

ENGINEERING EVALUATION SUMMARY
AUTHORITY TO CONSTRUCT

Facility Name: Hamann Property Management
Application Number: APCD2025-APP-008870
Equipment Type: Sub-Slab Depressurization System
Facility ID: APCD2025-SITE-04906
Equipment Address: 1425 30th Street
San Diego, CA 92154

Facility Contact: Brendan Thiessen
Contact Phone: (619) 440-7424

Permit Engineer: J. Meza

Date Application Received: 10/09/2025
Date A/C Evaluation Completed: 3/26/2026
Date Evaluation Modified: _____
Senior Engineer Approval: _____

1.0 BACKGROUND

1.1 Type of Application – This application is for a permit to construct and operate a new sub-slab depressurization system (SSD) without controls from a former dry-cleaning site. One or more releases of tetrachloroethene (PCE), a dry-cleaning fluid, were released during site operations. A grab sample of groundwater from 2001 revealed significant impact from tetrachloroethene (PCE). Subsequent soil sampling did not reveal near-surface zones of PCE-contaminated soil; however, soil vapor measurements indicated significant risk to indoor air quality.

This project will include three (3) suction pits, three (3) 0.25 inch width, 3 inch vertical pipes as exhaust points located on the roof of the building. Each exhaust point has a radon-type fan, electric box, wall clamps and roof mounts. The pipes connect a circular area of crushed rock placed beneath the slab-on grade up and through the roof to its' associated fan. Also included are blast-gates allowing redundancy in case of individual fan failure.

1.2 Permit History – This is an initial permit application with the SDAPCD at this Site. There has been no previous permit activity at this location.

1.3 Facility Description – The site is a multitenant industrial building, that is located at the southern end of a single-story concrete tilt-up building. The building itself is the northern east building of the parcel. The site has had historical usage of dry-cleaning, a small welding school, and other warehousing and fabrication/store-front businesses. The SSD will be located in Suite E northeast wall, Suite D south wall, and suite A/B northeast wall.

- 1.4 Other Background Information (where pertinent) – Previously, one or more releases of tetrachloroethene (PCE), a dry-cleaning fluid, were released during site operations. A 2001 grab sample of groundwater revealed significant impact from tetrachloroethene (PCE). Subsequent soil sampling did not reveal near-surface zones of PCE-contaminated soil; however, soil vapor measurements indicated significant risk to indoor air quality. A recommendation was made that sub-slab depressurization be considered for disruption of the major pathway as enables soil vapor to enter the occupied areas. A work plan was submitted to the DEH describing assessment actions to verify subsurface conditions at the site are amenable to use of a sub-slab depressurization system and design a system that can ameliorate adverse conditions affecting indoor air quality.

2.0 PROCESS DESCRIPTION

Equipment –

Sub slab-depressurization system consisting of: three (3) suction pits, three (3) 3-inch vertical ABS pipes as exhaust points located 25 ft above ground surface, each connecting to a circular area of crushed rocks placed beneath the slab-on-grade up and through the roof to a rooftop fan. Three (3) rooftop induced Radonaway HS-5000s fans, with blast gates, and flow rates of 1575 CFM, 1125CFM, and 1755 CFM with no controls; Three (3) Electric Boxes; and associated blast gates.

Vapor application points are in Suites A/B, C, and D, each comprising of a 3-inch vertical ABS pipe which connects a circular area of crushed rock placed beneath the slab-on-grade up and through the roof to a rooftop fan. Three Radonaway HS-5000s fans were chosen for this service based on their high vacuum and flowrate. Each is connected on the roof with blast-gates allowing redundancy in case of individual fan failure. There is no mention of PCE or other pollutants being treated by other methods.

- 2.1 Process – The facility has applied for the installation of a new sub-slab depressurization system without controls to improve indoor air quality. Three central vapor points will each be converted to sub-slab-depressurization hubs, each with suction continuously applied by induced-draft fans designed for such service. Piping from each will be extended vertically to penetrate the roof where a dedicated induced-draft fan will operate continuously. The designated usage cycle will be 100% on; however, power connection boxes will include a timer for future modifications in the duty-cycle. Other elements of design are wall-clamps or wire-stays to secure the pipe and a connection box with space for a future timer if desired.
- 2.2 Emissions Controls – The facility is not proposing the use of any controls.
- 2.3 Attachments – Application submittals.

