Los Angeles Regional Water Quality Control Board

April 11, 2022

Nicole Mouren-Laurens as Administrator of the Estate of Emma Mouren-Laurens and Claudine Mouren-Laurens as Administrator of the Estate of Joseph Mouren-Laurens c/o Timothy C. Cronin, Esq. The Law Offices of Timothy C. Cronin, Esq. 390 Bridge Parkway, Ste. 220 Redwood City, CA 94065	Via E-Mail (tcronin@crolaw.com) and Certified Mail Return Receipt Requested **Claim No. 7020 3160 0000 7677 7405**
Mouren-Laurens Oil Company, Inc., John Mouren-Laurens, and Mireille Mouren-Laurens c/o Jordan S. Stanzler, Esq. THE STANZLER LAW GROUP 390 Bridge Parkway, Suite 220 Redwood City, CA 94065	Via E-Mail (jstanzler@stanzlerlawgroup.com) and Certified Mail Return Receipt Requested **Claim No. 7020 3160 0000 7677 7412**

SUBJECT: REVIEW OF A REMEDIAL ACTION PLAN DATED JULY 26, 2021 SUBMITTED ON BEHALF OF VARIOUS MOUREN-LAURENS PARTIES PURSUANT TO CLEANUP AND ABATEMENT ORDER (CAO) NO. R4-2014-0117

SITES: MOUREN-LAURENS AND LEACH SITES LOCATED AT 625, 641, 705, 717, AND 719 EAST COMPTON BOULEVARD, AND 15006 SOUTH AVALON BOULEVARD COMPTON, CALIFORNIA 90248 (SITE CLEANUP NOS. 0023A AND 0023B)

Dear Messrs. Cronin and Stanzler:

The California Regional Water Quality Control Board, Los Angeles Region (Los Angeles Water Board) is the state agency with primary responsibility for the protection of groundwater and surface water quality within major portions of Los Angeles and Ventura Counties. To accomplish this, the Los Angeles Water Board oversees the investigation and cleanup of discharges of waste that may affect the quality of waters of the state as

authorized by the Porter-Cologne Water Quality Control Act (California Water Code [CWC], Division 7).

In a letter dated August 19, 2021, the Los Angeles Water Board concurred with the conceptual remedial approach[1] provided in the *Remedial Action Plan* (RAP) dated July 26, 2021 prepared by EKI Environment & Water, Inc. (EKI). The RAP was submitted on behalf of Nicole Mouren Laurens as Administrator of the Estate of Emma Mouren Laurens, Claudine Mouren Laurens as Administrator of the Estate of Joseph Mouren Laurens, Mouren Laurens Oil Company, Inc., John Mouren Laurens and Mireille Mouren Laurens (collectively, MLOC Parties) for the Mouren-Laurens Oil Company (MLOC) facility located at 641, 705, 717, and 719 East Compton Boulevard in Compton, California (MLOC Site). The RAP was submitted pursuant to the requirements in Cleanup and Abatement Order (CAO) No. R4-2014-0117 dated September 19, 2014 issued to the MLOC parties and the current MLOC Site owner Rev 973, LLC (Rev 973) on September 17, 2014. The Los Angeles Water Board issued CAO No. R4-2014-0118 to Leach Oil Company (LOC), Leach Property Management, and Patricia Leach (collectively, LOC Parties) for the facility located at 625 E. Compton Boulevard and 15006 South Avalon Boulevard in Compton, California (LOC Site). The RAP addresses the cleanup of waste at both the MLOC Site and LOC Site (collectively, Sites). The Sites are adjacent to each other, share similar operational histories, and the contaminant plumes from the two Sites are commingled.

Pursuant to CWC section 13307.5, the Los Angeles Water Board prepared a Fact Sheet to solicit comments on the RAP. On October 6, 2021, the MLOC Parties distributed the Fact Sheet to the owners and occupants of properties located within a 500-foot radius of the Sites and the known plume of groundwater contaminants from the Sites. The Fact Sheet was also posted on Geotracker, a publicly accessible online database of certain documents related to all sites overseen by the Los Angeles Water Board, including the Sites. The public was invited to submit comments on the RAP until November 9, 2021. During the comment period, the Los Angeles Water Board received comments from Rev 973's attorney Beth Dorris, Esq., dated October 8, 2021, and from Rev 973's consultant Bowyer Environmental Consulting, Inc. (BEC) dated August 31, 2021.

