California Environmental Quality Act

Notice of Preparation of Draft Environmental Impact Report
and Scoping Meeting
for Amendments to Refinery Rules

TO: Interested Parties
FROM: Bay Area Air Quality Management District
375 Beale St., Suite 600
San Francisco, CA 94105

Lead Agency: Bay Area Air Quality Management District
Contact: Victor Douglas, Manager
Phone: (415) 749-4752

SUBJECT: NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT

Notice is hereby given pursuant to California Public Resources Code §21091, 21092, 21092.2, and 21092.3 and CEQA Guidelines Section 15085 and 15087 that the Bay Area Air Quality Management District (“Air District”), as lead agency, will prepare a Draft Environmental Impact Report (EIR) in connection with the project described below.

Project Title: Amendments to Refinery Rules: Rule 6, Particulate Matter, Rule 5: Particulate Matter Emissions from Refinery Fluid Catalytic Cracking Units; Regulation 11, Hazardous Pollutants, Rule 10: Hexavalent Chromium Emissions from All Cooling Towers and Total Hydrocarbon Emissions from Petroleum Refinery Cooling Towers; and Regulation 12, Miscellaneous Standards of Performance, Rule 15: Petroleum Refinery Emissions Tracking

Project Location: The rule would apply within the Bay Area Air Quality Management District jurisdiction, which includes all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties, and the southern portions of Solano and Sonoma counties.

Project Description: Amendments to the three Refinery rules clarify exemptions, definitions, and requirements for specific sections of all three rules. Amendments to Rule 6-5 are simply clarifications of original intent. Amendments to Rule 11-10 reduce monitoring of cooling towers for hydrocarbon leaks from daily to weekly, with provisions to extend monitoring periods after proving no leaks for an extended time. Costs for daily monitoring were found to be excessive relative to the potential hydrocarbon emission reductions. Requirements for cooling tower best management practices and reporting were eliminated when found to be focused primarily on Process Safety Management and cooling water chemistry rather than leak detection. Thresholds were established regarding Rule 12-15 requirements for non-crude oil feedstock imports, and processes for handling and securing confidential information were clarified.

Scoping Meetings: Notice is also given pursuant to California Public Resource Code, Sections 15206 and 15082 (c) that the Air District will conduct a California Environmental Quality Act (CEQA) scoping meeting at the Air District Headquarters’ Yerba Buena Room, 375 Beale Street, San Francisco, California, on Monday, August 20, 2018 at 2:00 p.m. to discuss and accept oral comments on the scope and content described in a Notice of Preparation and an Initial Study (NOP/IS) prepared in anticipation of a draft Environmental Impact Report (DEIR) for the Refinery Rules.

Reviewing the Notice of Preparation/Initial Study (NOP/IS): The NOP/IS documents are available at the on the Air District’s website at www.baaqmd.gov/ruledev, at Air District headquarters, or, by request, via mail or email. Requests for copies of the NOP/IS should be directed to Guy Gimlen (ggimlen@baaqmd.gov) at (415) 749-4734.

Comment Procedure: Comments relating to the environmental analysis in the NOP/IS should be addressed to Guy Gimlen, Bay Area Air Quality Management District, 375 Beale Street, Suite 600, San Francisco, CA 94105. Comments may also be sent by e-mail to ggimlen@baaqmd.gov. Comments on the NOP/IS will be accepted until Friday, September 7, 2018 at 5:00 p.m.
Initial Study for

Draft Amendments to Refinery Rules

Prepared by:

Bay Area Air Quality Management District
375 Beale St., Suite 600
San Francisco, CA  94109

Contact: Guy Gimlen
(415) 749-4734

July 2018
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CHAPTER 1

PROJECT DESCRIPTION

Introduction
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CHAPTER 1

1.0 PROJECT DESCRIPTION

1.1 INTRODUCTION

The Bay Area Air Quality Management District (District or Air District) is preparing the Refinery Rules - Draft Rule Amendments (Projects or Proposed Projects). These Projects involve developing draft amendments to previously adopted rules: Regulation 6, Rule 5 - Particulate Emissions from Refinery Fluidized Catalytic Cracking Units (FCCUs); Regulation 11, Rule 10 - Hexavalent Chromium Emissions from All Cooling Towers and Total Hydrocarbon Emissions from Petroleum Refinery Cooling Towers; and Regulation 12, Rule 15 - Petroleum Refining Emissions Tracking. The draft amendments aim to do the following:

The draft amendments to Regulation 6, Rule 5 (Rule 6-5) - Particulate Emissions from Refinery Fluidized Catalytic Cracking Units (FCCUs) include revisions to:

- Clarify exemptions and rule provisions.

The draft amendments to Regulation 11, Rule 10 (Rule 11-10) - Hexavalent Chromium Emissions from All Cooling Towers and Total Hydrocarbon Emissions from Petroleum Refinery Cooling Towers include revisions to:

- Modify and clarify limited exemptions for smaller cooling towers;
- Clarify a limited exemption for cooling towers not in petroleum refining service;
- Modify and clarify leak monitoring, action, and reporting requirements; and,
- Remove Best Modern Practices requirements and associated reporting requirements.

The draft amendments Regulation 12, Rule 15 (Rule 12-15) - Petroleum Refining Emissions Tracking include revisions to:

- Modify and clarify rule definitions and applicability;
- Clarify the Annual Emissions Inventory review and approval process;
- Modify and clarify fence-line monitoring plan requirements, and review and approval process;
- Modify the process for updating Emissions Inventory Guidelines and Air Monitoring Guidelines;
- Modify the monthly crude slate report requirements; and,
- Modify provisions for designating confidential information.

1.2 AGENCY AUTHORITY

CEQA, Public Resources Code §21000 et seq., requires that the environmental impacts of proposed Projects be evaluated and that feasible methods to reduce, avoid or eliminate significant adverse impacts of these Projects be identified and implemented. To fulfill the purpose and intent of CEQA, the Air District is the lead agency for these Projects and has prepared the Notice of Preparation/Initial Study (NOP/IS) for the proposed amendments to these refinery rules. These Projects are being addressed in the same CEQA document because they are moving through the
rule amendment process together. However, revisions to each of the rules is a distinct CEQA project independent of the others.

The Lead Agency is the “public agency that has the principal responsibility for carrying out or approving a project that may have a significant effect upon the environment” (Public Resources Code §21067). It was determined that the Air District has the primary responsibility for supervising or approving the entire project as a whole and is the most appropriate public agency to act as lead agency (CEQA Guidelines §15051(b)).

1.3 PROJECT LOCATION

The Air District has jurisdiction of an area encompassing 5,600 square miles. The Air District includes all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties, and portions of southwestern Solano and southern Sonoma counties. The San Francisco Bay Area is characterized by a large, shallow basin surrounded by coastal mountain ranges tapering into sheltered inland valleys. The combined climatic and topographic factors result in increased potential for the accumulation of air pollutants in the inland valleys and reduced potential for buildup of air pollutants along the coast. The Basin is bounded by the Pacific Ocean to the west and includes complex terrain consisting of coastal mountain ranges, inland valleys and bays (see Figure 1.2-1).

Currently, five petroleum refineries are located in the Bay Area within the jurisdiction of the Air District (see Figure 1.2-1). Four of the refineries are located in Contra Costa County and one refinery is located in Solano County:

- Chevron Products Company (Richmond),
- Phillips 66 Company – San Francisco Refinery (Rodeo),
- Shell Martinez Refinery (Martinez),
- Andeavor Refinery (formerly Tesoro Refining and Marketing Company) (Martinez), and
- Valero Refining Company (Benicia).

1.4 PROJECT BACKGROUND

The Air District is developing draft amendments to two of three rules that were adopted by the Air District Board of Directors on December 16, 2015. These rules were challenged by three of the five Bay Area refineries in a lawsuit that was filed on January 22, 2016, Valero, et al. v. Bay Area Air Quality Management District (case number N16-0095), and amended on February 16, 2016. On March 24, 2017, the parties to the lawsuit entered an enforcement agreement and agreement to stay litigation for all three of these regulations (referred to as the “Valero Case Agreement”). Terms of the Agreement affect implementation of Rule 6-5, Rule 8-18, Rule 11-10. This document will use the phrase “2016 Refinery Rules” when referring to these three rules collectively. Specifically, the Air District staff committed in the Valero Case Agreement to implement the three rules that
were challenged for a limited period of time in a manner consistent with how the rules would be proposed to be changed. The intent of this provision is that the refineries should not have to implement in the near-term provisions that will change if the rules are amended as contemplated in the Valero Case Agreement. If the rules are not changed as contemplated in the Valero Case Agreement, the refineries will have to implement the rules as originally adopted in 2016.
In that scenario, the refineries could reactivate their lawsuit and move forward with their legal challenge to the rules.

The Valero Case Agreement states the Air District will propose amendments to the 2016 Refinery Rules for adoption by the Air District Board of Directors by November 1, 2018. Draft amendments to Rule 8-18 – Equipment Leaks are not being put forth at this time, and will be delayed until a Refinery Heavy Liquids Fugitive Leaks study can be completed at all five Bay Area refineries. This study has been underway and findings are expected to be finalized in late 2018. Information from the study will be used to develop appropriate amendments for Rule 8-18, which are expected in Spring 2019.

In addition, the Air District is developing draft amendments to Regulation 12, Rule 15: Petroleum Refining Emissions Tracking (Rule 12-15), adopted by the Air District Board of Directors on April 20, 2016. Rule 12-15 was challenged in a lawsuit that was filed by the Western States Petroleum Association (WSPA) and three of the refineries individually on May 25, 2016, WSPA, et al. v. Bay Area Air Quality Management District (case number N16-0963). Similar to the Valero Case Agreement, parties to the lawsuit have entered an agreement to stay the WSPA case litigation contingent on the Air District proposing specified amendments to Rule 12-15 (but not Rule 9-14). This agreement, entered into as of March 1, 2018, will be referred to as the “WSPA Case Agreement.” Similar to the Valero Case Agreement, in the WSPA Case Agreement the Air District committed to implement Rule 12-15 for a limited period of time in a manner consistent with how Rule 12-15 would be changed as contemplated in the WSPA Case Agreement. The intent of this provision is that the refineries should not have to implement in the near-term provisions that will change if Rule 12-15 is amended as contemplated in the Agreement. If Rule 12-15 is not changed as contemplated in the WSPA Case Agreement, the refineries will have to implement Rule 12-15 as originally adopted. In that scenario, the refineries could reactivate their lawsuit and move forward with their legal challenge to Rule 12-15.

The draft amendments would apply to petroleum refineries. Petroleum refineries convert crude oil into a wide variety of refined products, including gasoline, aviation fuel, diesel and other fuel oils, lubricating oils, and feed stocks for the petrochemical industry. Crude oil consists of a complex mixture of hydrocarbon compounds with smaller amounts of impurities including sulfur, nitrogen, oxygen and metals (e.g., iron, copper, nickel, and vanadium).

1.5 PROJECT DESCRIPTION

The Air District proposed rule amendments aim to amend Rules 6-5, Rule 11-10, and Rule 12-15. The draft amendments to Rule 6-5 would apply to four of the five Bay Area refineries with FCCUs. The draft amendments to Rule 11-10 and Rule 12-15 would apply to all five Bay Area refineries. These proposed rule amendments are described in the following subsections.

1.5.1 DRAFT AMENDMENTS TO RULE 6-5

The draft amendments to Rule 6-5 include revisions to provide more clarity and conciseness to Section 6-5-111 - Exemption, Emissions Abated by Wet Scrubber and Section 6-5-301 - FCCU Emission Limits. Both of these changes reflect changes in language for clarity purposes and do not represent substantive changes to Rule 6-5.
1.5.2 DRAFT AMENDMENTS TO RULE 11-10

The draft amendments to Rule 11-10 include revisions to modify limited exemption requirements; modify and clarify leak monitoring, action, and reporting requirements; and remove modern practice requirements and reporting.

**Limited Exemptions for Smaller Cooling Towers:** This amendment requires cooling towers with water recirculation rates of less than 2,500 gallons per minute (gpm) to be monitored once every other week instead of every week. Operators may also move to a monthly monitoring schedule if results are below the Leak Action Level for four consecutive weeks.

**Limited Exemption for Cooling Towers Not in Petroleum Refining Service:** This amendment is to clarify that cooling towers not in petroleum refining service are exempt from Rule 11-10.

**Leak Monitoring, Action, and Reporting Requirements:** An amendment to total hydrocarbon leak monitoring will require cooling towers to be sampled once every week instead of once every day. Operators will be able to move to a bi-monthly sampling schedule if sampling results are below the Leak Action Level for six consecutive months. Further, leak action requirements will be amended to require cooling tower hydrocarbon leaks to be minimized as soon as practicable or within seven calendar days (rather than five calendar days) to provide time for necessary leak minimization delays associated with potential technical and/or safety constraints.

Finally, an amendment to Refinery cooling tower reporting requirements clarifies that sampling of the cooling tower water must occur as soon as feasible, and no later than 24 hours from the discovery of the leak. This has been amended to require notification to the Air District’s Air Pollution Control Officer (APCO) of total hydrocarbon concentration and chlorine concentration within 72 hours (rather than one calendar day) of discovering the leak. The draft amendment also removes the requirements to report lists of all heat exchangers served by the cooling tower, as well as the pH level and iron concentration of the cooling water, as this reporting is unlikely to provide additional substantive information regarding the hydrocarbon emissions from the cooling tower. Notification requirements are also being added for delays in repair that meet the criteria cited in 40 CFR 63.654(f)-(g), as referenced in amended Section 11-10-305.

**Best Modern Practices Requirements and Reporting:** Section 11-10-402: Best Modern Practices is being deleted to avoid potential duplication and conflicts with process safety management requirements. Section 11-10-504: Operating Records is being amended to remove recordkeeping requirements associated with the deleted Section 11-10-402, as these recordkeeping requirements are no longer applicable.
1.5.3 DRAFT AMENDMENTS TO RULE 12-15

The draft amendments to Rule 12-15 include revisions to modify and clarify definitions and rule applicability, emission calculation methodologies, emission inventory review and approval requirements and procedures, fence-line monitoring plan requirements, procedures for updating guidelines, crude slate reporting requirements, and confidential information designation procedures, as described below.

**Rule Definitions and Applicability:** The requirement to include emissions from cargo carriers (ships and trains) in the emissions inventory data has been removed as they are not under the control or authority of the refineries. The definition of monthly crude slate report is being amended to better focus on non-crude feedstocks that may be serving as a substitute for crude feedstocks. Non-crude feedstocks are introduced at refineries across a vast spectrum of uses and is often in very small quantities. To better effect the intent of the Rule, a threshold will be established below which non-crude feedstocks need not be addressed in the crude slate report.

**Emission Factors and Calculation Methodology:** Section 12-15-401 - Annual Emissions Inventory is being amended to clarify the calculation methodology to be used for calculating greenhouse gases using a “common pipe” method, when many fuel consumers use fuel from one “common pipe” source.

**Annual Emissions Inventory Review and Approval Process:** This section is being amended to clarify the process for communicating and issuing preliminary review determinations under Subsection 12-15-402.1. The draft amendment also clarifies the notification process for APCO extension of the Air District’s review period under Subsection 12-15-402.3, and sets a limit of 45 days for the extension of the review period.

**Fence-line Monitoring Plan Requirements and Review Process:** Air Monitoring Plan requirements are being amended to clarify that site-specific air monitoring plans will be allowed to have implementation schedules and dates that are tailored to the specific plan, due to the unique set of circumstances of each individual refinery. The process for issuing preliminary review determinations has also been amended for clarity. Finally, amendments to Section 12-15-501 - Fence-line Monitoring System clarify that the requirements of the section will be effective once the fence-line monitoring system is installed and operational.

**Update of Emissions Inventory Guidelines and Air Monitoring Guidelines:** Draft amendments to the guideline update process include a 60-day comment period for affected facilities to review and comment on changes to the Emissions Inventory Guidelines and Air Monitoring Guidelines. Further, the Air District will respond to comments received. Affected facilities will be given at least 90 days to implement changes from the updated Emissions Inventory Guidelines in their respective annual emissions inventories.

**Monthly Crude Slate Report Requirements:** Section 12-15-408 - Availability of Monthly Crude Slate Reports is being amended to validate that the historical monthly crude slate data required for years 2013, 2014, 2015, and 2016 will be based on records
maintained by the refinery in the normal course of business. The draft amendments to this section also define precautions and procedures for handling confidential data for inspection, audit, and review. The draft amendments ensure that refinery confidential data is protected appropriately, and remains on-site at the refinery and is prevented from inadvertent release. Subsection 12-15-408.2 is being amended to modify the summarized information required in the monthly crude slate report.

**Designation of Confidential Information:** Requirements regarding confidential information have been amended to defer to the amended Sections 12-15-209 and 12-15-408. The requirements for an owner/operator to provide a redacted version of the document have been removed.
CHAPTER 2

ENVIRONMENTAL CHECKLIST

Introduction

General Information

Environmental Factors Potentially Significant

Determination

Evaluation of Environmental Impacts

Summary of Proposed Project and Potential Impacts

Environmental Checklist and Discussion
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CHAPTER 2

2.0 ENVIRONMENTAL CHECKLIST

2.1 INTRODUCTION

The environmental checklist provides a standard evaluation tool to identify a project's adverse environmental impacts. This checklist identifies and evaluates potential adverse environmental impacts that may be created by the proposed projects.

