August 20, 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 test is conducted to determine the radius of influence (which will be the distance at which the vacuum is 0.1 inches WC.

The primary objectives of the pilot test are to:

- Determine 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,

- 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. Five SVE wells, consisting of one extraction well (SVE-A) and four observation wells (SVE-B, C, D, and E), will be installed in the southern portion of the Site utilizing a direct-push drill rig. All five SVE wells will be installed to a depth of 13 feet below grade surface (bgs) with direct-push drilling technology. All five wells will consist of a 8-foot riser and a 5-foot screen constructed of SCH40 PVC with 0.020-inch slot screen. The extraction well will have a 2" well diameter instead of a traditional 4" diameter due to the observation wells being 1".

Prior to drilling, AMC will confirm groundwater depth at the existing wells onsite using a water level probe to determine groundwater table depth for proper extraction well screen setting. The SVE wells will be sealed at the riser interface with bentonite. Figure 2 shows the location of SVE wells.

Well ID	Purpose	Distance from A (ft)	Well Diameter
SVE-A	Extraction	0	2-inch
SVE-B	Observation	5	1-inch
SVE-C	Observation	10	1-inch
SVE-D	Observation	20	1-inch
SVE-E	Observation	30	1-inch

Pilot Test Procedures

The pilot test will be conducted following the installation of one extraction well and four 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 (1.5-hp) blower or equivalent equipment capable of maintaining a stable extraction vacuum 10"-15" 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. In the absence of the concrete cover, a 20 mil min vapor barrier will be installed to cover the tested area (as indicated in figure 2) to prevent indoor air extraction during the test. The barrier will extend a minimum of 5 ft beyond the observation wells and will be sealed around all penetrations with tape or any other adequate material. The discharge of the blower will pass through granular activated carbon drums (55gal) and that will exhaust to the atmosphere. 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,
- Collection of a Summa Canister soil vapor sample at the pre GAC location,
- Operate the blower for approximately 20 minutes to allow subsurface conditions to stabilize,
- Measure and record vacuum responses at each observation well using a digital manometer, and
- Document all field observations. After the initial 20-minute period is reached, at least 3 vacuum readings from each of the observation wells will be taken at 15 minute intervals. Stabilization will be established when values from two consecutive readings are within 1% of each other.

Test Parameter	**Description**	**Units**	**Measurement Method / Equipment**
Extraction Well Vacuum	Vacuum applied at the SVE-A extraction wellhead during blower operation	inches WC	Digital Manometer
Air Flow Rate	Volumetric extraction flow rate at the blower	ft/min	Anemometer
Observation Well Vacuum Readings	Vacuum response measured at observation wells B, C, D, and E	inches WC	Digital manometer
Ambient Temperature	Ambient air temperature recorded during testing	°F	Thermometer
Field Screening (PID) Readings	Field screening of pre- and post-GAC sampling ports	ppm	Photoionization detector (PID)
Additional Equipment:			
Vapor Barrier- 20 mil HDPE (stego wrap or similar)			
One 55gal GAC 20x40 vapor phase (General Carbon or similar)			
1. 1.5 HP Regenerative Blower (Ametek Rotron or similar)			

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, ambient temperature, well construction details, and well locations will be recorded.

At minimum, 2 extraction rates will 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 demonstrates 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 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.

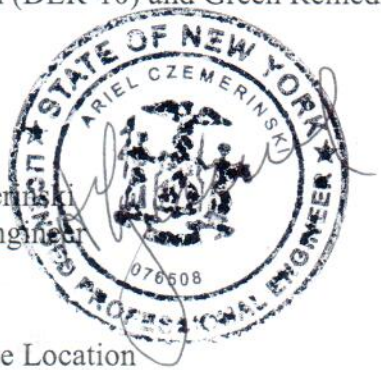
Implementation and Reporting Schedule

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 RAWP Addendum and Remedial Design Technical Memorandum will be submitted to the NYSDEC for review and approval within 90 days of approval of this Workplan.