3.0 EMISSIONS

3.1 Emission Estimate Summary – The potential to emit was estimated for the process. A summary of the emissions is below in Table 3.1. A breakdown of the emissions can be found in attachment “Engineering Risk Screen APCD2025-APP-008870” (Attached).

Table 3.1a (Combined Emissions)			
Compound	Post Project Potential Emissions		
	Hourly (lbs)	Daily (lbs)	Annual (lbs)
Oxides of Nitrogen (NOx)	0	0	0
Carbon Dioxide (CO)	0	0	0
Oxides of Sulfur (SOx)	0	0	0
Lead	0	0	0
Particulate Matter (PM10)	0	0	0
Volatile Organic Compounds (VOC)	1.54E-03	3.70E-02	1.35E+01
Perchloroethylene {Tetrachloroethene} (Exempt)	3.41E-03	8.18E-02	2.99E+01
Trichloroethylene (VOC)	3.26E-04	7.83E-03	2.85E+00
cis-1,2-Dichloroethene (VOC)	5.43E-05	1.30E-03	4.75E-01
Trichlorofluoromethane (CFC-11) (Exempt)	2.69E-04	6.44E-03	2.35E+00
Dichlorodifluoromethane (F12) (exempt)	6.49E-05	1.56E-03	5.69E-01
Toluene (VOC)	1.60E-05	3.84E-04	1.40E-01
Chloromethane (VOC)	8.85E-06	2.12E-04	7.75E-02
1,2,4-Trimethylbenzene (VOC)	8.55E-05	2.05E-03	7.49E-01
Exempt VOC	2.70E-03	6.47E-02	2.35E+01

3.2 Emission Estimate Assumptions –Based on the information provided in the detection summary the primary contaminant of concern for the facility is contaminants from dry cleaning, such as Perchloroethylene (tetrachloroethylene), which is VOC exempt in District Rule 2. The worst-case outlet concentration is 400 µg/m³ as Perchloroethylene {Tetrachloroethene} with a flow rate of 1575 cfm. The max isolated flow rate of the facility, at a different emission point, is that of 1755 cfm. With these assumptions, it was estimated that 29.91 lbs of perchloroethylene would be emitted from the process with that estimate.

3.3 Emission Calculations – See attached calculation sheet “Engineering Risk Screen APCD2025-APP-008870”.

The hourly and annual emissions were Calculated for both total VOC and individual Toxic Air Contaminants (TACs), using the following formula:

Calculation:

$$E = C_i * Q * C_o * (1 - \% \text{Control efficiency})$$

Where:

E = emissions (pounds per hour [lbs/hr])

C_i = influent concentration (micrograms per cubic meter [μg/m³])

Q = Max air flow rate (standard cubic feet per minute [scfm])

C_o = conversion factor

$$= \frac{1 \text{ lb}}{4.536 \text{E}8 \text{ ug}} * \frac{28.317 \text{ L}}{\text{ft}^3} * \frac{60 \text{ min}}{\text{hour}} * \frac{\text{m}^3}{1000 \text{ L}} = 8.99\text{E} - 8 \frac{\text{lb-min-m}^3}{\text{ug-ft}^3\text{-hour}}$$

e.g. N Exhaust- Tetrachloroethene: (400 μg/m³ x 0.02832 m³/ft³) / 4.54E+08
μg/lb = 2.50E-08 lb/ft³ of PCE

PCE: 2.50E-08 lb/ft³ x 35 fps x 0.25 ft x 3ft x 60seconds/min x 60 min/hr =
2.36E-03 lb/hr of Tetrachloroethene

3.4 Emission Calculation References – References provided on Table #1 (attached).

4.0 APPLICABLE RULES

4.1 Prohibitory Rules – Rule 51 (Nuisance) - Rule 51 –

A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property. The provisions of this rule do not apply to odors emanating from agricultural operations in the growing of crops or raising of fowls or animals.