2.2 GENERAL INFORMATION

<table>
<thead>
<tr>
<th>Project Title:</th>
<th>Draft Amendments to Refinery Rules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead Agency Name:</td>
<td>Bay Area Air Quality Management District</td>
</tr>
</tbody>
</table>
| Lead Agency Address: | 375 Beale Street  
San Francisco, California 94105 |
| Contact Person: | Guy Gimlen |
| Contact Phone Number: | 415-749-4734 |
| Project Location: | The proposed Project applies to the area within the jurisdiction of the Bay Area Air Quality Management District, which encompasses all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. |
| Project Sponsor's Name: | Bay Area Air Quality Management District |
| Project Sponsor's Address: | 375 Beale Street  
San Francisco, California 94105 |
| General Plan Designation: | The proposed Projects relate to refineries located within the District which are located in land use areas designated as industrial. |
| Zoning: | The proposed Projects apply to five petroleum refineries within the District, which are located in industrially zoned areas. |
| Description of Project: | See “Project Description” in Chapter 1. |
| Surrounding Land Uses and Setting: | See “Project Location” in Chapter 1. |
| Other Public Agencies Whose Approval is Required: | None |
2.3 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The following environmental impact areas have been assessed to determine their potential to be affected by the proposed Projects. As indicated by the checklist on the following pages, environmental topics marked with an "✓" may be adversely affected by the proposed Projects. An explanation relative to the determination of impacts can be found following the checklist for each area.

- Aesthetics
- Biological Resources
- Greenhouse Gas Emissions
- Land Use / Planning
- Population / Housing
- Transportation / Traffic
- Agriculture and Forestry Resources
- Cultural Resources
- Hazards & Hazardous Materials
- Mineral Resources
- Public Services
- Utilities / Service Systems
- Air Quality
- Geology / Soils
- Hydrology / Water Quality
- Noise
- Recreation
- Mandatory Findings of Significance
2.4 DETERMINATION

On the basis of this initial evaluation:

☐ I find the proposed Project COULD NOT have a significant effect on the environment, and that a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed Project could have a significant effect on the environment, there will not be significant effects in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☒ I find that the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed Project MAY have a "potentially significant impact" or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is required.

__________________________   __________________________
Signature:                      Date:

__________________________   __________________________
Printed Name:                   Date:
2.5 EVALUATION OF ENVIRONMENTAL IMPACTS

1) A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the Project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on Project-specific factors as well as general standards (e.g., the Project will not expose sensitive receptors to pollutants, based on a Project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.

4) “Negative Declaration: Less Than Significant with Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from “Earlier Analyses,” as described in (5) below, may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, Program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063 (c)(3)(D). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are “Less than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the Project.
6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This checklist is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a Project’s environmental effects in whatever format is selected.

9) The explanation of each issue should identify:
   a) the significance criteria or threshold, if any, used to evaluate each question; and
   b) the mitigation measure identified, if any, to reduce the impact to less than significance.

2.6 SUMMARY OF PROPOSED PROJECT AND POTENTIAL IMPACTS

Chapter 2 provides a summary of the main components of proposed amendments to Regulations 6-5, 11-10, and 12-15. A summary of the expected methods of compliance is provided below.

- **Draft Amendments Rule 6-5 – Particulate Emissions from Refinery Fluidized Catalytic Cracking Units (FCCUs):** The draft amendments to Rule 6-5 apply to four of the five Bay Area refineries with FCCUs. The draft amendments clarify exemptions to the rule (it does not apply to FCCUs with wet scrubbers) and deletes placeholders in the existing rule for future limits on condensable matter and sulfur dioxide. The draft amendments to Rule 6-5 would have no impact on emissions as the amendments are clarifications of the original intent of Rule 6-5.

- **Draft Amendments to Rule 11-10 – Hexavalent Chromium Emissions from All Cooling Towers and Total Hydrocarbon Emissions from Petroleum Refinery Cooling Towers:** Compliance with the amendments to Rule 11-10 is expected to be achieved through monitoring and repair programs. Amendments to Regulation 11-10 would require cooling towers to be sampled once every week (rather than once every day) and that leaks be minimized as soon as practicable or within seven calendar days (rather than five). Amendments to Regulation 11-10 would also clarify limited exemptions for cooling towers not in petroleum refining service and would require less frequent monitoring for smaller cooling towers. The draft amendments to Rule 11-10 will not impact actual emissions because the amendments are consistent with how the Rule has been implemented since adoption. The draft amendments may impact emissions if compared to the rule as adopted due to reduced frequency in monitoring and potential leak detection.
• **Draft Amendments to Rule 12-15 - Petroleum Refining Emissions Tracking:** The Proposed Amendments to Rule 12-15 include revisions to modify and clarify definitions and rule applicability, emission calculation methodologies, emission inventory review and approval requirements and procedures, fence-line monitoring plan requirements, procedures for updating guidelines, crude slate reporting requirements, and confidential information designation procedures. Rule 12-15 is an emissions reporting rule, so no controls are required, no impacts on emissions is expected and no physical impacts to the refineries would occur.

• **Draft Amendments to Rule 8-18 - Equipment Leaks:** Compliance with the amendments to Rule 8-18 is expected to be achieved through improved and more stringent leak detection and repair programs that will require monitoring of additional fugitive components, more frequent monitoring of some components, and potentially more repair of fugitive components. Draft amendments to Rule 8-18 are not being put forth at this time and will be delayed until a Refinery Heavy Liquids Fugitive Leaks study can be completed at all five Bay Area refineries. To provide a complete review, potential amendments to Rule 8-18 will be included as a cumulative project in the EIR.

The impacts of these expected methods of compliance are evaluated in this Initial Study. CEQA recognizes that regulatory requirements consisting of monitoring and inspections, do not typically generate environmental impacts (see for example, CEQA Guidelines §15309). The analysis of potential secondary adverse environmental impacts from control strategies identified in Chapter 1 as a result of implementing amendments to Rules 6-5, 11-10, and 12-15 have been further analyzed in the subsections below.
2.7 ENVIRONMENTAL CHECKLIST AND DISCUSSION

<table>
<thead>
<tr>
<th>Potentially Significant Impact</th>
<th>Less Than Significant Impact with Mitigation Incorporated</th>
<th>Less-than-Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
</table>

I. AESTHETICS.

Would the Project:

a) Have a substantial adverse effect on a scenic vista? 
   - Yes ☑  
   - No ☐  
   - Mitigation ☐  
   - No Impact ☐

b) Substantially damage to scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway? 
   - Yes ☑  
   - No ☐  
   - Mitigation ☐  
   - No Impact ☐

c) Substantially degrade the existing visual character or quality of the site and its surroundings? 
   - Yes ☑  
   - No ☐  
   - Mitigation ☐  
   - No Impact ☐

d) Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area? 
   - Yes ☑  
   - No ☐  
   - Mitigation ☐  
   - No Impact ☐

Setting

The Bay Area Air Quality Management District covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano County and southern Sonoma County. The area of coverage is vast (about 5,600 square miles), so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses. Important views of natural features include the San Francisco Bay and ocean, San Francisco Bay, Mount Tamalpais, Mount Diablo, and other peaks and inland valleys of the Coast Range. Cityscape views offered by buildings and distinctive Bay Area bridges, especially the Golden Gate and Bay Bridges and the San Francisco skyline, are also important built visual resources to the region (ABAG, 2017). Views along travel corridors, including roads and rail lines, are in abundance in the Bay Area and include views of the San Francisco Bay, city scape, mountains and hills, redwood groves, and broader views of the ocean and lowlands, such as along ridgelines. Because of the variety of visual resources, scenic highways or corridors are located throughout the Bay Area and includes 15 routes that have been designated as scenic highways and 29 routes eligible for designation as scenic highways (ABAG, 2017).

The proposed rule amendments would affect the five refineries within the Bay Area. Petroleum refineries are generally located in industrial areas.
Regulatory Background

Visual resources are generally protected by the City and/or County General Plans through land use and zoning requirements.

Significance Criteria

Project-related impacts on aesthetics and visual resources will be considered significant if any of the following conditions are met:

- The proposed Project would have a substantial adverse effect on a scenic vista.
- The proposed Project would substantially damage scenic resources, including but not limited to trees, rock outcropping, and historical buildings within a state scenic highway.
- The proposed Project would substantially degrade the existing visual character or quality of the site and its surrounds.
- The proposed Project would add a visual element of urban character to an existing rural or open space area or add a modern element to a historic area.
- The proposed Project would create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

Discussion of Impacts

I a – c. Rules 6-5, 11-10, and 12-15 were part of the District’s focus on petroleum refinery emissions, designed to enhance reporting requirements and reduce emissions of particulate matter (PM), particulate matter less than 2.5 microns in diameter (PM$_{2.5}$), reactive organic gases (ROG), nitrogen oxides (NOx), sulfur dioxide (SO$_2$), and ammonia (NH$_3$) from stationary sources located at petroleum refineries. The proposed amendments would clarify exemptions (Rules 6-5 and 11-10), change the frequency of monitoring (Rule 11-10), and clarify reporting requirements (Rule 12-15).

The proposed Projects would not require any new construction or development. Physical modifications associated with implementation of the original Rule 6-5 were limited to measures to optimize ammonia or urea injection systems on existing FCCUs. The currently proposed amendments to Rule 6-5 would not require the construction of any additional air pollution control equipment or refinery modifications. Changing the frequency of monitoring requirements (Rule 11-10) or reporting requirements (Rule 12-15) would not result in any physical modifications, e.g., new equipment or construction. None of the proposed rule amendments are expected to result in visual changes to the refineries. Therefore, obstruction of scenic resources or degrading the visual character of a site, including but not limited to: trees, rock outcroppings, or historic buildings, is not expected.

I d. The proposed Projects are not expected to require any new equipment or any new light generating equipment for compliance. The existing refineries are current lighted for nighttime work and no additional light or glare would be added to impact day or nighttime views in the Bay Area.
Conclusion

Based upon the above considerations, significant adverse impacts to aesthetics or light and glare are not expected to occur due to the proposed amendments to Rules 6-5, 11-10 or 12-15 and, therefore, will not be further evaluated in the Draft EIR.
II. AGRICULTURE and FOREST RESOURCES.

In determining whether impacts on agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. --Would the Project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?  

<table>
<thead>
<tr>
<th>Potentially Significant Impact</th>
<th>Less Than Significant Impact with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
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b) Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?

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<th>Potentially Significant Impact</th>
<th>Less Than Significant Impact with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
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c) Conflict with existing zoning for, or cause rezoning of, forest land as defined in Public Resources Code section 12220(g), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? 

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<th>Potentially Significant Impact</th>
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d) Result in the loss of forest land or conversion of forest land to non-forest use?

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<tr>
<th>Potentially Significant Impact</th>
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<th>Less Than Significant Impact</th>
<th>No Impact</th>
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e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

<table>
<thead>
<tr>
<th>Potentially Significant Impact</th>
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Setting

The Air District covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles), so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses. Some of these agricultural lands are under Williamson Act contracts. Agricultural land under Williamson Act contract includes both prime and nonprime lands. Prime agricultural land includes land with certain specific soil characteristics, land that has returned a predetermined annual gross value for three of the past five years, livestock-supporting land with specific carrying capacities, or land planted with fruit or nut trees, vines, bushes or crops that have a non-bearing period of less than five years (Government Code §51200-51207). Nonprime lands include pasture and grazing lands and other non-irrigated agricultural lands with lesser soil quality.

The Bay Area has a significant amount of land in agricultural uses. In 2010, approximately over half of the region’s approximately 4.5 million acres were classified as agricultural lands, as defined by the California Department of Conservation Farmland Mapping and Monitoring Program. Of these, 2.3 million acres of agricultural land, over 70 percent (about 1.7 million acres) are used for grazing. Products grown in the Bay Area include field crops, fruit and nut crops, seed crops, vegetable crops, and nursery products. Field crops, which include corn, wheat, and oats, as well as pasture lands, represent approximately 62 percent of the Bay Area agricultural land (ABAG, 2017). In 2014, about 1.25 million acres of land were under Williamson Act contract in the Bay Area. Of this, about 203,200 acres were prime farmland and one million acres were nonprime. Lands under Williamson Act contract are primarily used for pasture and grazing and not for cultivation of crops. Approximately 70 percent of prime farmlands under contract are in Santa Clara, Solano, and Sonoma counties (ABAG, 2017).

The proposed rule amendments would affect the five refineries within the Bay Area. Petroleum refineries are generally located in industrial areas. Agricultural or forest resources are typically not located within these industrial areas within the Bay Area.

Regulatory Background

Agricultural and forest resources are generally protected by the City and/or County General Plans, Community Plans through land use and zoning requirements, as well as any applicable specific plans, ordinances, local coastal plans, and redevelopment plans.

Significance Criteria

Project-related impacts on agricultural and forest resources will be considered significant if any of the following conditions are met:

- The proposed Project conflicts with existing zoning or agricultural use or Williamson Act contracts.
• The proposed Project will convert prime farmland, unique farmland or farmland of statewide importance as shown on the maps prepared pursuant to the farmland mapping and monitoring program of the California Resources Agency, to non-agricultural use.
• The proposed Project conflicts with existing zoning for, or causes rezoning of, forest land (as defined in Public Resources Code §12220(g)), timberland (as defined in Public Resources Code §4526), or timberland zoned Timberland Production (as defined by Government Code § 51104 (g)).
• The proposed Project would involve changes in the existing environment, which due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use.

Discussion of Impacts

II a – e. Rules 6-5, 11-10, and 12-15 were part of the District’s focus on petroleum refinery emissions, designed to enhance reporting requirements and reduce emissions of PM, PM$_{2.5}$, ROG, NO$_x$, SO$_2$ and NH$_3$ from stationary sources located at petroleum refineries. The proposed amendments would clarify exemptions (Rules 6-5 and 11-10), change the frequency of monitoring (Rule 11-10), and clarify reporting requirements (Rule 12-15).

The proposed Projects would not require any new construction or development. Physical modifications associated with implementation of the original Rule 6-5 were limited to measures to optimize ammonia or urea injection systems on existing FCCUs. The currently proposed amendments to Rule 6-5 would not require the construction of any additional air pollution control equipment or refinery modifications. Changing the frequency of monitoring requirements (Rule 11-10) or reporting requirements (Rule 12-15) would not result in any physical modifications, e.g., new equipment or construction.

The proposed rule amendments would affect petroleum refineries that are located within industrial areas and no agricultural or forest resources are located within refineries. The proposed Projects would not conflict with existing agriculture related zoning designations or Williamson Act contracts. Williamson Act lands within the boundaries of the District would not be affected. No effects on agricultural or forestland resources are expected because the proposed Project would not require any new development. All of these activities associated with the proposed rule amendments would occur within the confines of the existing refineries. Therefore, there is no potential for conversion of farmland to non-agricultural use or conflicts related to agricultural uses or land under a Williamson Act contract, or impacts to forestland resources.

Conclusion

Based upon the above considerations, significant adverse impacts to agricultural and forest resources are not expected to occur due to the proposed amendments to Rules 6-5, 11-10 or 12-15 and, therefore, will not be further evaluated in the Draft EIR.
III. AIR QUALITY

When available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the Project:

a) Conflict with or obstruct implementation of the applicable air quality plan? □ □ □ ☑

b) Violate any air quality standard or contribute to an existing or projected air quality violation? ☑ □ □ □

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is a nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)? ☑ □ □ □

d) Expose sensitive receptors to substantial pollutant concentrations? ☑ □ □ □

e) Create objectionable odors affecting a substantial number of people? □ □ ☑ □

Setting

It is the responsibility of the Air District to ensure that state and federal ambient air quality standards are achieved and maintained in its geographical jurisdiction. Health-based air quality standards have been established by California and the federal government for the following criteria air pollutants: ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter less than 10 microns in diameter (PM₁₀), particulate matter less than 2.5 microns in diameter (PM₂.₅), and lead.

The San Francisco Bay Area is characterized by a large, shallow basin surrounded by mountain ranges tapering into sheltered inland valleys. The basin is bounded by the Pacific Ocean to the west and includes complex terrain consisting of mountains, valleys and bays. Combined climatic and topographic factors result in increased potential for the accumulation of air pollutants in the inland valleys and reduced potential for buildup of air pollutants along the coast.
Air quality conditions in the San Francisco Bay Area have improved greatly since the Air District was created in 1955, and regional concentrations of criteria pollutants are now in compliance with or near compliance with most ambient air quality standards. However, the Bay Area is not in attainment with the National and State 8-hour ozone standards and the State one-hour ozone standard. The Bay Area is also not in attainment for the California standards for PM$_{10}$ and PM$_{2.5}$. NOx and other pollutants react to produce secondary PM$_{2.5}$ in the form of nitrates. NOx reductions will have the added benefit of reducing secondary PM$_{2.5}$ formation.

**Regulatory Background**

**Criteria Pollutants**

At the federal level, the Clean Air Act (CAA) Amendments of 1990 give the U.S. EPA additional authority to require states to reduce emissions of ozone precursors and particulate matter in non-attainment areas. The amendments set attainment deadlines based on the severity of problems. At the state level, CARB has traditionally established state ambient air quality standards, maintained oversight authority in air quality planning, developed programs for reducing emissions from motor vehicles, developed and compiled state-wide air emission inventories, collected air quality and meteorological data, and approved state implementation plans. At a local level, California’s air districts, including the Bay Area Air Quality Management District, are responsible for overseeing stationary source emissions, approving permits, maintaining local stationary point source emission inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality-related sections of environmental documents required by CEQA.