Certification

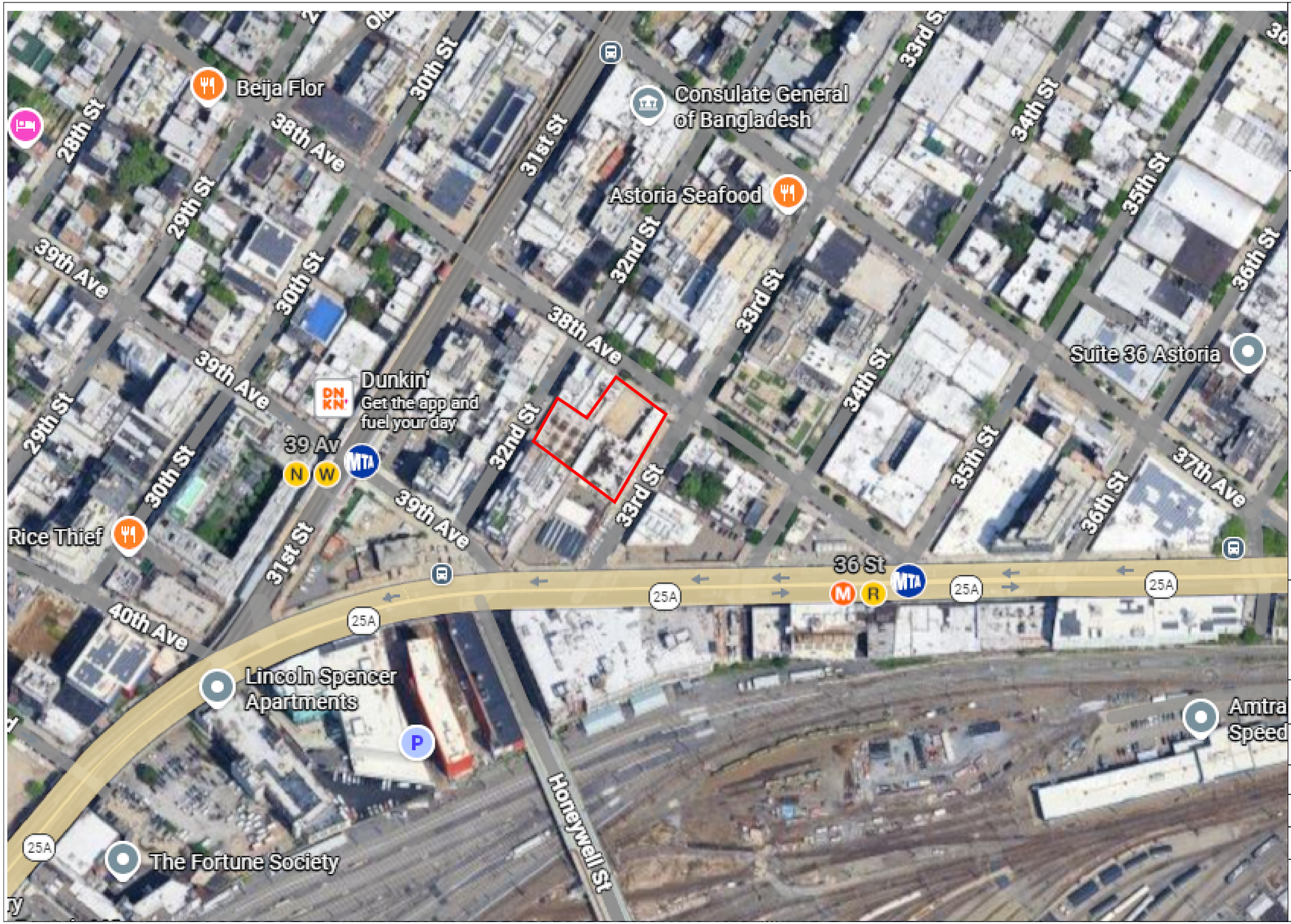
I, Ariel Czemerinski, certify that I am currently a Professional Engineer as defined in 6 New York Codes, Rules, and Regulations (NYCRR) Part 375 and that this Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the Division of Environmental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



Ariel Czemerinski
Remedial Engineer

Enc.

