BAY AREA AIR QUALITY MANAGEMENT DISTRICT

California Environmental Quality Act

NOTICE OF PREPARATION OF DRAFT ENVIRONMENTAL IMPACT REPORT FOR ADOPTION OF PROPOSED BAAQMD REGULATION 12, RULE 15: PETROLEUM REFINING EMISSIONS TRACKING AND PROPOSED BAAQMD REGULATION 12, RULE 16: PETROLEUM REFINING EMISSIONS ANALYSIS, THRESHOLDS AND MITIGATION

Interested Agencies, Organizations and Individuals:

Subject: Notice is hereby given that the Bay Area Air Quality Management District (Bay Area AQMD or Air District) will be the lead agency and will prepare an Environmental Impact Report (EIR) in connection with the project described in this notice. This Notice of Preparation is being prepared pursuant to California Public Resources Code § 21080.4 and CEQA Guidelines Section 15082.

Project Title: Proposed BAAQMD Regulation 12, Rule 15: Petroleum Refining Emissions Tracking and Proposed BAAQMD Regulation 12, Rule 16: Petroleum Refining Emissions Analysis, Thresholds and Mitigation

Project Location: The rule will apply within the Bay Area AQMD, 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: The Bay Area Air Quality Management District is proposing two new rules: Proposed Regulation 12, Rule 15: Petroleum Refining Emissions Tracking (Rule 12-15) and Proposed Regulation 12, Rule 16: Petroleum Refining Emissions Analysis, Thresholds and Mitigation (Rule 12-16). Rule 12-15 is being proposed to put in place requirements to enhance the tracking of refinery emissions, determine crude composition over time, require development of emissions inventory, require additional air monitoring, and requiring refineries to updated Health Risk Assessments utilizing the latest methodology and health effects data. Rule 12-16 would use emissions information gathered under Rule 12-15 to establish trigger level emissions thresholds, require causal analysis if those emissions thresholds are exceeded, prepare enforceable Emission Reduction Plans to reduce air emissions, and conduct an audit if planned reductions are not sufficient to bring emissions back below trigger threshold levels.

Probable Environmental Impacts: A number of air quality rules and regulation that apply to refineries are enforced by the BAAQMD. These existing rules and regulations require: (1) air permits; (2) the use of best available control technology (BACT); (3) new source review for new emission sources and offsets for new emissions; (4) control of toxic air contaminants; (5) control of fugitive emission sources including storage tanks, equipment leaks, bulk loading, and wastewater separators; and (6) control of emissions from combustion sources, including process heaters, boilers, internal combustion engines, gas turbines, catalytic cracking and reforming units, and flares. Rule 12-15 would require recordkeeping and monitoring. However, Rule 12-16 could require the modification to refineries to further reduce emissions either through the installation of air pollution control equipment or changes in operations.

Although the primary effect of installing air pollution control equipment is to reduce emissions of a particular pollutant, e.g., VOCs, some types of control equipment have the potential to create secondary adverse air quality impacts, e.g., increased NOx emissions if VOC emissions are controlled through a combustion process (e.g., afterburner) or require additional energy to operate. Control measures aimed at reducing NOx from stationary sources may use ammonia for control (e.g., selective catalytic reduction). Ammonia use could result in increased ammonia emissions and, since ammonia is a precursor to particulate formation, increased particulate emissions. Because of the potential for secondary emissions from air pollution control equipment,

there is a potential that sensitive receptors could be exposed to increased pollutant concentrations, which may be significant.

Rules 12-16 could require the installation of additional air pollution control equipment or modify refinery operations. The proposed new rules could require new construction activities and the operation of new/modified refinery equipment. The goal of Rule 12-15 and 12-16 is to minimize overall refinery emissions, however, refinery modifications could result in the increased use of fuel for combustions sources (e.g., electricity, natural gas, or refinery fuel gas), potentially generating additional greenhouse gas emission impacts, which will be evaluated in the Draft EIR.

An environmental impact report is needed to evaluate the air quality impacts of the proposed regulation and to address any impacts that the Air District finds to be significant. Attached to this notice is an Initial Study. The Initial Study outlines the areas of potential environmental impact that will be further reviewed in the draft Environmental Impact Report.