The Air District is governed by a 24-member Board of Directors composed of publicly-elected officials apportioned according to the population of the represented counties. The Board has the authority to develop and enforce regulations for the control of air pollution within its jurisdiction. The Air District is responsible for implementing emissions standards and other requirements of federal and state laws. It is also responsible for developing air quality planning documents required by both federal and state laws.

**Toxic Air Contaminants**

Toxic air contaminants (TACs) are regulated in the Air District through federal, state, and local programs. At the federal level, TACs are regulated primarily under the authority of the CAA. Prior to the amendment of the CAA in 1990, source-specific NESHAPs were promulgated under Section 112 of the CAA for certain sources of radionuclides and Hazardous Air Pollutants (HAPs).

Title III of the 1990 CAA amendments requires U.S. EPA to promulgate NESHAPs on a specified schedule for certain categories of sources identified by U.S. EPA as emitting one or more of the 189 listed HAPs. Emission standards for major sources must require the maximum achievable control technology (MACT). MACT is defined as the maximum degree of emission reduction achievable considering cost and non-air quality health and environmental impacts and energy requirements. All NESHAPs were to be promulgated by the year 2000. Specific incremental progress in establishing standards were to be made by the years 1992 (at least 40 source categories), 1994 (25 percent of the listed categories), 1997 (50 percent of remaining listed categories), and 2000 (remaining balance). The 1992 requirement was met; however, many of the four-year
standards were not promulgated as scheduled. Promulgation of those standards has been rescheduled based on court ordered deadlines, or the aim to satisfy all Section 112 requirements in a timely manner.

Many of the sources of TACs that have been identified under the CAA are also subject to the California TAC regulatory programs. CARB developed regulatory programs for the control of TACs, including: (1) California's TAC identification and control program, adopted in 1983 as Assembly Bill 1807 (AB 1807) (California Health and Safety Code §39662), a two-step program in which substances are identified as TACs, and airborne toxic control measures (ATCMs) are adopted to control emissions from specific sources; and (2) The Air Toxics Hot Spot Information and Assessment Act of 1987 (AB 2588) (California Health and Safety Code §39656) established a state-wide program to inventory and assess the risks from facilities that emit TACs and to notify the public about significant health risks associated with those emissions.

In 2004, the Air District initiated the Community Air Risk Evaluation (CARE) program to identify areas with relatively high concentrations of air pollution – including toxic air contaminants (TACs) and fine particulate matter – and populations most vulnerable to air pollution’s health impacts. Maps of communities most impacted by air pollution, generated through the CARE program, have been integrated into many Air District programs. For example, the Air District uses information derived from the CARE program to develop and implement targeted risk reduction programs, including grant and incentive programs, community outreach efforts, collaboration with other governmental agencies, model ordinances, new regulations for stationary sources and indirect sources, and advocacy for additional legislation.

Significance Criteria

On June 2, 2010, the Air District's Board of Directors unanimously adopted thresholds of significance to assist in the review of projects under CEQA. These CEQA thresholds were designed to establish the level at which the Air District believed air pollution emissions would cause significant environmental impacts under CEQA. The CEQA thresholds were challenged in court. Following litigation in the trial court, the court of appeal, and the California Supreme Court, all of the thresholds were upheld. However, in an opinion issued on December 17, 2015, the California Supreme Court held that CEQA does not generally require an analysis of the impacts of locating development in areas subject to environmental hazards unless the project would exacerbate existing environmental hazards.

In view of the Supreme Court’s opinion, local agencies may rely on the Air District’s CEQA thresholds designed to reflect the impact of locating development near areas of toxic air contamination where such an analysis is required by CEQA or where the agency has determined that such an analysis would assist in making a decision about the project. However, the CEQA thresholds are not mandatory and agencies should apply them only after determining that they reflect an appropriate measure of a project’s impacts.

The Air District published a new version of the Guidelines dated May 2017, which includes revisions made to address the Supreme Court’s opinion. The CEQA Guidelines for implementation of the Thresholds are for information purposes only to assist local agencies.
Recommendations in the Guidelines are advisory and should be followed by local governments at their own discretion. The Air District is currently working to revise any outdated information in the Guidelines as part of its update to the CEQA Guidelines and thresholds of significance. Since these are the most current air quality significance thresholds and address court decisions, they will be used in the CEQA analysis for the current Project.

**Construction Emissions**

Regarding construction emissions, the Air District’s 2017 Thresholds of Significance will be used in the current air quality analysis for construction emissions (see Table 2-1).

<table>
<thead>
<tr>
<th>Pollutant/Precursor</th>
<th>Daily Average Emissions (lbs/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROG</td>
<td>54</td>
</tr>
<tr>
<td>NOx</td>
<td>54</td>
</tr>
<tr>
<td>PM(_{10})</td>
<td>82*</td>
</tr>
<tr>
<td>PM(_{2.5})</td>
<td>54*</td>
</tr>
<tr>
<td>PM(<em>{10}/\ PM</em>{2.5}) Fugitive Dust</td>
<td>Best Management Practices</td>
</tr>
</tbody>
</table>

*Applies to construction exhaust emissions only. Source: BAAQMD, 2017

**Operational Emissions**

The most recently available CEQA Guidelines established emission thresholds for specific projects, general plans, and regional plans. An air quality rule does not fall neatly into any of these categories. Air quality rules are typically regional in nature, as opposed to general plans and community plans. In addition, air quality rules are usually specific to particular source types and particular pollutants. The Air Quality Plan threshold of “no net increase in emissions” is appropriate for Air Quality Plans because they include a mix of several control measures with individual trade-offs. For example, one control measure may result in combustion of methane to reduce greenhouse gas emissions, while increasing criteria pollutant emissions by a small amount. Those increases from the methane measure would be offset by decreases from other measures focused on reducing criteria pollutants. In a particular rule development effort, there may not be opportunities to make these trade-offs.

The 2017 project-level stationary source CEQA thresholds are identified in Table 2-2. These represent the levels at which a project’s individual emissions would result in a cumulatively considerable contribution to the Air District’s existing air quality conditions for individual projects. The Air District does not currently have significance thresholds specifically for rules. In order to provide a conservative air quality analysis, the project-specific thresholds recommended in the revised 2017 CEQA Guidelines (BAAQMD, 2017) will be used in the current air quality impacts analysis (see Table 2-2).
**TABLE 2-2**

**Thresholds of Significance for Operation-Related Criteria Air Pollutants and Precursors**

<table>
<thead>
<tr>
<th>Pollutant/Precursor</th>
<th>Daily Average Emissions (lbs/day)</th>
<th>Maximum Annual Emissions (tons/year)</th>
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<tbody>
<tr>
<td>ROG</td>
<td>54</td>
<td>10</td>
</tr>
<tr>
<td>NOx</td>
<td>54</td>
<td>10</td>
</tr>
<tr>
<td>PM(_{10})</td>
<td>82</td>
<td>15</td>
</tr>
<tr>
<td>PM(_{2.5})</td>
<td>54</td>
<td>10</td>
</tr>
</tbody>
</table>

*Source: BAAQMD, 2017*

**Discussion of Impacts**

**III a.** The proposed rule amendments are not expected to conflict with or obstruct implementation of the applicable air quality plan. The applicable air quality plan is the Air District’s recently-adopted 2017 Clean Air Plan, *Spare the Air; Cool the Climate*. The Plan outlines the overall strategy for achieving the Bay Area’s clean air goals by reducing emissions of ozone precursors, particulate matter, and other pollutants in the region.

Rules 6-5, 11-10, and 12-15 were part of the District’s focus on petroleum refinery emissions, designed to enhance reporting requirements and reduce emissions of PM, PM\(_{2.5}\), ROG, NOx, SO\(_2\) and NH\(_3\) from stationary sources located at petroleum refineries. The proposed amendments would clarify exemptions (Rules 6-5 and 11-10), change the frequency of monitoring (Rule 11-10), and clarify reporting requirements (Rule 12-15). The proposed amendments will not conflict with or obstruct implementation of the 2017 Clean Air Plan, rather it will help achieve the Plan’s goals by helping to better implement some of the Air District’s existing rules. Thus, no significant impacts to the implementation of the 2017 Clean Air Plan are expected.

**III b – d.** Rules 6-5, 11-10, and 12-15 were part of the District’s focus on petroleum refinery emissions, designed to enhance reporting requirements and reduce emissions of PM, PM\(_{2.5}\), ROG, NOx, SO\(_2\) and NH\(_3\) from stationary sources located at petroleum refineries. The proposed amendments would clarify exemptions (Rules 6-5 and 11-10), change the frequency of monitoring (Rule 11-10), and clarify reporting requirements (Rule 12-15).

The proposed Projects would not require any new construction or development. Physical modifications associated with implementation of the original Rule 6-5 were limited to measures to optimize ammonia or urea injection systems on existing FCCUs. The currently proposed amendments to Rule 6-5 would not require the construction of any additional air pollution control equipment or refinery modifications. Changing monitoring requirements (Rule 11-10) or reporting requirements (Rule 12-15) would not result in any physical modifications, e.g., new equipment or construction. Changing monitoring frequency as proposed in amendments to Rule 11-10 would not result in an increase in actual emissions because the amendments are consistent with how the Rule has been implemented since adoption. However, the change in monitoring frequency, when
compared to the rule language as adopted, can theoretically allow for an emissions impact since less frequent monitoring may allow a future leak to go undetected for a longer period of time.

The Air District’s position is that a theoretical impact relative to the rule language that was never implemented does not require analysis under CEQA. However, for the sake of transparency and thoroughness, the Air District is analyzing these theoretical impacts so that the public understands the difference between the rule as it was adopted (though not implemented) and the rule as it would be amended.

Rule 11-10 as adopted in December 2015 required daily monitoring of cooling towers for leaks, while the currently proposed amendments to Rule 11-10 would require weekly monitoring with potential adjustments to bi-monthly monitoring. Approval of Rule 11-10 in December 2015 was based on estimated reduction of hydrocarbon emissions from 978 tons per year to 117 tons per year (a reduction in 861 tons per year). This estimate was based on available emissions factors for un-monitored cooling towers and emissions factors for cooling towers that are monitored monthly. The daily or continuous monitoring requirements for cooling towers larger than 2,500 gpm (Rule 11-10 as adopted) are more stringent than monthly monitoring. While the proposed amendments for weekly monitoring are less stringent than daily monitoring, both monitoring requirements remain substantially more stringent than monthly monitoring.

The weekly monitoring proposed for Rule 11-10, as compared to the daily monitoring in the rule as adopted, equates to a potentially longer period of time before a leak is detected under specific circumstances, and subsequently delay minimization and/or repair of a leak resulting in increased ROG emissions (i.e. “foregone” emission reductions). The theoretical foregone emission reductions have been initially estimated to be approximately 16 tons per year\(^1\) and could exceed the ROG significance criteria. These theoretical air quality impacts associated with the ROG emissions will be evaluated in the Draft EIR.

CEQA Guidelines indicate that cumulative impacts of a Project shall be discussed when the Project’s incremental effect is cumulatively considerable, as defined in CEQA Guidelines §15065(c). The cumulative air quality impacts of the proposed Project will also be evaluated in the Draft EIR.

**III e.** The proposed amendments would clarify exemptions (Rules 6-5 and 11-10), change the frequency of monitoring (Rule 11-10), and clarify reporting requirements (Rule 12-15). The proposed amendments are not expected to result in an increase in any emissions at refineries, including odorous emissions. The proposed amendments to Rule 11-10 could result in theoretical foregone ROG emission reductions; however, cooling towers are generally not sources of odors because leaks start out small, are diluted with a high volume of cooling water, and further diluted by a high volume of air flowing up through the cooling tower. Therefore, the proposed rule amendments are not expected to result in an increase in the emissions that could generate odors. The Air District will continue to enforce odor nuisance complaints through District Regulation 7, Odorous Substances.

\(^1\) Described in Appendix 1 of the Refinery Rules – Draft Amendments Workshop Report
Conclusion

The currently proposed amendments would not require the construction of any additional equipment or refinery modifications. However, changing monitoring requirements for cooling towers as proposed in the amendments to Rule 11-10 from daily to weekly equates to a theoretical increase in the time that it would take for a leak to be detected and subsequently delay the minimization and/or repair of the leak, resulting in increased ROG emissions above the currently approved Rule 11-10 (emission reductions “forgone.”) The theoretical emission reductions foregone could exceed the ROG significance criteria and will be evaluated in the Draft EIR. No significant impacts were identified on air quality plans or the generation of odors and these topics will not be addressed further in the Draft EIR.
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<tr>
<th>Potentially Significant Impact</th>
<th>Less Than Significant Impact with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
</table>

### IV. BIOLOGICAL RESOURCES.

Would the Project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

   ☒

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

   ☒

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?

   ☒

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

   ☒

e) Conflicting with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

   ☒

f) Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?

   ☒
Setting

The Air District covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles), so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses. A wide variety of biological resources are located within the Bay Area.

The Bay Area supports numerous distinct natural communities composed of a diversity of vegetative types that provide habitat for a wide variety of plan and wildlife species. Broad habitat categories in the region include grasslands, coastal scrubs and chaparral, woodlands and forests, riparian systems and freshwater aquatic habitat, and wetlands. Extensive aquatic resources are provided by the San Francisco Bay Delta estuary, as well as numerous other rivers and streams. Urban and otherwise highly disturbed habitats, such as agricultural fields, also provide natural functions and values as wildlife habitat (ABAG, 2017).

The proposed rule amendments would affect the five refineries within the Bay Area. Petroleum refineries are generally located in industrial areas where native vegetation has been removed from the operating portions of the refinery to minimize the potential for fire hazards.

Regulatory Background

Biological resources are generally protected by the City and/or County General Plans through land use and zoning requirements which minimize or prohibit development in biologically sensitive areas. Biological resources are also protected by the California Department of Fish and Wildlife, and the U.S. Fish and Wildlife Service. The U.S Fish and Wildlife Service and National Marine Fisheries Service oversee the federal Endangered Species Act. Development permits may be required from one or both of these agencies if development would impact rare or endangered species. The California Department of Fish and Wildlife administers the California Endangered Species Act which prohibits impacting endangered and threatened species. The U.S. Army Corps of Engineers and the U.S. EPA regulate the discharge of dredge or fill material into waters of the United States, including wetlands.

Significance Criteria

The proposed Project impacts on biological resources will be considered significant if:

- The Project results in a loss of plant communities or animal habitat considered to be rare, threatened or endangered by federal, state or local agencies.
- The Project interferes substantially with the movement of any resident or migratory wildlife species.
- The Project adversely affects aquatic communities through construction or operation of the Project.
Discussion of Impacts

IV a – f. Rules 6-5, 11-10, and 12-15 were part of the District’s focus on petroleum refinery emissions, designed to enhance reporting requirements and reduce emissions of PM, PM$_{2.5}$, ROG, NOx, SO$_2$ and NH$_3$ from stationary sources located at petroleum refineries. The proposed amendments would clarify exemptions (Rules 6-5 and 11-10), change the frequency of monitoring (Rule 11-10), and clarify reporting requirements (Rule 12-15).

The proposed Projects would not require any new construction or development. Physical modifications associated with implementation of the original Rule 6-5 were limited to measures to optimize ammonia or urea injection systems on existing FCCUs. The currently proposed amendments to Rule 6-5 would not require the construction of any additional air pollution control equipment or refinery modifications. Changing the frequency of monitoring requirements (Rule 11-10) or reporting requirements (Rule 12-15) would not result in any physical modifications, e.g., new equipment or construction.

Vegetation has been removed from the operating portions of refineries to minimize the potential for fire hazards. Since the proposed amendments to Rules 6-5, 11-10, and 12-15 are not expected to result in physical modifications to the existing refineries, they are not expected to result in impacts to biological resources and would not directly or indirectly affect riparian habitat, federally protected wetlands, or migratory corridors.

The proposed rule amendments would not conflict with local policies or ordinances protecting biological resources, nor would they conflict with local, regional, or state conservation plans because as the proposed Project applies to equipment in existing developed refineries. The proposed Project will also not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or any other relevant habitat conservation plan as these types of conservation plans are not located within existing refineries.

Conclusion

Based upon the above considerations, significant adverse impacts to biological resources are not expected to occur due to the proposed amendments to Rules 6-5, 11-10 or 12-15 and, therefore, will not be further evaluated in the Draft EIR.
V. **CULTURAL RESOURCES.** Would the Project:

<table>
<thead>
<tr>
<th>Impact Level</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant Impact With Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>✓</td>
</tr>
<tr>
<td>b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>✓</td>
</tr>
<tr>
<td>c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>✓</td>
</tr>
<tr>
<td>d) Disturb any human remains, including those interred outside of formal cemeteries?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>✓</td>
</tr>
</tbody>
</table>

**Setting**

The Air District covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles), so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses. Cultural resources are defined as buildings, sites, structures, or objects which might have historical architectural, archaeological, cultural, or scientific importance. Cultural resources also include paleontological sites, which can consist of mineralized, partially mineralized, or unmineralized bones and teeth, soft tissues, shells, wood, leaf impressions, footprints, burrows, and microscopic remains that are more than 5,000 years old and occur mainly in Pleistocene or older sedimentary rock units.

