NYSDEC BROWNFIELD CLEANUP PROGRAM

Excavation Work Plan – BCP # C224329
April 28, 2022

conducted at:

585 Union Street
577-599 Union Streeet (also known as 586 Sackett Street)
Brooklyn, New York
County Tax Map Designation: *Block 433; Lot 28*

Submitted to:

Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, New York, 12233-7020

Prepared For:

Gowanus Union Street LLC
19 West 24th Street, 12th Floor
New York, NY, 10010

IEC Project # 14729

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LIST OF ACRONYMS

Acronym	Definition
DER	Division of Environmental Remediation
E.I.T.	Engineer-in-Training
EWP	Excavation Work Plan
NYS DEC	New York State Department of Environmental Conservation
NYS DOH	New York State Department of Health
NYC RR	New York Codes, Rules, and Regulations
TCL	Target Compound List
QEP	Qualified Environmental Professional

CERTIFICATION

I, Xin Yuan am a Professional Engineer (PE) as defined in §43-140. I have primary direct responsibility for implementation of the Excavation Work Plan (EWP) for the (585 Union Street, Brooklyn, NY) Site (DEC Site # C224329).

I certify that the EWP has a plan for the handling of soil, fill and other materials during excavation at the property in accordance with applicable City, State and Federal laws and regulations. This provisions to control nuisances during invasive work, including dust suppression.

Xin Yuan, P.E.

Name

Signature

4/28/2022

Date

1 INTRODUCTION

1.1 Notification

At least 15 days prior to the start of any activity that is anticipated to encounter residual materials located on the Site, the Site owner or their representative will notify the New York State department of Environmental Conservation (NYSDEC). The following table includes contact information for the above notification. The information on this table will be updated, as necessary, to provide accurate contact information. A full listing of Site-related contact information is provided below:

Notifications	
Name	**Contact Information**
NYSDEC Remediation Project Manager: Rafi Alam	(518) 402-8606 Rafi.Alam@dec.ny.gov
NYSDOH Project Manager: Public Health Specialist: Mark Sergott	(518) 402-7860 Mark.sergott@health.ny.gov

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent of excavation, plans/drawings, estimated volumes of contaminated soil to be excavate.
- A summary of environmental conditions anticipated to be encountered in the work areas, including the nature and concentrations levels of contaminants of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling.
- A schedule for the work, detailing the start and completion of all intrusive work.
- A summary of the applicable components of this Excavation Work Plan (EWP).
- A statement that the work will be performed in compliance with the EWP and 29 Code of Federal Regulations 1910.120.
- A copy of the contractor's health and safety plan, in electric format.
- Identification of disposal facilities for potential waste streams.
- Identification of sources of any anticipated backfill, along with all required chemical testing results.

1.2 Soil Screening Methods

Visual, olfactory, and instrumental-based (e.g. photoionization detector [PID]) soil screening will be performed by a qualified environmental professional (EP) during all excavations into known or potentially contaminated material (remaining contamination). Soil screening will be performed when invasive work is done and will include all

excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the Certificate of Completion.

Soils will be segregated based on previous environmental data and screening results into material that requires offsite disposal and material that requires testing to determine if the material can be reused onsite as soil beneath a cover or if the material can be used as cover soil. Further discussion of offsite disposal of materials and onsite reuse is provided in Section 1.6 of this EWP.

1.3 Soil Staging Methods

Any exposed soil or stockpiled material will be covered with 8-mil minimum polyethylene sheeting.

Soil stockpiles will be continuously encircled with a berm and/or silt fence. Hay bales will be uses as needed near catch basins, surface waters and other discharge points.

Stockpiled material will always be kept covered with appropriately anchored tarps. Stockpiles will be routinely inspected, and damaged tarp covers will be promptly replaced.

Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by the NYSDEC.

1.4 Materials Excavation and Load-Out

A qualified environmental professional (QEP) or person under their supervision will oversee all invasive work and excavation. Load out is not anticipated for the purposes of this EWP pertaining to the installation of eight (8) test pits, however, should it be needed, a QEP will oversee load-out of all excavated material.

The owner of the property (if applicable) and its contractors are responsible for safe execution of all intrusive and other work performed under this EWP. The presence of utilities and easements on the Site will be investigated by the QEP. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the Site.

Loaded vehicles leaving the Site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate federal, state, local and New York State Department of Transportation requirements. A truck ash will be operated onsite, as appropriate. The QEP will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the Site. The truck wash waters will be collected and disposed of

offsite in an appropriate manner. Locations where vehicles enter or exit the Site shall be inspected daily for evidence of offsite soil tracking.

