

Martinez Refinery Renewable Fuels Project

Draft Revised Environmental Impact Report

County File No. CDLP20-02046
State Clearinghouse No. 2021020289

August 2024 Update





**MARTINEZ REFINERY
RENEWABLE FUELS PROJECT**

Draft Revised Environmental Impact Report

August 2024 Update

Prepared for:



Contra Costa County
Department of conservation and Development
30 Muir Road
Martinez, CA 94553

Prepared by:

Stantec Consulting Services Inc.
2890 Gateway Oaks Drive, Suite 200
Sacramento, CA 95833
www.stantec.com

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Acronyms / Abbreviations

BAAQMD	Bay Area Air Quality Management District
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
County	Contra Costa County
Draft REIR	Draft Revised Environmental Impact Report
EIR	Environmental Impact Report
LUP	Land Use Permit
Applicant	Marathon Petroleum Corporation
Project	Martinez Refinery Renewable Fuels Project
NOP	Notice of Preparation
OMCP	Odor Management and Control Plan
PRC	Public Resources Code
REIR	Revised Environmental Impact Report
SAP	Sulfuric Acid Plant
SRU	Sulfur Recovery Unit
WWTP	Wastewater Treatment Plant

1 Introduction

The California Environmental Quality Act (CEQA) of 1970 (Public Resources Code [PRC] Sections 21000 et seq.) and the CEQA Guidelines (California Code of Regulations Title 14, Section 15000) require a public agency with discretionary authority to issue a permit or other approval to evaluate the environmental impacts of its action. In 2020, Tesoro Refining & Marketing Company LLC, an indirect and wholly owned subsidiary of Marathon Petroleum Corporation (applicant) submitted a Land Use Permit (LUP) application for its proposed Martinez Refinery Renewable Fuels Project (Project) with the Contra Costa County Department of Conservation and Development. Under the Project, the applicant's Marathon Martinez Refinery would discontinue the production of fossil fuels and switch to production of fuels from renewable sources, including rendered fats, soybean and corn oil, and other cooking or vegetable oils. Approval or denial of the LUP is a discretionary action requiring review under CEQA (PRC Section 21080). Pursuant to CEQA, Contra Costa County (County), as lead agency for the Project, prepared a Final Environmental Impact Report (2022 EIR) for the proposed Martinez Refinery Renewable Fuels Project. On May 3, 2022, the County Board of Supervisors certified the 2022 EIR for the Project as having been prepared in compliance with CEQA and approved the Project. The 2022 EIR can be found in its entirety at the County's website: [Martinez Refinery Renewable Fuels Project | Contra Costa County, CA Official Website](#) (link)

In June 2022, a lawsuit was filed in the Contra Costa County Superior Court challenging the certification of the 2022 EIR and the approval of the Project. (*Communities for a Better Environment, et al., v. County of Contra Costa, et al.*, Contra Costa County Superior Court Case No. N22-1080.) On July 21, 2023, the Superior Court, the Honorable Edward G. Weil presiding, issued a Statement of Decision in which the Superior Court concluded that the 2022 EIR was adequate on all counts, except in its discussion and deferral of odor mitigation (refer to Appendix A and discussion below). On August 23, 2023, the Superior Court entered judgment and issued a peremptory writ of mandate to the County to partially decertify the 2022 EIR and remanding the matter to the County for reconsideration of the odor mitigation measures only. This Revised Environmental Impact Report (REIR) responds to the decision by the Court.

1.1 SUPERIOR COURT DECISION

The Superior Court decision identified one specific issue to be remanded to the County for further consideration in compliance with CEQA:

- Reconsider the mitigation measures for the Project's odor impacts.

Section 3.3, Air Quality of this REIR, provides new information regarding the Project's odor mitigation that replaces Section 3.3, Air Quality of the 2022 EIR as directed by the Superior Court.

1.2 PURPOSE OF THIS DRAFT REVISED EIR

The Superior Court decision did not invalidate any aspect of the 2022 EIR except for the odor mitigation measures. The County has prepared this REIR to address the one issue identified by the Court and to conduct further environmental review in compliance with CEQA as directed by the Superior Court. Consistent with the Superior Court decision, the REIR need only address the issue identified in the decision (i.e., reconsider the mitigation measures for the Project's odor impacts) as necessary to achieve compliance with CEQA. Except for the one issue specified in the Statement of Decision, the remainder of the 2022 EIR previously prepared and certified by the County was either not challenged or was found by

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the Court to be in compliance with CEQA, and therefore remains valid. The Final 2022 EIR (State Clearinghouse No. 2021020289), to the extent it does not conflict with the additional information provided in this Draft REIR, is incorporated herein by reference. As required by CEQA Guidelines Section 15088.5(g), revisions made to the 2022 EIR are identified by strike through for deleted text and double underline for new text.

The information included in this Draft REIR are those needed to address the deficiencies identified in the Superior Court decision and to provide sufficient additional information so that the reader can understand and assess the REIR's contents. Pursuant to CEQA Guidelines Section 15088.5(c), recirculation is limited to those chapters and sections and the additional information contained in this Draft REIR, namely portions of Section 3.3, Air Quality. Analyses in the 2022 Final EIR that were not invalidated by the Superior Court decision have not been revised and are not being recirculated.

1.3 CONTENT OF THIS DRAFT REVISED EIR

This document consists of the following chapter and section. All chapter and section numbering are consistent with the chapter and section numbering the 2022 EIR.

- **Executive Summary.** Provides updates to the summary of impacts and mitigation measures identified in Section 3.3, Air Quality.
- **Section 3.3, Air Quality.** Provides an assessment of the proposed Project's odor impacts and identifies mitigation measures.
- Appendix A: Superior Court Filings (Statement of Decision, Judgment, and Peremptory Writ of Mandamus)
- Appendix B: Martinez Refinery Renewable Fuels Project Odor Management and Control Plan

1.4 PUBLIC REVIEW OF THE DRAFT REVISED EIR

This Draft REIR for the Project is subject to a public review period. (CEQA Guidelines, §§ 15087 and 15088.5.) If an EIR is submitted to the State Clearinghouse for review, the review period shall be a minimum of 45 days. (CEQA Guidelines, § 15105(a).) This Draft REIR is being released for a 45-day public review period, beginning Tuesday, August 6, 2024 until Friday, September 20, 2024 at 4:00 p.m. During the 45-day review period, the Draft REIR is available at the following locations:

- Contra Costa County Department of Conservation and Development located at 30 Muir Road Martinez, between 8:00 a.m. and 5:00 p.m. Monday through Thursday, and 8:00 a.m. and 4:00 p.m. on Friday.
- County website: <https://www.contracosta.ca.gov/3383/Conservation-Development>
- Pleasant Hill Library, 2 Monticello Avenue, Pleasant Hill, CA
- Rodeo Library, 220 Pacific Avenue, Rodeo, CA
- San Pablo Library, 13751 San Pablo Avenue, San Pablo, CA

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- Crockett Library, 991 Loring Avenue, Crockett, CA

Pursuant to CEQA Guidelines Section 15088.5(f)(2), reviewers are hereby notified that comments should be limited to the revised chapters or sections of this Draft REIR. The content of this Draft REIR provides sufficient detail and clarity such that the public and decision makers can make an informed decision regarding the adequacy of the issues discussed in this REIR. The County will only prepare written responses to comments received regarding the contents of the REIR. Responses to all comments received during the review period will be provided in a separate document.

1.4.1 How to Submit Comments on the REIR

To comment on the Draft REIR, please send comments to the Contra Costa County of Department of Conservation and Development, Community Development Division before the end of the comment period specified in the Notice of Availability:

- Contra Costa County Department of Conservation & Development Community Development Division
30 Muir Road, Martinez, California 94553
Attention: Joseph Lawlor, Senior Planner or Email: joseph.lawlor@dcd.cccounty.us

All comments received on the Draft REIR during the public review period will be addressed in the Final REIR. The Final REIR will include all comments received and the County's responses, as well as any changes to the text of the Draft REIR. The Draft REIR and Final REIR, as well as the portions of the 2022 EIR determined by the Superior Court to be in compliance with CEQA, will comprise the EIR for the project. The EIR will be considered anew by Contra Costa County for certification. Certification entails determination by Contra Costa County, as Lead Agency, that the EIR has been completed in compliance with CEQA, that the decision-making body reviewed and considered the information in the EIR, and that the EIR reflects its independent judgment. If the EIR is certified, Contra Costa County will file a return to the writ specifying the actions taken to comply with the writ and take necessary actions to discharge the writ.

Executive Summary

The Superior Court concluded that the discussion of odor mitigation measures was insufficient and the matter was remanded to the County for reconsideration of the odor mitigation measures only. Other aspects of the Final EIR were challenged in the litigation, but those challenges were rejected by the Superior Court. Therefore, this REIR focuses on the issue as directed by the Court and is limited to the discussion of odor mitigation measures only. For all other impacts and mitigation measures of the Project, refer to the 2022 EIR which can be found in its entirety at the County's website: Martinez Refinery Renewable Fuels Project | Contra Costa County, CA Official Website [Martinez Refinery Renewable Fuels Project | Contra Costa County, CA Official Website](#) (link)

Mitigation Measure AQ-5 required that an operational Odor Management Plan be developed and implemented upon commissioning of the renewable fuels processes. To implement Mitigation Measure AQ-5, and as required by the BAAQMD Authority to Construct Permits and the County's LUP, a detailed facility-wide Odor Management and Control Plan (OMCP) was developed. A copy of the OMCP is included as Appendix B. The OMCP provides background information on the odor monitoring and detection methods (see Section 2.1 of the OMCP), odor management and control equipment (Section 2.2 of the OMCP), odor event and investigation procedures (Section 2.3 of the OMCP), potential odor sources (Section 3.0 of the OMCP), and system performance and reporting (Section 4 of the OMCP). Additional odor prevention and management is provided by the Facility's existing Leak Detection and Repair Programs and its Fenceline Monitoring program, as both can detect fugitive emissions that may generate odors.

Prior to starting up the Project, the OMCP was prepared and submitted to the BAAQMD. As the agency in charge of air quality, the BAAQMD has the most experience and technical expertise in handling air quality-related issues, including odor management and control.

The primary odor control measures included engineered odor controls (e.g., enclosed systems), nitrogen blanketing, establishing operating limits to prevent pressure safety valve releases, developing a mechanical integrity program, vapor recovery, inspections during routine operations, Leak Detection and Repair, and installation of pond aerators and Moving Bed Biofilm Reactor Blowers. The Marathon Martinez Refinery facility has been processing renewable feedstocks since February 2023. Since that time, no confirmed odor complaints have been received for the facility, demonstrating that the odor mitigation measures, the Project design including engineered controls, and implementation of the OMCP have been effective in mitigating any odors from the Project.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

This Draft ~~EIR~~ Revised EIR includes a detailed evaluation of the potentially significant environmental effects that could result from implementation of the Project on a variety of resource topics. The following Table ES-1 presents a summary of potential impacts of and mitigation measures for the proposed Project.

Table ES-1. Summary of Project Impacts and Mitigation Measures

Section	Impact Number	Impact	Level of Significance	Mitigation Measures	Level of Significance after Mitigation
Air Quality	AQ-5	Creation of objectionable odors.	Potentially Significant	During the construction phase of the Project, the operational Odor Management ~~and Control~~ Plan (OMCP) shall be developed and implemented upon commissioning of the renewable fuels processes, intended to become an integrated part of daily operations at the Facility and other sites, so as to prevent any objectionable offsite odors and effect diligent identification and remediation of any potential objectionable odors generated by the facility and associated sites. The ~~Plan~~ OMCP shall outline equipment that is in place and procedures that facility personnel shall use to address odor issues, facility wide. The ~~OMCP~~ ~~Plan~~ shall include continuous evaluation of the overall system performance, identification of trends to provide an opportunity for improvements to the ~~OMCP~~ ~~Plan~~, and updating the odor management and control strategies, as necessary. This ~~OMCP~~ ~~Plan~~ shall be retained at the facility for County or other government agency, ~~e.g., BAAQMD~~, inspection upon request. The following practices shall be included in the OMCP to reduce the potential of objectionable odors from the storage of renewable feedstocks, operation of the wastewater treatment plant, and any other odor generating activity <u>at the Facility and other sites</u>: • Develop operating procedures to inspect and evaluate the effectiveness of odor control	Less than Significant

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Section	Impact Number	Impact	Level of Significance	Mitigation Measures	Level of Significance after Mitigation
				equipment and operation of the wastewater treatment plant. <u>All OMCP related records will be retained for a period of 5 years as required under Title V.</u> <u>Random Self Inspections to be conducted on a semi-annual basis eight times per calendar quarter.</u> <u>At least semi-annually, the odor complaint log will be reviewed along with the WWTP monitoring data.</u> <u>If there are fewer than an average of five confirmed complaints per year during the first three years of operation, then the formal review of the complaint log frequency can be reduced to an annual basis. If there are fewer than an average of five confirmed complaints per year during the first 3 years of operation, then the inspection frequency can be reduced to an annual basis.</u> - If there are more than five confirmed complaints in any single year, then the application shall develop additional mitigation strategies in consultation with the BAAQMD. - In the event that odor complaints are reported, the permittee shall immediately take action to prevent repeat complaints. <u>Investigations by facility staff will begin within one hour, or as soon as practicable, within safety protocols and site logistics constraints.</u> The permittee shall also develop and implement remedial	

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Section	Impact Number	Impact	Level of Significance	Mitigation Measures	Level of Significance after Mitigation
				odor mitigation strategies in consultation with the BAAQMD and County. • Prepare an annual evaluation report of the overall system performance, identifying any trends to provide an opportunity for improvements to the plan, and updates to the odor management and control strategies, as necessary. The report shall be provided to the BAAQMD and County for review and approval. • <u>Training will be conducted annually for facility staff on the relevant plans for odor prevention, detection, and reporting. Records of this training will be kept onsite for at least five years.</u> • <u>Records will be maintained for any odor control equipment maintenance and repairs.</u> • <u>Records will be maintained for any odor related corrective actions.</u> • <u>Operators will complete monitoring and inspection rounds every day twice per 12-hour shift (i.e., four times per day) where they will walk through the Facility and report any noticeable odors or other issues that could lead to odors emanating offsite (e.g., gas or liquid leaks) to Shift Supervision</u>	

3 Environmental Setting, Impacts, and Mitigation Measures

As identified in the Superior Court decision, the Superior Court found that the 2022 EIR improperly deferred mitigation of potential odor impacts. This deficiency is addressed by the preparation and distribution of this Draft Revised EIR (Draft REIR). This section of the Draft REIR provides new information regarding the Project's odor mitigation that replaces those portions of Section 3.3.1 relating to Impact AQ-5. The section maintains the same section numbering (i.e., Section 3.3.1), title, and general organization as the 2022 EIR to simplify comparisons across the two documents. However, this section only addresses the issues necessary to address the inadequacies identified in the Superior Court decision. Therefore, Impact AQ-5 addressing odor emissions is the only section of the Air Quality section that is revised. All other sections including the environmental and regulatory setting, existing conditions, and impacts and mitigation measures unrelated to odor are not repeated here. Those sections, and the information contained therein, were adequately addressed in the 2022 EIR and are not related to or impacted by the changes responding to the deficiencies identified in the Superior Court decision. The 2022 EIR can be found in its entirety at the County's website: [Martinez Refinery Renewable Fuels Project | Contra Costa County, CA Official Website](#) (link)

Changes to the original text of the 2022 EIR are shown in strike-out for text removed and double underline for new text.

3.3 AIR QUALITY

3.3.1 Impacts and Mitigation Measures

Impact AQ-5: Creation of objectionable odors (Potentially Significant)

The primary source of odors from pre-Project operations are the treatment of sour gas streams, the Sulfur Recovery Unit (SRU), the Sulfuric Acid Plant (SAP), storage of crude oil, and the wastewater treatment plant. The SRU, SAP, and crude oil storage would be shut down as part of this Project resulting in a reduction of odors emanating from these sources. The elimination of crude oil refining at the facility would result in a substantial reduction in sulfur compounds handled at the Facility, reducing the potential generation of hydrogen sulfide, sulfur dioxide, and other sulfur compounds (e.g., mercaptans) that are the prominent sources of odors at refineries.

The wastewater treatment plant will be upgraded with a new Moving Bed Biological Reactor unit. Odors from wastewater are often created when treatment systems are under designed or when there is poor control of operational variables. The new wastewater treatment plant will have an equalization tank to provide a consistent feed to the plant creating fewer process swings and better control of process operating variables limits. The controls for chemical addition and outfall would be automated with updated technology that is more reliable and precise. The combination of these upgrades will result in reduced odor generation from the wastewater treatment plant.

Potential new sources of odor associated with the Project are from organic vapors generated by the storage of renewable feedstock, including tallow. There are several engineered controls that can eliminate accumulation or release of these vapors. These include covering/sealing odor-generating equipment, using fixed roof or floating roof tanks to prevent the escape of vapors from tanks, reducing

3 Environmental Setting, Impacts, and Mitigation Measures

fugitive emissions, using systems to incinerate vapors, using scrubbing systems to remove vapors, and minimizing system upsets to reduce releases of vapors. Odor management controls also include nitrogen blanketing of storage tanks to prevent oxygenation of materials that could lead to odors, and a vapor recovery system that gathers vapors for treatment by activated carbon, which neutralizes vapor generating compounds. These controls are effective at mitigating odors from storage tanks and loading and unloading activities. Several of these types of engineered controls have been identified by BAAQMD as effective at mitigating vapors.¹

In order to determine the level of potential odor and whether controls would be needed, Marathon visited three facilities where fat, oils, and grease were stored, including: (1) a facility that pretreats, manufactures and transports animal fat and plant-based oil byproducts; and (2) a terminal that stores and transports vegetable oils and petroleum products. Techniques that were observed to be effective to control odors at these facilities included having enclosed systems and tanks, limiting exposure of feedstocks to oxygen, and nitrogen blanketing tanks to eliminate oxygen. Noticeable odors were not observed at these facilities and the types of odor control technologies used at these sites were incorporated into the design for the Project. Other odor management controls include, but are not limited to, activated carbon adsorption, incineration, biofiltration biofilter use, and chemical scrubbing. All of these methods, in conjunction with a vapor recovery system and nitrogen blanketing of storage tanks, were evaluated to determine the most effective and practicable method to reduce odors from the storage tanks and loading and unloading activities. These options are the most common utilized odor control methods for biofuel production.