The Carquinez Strait represents the entry point for the Sacramento and San Joaquin Rivers into the San Francisco Bay. This locality lies within the San Francisco Bay and the west end of the Central Valley archaeological regions, both of which contain a rich array of prehistoric and historical cultural resources. The areas surrounding the Carquinez Strait and Suisun Bay have been occupied for millennia given their abundant combination of littoral and oak woodland resources.

Important vertebrate and invertebrate fossils and unique geologic units have been documented throughout California. The fossil yielding potential of a particular area is highly dependent on the geologic age and origin of the underlying rocks. Pleistocene or older (older than 11,000 years) continental sedimentary deposits are considered to have a high paleontological potential while Holocene-age deposits (less than 10,000 years old) are generally considered to have a low...
paleontological potential because they are geologically immature and are unlikely to contain fossilized remains of organisms. Metamorphic and igneous rocks have a low paleontological potential, either because they formed beneath the surface of the earth (such as granite), or because they have been altered under heat and high pressures.

Historic resources are standing structures of historic or aesthetic significance. Architectural sites dating from the Spanish Period (1529-1822) through the late 1960s are generally considered for protection if they are determined to be historically or architecturally significant. These may include missions, historic ranch lands, and structures from the Gold Rush and the region’s early industrial era. More recent architectural sites may also be considered for protection if they could gain historic significance in the future (ABAG, 2017).

Of the 8,199 sites recorded in the Bay Area, there are 1,006 cultural resources listed on the California Register of Historic Resources (CRHR), meaning that they are significant at the local, State or federal level; of those, 744 are also listed on the National Register of Historic Places (NRHP). From this list, 249 resources are listed as California Historic Landmarks. The greatest concentration of historic resources listed on both the NRHP and the CRHR in the Bay Area occurs in San Francisco, with 181 resources. Alameda County has the second highest number with 147 resources (ABAG, 2017).

The petroleum refineries are located within industrial areas in the Bay Area. These areas have generally already been graded to accommodate development. Cultural resources would not be expected to be impacted by modifications to existing refineries.

Regulatory Background

The State CEQA Guidelines define a significant cultural resource as a “resource listed or eligible for listing on the California Register of Historical Resources” (Public Resources Code §5024.1). A project would have a significant impact if it would cause a substantial adverse change in the significance of a historical resource (State CEQA Guidelines §15064.5(b)). A substantial adverse change in the significance of a historical resource would result from an action that would demolish or adversely alter the physical characteristics of the historical resource that convey its historical significance and that qualify the resource for inclusion in the California Register of Historical Resources or a local register or survey that meets the requirements of Public Resources Code §§50020.1(k) and 5024.1(g).

Significance Criteria

The proposed Project impacts to cultural resources will be considered significant if:

- The Project results in the disturbance of a significant prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group.
- Unique paleontological resources are present that could be disturbed by construction of the proposed Project.
- The Project would disturb human remains.
Discussion of Impacts

V a – d. Rules 6-5, 11-10, and 12-15 were part of the District’s focus on petroleum refinery emissions, designed to enhance reporting requirements and reduce emissions of PM, PM$_{2.5}$, ROG, NOx, SO$_2$ and NH$_3$ from stationary sources located at petroleum refineries. The proposed amendments would clarify exemptions (Rules 6-5 and 11-10), change the frequency of monitoring (Rule 11-10), and clarify reporting requirements (Rule 12-15).

The proposed Projects would not require any new construction or development. Physical modifications associated with implementation of the original Rule 6-5 were limited to measures to optimize ammonia or urea injection systems on existing FCCUs. The currently proposed amendments to Rule 6-5 would not require the construction of any additional air pollution control equipment or refinery modifications. Changing the frequency of monitoring requirements (Rule 11-10) or reporting requirements (Rule 12-15) would not result in any physical modifications, e.g., new equipment or construction.

Refinery structures are typically not considered to be historic resources. Therefore, no impacts to historical resources are expected as a result of the proposed Project, since no structures would be required to be removed. No construction activities are expected to be required as part of the proposed Project; therefore, no impacts to cultural resources, including archaeological resources, paleontological resources, or disturbance of human remains would occur as a result of the proposed Project.

Conclusion

Based upon the above considerations, significant adverse impacts to cultural resources are not expected to occur due to the proposed amendments to Rules 6-5, 11-10 or 12-15 and, therefore, will not be further evaluated in the Draft EIR.
VI. GEOLOGY AND SOILS.

Would the Project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

    ☐  ☐  ☐  ☑

ii) Strong seismic ground shaking?

    ☐  ☐  ☐  ☑

iii) Seismic-related ground failure, including liquefaction?

    ☐  ☐  ☐  ☑

iv) Landslides?

    ☐  ☐  ☐  ☑

b) Result in substantial soil erosion or the loss of topsoil?

    ☐  ☐  ☐  ☑

c) Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the Project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?

    ☐  ☐  ☐  ☑

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

    ☐  ☐  ☐  ☑

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?

    ☐  ☐  ☐  ☑
Setting

California has 11 natural geologic regions, known as geomorphic provinces, which are defined by the presence of similar physical characteristics, such as relief, landforms, and geology. Most of the Bay Area is located in the natural region of California known as the Coast Ranges geomorphic province, with the eastern portions of Contra Costa and Alameda Counties extending into the neighboring Great Valley geomorphic province, located east of the Coast Ranges. The Coast Range, extends about 400 miles from Oregon south into Southern California, and is characterized by a series of northwest trending ridges and valleys that roughly parallel the San Andreas fault zone. The San Francisco Bay is a broad, shallow regional structural depression created from an east-west expansion between the San Andreas and the Hayward fault systems.

Much of the Coast Range province is composed of marine sedimentary and volcanic rocks located east of the San Andreas Fault. The region west of the San Andreas Fault is underlain by a mass of basement rock that is composed of mainly marine sandstone and various metamorphic rocks. Marginal lands surrounding San Francisco Bay consist generally of alluvial plains of low relief that slope gently towards the bay from bordering uplands and foothills (ABAG, 2017). Unconsolidated alluvial deposits, artificial fill, and estuarine deposits, (including Bay Mud) underlie the low-lying region along the margins of the Carquinez Straight and Suisun Bay. The organic, soft, clay-rich sediments along the San Francisco and San Pablo Bays are referred to locally as Bay Mud and can present a variety of engineering challenges due to inherent low strength, compressibility and saturated conditions. Landslides in the region occur in weak, easily weathered bedrock on relatively steep slopes.

The San Francisco Bay Area is a seismically active region, which is situated on a tectonic plate boundary marked by the San Andreas Fault System. Under the Alquist-Priolo Earthquake Fault Zoning Act, Earthquake Fault Zones were established by the California Division of Mines and Geology along “active” faults, or faults along which surface rupture occurred in Holocene time (the last 11,000 years). The San Andreas and the Hayward faults are the two faults considered to have the highest probabilities of causing a significant seismic event in the Bay Area. These two faults are classified as strike-slip faults that have experienced movement within the last 150 years. Other principal faults capable of producing significant ground shaking in the Bay Area are included in Table 2-3, and include the Rodgers Creek-Healdsburg, Concord-Green Valley, Marsh Creek-Greenville, San Gregorio-Hosgri, West Napa and Calaveras faults (ABAG, 2017). A major seismic event on any of these active faults could cause significant ground shaking and surface fault rupture. Other smaller faults in the region classified as potentially active include the Southampton and Franklin faults.

Ground movement intensity during an earthquake can vary depending on the overall magnitude, distance to the fault, focus of earthquake energy, and type of geological material. Areas that are underlain by bedrock tend to experience less ground shaking than those underlain by unconsolidated sediments such as artificial fill. Earthquake ground shaking may have secondary effects on certain foundation materials, including liquefaction, seismically induced settlement, and lateral spreading.

**TABLE 2-3**
A summary of the existing geological hazards in the vicinity of the existing five refineries is summarized below. The data is from the Contra Costa Internet GIS Map.

1. Chevron Richmond: The portions of the refinery immediately adjacent to the Bay are identified as areas subject to liquefaction. A landslide area is noted in the upper portions of the hill. No faults are identified in the immediate area of the refinery.

2. Shell Martinez: The portions of the refinery immediately adjacent to the Bay are identified as areas subject to liquefaction. Generally, areas southwest of Highway 680 are not subject to liquefaction, which is where the operating portion of the refinery is located. A portion of the Concord fault is located east of Highway 680 and east of the Shell Refinery. A portion of the Southampton fault is located west of the refinery. No landslides have been identified in the vicinity of the refinery.

3. Tesoro Martinez: The portions of the refinery immediately adjacent to the Bay are identified as areas subject to liquefaction. The operating refinery is generally located outside of the areas subject to liquefaction. A portion of the Concord fault is located east of Highway 680 and west of the Tesoro Refinery. A portion of the Southampton fault is located west of the refinery. No landslides have been identified in the vicinity of the refinery.

4. Valero Benicia: The operating portions of the refinery are not subject to liquefaction. The refinery is located west of the Concord fault and east of the Southampton fault. No landslides have been identified in the vicinity of the refinery.
5. Phillips 66 Rodeo: Areas along the northeastern and southwestern boundaries of the refinery may be subject to liquefaction. The Franklin fault is located east of the refinery. No landslides have been identified in the vicinity of the refinery.

While there are existing geological hazards in the vicinity of the refineries, there is extensive development within and surrounding the refineries and the areas have been urbanized. Development within geologically active areas is protected by developing structures in compliance with the California Building Codes.

**Regulatory Background**

Construction is regulated by the local City or County building codes that provide requirements for construction, grading, excavations, use of fill, and foundation work including type of materials, design, procedures, etc. which are intended to limit the probability of occurrence and the severity of consequences from geological hazards. Necessary permits, plan checks, and inspections are generally required.

The City or County General Plan includes the Seismic Safety Element. The Element serves primarily to identify seismic hazards and their location in order that they may be taken into account in the planning of future development. The California Building Code is the principle mechanism for protection against and relief from the danger of earthquakes and related events.

In addition, the Seismic Hazard Zone Mapping Act (Public Resources Code §§2690 – 2699.6) was passed by the California legislature in 1990 following the Loma Prieta earthquake. The Act required that the California Division of Mines and Geology (DMG) develop maps that identify the areas of the state that require site specific investigation for earthquake-triggered landslides and/or potential liquefaction prior to permitting most urban developments. The act directs cities, counties, and state agencies to use the maps in their land use planning and permitting processes.

Local governments are responsible for implementing the requirements of the Seismic Hazards Mapping Act. The maps and guidelines are tools for local governments to use in establishing their land use management policies and in developing ordinances and reviewing procedures that will reduce losses from ground failure during future earthquakes.

**Significance Criteria**

The proposed Project impacts on the geological environment will be considered significant if:

- Topographic alterations would result in significant changes, disruptions, displacement, excavation, compaction or over covering of large amounts of soil.
- Unique geological resources (paleontological resources or unique outcrops) are present that could be disturbed by the construction of the proposed Project.
- Exposure of people or structures to major geologic hazards such as earthquake surface rupture, ground shaking, liquefaction or landslides.
- Secondary seismic effects could occur which could damage facility structures, e.g., liquefaction.
• Other geological hazards exist which could adversely affect the facility, e.g., landslides, mudslides.

Discussion of Impacts

VI a. Rules 6-5, 11-10, and 12-15 were part of the District’s focus on petroleum refinery emissions, designed to enhance reporting requirements and reduce emissions of PM, PM\textsubscript{2.5}, ROG, NO\textsubscript{x}, SO\textsubscript{2} and NH\textsubscript{3} from stationary sources located at petroleum refineries. The proposed amendments would clarify exemptions (Rules 6-5 and 11-10), change the frequency of monitoring (Rule 11-10), and clarify reporting requirements (Rule 12-15).

The proposed Projects would not require any new construction or development. Physical modifications associated with implementation of the original Rule 6-5 were limited to measures to optimize ammonia or urea injection systems on existing FCCUs. The currently proposed amendments to Rule 6-5 would not require the construction of any additional air pollution control equipment or refinery modifications. Changing the frequency of monitoring requirements (Rule 11-10) or reporting requirements (Rule 12-15) would not result in any physical modifications, e.g., new equipment or construction.

The proposed rule amendments would not require any new construction, development, or refinery modifications. New structures must be designed to comply with the California Building Code requirements since the Bay Area is located in a seismically active area. The local cities or counties are responsible for assuring that any new or remodeled structures comply with the California Building Code as part of the issuance of the building permits and can conduct inspections to ensure compliance. The California Building Code is considered to be a standard safeguard against major structural failures and loss of life. The goal of the code is to provide structures that will: (1) resist minor earthquakes without damage; (2) resist moderate earthquakes without structural damage, but with some non-structural damage; and (3) resist major earthquakes without collapse, but with some structural and non-structural damage.

No significant impacts from seismic hazards are expected since no new equipment or structures would be required to comply with the proposed rule amendments. As a result, exposure of people or structures to the risk of loss, injury, or death involving seismic-related activities is not anticipated as a result of compliance with the proposed rule amendments. Therefore, no significant adverse impacts on geology and soils are expected.

VI b – d. The proposed rule amendments would affect existing refineries. However, no additional construction activities or physical modifications to the refineries would be required to comply with the proposed amendments. The proposed amendments would not require additional construction activities and, therefore, would not result in additional grading or other construction activities that could result in soil erosion or the loss of topsoil. Further, no construction activities would be required so no additional landslide, lateral spreading, subsidence, liquefaction or collapse impacts or development on expansive soils would occur due to the proposed rule amendments.

VI e. The proposed rule amendments would have no effect on the installation of septic tanks or alternative wastewater disposal systems. Refineries operate existing wastewater treatment systems
and the proposed rule amendments would result in no impacts to their existing wastewater treatment systems or require alternative wastewater treatment systems. Consequently, no impacts from failures of septic systems related to soils incapable of supporting such systems are anticipated.

**Conclusion**

Based upon the above considerations, significant adverse impacts to geology and soils are not expected to occur due to the proposed amendments to Rules 6-5, 11-10 or 12-15 and, therefore, will not be further evaluated in the Draft EIR.
VII. GREENHOUSE GAS EMISSIONS.

Would the Project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? 

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Setting

Global climate change refers to changes in average climatic conditions on the earth as a whole, including temperature, wind patterns, precipitation and storms. Global climate change is caused primarily by an increase in levels of greenhouse gases (GHGs) in the atmosphere. The major greenhouse gases are the so-called “Kyoto Six” gases – carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs) – as well as black carbon. These greenhouse gases absorb longwave radiant energy (heat) reflected by the earth, which warms the atmosphere in a phenomenon known as the “greenhouse effect.” The potential effects of global climate change include rising surface temperatures, loss in snow pack, sea level rise, ocean acidification, more extreme heat days per year, and more drought years.

Increases in the combustion of fossil fuels (e.g., gasoline, diesel, coal, etc.) since the beginning of the industrial revolution have resulted in a significant increase in atmospheric levels of greenhouse gases. CO₂ levels have increased from long-term historical levels of around 280 ppm before the mid-18th century to over 400 ppm today. This increase in greenhouse gases has already caused noticeable changes in the climate. The average global temperature has risen by approximately 1.4°F (0.8°C) over the past one hundred years, and 16 of the 17 hottest years in recorded history have occurred since 2001, according to the National Oceanic and Atmospheric Administration.

Total global greenhouse gas emissions contributing to climate change are in the tens of billions of metric tons of CO₂e (carbon dioxide equivalent) per year. The State of California alone produces about two percent of the entire world’s GHG emissions with major emitting sources including fossil fuel consumption from transportation (37 percent), electricity production (20 percent), industry (24 percent), agricultural and forestry (8 percent), residential activities (6 percent), and

2 Technically, black carbon is not a gas but is made up of solid particulates or aerosols. It is included in the discussion of greenhouse gas emissions because, like true greenhouse gases, it is an important contributor to global climate change.
commercial activities (5 percent) (ABAG, 2017). The Bay Area’s contribution to the global total is approximately 85 million tons per year. Transportation sources generate approximately 40 percent of the total, with the remaining 60 percent coming from stationary and area sources (BAAQMD, 2017).

Regulatory Background

California has committed to reducing its greenhouse gas emissions to 1990 levels by 2020, to 40 percent below 1990 levels by 2030, and to 80 percent below 1990 levels by 2050. This commitment was enacted in AB 32, the Global Warming Solutions Act of 2006, which adopted the 2020 target; in 2016’s SB 32 (Pavley), which adopted the 2030 target; and in Executive Order S-3-05, which adopted the 2050 target. The Air District has adopted the same 80 percent reduction target for 2050 for the Bay Area’s greenhouse gas emissions, in Board of Directors Resolution 2013-11.

To achieve these emission reduction goals, the California legislature has directed the California Air Resources Board (CARB) to develop a Scoping Plan setting forth regulatory measures that CARB will implement, along with other measures, to reduce the state’s greenhouse gas emissions. One of the principal regulatory measures is CARB’s Cap and Trade program, which requires industrial greenhouse gas sources to obtain “allowances” equal to their greenhouse gas emissions. The amount of available allowances is subject to a “cap” on total emissions statewide, which CARB will reduce each year. Regulated facilities will either have to reduce their emissions or purchase allowances on the open market, which will give them a financial incentive to reduce emissions and will ensure that total annual emissions from the industrial sector will not exceed the declining statewide cap.