The QEO will be responsible for ensuring that all egress points for truck and equipment transport from the Site are clean of dirt and other materials derived from the Site during intrusive excavation activities. Cleaning of the adjacent streets will be performed daily, at a minimum, as needed to maintain a clean condition with respect to site-derived materials.

1.5 Materials Transport Offsite

Material transport offsite is not anticipated for the purposes of this EWP pertaining to the installation of eight (8) test pits. Should transport of materials be needed, it will be performed by licensed haulers in accordance with appropriate local, state and federal regulations, including 6 New York Codes, Rules, and Regulations (NYCRR) Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Material transported by trucks exiting the Site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used. Truck transport routes will be determined based on where the proposed excavation will occur.

The most appropriate truck route will account for: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting offsite queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport.

Trucks will be prohibited from stopping and idling in the neighborhood outside the project Site. Egress points for truck and equipment transport from the Site will be kept clean of dirt and other materials during Site remediation and development. Queuing of trucks will be performed onsite in order to minimize offsite disturbance. Offsite queuing will be prohibited.

1.6 Materials Disposal Offsite

Material disposal offsite is not anticipated for the purposes of this EWP pertaining to the installation of eight (8) test pits. Should disposal be needed, all material excavated and removed from the Site will be treated as contaminated and regulated material and will be transported and disposed of in accordance with all local, stat (including 6 NYCRR Part 360) and federal regulations. If disposal of material from this Site is proposed for unregulated offsite disposal (i.e., clean soil removed for developmental purposes), a formal request with an

associated plan will be made to the NYSDEC. Unregulated offsite management of materials from the Site will not occur without formal NYSDECC approval.

Offsite disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate (i.e., hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, construction/demolition recycling facility, etc.). Actual disposal quantities and associated documentation will be reported to the NYSDEC. This documentation will include waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Non-hazardous historic fill and contaminated soils taken offsite will be handled, at a minimum, as a Municipal Solid Waste per 6 NYCRR Part 360-1.2. Material that does not meet Unrestricted Soil Cleanup Objectives is prohibited from being taken to a New York State recycling facility (6 NYCRR Part 360-16 Registration Facility).

1.7 Materials Reuse Onsite

Chemical criteria for onsite reuse of material is subject to approval by NYSDEC prior to excavation work.

The QEP will ensure that procedures defined for materials reuse are followed and that unacceptable material does not remain onsite. Contaminated onsite material, including historic fill and contaminated soil, that is acceptable for reuse onsite will be placed below the demarcation layer or impervious surface, and will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines.

1.8 Fluids Management

All liquids to be removed from the Site, including but not limited to, decontamination waters and groundwater monitoring well purge and development waters, will be handled, transport, and disposed in accordance with applicable local, state, and federal regulations. Dewatering, purge, and development fluids will not be recharged back to the land surface or subsurface of the Site, and will be managed offsite, unless prior approval is obtained from NYSDEC.

Discharge of water generated during large-scale construction activities to surface waters (i.e., a local pond, stream, or river) will be performed under a State Pollutant Discharge Elimination System permit.

1.9 Construction Dewatering

Dewatering is not anticipated for the purposes of this EWP pertaining to the installation of eight (8) test pits on the Site. Should dewatering be needed at the Site, it will be done utilizing a pumping system, settling tanks, and possible treatment system.

Dewatering fluids are to be discharged to the local sanitary sewer system after treatment and under approved regulatory permit. Alternatively, the contractor may provide containerized storage to allow for testing of groundwater prior to, and after, treatment and before disposal. If required, Impact Environmental field personnel may sample dewatering treatment system liquids from either a discharge standpipe or a storage tank. Dewatering samples will be submitted to an NYSDEP ELAP-certified laboratory for analysis.

1.10 Equipment Decontamination

Prior to arrival on the Site and between samples, sampling tools/equipment will be decontaminated using the following methods: 1) remove adherent soil material with stiff bristle brush; 2) wash with laboratory grade glassware detergent or Alconox; 3) steam clean interior and exterior of screen auger sampler and all associated augers; and 4) allow equipment to air dry.

1.11 Backfill from Offsite Sources

All materials proposed for import onto the Site will be approved by the QEP. A Request to Import/Reuse Dill or Soil form (http://www.dec.ny.gov/regulations/67386.html) will be prepared and submitted to the NYSDEC Project Manager allowing a minimum of 5 business days for review.

Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the Site.

