June 15, 2026

Haala Al-Hadithy
Assistant Engineer
New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 2
47-40 21st Street, Long Island City, NY 11101

Re: Soil Vapor Extraction Pilot Test Work Plan
Former Refron Inc. Gas Reclamation Site (BCP Site No: C241285)
32-10 38th Avenue, 32-20 38th Avenue & 38-11 33rd Street
Queens, New York 11101

Dear Ms. Al-Hadithy:

This Soil Vapor Extraction (SVE) Pilot Test Work Plan was prepared by AMC Engineering, PLLC (AMC) for the Former Refron Inc. Gas Reclamation Site located in Long Island City, Queens, New York. The site location is provided in Figure 1. This SVE Pilot Test Work Plan was prepared to support the remedial action and design development process of a full-scale SVE system at the Site.

Site Background

38-13 33rd Street LLC and 32-20 38th Avenue LLC (the "Applicant") enrolled in the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) to investigate and remediate the property located at 38-18 33rd Street and 32-20 38th Avenue in the Long Island City section of Queens County, New York (the "Site"). A Brownfield Cleanup Agreement (BCA) was executed by the NYSDEC on March 11, 2025 (Site No. C241285), with the Applicant classified as a Volunteer. The New York State Brownfield Cleanup Agreement Index Number is C241285-01-25, and the Site Number is C241285. A BCA Amendment was then submitted to the NYSDEC on January 22, 2026, to add a tax parcel (Tax Block: 381, Lot 12) at 32-10 38th Avenue to the BCP Site, and the Amendment was approved on March 20, 2026.

The Site, addressed as 32-10 38th Avenue, 38-18 33rd Street, and 32-20 38th Avenue, is located on the southwest corner of the 38th Avenue and 33rd Street intersection in Queens County. The Site consists of three adjacent tax lots totaling approximately 32,031 square feet (0.735 acres). The legal description of the Site is New York City Department of Finance Tax Block 381, Lots 5, 12, and 16. Lot 5 is alternately addressed as 38-11 through 38-19 32nd Street, 38-12 through 38-20

33rd Street, and 32-12 through 32-18 38th Avenue. Lot 12 is alternately addressed as 32-11 38th Avenue. Lot 16 is alternately addressed as 38-02 through 38-10 33rd Street.

The remedial investigation (RI) conducted at the Site identified the presence of chlorinated volatile organic compounds (CVOCs) in soil, groundwater, and soil vapor beneath the Site.

Trace detections of CVOCs were observed in collected soil samples during the RI and were found to exceed their respective NYSDEC Ambient Water Quality Standards (AWQS) Guidance Values in groundwater, suggesting mitigation in soil vapor. Therefore, the areas of the Site that will not be excavated for a new cellar, and the southern portions of the Site where elevated concentrations were identified, will include the SVE. The highest CVOC concentrations in both groundwater and soil vapor are in proximity to each other in the south and central portions of the Site. Since concentrations of CVOCs were also detected in the soil, the presence of CVOCs in groundwater and soil vapor is indicative of an on-site source.

As discussed in an April 2026 meeting with NYSDEC, an SVE is required along the southern portion of the Site, where limited excavation will occur.

SVE Pilot Test

A soil vapor extraction (SVE) pilot test will be conducted to evaluate the feasibility and effectiveness of an SVE system as a remedial technology to address CVOCs present in the vadose zone beneath the Site. The pilot test is intended to generate site-specific data necessary to support the design and operation of a full-scale SVE system and to assess the subsurface flow characteristics.

The pilot test will consist of a pneumatic conductivity test in which vacuum pressure is applied to a single extraction well while monitoring pressure response at surrounding observation wells. The test will be performed in the area of the Site exhibiting elevated concentrations of CVOCs in soil vapor and groundwater, where future remedial excavation is limited.

The primary objectives of the pilot test are to:

- Evaluate the radius of influence (ROI) achieved by an extraction well operating under vacuum,
- Assess subsurface vapor permeability and pneumatic conductivity,
- Evaluate airflow characteristics within the vadose zone,
- Determine the degree of vacuum propagation through site soils,
- Identify potential preferential pathways that may influence system performance,

- Assess the suitability of SVE as a remedial technology for the Site by testing if the vacuum at the most remote observation well is greater than or equal to 1" WC, and
- Generate design parameters for development of a full-scale SVE system.

