## / SV-## / GW-##	SOIL, SOIL VAPOR, AND GROUNDWATER SAMPLE LOCATION AND IDENTIFICATION NUMBER (NOVEMBER 2019)
TRC-SB-## / SV-##	SOIL AND SOIL VAPOR SAMPLE LOCATION AND IDENTIFICATION NUMBER (NOVEMBER 2019)
TRC-SB-## / SSV-##	SOIL AND SUB-SLAB SOIL VAPOR SAMPLE LOCATION AND IDENTIFICATION NUMBER (NOVEMBER 2019)
TRC-AA-##	AMBIENT AIR SAMPLE LOCATION AND IDENTIFICATION NUMBER (NOVEMBER 2019)
TRC-DRAIN-##	FLOOR DRAIN SAMPLE LOCATION AND IDENTIFICATION NUMBER (NOVEMBER 2019 AND JANUARY 2020)
TRC-GW-##	GROUNDWATER SAMPLE LOCATION AND IDENTIFICATION NUMBER (JANUARY 2020)
TRC-SB-1##	SOIL SAMPLE LOCATION AND IDENTIFICATION NUMBER (JANUARY 2020)
TRC-SB-## / TRC-GW-##	SOIL BORING / PERMANENT MONITORING WELL LOCATION AND IDENTIFICATION NUMBER (JULY 2022)
TRC-SB-06-#	DELINEATION SOIL BORING LOCATION AND IDENTIFICATION NUMBER (JULY 2022)
TRC-SB-## / SSV-##	SHALLOW SOIL BORING AND SUB-SLAB SOIL VAPOR SAMPLE LOCATION AND IDENTIFICATION NUMBER (JULY 2022)
TRC-SB-##	SOIL BORING SAMPLE AND IDENTIFICATION NUMBER (JULY 2022)
TRC-SB-22-#	PROPOSED SOIL BORING LOCATION AND IDENTIFICATION NUMBER
TRC-SB-22-# / TRC-GW-22-#	PROPOSED SOIL BORING AND/OR MONITORING WELL LOCATION AND IDENTIFICATION NUMBER

NOTES:

1. LOCATIONS AND DIMENSIONS OF PHYSICAL FEATURES AND BOUNDARIES ARE APPROXIMATE.
2. BASEMAP SOURCE FROM NYC DEPARTMENT OF FINANCE TAX MAP.
3. UST - UNDERGROUND STORAGE TANK.
4. TEMPORARY WELL INSTALLED AT TRC-GW-02, AND TRC-GW-03.
5. SAMPLING LOCATIONS INCLUDING MONITORING WELLS, SOIL BORING, AND SOIL / SUB-SLAB VAPOR SAMPLING LOCATIONS AND FLOOR DRAINS AND LOCATION OF ANOMOLY/POTENTIAL UST, WERE SURVEYED BY PERFECT POINT LAND SURVEYING ON AUGUST 11, 2022.
6. PHYSICAL EVIDENCE OF IMPACTS (I.E., ODORS, STAINING, AND/OR ELEVATED PHOTOIONIZATION DETECTOR [PID] READINGS) WERE IDENTIFIED AT TRC-SB-19, TRC-SB-19-N, TRC-SB-19-E, TRC-SB-19-S, AND TRC-SB-19-W.
7. IF CONTAMINATION IS IDENTIFIED IN TRC-SB-22, A PERMANENT MONITORING WELL MAY ALSO BE INSTALLED IN THAT LOCATION.

PROJECT: NEW YORK CITY SCHOOL CONSTRUCTION AUTHORITY
SUPPLEMENTAL REMEDIAL INVESTIGATION WORK PLAN - BCP SITE NO. C224327
8802 5TH AVENUE AND 429 89TH STREET
BLOCK: 6065, LOTS: 28 & 39
BROOKLYN, NEW YORK 11209

TITLE:

PROPOSED SAMPLE LOCATION PLAN

DRAWN BY:	H. DELGADO	PROJ NO.:	565027
CHECKED BY:	O. MASKELL	FIGURE 1	
APPROVED BY:	E. KESSLER		
DATE:	FEBRUARY 2024		

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FILE NO.: Fig 1 - Prop. Samp. Loc. Plan (K20F).dwg