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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Northwest Region Office

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July 10, 2024

James P. Kiernan
Chevron Environmental Management and Real Estate Company
6001 Bollinger Canyon Road
San Ramon, CA 94583
(jkiernan@chevron.com)

Re: Ecology Comments on Soil Vapor and Ambient Air Sampling Results

Texaco 211577 Monterey
631 Queen Anne Avenue N, Seattle, WA 98109
Facility Site No.: 77774779
Cleanup site ID No.: 6663

Dear James Kiernan:

On June 6, 2023, the Washington State Department of Ecology (Ecology) received the *Summary of Soil Vapor and Ambient Air Sampling Events – April and November 2022* report, for the Texaco 211577 Monterey facility (Site). The Site is generally located at 631 Queen Anne Avenue North in Seattle (the Property), and consists of the Property and multiple nearby properties and rights-of-way.

Currently, the Site cleanup is conducted under an *Agreed Order No. 16537 (AO 16537)*, effective August 21, 2019. The *AO 16537* requires Chevron Environmental Management Company (CEMC) to complete a Site Remedial Investigation (RI), Feasibility Study (FS), and prepare a preliminary Draft Cleanup Action Plan (DCAP). Under *AO 16537*, CEMC submitted a final *Remedial Investigation Work Plan (RIWP)* on February 8, 2022. Ecology approved the *RIWP* in an email dated February 10, 2022.

In accordance with the Ecology approved *RIWP*, soil vapor investigations and air sampling were completed for Del Roy Apartments and Monterey Apartments in 2022. Soil vapor and indoor air samples were collected from the basement of the two apartment buildings in two sampling events – April 7 and November 17, 2022. Outdoor air samples were collected at the same time. The sampling activities and results were submitted to Ecology in the *Summary of Soil Vapor and Ambient Air Sampling Events – April and November 2022* report.

Based on a review of the summary report, Ecology provides the following comments:

- 1. The indoor air quality in Del Roy and Monterey Apartments basement DOES NOT meet the MTCA cleanup standards.**

Ecology conducted risk assessments on the indoor air samples collected from Del Roy and Monterey Apartments. The non-carcinogenic hazard indices (HI) and cancer risks for the indoor air samples in both sampling events are summarized in the table below:

**Table 1 – Non-carcinogenic Hazards and Cancer Risks for Indoor Air Samples
Monterey and Del Roy Apartments**

Sample Location	Sample ID	Date	Hazard Index (unitless)	Cancer Risk (unitless)
Del Roy Apartments	IA-01-North	4/7/2022	0.3	8E-07
		11/17/2022	2	7E-07
Monterey Apartments	IA-02-South	4/7/2022	0.6	1E-06
		11/17/2022	2	2E-06

In accordance with Model Toxics Control Act (MTCA), WAC 173-340-708, air samples must meet all of the following requirements to be in compliance with the MTCA cleanup standards:

- The cancer risk for each individual carcinogen (in this case, benzene and naphthalene) does not exceed one in one million (1E-6).
- Total cancer risk for multiple carcinogens in a sample does not exceed one in one hundred thousand (1E-5).
- For a sample that contains multiple non-carcinogenic compounds, the calculated HI does not exceed 1.

Based on the data provided in Table 1, both air samples that were collected from Del Roy and Monterey Apartments in November 2022 sampling event, had calculated non-carcinogenic HI greater than 1. These results do not meet the MTCA cleanup standards. The non-carcinogenic hazard is mainly caused by long-chain aliphatic hydrocarbons (aliphatics EC >8-12).

2. Ecology requires mitigation activities to reduce the vapor intrusion risk to Del Roy and Monterey Apartments.

Since vapor intrusion (VI) is causing an exceedance of non-carcinogenic hazard in the basement of both Del Roy and Monterey Apartments, mitigation activities are required to reduce the VI risk for both apartment buildings.

Ecology requires CEMC to communicate with the building owners to identify an approach for reducing VI exposures as soon as possible. Potential mitigation activities can include:

- Sealing obvious openings for preferential vapor entry into the buildings, where applicable.
- Increasing ventilation to certain indoor spaces.
- Adjusting heating, ventilation, and air conditioning (HVAC) controls to positively pressurize the building's basement.
- Installing indoor air treatment devices.

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- Re-locating residents from the basements, if any, and reducing the amount of time maintenance or management personnel spend in the basements.
- Installing and operating a mitigation system, such as a sub-slab depressurization system (SSDS).

Please refer to Ecology's [Guidance for Evaluating Vapor Intrusion in Washington State Investigation and Remedial Action](#),¹ March 2022, for detailed requirements and guidance for identifying, designing, and implementing mitigation activities.

Please note, additional VI sampling (soil vapor and/or indoor air) are necessary to verify the effectiveness of the mitigation activities. Ecology may request additional indoor air sampling in the first residential floor of the buildings, if needed.

If an active mitigation system is needed, installing such a system may be considered as an interim action and shall follow the appropriate interim action procedure specified in *AO 16537*.

Ecology appreciates your submission of the *Summary of Soil Vapor and Ambient Air Sampling Events – April and November 2022* report. **Please take the necessary mitigation activities, or submit a draft Mitigation System Work Plan (if a mitigation system is necessary), no later than 45 days after receipt of this letter.**

Please work with Ecology during identification and implementation of the mitigation activities. If you have any questions about this letter, please contact me at (425) 229-2565 or jing.song@ecy.wa.gov.

Sincerely,



Jing Song

Site Manager

Toxics Cleanup Program, NWRO

cc: Jeremy Wilson, Arcadis (Jeremy.Wilson@Arcadis.com)
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¹ <https://apps.ecology.wa.gov/publications/documents/0909047.pdf>