Response: This notice provides information on the above project and provides you an opportunity to submit comments on potential environmental effects that should be considered in the EIR. If the proposed project has no bearing on you or your agency, no action on your part is necessary. Due to the time limits mandated by State law, your response must be sent at the earliest possible date but ***not later than 30 days*** after receipt of this notice. If you or your agency wishes to submit comments, they may be sent to Guy Gimlen, via the contact information below.

Eric Stevenson, Director
Technical Service Division
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109
Phone: (415) 749-4695 Fax: (415) 749-5082
Email: EStevenson@baaqmd.gov
Date: February 23, 2015

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

CEQA NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT

February 23, 2015

TO: INTERESTED PARTIES

FROM: EXECUTIVE OFFICER / APCO

SUBJECT: NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT

PROJECT TITLE: BAAQMD Regulation 12, Rule 15 (Petroleum Refining Emissions General Requirements); BAAQMD Regulation 12, Rule 16 (New Source Review)

In accordance with the California Environmental Quality Act (CEQA) (California Code of Regulations, Title 14, Sections 15082(a)), the Bay Area Air Quality Management District (District) will be the Lead Agency for the project identified above and described in the attached Initial Study. Through this Notice of Preparation (NOP), the Air District is soliciting information and your views on the scope of the environmental analysis for the proposed project. As detailed in the attached Initial Study, Air District staff has made a preliminary determination that the potential air quality, greenhouse gas, and hazard impacts of implementing the proposed Rule amendments required more detailed analyses in an Environmental Impact Report (EIR).

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice. Comments focusing on your area of expertise, your agency's area of jurisdiction, or issues relative to the environmental analysis should be addressed to Mr. Eric Stevenson at the address shown below, or sent by fax to (415) 749-4741, or by e-mail to estevenson@baaqmd.gov. Comments must be received no later than **5:00 PM on Friday, *March 27, 2015***. Please include the name and phone number of the contact person for your agency. Questions relative to the proposed Rules should be directed to Mr. Eric Stevenson (415) 749-4695, or by email to estevenson@baaqmd.gov.

The following public workshops are scheduled for the proposed new Rule:

Benicia
Monday, March 16, 2015
5:30 PM-7:00 PM
Benicia Senior Center
187 East L Street

Richmond
Tuesday, March 17, 2015
5:30 PM-7:00 PM
Madeline F Whittlesey Community Room
325 Civic Center Plaza

Martinez
Wednesday, March 18, 2015
5:30 PM- 7:00 PM
Contra Costa County Chambers
651 Pine Street

San Francisco*
Friday, March 20, 2015
10:30 AM- 12:00 PM
Air District Board Room, 7th Floor
939 Ellis Street
Meeting will be webcast

Date: ***February 23, 2015*** ***Signature:*** _____

Eric Stevenson, Director,
Technical Services Division

NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT

Project Title:
Proposed BAAQMD Regulation 12, Rule 15: Petroleum Refining Emissions Tracking and Proposed BAAQMD Regulation 12, Rule 16: Petroleum Refining Emissions Analysis, Thresholds and Mitigation

Project Location:
The proposed rule amendments would apply five refineries within the District, which 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.

Description of Nature, Purpose, and Beneficiaries of Project:
Regulation 12-15 is being proposed to put in place requirements to enhance the tracking of refinery emissions, determine crude composition over time, require development of emissions inventory, require additional air monitoring, and requiring refineries to updated Health Risk Assessments utilizing the latest methodology and health effects data. Regulation 12-16 would use emissions information gathered under Regulation 12-15 to establish trigger level emissions thresholds, require causal analysis if those emissions thresholds are exceeded, prepare enforceable Emission Reduction Plans to reduce air emissions, and conduct an audit if planned reductions are not sufficient to bring emissions back below trigger threshold levels.