This letter reflects the Los Angeles Water Board's evaluation of all the comments. This letter provides the Los Angeles Water Board's evaluation of the RAP and concurs with the RAP's approach, with the conditions set forth herein.

[1] The Board concurs with the approach in the RAP subject to compliance with the conditions set forth herein. This includes the timely completion of the tasks in the RAP and timely submittal to the Board of all reports required in the RAP. This letter acknowledges that the path described in the RAP is expected to remediate the Sites with the additional conditions and requirements described in this letter. Please note that CEQA must be complied with before the RAP can be approved.

Background

The Sites are located in the Central Basin of the Los Angeles County Coastal Plain in the proximity of the Avalon-Compton Fault. Alluvial material consisting of clay, silt, sand, and gravel underlie both Sites. The maximum depth of investigation at the MLOC Site is 139 feet below ground surface (bgs). Based on the boring logs, there are two groundwater zones identified within the Bellflower Aquiclude: a thin perched groundwater zone located at approximately 60 feet bgs and the main basal groundwater zone at 80 feet bgs. The perched groundwater zone has been dry since 2019. The groundwater in the Gardena/Gage Aquifer occurs at approximately 98 feet bgs. There are several groundwater monitoring wells screened within the perched and basal groundwater zones, and the groundwater flow is towards the south.

As set forth in the Water Quality Control Plan for the Los Angeles Region (Basin Plan), the designated beneficial uses for groundwater in the Central Basin include municipal and domestic drinking water supply (MUN), Industrial Service Supply (IND), Industrial Process Supply (PROC) and Agricultural Supply (AGR).

The MLOC Site has been overseen by the Los Angeles Water Board since 1987. The LOC Site, which was under the oversight of the California Department of Toxic Substances Control (DTSC), was operating as a Treatment, Storage, and Disposal Facility (TSDF). DTSC terminated LOC's permit to operate as a TSDF facility in 1998, and in 2008 made the final decision to deny the permit to LOC. In 2009, DTSC transferred regulatory oversight for the assessment and cleanup of the waste at the LOC Site to the Los Angeles Water Board. However, the LOC Site still must meet the closure performance standards pursuant to California Code of Regulations, Title 22, Division 4.5, Chapter 15.

The cleanup of the wastes at the Sites has not occurred in a timely manner. All parties named in the CAOs have failed to comply with the CAOs. In addition, the MLOC Parties, the LOC Parties, and Rev 973 have been in litigation since 1998, which has complicated compliance with the CAOs. Because of the related operations (at times) between the Sites, proximity of Sites to each other, and commingling of contamination at and from the two Sites, the Los Angeles Water Board has encouraged the MLOC Parties, the LOC Parties, and Rev 973 to jointly remediate the Sites. As set forth below, the RAP contains such a proposal.

Summary of RAP

The RAP uses the following approach to identify and select the contaminants of concern (COCs), to set cleanup goals and to propose actions to address the contamination present in soil, soil vapor and groundwater at the Sites.

A. Selection of COCs and Cleanup Goals:

1. EKI categorized chemicals at the Sites as "COCs" or "primary COCs". If a chemical's maximum concentration in a media (i.e., soil, soil vapor, groundwater) is greater than the Tier 1 published screening levels[2] for commercial and industrial land use, it is identified as a COC. But when a chemical's maximum concentration in the medium is two orders of magnitude greater than the screening level as well as being detected in at least 20 percent in the analyzed samples then it is identified as a primary COC. In general, EKI identified the following as primary COCs at the Sites: petroleum hydrocarbons; petroleum hydrocarbon related constituents, such as benzene and ethylbenzene; chlorinated solvents; 1,4-dioxane; N-nitroso dimethylamine (NDMA); and metals, such as lead. Based on this approach, EKI produced a list of COCs provided in Tables 2a, 2b, and 2c of the RAP.

2. EKI based its remedy selection on achieving the remedial action objectives (RAOs), which EKI defines as being designed to remove, treat in-situ, isolate, and reduce concentrations of COCs present in soil, soil vapor, and groundwater to protect human health and groundwater resources. According to EKI, this can be achieved by implementing a remedy, but also by preventing exposure to humans via capping the ground surface with pavement.