-Equipment is expected to comply with the Nuisance Rule as specified in Rule 51. This will be verified during the start-up inspection. A condition is recommended to ensure compliance with the rule.

4.2 Rule 20.2 - New Source Review (NSR) – Non Major Stationary Sources.

District Rule 20.1 outlines the terms and definitions for New Source Review.

Rule 20.2(a) - Applicability: This rule applies to any new or modified stationary source, to any new or modified emission unit and to any relocated emission unit being moved from a stationary source provided

that after completion of the project, the stationary source is not a major stationary source.

Rule 20.1 (c)(41) defines a major stationary source as the following: "Major Stationary Source" means any emission unit or stationary source which has, or will have after issuance of a permit, an aggregate potential to emit one or more air contaminants, including fugitive emissions, in amounts equal to or greater than any of the emission rates listed in Table 20.1 - 6.

Table 20.1-6: Classification of Major/PSD Source and Modification New Source Review (NSR) Requirements

**TABLE 20.1 - 6
Major Stationary Source
Federal Serious Ozone Non-attainment Area**

<u>Air Contaminant:</u>	<u>Emission Rate (Ton/yr)</u>
Particulate Matter (PM10)	100
Oxides of Nitrogen (NOx)	50
Volatile Organic Compounds (VOC)	50
Oxides of Sulfur (SOx)	100
Carbon Monoxide (CO)	100
Lead (Pb)	100

Table 4.2a: Max Potential VOC's calculated for the facility

Table 4.2b (All Emission Points) Post Project Potential Emissions				
Compound	Emission Point 1: N Exhaust (tons/year)	Emission Point 2: S exhaust (tons/year)	Emission Point 3: C exhaust (tons/year)	Combined Emissions (Tons/year)
Volatile Organic Compounds (VOC)	1.53E-03	2.45E-04	4.98E-03	6.76E-03

- This section has been included to distinguish this source from a major source. This source's total calculated VOC is 6.76E-03 tons/year, well below the thresholds defined in 20.1(c)(35) and table 20.1-6 of 50 tons/year, and therefore is classified as a non-major stationary source. Therefore, Rule 20.2 applies.

District Rule Rule 20.2 – NSR – Non-Major Stationary Sources.

Rule 20.2 (a)-Applicability: This rule applies to any new or modified stationary source, to any new or modified emission unit and to any relocated emission unit being moved from a stationary source provided that after completion of the project, the stationary source is not a major stationary source.

The emission rates for this source are below the major stationary source thresholds, as defined in Rule 20.1 (c) (41), therefore, this source is a non-major Stationary source and Rule 20.2 is applicable.

Rule 20.2(d)(1)(iv) - Best Available Control Technology (BACT): Any new or modified emission unit which has any increase in its potential to emit particulate matter (PM10), oxides of nitrogen (NOx), volatile organic compounds (VOC) or oxides of sulfur (SOx) and which unit has a post-project potential to emit of 10 pounds per day or more of PM10, NOx, VOC, or SOx shall be equipped with Best Available Control Technology (BACT) for each such air contaminant.

- NOx, PM-10, SOx and VOC emissions are all estimated to be below 10 lbs/day. BACT is not required for any of these pollutants.

Rule 20.2(d)(2)(i) - Air Quality Impact Analysis (AQIA): This rule requires new/modified sources that exceed the emissions limits in the table below to perform an AQIA.

AQIA Stationary Source Trigger Levels

Compound	Lb/hr	Lb/day	Ton/yr
NOx	25	250	40
CO	100	550	100
SOx	25	250	40
PM10	N/A	100	15
Lead	N/A	3.2	0.6

- AQIA does not apply since estimated emission rates of PM₁₀, NOx, SOx, CO and Lead do not exceed the above trigger levels.

Rule 20.2(d)(3) - Prevention of Significant Deterioration (PSD): Rule 20.1 defines a PSD stationary source as any stationary source which has, or will have after issuance of a permit, an aggregate potential to emit one or more air contaminants in amounts equal to or greater than any of the emission rates listed below.