Figure 1: Site Location
Figure 2: SVE Well Locations
Figure 3: Proposed Well Construction Details



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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 QUEENS, NEW YORK



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Legend:

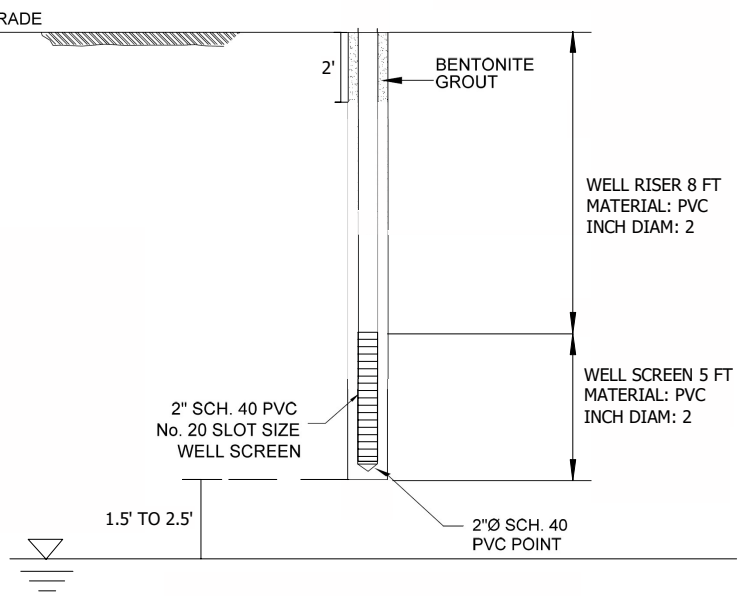
- Site Boundary
- SVE Extraction Well ID and Location
- SVE Observation Well ID and Location
- Area of Vapor Barrıer

Notes:

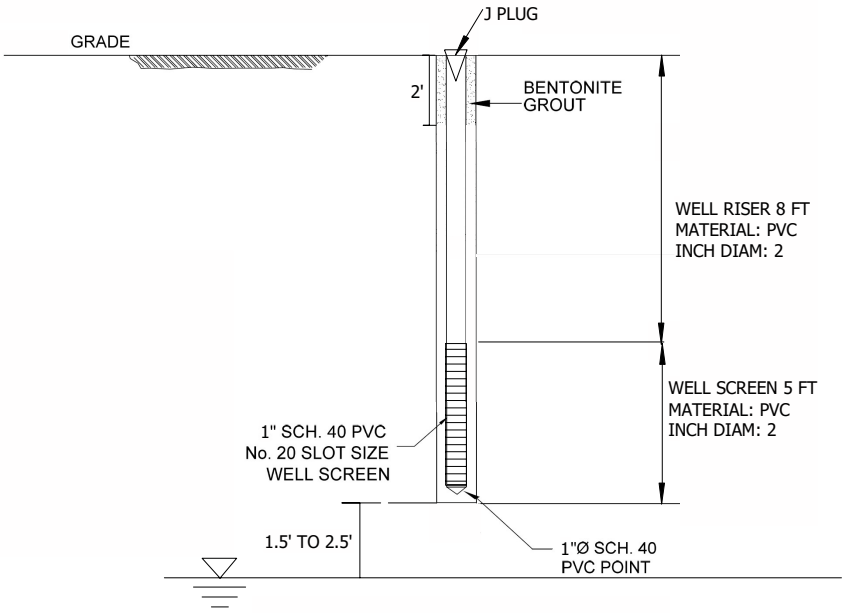
1. All features are approximate
2. SVE Well, A, is 2" diameter
3. SVE Wells, B,C, D, are 1" diameter

Scale: 0 25' 50'

