

**CITY OF PHILADELPHIA  
Department of Public Health  
Environmental Protection Division  
Air Management Services**

**InterOffice Memo**

**To:** File  
**From:** Maryjoy Ulatowski, Environmental Engineering Supervisor  
**Date:** November 2, 2019  
**Subject:** Initial Natural Minor Operating Permit Summary for Evergreen Resources Group, LLC, OP17-000056, PLID 10479

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**Company Description:**

Evergreen Resource Group, LLC is responsible for operation of one (1) biofilter and a one (1) groundwater remediation system at the Philadelphia Energy Solutions Refining and Marketing LLC (PES) Philadelphia Refining Complex (3144 W. Passyunk Avenue, Philadelphia, PA 19145) and one (1) biofilter located Sunoco Partners Marketing and Terminals L.P. (SPMT) Belmont Terminal (2700 W. Passyunk Avenue, Philadelphia, PA 19145)

On September 2017, the facility submitted an initial Natural Minor Operation Permit Application (OP17-000056) to operate the remediation systems at the 2 locations.

The facility's representative to contact concerning their Natural Minor Operating Application is below:

Owner: Philadelphia Refinery Operations - Evergreen Resources Group.  
Mailing Address: 2 Righter Parkway, Suite 120  
Wilmington DE 19803

Facility and Permit Contact: Tiffani L. Doerr  
Phone: 302-477-1308  
Email: tldoerr@evergreenmngt.com

The facility is subject to the operating permit requirements under 25 Pa Code §127, Subchapter F. The facility is not a major stationary source as defined in Title I, Part D of the Clean Air Act Amendments and is therefore not subject to the Title V operating Permit requirements adopted in 25 Pa Code §127, Subchapter G.

## **Applicability for Regulations:**

### **Point Breeze Remediation System at PES Site**

The Point Breeze Remediation system located at the PES Terminal Site consist of the following:

- Biofilter 14,000 CFM, 2 banks of 2 beds for a total of 4 biomass treatment beds. Each bed is approx. 73 x 39 x 4 ft. and
- Three (3) blower fans

The unit was originally permitted under 98005 dated 3/23/1998, modified under 06170 dated 4/30/2007 and modified under 15302 dated 11/29/2016. The Permittee shall perform all routine maintenance procedures to the biofilter according to the latest weekly maintenance schedule log which includes annual maintenance/testing of the heating coil and air distribution piping.

For the Point Breeze Remediation System, The Permittee will need to keep monitor and keep records

- Weekly monitoring of the steam injection system.
- Weekly temperature of the inlet gas to the Biofilter.
- Weekly Maintenance Schedule Log .
- Monthly checklists for fan current and fan differential pressure.
- Monthly checklists for steam valve positions and Biofilter cell pressures.
- Quarterly checks of blower fan performance.
- Quarterly checks of pH cell beds.
- Annual inspection and calibration of the humidification and temperature control systems.
- Annual inspection of the stem valve position.

### **Belmont Remediation System at Sunoco Belmont Terminal Site**

The Belmont Remediation System at the Sunoco Belmont Terminal Site consists of the following:

- Biofilter - Three (3) cells, biomass treatment beds
- Each bed is Approx 45 ft x 45ft x 4ft
- One (1) 5000 Gallon LNAPL Holding Tank

The unit was originally permitted Under 01092 and then modified under 13280 dated 12/23/2013. The Biofilter shall be installed, operated and maintained according to Best Management Practices to maximize odor reduction for the air stream it controls. Odors from the process shall not cause odor nuisance outside the boundary of the property. The Permittee shall smoke test the piping of the biofilter to ensure proper distribution of the influent vapors. The smoke testing shall be repeated annually.

For the Belmont Terminal Remediation System, the Permittee will need to monitor and keep the following records:

- Weekly blower flow rate, influent vacuum, and effluent pressure
- Weekly treatment bed temperatures, and influent pressure
- Weekly influent concentration at the Shunk St. Sewer blower and the effluent concentration

from the top of each bed.

- Humidity and temperature of the influent stream weekly.
- pH of the filter media quarterly.

**Penrose Remediation System at PES Site**

The Penrose Remediation system located at the PES Site consist of the following to treat groundwater:

- One (1) Oil-water separator (HydroQuip),
- One (1) Influent Settling Tank, 300 gallons ,
- One (1) Secondary Settling Tank (105 gallons, Chem Trailer /TC2454AA/AB),
- One (1) 550 Gallon LNAPL Holding Tank ( Highland Tank and Manufacturing, Inc.) ,
- One regenerative blower, AMETEK/Rotron/ EN404, and
- One (1) Catalytic Oxidizer - Falmouth Products

The ground water remediation system was permitted under IP18-000431 dated 2/21/2019 and replaced old biofilter (permitted under 11277 dated 1/27/2012).

Per IP18-000431, the unit is subject to the following emission limits:

- Actual VOC emissions from the soil and groundwater remediation systems shall be less than 2.7 tons per rolling 12-month period.
- Actual HAP emission from the remediation system shall be less than 1 ton per rolling 12-month period.
- During operation of the VEGE and control device, the Permittee shall comply with one of the following:
- The total Volatile Organic Compound (VOC) content in the effluent stream shall not exceed 200 ppmv at any time.
- The minimum VOC destruction efficiency for the Catalytic Oxidizer shall be 90%.

All vapors from the closed-vent groundwater remediation system shall pass through the catalytic oxidizer prior to discharge to the atmosphere. The temperatures in the influent air stream, the catalyst bed, and the effluent air stream shall be continuously monitored by the equipment and the system shall shut down upon detection of any operating temperatures which are out of the range of the following catalytic oxidizer specifications:

Temperature Position	Low Operating Range	High Operating Range
Catalyst Bed Influent (T1)	270° C	505° C
Catalyst Bed Effluent (T2)	N/A	620° C
Catalyst Bed (T3)	N/A	600° C

The catalytic oxidizer shall operate at a minimum pre-catalyst (T1) set point temperature of 626 °F (330° C) and a minimum operating temperature of 270 ° C.

For the Penrose Ave Remediation System, the Permittee needs to monitor and keep records of the following:

- For each day of monitoring as required by Section D.4.(d)(1), the Permittee shall keep records the following:
  - (i) The pre-catalyst temperature set point upon arrival and departure from the site.
  - (ii) The actual pre-catalyst operating temperature.
  - (iii) Date of monitoring and the influent and effluent concentrations.

**Compliance Review:**

AMS last inspected the facility on 1/14/2019. There were no violations or significant compliance issues that resulted from the inspection.