California has also adopted the “Renewable Portfolio Standard” for electric power generation, which requires that at least 33 percent of the state’s electric power must come from renewable sources by 2020, and at least 50 percent must come from renewables by 2030. To complement these efforts on electricity generation, the state has also committed to increasing the energy efficiency of existing buildings by 50 percent by 2050 in order to reduce energy demand.

California has adopted regulatory measures aimed at reducing greenhouse gas emissions from mobile sources. These measures include standards for motor vehicle emissions and the state’s Low Carbon Fuel Standard, which set limits on the carbon intensity of transportation fuels. California has also adopted SB 375, the Sustainable Communities and Climate Protection Act of 2008, which requires regional transportation and land use planning agencies to develop coordinated plans, called “Sustainable Communities Strategies,” to reduce greenhouse gas emissions from the transportation sector by promoting denser development and alternatives to driving. The current Sustainable Communities Strategy for the Bay Area is Plan Bay Area 2040, which was adopted by the Metropolitan Transportation Commission and the Association of Bay Area Governments in July of 2017.

The Air District has committed to reducing the Bay Area’s regional greenhouse gas emissions to 80 percent below 1990 levels by 2050, as noted above. The Air District has also committed to a broad suite of specific measures to address greenhouse gases in the 2017 Clean Air Plan, Spare the Air, Cool the Climate. That document lays out the Air District’s vision for what the Bay Area
may look like in a post-carbon year 2050 and describes policies and actions that the region needs
to take in the near- to mid-term to achieve these goals.

Significance Criteria

The most recently available Air District draft CEQA guidelines established GHG thresholds for
specific Projects, general plans, and regional plans. An air quality rule does not fall neatly into any
of these categories. Air quality rules are typically regional in nature, as opposed to general plans,
community plans and regional plans. In addition, air quality rules are usually specific to particular
source types and particular pollutants.

The Air District draft CEQA Guidelines (BAAQMD, 2017) established a GHG threshold for air
quality plans of “no net increase in emissions,” which is appropriate for air quality plans because
they include a mix of control measures with individual trade-offs. For example, one control
measure may result in combustion of methane to reduce greenhouse gas emissions, while
increasing criteria pollutant emissions by a small amount. Those increases from the methane
measure would be offset by decreases from other measures focused on reducing criteria pollutants.
In a particular rule development effort, there may not be opportunities to make these trade-offs.

The Project-level GHG threshold for stationary source Projects is 10,000 metric tons of carbon
dioxide equivalent (CO2e) emissions under the draft CEQA Guidelines. This threshold is expected
to capture approximately 95 percent of all GHG emissions from new permit applications from
stationary sources within the jurisdiction of the Air District. The threshold level was calculated as
an average of the combined CO2 emissions from all stationary source permit applications
submitted to the Air District during the three-year analysis period (BAAQMD, 2017). The interim
Project-level GHG significance threshold of 10,000 MT CO2e will be used to evaluate the
cumulative GHG impacts.

Discussion of Impacts

**VII a and b.** Combustion of conventional hydrocarbon fuel results in the release of energy as
bonds between carbon and hydrogen are broken and reformed with oxygen to create water vapor
and carbon dioxide (CO2). CO2 is not a pollutant that occurs in relatively low concentrations as a
by-product of the combustion process; CO2 is a necessary combustion product of any fuel
containing carbon. Therefore, attempts to reduce emissions of greenhouse gases from combustion
focus on increasing energy efficiency – consuming less fuel to provide the same useful energy
output.

The analysis of GHG emissions is a different analysis than for criteria pollutants for the following
reasons. For criteria pollutants, significance thresholds are based on daily emissions because
attainment or non-attainment is typically based on daily exceedances of applicable ambient air
quality standards. Further, several ambient air quality standards are based on relatively short-term
exposure effects to human health, e.g., one-hour and eight-hour. Using the half-life of CO2, 100
years, for example, the effects of GHGs are longer-term, affecting the global climate over a
relatively long-time frame. GHGs do not have human health effects like criteria pollutants. Rather, it is the increased accumulation of GHGs in the atmosphere that may result in global
climate change. Due to the complexity of conditions and interactions affecting global climate change, it is not possible to predict the specific impact, if any, attributable to GHG emissions associated with a single Project. Furthermore, the GHG emissions associated with the proposed rule amendments would be small relative to total global or even state-wide GHG emissions. Thus, the significance of potential impacts from GHG emissions related to the proposed Project has been analyzed on a cumulative basis, as discussed below.

Rules 6-5, 11-10, and 12-15 were part of the District’s focus on petroleum refinery emissions, designed to enhance reporting requirements and reduce emissions of PM, PM_{2.5}, ROG, NOx, SO_2 and NH_3 from stationary sources located at petroleum refineries. The proposed amendments would clarify exemptions (Rules 6-5 and 11-10), change the frequency of monitoring (Rule 11-10), and clarify reporting requirements (Rule 12-15).

The proposed Projects would not require any new construction or development. Physical modifications associated with implementation of the original Rule 6-5 were limited to measures to optimize ammonia or urea injection systems on existing FCCUs. The currently proposed amendments to Rule 6-5 would not require the construction of any additional air pollution control equipment or refinery modifications. Changing the frequency of monitoring requirements (Rule 11-10) or reporting requirements (Rule 12-15) would not result in any physical modifications, e.g., new equipment or construction, require additional energy or fuel, or generate GHG emissions.

CARB has designed a California Cap-and-Trade program that is enforceable and meets the requirements of AB 32. The program began on January 1, 2012, with an enforceable compliance obligation beginning with the 2013 GHG emissions inventory. All refineries in the Bay Area are subject to the requirements of the AB 32 Cap-and-Trade Program and have a GHG allocation based on current GHG emissions levels. The AB 32 Cap-and-Trade Program requires that the refineries subject to the program (including all refineries in the Bay Area) to offset any GHG emissions in excess of the total allocation obtained through the program. As the emissions cap is gradually reduced over time, and as additional sources are brought under the cap to include the vast majority of emissions in the State, the program will ensure that California remains on track to continually reduce GHG emissions and meet the 2020 limit. Therefore, the refineries are subject to a plan to reduce GHG emissions. The proposed rule amendments would not require any additional equipment, construction, fuel or energy use; therefore, they would not result in any increase in GHG emissions.

**Conclusion**

Based upon the above considerations, significant adverse GHG impacts are not expected to occur due to the proposed amendments to Rules 6-5, 11-10 or 12-15 and, therefore, will not be further evaluated in the Draft EIR.
VIII. HAZARDS AND HAZARDOUS MATERIALS. Would the Project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? ☐ ☐ ☐ ☑

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? ☐ ☐ ☐ ☑

c) Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? ☐ ☐ ☐ ☑

d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? ☐ ☐ ☐ ☑

e) For a project located within an airport land use plan or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the Project area? ☐ ☐ ☐ ☑

f) For a project within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the Project area? ☐ ☐ ☐ ☑

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? ☐ ☐ ☐ ☑

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? ☐ ☐ ☐ ☑
Setting

The Air District covers all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara Counties, and portions of western Solano and southern Sonoma Counties. Because the area of coverage is vast (approximately 5,600 square miles), land uses vary greatly and include commercial, industrial, residential, and agricultural uses.

Facilities and operations within the District handle and process substantial quantities of flammable materials and acutely toxic substances. Accidents involving these substances can result in worker or public exposure to fire, heat, blast from an explosion, or airborne exposure to hazardous substances. The potential hazards associated with handling such materials are a function of the materials being processed, processing systems, and procedures used to operate and maintain the facilities where they exist. The hazards that are likely to exist are identified by the physical and chemical properties of the materials being handled and their process conditions, including the following events.

- **Toxic gas clouds:** Toxic gas clouds are releases of volatile chemicals (e.g., anhydrous ammonia, chlorine, and hydrogen sulfide) that could form a cloud and migrate off-site, thus exposing the public. “Worst-case” conditions tend to arise when very low wind speeds coincide with an accidental release, which can allow the chemicals to accumulate rather than disperse.

- **Torch fires (gas and liquefied gas releases), flash fires (liquefied gas releases), pool fires, and vapor cloud explosions (gas and liquefied gas releases):** The rupture of a storage tank or vessel containing a flammable gaseous material (like propane), without immediate ignition, can result in a vapor cloud explosion. The “worst-case” upset would be a release that produces a large aerosol cloud with flammable properties. If the flammable cloud does not ignite after dispersion, the cloud would simply dissipate. If the flammable cloud were to ignite during the release, a flash fire or vapor cloud explosion could occur. If the flammable cloud were to ignite immediately upon release, a torch fire would ensue.

- **Thermal Radiation:** Thermal radiation is the heat generated by a fire and the potential impacts associated with exposure. Exposure to thermal radiation would result in burns, the severity of which would depend on the intensity of the fire, the duration of exposure, and the distance of an individual to the fire.

- **Explosion/Overpressure:** Process vessels containing flammable explosive vapors and potential ignition sources are present at many types of industrial facilities. Explosions may occur if the flammable/explosive vapors come into contact with an ignition source. An explosion could cause impacts to individuals and structures in the area due to overpressure.

For all affected facilities, risks to the public are reduced if there is a buffer zone between industrial processes and residences or other sensitive land uses, or the prevailing wind blows away from residential areas and other sensitive land uses. The risks posed by operations at each facility are unique and determined by a variety of factors. The refineries affected by the proposed rule amendments are located in industrial areas.
Regulatory Background

There are many federal and state rules and regulations that facilities handling hazardous materials must comply with which serve to minimize the potential impacts associated with hazards at these facilities.

Under the Occupational Safety and Health Administration (OSHA) regulations [29 Code of Federal Regulations (CFR) Part 1910], facilities which use, store, manufacture, handle, process, or move highly hazardous materials must prepare a fire prevention plan. In addition, 29 CFR Part 1910.119, Process Safety Management (PSM) of Highly Hazardous Chemicals, and Title 8 of the California Code of Regulations, General Industry Safety Order §5189, specify required prevention program elements to protect workers at facilities that handle toxic, flammable, reactive, or explosive materials.

Section 112 (r) of the Clean Air Act Amendments of 1990 [42 U.S.C. 7401 et. Seq.] and Article 2, Chapter 6.95 of the California Health and Safety Code require facilities that handle listed regulated substances to develop Risk Management Programs (RMPs) to prevent accidental releases of these substances. U.S. EPA regulations are set forth in 40 CFR Part 68. In California, the California Accidental Release Prevention (CalARP) Program regulation (CCR Title 19, Division 2, Chapter 4.5) was issued by the Governor’s Office of Emergency Services (OES). RMPs consist of three main elements: a hazard assessment that includes off-site consequences analyses and a five-year accident history, a prevention program, and an emergency response program.

Affected facilities that store materials are required to have a Spill Prevention Control and Countermeasures (SPCC) Plan per the requirements of Title 40, Code of Federal Regulations, Section 112. The SPCC is designed to prevent spills from on-site facilities and includes requirements for secondary containment, provides emergency response procedures, establishes training requirements, and so forth.

The Hazardous Materials Transportation (HMT) Act is the federal legislation that regulates transportation of hazardous materials. The primary regulatory authorities are the U.S. Department of Transportation, the Federal Highway Administration, and the Federal Railroad Administration. The HMT Act requires that carriers report accidental releases of hazardous materials to the Department of Transportation at the earliest practical moment (49 CFR Subchapter C). The California Department of Transportation (Caltrans) sets standards for trucks in California. The regulations are enforced by the California Highway Patrol.

California Assembly Bill 2185 requires local agencies to regulate the storage and handling of hazardous materials and requires development of a business plan to mitigate the release of hazardous materials. Businesses that handle any of the specified hazardous materials must submit to government agencies (i.e., fire departments), an inventory of the hazardous materials, an emergency response plan, and an employee training program. The information in the business plan can then be used in the event of an emergency to determine the appropriate response action, the need for public notification, and the need for evacuation.
Contra Costa County has adopted an industrial safety ordinance that addresses the human factors that lead to accidents. The ordinance requires stationary sources to develop a written human factors program that considers human factors as part of process hazards analyses, incident investigations, training, operating procedures, among others.

**Significance Criteria**

The proposed Project impacts associated with hazards will be considered significant if any of the following occur:

- Non-compliance with any applicable design code or regulation.
- Non-conformance to National Fire Protection Association standards.
- Non-conformance to regulations or generally accepted industry practices related to operating policy and procedures concerning the design, construction, security, leak detection, spill containment or fire protection.
- Exposure to hazardous chemicals in concentrations equal to or greater than the Emergency Response Planning Guideline (ERPG) 2 levels.

**Discussion of Impacts**

**VIII a and b.** The potential hazards associated with petroleum refining activities are a function of the materials being processed, processing systems, and procedures used to operate and maintain the refinery. The hazards that are likely to exist are identified by the physical and chemical properties of the materials being handled and their process conditions, including the following events: (1) toxic gas clouds; (2) torch fires, flash fires, pool fires, and vapor cloud explosions; (3) thermal radiation; and (4) explosion/overpressure. The potential for these types of events to occur currently exists at the existing refineries.

The proposed Projects would not require any new construction or development. Physical modifications associated with implementation of the original Rule 6-5 were limited to measures to optimize ammonia or urea injection systems on existing FCCUs. The currently proposed amendments to Rule 6-5 would not require the construction of any additional air pollution control equipment or refinery modifications. Changing the frequency of monitoring requirements (Rule 11-10) or reporting requirements (Rule 12-15) would not result in any physical modifications, e.g., new equipment or construction.

The proposed amendments would clarify exemptions (Rules 6-5 and 11-10), change the frequency of monitoring requirements (Rule 11-10), and clarify reporting requirements (Rule 12-15). The proposed rule amendments would not require any new construction or development. Physical modifications associated with implementation of the original Rule 6-5 were limited to measures to optimize ammonia or urea injection systems on existing FCCUs. Ammonia is currently used to reduce NOx emissions at existing refineries. Rule 6-5 limited ammonia emissions from FCCUs. To comply, refineries were required to optimize the injection of ammonia or urea. Rule 6-5 did not increase the use of ammonia or urea and likely resulted in a decrease in ammonia use. The currently proposed amendments to Rule 6-5 would not require the construction of any additional air pollution control equipment or refinery modifications.
Changing monitoring requirements (Rule 11-10) or reporting requirements (Rule 12-15) would not result in any physical modifications, e.g., new equipment or construction, require the use of additional hazardous materials, generate additional hazardous materials or create new refinery hazards. Therefore, no increased hazards are expected from implementation of the proposed rule amendments.

**VIII c.** The proposed rule amendments would not generate hazardous emissions, handling of hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school. Rule 6-5 limited ammonia emissions from FCCUs and resulted in a decrease in ammonia emissions. (Note that ammonia is regulated as a TAC). Proposed amendments to Rules 11-10 and 12-15 are not expected to result in an increase in TAC emissions from refineries. Therefore, no increase in TAC emissions is expected from implementation of the proposed rule amendments.

**VIII d.** Government Code §65962.5 requires creation of lists of facilities that may be subject to Resource Conservation and Recovery Act (RCRA) permits or site cleanup activities. The refineries affected by the proposed rules may be located on the hazardous materials sites list pursuant to Government Code §65962.5. The refineries would be required to manage any and all hazardous materials in accordance with federal, state and local regulations. Implementation of the proposed rule amendments would not interfere with site cleanup activities or create additional site contamination. As a result, the proposed Project is not expected to require any physical modifications to facilities included on a list of hazardous material sites and, therefore, would not create a significant hazard to the public or environment.

**VIII e and f.** The proposed rule amendments would not result in a safety hazard for people residing or working within two miles or a public airport or air strip. No impacts on airports or airport land use plans are anticipated from the proposed rule amendments which would apply to petroleum refineries operating in the Bay Area, which are generally not located near public airports or air strips. No construction activities or additional refinery structures are required due to the proposed rule amendments. Therefore, no significant adverse impacts on an airport land use plan or on a private air strip are expected.

**VIII g.** No impacts on emergency response plans are anticipated from the proposed new and amended rules that would apply to existing petroleum refineries. The refineries affected by the proposed rule amendments already exist and operate within the confines of existing industrial facilities. The proposed rule amendments do not require construction activities or new structures that would impact any emergency response plan. The existing refineries affected by the proposed rule amendments already use, produce, store and transport hazards materials, so emergency response plans already include hazards associated with existing refinery operations. The proposed rule amendments would not require any changes in emergency response planning. Therefore, no significant adverse impacts on emergency response plans are expected.

**VIII h.** No increase in hazards associated with wildfires is anticipated from proposed rule amendments. The petroleum refineries affected by the proposed rule amendments already exist and operate within the confines of existing industrial areas. Native vegetation has been removed...
from the operating portions of the affected refineries to minimize fire hazards. The proposed rule amendments would not increase the risk of hazards associated with wildland fires in general and specifically in areas with flammable materials. Therefore, the proposed Project would not expose people or structures to significant risk of loss, injury or death involving wildland fires.

Conclusion

Based upon the above considerations, significant adverse hazards and hazardous materials impacts are not expected to occur due to the proposed amendments to Rules 6-5, 11-10 or 12-15 and, therefore, will not be further evaluated in the Draft EIR.
IX. HYDROLOGY AND WATER QUALITY.

