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December 17, 2021

Joseph Lawlor, Project Planner
Community Development Division
Contra Costa County, Department of Conservation and Development
30 Muir Road, Martinez, CA 94553

Re: Martinez Refinery Renewable Fuels Project Draft Environmental Impact Report

Dear Mr. Lawlor:

Bay Area Air Quality Management District (Air District) staff has reviewed the Draft Environmental Impact Report (DEIR) for Martinez Refinery Renewable Fuels Project (Project). The Project is located at the Marathon Martinez Refinery (Refinery), at 150 Solano Way, Martinez, in Contra Costa County (County), and comprises approximately 2,000 acres of land.

The proposed Project would repurpose the Refinery for production of fuels from renewable sources rather than from crude oil. Some existing refinery equipment would be altered or replaced, and additional new equipment units and tanks would be installed to facilitate production of fuels from renewable feedstock. Crude oil processing equipment that cannot be repurposed for processing of renewable feedstock would be shut down and removed from the Refinery. Upon completion of facility changes, the Refinery is anticipated to process approximately 48,000 barrels per day (bpd) of renewable feeds and would produce renewable diesel fuel, renewable propane, renewable naphtha, and potentially, renewable aviation fuel. Refined petroleum products would continue to be received, stored, and distributed through the Refinery, but would not be further processed at the Refinery.

The Project also includes the modification of the two marine oil terminals (MOT or MOTs), Avon MOT and Amorco MOT, to facilitate receipt of renewable feedstocks and distribution of renewable fuels outside of the Bay Area. Avon MOT is located on Suisun Bay, 1.75 miles east of the Benicia-Martinez Bridge, on unincorporated land in Contra Costa County. Amorco MOT is located approximately 0.6 miles west of the Benicia-Martinez Bridge in the city of Martinez.

The Air District has the following comments on the Project's DEIR.

Air Quality Impacts and Mitigation Measures

1. Impact AQ-2: Operation emissions in excess of the thresholds of significance. DEIR page 3.3-34 begins a discussion of the Project's significant and unavoidable impact due to nitrogen oxide (NOx) emissions from marine and rail transport.

However, rather than documenting the estimated emissions from the Project, Tables 3.3-14 and Table 3.3-15 provide pre- and post-project “emission change” summaries. Impact AQ-2 requires additional information to ensure the accurate and transparent portrayal of the Project’s impact and identification of effective mitigation measures, including:

- a. A table to document the Project’s net operational emissions with language that compares the pre- and post-project net emissions. Pre-project emissions should show actual emissions and be compared to post-project potential to emit emissions.
- b. A table and discussion that includes a breakdown of post-project emissions from new and existing sources based on the potential to emit.
- c. If emissions from existing sources are calculated using different methods for different sources, an explanation should be provided.
- d. The discussion of the significant impact from NO_x emissions in the San Joaquin Air Pollution Control District (SJAPCD). The reliance on the California Air Resources Board (CARB) Commercial Harbor Craft Regulation to reduce emissions requires further explanation including estimated emission reductions from the regulation (DEIR p.3.3-38). In addition, complying with a regulation is not a CEQA mitigation and the DEIR must present and analyze additional actions to show that the Project will mitigate NO_x emissions below the SJAPCD’s threshold.

2. Impact AQ-4: Cumulative criteria pollutant health risk in excess of the thresholds of significance identified in the Air District CEQA Guidelines. The DEIR states that the Project’s annual average fine particulate matter (PM_{2.5}) concentrations are 0.12 micrograms per cubic meter (µg/m³), and while this represents a decrease from baseline concentration, there is an existing significant and unavoidable cumulative impact for annual average PM_{2.5} concentrations in the Project area (Impact AQ-4, p. 3.3-39 and p. 3.3-40). The Project is located in a community that the State of California has identified as disproportionately impacted, disadvantaged and low-income under Senate Bill 1000 and by CalEPA’s CalEnviroScreen 4.0. Therefore, if the Project has the potential to reduce air quality and community health impacts the Air District strongly encourages the County to include and require such reductions as conditions of Project approval in order to minimize the cumulative air pollution burden in this disproportionately impacted community.

For example, Mitigation Measure AQ-1, recommended to address Impact AQ-1, would decrease fine particulate matter emissions. Thus, the Air District recommends that all measures in Mitigation Measure AQ-1b (DEIR page 3.3-33) be *required* as conditions of Project approval rather than recommended, including:

- a. Infrastructure shall be provided to support the off-road and on-road zero and near-zero emission technology vehicles and equipment that will be operating on-site.
- b. Portable equipment used during construction should be powered by electricity from the grid or onsite renewable sources, instead of diesel-powered generators.
- c. All off-road diesel-powered equipment used during construction shall be equipped with Tier 4 or cleaner equipment. In place of Tier 4 engines, off-road equipment can incorporate retrofits such that emission reductions achieved equal or exceed that of a Tier 4 engine.