These control measures were incorporated into applicable permits issued by the BAAQMD. A third-party contractor would be used to conduct odor monitoring throughout the facility and surrounding community to evaluate the type and strength of any odors. There has been an average of two confirmed odor complaints over the last 3 years when crude oil was refined (2018-2020) (BAAQMD 2021), which is less than the BAAQMD significance threshold of five confirmed odor complaints per year averaged over three years. Implementation of the above control measures and odor monitoring would prevent the generation of objectionable odors. Nevertheless, the potential for odors cannot be accurately predicted and therefore, the impact is potentially significant. Implementation of Mitigation Measure AQ-5 would reduce this impact to less than significant.

Mitigation Measure AQ-5 required that an operational Odor Management Plan be developed and implemented upon commissioning of the renewable fuels processes. The plan shall outline equipment that is in place and procedures that facility personnel shall use to address odor issues, facility wide. Practices that were to be included in the Odor Management Plan to reduce objectionable odors from the storage of renewable feedstocks, operation of the wastewater treatment plant, and any other odor generating activity, included the following:

- Develop operating procedures to inspect and evaluate the effectiveness of odor control equipment and operation of the wastewater treatment plant. Inspections are required to be conducted on a semi-annual basis.
- If there are fewer than an average of five confirmed complaints per year during the first 3 years of operation, then the inspection frequency can be reduced to an annual basis.
- If there are more than five complaints in any single year, then the applicant shall develop additional mitigation strategies in consultation with the BAAQMD.

¹ Bay Area Air Quality Management District, California Environmental Quality Act Air Quality Guidelines (Updated May 2012)
(https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/baaqmd-ceqa-guidelines_final_may-2012.pdf)

Mitigation measure AQ-5, as revised below, would reduce odor impacts to less than significant.

Mitigation Measure AQ-5: During the construction phase of the Project, the operational Odor Management and Control Plan (OMCP) shall be developed and implemented upon commissioning of the renewable fuels processes, intended to become an integrated part of daily operations at the Facility and other sites, so as to prevent any objectionable offsite odors and effect diligent identification and remediation of any potential objectionable odors generated by the facility and associated sites. The ~~Plan~~ OMCP shall outline equipment that is in place and procedures that facility personnel shall use to address odor issues, facility wide. The OMCP shall include continuous evaluation of the overall system performance, identification of trends to provide an opportunity for improvements to the OMCP, and updating the odor management and control strategies, as necessary. This OMCP shall be retained at the facility for County or other government agency, e.g., BAAQMD, inspection upon request. The following practices shall be included in the OMCP to reduce the potential of objectionable odors from the storage of renewable feedstocks, operation of the wastewater treatment plant, and any other odor generating activity at the Facility and other sites:

- Develop operating procedures to inspect and evaluate the effectiveness of odor control equipment and operation of the wastewater treatment plant.
- All OMCP related records will be retained for a period of 5 years as required under Title V.
- Random Self Inspections to be conducted on a semi-annual basis eight times per calendar quarter.
- At least semi-annually, the odor complaint log will be reviewed along with the WWTP monitoring data.
- If there are fewer than an average of five confirmed complaints per year during the first three years of operation, then the formal review of the complaint log frequency can be reduced to an annual basis. If there are fewer than an average of five confirmed complaints per year during the first 3-years of operation, then the inspection frequency can be reduced to an annual basis.
- If there are more than five confirmed complaints in any single year, then the application shall develop additional mitigation strategies in consultation with the BAAQMD.
- In the event that odor complaints are reported, the permittee shall immediately take action to prevent repeat complaints. Investigations by facility staff will begin within one hour, or as soon as practicable, within safety protocols and site logistics constraints. The permittee shall also develop and implement remedial odor mitigation strategies in consultation with the BAAQMD and County.
- Prepare an annual evaluation report of the overall system performance, identifying any trends to provide an opportunity for improvements to the plan, and updates to the odor management and control strategies, as necessary. The report shall be provided to the BAAQMD and County for review and approval.
- Training will be conducted annually for facility staff on the relevant plans for odor prevention, detection, and reporting. Records of this training will be kept onsite for at least five years.
- Records will be maintained for any odor control equipment maintenance and repairs.

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- Records will be maintained for any odor related corrective actions.
- Operators will complete monitoring and inspection rounds every day twice per 12-hour shift (i.e., four times per day) where they will walk through the Facility and report any noticeable odors or other issues that could lead to odors emanating offsite (e.g., gas or liquid leaks) to Shift Supervision.

Significance after Mitigation: Less than significant.

Implementation of Odor Mitigation Measures

Identifying and addressing odors is a long established activity at the Refinery. Odor Patrols, specifically established to identify and resolve identified odors have long been in place prior to 2000. By 2000, a formal OMCP was in place to address refinery operations and activities with the potential to generate odors and methods for control and resolution of odors. For the Project, as required by Mitigation Measure AQ-5, the OMCP was revised and updated in November 2022. The November 2022 OMCP addresses renewable fuels activities addressed in the 2022 EIR (see Appendix B).

The OMCP was approved by the County and submitted to the BAAQMD in November 2022 and a copy is included as Appendix B. As the agency in charge of air quality, the BAAQMD has the most experience and technical expertise in handling air quality-related issues, including odor management and control.

The OMCP provides: An Introduction (Section 1), background information on the odor monitoring and detection methods (see Section 2.1), odor management and control equipment (Section 2.2), odor event and investigation procedures (Section 2.3), potential odor sources (Section 3.0), and system performance and reporting (Section 4). Additional odor prevention and management is provided by the Facility's existing Leak Detection and Repair Programs and its Fenceline Monitoring program, as both can detect fugitive emissions that may generate odors. A summary of pertinent portions of the OMCP is provided in this section.

Section 1.0: Introduction

The Martinez Renewable Fuels Facility conditions of approval in the LUP issued by the County on May 3, 2022 and the BAAQMD ATC (Permit Application No. 30768) require the development of a facility-wide OMCP.

Additional regulations that govern odor and apply to the Project include the following:

- BAAQMD Regulation 7 which places general limitations on odorous substances.
- BAAQMD Regulation 9, Rule 1 (Sulfur Dioxide) and Rule 2 (Hydrogen Sulfide)
- BAAQMD Regulation 12, Rule 15 which requires fenceline monitoring.
- Contra Costa Health Services Hazardous Materials Program Hazardous Materials Notification Policy, which includes odors as trigger for use of the Community Warning System.

The objective of the OMCP is to prevent any objectionable offsite odors and effect diligent identification and remediation of any potential objectionable odors generated by the Facility and associated sites (e.g., Amorco Terminal). As required by the County's LUP, the OMCP includes:

- A list of equipment and procedures used to address odor issues, facility-wide (see Section 2).

3 Environmental Setting, Impacts, and Mitigation Measures

- A summary of how system performance will be monitored including identification of trends and methodology for updating the OMCP, as necessary (see Sections 3 and 4).
- Operating procedures to inspect and evaluate the effectiveness of odor control equipment and operation of the wastewater treatment plant (see Section 4).

Section 2.0: Background

The background section of the OMCP describes the general odor detection, control, and abatement methods; includes procedures for initiating an odor investigation; and provides relevant odor management and control procedures.

Odor monitoring and detection methods include 24-hour observation by Facility operators, routine daily odor patrols within and outside of the Facility; use of ground level monitors for hydrogen sulfide and sulfur dioxide (odorous compounds); fenceline monitors for sulfur dioxide, benzene, ethylbenzene, toluene, xylenes, ammonia, 1,3-butadiene, and hexane; use of handheld hydrogen sulfide monitors for the surge and bio-oxidation pond; and Leak Detection and Repair (LDAR) that is conducted daily using handheld flame ionization detectors to detect leaks from fugitive components.

The Facility utilizes various equipment to manage and control potential odors, including:

- Pond aerators – Surface aerators provide oxygen for the pond bacteria which supports bioremediation, i.e., the breakdown of contaminants through bio-oxidation of the contaminants.
- Moving Bed Biofilm Reactor (MBBR) blowers – The MBBR is equipped with air blowers which provide oxygen for bacteria to avoid anaerobic conditions that can lead to odors.
- Feed tank carbon canisters – Each feedstock tank is equipped with a carbon canister to absorb organic compounds which could result in nuisance odors
- Vapor Recovery – Hydrocarbon vapors from tanks and vessels which would otherwise escape to the atmosphere and create odors are recovered via the Facility's Vapor Recovery System.
- Flares – The flare system is used to dispose of excess Facility gases in a safe, controlled manner. The gases are combusted to break down hazardous and potentially odorous contaminants.

The Facility uses additional additives to control odors, including:

- ProKa 2500 – ProKa 2500 is applied to ponds, when needed, as an odor eliminator that encapsulates sulfide gas and retards the activity of the sulfur reducing bacteria that produce hydrogen sulfide.
- ProKa 1700 – ProKa 1700 is applied to ponds, when needed to add carbonaceous bacteria to reduce strong organic content and high COD/BOD wastewater.
- Hydrogen Peroxide – Hydrogen Peroxide is applied to the ponds, when needed, to raise the concentration of dissolved oxygen and prevent anaerobic conditions.
- Odor Suppression Chemical and Atomizers – Mobile equipment can be set up downwind of odor sources to neutralize airborne odors.

Section 2 of the OMCP also identifies the incidents that must be investigated to identify and mitigate potential odor sources (see Appendix B, Section 2.3 for further details).

Section 3.0: Potential Odor Sources

Section 3 of the OMCP identifies that the primary sources of potential odors at the Martinez Facility are from the operation of wastewater treatment, storage tanks, pressure safety valves (PSVs), and process releases.

Wastewater Treatment: Wastewater treatment at the Facility has been conducted as part of fossil fuel refining and is continuing as part of renewable fuels refining. Although not specific to the Renewable Fuels Project, wastewater treatment, especially the surge ponds, is a potential source of odors. The Facility's objectives for odor control at the wastewater treatment system is to ensure that sufficient wastewater retention times are maintained to achieve NPDES compliant biochemical oxygen demand (BOD) removal, minimize the opportunities for anaerobic conditions to develop to reduce the potential for generation of excessive odors and hydrogen sulfide; and maintain conditions for the microorganisms to allow biological growth.

An important aspect of biological treatment as well as odor management is retention time within the surge ponds. Without adequate residence time, the dissolved phase wastewater contaminants risk moving downstream without being treated/consumed, where less oxygen is available and fewer oxygen controls are in place. Maintaining a sufficient average pond depth ensures residence time is met. To maintain the target depths of the surge ponds, the Martinez Facility conducts pond depth surveys annually and directs solids removal activities, if needed. See Table 1, Appendix B for the surge pond design sizes.

Other methods used to control odors from the wastewater system include Pond Aerators and Moving Bed Biofilm Reactor Blowers, both of which provide oxygen for the pond bacteria. The aeration supports the dissolved oxygen needed for the microorganisms to live and grow in the ponds. Dissolved oxygen encourages bio-oxidation (i.e., metabolism of wastewater contaminants) into carbon dioxide and water. Continuous analyzers are used to monitoring oxygen levels in the surge ponds. Handheld hydrogen sulfide meters are used on normal business days to measure hydrogen sulfide concentrations at the perimeter of the ponds. Operating adjustments are made when hydrogen sulfide concentrations exceed 20 parts per billion (ppb). In addition, routine odor patrols inside and outside the Facility are conducted by Facility staff.

The Facility's operating procedures are designed to proactively monitor and adjust parameters during primary treatment and if needed in the surge ponds before off-spec water reaches the Bio-Oxidation Pond. Odor response contingency actions in the event of unusual conditions are presented below (See Appendix B, Section 3.1.2 – Odor Control):

- Additional monitoring around Bio-Oxidation Pond and in the community.
- Hydrogen sulfide monitoring will continue on a daily basis until readings remains less than 20 ppb for 7 days.
- Hydrogen peroxide can be added into the Bio-Oxidation Pond, if needed.
- Station at least three atomizers downwind of the Bio-Oxidation Pond. Monitor wind condition daily to ensure that the position of atomizers is appropriate for odor abatement.
- Monitor Bio-Oxidation Pond return flow differential with flow to wastewater treatment plant to minimize undue recycle.

3 Environmental Setting, Impacts, and Mitigation Measures

- Ensure all aerators are operational and running. If necessary, add aerators to both the surge ponds and the Bio-Oxidation Pond. Repair non-operational aerators.
- Mobilize diesel generators as needed to station additional aerators.
- Start a chemical dosing program (e.g., ProKa 1700 for additional bacteria cultures or ProKa 2500 as an odor eliminator).

In addition, routine odor patrols inside and outside the Facility are conducted by Facility staff. See Appendix B, Section 2 for more details on the odor control measures for the wastewater treatment system.

Storage Tanks: As summarized in Section 3.2 of the OMCP, material stored in tanks can create odors if they leak or are opened to facilitate inspections, maintenance and cleaning. Tanks typically associated with odors include: feedstock, recovered oil, sour water, spent caustic, mercaptan, anhydrous ammonia, and sulfiding agents.

Nitrogen blanketing will be used for each fixed roof tank containing renewable feedstocks to prevent oxygenation of the feedstocks that could result in rancid odors. A nitrogen blanket means that nitrogen covers the vapor space of the tank, preventing oxygen to come in contact with the feedstocks. Oxygen in contact with the renewable feedstock causes free radicals to form and which can produce odors. In addition to nitrogen blanketing, fixed roof tanks are equipped with carbon canisters to adsorb organic vapors that may be produced in the tanks. By passing the gas stream through a carbon bed, organic molecules are captured and adhere to the solid surface of the carbon, removing them from the air.

Adsorption by activated carbon has a long history of use as a treatment for municipal, industrial, and hazardous waste streams. The concepts, theory, and engineering aspects of the technology are well developed. It is a proven technology with documented performance data. Activated carbon is a relatively nonspecific adsorbent and is effective for removing many organic and some inorganic contaminants from liquid and gaseous streams.²

The process of adsorption takes place in three steps. First the contaminant migrates to the external surface of the carbon granules. It then diffuses in the carbon pore structure. Finally, a physical or chemical bond forms between the contaminant and the internal carbon surface. The contaminant adsorbs to the surface of the microporous carbon granules until the carbon becomes exhausted. The carbon can then be reactivated, regenerated, or discarded. The use of activated carbon has been shown to be effective for hydrocarbon streams, as well as hydrogen sulfide.

For the floating roof feedstock tanks, the roof floats on the surface of the feedstock preventing a vapor space and preventing the generation of volatile organic emissions, including odorous compounds. Further, the tanks are equipped with specialized wipers to ensure the feedstock does not build up on the tank walls as the roof moves up and down. For further odor management and odor control details for storage tanks, see Appendix B, Section 3.2.1 and 3.2.2.

Pressure Safety Valves (PSVs): PSVs are designed to relieve excess pressure from various equipment and vessels. PSVs can relieve to vapor recovery, the flare system or the atmosphere.

² U.S. Environmental Protection Agency, Engineering Bulletin, Granular Activated Carbon Treatment, EPA/540/2-91/024, October 1991. Available at: https://cfpub.epa.gov/si/si_public_record_Report.cfm?Lab=NRMRL&dirEntryId=49879

The following methods are employed to prevent PSV leaks which may result in odors (see Appendix B, Section 3.3 for further details):

Operating Limits – appropriate operating limits have been established for equipment at the Facility. These limits inform operators of the conditions they must maintain to protect the equipment and prevent over pressuring and lifting a PSV.

Mechanical Integrity Program (MIP) – The MIP manages the mechanical integrity of the Facility’s equipment, including equipment related to processing, storage, and handling of highly hazardous chemicals and regulated materials. The MIP assigns responsibility for the inspection and testing of such equipment to maintain ongoing integrity and eliminate or minimize process chemical releases.

Vapor Recovery – Gases released from PSVs into the flare gas header are either combusted at the flares or recovered at the flare gas recovery system and recycled as fuel gas.

Operator Rounds – The Facility is operated 24 hours a day and 7 days a week, it is an expectation that operators will report all abnormal odors in their unit.
Leak Detection and Repair (LDAR) – LDAR is conducted daily on normal business days throughout the Facility using handheld flame ionization detectors to detect leaks that can’t be seen from equipment. LDAR is also deployed to ensure that the PSV has been resealed and is not a source of odors.

Releases: Depending on the material, even small releases can cause significant odors. Keeping material in primary containment is a core tenant of the Facility and every department has a responsibility to prevent, report, and respond to spills. The operating limits, MIP, Operator Rounds and LDAR described above are the methods used to minimize odors from releases as well.

Section 4.0: System Performance and Reporting

In order to evaluate the performance of the odor management and control methods listed in Section 2.0 and 3.0, the Facility maintains a log of all odor complaints that includes: date, time, and location of observed odor; source of the odor; wind direction; ground level monitor activity; open-path fence line activity; and relevant operational notes (e.g., unit upsets, releases, etc.).

Once a year, the information on the odor complaints, odor sources, and data from monitoring will be summarized and reported to the BAAQMD and the County for their review.

Conclusions

The BAAQMD has issued Authority to Construct Permit Application No. 30768 (September 13, 2022) which allows the construction of the equipment needed for the Marathon Martinez Renewable Fuels Project. The ATC includes General Permit Conditions related to odor control including:

- Condition 27584 Part 9 – “The owner/operator of S-205 (Pretreatment Unit) shall not discharge any odorous substance which causes the ambient air at or beyond the property line to be odorous.”
- Condition 27583FW Part 25, - “The owner/operator shall maintain update, and implement the Odor Prevention and Management Plan as reviewed and approved by the Air District and County of Contra Costa.” The November 2022 OMCP has been reviewed and was approved by the Air District. See Appendix B for a complete copy of the OMCP.

Martinez Refinery Renewable Fuels Project—Draft Revised Environmental Impact Report

3 Environmental Setting, Impacts, and Mitigation Measures

The Facility has been processing renewable feedstocks since February 2023. Since that time, no confirmed odor complaints have been received for the Facility, demonstrating that the odor mitigation measures, the Project design including engineered controls, and implementation of the OMCP have been effective in preventing odors from the Renewable Fuels Project.