Lead Agency:
Bay Area Air Quality Management District

Initial Study and all Supporting Documentation are Available at:
BAAQMD Headquarters
939 Ellis Street
San Francisco, CA 94109
Attn: Eric Stevenson at (415) 749-4689 or estevenson@baaqmd.gov
Or by accessing: http://www.baaqmd.gov/Divisions/Planning-and-Research/Rule-Development/Rule-Workshops.aspx

Or by Calling:
(415) 749-4695

Scheduled Workshop Dates:

Benicia **Monday, March 16, 2015** **5:30 PM-7:00 PM** **Benicia Senior Center** **187 East L Street**	**Richmond** **Tuesday, March 17, 2015** **5:30 PM-7:00 PM** **Madeline F Whittlesey Community Room** **325 Civic Center Plaza**
Martinez **Wednesday, March 18, 2015** **5:30 PM- 7:00 PM** **Contra Costa County Chambers** **651 Pine Street**	**San Francisco*** **Friday, March 20, 2015** **10:30 AM- 12:00 PM** **Air District Board Room, 7th Floor** **939 Ellis Street** ***Meeting will be webcast**

The Notice of Preparation is provided through the following:

☑ Office of Planning & Research, State Clearinghouse ☑ BAAQMD Website
☑ Newspaper
☑ Interested Parties ☑ BAAQMD Mailing List

Review Period:
February 23, 2015 through March 25, 2015

Contact Person:	**Phone Number:**	**E-Mail Address:**
Eric Stevenson	(415) 749-4695	estevenson@baaqmd.gov

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Initial Study for Proposed

BAAQMD Regulation 12-15: Petroleum Refinery Emissions Tracking
BAAQMD Regulation 12, Rule 16: Petroleum Refining Emissions Analysis, Thresholds and Mitigation

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, California 94109

Contact: Eric Stevenson
415-749-4695

Prepared by:

ENVIRONMENTAL AUDIT, INC.
1000-A Ortega Way, Suite A
Placentia, CA
(714) 632-8521

February 2015

Chapter 1

Chapter 2

FIGURES:

CHAPTER 1

PROJECT DESCRIPTION

Introduction

Agency Authority

Project Location

Background

Project Description

1.0 PROJECT DESCRIPTION

1.1 INTRODUCTION

The Bay Area Air Quality Management District (BAAQMD or Air District) is proposing two new rules that would apply to petroleum refineries located in the San Francisco Bay Area. The titles of the proposed new rules are Regulation 12, Rule 15 (Rule 12-15): Petroleum Refining Emissions Tracking (herein "Tracking Rule"); and Regulation 12, Rule 16 (Rule 12-16): Petroleum Refining Emissions Analysis, Thresholds and Mitigation (herein "Mitigation Rule").

Rule 12-15 is being proposed to put in place requirements to enhance the tracking of refinery emissions and crude composition over time. Tracking this information would allow the Air District to use emissions inventory data, crude oil information and air monitoring data to identify any potential relationship between emissions and crude oil quality. In addition, the rule would also require updated Health Risk Assessments (HRAs) be performed utilizing the latest methodology and health effects data to provide additional information regarding health risk from air emissions at refineries. Rule 12-16 would use emissions information gathered by the Tracking Rule to establish "trigger level" emissions thresholds and would require refineries to address significant increases in emissions due to, among other causes, changes in crude oil composition. The causal analysis required when emissions thresholds are exceeded would explain why the emissions increase occurred. Enforceable Emission Reduction Plans (ERPs) would commit the refineries to planned reductions. If planned reductions are not sufficient to bring emissions back below trigger level thresholds within the two years, an audit would be required to identify all feasible measures for emission reductions to bring emissions below the established threshold levels.