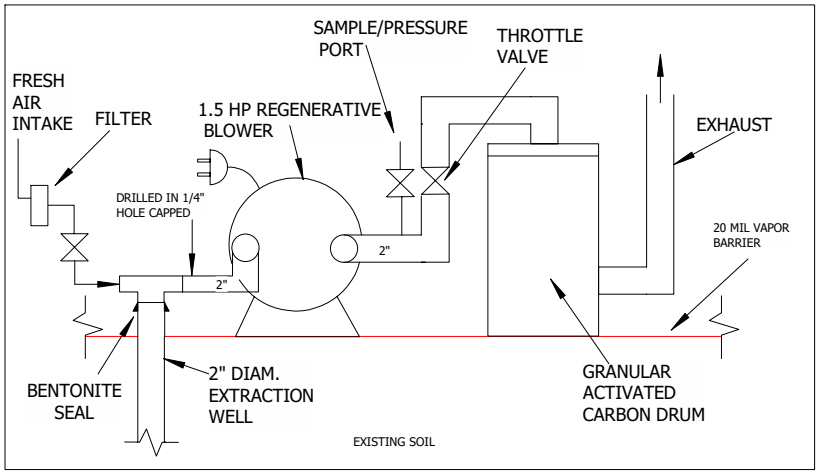
Figure No.	2
Figure Name:	SVE WELL LOCATIONS
Report:	SVE PILOT TEST WORK PLAN
Date:	7/15/2026
Drawn By:	KB
Site Address:	32-10 38TH AVENUE, 32-20 38TH AVENUE QUEENS, NEW YORK



EXTRACTION WELL DETAIL (NTS)



VACUUM MONITORING POINT DETAIL (NTS)



EXTRACTION WELL EFFLUENT DETAIL (NTS)

AMC ENGINEERING PLLC
18-36 42nd Street
Astoria, NY 11105
(718) 545-0474

PROJECT

38-18 33RD STREET
LONG ISLAND CITY, NY 11101

TITLE:

SVE PILOT TEST WORK PLAN
FIGURE 3: PROPOSED WELL CONSTRUCTION DETAILS

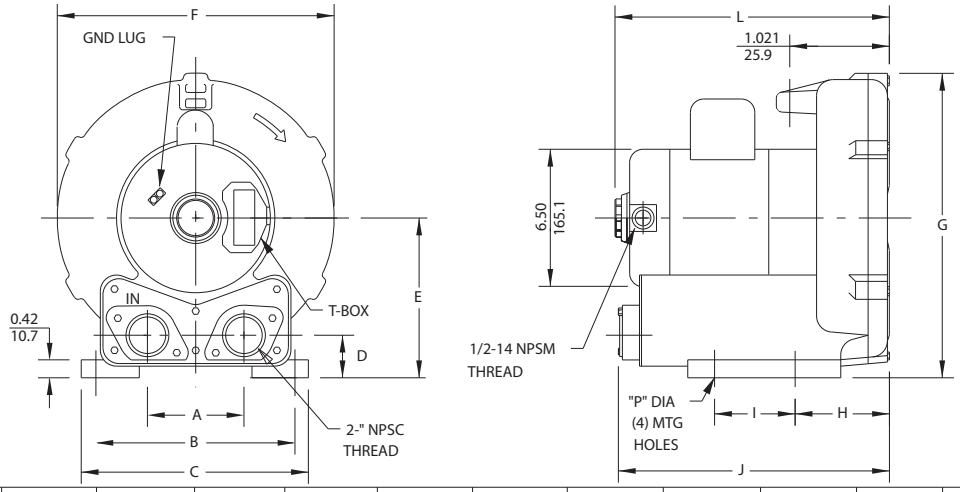
SEAL & SIGNATURE:

DATE: JULY 15, 2026
PROJECT No:
DRAWING BY: AK
CHK BY: AK
DWG No:
CADD FILE No:

DR 404/454/505/513/656

ROTRON®

Spa Blowers



IN
MM

NOTES
1 DRAWING NOT TO SCALE, CONTACT FACTORY FOR SCALE CAD DRAWING.
2 CONTACT FACTORY FOR BLOWER MODEL LENGTHS NOT SHOWN.