3. Regarding cleanup goals, EKI quotes the requirement from the CAO that responsible parties must propose preliminary cleanup goals for soil and groundwater in compliance with State Water Resources Control Board (SWRCB) Resolution 92-49 ("Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304"). The cleanup levels must be protective of human health, groundwater and surface water resources, the environment, and the beneficial uses set forth in the Basin Plan. EKI states that risk assessments shall establish cleanup goals for the remedies implemented at the Sites. For the contamination present in the groundwater at the Sites, EKI also asserts that due to the contribution to the groundwater plume from source(s) located upgradient from the Sites, the MLOC Parties and LOC Parties should only be required to expend resources toward groundwater cleanup that is equal to their contribution to the groundwater plume. EKI also states that USEPA normally does

[2] EKI used DTSC modified screening levels, Human Health Risk Assessment Note No. 3, USEPA Regional Screening Levels, Environmental Screening Levels by the San Francisco Bay Regional Water Quality Control Board, and State of California Water Quality Goals (Maximum Contaminant Levels and Notification Levels).

not set cleanup goals below an anthropogenic contaminant's background concentration.

B. Proposed Actions

1. EKI will complete delineation of waste, both onsite and offsite.

2. EKI proposes to demolish and remove infrastructure associated with historical operations such as aboveground storage tanks at the LOC Site, and underground sumps and pipelines from both Sites to prepare for remediation.

3. EKI proposes covering the open areas of the Sites with pavement. Any cracks in the existing pavement will be sealed. According to EKI, the paved surface at the Sites will act as a barrier between the Sites' occupants and non-volatile COCs present in surface soil. EKI also proposes institutional controls such as a site management plan to maintain the pavement.

4. EKI proposes to conduct limited soil excavation in three areas shown on Figure 16 of the RAP. The three areas are: 1) in the skim pond area located on the LOC Site; 2) the underground pipeline that connected the LOC Site with the northern tank farm area on the MLOC Site; and 3) the underground pipeline between the north tank farm and building 1 on the MLOC Site. EKI intends to remove near surface heavily impacted soil containing liquid oil.

5. EKI proposes to remediate the vadose zone using soil vapor extraction (SVE) at the Sites. EKI proposes SVE wells with 10-foot long screen intervals at three depths beginning at 5 feet bgs (11 SVE wells), 40 feet bgs (11 SVE wells), and 55 feet bgs (3 SVE wells). EKI assumed a radius of influence (ROI) of 25 feet, 50 feet, and 30 feet for the upper, middle, and deep SVE wells, respectively. However, EKI will conduct an SVE pilot test to determine all the parameters necessary to design a full-scale SVE system at the Sites.

6. EKI proposes remediation of groundwater by air sparging into the basal groundwater zone to volatilize the VOCs and then capture them via SVE wells for aboveground treatment. EKI proposes to install 11 air sparge wells on the MLOC and LOC Sites. EKI also proposes to conduct an air sparge pilot test to determine all the parameters necessary to design a full-scale air sparging system at the Sites.

7. EKI proposes in-situ chemical oxidation (ISCO) along with air sparging using ozone to destroy most organic pollutants at rapid rates. EKI proposes to perform bench-scale testing to select the proper oxidant to use at the Sites.

8. EKI proposes active remediation followed by monitored natural attenuation (MNA) of residual contaminants in soil, soil vapor, and groundwater at the Sites. EKI expects to actively operate the remedial systems for 5 to 7 years followed by 5 years of MNA to achieve cleanup at the Site. In the RAP, EKI did not propose active

remediation for the groundwater plume that has migrated offsite; EKI proposes only onsite source removal and MNA for the downgradient groundwater plume.

Los Angeles Regional Board Comments and Modifications

The Los Angeles Water Board makes the following comments regarding the RAP:

1. The conceptual approach proposed in the RAP is sequential, consisting of several steps that may overlap during implementation, but each task will require separate approval. As described under "Summary of RAP", the proposed remedial approach will require at least: 1) additional assessment to fill data gaps, 2) on-site structures removal, 3) targeted soil excavation, 4) pilot testing and bench-scale testing, 5) SVE system operation, 6) sparging system operation, 7) ISCO, and 8) monitoring specific to each remedial technology to evaluate efficacy of the remedy. Work plans will be required to collect additional information prior to activating the full-scale remedy. The results of data gap investigation(s) or pilot test(s) may require an adjustment, modification or even an alternate remedy. In addition, there are other considerations such as risk characterization and cleanup goals that play a key role in the success of a remedial action.

2. In Section 5 of the RAP, EKI failed to describe the purpose for classifying the chemicals detected at the Sites as "COCs" or "primary COCs". For risk estimates, all chemicals detected at the Sites pose a potential threat to Site users. Therefore, a baseline risk assessment to characterize and estimate risk to current and future occupants at the Sites is required.