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- d. All off-road equipment with a power rating below 19 kilowatts (e.g., plate compactors, pressure washers), used during project construction shall be battery powered.
 - e. All heavy-duty trucks entering the construction site, during the grading and building construction phases shall be model year 2014 or later.
 - f. Renewable diesel shall be used for all truck fleets.

Additionally, the measures identified in the Best Management Practice Greenhouse Gas (GHG)-1 measure (DEIR p 3.8-19) will reduce PM2.5 emissions. The Air District recommends that the GHG-1 measures be updated, expanded, and required through contractual relationships with the marine and railroad operators, including but not limited to the following:

- a. Ocean going vessels (OGV), shall use engines meeting the International Maritime Organization's Tier 4 engine standards or higher.
- b. All engines in articulated tug-barge combinations and tugboats assisting oceangoing vessels and any equipment engaged in dredging activities shall meet U.S. Environmental Protection Agency (EPA) Tier 4 standard and be equipped with diesel particulate filters.
- c. In advance of California Air Resources Board (CARB) requirements, the County should require shore power be provided to all vessel fleets and require all fleets to be shore power compatible.
- d. All locomotives shall meet U.S. EPA Tier 4 engine standards.
- e. Require a "clean fleet" (e.g., zero-emission light-and medium-duty delivery trucks, vans, automobiles) as part of business operations.
- f. Ensure all service equipment (e.g., yard hostlers, yard equipment, forklifts, and pallet jacks) used within the project site are zero-emission.
- g. Diesel back-up generators shall not be used on the property unless absolutely necessary. If necessary, generators shall have Best Available Control Technology (BACT) that meets U.S. EPA's Tier 4 emission standards or meet the most stringent in-use standard, whichever has the least emissions.

Please note the Project is subject to Air District Regulation 6-6: Prohibition of Trackout. In addition, MM AQ-1 should commit to the following additional best practices during both phases of construction:

- a. All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.
- b. All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
- c. Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.

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- d. Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
 - e. The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.
 - f. All trucks and equipment, including tires, shall be washed off prior to leaving the site.
 - g. Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel.
 - h. Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.
 - i. Using only Tier 4 engines for all construction equipment and using zero-emission equipment as available.
3. Impact AQ-5: Creation of objectionable odors (DEIR page 3.3-41). The DEIR states that the Project's odors are less than significant with Mitigation Measure AQ-2 (MM AQ-2). MM AQ-2 states that during the construction phase of the Project, an Odor Management Plan (Odor Plan) shall be developed and implemented upon commencement of the renewable fuels processes. The Air District has the following comments on the proposed Odor Plan.
- a. The Air District does not have sufficient information to agree or disagree with the determination that with implementation of MM AQ-2 (Odor Plan) Impact AQ-5 is less than significant. Without the opportunity to review a proposed Odor Plan, it is not possible to assess its potential benefits or shortcomings.
 - b. The Project Sponsor must commit to specific actions in the EIR as part of the public review process for the Odor Plan to be acceptable as a mitigation measure.
 - c. The District recommends more robust discussion of enforcement measures to address odors from processing renewable feedstock and changes to the wastewater treatment emission units.
 - d. Include a discussion in the Odor Plan of odors from mobile sources carrying odorous materials, and any sources that require approval by the California State Water Resources Control Board, such as wastewater pond closures.
 - e. Additional details are needed to document how the County will enforce the Odor Plan to ensure the expected management and control strategies are achieved, such as what actions will be taken if an odor is suspected.
 - f. When odor complaints are reported, the Odor Plan should require immediate action to prevent repeat complaints. In addition, the Odor Plan should include an annual evaluation of the overall system performance, identifying any trends to provide an opportunity for improvements to the plan, and updating the odor management and control strategies, as necessary.

The Air District is available to help the County address the Odor Plan's potential compliance and enforcement issues by including odor control conditions on new, altered, or modified stationary source permits, and by assisting with the development of a robust Odor Plan to mitigate potential odors.