All imported soils will meet the backfill and cover soil quality standards established in 6 NYCRR 375-6.7(d) and New York State Division of Environmental Remediation (DER)-10 Section 5.4(e). Based on an evaluation of the land use, the resulting soil quality standards are listed in Table 375-6.8(b) for restricted-residential use. Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this Site, will not be imported onto the Site without prior approval by NYSDEC. Solid waste will not be imported onto the Site.

Trucks entering the Site with imported soils will be securely covered with tight-fitting covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases. All stockpiles will be graded for stability and stored on poly sheeting.

1.12 Stormwater Pollution Prevention

If applicable, barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by the

NYSDEC. All necessary repairs shall be made immediately. Accumulated sediments will be removed as required to keep the barrier and hay bale check functional. All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials. Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

Erosion and sediment control measures shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Silt fencing or hay bales will be installed around the entire perimeter of the construction area.

1.13 Excavation Contingency Plan

If underground tanks or other previously unidentified contaminant sources are found during excavations or development related to construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition.

Sampling will be performed on product, sediment, and surrounding soils, etc., as necessary, to determine the nature of the material and proper disposal method. Chemical analysis will be performed for a full list of analytes (Target Analyte List metals; Target Compound List [TCL] volatiles and semi-volatiles, [TCL] pesticides, and polyvinyl chlorinated biphenyls [PCBs]), unless the Site history and previous sampling results provide sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC for approval prior to sampling.

Identification of unknown or unexpected contaminated media identified by screening during invasive site work will be promptly communicated by phone to NYSDEC's Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included to the NYSEDC in subsequent reporting.

1.14 Community Air Monitoring Plan

Continuous air monitoring will be conducted for protection of the downwind community during site work activities, per the NYSDOH generic Community Air Monitoring Plan in DER-10 Appendix 1A. Continuous air monitoring for volatile organic compounds will be conducted by a minimum of one dedicated person and will use approved instrumentation during ground intrusive activities. The following action levels have been established for air monitoring.

Parameter	Action Level	Action
Total particulates	2.5 times background and/or greater than 150 micrograms per cubic meter	Work ceases until mitigated
Volatile organic compounds	5 parts per million above background (15-minute average) at the downwind perimeter of the work zone	Work ceases until mitigated
Visible dust	Visible dust as determined by the Engineer	Work ceases until mitigated

1.15 Odor Control Plan

This Odor Control Plan is capable of controlling emissions of nuisance odors offsite. Specific odor control methods to be used on a routine basis will include odor masking agents. If nuisance odors are identified at the Site boundary, or if odor complaints are received, work will be halted, and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the halt of work, is the responsibility of the remedial party's Remedial Engineer, and any measures that are implemented will be provided to the NYSEDC in subsequent reporting.

All necessary means will be employed to prevent onsite and offsite nuisances. At a minimum, these measures will include: (a) limiting the area of open excavations and size of soil stockpiles; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (a) direct load-out of soils to trucks for offsite disposal; (b) use of chemical odorants in spray or misting systems; and (c) use of staff to monitor odors in surrounding neighborhoods.

If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to onsite conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering the excavation and handling areas in a temporary containment structure equipped with appropriate air venting/filtering system.

1.16 Dust Control Plan

A dust suppression plan that addresses dust management during invasive onsite work will include, at a minimum, the following items:

- Dust suppression will be achieved by using a dedicated onsite water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- Onsite roads will be limited in total area to minimize the area required for water truck sprinkling.

1.17 Other Nuisances

A plan for rodent control will be developed and utilized by the contractor prior to and during site clearing and grubbing, and during all remedial work.

A plan will be developed and utilized by the contractor for all remedial work to ensure compliance with local noise control ordinances.

1.18 Daily Reporting

Daily reports proving a general summary of the activities for each day of active remedial work will be submitted to the NYSDEC and NYSDOH project managers by the end of each business day. The reports will include:

- BCP Site number and statement of the activities performed that day and an update of progress made as well as locations of excavation and other remedial work performed;
- Quantities of material imported and exported from the Site;
- Status of on-Site soil/fill stockpiles;
- A summary of all citizen complaints, with relevant details basis of complaint; actions taken, etc.);
- A summary of CAMP results noting all exceedances; and
- Photographs of notable Site conditions and activities.

The frequency of the reporting period may be revised in consultation with the NYSDEC and NYSDOH project managers based on the planned project tasks. Daily reports are not intended to be the primary mode of communication for notification to NYSDEC and NYSDOH of emergencies (accidents, spills), or other sensitive or time critical information. However, such information will be included in the daily reports.