APPENDIX A

Superior Court Decision

Statement of Decision
(issued July 21, 2023)

FILED

JUL 21 2023

K. BIERKE, CLERK OF THE COURT
SUPERIOR COURT OF CALIFORNIA
COUNTY OF CONTRA COSTA

By _____
C. F. Fong, Deputy Clerk

SUPERIOR COURT OF THE STATE OF CALIFORNIA
IN AND FOR THE COUNTY OF CONTRA COSTA

COMMUNITIES FOR A BETTER
ENVIRONMENT and CENTER FOR
BIOLOGICAL DIVERSITY,

Petitioners,

v.

COUNTY OF CONTRA COSTA; BOARD OF
SUPERVISORS OF COUNTY OF CONTRA
COSTA; CONTRA COSTA COUNTY
DEPARTMENT OF CONSERVATION AND
DEVELOPMENT and DOES 1 - 20,

Respondents,

MARATHON PETROLEUM CORPORATION,
an Ohio corporation; and TESORO REFINING
& MARKETING COMPANY LLC, a California
limited liability company, and DOES 21-40,
inclusive,

Real Party in Interest.

Case No. N22-1091

**STATEMENT OF DECISION FROM
5-24-23 SUBMISSION**

Judge: Hon. Edward G. Weil
Dept. 1/39

The Court heard oral argument in this case on May 24, 2023 and then took the matter under submission. After considering all documents filed in this case, along with oral argument, the Court rules as follows¹:

¹ Although the Court titles this order "Statement of Decision," it did not follow the process of issuing a tentative decision and proposed statement of decision under Rule of Court 3.1590, because the requirements of Code of Civil Procedure section 632 do not apply to this action. That provision applies where the court holds a trial resolving issues of fact, which does not occur in a

1 I. BACKGROUND

2 Real Party in Interest Marathon Petroleum Company operated an oil refinery in Martinez.
3 The refinery operated for 107 years, until it stopped operating in April of 2020. It now proposes to
4 repurpose the refinery into a renewable fuels' refinery, i.e., a refinery that will make fuels out of
5 agricultural feedstocks, such as soybean oil, corn oil, and other vegetable oils. Respondents Contra
6 Costa County, its Board of Supervisors and its Department of Conservation and Development,
7 prepared and certified an Environmental Impact Report for the Project. Petitioners Communities
8 for a Better Environment and Center for Biological Diversity contend that the EIR did not comply
9 with CEQA for a variety of reasons. (For ease of reference, Real Party in Interest Marathon
10 Petroleum Company and the county agency respondents are collectively referred to as
11 "Respondents." Since they filed a joint brief, their contentions are the same.)
12

13
14 Petitioners contend that the EIR is inadequate in five different ways. First, in assessing the
15 "baseline," i.e., the activities that provide the background level of environmental effects against
16 which the project should be measured, Respondents used the previously-existing operating facility,
17 when they should have used the currently closed facility as the appropriate measurement. Second,
18 they contend that it failed to consider the mix of feedstocks that will be used at the facility, which
19 in turn changes the effects of the project. Third, that it failed to consider "Indirect Land Use
20 Changes" (ILUC) caused by the project, which consist of changes to agricultural activity by
21 growing crops that will be used as feedstock. Fourth, that it does not provide adequate mitigation
22
23
24
25

26 _____
27 mandamus action under CEQA. (*City of Carmel-by-the-Sea v. Board of Supervisors* (1986) 183
28 Cal.App.3d 229, 237.)

1 of odor that will be generated by the product. And fifth, that it failed to consider greenhouse gas
2 emissions from the project.

3 The refinery has existed since 1913, and as of 2020 had the capacity to produce 161,000
4 barrels per day of petroleum products. In April of 2020, it either “closed” or “suspended
5 operations,” depending on one’s point of view.
6

7 In August of 2020, Marathon decided to modify the refinery to produce diesel fuels from
8 renewable sources: rendered fats, corn oil, and other cooking oils. Much of the old equipment from
9 refining crude oil remains, but new construction and modification was necessary. The construction
10 was completed in late 2022. Eventually, it will produce 48,000 barrels per day of renewable fuels.
11 (This is a maximum allowed by the facility’s permits.) Some parts of the facility that were used for
12 processing petroleum are no longer used in the modified refinery and have been shut down.
13

14 II. STANDARD OF REVIEW 15

16 In reviewing a challenge to approval of a project under CEQA, the Court determines
17 whether there has been a prejudicial abuse of discretion by the public agency, which is established
18 " 'if the agency has not proceeded in a manner required by law or if the determination or decision is
19 not supported by substantial evidence.' [Citations, internal quotation marks omitted.]" (*Citizens*
20 *Committee to Complete the Refuge v. City of Newark* (2021) 74 Cal.App.5th 460, 469 ("City of
21 *Newark*") [quoting *Concerned Dublin Citizens v. City of Dublin* (2013) 214 Cal.App.4th 1301,
22 1310].)
23

24 Under the substantial evidence test, the agency's factual determinations cannot be set aside
25 "on the ground that an opposite conclusion would have been equally or more reasonable." (*Sierra*
26 *Club v. County of Fresno* (2018) 6 Cal.5th 502, 512 [internal quotation marks omitted, quoting
27
28

1 *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th
2 412, 435 and addressing factual findings supporting an EIR].) " 'Substantial evidence' is defined as
3 'enough relevant information and reasonable inferences from this information that a fair argument
4 can be made to support a conclusion, even though other conclusions might also be reached.'
5 (CEQA guidelines, § 15384, subd. (a).) 'The agency is the finder of fact and we must indulge all
6 reasonable inferences from the evidence that would support the agency's determinations and
7 resolve all conflicts in the evidence in favor of the agency's decision.' [Citation omitted.]" (*City of*
8 *Hayward v. Trustees of California State University* (2015) 242 Cal.App.4th 833, 839-840 [quoting
9 *Save Our Peninsula Committee v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99,
10 117].) (See also *Break Zone Billiards v. City of Torrance* (2000) 81 Cal.App.4th 1205, 1244
11 ["reasonable doubts must be resolved in favor of the decision of the agency."].)
12

13
14 Substantial evidence includes "facts, reasonable assumptions predicated upon facts, and
15 expert opinion supported by facts." (Pub. Res. Code § 21082.2(c).) "Argument, speculation,
16 unsubstantiated opinion or narrative" do not qualify as substantial evidence. (Guidelines §
17 15384(a); Pub. Res. Code § 21082.2(c).)
18

19 The burden is on Petitioners to demonstrate that no substantial evidence in the record
20 supports Respondents' decisions. (*Citizens for a Megaplex-Free Alameda v. City of Alameda*
21 (2007) 149 Cal.App.4th 91, 113 ["It is *Citizens'* burden to demonstrate that there is not sufficient
22 evidence in the record to justify the City's action. [Citation omitted; italics in original.] To do so, an
23 appellant must set forth in its brief all the material evidence on the point, not merely its own
24 evidence. [Citation omitted.] A failure to do so is deemed a concession that the evidence supports
25 the findings. [Citation omitted.]"]; *Citizens Against Airport Pollution v. City of San Jose, supra*,
26 227 Cal.App.4th at 798 [" 'The burden is on the appellant to show there is no substantial evidence
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1 to support the findings of the agency. [Citation.] [Citation omitted.]," quoting *American Canyon*
2 *Community United for Responsible Growth v. City of American Canyon* (2006) 145 Cal.App.4th
3 1062, 1070[.]

4 5 III. ANALYSIS

6 A. Proper Baseline

7
8 An Environmental Impact Report must establish the existing background against which
9 effects on the environment will be measured. This choice matters a lot in this case, because in
10 many areas the project would have less serious environmental impacts than the old petroleum
11 refinery. But it would have greater impacts than having no operating refinery at all. Accordingly,
12 for a number of matters, the discussion is greatly affected by the choice of baseline.

13
14 The CEQA Guidelines address the issue, in section 15125(a)(1); "environmental setting":

15 Generally, the lead agency should describe physical environmental conditions as
16 they exist at the time the notice of preparation is published, or if no notice of preparation is
17 published, at the time environmental analysis is commenced, from both a local and regional
18 perspective. Where existing conditions change or fluctuate over time, and where necessary
19 to provide the most accurate picture practically possible of the project's impacts, a lead
20 agency may define existing conditions by referencing historic conditions, or conditions
21 expected when the project becomes operational, or both, that are supported with substantial
22 evidence. In addition, a lead agency may also use baselines consisting of both existing
23 conditions and projected future conditions that are supported by reliable projections based
24 on substantial evidence in the record.
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1 Notably, the Guidelines allow use of “historic conditions,” but only where “necessary to
2 provide the most accurate picture practically possible[.]” As one case has noted, “[a]n agency’s
3 determination of the proper baseline for a project can be difficult and controversial, particularly
4 when the physical conditions in the vicinity of the project are subject to fluctuations[.]” (*Cherry*
5 *Valley Pass Acres & Neighbors v. City of Beaumont* (2010) 190 Cal.App.4th 316, 337.) In *Cherry*
6 *Valley*, the court approved a baseline of water usage based on the amount permitted by a previous
7 judgment in litigation and actually used in the past, even though the actual current water usage on
8 the project site was far lower. In *North County Advocates v. City of Carlsbad* (2015) 241
9 Cal.App.4th 94, 105-106, the court allowed a project to renovate a shopping center to estimate the
10 baseline of traffic based on full occupancy of the pre-existing shopping center, even though it was
11 not fully occupied at the time and had not been for six years, because it had been fully occupied for
12 much of the previous thirty years. It found that the baseline “was not merely hypothetical because
13 it was not based *solely* on Westfield’s entitlement to reoccupy the ... building ‘at any time without
14 discretionary action’ but was also based on the actual historical operation of the space at full
15 occupancy” (*Id.* [emphasis in original].)

16
17
18 In *Communities for a Better Environment v. South Coast Air Quality Management District*
19 (2010) 48 Cal.4th 310, the Supreme Court addressed the baseline issue in the context of
20 modifications to a refinery. The issue was whether the proper baseline was the existing operational
21 level, or maximum allowable under permits. The court stated, “[w]e conclude the District’s choice
22 of a baseline for NOx emissions was inconsistent with CEQA and the CEQA guidelines; the
23 District should have looked to the existing physical conditions, rather than to the maximum
24 permitted operation of the boilers.” (*Id.*, at 319.) As the court explained, “the impacts of a
25 proposed project are ordinarily to be compared to the actual environmental conditions existing at
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1 the time of CEQA analysis, rather than to allowable conditions defined by a plan or regulatory
2 framework.” (*Id.*, at 321.) There was no evidence that the facility ever operated at the maximum
3 capacity.

4
5 In *Neighbors for Smart Rail v. Exposition Metro Line Constr. Auth.* (2013) 57 Cal.4th 439,
6 447, the agency used *future* conditions as the baseline, but the court found that the EIR must use
7 current conditions, unless special circumstances exist that would make it misleading. The agency
8 had used predicted 2030 traffic conditions, rather than present conditions. The court also indicated,
9 however, that an agency could consider the future projection, but could not use it as the baseline.
10

11 At least one case has interpreted *Smart Rail* “as applying only to baselines that use
12 hypothetical future conditions. Consequently, we conclude its principles do not apply to an
13 agency’s decision about how to measure existing conditions when the activity creating those
14 conditions has fluctuated.” (*Association of Irrigated Residents v. Kern County Bd. Of Supervisors*
15 (2017) 17 Cal.App.5th 708, 730.) There, the issue was a refinery with long history, which had
16 “suspended” operations during bankruptcy but had a clear intention to continue refining at the site.
17 The city had used a baseline year of 2007, when the facility was operating, not 2010, when
18 operations were limited and emissions were zero. That case in turn relied on *North County*
19 *Advocates v. City of Carlsbad*, *supra*, 241 Cal.App.4th at 97.
20

21 Accordingly, much of the dispute here addresses which scenario—the closed refinery or the
22 operating refinery—presents the more accurate picture. According to Petitioners, demand for
23 petroleum is down, and will stay down. Marathon and others have reduced their refining capacity.
24 (While Marathon faults Petitioners’ briefing for simply referring to its own comments, the
25 comments themselves include evidence concerning the overall state of the petroleum refining
26 business on the west coast.) (AR 048438.) Petitioners argue that there is essentially no chance that
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1 the refinery would reopen. They rely at least in part on an article from a trade magazine asserting
2 that the closure is “permanent.” (AR 147787.) Marathon disputes this, arguing that the reduction in
3 petroleum demand is temporary, and if the proposed project does not proceed, the refinery could
4 reopen when market conditions change. It argues that longer-term trends for petroleum demand
5 suggest an increase. (AR 081693.) It also points out that its permits remain valid, and the
6 extension of some of these permits required significant expenditures. (AR 048841.) Indeed, in the
7 EIR, the County rejected the “no project” alternative saying “refinery operations would resume as
8 described in Section 2.4 of the Draft EIR.” Marathon’s public statements have been more
9 circumspect, e.g., “At this time, the duration of the idle period is unknown; however, it is our intent
10 to return to normal operations once demand levels support doing so.” (AR 018697.) Nor is
11 accelerated depreciation of assets (or “exit costs related to the Martinez and Gallup refineries”)
12 probative to the issue, especially given that it occurred in February of 2021. (AR 075235.)
13
14

15 The standard of review is important here. The issue is not reviewed de novo, but for
16 whether substantial evidence supports Respondents’ conclusion that the previous operating level
17 more accurately reflects the likely conditions that would exist if the project did not go forward. As
18 the court stated in *Cherry Valley*, the decision is “quintessentially a discretionary determination of
19 how the existing physical conditions without the project could most realistically be measured,”
20 which is reviewed for substantial evidence. (*Cherry Valley, supra* (190 Cal.App.4th at 337 [citing
21 *CBE, supra* 48 Cal.4th at 328.]) The court in *Smart Rail* also addressed the standard of review on
22 this issue, stating that CEQA imposes no “ ‘uniform, inflexible rule for determination of the
23 existing conditions baseline,’ instead leaving to a sound exercise of agency discretion the exact
24 method of measuring the existing environmental conditions upon which the project will operate.”
25 (*Smart Rail, supra*, 57 Cal.4th at 452-453.) This issue was also addressed in *Save Our Peninsula*
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1 *Committee v. Monterey County Bd. Of Supervisors* (2001) 87 Cal.App.4th 99, 120, in which the
2 court stated that “if the determination of a baseline condition requires choosing between conflicting
3 expert opinions or differing methodologies, it is the function of the agency to make those choices
4 based on all of the evidence.”
5

6 The operating history of the refinery is not disputed. As to the future, there is uncertainty
7 as to whether the refinery would have reopened if the proposed project had not gone forward. In
8 relative terms, the refinery operated for many years and was closed a short time. (In the Draft EIR,
9 the county found that “use of a historical average over a specified period for Refinery crude oil
10 processing operations recognizes such fluctuations and allows for characterization of the overall
11 level of crude oil refining operations without singling out a specific moment in time when the
12 Refinery throughput volumes may have been unusually high or unusually low.”) (AR 000142.)
13 But it did not address the issue of complete closure. In the Final EIR, the “Master Response” to
14 comments on the Draft EIR addressed the issue in detail. (AR48838.) After defending the use of
15 the five-year average (AR 0488840-41) it then addressed the issue of “currently suspended”
16 operations. It noted that Marathon had the option of restarting operations, because it had the
17 necessary permits, which had cost \$9 million in 2021. It further determined that “a conclusion that
18 Marathon would not re-start petroleum processing at this specific site is speculative.” The Master
19 Response cited California Energy Commission and U.S. Energy Information Administration data
20 that “support a contrasting scenario to re-start petroleum processing at the Refinery.” (AR
21 048842.) Data showed increasing demand for liquid fuel, including diesel and jet fuel. Ultimately,
22 the County stated that “the demand for petroleum-based products appears to support the continued
23 operation of the Refinery should the Project not be implemented. Furthermore, Marathon has
24 continued to comply with all regulatory requirements and maintaining all permits necessary for
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1 crude oil refining, providing a path for continued operations if the project is not implemented.”
2 (AR 048846.) The data cited in the Response to comments concerning petroleum demand and the
3 information concerning the maintenance of permits provide substantial evidence in support of this
4 determination. Accordingly, substantial evidence supports Respondents’ determination to use a
5 baseline reflecting operation of the petroleum refinery, and Respondents did not abuse their
6 discretion in so choosing.
7

8 Petitioners also argue that the decision not to use the one-year average in 2019-2020 was an
9 error. (AR 143-145.) The EIR explained that the 2019-2020 average was not representative
10 because it included a half year of zero production. (AR 145.) Instead, the EIR chose a five-year
11 average for the baseline. (AR 145.) The EIR sufficiently explained why it did not use a one-year
12 average during 2019-2020. The numbers here are another way of highlighting Petitioners’ main
13 point, which is that the refinery closed in 2020. As discussed above, there is substantial evidence to
14 support Respondent’s determination to use a baseline reflecting operation of the petroleum
15 refinery.
16

17 B. Estimating Mix of Feedstocks

18 An EIR must have a proper description of the project. “[W]hether the EIR’s project
19 description complied with CEQA’s requirements, the standard of review is de novo. [Citations.]”
20 (*stopthemillenniumhollywood.com v. City of Los Angeles* (2019) 39 Cal.App.5th 1, 15.)
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23 As part of the description of the Project, the EIR describes that the modified facility would
24 use a variety of different substances as inputs: “rendered fats, soybean and corn oil, and potentially
25 other cooking and vegetable oils, but excluding palm oil.” (AR 000100.) It also noted that in the
26 future, “other biological fuel sources such as used cooking oils, and plant and animal processing
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1 by-products, may also be used as feedstock using substantially the same equipment and processes
2 as those proposed under the proposed Project.” (AR 000135.)

3
4 Petitioners contend that which of these inputs are used, in what proportions, significantly
5 changes the environmental impacts of the project, specifically carbon emissions and hydrogen
6 usage (which leads to other GHG emissions). The record contains evidence that indicates that the
7 different feedstocks could lead to different emissions, and quantifies the difference between the
8 different types of feedstock as a general matter. (AR 048864-048868.)

9
10 In comments to the Draft EIR, Petitioners argued that “processing emissions of GHGs
11 should have been estimated in the Draft EIR for each potential project feedstock and product slate,
12 or range of product slates, proposed to be manufactured from it, including a reasonable worst-case
13 scenario.” (AR 048467.) It does not, however, make any estimate of the likely mix of feedstocks
14 and the combined effect of the various mixtures. In response to comments, Respondents stated only
15 that “CEQA does not require speculation about future fuel sources that might materialize.” (*Id.*)
16

17 The EIR should consider the relative mix of these inputs, to the extent it can be estimated,
18 but not if it would be speculative. The record, however, does not appear to contain substantial
19 evidence concerning the likely mixtures of feedstocks that would be used.