1.2 AGENCY AUTHORITY

The California Environmental Quality Act (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 BAAQMD is the lead agency for the proposed Regulation 12, Rule 15, and Regulation 12, Rule 16, and has prepared a Notice of Preparation of an Environmental Impact Report (EIR) and Initial Study (NOP/IS) to address the potential environmental impacts associated with the proposed new rules. 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 BAAQMD 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 BAAQMD 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

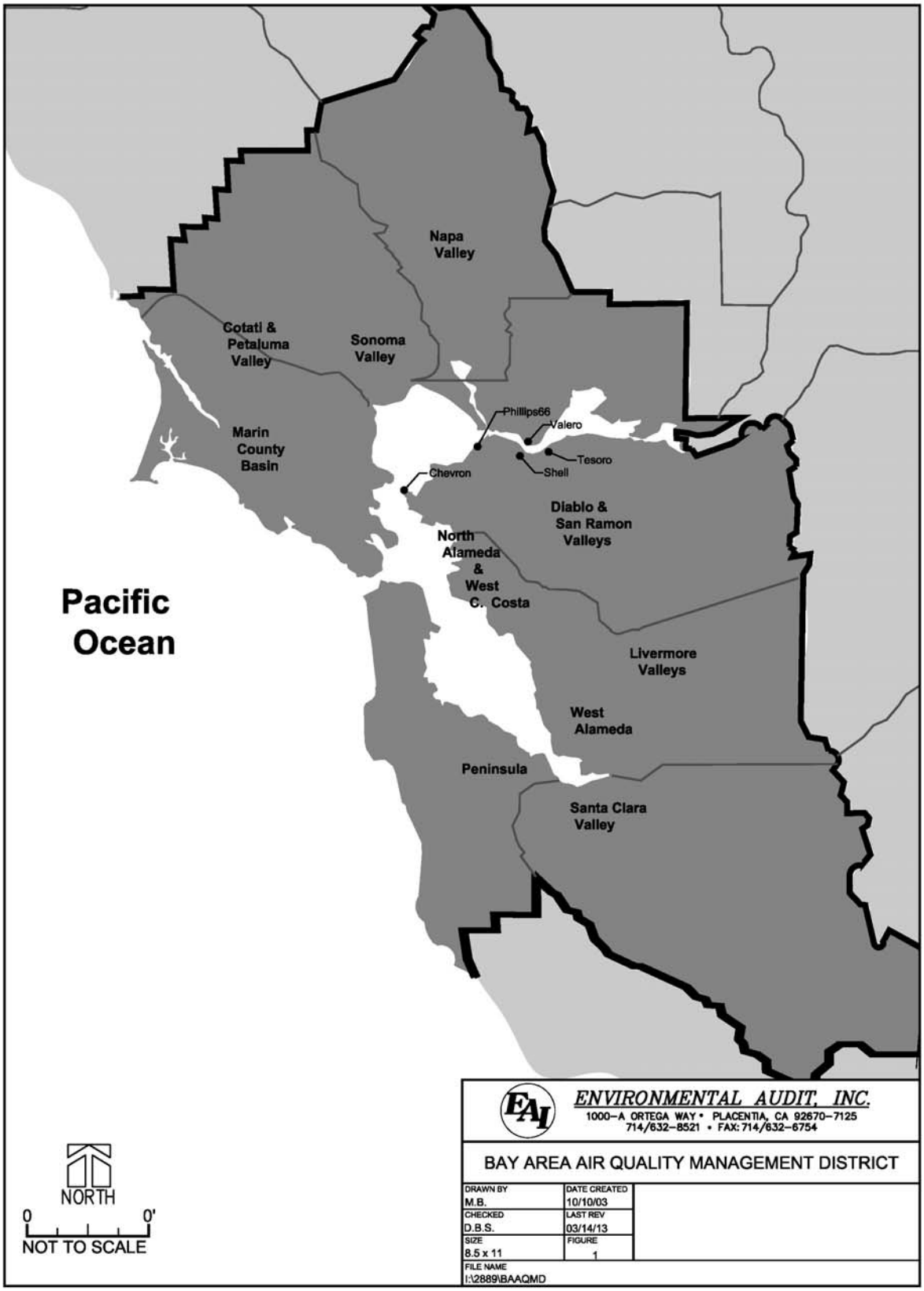
Counties, and portions of southwestern Solano and southern Sonoma counties. The San Francisco Bay Area is characterized by a large, shallow basin surrounded by coastal mountain ranges tapering into sheltered inland valleys. The combined climatic and topographic factors result in increased potential for 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 1-1).