Would the Project:

a) Violate any water quality standards or waste discharge requirements?
   - Potentially Significant Impact
   - Less Than Significant Impact
   - Less Than Significant Impact with Mitigation Incorporated
   - No Impact

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?
   - Potentially Significant Impact
   - Less Than Significant Impact
   - Less Than Significant Impact with Mitigation Incorporated
   - No Impact

c) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or offsite?
   - Potentially Significant Impact
   - Less Than Significant Impact
   - Less Than Significant Impact with Mitigation Incorporated
   - No Impact

d) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite?
   - Potentially Significant Impact
   - Less Than Significant Impact
   - Less Than Significant Impact with Mitigation Incorporated
   - No Impact

e) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?
   - Potentially Significant Impact
   - Less Than Significant Impact
   - Less Than Significant Impact with Mitigation Incorporated
   - No Impact

f) Otherwise substantially degrade water quality?
   - Potentially Significant Impact
   - Less Than Significant Impact
   - Less Than Significant Impact with Mitigation Incorporated
   - No Impact

g) Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?
   - Potentially Significant Impact
   - Less Than Significant Impact
   - Less Than Significant Impact with Mitigation Incorporated
   - No Impact

h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?
   - Potentially Significant Impact
   - Less Than Significant Impact
   - Less Than Significant Impact with Mitigation Incorporated
   - No Impact

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?
   - Potentially Significant Impact
   - Less Than Significant Impact
   - Less Than Significant Impact with Mitigation Incorporated
   - No Impact
Setting

The Air District covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles). Reservoirs and drainage streams are located throughout the area within the District’s jurisdiction, and discharge into the Bays. Marshlands incised with numerous winding tidal channels containing brackish water are located throughout the Bay Area.

The San Francisco Bay estuary system is one of the largest in the country and drains approximately 40 percent of California. Water from the Sacramento and San Joaquin Rivers of the Central Valley flow into what is known as the Delta region, then into the sub-bays, Suisun Bay and San Pablo Bay, and finally into the Central Bay and out the Golden Gate strait. The Delta is a large triangle of interconnected sloughs and agricultural “islands” that forms a key link in California’s water delivery system. Some of the fresh water flows through the Delta and into Bay, but much is diverted from the Bay for agricultural, residential, and industrial purposes, as well as delivery to distant cities of southern California as part of state and federal water projects (ABAG, 2017).

The two major drainages, the Sacramento and San Joaquin Rivers receive more than 90 percent of runoff during the winter and spring months from rainstorms and snow melt. San Francisco Bay encompasses approximately 1,600 square miles and is surrounded by the nine Bay Area counties of which seven border the Bay. Other surface waters flow either directly to the Bay or Pacific Ocean. The drainage basin that contributes surface water flows directly to the Bay covers a total area of 3,464 square miles. The largest watersheds include Alameda Creek (695 square miles), the Napa River (417 square miles), and Coyote Creek (353 square miles) watersheds. The San Francisco Bay estuary includes deep-water channels, tidelands, and marshlands that provide a variety of habitats for plants and animals. The salinity of the water varies widely as the landward flows of saline water and the seaward flows of fresh water converge near the Benicia Bridge. The salinity levels in the Central Bay can vary from near oceanic levels to one quarter as much, depending on the volume of freshwater runoff (ABAG 2017).

Surface waters in the Bay Area include freshwater rivers and streams, coastal waters, and estuarine waters. Estuarine waters include the San Francisco Bay Delta from the Golden Gate Bridge to the Sacramento and San Joaquin Rivers, and the lower reaches of various streams that flow directly into the Bay, such as the Napa and Petaluma Rivers in the North Bay and the Coyote and San Francisquito Creeks in the South Bay (ABAG, 2017).

The Bay Area region is divided into a total of 28 groundwater basins. The ten primary groundwater basins in the Bay Area are the Petaluma Valley, Napa-Sonoma Valley, Suisun-Fairfield Valley, San Joaquin Valley, Clayton Valley, Diablo Valley, San Ramon Valley, Livermore Valley, Sunol Valley, and Santa Clara Valley basins. Groundwater in the region is used for numerous purposes, including municipal and industrial water supply. However, groundwater use accounts for only about five percent of the total water usage (ABAG, 2017).
Together, surface water and ground water supply approximately 31 percent of Bay Area water. Surface water from local rivers and streams (including the Delta) is an important source for all Bay Area Water agencies, but particularly in the North Bay counties, where access to imported water is more limited because of infrastructure limitations. The greatest proportion of Bay Area water is imported from Sierra Nevada and Delta sources, comprising approximately 66 percent of supply. The primary Sierra Nevada sources are the Mokelumne River and Tuolumne River watersheds. Several Bay Area water agencies receive Delta water through the State and Central Valley Water Projects, which comprise a vast network of canals and aqueducts for the delivery of water throughout the Bay Area and the Central Valley (ABAG, 2017).

Recycled water in the Bay Area has come to be widely used for a number of applications, including landscape irrigation, agricultural uses, commercial and industrial purposes and as a supply to the area’s wetlands. The Alameda County Water District operates the Newark Desalination Facility which supplies approximately 12.5 million gallons per day to the distribution system (ABAG, 2017).

Wastewater treatment in the Bay Area is provided by various agencies as well as individual city and town wastewater treatment systems. Some treatment plants serve individual cities while others serve multiple jurisdictions. More than 50 agencies provide wastewater treatment throughout the Bay Area. Most industrial facilities have wastewater and storm water treatment facilities and discharge treated wastewater under the requirements of National Pollutant Discharge Elimination System (NPDES) permits.

**Regulatory Background**

The Federal Clean Water Act of 1972 primarily establishes regulations for pollutant discharges into surface waters in order to protect and maintain the quality and integrity of the nation’s waters. This Act requires industries that discharge wastewater to municipal sewer systems to meet pretreatment standards. The regulations authorize the U.S. EPA to set the pretreatment standards. The regulations also allow the local treatment plants to set more stringent wastewater discharge requirements, if necessary, to meet local conditions.

The 1987 amendments to the Clean Water Act enabled the U.S. EPA to regulate, under the NPDES program, discharges from industries and large municipal sewer systems. The U.S. EPA set initial permit application requirements in 1990. The State of California, through the State Water Resources Control Board, has authority to issue NPDES permits, which meet U.S. EPA requirements, to specified industries.

The Porter-Cologne Water Quality Act is California's primary water quality control law. It implements the state's responsibilities under the Federal Clean Water Act but also establishes state wastewater discharge requirements. The Regional Water Quality Control Board administers the state requirements as specified under the Porter-Cologne Water Quality Act, which include storm water discharge permits. The water quality in the Bay Area is under the jurisdiction of the San Francisco Bay Regional Water Quality Control Board.
In response to the Federal Act, the State Water Resources Control Board prepared two state-wide plans in 1991 and 1995 that address storm water runoff: the California Inland Surface Waters Plan and the California Enclosed Bays and Estuaries Plan, which have been updated in 2005 as the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California. Enclosed bays are indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. San Francisco Bay, and its constituent parts, including Carquinez Strait and Suisun Bay, fall under this category.

The San Francisco Bay Basin Plan identifies the: (1) beneficial water uses that need to be protected; (2) the water quality objectives needed to protect the designated beneficial water uses; and (3) strategies and time schedules for achieving the water quality objectives. The beneficial uses of the Carquinez Strait that must be protected which include water contact and non-contact recreation, navigation, ocean commercial and sport fishing, wildlife habitat, estuarine habitat, fish spawning and migration, industrial process and service supply, and preservation of rare and endangered species. The Carquinez Strait and Suisun Bay are included on the 1998 California list as impaired water bodies due to the presence of chlordane, copper, DDT, diazinon, dieldrin, dioxin and furan compounds, mercury, nickel, PCBs, and selenium.

Significance Criteria

**Water Demand:**

- The existing water supply does not have the capacity to meet the increased demands of the Project, or the Project would use more than 263,000 gallons per day of potable water.

**Water Quality:**

- The Project will cause degradation or depletion of ground water resources substantially affecting current or future uses.
- The Project will cause the degradation of surface water substantially affecting current or future uses.
- The Project will result in a violation of National Pollutant Discharge Elimination System (NPDES) permit requirements.
- The capacities of existing or proposed wastewater treatment facilities and the sanitary sewer system are not sufficient to meet the needs of the Project.
- The Project results in substantial increases in the area of impervious surfaces, such that interference with groundwater recharge efforts occurs.
- The Project results in alterations to the course or flow of floodwaters.

**Discussion of Impacts**

**IX a and f.** No increase in wastewater discharge is expected from the proposed Project so no impacts on water quality resources are anticipated from the proposed Project. The proposed Project is not expected to require any new construction or development. The proposed amendments would clarify exemptions (Rules 6-5 and 11-10), change the frequency of monitoring (Rule 11-10), and clarify reporting requirements (Rule 12-15).
The proposed rule amendments would not require any new construction or development. Changing monitoring requirements (Rule 11-10) or reporting requirements (Rule 12-15) would not result in any physical modifications, require the use of additional water or result in additional wastewater discharges from the affected refineries. Therefore, the proposed rule amendments would not result in the violation of any water quality standards or waste discharge requirements.

**IX b.** No increase in water use is expected as a result of the proposed rule amendments. The proposed amendments would clarify exemptions (Rules 6-5 and 11-10), change the monitoring requirements (Rule 11-10), and clarify reporting requirements (Rule 12-15). The proposed rule amendments would not require any new construction or development. Changing monitoring requirements (Rule 11-10) or reporting requirements (Rule 12-15) would not result in any physical modifications, require the use of additional water from the affected refineries. Therefore, the proposed Project would not deplete groundwater supplies or interfere with groundwater recharge.

**IX c – e.** The proposed Project does not have the potential to increase the area subject to runoff since no construction activities, new development or new structures are expected to occur. In addition, storm water drainage within refineries has been controlled and no construction activities are expected, therefore, storm water drainage within the existing refineries would not be altered. Therefore, the proposed rule amendments would not alter the existing drainage or drainage patterns, result in erosion or siltation, alter the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite. Additionally, the proposed Project is not expected to create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of contaminated runoff. Therefore, no significant adverse impacts to storm water runoff are expected as a result of the proposed Project.

**IX g – j.** The proposed Projects do not include the construction of new or relocation of existing housing or any other facilities and, as such, would not require the placement of housing or other structures within a 100-year flood hazard area. (See also XIII “Population and Housing”). No new construction is associated with the proposed Project at refineries. As a result, the proposed Project would not be expected to create or substantially increase risks from flooding; expose people or structures to significant risk of loss, injury or death involving flooding; or increase existing risks, if any, of inundation by seiche, tsunami, or mudflow.

**Conclusion**

Based upon the above considerations, significant adverse impacts to hydrology and water quality are not expected to occur due to the proposed amendments to Rules 6-5, 11-10 or 12-15 and, therefore, will not be further evaluated in the Draft EIR.
### X. LAND USE AND PLANNING.

Would the Project:

a) Physically divide an established community? ❑ ❑ ❑ ☑

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to a general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? ❑ ❑ ❑ ☑

c) Conflict with any applicable habitat conservation plan or natural community conservation plan? ❑ ❑ ❑ ☑

### Setting

The Air District covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles), so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses. The land uses surrounding the Bay margins tend to be more intensely developed, particularly from San Francisco south along the Peninsula to Santa Clara County, and Contra Costa County south through Alameda County to Santa Clara County. These areas also include extensive networks of open space. The counties north of the Bay (Marin, Sonoma, and Napa) are more sparsely developed with a combination of suburban development, smaller cities and towns, and agriculture defining the landscape. Other areas of the Bay Area, such as the East Bay and Solano County, tend to be more suburban in character, with heavy industry related to oil refineries dotting the landscape as well as agriculture (ABAG, 2017).

Approximately 18 percent of the region’s 4.8 million acres are considered to be urban or built-up land according to the California Farmland Mapping and Monitoring Program. The remaining undeveloped area includes open space and agricultural lands as well as water bodies and parks. Approximately 29 percent of the region is identified as protected open space. The Bay Area includes 101 cities with San Jose, San Francisco, and Oakland representing the largest urbanized centers (ABAG, 2017).

### Regulatory Background

Land uses are generally protected and regulated by the City and/or County General Plans through land use and zoning requirements.
Significance Criteria

The proposed Project impacts will be considered significant on land use and planning if the Project conflicts with the land use and zoning designations established by local jurisdictions, or any applicable habitat conservation or natural community conservation plan.

Discussion of Impacts

X a – c.  Rules 6-5, 11-10, and 12-15 were part of the District’s focus on petroleum refinery emissions, designed to enhance reporting requirements and reduce emissions of PM, PM$_{2.5}$, ROG, NOx, SO$_2$ and NH$_3$ from stationary sources located at petroleum refineries. The proposed amendments would clarify exemptions (Rules 6-5 and 11-10), change the frequency of monitoring (Rule 11-10), and clarify reporting requirements (Rule 12-15).

The proposed Project would not require any new construction or development. Physical modifications associated with implementation of the original Rule 6-5 were limited to measures to optimize ammonia or urea injection systems on existing FCCUs. The currently proposed amendments to Rule 6-5 would not require the construction of any additional air pollution control equipment or refinery modifications. Changing the frequency of monitoring requirements (Rule 11-10) or reporting requirements (Rule 12-15) would not result in any physical modifications, e.g., new construction, or new development. Thus, the proposed rule amendments do not include any components that would mandate physically dividing an established community or generate additional development.

All of the General Plan and land use plans for Richmond, Martinez, and Rodeo (Contra Costa County) and Benicia (Solano County) allow for and encourage the continued use of industrial areas within their respective communities. Some of the General Plans encourage the modernization of existing industrial areas, including the refineries. A summary of the land use policies that apply to industrial areas is summarized for each community that the five Bay Area refineries are located.

1. Richmond General Plan 2030 includes the following land use policies regarding industrial areas (Richmond, 2015).
   • **Action LU3.H** Industrial Lands Retention and Consolidation Ensure that industrial uses are consolidated around rail and port facilities and work with existing industrial operators, economists and commercial brokers to remain informed about the future demand for industrial land.
   • **Action LU3.I** Industrial Modernization Support heavy industry’s on-going efforts to modernize and upgrade their plants to reduce energy use, increase efficiency and reduce emissions.

2. City of Martinez General Plan includes the following land use policies regarding industrial areas (Martinez, 2015).
   • **21.51** Expansion of the petroleum refining and related industries must proceed in an orderly fashion and be consistent with protection of the community's air, water, scenic and fiscal resources.
30.351 Adequate land for industrial growth and development should be provided. It is the policy of the City to encourage and assist existing industry to relocate away from the southern perimeter of the waterfront.

30.352 The City should consider further annexation to the east of the current Martinez City Limits to provide space for expansion of industry.

30.353 Industrial expansion accompanied by adverse environmental impact will not be permitted.

30.354 Acceptability of any industry shall be based upon its demonstrated ability to conform to performance standards set by the City.

30.355 Architecture of some merit and landscaping of building sites and parking areas should be required; according to design and landscaping criteria for industrial sites.

3. City of Benicia General Plan includes the following land use policies regarding industrial areas (Benicia, 2015).

**POLICY 2.6.1:** Preserve industrial land for industrial purposes and certain compatible “service commercial” and ancillary on-site retail uses.

“Compatible,” as defined in the California General Plan Glossary, means “capable of existing together without conflict or detrimental effects.” Compatibility will often be decided on a case-by-case basis by the Planning Commission and City Council.

**POLICY 2.6.2:** Other land uses should not adversely affect existing industrial and commercial land uses.

Program 2.6.A: Where General Plan amendments propose to convert industrial land to non-industrial or non-commercial uses, require the preparation of a fiscal and economic impact analysis to ensure that the conversion does not adversely affect the city’s long term economic development, or the economic vitality of existing industrial/commercial uses.

Program 2.6.B: Develop criteria for evaluating whether a proposed non-industrial/non-commercial use would impact the viability of existing industrial/commercial uses. Use the criteria to evaluate non-industrial and non-commercial projects proposed in the Industrial Park.

**POLICY 2.6.3:** Facilitate continued development of the Industrial Park. Especially encourage general industrial uses to locate in the basin northeast of Downtown (around Industrial Way between East Second and the freeway).

Program 2.6.C: For lands designated limited industrial, reduce the length of time and number of steps required for development proposals to proceed, consistent with CEQA, community development policies and ordinances, and the design review process for general industrial lands.

**POLICY 2.6.4:** Link any expansion of Industrial land use to the provision of infrastructure and public services that are to be developed and in place prior to the expansion.

Program 2.6.D: Continue to update the overall capital improvements program and infrastructure financing plan for the Industrial Park and other major industrial areas.

Program 2.6.E: Develop Industrial Park infrastructure and public services standards, as approved by the City Council.

**POLICY 2.6.5:** Establish and maintain a land buffer between industrial/commercial uses and existing and future residential uses for reasons of health, safety, and quality of life.
• Program 2.6.F: Use topography, landscaping, and distance as a buffer between Industrial Park uses and residential uses.

• A buffer is “adequate” to the extent that it physically and psychologically separates uses or properties so as to shield, reduce, or block one set of properties from noise, light, or other nuisances generated on or by the other set of properties. Buffers will be determined on a case by case basis.

4. Rodeo: The Contra Costa General Plan Land Use Element identifies the following land use policies (CCC, 2015).

• 3.163. A buffer of agricultural lands around the eastern Union Oil (currently Phillips 66) property is created in this plan to separate the viewpoint residential area from future industrial development on the property. These open space lands should remain undeveloped.