20
21 Petitioners contend that even if the actual mix cannot be predicted, a worst-case scenario
22 could be used. Use of worst-case scenarios has been discussed in a number of cases.

23 *stopthemillenniumhollywood.com, supra*, 39 Cal.App.5th 1 rejected using worst-case
24 scenario where project description included different conceptual scenarios for development instead
25 of including the size, mass, or appearance of proposed buildings on the site. The court explained
26 that it was not enough that “the worst-case-scenario environmental effects have been assumed,
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1 analyzed, and mitigated” and development does not exceed those mitigation measures. “CEQA’s
2 purposes go beyond an evaluation of theoretical environmental impacts. ‘If an EIR fails to include
3 relevant information and precludes informed decision making and public participation, the goals of
4 CEQA are thwarted and a prejudicial abuse of discretion has occurred.’ [Citation.]”
5 (*stopthemillenniumhollywood.com v. City of Los Angeles, supra*, 39 Cal.App.5th at 18.)
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8 In *Citizens for a Sustainable Treasure Island v. City and County of San Francisco* (2014)
9 227 Cal.App.4th 1036 a worst-case type analysis was approved. There, the EIR included different
10 potential building development options, but with more detail than in
11 *stopthemillenniumhollywood.com*. The court in *Treasure Island* approved of “the EIR’s focus on
12 the maximum impacts expected to occur at full buildout [because it] promoted informed decision
13 making, and evidences a good faith effort at forecasting what is expected to occur if the Project is
14 approved.” (*Id.* at 1053, fn. 7.)
15

16
17 Respondents argue that this case is more like *South of Market Community Action Network*
18 *v. City and County of San Francisco* (2019) 33 Cal.App.5th 321 (“*South of Market Community*
19 *Action*”). There the EIR described a mixed-use development with two options for different
20 allocations of residential and office space. The court rejected the argument that the project
21 description was insufficient. The court found that the project description “carefully articulated two
22 possible variations and fully disclosed the maximum possible scope of the project. The project
23 description here enhanced, rather than obscured, the information available to the public.” (*Id.* at
24 333-334.)
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1 “ “CEQA requires that an EIR make ‘a good faith effort at full disclosure.’ [Citation.] ‘An
2 EIR should be prepared with a sufficient degree of analysis to provide decisionmakers with
3 information which enables them to make a decision which intelligently takes account of
4 environmental consequences.’ ” (Save the El Dorado Canal v. El Dorado Irrigation Dist. (2022)
5 75 Cal.App.5th 239, 264 (El Dorado).) An EIR ‘is required to study only reasonably foreseeable
6 consequences of’ a project. (High Sierra Rural Alliance v. County of Plumas (2018) 29
7 Cal.App.5th 102, 125.) ‘CEQA does not require an agency to assume an unlikely worst-case
8 scenario in its environmental analysis.’ (Id. at p. 126.)” (East Oakland Stadium Alliance v. City of
9 Oakland (2023) 89 Cal.App.5th 1226, 1252.)

11 “ ‘[A]n EIR is not required to engage in speculation in order to analyze a “worst case
12 scenario.” ’ (Napa Citizens for Honest Government v. Napa County Bd. of Supervisors (2001) 91
13 Cal.App.4th 342, 373, citing Towards Responsibility in Planning v. City Council (1988) 200
14 Cal.App.3d 671.)” (High Sierra Rural Alliance v. County of Plumas (2018) 29 Cal.App.5th 102,
15 122.)

17 Respondents point out CEQA permits a worst-case analysis in some situations. The cases
18 relied on by Respondents are both water supply cases and did not deal with an adequate project
19 description. (Cherry Valley Pass Acres & Neighbors v. City of Beaumont (2010) 190 Cal.App.4th
20 316, 345; Western Placer Citizens for an Agricultural and Rural Environment v. County of Placer
21 (2006) 144 Cal.App.4th 890, 908.)

23 It is possible that a worst-case analysis of the feedstocks would comply with CEQA,
24 however, such a worst-case analysis is not required. Instead, Respondents are required to make
25 good faith effort to include a description of the likely or reasonably foreseeable mixtures of
26 feedstock. Here the question is whether a description of the likely types of feedstocks constitutes a
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1 good faith effort at describing the feedstocks in the Project Description. Or whether Respondents
2 needed to do more by including various estimates of the likely amounts of feedstock. The Court
3 finds that including estimates on the likely amounts of feedstocks is unduly speculative given the
4 shifting nature of the renewable feedstock market.

5
6 Furthermore, Petitioners have not shown that the failure to include more information on the
7 likely amounts of feedstocks negatively affected the analysis of the environmental impact from the
8 Project. The EIR's analysis of the greenhouse gas (GHG) emissions assumed the maximum
9 operating capacity of the hydrogen plant. (AR 115-116.) Thus, the specific amounts of feedstock
10 will not change the GHG emissions analysis. As discussed below, the Court finds that additional
11 discussion on how this Project will impact indirect land use changes would be too speculative.
12 Thus, a better estimate of the different types of feedstocks used at this facility will not change the
13 indirect land use analysis as more information on what this facility is likely to use will not change
14 the speculative nature of that analysis.

15
16 Finally, the Court must consider whether the odor mitigation analysis could be better with
17 an estimate as to the likely amounts of various feedstocks. It is worth noting here that certain
18 feedstocks, such as animal fats, are known to create more objectionable odors than plant-based
19 feedstocks. Yet, the EIR concluded that there would be potentially significant odor impacts from
20 the Project that could be reduced to less than significant with mitigation. More specific information
21 on the amounts of feedstocks would not change the analysis of the potential odor impacts. While
22 the Court finds that the EIR improperly deferred mitigation of the odor impacts, it is not convinced
23 that more information on the amounts of feedstocks is necessary for a properly drafted odor
24 mitigation measure.
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1 Therefore, the Court finds that the Project Description is sufficient and that the EIR is not
2 required to include additional information on the likely amounts of feedstocks.

3 C. Discussion of Greenhouse Gas Emissions
4

5 Projects that emit significant amounts of greenhouse gases, such as CO₂, must identify the
6 emissions in the EIR. Petitioners assert that the EIR fails in two significant respects. First, while
7 the EIR estimates that GHG emissions will be 104,085.68 metric tons, in fact the amount of
8 emissions “is highly variable and depends on the feedstock’s chemical composition.” This, of
9 course, harkens back to Petitioners’ earlier argument that the nature of the feedstock is not
10 sufficiently described. Likewise, Respondents and Marathon contend that the issue is too
11 speculative to warrant further study. It also relates to the “baseline” discussion, because Marathon
12 and Respondents contend that the emission estimates were calculated based on the previously
13 operating petroleum refinery, which included hydrogen plants operating at full capacity. Because
14 some portions of the facility will be shut down, those sources of GHG emissions are eliminated.
15 Other parts of the facility will emit more GHGs. The net result is that the conversion will reduce
16 GHG emissions by over a million metric tons per year. (AR 000540.)
17
18

19 Respondents offer the following explanation: To process the feedstocks into fuel, one of the
20 steps requires the use of substantial amounts of hydrogen. Using hydrogen in the process requires
21 the combustion of natural gas, which results in emissions of GHGs. Some feedstocks need more
22 hydrogen than others, thus, they could result in more GHG emissions. The needed hydrogen is
23 obtained through two hydrogen plants that are part of the refinery. According to Marathon,
24 however, the GHG estimates were made assuming that the hydrogen plants operate at maximum
25 capacity (because the availability of hydrogen limits the otherwise possible amount of production).
26
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1 Thus, if a mix of feedstocks that require more hydrogen were used, it would not increase the use of
2 hydrogen, it would reduce the processing capacity of the refinery.

3
4 Accordingly, Marathon contends that by assuming that the hydrogen plants are operating at
5 maximum capacity, it is effectively using a worst-case scenario, and therefore need not further
6 address how the mix of feedstocks will affect GHG emissions.

7
8 Petitioners' response to this argument is that Respondents never disclosed it in the EIR, but
9 only in the briefing, and therefore it cannot be considered at this point. (While this argument bears
10 some similarity to a "failure to exhaust administrative remedies" argument, it is different because
11 Respondents are not contesting the administrative decision.) There is authority, however, that if an
12 EIR fails to discuss an issue adequately, the problem cannot be "fixed" through discussion in briefs
13 (*Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th
14 412, 443; ["That a party's briefs to the court may explain or supplement matters that are obscure or
15 incomplete in the EIR, for example, is irrelevant, because the public and decision makers did not
16 have the briefs available at the time the project was reviewed and approved. The question is
17 therefore not whether the project's significant environmental effects *can* be clearly explained, but
18 whether they *were*."] [emphasis in original].) The entire record, including appendices, not just the
19 text of the EIR, is available for this purpose, however. (*A Local & Regional Monitor v. City of Los*
20 *Angeles* (1993) 12 Cal.App.4th 1773, 1793; *North Coast Rivers Alliance v. Marin Municipal Water*
21 *Dist. Bd of Directors* (2013) 216 Cal.App.4th 614, 638.)
22
23

24 Was the "maximum emissions" contention disclosed in the record? Real Parties cite to
25 numerous places in the administrative record describing the sources of the GHG emissions and
26 estimating their amounts. (Rsp., at 34.) It does state that "due to limitations in the production of
27 the on-site hydrogen plant, the Refinery would have capacity to receive and process up to 48,000
28

1 bpd of fresh renewable feedstock.” (AR 000115-000116.) It does not offer the more lucid
2 narrative explanation offered by Respondents in the briefing, but it does establish that the GHG
3 estimates were made based on the maximum operating capacity of the hydrogen plant.
4

5 Respondents assert that Petitioners failed to exhaust administrative remedies on this issue.
6 Marathon argues that the “mix of feedstocks” issue was not raised with respect to the GHG
7 analysis. (It clearly was raised with respect to the “project description” issue.) Respondents claim
8 that in the administrative process, petitioners claimed only that “emissions should be calculated for
9 each type of feedstock,” but never claimed that the EIR should calculate the *actual mix* of
10 feedstocks that would be used. (Rsp., at 33.)
11

12 The Comments of CBE, et al. on the draft EIR (beginning at AR 080894) show that the
13 issue was raised at several points: (AR 080910: “the County was obligated to use available
14 information to estimate the likelihood of any given feedstock or combination of feedstocks will be
15 used.”; “The DEIR should have developed scenarios (including a reasonable worst-case
16 scenario...) for likely feedstock mixes.” AR 080944: “[T]he choice among project feedstocks itself
17 could result in significant emission impacts. Therefore, emissions from each potential feedstock
18 should be estimated in the EIR.” AR 080955: “[T]he analysis fails to take into account the widely
19 differing air emissions impact associated with both different feedstocks and different product
20 slates. Those differences should have been factored into the reasonable worst-case scenario
21 analysis to address uncertainty as to the feedstocks what will be used[.]” Thus, Petitioners clearly
22 indicated that they sought either “the likelihood of any given feedstock or combination of
23 feedstocks will be used,” likely “scenarios,” or a worst-case scenario. This was sufficient to
24 exhaust administrative remedies.
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1 D. Discussion of Indirect Land Use changes

2 CEQA requires that agencies consider the indirect changes in land use caused by projects,
3 but not if they are speculative. Indirect land use changes are cognizable under CEQA as a basis for
4 a finding that the project will significantly affect the environment, *if* a sufficient showing is made.
5 (*Muzzy Ranch Co. v. Solano County Airport Land Use Com.* (2007) 41 Cal.4th 372, 383.)
6

7 Petitioners argue that the project will result in the conversion of existing lands that either lie fallow
8 or are used to grow other crops and instead will be used for growing crops that are used as
9 feedstock for the project. Some of these changes, particularly production of soybeans, involve
10 adoption of more intensive agricultural practices that consume more water and otherwise affect the
11 environment.
12

13 Accordingly, the CEQA Guidelines address the issue, requiring analysis of indirect land use
14 changes if they are “reasonably foreseeable.” (CEQA Guidelines §§ 15064(d), 15358(a)(2).)
15

16 While many cases discuss this issue, typically the issue is raised in the context of displaced
17 physical development. As the Supreme Court stated, “a government agency may reasonably
18 anticipate that its placing a ban on development in an area of a jurisdiction may have the
19 consequence, notwithstanding existing zoning or land use planning, of displacing development to
20 other areas of the jurisdiction.” (*Id.*, at 383.) Nor does the fact that subsequent developments will
21 require further approvals automatically negate the requirement, although it is a factor that may be
22 considered. (*Id.*, at 383 and 388.) As the court noted in *Muzzy Ranch*, “nothing inherent in the
23 notion of displaced development places such development, *when it can reasonably be anticipated*,
24 categorically outside the concern of CEQA.” (*Id.*, [emphasis added].)
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1 The line between the two appears to be very fact-specific. In *Stanislaus Audubon Society,*
2 *Inc. v. County of Stanislaus* (1995) 33 Cal.App.4th 144, 158, the court considered whether
3 construction of a golf course could lead to residential development. The fact that those effects
4 (development of housing) would go through their own environmental review process did not avoid
5 the issue. There were no pending applications at the time. The county had stated that past
6 experience had shown that golf courses were “a catalyst which triggers requests for residential
7 development.” (*Id.*, at 16, 158.) As the court stated, “The record here clearly contains substantial
8 evidence supporting a fair argument the proposed country club may induce housing development in
9 the surrounding area. The fact that the exact extent and location of such growth cannot now be
10 determined does not excuse the County from preparation of an EIR.” (*Id.*) The court went on to
11 note that the petition is not required to prove that the project “will have a growth-inducing effect or
12 to present evidence demonstrating it had already spurred growth in the surrounding area. To the
13 contrary, appellant is required only to demonstrate that the record contains substantial evidence
14 sufficient to support a *fair argument* that the project *may* have a significant growth inducing
15 effect.” (*Id.*, at 152-153 [emphasis in original].)
16
17

18 In *Aptos Council v. County of Santa Cruz* (2017) 10 Cal. App.5th 266, 293, the court noted
19 the same standards, but reached a different result based on the facts in the record. The ordinance in
20 question changed standards for construction of hotels in a manner that was intended to encourage
21 more development. The court stated that “when evaluating the potential environmental impact of a
22 project that has growth-inducing effects, an agency is not excused from environmental review
23 simply because it is unclear what future developments may take place. It must evaluate and
24 consider the environmental effects of the ‘most probable development patterns.’” (*Id.*, at 292-293,
25 quoting *City of Antioch v. City Council* (1986) 187 Cal.App.3d 1325, 1337.) Ultimately, however,
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1 the court concluded that while the ordinance reflected the County's "hope" that it would result in
2 more hotels, the record did not show that it was "reasonably foreseeable, rather than an 'optimistic
3 gleam in [the County's] eye.'" (*Id.*, at 294.) Thus, it found that no Environmental Impact Report
4 was required.

5
6 In some instances, the foreseeability of the impact affects not simply whether the issue must
7 be discussed, but the level of detail required. (*Muzzy Ranch Co.*, *supra*, 41 Cal.4th at 388.)

8
9 The issue has been reviewed in other contexts, i.e., the California Air Resources Board's
10 "Low Carbon Fuels Standard Program, in which it analyzed the indirect effects of requiring
11 development of "biofuels." To be clear, that analysis does not substitute for any analysis required
12 in the consideration of this project. It does, however, provide some useful information in
13 determining the feasibility of ILUC analysis for this project. In response to comments to the Draft
14 EIR, the County recounted much of the Air Resources Board's efforts to analyze the problem. Its
15 solution was to give certain biofuels a "carbon intensity" score based on the extent to which the
16 particular feedstock generated carbon, including through "worldwide model for estimating land use
17 change impacts.[...] As a consequence, fuels produced from feedstock that results in greater land
18 use change are assigned a higher CI score, which acts as an economic disincentive to produce such
19 fuels as a substitute for petroleum-based fuels." (AR 048865.) As a result, the EIR addressed this
20 issue, but in a broad-brush way, highlighting the existing uncertainty, and ultimately concluding
21 that "the project would not have significant irretrievable impacts on land, forest, or agricultural
22 resources." (AR 048866.)
23
24

25 Petitioners argue that the Project will cause significant and unavoidable land use impacts.
26 Petitioners cite to three articles discussing potential land use changes caused by an increased
27 demand in bio feedstock. (AR 145865-145904; 1542427-152478; 68565-68564.) These articles
28

1 explain that an increased demand for certain feedstocks may result in deforestation, which can have
2 a number of negative impacts including negative impacts on biodiversity and threatening food and
3 water security. (AR 68584.) Two of the articles note a particular problem with palm oil, however,
4 palm oil will not be used at the Marathon facility. (AR 145874, 152430.) One of the articles
5 explained that the International Panel on Climate Change rated certain feedstocks as having a high
6 risk of indirect land use changes. Based on that system, palm oil was identified as high risk while
7 soy was not. (AR 145874.)
8

9 In addition to these articles, Petitioners' point to the 2018 FEIR for proposed Amendments
10 to low carbon fuel standards and the alternative diesel fuels regulation, providing in this FEIR as
11 appendix D. (AR 46931-47334.) The 2018 FEIR explained that biofuel crop production may cause
12 more fuel-based agricultural and thus cause indirect land use where the loss of food-based
13 agriculture results in conversion of rangeland, grassland, forests, and other land uses to agriculture.
14 (AR 46998-46999.) The 2018 FEIR concluded there was a potentially significant impact on
15 indirect land use, but it could not be mitigated by the California Air Resources Board because
16 CARB had no authority over land use regulation. (AR 46999; 47026-27.)
17
18

19 Petitioners show that in general there may be some impacts on land use from an increase in
20 biofuels on a large scale. But Petitioners' evidence does not show that this Project will have a
21 significant impact on land use changes. In addition, much of Petitioners' cited evidence focuses on
22 the harmful effects of palm oil, which, as noted above, will not be used at this facility.
23

24 Petitioners also argue that Respondents failed to consider the cumulative impact of similar
25 projects on indirect land use changes.
26
27
28

1 “The EIR must discuss cumulative impacts. (Guidelines, § 15130.) That is, the EIR must
2 discuss the impacts of the project over time in conjunction with past, present and reasonably
3 foreseeable future projects. (§ 21083; Guidelines, § 15130.) Guidelines section 15130, subdivision
4 (b) provides that ‘[t]he discussion of cumulative impacts shall reflect the severity of the impacts
5 and their likelihood of occurrence, but the discussion need not provide as great detail as is provided
6 of the effects attributable to the project alone. ...’ Thus, an EIR which completely ignores
7 cumulative impacts of the project is inadequate. [Citation.] But a good faith and reasonable
8 disclosure of such impacts is sufficient. [Citation.]” (*Fairview Neighbors v. County of*
9 *Ventura* (1999) 70 Cal.App.4th 238, 245.)