3. The RAP states that in the future the Sites will be limited to commercial and industrial uses. If such cleanup levels are appropriate (see discussion re SWRCB Resolution 92-49 and related requirements in this letter), the Los Angeles Water Board will require recording a land use covenant and environmental restriction for each of the Sites to reflect the limitations on future uses of the Sites, pursuant to CWC sections 13304 and 13307.1.

4. The Los Angeles Water Board requires that the cleanup at both Sites must be conducted under the authority of the Porter-Cologne Water Quality Control Act, pursuant to the requirements stated in the CAO as well as cleanup and abatement order R4-2014-0118 issued for the Sites. Additionally, the LOC Site was a TSDF facility under the Hazardous Waste Control Law. Therefore, the remedial actions at the LOC Site must be consistent with DTSC's requirements for Corrective Action pursuant to Section 25187 of the Health and Safety Code.

5. EKI selected COCs using published screening levels and discussed cleanup goals but has not provided actual numeric cleanup goals for the recognized COCs at the Sites in the RAP. Such numeric cleanup goals must be submitted.

The Los Angeles Water Board determines that, so long as the CEQA analysis does not demonstrate anything to the contrary, it concurs with the approach contained in the RAP conditioned on the following modifications:

A. Cleanup goals must be proposed for all COCs that are present in each media (i.e., soil, soil vapor, groundwater) at the Sites. The Los Angeles Water Board oversees cleanup of soil (including soil matrix and soil vapor) pursuant to Section III.G. of SWRCB Resolution No. 92-49 which requires parties "to clean up and abate the effects of discharges in a manner that promotes attainment of either background water quality, or the best water quality which is reasonable if background levels of water quality cannot be restored". Alternative cleanup goals greater than background concentrations may be considered if it can be demonstrated that cleanup to background is not technologically and economically achievable due to site conditions and currently available remedial technologies. (See Resolution No. 92-49 and Cal. Code Regs., tit. 23, § 2550.4.) Any such proposed cleanup goals are subject to approval by the Los Angeles Water Board. Proposed cleanup goals are due to the Los Angeles Water Board by **July 29, 2022**.

B. The Los Angeles Water Board agrees with EKI that a successful remedial action plan requires addressing data gaps in the extent of soil and soil vapor contamination at the Sites, and the extent of groundwater contamination. The physical properties of subsurface layers such as grain-size distribution, bulk density, organic carbon content, microbial population, permeability, porosity, and moisture content are important parameters in the evaluation of remedial technology, particularly in-situ technologies, MNA, and vapor intrusion. The RAP must address these data gaps.

C. Perform a baseline risk assessment to characterize and estimate risk to current and future occupants at the Sites. This must be done by **July 29, 2022**.

D. The Los Angeles Water Board does not agree with EKI that covering the ground surface with asphalt or concrete to prevent exposure of onsite workers to COCs in shallow soil is a remedy. The Los Angeles Water Board requires that COCs exceeding cleanup goals present within the upper 10 feet of soil must be remediated to prevent direct exposure to humans at the Sites. The Los Angeles Water Board does not consider paving the ground surface, alone, as a remedy. Any remedies and final actions will be evaluated to confirm they are consistent with Resolution 92-49, Section III.G, and the regulations cited therein.

E. The Los Angeles Water Board concurs with EKI regarding targeted remedial excavation for soil at the Sites centered around the Skim Pond and two underground pipelines. However, existing data suggest that, particularly in the Skim Pond area, COCs are present at high concentrations to 40 feet bgs or deeper. Due to the concentration of total petroleum hydrocarbons (TPH) in some soil samples exceeding soil saturation, there is a concern that light non-aqueous phase liquid (LNAPL) may be present. Additional soil borings are essential in this area to laterally and vertically define the area that could be subject to excavation. Similarly, after the removal of underground pipelines, proper investigation of subsurface conditions is necessary. Therefore, a soil excavation remedial action work plan, and an underground pipeline removal and assessment workplan, must be developed. These two workplans are due to the Los Angeles Water Board by **October 31, 2022**.

F. The Los Angeles Water Board concurs with EKI's proposed installation of SVE technology to remediate the VOCs within the vadose zone. However, determining the number and locations of the SVE wells that may be required is premature, and should be determined through results of an SVE pilot test. An SVE pilot test work plan for the Sites is due to the Los Angeles Water Board by **August 31, 2022**.