SVE Extraction Well and Observation Well Installation

Data generated during the conductivity testing program will be utilized to develop a full-scale SVE system design. Four SVE wells, consisting of one extraction well (SVE-A) and three observation wells (SVE-B, C, and D), will be installed in the southern portion of the Site utilizing a direct-push drill rig. All four SVE wells will be installed to a depth of 13 feet below grade surface (bgs) with direct-push drilling technology. All four wells will consist of a 12-foot screen and 1-foot riser constructed of SCH40 PVC with 0.020-inch slot screen. Before installation, AMC will confirm groundwater depth and adjust well depths accordingly so that the wells are screened above the water table. The SVE wells will be located 25 feet apart and sealed at the riser interface with bentonite. Figure 2 shows the location of SVE wells.

Well ID	Purpose	Well Diameter
SVE-A	Extraction	2-inch
SVE-B	Observation	1-inch
SVE-C	Observation	1-inch
SVE-D	Observation	1-inch

Pilot Test Procedures

The pilot test will be conducted following the installation of one extraction well and three observation wells. Prior to testing, all wells will be inspected, and atmospheric pressure measurements will be recorded. The conductivity test will be performed using a regenerative blower such as Rotron (1-hp) blower or equivalent equipment capable of maintaining a stable extraction vacuum 1" WC and airflow rate 100 CFM. A 55-gallon drum containing granular activated carbon (GAC) will be connected to the blower to treat off-gas and protect site workers. The blower will be powered with a diesel generator. The SVE conductivity test will be performed using the following procedures:

- Connect the blower suction line to the extraction well,
- Initiate blower operation and establish constant vacuum,
- Measure and record extraction well vacuum and air flow rate,
- Operate the blower for approximately 20 minutes to allow subsurface conditions to stabilize,

- Measure and record vacuum responses at each observation well using a calibrated manometer,
- Record vacuum response data at regular intervals throughout the test period, and
- Document all field observations and operational parameters.

Vacuum measurements will be collected using a calibrated manometer capable of measuring low-pressure differentials. During the pilot test, extraction well vacuum (inches of water column), air flow rate (cubic feet per minute), observation well vacuum response, atmospheric pressure, ambient temperature, well construction details, well spacing, and well locations will be recorded:

Multiple extraction rates may be evaluated during the test to assess the relationship between airflow and vacuum propagation. The pilot test will be considered successful if measurable vacuum is observed at one or more observation wells and the resulting data demonstrate sufficient subsurface permeability to support implementation of an SVE system. Should the pilot test indicate limited vacuum propagation or inadequate subsurface permeability, alternative remedial approaches or modifications to the SVE design will be evaluated and presented to NYSDEC and NYSDOH.

Health and Safety / Community Air Monitoring

All intrusive activities associated with the delineation sampling and SVE pilot test will be completed in accordance with the Community Air Monitoring Plan (CAMP) and Health and Safety Plan (HASP) included in the approved Remedial Action Work Plan (RAWP). Appropriate engineering controls, dust suppression measures, and site management procedures will be implemented throughout field activities to minimize potential exposure to site contaminants and prevent off-site migration of impacted materials.

Reporting

The field activities will be reported to the NYSDEC in a daily report by noon the next day of fieldwork.

The results of the SVE pilot test will be summarized in a technical memorandum and incorporated into the forthcoming RAWP Addendum. The report will include boring logs, laboratory analytical data, figures depicting sample locations, conductivity testing data, and conclusions regarding the extent of lead impacts.

Certification

I, Ariel Czemerinski, certify that I am currently a Professional Engineer as defined in 6 New York Codes, Rules, and Regulations (NYCRR) Part 375 and that this Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the Division of Environmental Remediation (DER) Technical Guidance for Site Investigation and Remediation (DER-10) and Green Remediation (DER-31).