11
12 “An agency's selection of the geographic area impacted by a proposed development,
13 however, falls within the lead agency's discretion, based on its expertise. (Guidelines, § 15130,
14 subd. (b)(3); *City of Long Beach v. Los Angeles Unified School Dist.* (2009) 176 Cal.App.4th 889,
15 907.) Moreover, discussion of cumulative impacts in an EIR “should be guided by the standards
16 of practicality and reasonableness.” [Citation.] Absent a showing of arbitrary action, a reviewing
17 court must assume the agency has exercised its discretion appropriately. [Citation.]” (*South of*
18 *Market Community Action Network v. City and County of San Francisco* (2019) 33 Cal.App.5th
19 321, 338.)

21 In *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692 the court held
22 that the cumulative air quality impact analysis was insufficient because it only considered a portion
23 of the San Joaquin Valley. Initially, respondents had agreed to include the entire air basin in the
24 FEIR, but ultimately decided to keep the smaller area for the cumulative impact analysis without
25 providing an explanation. The court found that the FEIR was inadequate under CEQA because the
26 cumulative impacts did not include similar projects in the entire air basin. In reaching this
27
28

1 conclusion, the court noted that information on the excluded projects was available through several
2 sources. (*Id.* at 722-724.)

3
4 In *Friends of the Eel River v. Sonoma County Water Agency* (2003) 108 Cal.App.4th 859
5 the court found the EIR for a water diversion project was inadequate because it did not consider the
6 cumulative impacts of another pending governmental action that could significantly affect water
7 supply.

8
9 The DEIR considered several other projects in the vicinity of the Project site (most within 2
10 miles). (AR 452-456.) The cumulative impact section included a discussion of the Phillips 66
11 Rodeo project, which involves transforming the Rodeo refinery into a facility that processes
12 renewable feedstocks, similar to the Project here. (AR 456.) The FEIR explained that it was
13 difficult to predict the cumulative indirect impacts raised in the comments (including land use). It
14 also explained that a discussion with more generality was appropriate when considering the
15 upstream impacts from the Project and similar projects, each with their own blend of feedstocks.
16 (AR 48870.)

17
18 Petitioners argue that the EIR should have considered the nearly 20 other renewable fuel
19 conversion projects in California and throughout the nation. (AR 82721-26; 152451.) Petitioners'
20 evidence shows several biofuel and biodiesel facilities in operation and planned. Approximately six
21 of these facilities are located in California, five in Southern California and one in Northern
22 California near Nevada. There are five facilities planned or under construction in California. The
23 only two in the Bay Area are the Marathon and Phillips 66 facilities. (AR 82725.) Here, the EIR
24 considered the Phillips 66 facility, which was arguably necessary for a proper cumulative impact
25 analysis. Given the similarity of the two projects, the relatively close proximity of the two projects
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1 (approximately 10 miles) and the fact that the two projects (if they become operational) will be two
2 of the largest biodiesel facilities in California. The question here is whether Respondents were
3 required to go beyond Phillips 66 and consider other biodiesel facilities in California or perhaps the
4 entire nation.

5
6 The Court is concerned that on a statewide or nationwide scale, there may be some indirect
7 land use effects. Such effects were discussed in the 2018 FEIR. (AR 46998-46999.) The problem
8 here is where should the line be drawn? In most of the cases cited by the parties, there was a clear
9 geographical boundary, which is near the Project site. Using a statewide boundary when
10 considering a change to a state law or regulation makes sense, but the Court is not convinced that
11 the same logic for requiring a statewide boundary applies to this Project.
12

13 Assuming that the Court is convinced that the EIR should have considered more biodiesel
14 or renewable fuel facilities in California, the Court is still concerned that the indirect land use
15 changes are too speculative. It does not appear practical for Respondents to estimate what the likely
16 mix of feedstocks will be at each facility. The Court finds that providing more analysis on the
17 indirect land use impacts would be too speculative and thus, the failure to include additional
18 analysis did not violate CEQA.
19

20 21 E. Deferral of Odor Mitigation

22 Respondents argued that no odor mitigation was required because the Project is expected to
23 reduce odor impacts. The primary odor sources from petroleum refining were sour gas streams, the
24 sulfur recovery unit, the sulfuric acid plant, storage of crude oil and the wastewater treatment plant.
25 (AR 206.) Stopping oil refining will results in the eliminated of the sulfur-based facilities and the
26 storage of crude oil, which will eliminate those odors. (AR 206, 548.) The wastewater treatment
27
28

1 plant will be upgraded to reduce odors from that plant. (AR 206.) Despite these improvements, the
2 EIR recognized that there is still a potential for odor impacts, including odors from the storage of
3 renewable feedstocks. (AR 206.) Ultimately, the DEIR found that the impact of odors is potentially
4 significant, but that with mitigation the impact would be reduced to less than significant. (AR 73,
5 206.) Since the DEIR concluded that the environmental impact from odors required mitigation to
6 be less than significant, the Court must consider whether the mitigation measures for odor are
7 sufficient.
8

9 Where an EIR identifies significant impacts from the project, it must also include feasible
10 mitigation measures for those impacts. (Pub. Res. Code § 21081.6(b), CEQA Guidelines S
11 15126.4(a)(2).) Here, the EIR identified “objectionable odors” as “potentially significant.” It then
12 identified a mitigation measure consisting of “the operational Odor Management Plan,” which
13 “shall be developed and implemented upon commissioning of the renewable fuels processes,
14 intended to become an integrated part of daily operation of the facilities. While the EIR contains
15 other language referring to the OMP preventing objectionable odors, and that it “shall outline
16 equipment that is in place and procedures that facility personnel shall use to address odor issues,” it
17 identifies no actual mechanism or whether it would reduce or eliminate the odors in question.
18

19 Mitigation measures may be deferred where they “specify performance standards which
20 would mitigate the significant effect of the project and which may be accomplished in more than
21 one specified way.” (CEQA Guidelines § 15126.4(a)(1)(B).) This is permissible where the agency
22 “commits itself to mitigation and lists the alternatives to be considered, analyzed and possibly
23 incorporated in the mitigation plan. [Citation.]” (*Defend the Bay v. City of Irvine* (2004) 119
24 Cal.App.4th 1261, 1275.) As that court stated in more detail:
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1 “ “[F]or [the] kinds of impacts for which mitigation is known to be feasible, but where
2 practical considerations prohibit devising such measures early in the planning process
3 (e.g., at the general plan amendment or rezone stage), the agency can commit itself to
4 eventually devising measures that will satisfy specific performance criteria articulated at
5 the time of project approval. Where future action to carry a project forward is
6 contingent on devising means to satisfy such criteria, the agency should be able to rely
7 on its commitment as evidence that significant impacts will in fact be mitigated.
8 [Citations.]” ’ [Citation.]” (*Id.* at 1275-76.) “On the other hand, an agency goes too far
9 when it simply requires a project applicant to obtain a biological report and then comply
10 with any recommendations that may be made in the report. [Citation.]” (*Id.* at 1275.)
11

12 In order to defer mitigation measures, the lead agency must find that the providing details
13 on a mitigation measure is “impractical or infeasible at the time the EIR was certified.” (*Preserve*
14 *Wild Santee v. City of Santee* (2012) 210 Cal.App.4th 260, 281; see also CEQA Guidelines §
15 15126.4(a)(1)(B) and *Save Agoura Cornell Knoll v. City of Agoura Hills* (2020) 46 Cal.App.5th
16 665, 687-688.)
17

18 Petitioners argue that the odor mitigation measure AQ-2 is an improperly deferred
19 mitigation because the County did not find that it was impractical or infeasible to include details of
20 the mitigation measure when the EIR was certified. Respondents has not shown how this threshold
21 requirement was met. The Court did not find the required finding in the EIR. Thus, as an initial
22 matter, the EIR fails to comply with CEQA because it has not shown that it was impractical or
23 infeasible to include the details odor mitigation measure at the time the EIR was certified.
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1 In addition to the threshold issue, a related question is whether there are feasible measures
2 to mitigate the odor, which are already known to exist, but simply can't be specified until more is
3 known about the odor problem.

4
5 Again, the issue here is tied to some degree to the selection of the proper baseline.
6 According to respondents, the odor problem will be less than it was when the refinery was in full
7 operation processing petroleum, because the biofuel feedstocks contain less sulfur and aromatic
8 hydrocarbons than petroleum, which are the main culprits in odor problems. (AR 048893.) They
9 also maintain that odor management practices were defined: installing carbon canisters, nitrogen
10 blanketing of storage tanks and use of the existing vapor recovery system, which would be
11 incorporated into required BAAQMD permits. (AR 000491.) (The record doesn't give any
12 information on how well those techniques work, other than a diagram on AR 048893.)
13

14 What is a "significant" odor impact? It is not defined by airborne concentrations of a
15 pollutant, because it has a substantial subjective element. Thus, it is defined by the number of
16 confirmed complaints received, in this instance five complaints per year in the area, averaged over
17 three years.

18
19 In the Executive Summary of the Draft EIR the County noted that odors were "potentially
20 significant" and that the "Odor Management Plan shall be developed upon commissioning of the
21 renewable fuels processes intended to become an integrated part of daily operations at the Facility
22 and other sides, so as to prevent any objectionable offsite odors and effect diligent identification
23 and remediation of a potential objectional odors generated by the facility and associated sites."
24 (AR 000073.)
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1 One comment to the Draft EIR requested “examples of successful odor management
2 methods at existing biofuels production facilities and at slaughterhouses where animal fat is
3 rendered.” The County responded that:

4 “The project will develop an odor control plan during the construction phase of the
5 project. Examples of successful odor control applications for both biofuels production and
6 slaughterhouses will be identified at that time. Odor management controls including, but
7 not limited to, carbon adsorption, incineration, biofilter use, and chemical scrubbing, all in
8 conjunction with a vapor recovery system and nitrogen blanketing of storage tanks are
9 being evaluated to determine the most effective and practicable method to reduce odors
10 from the storage tanks and loading and unloading activities. ... Examples of successful odor
11 control applications for biofuels production and slaughterhouses will be identified at that
12 time.”
13

14
15 (AR 048971.) The response then went on to provide over three pages of descriptions of various
16 odor mitigation measures, generally describing them, including a chart showing four major types of
17 odor control technologies, and identifying eight of their major characteristics. (AR 048892-95.)

18 The Court finds that the record does not show that there are feasible mitigation measures,
19 which could not be finished when the EIR was certified due to practical considerations. Therefore,
20 the Court finds that the County violated CEQA by allowing deferred mitigation for the odor
21 impacts without complying with CEQA Guidelines § 15126.4(a)(1)(B).
22

23 F. Request for Judicial Notice

24 Respondents’ request for judicial notice is denied. The SEC filing was not part of the
25 proceedings below.
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1 IV. CONCLUSION

2 Accordingly, the Court's rulings on the issues are:

- 3
- 4 1. The County's decision to use an operating refinery as the baseline was supported by
- 5 substantial evidence in the record and was not an abuse of discretion;
- 6
- 7 2. The project description with respect to the mix of feedstocks was sufficient;
- 8
- 9 3. The discussion of Greenhouse Gas emissions was sufficient;
- 10
- 11 4. The discussion of Indirect Land Use Impacts was sufficient;
- 12
- 13 5. The discussion of cumulative Indirect Land Use Impacts was sufficient;
- 14
- 15 6. The discussion of Odor Mitigation Measures was insufficient.

16 This matter will be remanded to the County for reconsideration of the odor mitigation

17 measure. The parties shall submit proposed writs and judgments by August 18, 2023. The parties

18 may also file and serve briefs of no more than ten pages double spaced addressing the issues below

19 by that date. No further hearings are anticipated.

20 (1) An Odor Management Plan was to be completed before the facility began processing

21 renewable fuels. Has that plan been completed? The parties may submit a copy of it

22 with a request for judicial notice. The parties may also briefly address if the Odor

23 Management Plan is included in the EIR whether there are additional objections to the

24 odor mitigation measure.

25 (2) The Court is inclined to partially decertify the EIR as to the odor mitigation issue only.

26 The parties may address this issue.

27

28

1 (3) Finally, the Court is not inclined to enjoin operations at the facility while the County
2 reconsiders the odor mitigation measure, but wants to ensure a prompt resolution of this
3 issue. The parties may address whether an injunction is appropriate here and a
4 reasonable timeline for the writ return.
5

6 Dated: July 20, 2023



HON. EDWARD G. WEIL
Judge of the Superior Court

Judgment
(issued August 23, 2023)

FILED

AUG 23 2023

K. BIEKER, CLERK OF THE COURT
SUPERIOR COURT OF CALIFORNIA
COUNTY OF CONTRA COSTA

By

C. Forteng, Deputy Clerk

SUPERIOR COURT OF THE STATE OF CALIFORNIA
FOR THE COUNTY OF CONTRA COSTA

COMMUNITIES FOR A BETTER
ENVIRONMENT and CENTER FOR
BIOLOGICAL DIVERSITY,

Petitioners,

v.

COUNTY OF CONTRA COSTA; BOARD OF
SUPERVISORS OF CONTRA COSTA;
CONTRA COSTA COUNTY DEPARTMENT
OF CONSERVATION AND DEVELOPMENT;
and DOES 1-20, inclusive,

Respondents.

MARATHON PETROLEUM CORPORATION,
an Ohio corporation; and TESORO REFINING
& MARKETING COMPANY LLC, a Delaware
limited liability company; and DOES 21-40,
inclusive,

Real Parties in Interest.

CASE NO. N22-1091

(California Environmental Quality Act)

[PROPOSED] JUDGMENT

Hearing on the Merits:

Date: May 24, 2023

Time: 9:00 a.m.

Dept: 39

Judge: Hon. Edward G. Weil

Action Filed: June 8, 2022

1 The Petition for Writ of Mandate filed by Communities for a Better Environment and Center
2 for Biological Diversity ("Petitioners") (Case No. N22-1091) came on regularly for hearing on May
3 24, 2023 in Department 39 of the Contra Costa County Superior Court, the Honorable Edward G. Weil
4 presiding.

5 Benjamin Clark and Joseph Petta appeared for Petitioners Communities for a Better
6 Environment and Center for Biological Diversity. Kurtis C. Keller appeared on behalf of Respondents
7 County of Contra Costa, Contra Costa County Board of Supervisors, and Contra Costa County
8 Department Of Conservation and Development ("Respondents"), and Peter S. Modlin appeared on
9 behalf of Real Parties in Interest Marathon Petroleum Corporation and Tesoro Refining & Marketing
10 Company LLC ("Real Parties in Interest").

11 The matter was heard and submitted, and documentary evidence in the form of the
12 administrative record was received. The Court, having considered the papers filed in support of and in
13 opposition to the Petition for Writ of Mandate, and all other papers filed, having heard oral argument
14 and reviewed and considered the record submitted, entered a Statement of Decision on July 21, 2023
15 that judgment and a peremptory writ of mandate issue in this proceeding. For the reasons set forth in
16 the Court's July 21, 2023 Statement of Decision, which is attached hereto as Exhibit A and incorporated
17 herein,

18 **IT IS ORDERED, ADJUDGED AND DECREED THAT:**

19 1. The petition for writ of mandate filed by Petitioners is granted in part and denied in part.
20 The petition is granted with respect to the Environmental Impact Report's ("EIR") discussion of odor
21 mitigation measures as described in the July 21, 2023 Statement of Decision, viz. Section III.E (Deferral
22 of Odor Mitigation). In all other respects, the Court denies the petition for writ of mandate.

23 2. A peremptory writ of mandate directed to Respondents shall issue under seal of this
24 Court, ordering Respondents to set aside the portion of their approval of the Martinez Renewable Fuels
25 Facility Project ("Project") that discusses odor mitigation, viz.

- 26 • The Contra Costa County Board of Supervisors' May 5, 2020 certification of the EIR
27 for the Project, State Clearinghouse Number 2021020289, as memorialized in the
28 Notice of Determination found at AR 1, only with respect to the following portion of

1 the EIR: The March 2023 Final Environmental Impact Report for the Project, Chapter
2 4, Section 3.3 Air Quality, Mitigation Measure AQ-2, found at AR048985-AR048986.

3 3. Under Public Resources Code section 21168.9, subdivision (b), the Court finds that (1)
4 the discussion of odor mitigation measures is severable from the remainder of the EIR, (2) severance
5 will not prejudice complete and full compliance with CEQA, and (3) the Court has found the remainder
6 of the Project and EIR to be in compliance with CEQA. Accordingly, Respondents shall not be required
7 to set aside approval of the remainder of the EIR.

8 4. The Court finds there is substantial evidence that any significant odor effects will be
9 mitigated in the interim period prior to the County's writ return such that an injunction is unnecessary.
10 Accordingly, this Judgment does not enjoin any Project activities.

11 5. Under Public Resources Code section 21168.9, subdivision (b), this Court reserves
12 jurisdiction over Respondents' proceedings by way of a return to the peremptory writ of mandate until
13 the Court determines that the Respondents have (i) remedied the inadequacy found by the Court in the
14 EIR set forth as described in the July 21, 2023 Statement of Decision, viz. Section III.E (Deferral of
15 Odor Mitigation) and (ii) complied with the provisions of CEQA and the CEQA Guidelines.

16 6. Notwithstanding the Court's retention of jurisdiction, this is intended to be a final,
17 appealable judgment.

18 7. Respondents are ordered to file an initial return to the writ of mandate within 75 days,
19 describing the action it has taken to comply with the writ pursuant to Public Resources Code section
20 21168.9, subdivision (b).

21 8. Nothing in this Judgment directs Respondents to exercise their discretion in any
22 particular way.

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1 9. This Court retains jurisdiction to determine Petitioners' entitlement to costs and
2 attorneys' fees.