G. The Los Angeles Water Board concurs with EKI regarding the use of air sparging technology, so long as it is employed with caution. The sparge points are proposed within the basal groundwater zone at 95 feet depth. Based on the cross sections in the RAP (Figures 4a, 4b, 5a, 5b, 6a, and 6b), there is a layer of fine-grained material described as silt and clay present above the basal groundwater zone. The three deep SVE wells are located above this fine-grained layer, screened from 55-65 feet bgs. This means that VOCs that are volatilized due to air sparging would not be captured by the SVE system and instead may travel laterally below the fine-grained layer and probably cause expansion of the VOC plume in groundwater. Also, 1,4-dioxane may not be amenable to volatilization via sparging. The proposed ISCO technology to remediate groundwater within the basal groundwater zone at the Sites shall undergo bench-scale testing to select the suitable oxidant for ISCO. In addition, an air sparging pilot test work plan shall be submitted to the Los Angeles Water Board for approval. The air sparging pilot test work plan is due to the Los Angeles Water Board by **August 31, 2022**.

H. In accordance with Resolution 92-49, Los Angeles Water Board considers MNA acceptable in certain circumstances and under specific conditions. For example, MNA might be appropriate where a source area is being actively remediated, and MNA is proposed primarily at the fringes of the plume where the concentrations of COCs are low. Here, the concentration of COCs (such as 1,4-dioxane) are highest

in groundwater wells located outside the boundary of the Sites on Compton Boulevard. The Los Angeles Water Board does not agree with EKI's proposal to address the cleanup of downgradient groundwater plume(s) with MNA. Alternate technologies, such as in-situ methods for the active cleanup of the downgradient groundwater plume, must be evaluated and discussed with the Los Angeles Water Board by **November 30, 2022**.

I. The Los Angeles Water Board requires performance monitoring during the implementation of the approved remedial actions to verify cleanup progress and compliance with cleanup goals. Such performance monitoring will be accomplished via periodic monitoring reports. For example, periodic vapor sampling during SVE operation, groundwater monitoring during air sparging and ISCO remediation. The liability to assess and remediate the waste ultimately lies with the responsible parties named in the CAOs. The Los Angeles Water Board does not prescribe the manner of remediation to be implemented by the responsible parties. However, the Los Angeles Water Board requires that a contingency plan, that includes potentially implementing alternative remedial technologies, to address any deficiencies revealed by performance monitoring be included in the final remedy that can be enacted if performance monitoring during the implementation of the remedy indicate that the remediation is not effective.

J. A land use covenant and environmental restriction for each of the Sites to reflect the limitations on future uses of the Sites, pursuant to CWC sections 13304 and 13307.1 must be submitted for approval. Such documents will be filed in the Los Angeles County Recorder's Office and will be recorded on title for each respective Site. The proposed land use covenant and environmental restriction for each of the Sites is due to the Los Angeles Water Board prior to the conclusion of active remediation.

The due dates set forth herein, including those for submittal of cleanup levels, soil excavation work plan, SVE pilot test work plan, bench-scale testing report, and air sparging pilot test work plan, do not constitute an amendment to the requirements of any cleanup and abatement order. All aspects of the CAO remain in full force and effect. Pursuant to CWC section 13350, failure to comply with the requirements of the CAO may result in civil liability in an amount up to fifteen thousand dollars ($15,000) for each day of violation.

///

///

If you have any questions, please contact Mr. Adnan Siddiqui (project manager) at (213) 576-6812 (Adnan.Siddiqui@waterboards.ca.gov) or Dr. Arthur Heath, Section Manager, at (213) 576-6725 (Arthur.Heath@waterboards.ca.gov).

Sincerely,

R Purdy Digitally signed by R Purdy
Date: 2022.04.11 08:14:59 -07'00'
Water Boards

_____
Renee Purdy
Executive Officer

cc (via e-mail):
Eric P. Francisconi, Esq.
Beth Dorris, Esq.
Michael L. Kinworthy, R.E.A., C.P.E.A.
Steve Figgins
Robert Traylor, PG, CHg
Alan Plaza
Noah M. Golden-Krasner, Esq.
Arthur Heath, Ph.D.
Hugh Marley
Russ Colby
Sophie Froelich, Esq.
Daniel S. Kippen, Esq.
Naomi S. Rubin, Esq.
Erin Garner, PG, CHg