Based on a review of the applicable land use plans, the proposed rule amendments would not conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the Project. The jurisdictions with land use approval recognize and support the continued use of industrial facilities. The proposed Project has no components which would affect land use plans, policies, or regulations as no new development or refinery modifications would be expected. Habitat conservation or natural community conservation plans, agricultural resources or operations, would not be affected by the proposed Project, and divisions of existing communities would not occur. Therefore, current or planned land uses within the District will not be affected as a result of the proposed rule amendments.

Conclusion

Based upon the above considerations, significant adverse impacts to land use and planning are not expected to occur due to the proposed amendments to Rules 6-5, 11-10 or 12-15 and, therefore, will not be further evaluated in the Draft EIR.
XI. MINERAL RESOURCES. Would the Project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

Setting

The Air District covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses and the affected environment vary greatly throughout the area. The refineries affected by the proposed Project are located in a Contra Costa and Solano Counties in the Bay Area.

Regulatory Background

Mineral resources are generally protected and regulated by the City and/or County General Plans through land use and zoning requirements.

Significance Criteria

The proposed Project impacts on mineral resources will be considered significant if:

- The Project would result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.
- The proposed Project results in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

Discussion of Impacts

XI a and b. The proposed rule amendments are not associated with any action that would result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state, or of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.
Rules 6-5, 11-10, and 12-15 were part of the District’s focus on petroleum refinery emissions, designed to enhance reporting requirements and reduce emissions of PM, PM$_{2.5}$, ROG, NOx, SO$_2$ and NH$_3$ from stationary sources located at petroleum refineries. The proposed amendments would clarify exemptions (Rules 6-5 and 11-10), change the frequency of monitoring (Rule 11-10), and clarify reporting requirements (Rule 12-15). The proposed Project would not require any new construction or development. Thus, the proposed rule amendments are not associated with any action that would result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state, or of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. Therefore, no impacts on mineral resources are expected.

**Conclusion**

Based upon the above considerations, no significant adverse impacts to mineral resources are expected to occur due to the proposed amendments to Rules 6-5, 11-10 or 12-15 and, therefore, will not be further evaluated in the Draft EIR.
XII. NOISE. Would the Project:

a) Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

b) Expose persons to or generate of excessive groundborne vibration or groundborne noise levels?

c) Result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?

d) A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the Project area to excessive noise levels?

f) For a project within the vicinity of a private airstrip and expose people residing or working in the Project area to excessive noise levels?

Setting

The Air District covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses and the affected environment vary greatly throughout the area. The refineries affected by the proposed Project are located in Contra Costa and Solano Counties in the Bay Area.

Regulatory Background

Noise issues related to construction and operation activities are addressed in local General Plan policies and local noise ordinance standards. The General Plans and noise ordinances generally establish allowable noise limits within different land uses including residential areas, other
sensitive use areas (e.g., schools, churches, hospitals, and libraries), commercial areas, and industrial areas.

**Significance Criteria**

The proposed Project impacts on noise will be considered significant if:

- Construction noise levels exceed the local noise ordinances or, if the noise ordinance is currently exceeded, Project noise sources increase ambient noise levels by more than three decibels (dBA) at the site boundary.
- The proposed Project operational noise levels exceed any of the local noise ordinances at the site boundary or, if the noise threshold is currently exceeded, Project noise sources increase ambient noise levels by more than three dBA at the site boundary.

**Discussion of Impacts**

**XII a, c, and d.** Rules 6-5, 11-10, and 12-15 were part of the District’s focus on petroleum refinery emissions, designed to enhance reporting requirements and reduce emissions of PM, PM$_{2.5}$, ROG, NO$_x$, SO$_2$ and NH$_3$ from stationary sources located at petroleum refineries. The proposed amendments would clarify exemptions (Rules 6-5 and 11-10), change the frequency of monitoring (Rule 11-10), and clarify reporting requirements (Rule 12-15).

The proposed Projects would not require any new construction or development. Physical modifications associated with implementation of the original Rule 6-5 were limited to measures to optimize ammonia or urea injection systems on existing FCCUs. The currently proposed amendments to Rule 6-5 would not require the construction of any additional air pollution control equipment or refinery modifications. Changing the frequency of monitoring requirements (Rule 11-10) or reporting requirements (Rule 12-15) would not result in any physical modifications, e.g., new equipment or construction. No new major industrial equipment is expected to be required to be installed due to the proposed Project so that no noise impacts associated with the operation of the proposed Project are expected. Further, the refineries are regulated by local noise ordinances. Therefore, refinery operations affected by the proposed rule amendments are not expected to result in a significant adverse effect on local noise control laws or ordinances.

**XII b.** The proposed Projects are not expected to generate or expose people to excessive groundborne vibration or groundborne noise. No construction equipment or activities that would generate vibration (e.g., backhoes, graders, jackhammers, etc.) is required to comply with the proposed rule amendments and no modifications to refinery equipment are required. Therefore, the proposed Project is not expected to generate excessive groundborne vibration or noise.

**XII e and f.** If applicable, the petroleum refineries affected by the proposed rule amendments would still be expected to comply, and not interfere, with any applicable airport land use plans. The existing refineries are not located within existing airport land use plans. The proposed new and amended regulations would not locate residents or commercial buildings or other sensitive noise sources closer to airport operations. As noted in the previous item, there are no components of the proposed regulations that would increase ambient noise levels, either intermittently or permanently.
Conclusion

Based upon the above considerations, no significant adverse noise impacts are expected to occur due to the proposed amendments to Rules 6-5, 11-10 or 12-15 and, therefore, will not be further evaluated in the Draft EIR.
XIII. POPULATION AND HOUSING. Would the Project:

a) Induce substantial population growth in an area either directly (e.g., by proposing new homes and businesses) or indirectly (e.g. through extension of roads or other infrastructure)?

   - Potentially Significant Impact: ☐
   - Less Than Significant Impact: ☐
   - Less Than Significant Impact with Mitigation Incorporated: ☐
   - No Impact: ☑

b) Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?

   - Potentially Significant Impact: ☐
   - Less Than Significant Impact: ☐
   - Less Than Significant Impact with Mitigation Incorporated: ☐
   - No Impact: ☑

c) Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?

   - Potentially Significant Impact: ☐
   - Less Than Significant Impact: ☐
   - Less Than Significant Impact with Mitigation Incorporated: ☐
   - No Impact: ☑

Setting

The Air District covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles), so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses. The proposed amendments would apply to refineries located within Contra Costa and Solano Counties in the Bay Area.

Population in the Bay Area in 2015 was about 7.6 million people, which is approximately 20 percent of California’s population. The population of the Bay Area is expected to grow to about 9.6 million people by 2040. Approximately 4 million people in the Bay Area were employed in 2015, and that number is expected to grow to 4.7 million jobs by 2040. There were approximately 2.8 million households in the Bay Area in 2015, and the number of households is expected to increase to 3.4 million by 2040 (ABAG, 2017).

Regulatory Background

Population and housing growth and resources are generally protected and regulated by the City and/or County General Plans through land use and zoning requirements.
Significance Criteria

The proposed Project impacts on population and housing will be considered significant if:

- The demand for temporary or permanent housing exceeds the existing supply.
- The proposed Project produces additional population, housing or employment inconsistent with adopted plans either in terms of overall amount or location.

Discussion of Impacts

XIII a. According to the Association of Bay Area Governments (ABAG), population in the Bay Area is currently about 7.6 million people and is expected to grow to about 9.6 million people by 2040 (ABAG, 2017). The proposed Project is not anticipated to generate any significant effects, either directly or indirectly, on the Bay Area’s population or population distribution. The proposed new and amended regulations will affect five refineries in Contra Costa and Solano counties. It is not expected that the affected refineries would need to hire additional personnel to implement the proposed rule amendments and no construction is expected to be required. Additional labor was required to monitor fugitive equipment under Rule 11-10; however, the proposed amendments Rule 11-10 will reduce the frequency of monitoring required for cooling towers. As such, adopting the proposed rule amendments are not expected to induce population growth.

XIII b and c. The proposed rule amendments would require modifications to existing refineries so that they are not expected to result in the creation of any industry that would affect population growth, directly or indirectly induce the construction of single- or multiple-family units, or require the displacement of people or housing elsewhere in the Bay Area. Based upon these considerations, population and housing impacts would not occur from the implementation of the proposed rule amendments.

Conclusion

Based upon the above considerations, no significant adverse impacts to population and housing are expected to occur due to the proposed amendments to Rules 6-5, 11-10 or 12-15 and, therefore, will not be further evaluated in the Draft EIR.
XI. PUBLIC SERVICES. Would the Project:

a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:

<table>
<thead>
<tr>
<th>Service</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant Impact With Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire protection?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[✓]</td>
</tr>
<tr>
<td>Police protection?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[✓]</td>
</tr>
<tr>
<td>Schools?</td>
<td>[ ]</td>
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<td>[ ]</td>
<td>[✓]</td>
</tr>
<tr>
<td>Parks?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[✓]</td>
</tr>
<tr>
<td>Other public facilities?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[✓]</td>
</tr>
</tbody>
</table>

Setting

The Air District covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties.

Public services are provided by a wide variety of local agencies. Fire protection services are managed at the local level, typically by municipalities, counties, fire protection districts, or volunteer fire companies. California Government Code §38611 states that any city organized under general law must establish a fire department unless it is included within the boundaries of an established fire protection district. State and federal lands are generally served by State and federal fire agencies, e.g., CALFIRE and National Park Service. In some cases, businesses and native Tribes manage their own fire departments. Each fire protection agency is responsible for serving its own prescribed area, but mutual aid agreements are in wide use across the region such that agencies can rely on assistance from neighboring agencies in the case of overwhelming demand (ABAG, 2017).

Police services are provided on the State, county, and local levels. Police services provide law enforcement in crime prevention, traffic and congestion control, safety management, emergency response, and homeland security. The California Highway Patrol (CHP) is responsible for police protection along the interstate highway systems and provides services for traffic management, emergency response, and protection of the highway system. Each county in the Bay Area has its own sheriff’s department responsible for police protection in unincorporated areas of each county. Each incorporated city and town has a police department responsible for police protection within its own jurisdiction. Unincorporated areas and individual cities and towns also may contract with county sheriff departments for police services instead of providing their own (ABAG, 2017).
Although the California public school system is under the policy direction of the Legislature, the California Department of Education relies on local control for the management of school districts. School district governing boards and district administrators allocate resources among the schools of the district and set education priorities for their schools. Each jurisdiction in the Bay Area provides residents with local public education facilities and services, including elementary, middle, secondary, and post-secondary schools, as well as special and adult education. As of 2015-2016 school year, there were 2,018 public and charter schools in the Bay Area with 1,019,853 enrolled students and 51,702 teachers (ABAG, 2017).

Public facilities within the Air District are managed by different county, city, and special-use districts. All refineries maintain fire-fighting equipment and trained personnel with fire-fighting and emergency response experience. In addition, all affected refineries maintain on-site security personnel and systems that include fences and enclosures, as well as 24-hour guarded entrances to their facilities.

**Regulatory Background**

City and/or County General Plans usually contain goals and policies to assure adequate public services are maintained within the local jurisdiction.

**Significance Criteria**

The proposed Project impacts on public services will be considered significant if the Project results in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time or other performance objectives.

**Discussion of Impacts**

**XIV a.** Rules 6-5, 11-10, and 12-15 were part of the District’s focus on petroleum refinery emissions, designed to enhance reporting requirements and reduce emissions of PM, PM$_{2.5}$, ROG, NOx, SO$_2$ and NH$_3$ from stationary sources located at petroleum refineries. The proposed amendments would clarify exemptions (Rules 6-5 and 11-10), change the frequency of monitoring (Rule 11-10), and clarify reporting requirements (Rule 12-15).

The proposed Projects would not require any new construction or development. Physical modifications associated with implementation of the original Rule 6-5 were limited to measures to optimize ammonia or urea injection systems on existing FCCUs. The currently proposed amendments to Rule 6-5 would not require the construction of any additional air pollution control equipment or refinery modifications. Changing the frequency of monitoring requirements (Rule 11-10) or reporting requirements (Rule 12-15) would not result in any physical modifications, e.g., new equipment or construction.

As stated above, all refineries maintain on-site fire-fighting equipment and trained personnel with fire-fighting and emergency response experience. Refineries also maintain their own security
systems, including fencing and controlled access at manned gates. The proposed rule amendments would not require the construction or operation of any additional refinery equipment. Therefore, the proposed Project is not expected to increase the need or demand for additional services from local fire or police departments above current levels.

As noted in the “Population and Housing” discussion above, the proposed rule amendments are not expected to induce population growth because no increase in employment is expected to be required. Therefore, there will be no increase in local population and thus no impacts are expected to local schools, parks, or other government services.

**Conclusion**

Based upon the above considerations, no significant adverse impacts to public services are expected to occur due to the proposed amendments to Rules 6-5, 11-10 or 12-15 and, therefore, will not be further evaluated in the Draft EIR.
XV. **RECREATION.** Would the Project:

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? ☐ ☐ ☐ ☑

b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment? ☐ ☐ ☐ ☑

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**Setting**

The Air District covers all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara Counties, and portions of western Solano and southern Sonoma Counties. Because the area of coverage is vast (approximately 5,600 square miles), land uses vary greatly and include commercial, industrial, residential, and agricultural uses. The Bay Area contains approximately 1.3 million acres of parks and open space areas, with Santa Clara County having the most (about 19%) followed by Sonoma County (17%), and Marin County (16%). Approximately 265,000 acres of new parkland were added to the regional’s open space inventory between 2002 and 2013, representing a 26 percent increase. Additionally, approximately 200,000 acres of privately-owned land are held in permanent reserve as of 2013. While access by the general public to these reserve areas is restricted, they are important for the preservation of wildlife habitats and the protection of the environment and rural characteristics of various parts of the region (ABAG, 2017).

Parks and open space are generally categorized according to their size and amenities. Smaller parks such as pocket parks, neighborhood parks, community parks, urban forests, and community gardens serve local communities, typically are located in urbanized areas, and often include a wide range of improvements from playing fields and picnic areas to playgrounds and fitness trails. These parks are most often managed by local park districts or municipalities, which typically set minimum standards for park acreage based on their population. Larger open space areas such as regional parks, greenbelts, trails and pathways, natural and wildlife preserves, state parks and federal parks serve a broader geographic range, typically are located outside of major urbanized areas, and generally include fewer improvements. Management of these parks is divided among a range of organizations and agencies including regional park districts, State and federal government, private individuals, and non-profit land trusts.
Regulatory Background

Recreational areas are generally protected and regulated by the City and/or County General Plans at the local level through land use and zoning requirements. Some parks and recreation areas are designated and protected by state and federal regulations.

Significance Criteria

The proposed Project impacts on recreation will be considered significant if:

- The Project results in an increased demand for neighborhood or regional parks or other recreational facilities.
- The Project adversely affects existing recreational opportunities.

Discussion of Impacts

XV a – b. As discussed under “Land Use” above, there are no provisions in the proposed new and amended regulations affecting land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments; no land use or planning requirements will be altered by the proposed rule amendments. The proposed rule amendments would not increase or redistribute population and, therefore, would not increase the demand for or use of existing neighborhood and regional parks or other recreational facilities or require the construction of new or the expansion of existing recreational facilities. Therefore, adoption of the proposed Project is not expected to have any significant adverse impacts on recreation.

Conclusion

Based upon the above considerations, no significant adverse impacts to recreation are expected to occur due to the proposed amendments to Rules 6-5, 11-10 or 12-15 and, therefore, will not be further evaluated in the Draft EIR.
XVI. TRANSPORTATION/TRAFFIC. Would the Project:

<table>
<thead>
<tr>
<th></th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant Impact with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a)</td>
<td>Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>b)</td>
<td>Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>c)</td>
<td>Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>d)</td>
<td>Substantially increase hazards because of a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>e)</td>
<td>Result in inadequate emergency access?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>f)</td>
<td>Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
Setting

The Air District covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. Transportation systems located within the Bay Area include railroads, airports, waterways, and highways.

The transportation infrastructure for vehicles and trucks in the Bay Area ranges from single lane roadways to multilane interstate highways. The Bay Area currently contains over 1,300 directional miles of limited-access highways, which include both interstates and state highways. These facilities provide access to major employment centers and to destinations outside of the Bay Area. In addition, the Bay Area has over 33,000 directional miles of arterials and local streets, providing localized access to individual communities. Together, these roadway facilities accommodate nearly 158 million vehicle miles each weekday. The road network also serves over 600,000 vehicles that travel into or out of the region from adjacent areas. Over half of these interregional travelers use two regional gateways: Interstate 80 connecting Solano County and Yolo County, and Interstate 580 and Interstate 205 connecting Alameda County and San Joaquin County (ABAG, 2017).

The region is served by numerous interstate and U.S. freeways. On the west side of San Francisco Bay, Interstate 280 and U.S. 101 run north-south. U.S. 101 continues north of San Francisco into Marin County. Interstates 880 and 660 run north-south on the east side of the Bay. Interstate 80 starts in San Francisco, crosses the Bay Bridge, and runs northeast toward Sacramento. Interstate 80 is a six-lane north-south freeway which connects Contra Costa County to Solano County via the Carquinez Bridge. State Routes 29 and 84, both highways that allow at-grade crossings in certain parts of the region, become freeways that run east-west, and cross the Bay. Interstate 580 starts in San Rafael, crosses the Richmond-San Rafael Bridge, joins with Interstate 80, runs through Oakland, and then runs eastward toward Livermore. From the Benicia-Martinez Bridge, Interstate 680 extends north to Interstate 80 in Cordelia. Interstate 780 is a four lane, east-west freeway extending from the Benicia-Martinez Bridge west to I-80 in Vallejo.