3
4 DATED: 8/23, 2023

5
6
7 By: 

Honorable Edward Weil
Superior Court Judge

SUPERIOR COURT – MARTINEZ
COUNTY OF CONTRA COSTA
MARTINEZ, CA 94553
EMAIL: dept39@contracosta.courts.ca.gov

CLERK'S CERTIFICATE OF E-MAILING

CASE NUMBER: N22-1091

THIS NOTICE/DOCUMENT HAS BEEN SENT TO ALL ATTORNEYS/PARTIES LISTED
BELOW:

PLAINTIFF'S COUNSEL: DEBORAH SIVAS, ESQ.: dsivas@stanford.edu
STEPHANIE SAFDI, ESQ.: ssafdi@stanford.edu
MATTHEW SANDERS, ESQ.: matthewjsanders@stanford.edu
ELLISON FOLK, ESQ.: Folk@smwlaw.com
JOSEPH PETTA, ESQ.: Petta@smwlaw.com
LAUREN TARPE, ESQ.: LTarpey@smwlaw.com
SHANA LAZEROW, ESQ.: slazerow@cbecal.org
CONSTANCE CHO, ESQ.: ccho@cbecal.org
VICTORIA BOGDAN TEJEDA, ESQ.: vbogdantejeda@biologicaldiversity.org
HOLLIN KRETZMANN, ESQ.: hkretzmann@biologicaldiversity.org

RESPONDENT'S COUNSEL: THOMAS GEIGER, ESQ.: thomas.geiger@cc.cccounty.us
KURTIS KELLER, ESQ.: kurtis.keller@cc.cccounty.us

COUNSEL FOR REAL PARTY IN INTEREST:
PETER MODLIN, ESQ.: pmodlin@gibsondunn.com
JAMES ERSELIUS, ESQ.: jerselius@gibsondunn.com

I declare under penalty of perjury that I am not a party to this action, and that I served a copy of
this notice/document to the person(s) listed above via e-mail from MARTINEZ, CA

TITLE OF DOCUMENT SERVED: JUDGMENT

DATE E-MAILED: 7/24/23

BY

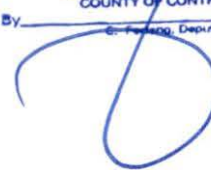
C. FORFANG, Deputy Clerk

Peremptory Writ of Mandamus
(issued August 23, 2024)

FILED

AUG 23 2023

K. BIEKER, CLERK OF THE COURT
SUPERIOR COURT OF CALIFORNIA
COUNTY OF CONTRA COSTA

By:  Deputy Clerk

SUPERIOR COURT OF THE STATE OF CALIFORNIA
FOR THE COUNTY OF CONTRA COSTA

COMMUNITIES FOR A BETTER
ENVIRONMENT and CENTER FOR
BIOLOGICAL DIVERSITY,

Petitioners,

v.

COUNTY OF CONTRA COSTA; BOARD OF
SUPERVISORS OF CONTRA COSTA;
CONTRA COSTA COUNTY DEPARTMENT
OF CONSERVATION AND DEVELOPMENT;
and DOES 1-20, inclusive,

Respondents.

MARATHON PETROLEUM CORPORATION,
an Ohio corporation; and TESORO REFINING
& MARKETING COMPANY LLC, a Delaware
limited liability company; and DOES 21-40,
inclusive,

Real Parties in Interest.

CASE NO. N22-1091

(California Environmental Quality Act)

 **[PROPOSED] PEREMPTORY WRIT OF
MANDAMUS**

Hearing on the Merits:

Date: May 24, 2023

Time: 9:00 a.m.

Dept: 39

Judge: Hon. Edward Weil

Action Filed: June 8, 2022

1 To the County of Contra Costa, the Contra Costa County Board of Supervisors, and Contra
2 Costa County Department Of Conservation and Development, Respondents:

3 Judgment having been entered in this proceeding, ordering that a peremptory writ of mandate
4 be issued from this Court,

5 YOU ARE ORDERED, upon receiving service of this writ, to:

6 1. Set aside the portion of Respondents' approval of the Martinez Renewable Fuels Facility
7 Project ("Project") that discusses odor mitigation, viz. the Contra Costa County Board of Supervisors'
8 May 5, 2020 certification of the EIR for the Project, State Clearinghouse Number 2021020289, as
9 memorialized in the Notice of Determination found at AR 1, only with respect to the following portion
10 of the EIR: the March 2023 Final Environmental Impact Report for the Project, Chapter 4, Section 3.3
11 Air Quality, Mitigation Measure AQ-2, found at AR048985-AR048986, as set forth in the Court's July
12 21, 2023 Statement of Decision, viz. Section III.E (Deferral of Odor Mitigation). In all other respects,
13 the Environmental Impact Report ("EIR") remains certified.

14 2. File and serve an initial return to the writ no later than 75 days after service of the writ.
15 The return shall specify the actions taken to comply with the terms of the peremptory writ of mandate.

16 3. Under Public Resources Code section 21168.9, subdivision (b), this Court reserves
17 jurisdiction over Respondents' proceedings by way of a return to this peremptory writ of mandate until
18 the Court has determined that Respondents have (i) remedied the inadequacy found by the Court in the
19 EIR set forth as described in the July 21, 2023 Statement of Decision, viz. Section III.E (Deferral of
20 Odor Mitigation) and (ii) complied with the provisions of CEQA and the CEQA Guidelines.

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1 4. Under Public Resources Code section 21168.9, subdivision (c), this Court does not
2 direct Respondents to exercise their lawful discretion in any particular way.
3

4
5 DATED: Aug. 23, 2023



Clerk Of The Superior Court

6
7 By: _____
8 Deputy Clerk

C. FORFANG

SUPERIOR COURT – MARTINEZ
COUNTY OF CONTRA COSTA
MARTINEZ, CA 94553
EMAIL: dept39@contracosta.courts.ca.gov

CLERK'S CERTIFICATE OF E-MAILING

CASE NUMBER: N22-1091

THIS NOTICE/DOCUMENT HAS BEEN SENT TO ALL ATTORNEYS/PARTIES LISTED
BELOW:

PLAINTIFF'S COUNSEL: DEBORAH SIVAS, ESQ.: dsivas@stanford.edu
STEPHANIE SAFDI, ESQ.: ssafdi@stanford.edu
MATTHEW SANDERS, ESQ.: matthewjsanders@stanford.edu
ELLISON FOLK, ESQ.: Folk@smwlaw.com
JOSEPH PETTA, ESQ.: Petta@smwlaw.com
LAUREN TARPE, ESQ.: LTarpey@smwlaw.com
SHANA LAZEROW, ESQ.: slazerow@cbecal.org
CONSTANCE CHO, ESQ.: ccho@cbecal.org
VICTORIA BOGDAN TEJEDA, ESQ.: vbogdantejeda@biologicaldiversity.org
HOLLIN KRETZMANN, ESQ.: hkretzmann@biologicaldiversity.org

RESPONDENT'S COUNSEL: THOMAS GEIGER, ESQ.: thomas.geiger@cc.cccounty.us
KURTIS KELLER, ESQ.: kurtis.keller@cc.cccounty.us

COUNSEL FOR REAL PARTY IN INTEREST:
PETER MODLIN, ESQ.: pmodlin@gibsondunn.com
JAMES ERSELIUS, ESQ.: jerselius@gibsondunn.com

I declare under penalty of perjury that I am not a party to this action, and that I served a copy of
this notice/document to the person(s) listed above via e-mail from MARTINEZ, CA

TITLE OF DOCUMENT SERVED: PEREMPTORY WRIT OF MANDAMUS

DATE E-MAILED: 7/24/23

BY 
C. FORFANG, Deputy Clerk

APPENDIX B

Martinez Refinery Renewable Fuels Project Odor Management and Control Plan

ODOR MANAGEMENT AND CONTROL PLAN

Martinez Renewable Fuels LLC
150 Solano Way
Martinez, California 94553

Operated by
Tesoro Refining & Marketing LLC
A wholly owned subsidiary of Marathon Petroleum Corporation



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Appendix A Odor Complaint Log Template

1 INTRODUCTION

The Martinez Renewable Fuels Facility (Facility, Marathon) Land Use Permit issued by the Contra Costa County Department of Conservation and Development, effective May 3, 2022 (Conditions of Approval for County File #CDLP20-02046, number 16), and the Authority to Construct (ATC) for Permit Application No. 30768 issued by the Bay Area Air Quality Management District (BAAQMD) (Condition 27583FW, No. 25) both require the development of a Facility-wide Odor Management and Control Plan (OMCP or Plan) (also referred to as “Odor Prevention and Management Plan”). Martinez Renewable Fuels LLC is operated by Tesoro Refining & Marketing LLC, a wholly owned subsidiary of Marathon Petroleum Corporation.

Additional regulations governing odor and response include:

- BAAQMD Regulation 7 places general limitations on odorous substances;
- BAAQMD Regulation 9, Rule 1 [9-1, Sulfur Dioxide (SO₂)] and Rule 2 [9-2, Hydrogen Sulfide (H₂S)]
- BAAQMD Regulation 12, Rule 15 (12-15, Fenceline Monitoring)
- Contra Costa Health Services Hazardous Materials Program Hazardous Materials Incident Notification Policy includes odors as trigger for use of the Community Warning System (CWS) (December 14, 2021).

1.1 Background

The Facility suspended refining of crude oil in April 2020 and in August 2020 began the process of obtaining all required permits to repurpose the existing refinery for the production of renewable fuels from alternative feedstock sources, including biological-based oils (e.g., soybean oil and corn oil), rendered fats, used cooking oils, other vegetable oils, and alternative biologically derived feedstocks for producing renewable fuels under the Low Carbon Fuel Standard (LCFS).

The transition to renewable fuels did not involve a major change in facilities but rather a reconfiguring of existing equipment and procurement of some new equipment to accommodate the renewable feedstocks. The Marathon Martinez Refinery is no longer using the Amorco Marine Terminal to unload crude oil but instead is using it to load renewable diesel. The principal process in creating renewable diesel involves operating hydrodeoxygenation (HDO) units and a diesel isomerization unit (for dewaxing, which improves renewable diesel’s cold weather properties). New sources of emissions added to the Facility include a pretreatment unit (PTU), wastewater treatment equipment (#2 WWTP), and a sour water stripper thermal oxidizer.

As discussed below, the project will comply with all federal and local environmental, health, and safety regulations and will incorporate good engineering practice (GEP) and operation/maintenance policies and procedures to minimize environmental impacts, emissions, and discharges.

1.2 Purpose of the Odor Management and Control Plan

The purpose of this OMCP is to prevent any objectionable off-site odors and effect diligent identification and remediation of any potential objectionable odors generated by the Facility and associated sites (e.g., Amorco Terminal). The OMCP will be used as an integrated part of daily operations at the Facility to achieve the overall objective of preventing off-site odors.

As required by the Land Use Permit, this OMCP includes:

Section 2: Overview of Facility Odor Management – provides an overview of Best Management Practices (BMPs), odor control equipment, and odor monitoring and detection methods.

Section 3: Odor Monitoring and Inspection Program –describes procedures for identification of odors, employee training, routine employee observations, self-inspections, preventive measures, investigation procedures, and monitoring and prevention activity schedule.

Section 4: Detailed Process and Control Equipment Description –describes how odor management and control is conducted for potential odor-producing equipment.

Section 5: Administrative Procedures – details the how the OMCP will be monitored for performance, procedures for review and reporting, and record keeping, in compliance with applicable BAAQMD and County requirements.

2 OVERVIEW OF FACILITY ODOR MANAGEMENT

This section provides an overview of BMPs, odor control equipment, and odor monitoring and detection methods.

2.1 Feedstock Best Management Practices

Marathon will continuously employ BMPs to ensure that odors are not generated during the transfer, delivery, and storage of renewable feedstocks and operation of the Renewable Fuels Facility.

- Each railcar is inspected (as described in Section 4) upon arrival at the Facility for any leaks and/or odors.
- Renewable feedstock will be offloaded after it arrives at the Facility as soon as practicable for timely processing. If renewable feedstocks need to be stored for a short time on-site prior to unloading, the railcars will remain sealed with all tank ports closed, vapor-tight, and unheated, effectively limiting the potential to generate odors while on-site.
- Sludges generated from the PTU or WWTPs will not be stored overnight in trucks prior to removal from the Facility.
- Renewable feedstocks with the potential to generate odors (e.g., vegetable oil, tallow) will be transported and stored in enclosed systems to prevent oxygenation of the feedstocks that could result in rancid odors due to the presence of oxygen and minimize the release of odorous compounds.
- Upon offloading, potential odors from railcars and ships will be controlled using the system described in Section 2.2.
- Mobile odor suppression chemical and atomizer equipment can be set up downwind of odor sources to neutralize airborne odors if needed.

2.2 Odor Control Equipment Summary

The main focus areas for odor prevention are the locations where the renewable feedstocks are unloaded (e.g., from railcars and marine vessels), stored prior to processing in tanks, and where associated waste water is either generated or stored/treated (e.g., PTU, #1 WWTP, and #2 WWTP). The Facility has an existing vapor control system that will continue to be used to control the majority of odors.

- **Unloading, Tank Storage, and Processing**
 - **Feed tank carbon canister** – Each feedstock tank is equipped with a carbon canister to absorb organic compounds which could result in nuisance odors.
 - **Vapor Recovery** - Hydrocarbon vapors from tanks and vessels which would otherwise escape to the atmosphere and create odors are recovered via the Facility's Vapor Recovery System. The Vapor Recovery system is subject to Leak Detection and Repair (LDAR) and is rigorously monitored for fugitive emissions.
 - **Flares** -The flare system is used to dispose of excess Facility gases in a safe, environmentally sound and controlled manner at a controlled location. The gases are combusted to break down hazardous and potentially odorous air contaminants.
 - **Enclosed Systems** – Renewable feedstocks with the potential to generate odors (e.g., vegetable oil, tallow), will be transported and stored in enclosed systems to

prevent oxygenation of the feedstocks that could result in rancid odors due to the presence of oxygen, and minimize the release of odorous compounds.

- **Wastewater**

- **Moving Bed Biofilm Reactor (MBBR) blowers** – The MBBR has been equipped with air blowers, which will provide oxygen for the bacteria to breathe. This aeration supports bioremediation (breakdown of contaminants through bio-oxidation) of the contaminants.
- **Pond aerators** – Surface aerators provide oxygen for the pond bacteria to breathe. This aeration supports bioremediation (i.e., the breakdown of contaminants through bio-oxidation) of the contaminants.
- **ProKa 2500** – ProKa 2500 is applied to the ponds, if necessary, as an odor eliminator that encapsulates sulfide gas and retards the activity of the sulfur reducing bacteria that produce H₂S.
- **ProKa 1700** – ProKa 1700 is applied to the ponds, if necessary, to add a broad blend of carbonaceous bacteria and thiobacillus cultures to reduce strong organic content and high chemical oxygen demand (COD)/biochemical oxygen demand (BOD) wastewater. The thiobacillus cultures use sulfides, including H₂S, as the energy source for their metabolism.
- **Hydrogen Peroxide (H₂O₂)** – H₂O₂ is applied to the ponds, if necessary, to raise the concentration of dissolved oxygen and prevent anaerobic conditions.

2.3 Odor Monitoring and Detection Methods

As a proactive measure, the Facility utilizes various qualitative and quantitative monitoring methods:

- **Operator Rounds (“Smell Something, Say Something”)** – The Facility is operated 24 hours a day and 7 days a week; it is expected that operators will report all abnormal odors in their unit [Rule and Standing Instruction (R&SI) 2-04].
- **Odor Science & Engineering (OS&E) Odor Rounds** – Daily routine odor patrols within the Facility and outside the Facility are conducted by OS&E, as well as call-outs as requested by the Facility Product Controls Shift Supervisor (PCSS) or the Environmental department.
- **Ground Level Monitors (GLM)** – Perimeter ground-level monitoring for H₂S and sulfur dioxide (SO₂) are required by BAAQMD Regulations 9-1 and 9-2. Currently, there are five monitoring locations situated along the Facility’s perimeter (Waterfront, Pacheco Slough, Martinez Gun Club, Chenery, and Clyde). The Clyde location was installed as a replacement for the Waterfront Road location, which, upon agreement with the BAAQMD, may be removed in the future. Data from the GLMs are recorded by dataloggers and transmitted to the PI system for trending and identification of potential issues.
- **Open Path Fenceline Monitors** – Perimeter monitoring for SO₂, benzene, ethylbenzene, toluene, o-xylene, m-xylene, p-xylene, ammonia, 1,3-butadiene, and hexane is required by Regulation 12-15. There are four open path fenceline monitors along the Facility’s perimeter (east, southeast, southwest, and west). Data from the fenceline monitors are recorded by computer dataloggers and transmitted to a public website: (<https://www.marathonmartinez.com/index.html>).
- **H₂S Pond Perimeter Monitoring** – Monitoring is conducted daily on normal business

days around the Surge Ponds and Bio-Oxidation Pond using handheld H₂S monitors (i.e., Jerome), and abnormal readings are reported immediately to Environmental and the PCSS.

- **Fugitive Emissions** – LDAR is conducted daily on normal business days throughout the Facility using handheld flame ionization detectors (FID) to detect leaks from equipment components (valves, connectors, pump seals, etc.) as required by federal [i.e., New Source Performance Standards (NSPS) Subparts EEEE and FFFF, National Emission Standards for Hazardous Air Pollutants (NESHAPs) Subpart J/Ja, etc.] and state (BAAQMD Regulation 8, Rule 18) regulations and the Facility's consent decree with the United States Environmental Protection Agency (U.S. EPA). In addition, the Fugitive Emissions group is also trained to use an optical gas imaging camera (e.g., FLIR) to help identify leaks.

3 ODOR MONITORING AND INSPECTION PROGRAM

The odor monitoring and inspection program described below has been designed to provide guidance for the proactive identification and documentation of odors through self-inspections, third-party odor monitoring, and odor compliance investigations. In addition, this program outlines the general methods by which odor sources can be identified, diagnosed, and resolved.

3.1 Identifying the Presence of Odor

The first step in the process of controlling odors is to determine if the odors are present and have the potential to cause a nuisance. This is done through employee training, routine employee observations, self-inspections, and odor complaint investigations. All reported odor complaints are directed to the Product Controls Shift Supervisor (PCSS) (925-372-3047).

3.2 Employee Training

Training is provided to the Facility Shift Organization annually and includes training on the relevant plans for odor prevention, detection, and reporting, listed in Section 3.7 below. Operators are trained on unit-specific odor investigations, equipment isolation, and vessel/piping opening and cleaning requirements. The procedures and training provide guidance on how to identify the source of potential odors and response to spills and loss of containment. Training is updated and refreshed annually.