1.4 BACKGROUND

Currently five petroleum refineries are located in the Bay Area within the jurisdiction of the Air District:

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

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). Crude oil that originates from different geographical locations may vary with respect to its composition, and is most often determined by the oils' density (light to heavy) and sulfur content (sweet to sour).


Napa Valley
Cotati & Petaluma Valley
Sonoma Valley
Marin County Basin
Phillips66
Valero
Tesoro
Shell
Chevron
Diablo & San Ramon Valleys
North Alameda & West C. Costa
Pacific Ocean
Livermore Valleys
West Alameda
Peninsula
Santa Clara Valley
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NOT TO SCALE
ENVIRONMENTAL AUDIT, INC.
1000-A ORTEGA WAY • PLACENTIA, CA 92670-7125
714/632-8521 • FAX: 714/632-6754
BAY AREA AIR QUALITY MANAGEMENT DISTRICT
DRAWN BY M.B.
DATE CREATED 10/10/03
CHECKED D.B.S.
LAST REV 03/14/13
SIZE 8.5 x 11
FIGURE 1
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Air pollutants are categorized based on their properties, and the programs in which they are regulated. Air pollutants include: (1) criteria pollutants, (2) toxic air contaminants, and (3) greenhouse gases. Additional categories of air contaminants include odorous compounds and visible emissions.

Criteria pollutants are emissions for which Ambient Air Quality Standards (AAQS) have been set and include: (1) carbon monoxide (CO), (2) nitrogen dioxide (NO_2) and oxides of nitrogen (NO_X), (3) particulate matter (PM) in two size ranges -- diameter of 10 micrometers or less (PM10), and diameter of 2.5 micrometers or less (PM2.5), (4) volatile organic compounds (VOC), and (5) sulfur dioxide (SO_2). Each of these criteria pollutants are emitted by petroleum refineries.

Toxic air contaminants (TACs) are emissions for which AAQS have generally not been established, but may result in human health risks. The state list of TACs currently includes approximately 190 separate chemical compounds, and groups of compounds. TACs emitted from petroleum refineries include volatile organic TACs, semi-volatile and non-volatile organic TACs, metallic TACs, and other inorganic TACs.

Greenhouse gases (GHGs) are emissions that include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_20), and three groups of fluorinated compounds (i.e., hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6)), and are the major anthropogenic GHGs. GHGs emitted from petroleum refineries include CO_2, CH_4 and N_20.

The proposed regulatory approach for Regulations 12-15 and 12-16 are summarized below and include the following basic elements.

Regulation 12, Rule 15

- Report on-going annual emissions inventories of all regulated air pollutants based on upgraded methods, including emissions from cargo carriers,
- Develop a Petroleum Emissions Profile (PREP) based on three years of emissions inventory and require that on-going inventories include comparisons with the PREP,
- Report on-going crude oil characteristics with annual emissions inventories,
- Require an update of refinery Health Risk Assessments (HRAs) based on the most recent Cal/EPA's Office of Environmental Health Hazard Assessment (OEHHA) guidelines, and
- Establish fence-line and community air monitoring systems.

Regulation 12, Rule 16

- Establish emissions thresholds,
- Require a causal analysis if criteria pollutant, TAC and/or GHG emissions increases not due solely to crude oil throughput are above trigger level thresholds.
- Require the submission of an emission reduction plan for criteria pollutants and TACs to reduce emissions when trigger levels are exceeded.
- Require the submission of an emissions audit requiring implementation of all feasible measures if planned emission reductions will not fully mitigate emission increases within two years.
- Require updates to emission reduction plans if expected emissions reductions are not achieved in practice.

1.5 PROPOSED PROJECT DESCRIPTION

The description of proposed Regulation 12, Rule 15 and Regulation 12, Rule 16 are provided below.

1.5.1 REGULATION 12, RULE 15

1.5.1.1 Administrative Procedures

The proposed Tracking Rule would require refinery owner/operators to submit to the BAAQMD various reports and plans, subject to review by members of the public and other interested stakeholders. Comments received would be considered by Air District staff prior to taking final action to approve, revise, or disapprove the reports and plans. Commenters would be notified of the Air District's final actions, and approved reports and plans would be posted on the Air District's website.