PSD Stationary Source Trigger Levels

Compound	Ton/yr
NOx	250
CO	250
Sox	250
PM10	250
VOC	250

- The emissions from this project are below the PSD trigger levels therefore, this project is not PSD stationary source and is not applicable to PSD requirements.

4.3 Toxic New Source Review- Rule 1200

Rule 1200 applies to any new, relocated or modified emission unit which results in any increase in emissions of one or more toxic air contaminant(s), and for which an Authority to Construct or Permit to Operate is required. This rule requires health risks be reviewed to ensure the risks are below one in one million for cancer (with T-BACT installed), and that the health hazard index (HI) is less than one for non-cancer chronic and acute toxic air contaminants.

- Rule 1200 is applicable. This application did not pass the District Engineering Risk screening. See the emission calculation spreadsheet titled "Engineering Risk Screen APCD2025-APP-008870" in Documentum. A health risk assessment (HRA) was conducted using worst case potential to emit at 1575 CFM and 1755 CFM. The worst case scenario includes every pollutant being emitted for 24 hours, 7 days a week. The HRA resulted with the following risk scores: cancer = 0.5 in a million, chronic < 1 and acute < 1. The worst-case emissions did not result in any significant cancer, acute, or chronic health risks. A maximum Perchloroethylene emission rate of 29.9 lbs/year was calculated which corresponds to a cancer risk of 0.5 in one million. Since there is no school within a 1 in one million cancer risk, the limit that will be used for Rule 1200 purposes is a max PCE concentration of 400 µg/m³, max Trichloroethylene concentration of 50 µg/m³, max Toluene concentration of 3.8 µg/m³, max 1,2,4-Trimethylbenzene concentration of 13 µg/m³, and max flow rate of 1755CFM in order to ensure the risk does not exceed Rule 1200 thresholds.

3.5 Since there is no school within a 1 in one million

4.4 AB3205-

Requirements in the California Health and Safety Code in sections 42301.6 through 42301.9 (a.k.a. "AB3205 requirements") specify that prior to issuing an authority to construct for sources located within 1000 feet of a K-12 school, a 30-day public notification process must be conducted.

This project is located within 1000 feet of a school (Hawking STEAM Charter School), so public notice is required for this section. A copy of the public notice is attached to the file and when the notice is issued, this evaluation and relevant attachments will be made available on the District's website for review. If any comments are received, they will be reviewed, considered and responded to prior to taking action on the permit

including revising any requirements as necessary in response to comments received.

4.5 NESHAPS AND ATCMs-

Soil vapor extraction processes are not subject to any NESHAPS or ATCMS. Not applicable.

4.6 CEQA-

The project being permitted is exempt from the requirements of the California Environmental Quality Act (CEQA) due to its designation as a ministerial action. Pursuant to CEQA Guidelines Section 15268, ministerial projects are not subject to environmental review because they involve decisions that are guided by fixed standards or regulations, with no allowance for discretionary judgment. The scope of this project falls within routine procedures that are strictly governed by established regulation, thereby precluding any need for subjective evaluation or interpretation. Consequently, the project is exempt from CEQA review

- This facility is not subject to CEQA because the emissions are permit limited below BACT thresholds, therefore the facility is considered ministerial and exempt from the requirements of CEQA.

4.7 Title V-

This is not a Title V facility because the facility will not result in a significant emission increase to trigger Title V requirements. No pollutant is over 50 or 100 tons/yr; being below all major source thresholds.

4.8 Attachments – Rule 1200 report.

5.0 RECOMMENDATION

Soil remediation process, using sub-slab depressurization (SSD) system, is expected to be in compliance with all applicable District rules and regulations. Approval of the A/C is recommended with the below conditions which are the same or similar to conditions used for other similar soil remediation permits.

6.0 RECOMMENDED A/C CONDITIONS

Equipment – Sub slab-depressurization system consisting of: Three (3) suction pits, Three (3) 3-inch vertical ABS pipes as exhaust points located 25 ft above ground surface, each connecting to a circular area of crushed rocks placed beneath the slab-on-grade up and through the roof to a rooftop fan. Three (3) rooftop induced Radonaway HS-5000s fans with design flow rates of 1575 CFM, 1125CFM, and 1755 CFM with no controls; Three (3) Electric Boxes; and associated blast gates.