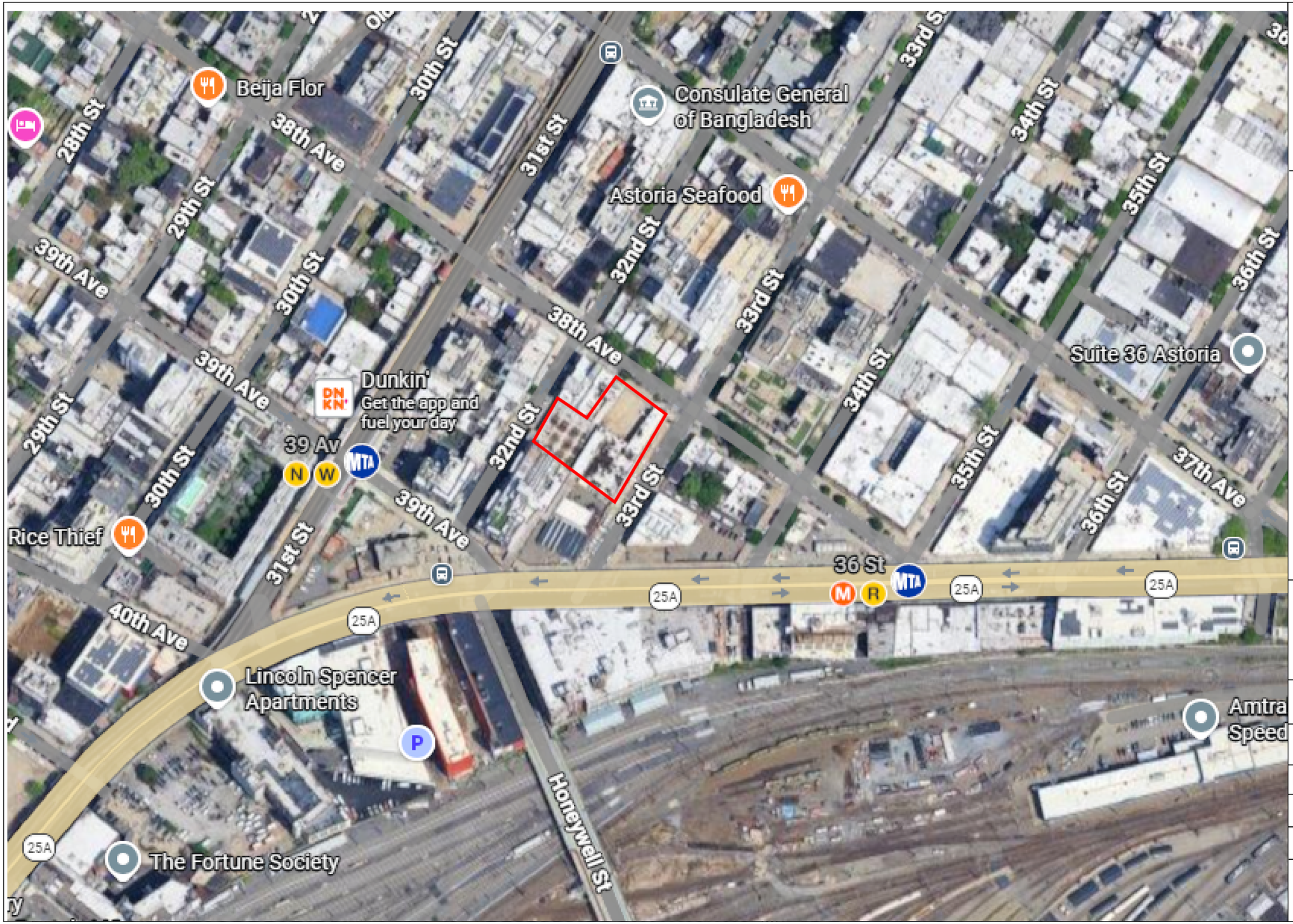
Signature: _____

STATE OF NEW YORK
ARIEL CZEMERINSKI
076508
LICENSED PROFESSIONAL ENGINEER

6/15/26

Ariel Czemerinski
Remedial Engineer

Enc.
Figure 1: Site Location
Figure 2: SVE Well Locations



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Legend:

Approximate BCP Site Boundary

Notes:

1. Base Map provided by Google Earth

Scale: NOT TO SCALE

Figure No.	1
Figure Name:	SITE LOCATION MAP
Report:	SVE PILOT TEST WORK PLAN
Date:	5/20/2026
Drawn By:	KB
Site Address:	32-10 38TH AVENUE, 32-20 38TH AVENUE & 38-13 33RD STREET QUEENS, NEW YORK

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Legend:

- Site Boundary
- SVE Observation Well ID and Location
- SVE Extraction Well ID and Location

Notes:

1. All features are approximate
2. SVE Well, A, is 2" diameter
3. SVE Wells, B,C, D, are 1" diameter

Scale: 0 25' 50'

Figure No.	1
Figure Name:	SAMPLING PLAN
Report:	SVE PILOT TEST WORK PLAN
Date:	5/18/2026
Drawn By:	KB
Site Address:	32-10 38TH AVENUE, 32-20 38TH AVENUE & 38-13 33RD STREET QUEENS, NEW YORK