It should be noted that California law specifies that "trade secrets" are not public records. While air pollutant emissions data and air monitoring data may not be considered trade secrets, many other types of information may be (e.g., production data used to calculate emissions data).

Section 12-15-411 of the proposed rule specifies that a refinery owner/operator may designate as confidential any information required to be submitted under the rule that is claimed to be exempt from public disclosure under the California Government Code. The owner/operator is required to provide a justification for this designation, and must submit a separate public copy of the document with the information that is designated "confidential" redacted.

1.5.1.2 Pollutant Coverage

The proposed Tracking Rule would cover the three primary categories of regulated air pollutants: (1) Criteria pollutants emissions; (2) TAC emissions; and (3) GHG emissions. The definition of TAC provided in Section 12-15-220 of the proposed rule refers to the State TAC list and includes those State TACs that have a basis for the evaluation of health effects under guideline procedures adopted by OEHHA for the Air Toxics Hot Spots Program.

Unlike criteria pollutants and TACs, GHGs are not directly associated with localized or regional health risks, which is the primary issue that the new rule is intended to address. GHGs are included in the proposed rule to address climate change issues (which have a link to increasing air concentrations of ozone, a criteria pollutant that forms on hot summer days), and because measures to reduce GHG emissions typically result in co-benefits in terms of reducing criteria pollutant and TAC emissions.

Odorous and visible emissions are not specifically proposed to be covered by the new rule, although most of these pollutants are also included in one of the categories of regulated air pollutants that would be covered (e.g., hydrogen sulfide, which is the primary odorous compound emitted from refineries, is a covered TAC; visible emissions are typically fine particulate matter (PM2.5), a covered criteria pollutant).

1.5.1.3 Source Coverage

The proposed Tracking Rule would apply to all air emissions from "stationary sources" at petroleum refineries. Stationary sources, as opposed to mobile sources such as trucks and other vehicles, are the sources over which the Air District has regulatory jurisdiction. However, there are instances where mobile sources become stationary sources, such as when ships and trains are unloading or loading products produced at the refinery, and thus should be included in the requirements of the rule. This concept is addressed in the definition of "emissions inventory" in Section 12-15-207.

The proposed Tracking Rule would apply to petroleum refinery operations whether or not these operations are owned or operated by different entities. For example, some Bay Area refineries include co-located hydrogen plants that are owned or operated by separate companies, but that provide hydrogen for refinery operations. Similar arrangements also exist for refinery terminal operations, and auxiliary facilities (e.g., cogeneration plants). The definition of "refinery owner/operator" provided in Section 12-15-215 of the proposed rule indicates that the refinery owner/operator is responsible for the submittal of required reports and plans that cover the entire refinery, including those that may be separately owned or operated. This is the same approach that is used in the implementation of BAAQMD Regulation 12, Rule 12: Flares at Petroleum Refineries (e.g., for the submittal of Flare Minimization Plans).

BAAQMD staff also believes there may be emissions changes caused by changes in the types and quantities of crude oil processed by a particular petroleum refinery over a period of time. As a result, the proposed rule requires that each refinery report its "crude slate" as defined in Section 12-15-206 that contains information regarding sulfur and nitrogen content, API gravity and total

acid number as described in Section 12-15-401.6. By gathering this information about crude oil fed into the refinery processes, the Air District intends to determine the relationship between the crude slate and emissions. Reporting the composition of the crude oil that is processed by the refinery along with total emissions from the refinery processes will assist in the development of any relationships that may exist between crude oil composition and overall facility emissions.

1.5.1.4 Emissions Inventory Development

Emissions inventories are used in a variety of air quality programs, and methodologies for establishing these inventories are provided in various publications. Depending on the specific type of source, and the specific type of air pollutant emitted, state-of-the-art emissions inventory techniques may involve continuous emission monitors, source-specific emission tests, general emission factors (i.e., representative values that relate the quantity of a pollutant emitted with an activity associated with the release of that pollutant), material balances, or empirical formulae. The term "emissions inventory" is defined in Section 12-15-207 of the proposed rule.

