
Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.
21 Penn Plaza, 360 West 31st Street, 8th Floor New York, NY 10001 T: 212.479.5400 F: 212.479.5444

To: Meghan Medwid, Heidi Dudek (NYSDEC)

From: Brian Gochenaur (Langan)

Info: Michael Burke, Kimberly Semon (Langan)

Date: November 17, 2020

Re: Supplemental Soil Vapor Investigation Work Plan
1607 Surf Avenue
Brooklyn, New York
Langan Project No.: 170599501
NYS BCP Site No. C224313

Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. (Langan) has prepared this Supplemental Soil Vapor Investigation Work Plan for the property located at 1607 Surf Avenue, Brooklyn, New York. The site is located in the Coney Island neighborhood of Brooklyn and is identified on the Borough of Brooklyn Tax Map as Tax Block 7062, Lot 28. The purpose of this investigation is to determine whether impacted soil vapor emanating from the site is potentially impacting surrounding properties. The following scope of work has been developed to supplement the Remedial Investigation summarized in the draft Remedial Investigation Report (RIR) dated June 3, 2020 and draft Remedial Action Work Plan (RAWP) dated June 8, 2020, and to satisfy the request from the New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health to further inform the human health exposure assessment and determine if the site is a significant threat.

SOIL VAPOR POINT INSTALLATION

Seven soil vapor points will be installed using direct-push technology in accordance with the New York State Department of Health (NYSDOH) "Guidance for Evaluating Soil Vapor Intrusion in the State of New York, with updates" (October 2006). A plan showing the proposed soil vapor locations is included as Figure 1. Soil vapor points will be installed by advancing a vapor probe to two feet above the groundwater table. The soil vapor collection points will consist of inert sample tubing (i.e., polyethylene), with the tubing at each of the soil vapor points attached to a 1.875-inch polyethylene implant. The annulus (i.e., the sampling zone) around the installed implants and/or tubing will be filled with a clean, coarse sand pack followed by a hydrated bentonite seal to surface grade.

SAMPLING METHODOLOGY AND ANALYSIS

Samples will be collected in general accordance with the NYSDOH "Guidance for Evaluating Soil Vapor Intrusion in the State of New York, with updates" (October 2006). Before collecting vapor samples, a minimum of three vapor probe volumes (i.e., the volume of the sample implant and tubing) will be purged from each sample point at a rate of less than 0.2 liters per minute using a

Memorandum

Supplemental Soil Vapor Investigation Work Plan
1607 Surf Avenue
Brooklyn, New York
NYS BCP Site No. C224313
November 17, 2020 Page 2 of 2

RAE Systems MultiRAE® meter. Purged soil vapor will be monitored for volatile organic compounds (VOC) and methane with the MultiRAE® during this process.

A helium tracer gas will be used in accordance with NYSDOH protocols to serve as a quality assurance/quality control (QA/QC) technique to document the integrity of each soil vapor sampling point seal before and after sampling. The tracer gas will be introduced into a container surrounding the vapor point and seal. Helium will be measured from the sampling tube and inside the container. If the sample tubing contains more than 10% of the tracer gas concentration that was introduced into the container, then the seal is considered compromised and should be enhanced or reconstructed to reduce outside air infiltration.

After the integrity of each seal is confirmed, soil vapor samples will be collected into laboratory-supplied, batch-certified clean 6-liter Summa® canisters with calibrated flow controllers. Soil vapor samples will be collected over a 2-hour sampling period. An ambient air sample will be collected at a height above the ground to represent the breathing zone (about 3 to 5 feet). The ambient air sample will be collected into laboratory-supplied, batch-certified clean 6-liter Summa® canisters with calibrated flow controller over a two-hour sampling period (concurrently with the soil vapor samples). All vapor samples will be analyzed for VOCs by United State Environmental Protection Agency (USEPA) Method TO-15. Category B deliverables will be requested from the laboratory and a Data Usability Summary Report (DUSR) will be prepared.

REPORTING

Soil vapor analytical results will be compared to the NYSDOH Guidance for Evaluating Soil Vapor Intrusion. We will revise the draft RIR to include sampling methodology, observations, sampling logs, analytical results, and conclusions. Validated, tabulated sampling results will be included in the updated RIR after the data is validated. We will also update the draft RAWP with any necessary changes.



Legend

- Site Boundary
- Lot Boundary
- + Proposed Soil Vapor Locations

Notes:
 1. Aerial imagery provided through Langan's subscription to NearMap, imagery dated 21 September 2019.
 2. Parcel boundaries provided through the New York City Department of Planning's MapPLUTO 20v1, last updated 2020.

LANGAN

21 Penn Plaza, 360 West 31st Street, 8th Floor
 New York, NY 10001-2727
 T: 212.479.5400 F: 212.479.5444 www.langan.com

Langan Engineering & Environmental Services, Inc.
 Langan Engineering, Environmental, Surveying,
 Landscape Architecture and Geology, D.P.C.
 Langan International LLC
 Collectively known as Langan

Project
1607 SURF AVENUE
 BLOCK No. 7062, LOT No. 28
 CONEY ISLAND
 BROOKLYN NEW YORK

Drawing Title
SAMPLE LOCATION PLAN

Project No. 170599501	1
Date 11/10/2020	
Scale 1" = 50'	
Drawn By IHB	
Submission Date	