3.3 Daily Routine Employee Observations

When on-site Facility employees or contractors detect an odor that they believe has sufficient intensity or volume that it could lead to detection off-site and potentially cause a nuisance, it is reported to Shift Supervision to investigate to determine the source of the odors. In addition, Operators complete monitoring and inspection rounds every day twice per 12-hour shift (i.e., four times per day) where they walk through their unit and will report any noticeable odors or other issues that could lead to odors (e.g., gas or liquid leaks) to Shift Supervision. Once the source of an odor is determined, Facility staff will respond to mitigate or otherwise control the odor source and restore the area to normal operations. Such protocols for on-site investigation, reporting, and remediation of odors are inherent components of the site's standard operating procedures.

3.4 Random Self-Inspections

The primary objective of this protocol is to identify and mitigate or otherwise control odors from the Facility before they can migrate off-site and potentially cause a nuisance. This is accomplished through routine operational self-inspections by Facility staff. The self-inspections will be performed at eight random times per calendar quarter with daily and weekly variability until meaningful trend data is collected to ensure that trend data is not biased by any temporal pattern in self-inspection. This level of random activity will yield 32 data sets per year.

3.5 Preventive Odor Management

Preventive odor management and relief system management are interrelated. Preventive odor management, for the purposes of this Plan, will be the temporary measures employed during any Facility maintenance activity that have the potential to generate odors, such as opening of vessels or piping.

Prior to any maintenance activities, standard pre-job planning and procedures have been developed and are in place at the Facility for the safe flushing and cleanout of the equipment, vessels, piping, etc., prior to opening the system for maintenance work. Equipment must be depressurized and flushed into an enclosed receiving system, such as vapor recovery vessels.

Typical cleaning will include steam, chemical cleaning, and a water wash/rinse. Pre-job planning involves operations, maintenance, and any trade/craft involved in the maintenance to ensure the proper safeguards are in place and understood. This prevents odor causing issues such as vapor releases. Several other programs, such as LDAR and fenceline monitoring, also work in conjunction with and support the overall odor management program at the Facility.

3.6 Odor Event and Investigation Procedure

Each of the following incidents must be investigated to determine if the Facility is the source of the off-site odors and to identify and mitigate potential odor sources:

- Any odor complaint received directly from the public or the BAAQMD;
- Three complaints reported within the Facility within 1 hour; **or**
- A Facility odor that is confirmed off-site by OS&E.

PCSS actions required:

1. If the complaint is reported by the public (directly to the Facility or through the BAAQMD) or Security Control, immediately notify the OS&E on-call representative and initiate off-site and on-site odor patrols.
2. Notify Environmental Department On-Call.
3. Initiate on-site odor investigation as described below.
 - a. Check environmental compliance PI workbook to obtain meteorological data (i.e., wind speed, wind direction) and any activity on the GLMs or fenceline monitors to help troubleshoot potential sources.
 - b. If the complainant has described the odors as “sulfurous”, “rotten egg”, “burned sulfur”, etc., conduct an internal Facility odor patrol using the PCSS’s Jerome handheld H₂S monitor to take readings if/when odors are detected.
 - c. Determine if there are any routine or non-routine operations or maintenance activities that could be contributing to off-site odors.
 - d. Review the results of OS&E and Operations odor patrols.
 - i. If operations are causing odors, revise activities to contain odors.
 - ii. Temporarily cease any maintenance activities that are determined (by OS&E and the PCSS) to be contributing to off-site odors.
 - iii. Determine if additional odor mitigation steps can be implemented as part of the work process before resuming maintenance activities.
 - iv. If needed, take actions to stop an odor event, and initiate on-site mitigation as described follows:
 - 1) Transportation – Section 4.1;
 - 2) Pressure Safety Valves (PSVs) – Section 4.2;
 - 3) Tanks – Section 4.3;
 - 4) Wastewater Treatment – Section 4.4; and
 - 5) Releases – Section 4.5.

4. If an odor-causing activity has been identified and mitigated, request OS&E to conduct a follow-up odor patrol off-site to confirm that off-site odors have been mitigated.
5. If the odor complainant has specifically requested a call-back from the Facility, the PCSS will make the return call briefly updating the caller on the odor investigation and any actions taken. Avoid stating the source of the odor with certainty until a thorough investigation is performed. If assistance is needed, i.e., there are multiple calls, or a caller asks questions you are not comfortable answering, notify CSR & Community Relations Representative or Environmental and they will call back the community member.
6. Send the Odor Complaint form, along with a brief summary of actions taken and findings, to Environmental.
7. Log the odor complaint in Intelex as an incident. **Follow required CWS 1 notification if three confirmed complaints are received within an hour** (Contra Costa County Health Services Hazardous Materials Program, Hazardous Materials Notification Policy, December 14, 2021). A confirmed complaint is when odors are confirmed as originating on-site by people trained in odor investigation and monitoring procedures (e.g., the BAAQMD or OS&E).

3.7 Relevant Plans, Instructions, and Procedures

- R&SI 2-04, Orientation Rounds;
- R&SI 2-11, Operating Limits;
- R&SI 6-01, Environmental Compliance and Release Reporting;
- R&SI 7-01, Emergency Planning and Response;
- R&SI 14-3, Mechanical Integrity Program;
- R&SI 14-15, Maintenance Equipment Records Management;
- Spill Prevention, Control, and Countermeasure (SPCC) Plan, Marathon Renewable Fuels Facility, December 2021;
- SPCC Plan, Amorco Terminal, March 2021;
- Oil Spill Response Plan [i.e., Facility Response Plan (FRP)], October 2022;
- Emergency Response Plan, January 2022;
- O-0741-PR-MS-05 – Hydrogen peroxide injection into Bio-Oxidation Pond; and
- Normal Startup, Normal Shutdown, and Emergency Shutdown Procedures – each unit has detailed procedures that describe steps to safely start up and shut down the units and minimize environmental impacts such as odor.

3.8 Odor Monitoring and Prevention Activity Schedule

Table 1 Presents the Odor Monitoring and Prevention Activity Schedule:

Table 1 Odor Monitoring and Prevention Activity Schedule

Task	Frequency	Objective	Responsibility
Record all odor complaints in Intellex (Section 3.6)	Each Occurrence	Document all odor complaints	PC Shift Supervisor
Conduct depth surveys of WWTP Surge Ponds 1 and 2. (Section 4.4)	Annually	Document current conditions	PC Technical Services Engineer
Schedule solids removal operations, as needed. (Section 4.4)	Complete required solids removal over the course of the year	Maintain depth at or below the target depth of 80% working volume.	PC Maintenance Supervisor
Ensure odor management and control chemicals and equipment are on-site (Section 4.4)	1 Month prior to major maintenance event	Ensure Facility is ready to respond to an odor event due to major maintenance	PC Day Foreman
Perform a preventative biomonitoring study (Section 4.4)	1 Month prior to major maintenance event	Ensure Facility is ready to respond to an odor event due to major maintenance	PC Technical Services Engineer
Monitor dissolved oxygen in Surge Pond #1 using continuous analyzer. (Section 4.4.1)	Continuously monitor; Record 7-day average.	Ensure adequate oxygen is available for effective wastewater treatment	PC Technical Services Engineer
Monitor pH of primary treatment effluent using continuous analyzer. (Section 4.4.1)	Continuously monitor; Record 12-hr average.	Ensure pH is maintained within a range that supports healthy biological activity	PC Technical Services Engineer

Task	Frequency	Objective	Responsibility
Conduct H ₂ S monitoring with handheld meters at various points around the perimeter of the ponds (Section 2.3)	Daily on normal business days, as conditions allow. If >20 ppb ΔC, H ₂ S monitoring frequency will be daily until <20 ppb for 7 days straight.	Verify the H ₂ S prevention methods outlined in this plan are successful	Environmental – Fugitive Emissions
Conduct odor patrol at various points around the perimeter of the ponds (Section 2.3)	Daily, as conditions allow, as well as call-outs as requested	Verify the prevention methods outlined in this plan are successful	Environmental – Fugitive Emissions
Track all odor complaints and confirmed sources in a log (Section 3.6)	Each Occurrence	Document all odor complaints and relevant conditions	Environmental
Review log for trends (Section 3.6)	At least Semi-Annually	Identification of opportunities for improvement	Environmental
Prepare report on OMCP (Section 3.6)	Annually (March 1)	Provide an update to the BAAQMD and County	Environmental

4 DETAILED PROCESS AND CONTROL EQUIPMENT DISCRIPTION

Specific odor management and control strategies for potential sources of odors are presented below.

4.1 Transportation

Based on the materials, railcars and other shipping containers could be a source of odors, if they leak or are opened to facilitate inspections, cleaning, etc. Renewable feedstocks are transported to the Facility via railcar and marine vessel and unloaded via the renewable feedstock eight-arm unloading rack (S-2009).

4.1.1 Odor Management

The following methods are employed to prevent leaks from railcars and shipping containers:

- Railcars and shipping containers will be visually inspected for integrity, as well as odors, upon their arrival at the Facility. Any containers observed to be leaking or generating odors will be immediately unloaded and cleaned.
- Renewable feedstock will be offloaded as soon as practicable after arrival at the Facility for timely processing.
- In certain cases, railcars delivering renewable feedstocks will need to remain for a short time on-site prior to unloading. In these cases, the railcars will remain sealed with all tank ports closed, vapor-tight, and unheated, effectively limiting the potential to generate odors while on-site.
- Feedstocks received by marine vessels are offloaded into a pipeline for direct transport to storage tanks, thus using an enclosed system. See Section 4.3 for odor controls on storage tanks.
- Operator Rounds are described in Section 3.

4.1.2 Odor Control

If odors are suspected or confirmed to be coming from railcars or other shipping containers, the following actions should be implemented:

- If transfers are suspected of causing odors, take measures to contain odors, including checking the connections, valves, etc. If any deficiencies are discovered, make repairs as soon as practicable.
- If practicable, stop transfer of odor-causing material until conditions are remedied.
- Station atomizers downwind of the source. Monitor wind conditions to ensure that the positioning of atomizers is appropriate for odor abatement.
- Repairs to minimize the release should be made as soon as possible.

4.2 Pressure Safety Valves

PSVs are designed to relieve excess pressure from various equipment and vessels. PSVs can relieve to the vapor recovery system, the flare system, or the atmosphere. PSVs are rigorously maintained as required by R&SI 14-3.

4.2.1 Odor Management

The following methods are employed to prevent PSV leaks, which may result in odors:

- **Operating Limits** – Appropriate operating limits have been established for assets at the Facility. These limits inform Operators of the conditions they must maintain to protect the asset and prevent over-pressuring and lifting a PSV (R&SI 2-11).
- **Mechanical Integrity Program (MIP)** – The MIP manages the mechanical integrity of the Facility's equipment, including equipment related to processing, storage, and handling of highly hazardous chemicals and regulated materials. The MIP assigns responsibility for the inspection and testing of such equipment to maintain ongoing integrity and eliminate or minimize process chemical releases (R&SI 14-3).
- **Vapor Recovery** – Gases released from PSVs into the vapor recovery system are recovered by the Facility's vapor recovery system and recycled as fuel gas.
- **Flare Gas** – Gases released from PSVs into the flare gas header are either combusted at the flares or recovered at the flare gas recovery system and recycled as fuel gas.
- **Operator Rounds** – Described in Section 3.
- **LDAR** – Described in Section 2. If pressure exceeds an atmospheric PSV set pressure, the Fugitive Emissions group is deployed to ensure that the PSV has reseated and is not a source of odors.

4.2.2 Odor Control

If odors are suspected or confirmed to be coming from a PSV, the pressure on the line, tank, or vessel should be reduced to below the PSV set pressure immediately. If the PSV does not reseal after the pressure is reduced, maintenance should be notified to make repairs as soon as possible, and the Fugitive Emissions team should be notified within 2 hours.

4.3 Tanks

Based on the material stored, tanks can create odors if they leak or are opened to facilitate inspections, maintenance, and cleaning.

The tanks typically associated with odors include:

- **Feedstock** – Feedstocks delivered to the Facility by railcar or marine vessel are stored in Tanks 517, 620, 895, and 943. Nitrogen blanketing will be used at each fixed roof feed tank (Tanks 517, 620, 895, and 943) to prevent oxygenation of the feedstocks that could result in rancid odors; additionally, the tanks are equipped with carbon canisters to absorb organic vapors produced from the tanks. Tank 867 is a floating roof feed tank which by design will prevent a vapor space that could introduce oxygen to the feedstock; the tank is equipped with specialized wipers to ensure the feedstock does not build up on the tank walls as the roof moves up and down.
- **Recovered oil** – Recovered oil from fossil fuels is routinely stored in Tank 705. Tank 705 is maintained as required by BAAQMD Regulation 8-5.
- **Sour Water** – Feed to the sour water strippers is stored in Tanks 846 and 847, and sour water is also stored in Tanks 650 and 651. Tanks 846 and 847 are fixed roof tanks that are connected to the vapor recovery system to capture organic vapors. The tanks are equipped with atmospheric PSV to prevent over-pressure. If the pressure in the tanks exceeds the PSV set pressure, the LDAR group is deployed to ensure that the PSV has reseated and is not a source of odors.

- **Spent Caustic** – Spent caustic is stored in Tank 877. Tank 877 is a fixed roof tank that is connected to the vapor recovery system to capture organic vapors. The tank is equipped with an atmospheric PSV to prevent over-pressure. If the pressure in the tank exceeds the PSV set pressure, the LDAR group is deployed to ensure that the PSV has reseated itself and is not a source of odors.
- **Mercaptan** – Odorant (ethyl mercaptan) is added to commercial propane as a leak detector at the Tract 3 LPG rack and is stored in Tank V-58. Even a small leak of mercaptan can be detected by smell at a long distance. The Waterfront Road GLM can erroneously detect mercaptans as H₂S.
- **Anhydrous Ammonia** – Anhydrous ammonia is a colorless gas/liquid with a strong, suffocating odor that is used as part of a process to reduce furnace emissions.
- **Sulfiding Agent** – A sulfiding agent is injected into the hydrodeoxygenation (HDO) units to keep the catalysts active. The sulfiding agent is injected into the discharge of the recycle liquid pumps and is stored in a tank in the 2 HDS units / propane dryers. The sulfiding agent is pale yellow liquid with a strong, foul odor (sulfur).

4.3.1 Odor Management

In addition to the specific prevention methods listed above, the following methods are employed to prevent tank leaks, which may result in odors:

- **Operating Limits** – Appropriate operating limits have been established for tanks at the Facility. These limits inform Operators of the conditions (e.g., level, pressure, temperature, etc.) they must maintain to protect the asset from acute operating conditions or long-term degradation that could result in a release/odor (R&SI 2-11).
- **Mechanical Integrity Program (MIP)** – The MIP manages the mechanical integrity of the Facility's equipment, including equipment related to processing, storage, and handling of highly hazardous chemicals and regulated materials. The MIP assigns responsibility for the inspection and testing of such equipment to maintain ongoing integrity and eliminate or minimize process chemical releases (R&SI 14-3).
- **Vapor Recovery** – Vapors from fixed roof tanks with a high potential for organic vapors (e.g., sour water and caustic) are recovered by the Facility's vapor recovery system.
- **Tank Degassing** – Prior to opening and cleaning tanks with high vapor pressure material (e.g., gasoline) or strong odors (e.g., sour water), the tank vapor space is either degassed and abated (e.g., by a thermal oxidizer) as required by BAAQMD Regulation 8-5 or neutralized in process (i.e., chemically cleaned).
- **Operator Rounds** – Described in Section 3.
- **LDAR** – Described in Section 2.
- **Tank Seal Inspections** – Material with a true vapor pressure greater than 0.5 pounds per square inch absolute (psia) (e.g., gasoline) is stored in internal floating roof tanks. These tanks are inspected semi-annually to ensure the integrity of the tank seals and fittings as required by BAAQMD Regulation 8-5.
- **Carbon Canister Monitoring and Replacement** – When carbon canisters are required to be used for tank emission abatement, the carbon replacement will be conducted per the appropriate BAAQMD permit.

4.3.2 Odor Control

If odors are suspected or confirmed to be coming from a tank, the following actions should be implemented, depending on the severity of the odors:

- If tank cleaning or other maintenance activities are identified as a source of odors, cease the activity until odors from the activity are contained or mitigated.
- If tank transfers (e.g., of sour water or slops) are suspected of causing odors, take measures to contain odors, including changing tank line-ups, changing out gas oil/diesel blanket layers on sour water tanks, or ceasing transfer until odors are controlled.
- Check the tank seals, gasket hatches, PSVs, and drains. If any deficiencies are discovered, notify the LDAR group and make repairs as soon as practicable.

Station at least three atomizers downwind of the tank. Monitor wind conditions daily to ensure that the positioning of atomizers is appropriate for odor abatement.

4.4 Wastewater Treatment

The Facility's #1 WWTP is comprised of primary treatment (preliminary oil and solids removal), secondary treatment (biological treatment), and tertiary treatment (clarification, filtration, and residual toxicity removal). The biological secondary treatment stage incorporates two primary biological treatment units (Surge Pond 1 and Surge Pond 2) and a 108-acre lagoon (Bio-Oxidation Pond) whose primary functions are the aerobic biological treatment of Facility wastewater. These ponds also provide flow and load equalization and solids separation upstream of the tertiary treatment stage.

The Facility's operating procedures for the biological treatment stage are designed to achieve the following objectives:

1. Ensure that sufficient wastewater retention times are maintained to achieve National Pollutant Discharge Elimination System (NPDES)-compliant BOD removal;
2. Minimize the opportunities for anaerobic conditions to develop to reduce the potential for generation of excessive odors and H₂S; and
3. Maintain optimal conditions for the microorganism community to allow biological growth, food consumption, and health.

The aforementioned objectives are achieved by:

- A. Conducting solids removal activities in the surge ponds to maintain adequate design depth and volume and minimize the likelihood of anaerobic conditions developing within the solids layer;
- B. Maintaining adequate mechanical aeration in Surge Pond 1 Cell #1 based on calculated average BOD loadings to maintain aerobic conditions;
- C. Maintaining the pH of the wastewater entering Cell #1 of Surge Pond 1 within a range proven to be supportive of microorganism health to allow a sustainable rate of activity and reproduction; and
- D. Monitoring H₂S levels at the perimeter of the ponds with handheld, low range H₂S meters to verify the success of the above objectives.