Due to the diversity of emissions inventory methodologies that exist, and the need to update these methodologies on an on-going basis due to improvements in scientific understanding and available data, Air District staff believes the Tracking Rule should not include detailed emissions inventory methodologies. As reflected in Section 12-15-409 of the proposed rule, the Air District staff would publish, and periodically update, emissions inventory guidelines for petroleum refineries that specify the methodology to be used for emissions inventories required under the rule. Section 12-15-601 indicates that emissions inventories submitted under the rule must be prepared following District-published guidelines.

The initial refinery emissions inventory guideline document has been developed concurrently with the development of the proposed new rule. That document refers heavily to other inventory methodology publications, including the refinery emissions protocol issued for the purpose of improving emissions inventories as collected through the U.S. EPA's 2011 Information Collection Request (ICR) for the petroleum refining industry (Emission Estimation Protocol for Petroleum Refineries, Version 2.1.1, Final ICR Version, RTI International, May 2011).

The BAAQMD has used staff-published guideline documents in combination with other rules that have requirements based on detailed technical information that needs to be updated on an on-going basis. This includes the Air District's BACT/TBACT Workbook and Permit Handbook (both used in Air District Rules 2-2 and 2-5), and Health Risk Screening Guidelines (used in Air District Rules 2-1 and 2-5).

1.5.1.5 Emissions Inventories and Crude Slate Report

The establishment of existing annual emissions inventories will provide the basis in the new rule for determining emissions variations that occur from each refinery year to year and will be used to develop a Petroleum Refinery Emissions Profile (PREP). In addition, each refinery would be required to provide information on the crude slate, as described above, that the Air District would use to examine potential relationships between emissions and crude input to the refinery. Each refinery would be required to prepare and submit an annual refinery emissions inventory

and crude slate report to the Air District as specified in Section 12-15-401 of the proposed rule. The public is provided an opportunity to provide input regarding emissions inventory and crude slate reports as described in Section 12-15-404.

1.5.1.6 Establishing Petroleum Refinery Emissions

Emissions can fluctuate from year to year due to market forces or other factors not necessarily related to normal refinery operation. Multiple annual emissions inventories are required to develop a more complete understanding of emissions and help determine which sources might require additional emissions reductions. Under the proposed Regulations 12-15, each refinery would be required to prepare and submit to the Air District a PREP, as specified in Section 12-15-402. The PREP would include a summary of the average emission rate of each criteria pollutant, TAC and GHG that was emitted from each source and from the refinery overall.

Although refinery operations are more continuous and uniform than some other types of industries, year-to-year variations in emissions occur due to a variety of factors. Some of these factors include business cycles that affect the demand for products produced, and cyclical process unit maintenance turnarounds (which generally occur on different schedules at different refineries).

A variety of other factors may affect variations in year-to-year emissions from a refinery including the addition of emissions controls, equipment changes (e.g., replacements, modernizations, and expansions), accidents, compliance issues, changes in feed stocks used, and the mix of products produced due to business decisions. As a result of these fluctuations, staff believes a three year period should be used to define the PREP. The annual emissions inventories will be compared to the PREP to see variations of emissions from year to year and over time and will be compared to changes in crude slate to determine if crude composition changes have a major impact in emissions. The public would have an opportunity to provide input regarding emissions inventory and crude slate reports as described in Section 12-15-404.

1.5.1.7 Revising Petroleum Refinery Emissions Profiles

In addition to specifying the quantity of emissions that occurred from the refinery during the three-year period for which the report is prepared, the on-going emissions inventory reports would also identify the changes in emissions that occurred relative to the PREP as described in Section 12-15-403. Revisions will indicate whether any observed changes in emissions have occurred. This provision would also cover potential expansions of the emissions inventory over time to address additional compounds that may be added to the OEHHA health effects values list, and will ensure that a uniform basis exists for determining changes in emissions over time. Any revisions to the PREP are required to be submitted no later than the date the emissions inventory affected by the changes in methodology is required.