Project Renewable Feedstocks

Section 6.2.3 Resource Impacts discusses the land-use impacts of agricultural crops and forest system feedstocks, but there is no consideration of other cellulosic feedstocks from municipal waste streams. The Air District recommends that the County investigate requiring that the Project Sponsor procure a percentage of organic waste from local sources for use as feedstock at the facility. Local governments in California are required to meet Senate Bill 1383 organic waste diversion requirements to reduce statewide disposal of organic waste by 75 percent from 2014 levels by 2025. The procurement and utilization of this organic waste as potential feedstock could result in benefits for associated transportation impacts and costs, greenhouse gas emissions, and land use.

Health Risk Assessment (HRA) & Emissions Estimates Methodology

DEIR Table 3.3-17 "Summary of Results at Maximally Exposed Offsite Receptors, Operational Sources" shows the reduction in cancer risk and chronic risks anticipated to result from the Project (DEIR p 3.3-39). As described above in the discussion of Air Quality Impact AQ-2, Table 3.3-17 requires a companion table and discussion to document the Project's net operational emissions. Providing the materials described above in the comment on Impact AQ-2 in the DEIR's Section 3.3 will help to ensure that the Project's net emissions are transparent and understandable to the public and are minimized to the fullest extent feasible.

The Air District also recommends the following modifications to the emissions calculation and HRA methodology to make the DEIR more transparent and health protective, and to use the most current methodologies.

1. Roadways should be modeled as adjacent volume sources instead of line sources to be consistent and comparable to community level assessments under AB 617 (see DEIR Appendix AQ/GHG: Air Quality and GHG Technical Analysis, Appendix C).
2. The HRA only includes modeled emissions associated with ship hoteling at Avon and Amorco MOTs. The Air District recommends that transiting and maneuvering operation emissions be modeled in the HRA (DEIR Appendix AQ/GHG: Air Quality and GHG Technical Analysis, Appendix C).
3. Provide additional explanation for the different release parameters (e.g., initial vertical dimension) used to model trucks assigned to specific routes (DEIR Appendix AQ/GHG: Air Quality and GHG Technical Analysis, Tables B-5 and B-7).
4. Extend the fine receptor grid spacing for modeling from a radius of 25 meters to 300 meters around the property boundary.
5. Provide detailed equations, exposure parameters, and explanation as to how the worker exposure was estimated using the modeled annual average concentration under operation

- and construction scenarios (DEIR Appendix AQ/GHG: Air Quality and GHG Technical Analysis, Appendix C).
6. Use California Air Resources Board's (CARB) Health Risk Assessment default parameters for the rail analysis. For example, see the BNSF Railway Richmond Railyard analysis (November 20, 2007): (https://ww2.arb.ca.gov/sites/default/files/classic/railyard/hra/bnsf_richmond_hra.pdf)
 7. For the on-road vehicle offsite paved road dust entrainment emission factors, the Air District recommends CARB's Miscellaneous Process Methodology 7.9 *Entrained Road Travel, Paved Road Dust* (2018) (https://ww3.arb.ca.gov/ei/areasrc/fullpdf/full7-9_2018.pdf) which is more current than U.S. EPA's AP 42 factors. The average vehicle weight of at least 16.5 tons (33,000 pounds) is equivalent to the weight of the T7 tractor vehicle types for the pre-and post-project emissions and should be used (see DEIR Appendix AQ/GHG: Air Quality and GHG Technical Analysis Table B-2b).
 8. The Air District recommends that estimated impacts to the maximally exposed individual (MEI) be based solely on the local silt loading factor.
 9. Provide an explanation for using 2022-2024 emission factors to calculate pre-project average emissions for vehicles from October 2015 to September 2020.
 10. Use CARB's EMFAC 2021 model rather than EMFAC 2017 to estimate vehicle emission factors, as EMFAC 2021 was the most recent CARB emissions model when the Notice of Preparation for the Project was released on February 17, 2021.

We encourage the County to contact Air District staff with any questions or to request assistance during the environmental review process. If you have any questions regarding the Air District's permits, please contact Barry Young, Senior Advanced Projects Advisor, at byoung@baaqmd.gov or (415) 940-9641. If you have any questions regarding these comments, please contact Alison Kirk, Principal Environmental Planner akirk@baaqmd.gov, Matthew Hanson, Environmental Planner II at mhanson@baaqmd.gov, or Lily Maclver, Environmental Planner I at lmaciver@baaqmd.gov.

Sincerely,



Greg Nudd
Deputy Air Pollution Control Officer – Policy

Cc: BAAQMD Director John Gioia
BAAQMD Director David Hudson
BAAQMD Vice Chair Karen Mitchoff
BAAQMD Director Mark Ross