The Facility's operating procedures are designed to proactively monitor and adjust parameters during primary treatment and if needed in the surge ponds before off-spec water reaches the Bio-

Oxidation Pond. Actions associated with odor prevention are presented in Section 3.1.1, and contingency response is presented in Section 3.1.2.

Surge Ponds

Surge Pond 1 is about 4 feet in depth and covers 14 acres. It is divided into five cells using 5-foot-deep curtain booms. These curtain booms guide the water through the pond to provide a longer residence time. A longer residence time provides more opportunity for biological activity to break down contaminants. Surface aerators and one Lagoon Master add and maintain the dissolved oxygen needed for the microorganisms living in the surge ponds. Dissolved oxygen encourages bio-oxidation (i.e., metabolism of Facility wastewater contaminants) and growth of microorganisms.



Figure 1 Surge Ponds

The majority of surface aerators are located in Cell #1 of Surge Pond 1 since this is where the primary treated effluent water enters the biological treatment stage. The aerators promote the mixing of the wastewater with the microorganisms that reside in Surge Pond 1. Cell #1 is the location where:

- (1) Wastewater and microorganisms first come into contact with one another;
- (2) Food (i.e., water-soluble contaminants) for the microorganisms is most abundant;
- (3) Demand for oxygen is highest; and
- (4) Much of contaminant treatment occurs via aerobic bio-treatment.

The remainder of the surface aerators are in Cells #2 and #3. The Lagoon Master is a floating brush aerator located in Cell #3. It has a horizontally mounted rotating drum suspended above the water surface. The rotating drum has many small paddles that impact the water surface, creating small water droplets to promote aeration. The Lagoon Master also creates a current that

encourages flow through the pond and promotes mixing. Cells #4 and #5 are quiescent to facilitate solids separation.

Two independent dissolved oxygen meters are located at the interface between Cell #1 and Cell #2 to confirm adequate aeration is maintained.

Water from Surge Pond 1 enters Surge Pond 2 by gravity through underground pipes. Surge Pond 2 is approximately 6 acres in area and primarily provides flow and load equalization capacity and promotes the settlement of solids. Less biological activity occurs in Surge Pond 2, but some occurs during the additional period of residence provided to the water.

As previously stated, Surge Ponds 1 and 2 are primarily designed to aerobically bio-treat water-soluble contaminants in the Facility's wastewater; however, anaerobic microorganisms are naturally occurring and also reside in the surge ponds. Ongoing microbial activity includes the consumption of organic material in the wastewater as well as that released from dead microorganisms under both aerobic and anaerobic conditions. This activity results in the generation of biological solids, which settle to the bottom of the pond. Some non-biodegradable solids may also enter the surge pond system from the primary treatment system.

Bio-Oxidation Pond

The Bio-Oxidation Pond (Ox Pond) is a 108-acre lagoon located downstream of the Facility WWTP primary biological treatment units (Surge Pond 1 and Surge Pond 2). The Ox Pond gets most of its aeration by natural aeration on the surface of the pond from wind and from algae via photosynthesis. Mechanical aeration at the south end of the pond (near the influent discharge) boosts the dissolved oxygen levels of the influent to promote a healthy aerobic environment for the microorganisms used to treat wastewater. After a retention time of 20 to 30 days in the Ox Pond, partially treated wastewater is pumped back to the WWTP from the north end of the Ox Pond for tertiary treatment, including clarification, filtration, and Granular Activated Carbon (GAC) adsorption.



Figure 2 Bio-Oxidation Pond with Lower Walnut Creek to the west and tidal marsh and Suisun Bay to the north

4.4.1 Odor Management

As discussed below, the Facility's operating procedures are designed to proactively monitor and adjust parameters during primary treatment and if needed in the surge ponds before off-spec water reaches the Bio-Oxidation Pond. Odor prevention monitoring and management activities at the surge ponds are described below.

Management Activities

Maintenance of Surge Pond Design Depths

The nominal design capacity for each surge pond in the WWTP is shown in Table 2. The last column in the table shows 80% of the design depth as an average in feet. The Facility has established as an operating target the maintenance of an average depth of 80% of the total design volume across Surge Pond 1. Average depth is a key operation parameter for two reasons: maintaining residence time (also referred to as retention time) and preventing the development of anaerobic conditions.

An important aspect of biological treatment, as well as H₂S and odor management, is retention time within the surge ponds, and for this reason, average pond depth is the most critical element, not an absolute depth or sediment level. The working volume of the pond, and therefore the average depth, provides the retention time for the wastewater to contact the active organisms in the presence of oxygen, consuming both oxygen and the dissolved wastewater components. Without adequate residence time, the dissolved phase wastewater contaminants risk moving downstream without being consumed, where less oxygen is available and fewer oxygen controls are in place. Maintaining an average depth ensures residence time is met.

Dredging to an average depth of 80% also prevents anaerobic conditions by continuously refreshing the top several inches of the sediment [referred to as the Biological Active Zone (BAZ)]; this zone is highly unconsolidated and allows microorganisms to maintain contact with the nutrients and food sources from the water column. The BAZ has been documented as the most active portion of sediment layers in pond systems, with biological activity and oxygen demand reducing with increasing depth into the sediment. The decaying of microorganisms and the opportunity for anaerobic conditions occur consistently across the top surface of the accumulated sediment and do not increase in localized areas of increased sediment volume. For this reason, an average sludge level is appropriate. Larger mounds or varying levels of sediment do not necessarily correlate to more H₂S-producing microorganisms, as the sediment material below the active zone is primarily inorganics (detritus, ferric chloride, silt, etc.).

Similarly, dredging in Surge Pond 2 to maintain 80% of design depth is conducted primarily to ensure sufficient residence time and minimize anaerobic activity. The decay of deceased microorganisms provides the greatest opportunity for anaerobic conditions to develop and for anaerobic microorganisms to thrive. Continual removal of sludge minimizes the likelihood of anaerobic conditions developing within the settled solids.

To maintain the target depths, the Facility conducts pond depth surveys annually and directs solids removal activities if the survey indicates less than the 80% design depth objective specified in this plan. Dredge activities are directed to target specific areas based on accumulated levels and operational needs.

Table 2 – Surge Pond Design Sizes

POND	Acres	Design Depth, feet *	Design Volume, Million gallons	80% of Design Depth, average in feet
Surge Pond 1 – Total of All Five Cells	14	4	18.2	3.2
Surge Pond 2	6	4.5	8.8	3.6

*Depth in areas away from banked slopes where pond bottom flattens.

Pre-Planning Prior to Major Maintenance Activity

One month prior to a major event such as an API Turnaround (TAR) or major Facility unit TAR that will be sending unusual discharge waste streams to the WWTP:

- Logistics Day Foreman should ensure:
 - There are at least 3,720 gallons of the ProKa 2500 on site;
 - There are at least 228 pounds of the ProKa 1700 on site;
 - Tank inventory is above 75% in the H₂O₂ supply tank;
 - At least two H₂O₂ vendors have existing purchase orders and are approved to enter the Facility;
 - There is a supply of at least 10 drums of odor suppression chemical on-site that can be used for the WWTP; and
 - There are at least three atomizers on-site ready for deployment in the field.
- Logistics Technical Service Engineer should perform:
 - A preventative biomonitoring study to ensure micro-organisms are healthy:
 - Verify with chemical vendor that micro-organism health is normal in the pond; and
 - Ensure that the Dissolved Oxygen Uptake Rate (DOUR) is within normal limits. If not, add H₂O₂ or consider augmenting with ProKa 1700 (if there are concerns in Surge Pond 1, reference procedure O-0741-PR-MS-05).

Monitoring Activities

Dissolved Oxygen

The Facility adjusts the amount of mechanical aeration as necessary to ensure adequate dissolved oxygen for effective treatment. Surge Pond 1 and Surge Pond 2 utilize mechanical aerators and a Lagoon Master to maintain adequate dissolved oxygen levels.

The Facility has established an operational target of >0.5 parts per million (ppm) dissolved oxygen (7-day rolling average), as measured by two independent continuous analyzers located in Surge Pond 1. The operational target was created taking into consideration the fact that the biological system is a living ecosystem, and that short-term excursions below the target level of 0.5 ppm are natural and are tolerated without adversely affecting the health and performance of the WWTP. An averaging period of 7 days allows for these fluctuations to be averaged into the data, as a short period of high or low oxygen would not shift the colony of microorganisms.

Parameter	Dissolved Oxygen
Period	7-day rolling average
Limit	Maintain above 0.5 ppm
Consequence	Prolonged low DO at Surge Pond 1 could create anaerobic conditions in ponds, decreased treatability, and create possible odors or environmental compliance issues.
Cause	Increased hydrocarbon loading, reduced mechanical aeration, reduced biological oxygen
Action	Correct within 7 days, recommended corrective actions: 1) suspend unusual discharges; 2) turn on all available aerators; 3) add hydrogen peroxide; 4) reseed pond.

pH

pH is an important factor to maintain optimal conditions for microorganism health and activity. A healthy biological environment is necessary to allow the living ecosystem to consume available food (dissolved wastewater components) and oxygen and promote growth and a sustained community. The biological community within the ponds is a living and dynamic system that can tolerate many changing conditions but still be allowed to thrive and consume available food more readily with certain optimal conditions. These include available O₂ (as described above) and pH. Conditions outside of the ideal pH range could lead to decreased activity levels of the microorganisms and therefore reduced BOD removal and potential for the support of anaerobic conditions.

pH is controlled at various upstream points within the system and is finally monitored at the inlet to Cell #1 Surge Pond #1 (Pump Station #6). pH is maintained within a range of 5-10 as calculated on a 12-hour average.

Parameter	pH
Period	12-hour rolling average
Limit	Maintain between 5 and 10 STU
Consequence	Decreased treatability in Surge Pond 1 with possible odors or environmental compliance issues.
Cause	Sustained low or high pH material being sent to API, insufficient acid / caustic injection into C Box
Action	Correct immediately (it may take 2-3 hours for the 12-hour average to reflect the changes), recommended corrective actions: 1) suspend unusual discharges; 2) adjust pH using C Box acid and caustic; 3) monitor unit health; 4) reseed pond.

Hydrogen Sulfide (H₂S)

Handheld H₂S meters will be utilized on normal business days to measure the H₂S above background concentration (ΔC) [measured as the difference (ΔC) in Jerome readings (i.e., the highest reading minus the lowest reading)] at the perimeter of the ponds at consistent locations, with the exception of extenuating circumstances that may prevent the monitoring activity. By taking H₂S readings at various points around the full perimeter, a change in concentration (ΔC) can be detected from the upwind/downwind sides of the pond, indicating if detected H₂S is contributed to by the pond or by external sources. If a change in concentration that exceeds 20 parts per billion (ppb) is detected, Operations will be notified to investigate the WWTP and other nearby operations, and H₂S monitoring will continue on a daily basis until the ΔC reading drops and remains below 20 ppb for 7 days.

Under normal operational conditions, no undue odors or significant levels of H₂S emanate from the ponds. Two parameters can impact production of H₂S odors at the ponds, as discussed below:

- Increased sulfur reducing bacteria (SRB) activity: SRBs are naturally occurring microorganisms that metabolize sulfur compounds to form H₂S or other odorous sulfur compounds. DO concentrations affect SRB activity, and decreased DO levels can lead to increased SRB activity.
- Low pH levels: H₂S solubility in water decreases dramatically at pH levels less than 9. Under normal circumstances, this pH reduction is likely inconsequential; however, in the event of high levels of SRB activity discussed above, this may create the release of low-level H₂S.

Parameter	H ₂ S
Period	Instantaneous
Limit	>20 ppb ΔC
Consequence	Possible odors or environmental compliance issues.
Cause	Increased SRB / decreased DO, decreased pH / decreased H ₂ S solubility
Action	1) Environmental Department will notify the PCSS; 2) PCSS will log the incident and initiate an investigation to identify any unusual mode of operation that may have allowed for H ₂ S generation

Odor

Daily routine odor patrols inside and outside the Facility are conducted by OS&E, as well as call-outs requested by the PCSS or the Environmental Department. OS&E monitors for potential surge pond and Ox Pond odors as part of their patrols.

Parameter	Odor
Period	Instantaneous
Limit	>4 butanol intensity

Consequence	Possible offsite odors or environmental compliance issues.
Cause	Inadequate treatment, anerobic conditions, increased hydrocarbon loading, reduced mechanical aeration, reduced biological oxygen, etc.
Action	1) Environmental Department will notify the PCSS; 2) PCSS will log the incident; 3) PCSS will initiate an investigation to identify any unusual mode of operation that may have allowed for odor generation from the ponds

4.4.2 Odor Control

As discussed in Section 3.1, the Facility's operating procedures are designed to proactively monitor and adjust parameters during primary treatment and if needed in the surge ponds before off-spec water reaches the Bio-Oxidation Pond. Odor response contingency actions in the event of unusual conditions reaching the Bio-Oxidation Pond are presented below.

A detailed evaluation of key Ox Pond parameters (e.g., DO, COD loading, pH, ambient temperature, wind speed/direction, and algal health) will be performed. As needed, some or all of the following actions will be implemented, depending on the severity of the odors:

- Additional OS&E monitoring around Ox Pond and community.
- H₂S monitoring will continue on a daily basis until the ΔC reading remains below 20 ppb for 7 days.
- Add H₂O₂ to the Ox Pond per Procedure O-074-PR-MS-01. H₂O₂ can be added into the Ox Pond on the west side. There is polyvinyl chloride (PVC) piping that has camlock connections for addition into each cell. H₂O₂ cannot be added to Cell 1 (southernmost cell) in the Ox Pond at the same time as the ProKa 1700 treatment, as it may negatively impact the ProKa micro-organisms.
- Station at least three atomizers downwind of the Ox Pond. Monitor wind conditions daily to ensure that the positioning of atomizers is appropriate for odor abatement.
- Monitor Ox Pond return flow differential with flow to WWTP to minimize undue recycle.
- Ensure all aerators are operational and running. If necessary, add aerators to both the surge ponds and the Ox Pond. If any aerators are not running, schedule repairs at a high priority.
- Mobilize portable generators as needed to station additional aerators.
- Start a chemical dosing program (ProKa 1700 is a dormant culture of thiobacillus that converts sulfides to elemental sulfur; ProKa 2500 is an odor eliminator). See the table shown below for suggested chemical dosing program.

<u>Application Point</u>	<u>Period</u>	<u>ProKa 1700 (PPD)</u>	<u>ProKa 2500 (GPD)</u>
Surge Pond #1 influent	Day 1-3	10.0	---
	Day 4-7	05.0	---
	Day 7-30	03.0	---
Surge Pond #2 effluent	Day 1-3	10.0	120
	Day 4-7	05.0	120
	Day 7-30	03.0	120

Once Ox Pond conditions have stabilized, the mitigations can be discontinued and the standard Ox Pond monitoring protocol resumed.

4.5 Releases

Depending on the material, even small releases can cause significant odors. Keeping material in primary containment is a core tenant of Marathon and every department has a responsibility to prevent, report, and respond to spills.

4.5.1 Odor Management

The following methods are employed to prevent or identify releases:

- **Operating Limits** – Appropriate operating limits have been established for assets at the Facility. These limits inform Operators of the conditions (e.g., level, pressure, temperature, etc.) they must maintain to protect the asset from acute operating conditions or long-term degradation that could result in a release (R&SI 2-11).
- **Mechanical Integrity Program (MIP)** – The MIP manages the mechanical integrity of the Facility's equipment, including equipment related to processing, storage, and handling of highly hazardous chemicals and regulated materials. The MIP assigns responsibility for the inspection and testing of such equipment to maintain ongoing integrity and eliminate or minimize process chemical releases (R&SI 14-3).
- **Operator Rounds** – Described in Section 3.
- **LDAR** – Described in Section 2.

4.5.2 Odor Control

The Facility maintains several documents in the event of a release, including:

- R&SI 06-01 (Environmental Compliance and Release Reporting) and R&SI 7-01 (Emergency Planning and Response);
- SPCC Plan;
- Oil Spill Response Plan (i.e., FRP); and
- Emergency Response Plan.

5 ADMINISTRATIVE PROCEDURES

5.1 OMCP Performance

In order evaluate the performance of the odor management and control methods listed in Sections 3 and 4, the Facility will log all odor complaints (See Section 3.6). The log will include:

- Date, time, and location where the odor was observed;
- Source of the odor if confirmed by OS&E;
- Wind direction;
- GLM activity/readings;
- Open path fenceline activity/readings; and
- Relevant operational notes (unit upsets, releases, etc.).

At least semi-annually, the odor complaint log will be reviewed along with the WWTP monitoring data (Section 4.4.1) to identify if there are any trends between reported odors and management of the WWTP or if there are any routine sources of odors that require mitigation. If there are more than five confirmed complaints in any single year, then the Facility will consult with the BAAQMD on additional mitigation strategies. If there are fewer than an average of five confirmed complaints per year during the first 3 years of operation, then the formal review of the complaint log frequency can be reduced to an annual basis.

5.2 Plan Review and Reporting

This OMCP shall be retained at the Facility for County or other government agency inspection upon request.

By March 1 of each year, the Environmental Department will summarize the following information for the previous calendar year to provide an update to the BAAQMD and County for their review and approval.

- A tabulated summary of the odor complaints received and the confirmed odor source, if known.
- A summary of any identified trends or OMCP improvements.
- Results of the surge pond depth surveys performed.
- An estimation of the total tonnage of solids removed from the surge ponds.
- Monitored DO levels in Surge Pond #1 (7-day rolling averages).
- Monitoring of pH levels of the water entering Surge Pond #1 (12-hour average).
- The results of H₂S monitoring conducted with handheld meters at the perimeters of the surge ponds.

5.3 Recordkeeping and Retention

OMCP records will be retained for a period of 5 years as required under Title V. These records will include, but not be limited to:

- Employee Training Attendance and Certification of Completion;
- Logs of Odor Control Equipment Maintenance and Repairs;

- OS&E Daily Observation Reports;
- Logs of Random Self-Inspections;
- Documentation of Odor Complaint Investigations; and
- Documentation of Remedial/Corrective Actions and Resolutions.

OMCP records will be kept on-site in a secure location with other operating records.

Appendix A
Odor Complaint Log Template

