

April 2025
Monthly Progress Update
Former Circle K 1461, Seattle, WA

Purpose.

To provide monthly progress updates under Contract: C2400059 to the State of Washington, Department of Ecology on work progress, upcoming activities, schedule updates, and deliverable status.

This Monthly Progress Update Report for the period covering 01 April 2025 through 30 April 2025 for the Former Circle K 1461 Site in Seattle, WA.

Summary of operations, monitoring, and maintenance activities performed during the reporting period.

- ERRG continued operation, monitoring, and maintenance of the system under Phase 1 conditions.
- Glacier removed catalytic oxidizer from the system and ERRG transitioned to the Vapor GAC vessels for vapor treatment on April 15, 2025.
- ERRG performed monitoring and sampling as follows:
 - Task 3, Subtask 3B – vapor sampling with summa canisters at vapor treatment system (Falco 300) influent and effluent for TO-15 on April 18, 2025
 - Task 3, Subtask 3B –vapor monitoring of vapor treatment system and extraction wells for VOCs using PID on April 4, 2025 and April 18, 2025.
 - Task 3, Subtask 3C - water treatment sampling performed at influent, midpoint, and effluent of liquid GAC vessel trains for GRO, VOCs, and FOG on April 25, 2025.
 - Task 3, Subtask 3D – Phase 1 month 2 groundwater sampling performed at 13 wells for GRO and BTEX, as well as select chlorinated VOCs on April 25, 2025.

Summary of system performance:

- System flows range from 86.3 to 101.8 cfm.
- Approximately 20,999 gallons of treated water was discharged.
- Catalytic oxidizer internal temperature remained above 650 °F when in use.
- System vapor concentrations presented in table below.

Analyte	Inlet Concentration	Effluent Concentration	Control Efficiency ¹	Influent Emission ^{2,3}	Influent Rates to Operate without Controls ²	Effluent Emissions ³	SQER ³	Di Minimis ³
PID calibrated to isobutylene (x 3.4 hexane conversion factor) – CatOx	252 ppm x 3.4 = 856.8 ppm	3.3 ppm x 3.4 = 11.22 ppm	98.69%	N/A	N/A	N/A	N/A	N/A
PID calibrated to isobutylene (x 3.4 hexane conversion factor) – Vapor GAC	164.8 ppm x 3.4 = 560.32 ppm	0.7 ppm x 3.4 = 2.38 ppm	99.58%	N/A	N/A	N/A	N/A	N/A
TPH (GRO) – Vapor GAC	582,000 µg/m ³	1,040 µg/m ³	99.82%	5.22 lb/24-hr	2.74 lb/24-hr	3.41 lb/year	N/A	N/A
n-hexane – Vapor GAC	63,500 µg/m ³	3.67 µg/m ³	99.99%	0.57 lb/24-hr	N/A	0.000033 lb/24-hr	52 lb/24-hr	2.6 lb/24-hr
Benzene – Vapor GAC	5,170 µg/m ³	5.94 µg/m ³	99.89%	0.046 lb/24-hr	0.018 lb/24-hr	0.033 lb/year	21 lb/year	1.0 lb/year

Notes:

1. The control efficiency of the MPE system abatement device shall meet the following requirements, as applicable:
 - a. ≥97% if inlet TPH ≥ 200 ppmv, measured as hexane or its equivalent; or,
 - b. ≥90% if inlet TPH < 200 ppmv, measured as hexane or its equivalent; or
 - c. ≤10 ppmv at the outlet of the control device, measured as hexane or its equivalent.
 2. The owner or operator may operate the soil vapor extraction system without any controls when inlet sampling data from two or more consecutive months shows all of the following:
 - a. Pre-control TPH emission rate is equal to or less than 2.74 lbs/day
 - b. Pre-control Benzene emission rate is equal to or less than 0.018 lbs/day.
 3. Estimated emissions based on system flow 100 cubic feet per minute.
 4. SQER and Di Minimis values provided in their respective averaging period
- N/A = not applicable
MPE = multiphase extraction
PID = photoionization device
ppm = parts per million
SQER = small quantity emission rate
TPH = total petroleum hydrocarbons
µg/m³ = micrograms per cubic meter

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Summary of operations, monitoring, and maintenance activities to be performed in the next month.

- ERRG to continue operation of system and perform monitoring and sampling as follows:
 - Task 1 – perform weekly and as-needed O&M activities for Phase 1 operation with Vapor GAC treatment.
 - Task 3, Subtask 3B – vapor sampling with summa canisters at vapor treatment system (Vapor GAC) influent and effluent for TO-15
 - Task 3, Subtask 3B– vapor monitoring with summa canisters at vapor treatment system (Vapor GAC) influent, midpoint and effluent and extraction wells
 - Task 3, Subtask 3D – groundwater monitoring and sampling for GRO, BTEX, and select chlorinated VOCs.
- ERRG to submit the following deliverables:
 - EIM uploads pending validated data for samples collected through April 2025.
 - May 2025 Monthly progress update
 - KCIW May 2025 Self-Monitoring Report.

Comparison of work completed to scheduled activities.

- Operation, monitoring, and maintenance activities completed as required.

Potential problems identified and suggested resolutions.

- Ecology to submit notice to PSCAA about chlorinated VOCs detected in system vapor samples.

Deliverables submitted during the reporting period.

- KCIW March 2025 Self-Monitoring Report on April 15, 2025.
- March Monthly Progress Update on April 22, 2025.

EIM field and laboratory analytical results submitted during the reporting period.

- No EIM data uploaded in April 2025.
- Laboratory results submitted:
 - April 2025 groundwater sampling analytical results.
 - April 2025 vapor treatment system analytical results