Standard A/C conditions for this system is recommended, which are listed below. This application is recommended for AC issuance.

1. The permittee shall install, maintain, and label a vapor sampling port at both the inlet and the exhaust of the emission points associated with this soil remediation equipment. (District Rule 1200)
2. There shall be no emissions of organic compounds into the atmosphere from the exhaust stack or any other portion of the vapor extraction system, the groundwater extraction system, the groundwater treatment system, or any material storage containers with a concentration equal to or greater than the following: 400 $\mu\text{g}/\text{m}^3$ (0.059 ppmv) of perchloroethylene, 50 $\mu\text{g}/\text{m}^3$ (0.0093 ppmv) of Trichloroethylene, 3.8 $\mu\text{g}/\text{m}^3$ of Toluene (0.0010 ppmv), and 13 $\mu\text{g}/\text{m}^3$ (0.0026 ppmv) of 1,2,4-Trimethylbenzene. This requirement shall not apply to organic compounds released during sampling, repair, maintenance, waste disposal, and/or equipment installation activities. (District Rule 21).
3. The permittee shall sample, analyze, and record the organic compound concentration (in ppmv as perchloroethylene) of the inlet and exhaust vapors at least once every 1000 operating hours. Additionally, the permittee shall sample, analyze, and record the organic compound concentration (in ppmv as perchloroethylene) of the inlet and exhaust vapors after any manual air dilution valve installed in the header piping is opened, closed, or otherwise adjusted. Each inlet and exhaust vapor sample shall be collected during that portion of the vapor extraction cycle when all installed automatic air dilution valves are in the closed position. (District Rules 21 and 1200)
4. This Sub-Slab Depressurization (SSD) vapor intrusion mitigation system shall not be used for treating TACs containing vapors except those which are being extracted, as identified in the Permit application. (District Rule 1200)
5. At no time shall the subject equipment cause or contribute to a public nuisance as specified in District Rule 51. If compliance with Rule 51 cannot be demonstrated to the satisfaction of the District, the permittee will take whatever corrective action necessary to meet applicable requirements. If corrective action requires any physical change or modification to the subject equipment the permittee shall apply for and obtain an Authority to Construct for all such modifications prior to making any physical change. (District Rule 51)
6. The permittee shall install, operate, modify, and adjust the soil vapor extraction system such that any automatic air dilution valve installed in the header piping is not continuously open to the atmosphere. All required air flow rate measurements, inlet vapor samples, and exhaust gas vapor samples shall be taken during that portion of the vapor extraction cycle when all installed automatic air dilution valves are in the closed position. (District Rule 21)

7. The permittee shall install an air flow meter that continuously measures and displays the total air flow rate (in scfm) at the inlet associated with this soil remediation equipment. The air flow meters shall be operated, calibrated, and maintained in accordance with the manufacturer's specifications. (District Rule 21)
8. The maximum total air flow rate into the fan shall not exceed 1575 scfm, 1125 scfm, 1755 scfm during that portion of the vapor extraction cycle when all installed automatic air dilution valves are in the closed position. (District Rules 21 and 1200)
9. The permittee shall measure and record the air flow rate (in scfm) associated with this soil remediation equipment at least once every 1000 operating hours. Additionally, the permittee shall also measure and record this air flow rate after any manual air dilution valve installed in the header piping is opened, closed, or otherwise adjusted. Each recorded air flow rate measurement shall be taken during that portion of the vapor extraction cycle when all installed automatic air dilution valves are in the closed position. (District Rules 21 and 1200)
10. The permittee shall use EPA Methods 8260, 8260B, TO-15, or a similar equivalent analytical method as approved by the District to quantify the organic compound concentration of the inlet and exhaust vapor samples. All vapor sample analytical results and records shall be retained for at least three years and made available to District personnel upon request. (District Rules 21 and 1200)
11. The permittee shall record the corresponding date, and cumulative operating hours when each vapor sample is collected and each air flow rate is recorded. These operating records shall be retained for at least three years and made available to District personnel upon request. (District Rules 21 and 1200)
12. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. (Rule 19)
13. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
14. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)