There are over 11,500 transit route miles of service including heavy rail (BART), light rail (Muni Metro and Santa Clara Valley Transportation Authority or VTA Light Rail), commuter rail (Caltrain and Alameda Commuter Express or ACE), diesel and electric buses, cable cars, and ferries. This public transit system accommodates a total of almost 1.7 million passengers a day, with about 53 percent of daily passengers on Muni Metro, about 26 percent of daily passengers on BART, 11 percent on AC Transit, and nine percent on VTA. Amtrak provides long-distance passenger rail services to the Bay Area via the Capitol Corridor, San Joaquin, Coast Starlight, and California Zephyr lines (ABAG, 2017).

In addition to public transit systems and operators, private transit options have been increasing including privately-operated commuter shuttles (e.g., Apple and Google), publicly accessible private shuttles (e.g., Emery Go-Round and Chariot), and transportation network companies (e.g., Uber and Lyft) (ABAG, 2017).
The Bay Area also has an extensive local system of bicycle routes and pedestrian paths and sidewalks. At a regional level, the share of workers driving alone was about 65 percent in 2015. The portion of commuters that carpool was about 10 percent in 2015, while an additional 12 percent utilize public transit. About two percent of commuters walked to work in 2015. In addition, other modes of travel (bicycle, motorcycle, etc.), account for five percent of commuters in 2015 (ABAG, 2017).

The Bay Area is served by five seaports, which provide the opportunity for intermodal transfers to truck and railcars. The Port of Oakland is the third largest U.S. seaport on the West Coast (after the Ports of Long Beach and Los Angeles). Other seaports include the Port of San Francisco, the Port of Richmond, the Port of Benicia, and the Port of Redwood City. These seaports are supported by freight railroad services operated by Union Pacific and Burlington Northern Santa Fe.

The Bay Area is also served by three international airports: San Francisco International Airport, Oakland International Airport, and Norman Y. Mineta San Jose International Airport. Each of these airports provides mobility for people and freight nationally and internationally. The region is also served by one smaller airport with limited commercial service, Charles M. Schulz Sonoma County Airport, as well as numerous small general aviation airports.

**Regulatory Background**

Transportation planning is usually conducted at the state and county level. Planning for interstate highways is generally done by the California Department of Transportation.

Most local counties maintain a transportation agency that has the duties of transportation planning and administration of improvement projects within the county and implements the Transportation Improvement and Growth Management Program, and the congestion management plans (CMPs). The CMP identifies a system of state highways and regionally significant principal arterials and specifies level of service standards for those roadways.

**Significance Criteria**

The proposed Project impacts on transportation and traffic will be considered significant if:

- A major roadway is closed to all through traffic, and no alternate route is available.
- The project conflicts with applicable policies, plans or programs establishing measures of effectiveness, thereby decreasing the performance or safety of any mode of transportation.
- There is an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system.
- The demand for parking facilities is substantially increased.
- Water borne, rail car or air traffic is substantially altered.
- Traffic hazards to motor vehicles, bicyclists or pedestrians are substantially increased.
Discussion of Impacts

XVI a, b, and f. Rules 6-5, 11-10, and 12-15 were part of the District’s focus on petroleum refinery emissions, designed to enhance reporting requirements and reduce emissions of PM, PM$_{2.5}$, ROG, NOx, SO$_2$ and NH$_3$ from stationary sources located at petroleum refineries. The proposed amendments would clarify exemptions (Rules 6-5 and 11-10), change the frequency of monitoring (Rule 11-10), and clarify reporting requirements (Rule 12-15).

The proposed Projects would not require any new construction or development. Physical modifications associated with implementation of the original Rule 6-5 were limited to measures to optimize ammonia or urea injection systems on existing FCCUs. The currently proposed amendments to Rule 6-5 would not require the construction of any additional air pollution control equipment or refinery modifications. Changing the frequency of monitoring requirements (Rule 11-10) or reporting requirements (Rule 12-15) would not result in any physical modifications, e.g., new equipment or construction. It is not expected that the affected refineries would need to hire additional personnel to implement the proposed rule amendments and no construction is expected to be required. Additional labor was required to monitor fugitive equipment under Rule 11-10; however, the proposed amendments Rule 11-10 will reduce the frequency of monitoring required for cooling towers. As such, adopting the proposed rule amendments is not expected to require any new employees or generate additional truck traffic associated with equipment/material delivery.

The proposed rule amendments would not affect the performance of mass transit or non-motorized travel to street, highways and freeways, pedestrian or bicycle paths. No conflicts with any congestion management programs, to include level of service and travel demand measures, or other standards established by county congestion management agencies for designated roads or highways are expected. No changes are expected to parking capacity at or in the vicinity of affected refineries as the proposed Project would not require additional employees. Therefore, no significant adverse impacts resulting in changes to traffic patterns or levels of service at local intersections are expected.

XVI c. The proposed rule amendments are not expected to involve the delivery of materials via air so no increase in air traffic is expected.

XVI d and e. The proposed Project is not expected to increase traffic hazards or create incompatible uses. No effect on emergency access to affected refineries would occur from adopting the proposed rule amendments as traffic is not expected to increase. The proposed Project is not expected to have a significant adverse impact on traffic hazards, create incompatible uses or emergency access.

XVI f. The proposed rule amendments affect existing refineries and would not conflict with adopted policies, plans, or programs supporting alternative transportation modes (e.g., bus turnouts, bicycle racks) as no increase in employees or other traffic is expected.
Conclusion

Based upon the above considerations, no significant adverse impacts to transportation and traffic are expected to occur due to the proposed amendments to Rules 6-5, 11-10 or 12-15 and, therefore, will not be further evaluated in the Draft EIR.
XVII. TRIBAL CULTURAL RESOURCES.
Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or ☐ ☐ ☐ ☑

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe? ☐ ☐ ☐ ☑

Setting
The Air District covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. Tribal cultural resources include site features, places, cultural landscapes and sacred places or objects which are of cultural value to a Tribe. The Carquinez Strait represents the entry point for the Sacramento and San Joaquin Rivers into the San Francisco Bay. Dense concentrations of Native American archaeological sites occur along the historic margins of San Francisco and San Pablo Bays. In addition, archaeological sites have also been identified in the following environmental settings in all Bay Area counties: near water sources, such as vernal pools and springs; along ridgetops and on midslope terraces; and at the base of hills and on alluvial flats. Native American archaeological sites have also been identified in the inland valleys of all Bay Area counties. Remains associated with a Native American archaeological site may include chert or obsidian flakes, projective points, mortars and pestles, and dark friable soil contain shell and bone dietary debris, heat-affected rock, or human burials (ABAG, 2017).
Native American populations, identified by their language, that lived within the Bay Area, included Costanoan, Eastern Miwok, Patwin, Coast Miwok, Pomo, and Wappo. Native villages and campsites were inhabited on a temporary basis and are found in several ecological niches due to the seasonal nature of their subsistence base. Remains of these early populations indicate that main villages, seldom more than 1,000 residents, were usually established along water courses and drainages. By the late 1760s, about 300,000 Native Americans lived in California (ABAG, 2013).

Regulatory Background

The State CEQA Guidelines were amended in July 2015 to include evaluation of impacts on tribal cultural resources. Tribal cultural resources include sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe (Public Resources Code §21074).

Significance Criteria

The proposed Project impacts to tribal resources will be considered significant if:

- The Project results in the disturbance of a significant prehistoric or historic archaeological site or a property of Tribal cultural significance to a community or ethnic or social group or a California Native American Tribe.
- Unique objects with cultural value to a California Native American Tribe are present that could be disturbed by construction of the proposed Project.

Discussion of Impacts

XVII a and b. As discussed in Section V, Cultural Resources, resources (buildings, structures, equipment) that are less than 50 years old are excluded from listing in the National Register of Historic Places unless they can be shown to be exceptionally important. The proposed amendment rules would only affect refineries and would not require the construction or operation or any additional refinery equipment. Affected refineries may have equipment or structures older than 50 years, however, this type of equipment does not meet the criteria identified in CEQA Guidelines §15064.5(a)(3), are not listed or eligible for listing in the California Register of Historic Resources or a local register of historical resources (Public Resources Code Section 5020.1(k), and are not considered to have cultural value to a California Native American Tribe.

Further, no construction activities are required to implement the proposed rule amendments at the refineries; therefore, no grading is required and the proposed Project would not require physical changes to a site, feature, place, cultural landscape, sacred place or object with cultural value to a California Native American Tribe. The proposed rule amendments would not result in a physical change to a resource determined to be eligible for inclusion or listed in the California Register of Historical Resources or included in a local register of historical resources.

As part of releasing this CEQA document for public review and comment, the document is circulated to the State Clearinghouse that provides notice of the proposed Project to all California
Native American Tribes that requested to be on the Native American Heritage Commission’s (NAHC) notification list per Public Resources Code § 21080.3.1(b)(1). The NAHC notification list provides a 30-day period during which Native American Tribes may respond to the notice, in writing, requesting consultation on the proposed rule amendments.

Since no construction activities are required, the proposed rule amendments would not affect historical or tribal resources as defined in Public Resources Section 5020.1(k), or 5024.1. Therefore, no impacts to tribal resources are anticipated to occur as a result of the proposed Project.

**Conclusion**

Based upon the above considerations, no significant adverse impacts to tribal cultural resources are expected to occur due to the proposed amendments to Rules 6-5, 11-10 or 12-15 and, therefore, will not be further evaluated in the Draft EIR.
### XVIII. UTILITIES/SERVICE SYSTEMS.

Would the Project:

<table>
<thead>
<tr>
<th></th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant Impact with Mitigation Incorporated</th>
<th>Less-than-Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a)</td>
<td>Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?</td>
<td>☑</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>b)</td>
<td>Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>c)</td>
<td>Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>d)</td>
<td>Have sufficient water supplies available to serve the Project from existing entitlements and resources, or would new or expanded entitlements needed?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>e)</td>
<td>Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>f)</td>
<td>Be served by a landfill with sufficient permitted capacity to accommodate the Project’s solid waste disposal needs?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>g)</td>
<td>Comply with federal, state, and local statutes and regulations related to solid waste?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

**Setting**

Given the large area covered by the Air District, public utilities are provided by a wide variety of local agencies. The San Francisco Bay Hydrologic Region covers approximately 4,550 square miles and encompasses numerous individual watersheds that drain into the San Francisco Bay and directly into the Pacific Ocean. Water is supplied to affected refineries by water purveyors in the Bay Area, which include the Alameda County Water District, Contra Costa Water District, East Bay Municipal District, Marin Municipal Water District, Napa Water Department, San Francisco Public Utilities Commission, Santa Clara Valley Water District, Solano County Water Agency, Sonoma County Water Agency, and the Zone 7 Water Agency.
Solid waste includes the garbage, refuse and other discarded solid materials generated by residential, commercial, and industrial activities. Solid waste is handled through a variety of municipalities, through recycling activities and at disposal sites. The Bay Area is currently served by 16 privately operated landfills and one operated by the Sonoma County Public Works Department. The 16 landfills have a total remaining capacity of 261,889,000 cubic yards, or a total daily throughput of 41,804 tons per day (ABAG, 2017).

There are no hazardous waste disposal sites within the jurisdiction of the Air District. Hazardous waste generated at facilities, which is not recycled off-site, is required to be disposed of at a licensed hazardous waste disposal facility. Two such facilities are the Chemical Waste Management Inc. (CWMI) Kettleman Hills facility in King’s County, and the Safety-Kleen facility in Buttonwillow (Kern County). Hazardous waste can also be transported to permitted facilities outside of California.

**Regulatory Background**

City and/or County General Plans usually contain goals and policies to assure adequate utilities and service systems are maintained within the local jurisdiction.

**Significance Criteria**

The proposed Project impacts on utilities/service systems will be considered significant if:

- The capacities of existing or proposed wastewater treatment facilities and the sanitary sewer system are not sufficient to meet the needs of the Project.
- An increase in demand for utilities impacts the current capacities of the electric utilities.
- The existing water supply does not have the capacity to meet the increased demands of the Project, or the Project would use a substantial amount of potable water.
- The Project increases demand for water by more than 263,000 gallons per day.
- The generation and disposal of hazardous and non-hazardous waste exceeds the capacity of designated landfills.

**Discussion of Impacts**

_XVIII a, b, d, and e._ Rules 6-5, 11-10, and 12-15 were part of the District’s focus on petroleum refinery emissions, designed to enhance reporting requirements and reduce emissions of PM, PM$_{2.5}$, ROG, NOx, SO$_2$ and NH$_3$ from stationary sources located at petroleum refineries. The proposed amendments would clarify exemptions (Rules 6-5 and 11-10), change the frequency of monitoring (Rule 11-10), and clarify reporting requirements (Rule 12-15).

The proposed Project would not require any new construction or development. Physical modifications associated with implementation of the original Rule 6-5 were limited to measures to optimize ammonia or urea injection systems on existing FCCUs. The currently proposed amendments to Rule 6-5 would not require the construction of any additional air pollution control equipment or refinery modifications. Changing the frequency of monitoring requirements (Rule
11-10) or reporting requirements (Rule 12-15) would not result in any physical modifications, e.g., new equipment or construction. The refineries affected by the proposed new and amended rules already exist and already use water, generate wastewater, treat wastewater, and discharge wastewater under existing wastewater discharge permits. The proposed rule amendments would not require new equipment, result in an increase in water demand or an increase in wastewater discharge. As discussed in Hydrology and Water Quality (see Section IX a.), water use and wastewater impacts were determined to be less than significant.

**XVIII c.** Implementation of the proposed rule amendments would not require any new refinery equipment or modifications. Therefore, the proposed Project would not alter the existing drainage systems or require the construction of new storm water drainage facilities. Nor would the proposed amendments create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff. Therefore, no significant adverse impacts on storm drainage facilities are expected.

**XVIII f and g.** Implementation of the proposed rule amendments would not require any new refinery equipment or modifications. As such, the proposed Project is not expected to generate any increase in hazardous or solid waste. Therefore, no adverse impacts are expected to landfill capacity or compliance with federal, state and local statues and regulations related to solid waste as a result of the proposed amendments.

The proposed amendments would clarify exemptions (Rules 6-5 and 11-10), change the frequency of monitoring (Rule 11-10), and clarify reporting requirements (Rule 12-15). Changing the frequency of monitoring requirements (Rule 11-10) or reporting requirements (Rule 12-15) would not result in any physical modifications, e.g., new equipment or construction, or require additional electricity, natural gas, refinery fuel gas, or any other type of fuel.

**Conclusion**

Based upon the above considerations, no significant adverse impacts to utilities and service systems are expected to occur due to the proposed amendments to Rules 6-5, 11-10 or 12-15 and, therefore, will not be further evaluated in the Draft EIR.
XIX. MANDATORY FINDINGS OF SIGNIFICANCE.

a) Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory? ☑ ☐ ☐ ☐

b) Does the Project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a Project are considerable when viewed in connection with the effects of past Projects, the effects of other current Projects, and the effects of probable future Projects) ☑ ☐ ☐ ☐ ☐

c) Does the Project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly? ☑ ☐ ☐ ☐ ☐

XIX. MANDATORY FINDINGS OF SIGNIFICANCE

Discussion of Impacts

XIX a. The proposed Project does not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory, as discussed in the previous sections of the CEQA checklist.

The proposed Project would not require any new construction or development. The proposed amendments would clarify exemptions (Rules 6-5 and 11-10), change the frequency of monitoring (Rule 11-10), and clarify reporting requirements (Rule 12-15). As discussed in Section IV - Biological Resources, Section V - Cultural Resources, and Section XVII – Tribal Cultural Resources, no significant adverse impacts are expected to biological, cultural resources, or tribal cultural resources.
XIX b and c. Rules 6-5, 11-10, and 12-15 were part of the District’s focus on petroleum refinery emissions, designed to enhance reporting requirements and reduce emissions of PM, PM_{2.5}, ROG, NOx, SO_{2} and NH_{3} from stationary sources located at petroleum refineries, thus providing a beneficial air quality impact and improvement in air quality. The proposed amendments would clarify exemptions (Rules 6-5 and 11-10), change the frequency of monitoring (Rule 11-10), and clarify reporting requirements (Rule 12-15) and are not expected to require additional refinery equipment, refinery modifications, development, or additional construction.

However, the proposed amendments to Rule 11-10 that would result in monitoring weekly may potentially delay the detection of a leak under specific circumstances, and subsequently delay minimization and/or repair of the leak resulting in increased ROG emissions above the currently approved Rule 11-10 (emission reductions “foregone.”). The potential emission reductions foregone have been initially estimated to be approximately 16 tons per year and could exceed the ROG significance criteria. Therefore, the potential air quality impacts associated with the ROG emission impacts will be evaluated in the Draft EIR.

CEQA Guidelines indicate that cumulative impacts of a project shall be discussed when the project’s incremental effect is cumulatively considerable, as defined in CEQA Guidelines §15065(c). The cumulative air quality impacts of the proposed Project will also be evaluated in the Draft EIR.
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CHAPTER 3

References Cited