MODEL	A (IN/MM)	B (IN/MM)	C (IN/MM)	D (IN/MM)	E (IN/MM)	F (IN/MM)	G (IN/MM)	H (IN/MM)	I (IN/MM)	J (IN/MM)	K (IN/MM)	L (IN/MM)
DR404AQ58M	4.75/120.7	8.93/226.8	10.12/257	192/48.8	6.28/159.5	11.5/292.1	12.16/308.9	3.0/76.2	3.75/95.3	12.88/372.2	.59/15	12.91/327.9
DR454V58	4.75/120.7	10.30/261.6	11.38/289.1	1.92/48.8	6.98/177.3	12.55/318.8	13.52/343.4	3.25/82.6	4.50/114.3	10.81/274.6	.59/15	14.45/367
DR505AW58M	4.75/120.7	10.30/261.6	11.70/297.2	1.87/47.5	7.26/184.4	13.53/343.7	14.38/365.3	3.56/92.7	4.50/114.3	14.38/365.3	.59/15	15.0/381
DR513V58	4.75/120.7	11.42/290.1	13.0/330.2	2.23/56.6	8.69/220.7	14.21/360.9	15.8/401.3	3.72/94.5	5.50/139.7	13.74/349	.59/15	14.58/370.3
DR656K58X	4.92/125	11.42/290.1	12.8/325.1	2.25/57.2	7.46/189.5	15.42/391.7	15.17/385.3	4.14/105.2	5.5/139.7	15.12/384.1	.59/15	15.51/393.9

		Part/Model Number				
		DR404AQ58M	DR454V58M	DR505AW58M	DR513V58	DR656K58X
Specification	Units	037778	080485	037935	038143	080603
Motor Enclosure - Shaft Mtl.	-	SPA (ODP)-CS	SPA (ODP)-CS	SPA (ODP)-CS	SPA (ODP)-CS	TEFC-CS
Horsepower	-	1.0	1.5	2.0	1.5	3.0
Voltage	AC	115/230	115/230	115/230	115/230	115/230
Phase - Frequency	-	Single-50/60 Hz	Single-50/60 Hz	Single-50/60 Hz	Single-50/60 Hz	Single-50/60 Hz
Insulation Class	-	F	F	F	F	F
NEMA Rated Motor Amps	Amps (A)	15/7.5	15.2/7.6	21/10.5	15.2/7.6	31/15.5
Service Factor	-	1.4	1.3	1.2	1.3	1.0
Maximum Blower Amps	Amps (A)	8/4	17/8.5	26/13	17/8.5	27.8/13.9
Locked Rotor Amps	Amps (A)	32/16	85/43	136/68	85/43	200/100
Recommended NEMA Starter	Size-	0/00	1/0	1/0	1/0	1.5/1
Shipping Weight	Lbs	64	76	83	90	51
	Kg	29	34.5	37.6	40.8	23.1
Recommended Number of Jets	-	3-6	5-10	5-10	12-17	8-12

Voltage - ROTRON motors are designed to handle a broad range of world voltages and power supply variations. Our dual voltage 1 phase motors are factory tested and certified to operate on both: **104-115/208-230 VAC-1 ph-60 Hz** and **100-110/200-220 VAC-1 ph-50 Hz**. All voltages above can handle a ±10% voltage fluctuation. Special wound motors can be ordered for voltages outside our certified range.

Operating Temperatures - Maximum operating temperature: Motor winding temperature (winding rise plus ambient) should not exceed 140°C for Class F rated motors or 120°C for Class B rated motors. Blower outlet air temperature should not exceed 140°C (air temperature rise plus inlet temperature). Performance curve maximum pressure and suction points are based on a 40°C inlet and ambient temperature. Consult factory for inlet or ambient temperatures above 40°C.

Maximum Blower Amps - Corresponds to the performance point at which the motor or blower temperature rise with a 40°C inlet and/or ambient temperature reaches the maximum operating temperature.

Notes
- The blower should not be stopped/started more than four times an hour. - Use of relief valve 515092 is required for all blowers.

This document is for informational purposes only and should not be considered as a binding description of the products or their performance in all applications. The performance data on this page depicts typical performance under controlled laboratory conditions. AMETEK is not responsible for blowers driven beyond factory specified speed, temperature, pressure, flow or without proper alignment. Actual performance will vary depending on the operating environment and application. AMETEK products are not designed for and should not be used in medical life support applications. AMETEK reserves the right to revise its products without notification. The above characteristics represent standard products. For product designed to meet specific applications, contact AMETEK Technical & Industrial Products Sales department.

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Application Specific Blowers

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FEATURES

- Manufactured in the USA - ISO 9001 and NAFTA compliant
- CE compliant - Declaration of Conformity on file
- Maximum flow: 105, 127, 160, 200 or 78 SCFM
- Maximum pressure: 56, 58, 74, 69 or 88 IWG
- Standard motor: 1.0, 1.5, 2.0, 3.0 HP, Spa Duty ODP
- Cast aluminum blower housing, impeller & cover; cast iron flanges (threaded)
- UL & CSA approved motor with permanently sealed ball bearings and Class B rated thermal protection
- Inlet & outlet internal muffling
- Quiet operation within OSHA standards

MOTOR OPTIONS

- International voltage & frequency (Hz)
- Chemical duty, high efficiency, inverter duty or industry-specific designs
- Various horsepowers for application-specific needs

BLOWER OPTIONS

- Corrosion resistant surface treatments & sealing options
- Remote drive (motorless) models
- Slip-on or face flanges for application-specific needs

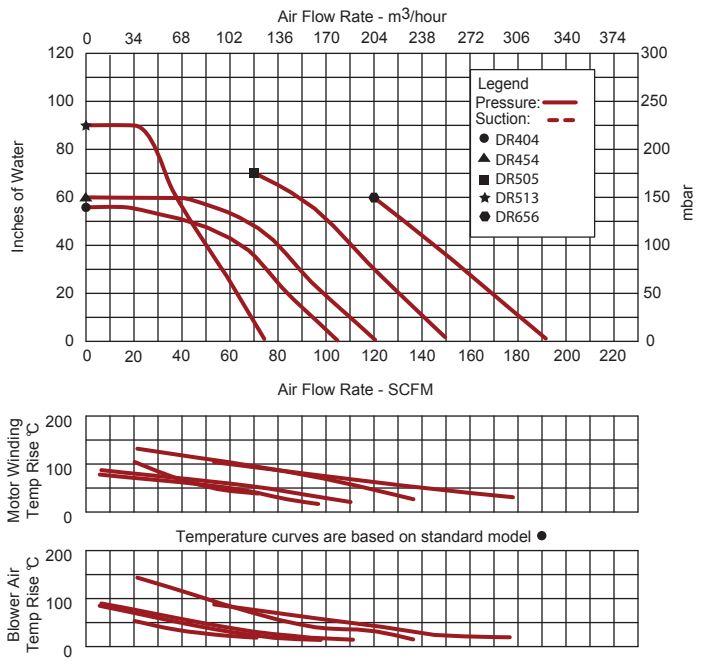
ACCESSORIES

- Flowmeters reading in SCFM
- Filters & moisture separators
- Pressure gauges, vacuum gauges, & relief valves
- Switches - air flow, pressure, vacuum, or temperature
- External mufflers for additional silencing
- Variable frequency drive package

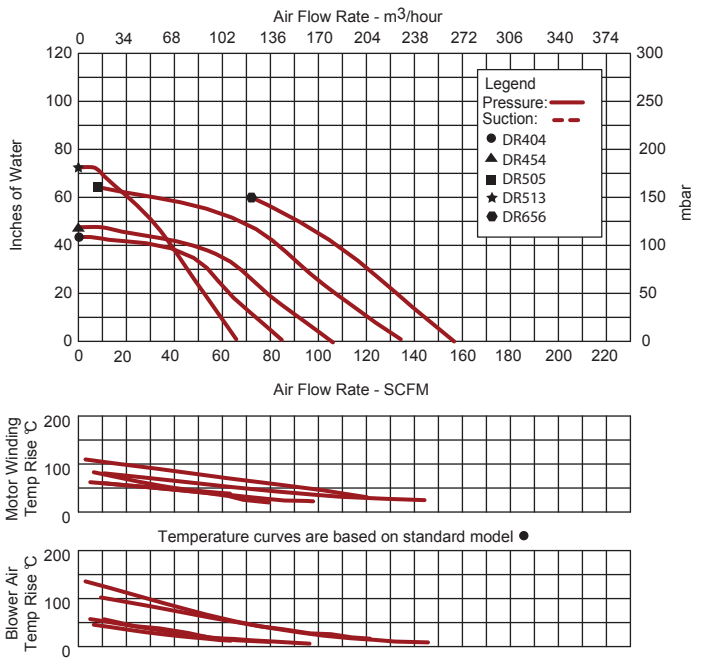


Blower Performance at Standard Conditions

60 Hz



50 Hz



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