1.5.1.8 Health Risk Assessments

The BAAQMD uses a variety of tools to determine where health hazards may be occurring in the Bay Area, to assess the relative magnitude of these health hazards compared to other locations, and to determine how to best focus Air District resources in order to reduce these health hazards. HRAs are one of the tools that can be used to assess the relative magnitude of health hazards. HRAs are designed to quantify the potential health impacts to an individual receptor or community that may be occurring due to specific sources or facilities or that may occur in the future due to proposed projects or proposed changes at a facility. For the purposes of this rule, an HRA is defined in Section 12-15-210.

An HRA consists of four basic steps: 1) hazard identification; 2) exposure assessment; 3) dose response assessment; and 4) risk characterization. The Air District conducts HRAs using standardized methodologies for each of these steps. As indicated in Sections 12-15-210 and 12-15-602 of the proposed rule, HRAs will be prepared in accordance with the most recent guidelines adopted by the OEHHA. The Air District follows these OEHHA HRA Guidelines when conducting HRAs under the Air Toxic Hot Spots Program.

BAAQMD staff believes that new facility-wide HRAs should be performed including improved emission inventories, updated health effects values, and the most recent HRA methodologies. The proposed rule requires that each refinery conduct an HRA utilizing the most recent OEHHA HRA Guidelines along with more refined emissions inventories. This requirement is outlined in Section 12-15-405. The public would have an opportunity to review and comment on the HRA Modeling Protocol and the HRA, as described in Section 12-15-406.

1.5.1.9 Air Monitoring

The proposed Tracking Rule would require the refinery owner/operator to prepare and submit to the Air District an air monitoring plan for establishing and operating a fence-line monitoring system and a community air monitoring system (see Section 12-15-407). The air monitoring plans would need to be prepared in accordance with air monitoring guidelines that are published by the Air District (see Sections 12-15-410 and 603).

The initial air monitoring guideline document was developed concurrently with the development of the proposed rule. Much of the information gathering for the guideline document is being completed under Action Item 3 of the Air District's Work Plan for Action Items Related to Accidental Releases from Industrial Facilities. Under this Action Item, Air District staff retained a contractor to create a report that identifies equipment and methodological options for monitoring systems. A panel of monitoring experts gathered from academia, industry, the community, and other government agencies then discussed and weighed the various options and provided input to guide the Air District in developing the air monitoring guidelines.

Under the proposed rule, within one year of Air District approval of a refinery's air monitoring plan, the refinery owner/operator would be required to ensure that fence-line monitoring systems are operational. Within two years after Air District approval of the air monitoring plan, the community air monitoring systems would be required to be operational. Both systems would be

installed, operated, and maintained, in accordance with the approved plan (see Sections 12-15-501 and 502 of the proposed rule).

The BAAQMD would update the initial air monitoring guideline document within a five- year period of the publication of the initial guideline document. The guidelines would be updated in consideration of advances in monitoring technology, updated information regarding the health effects of air pollutants, and review of data collected by existing monitoring systems required under the rule. The refinery owner/operator would be required to implement any needed modifications to existing monitoring systems within one year of publication of the updated guidelines.

1.5.2 REGULATION 12, RULE 16

1.5.2.1 Limited Exemption

The proposed Rule 12-16, which would use many of the plans and reports required by Rule 12-15, is designed to mitigate emissions increases, such as those caused by changes in crude oil composition, based on mass emissions from refineries as a whole. There are three limited exemptions in the rule. The first exemption, contained in Section 12-16-102, applies to small refineries whose processing capacity of total crude oil is 5,000 barrels per day or less. This exemption is intended to limit the requirements of the rule to the Chevron, Phillips 66, Shell, Tesoro and Valero refineries operating in the Bay Area and not include operations solely involving asphalt or oil recycling.

A second exemption applies to criteria pollutants and GHG emission increases resulting solely from additional crude oil throughput. This allows the refineries flexibility in production that may result from increases in demand or the reduction of output from other California refineries. Both Rules 12-15 and 12-16 are intended to address any increase in emissions caused by changes in crude oil composition.

A third exemption deals with GHG emissions. GHG emissions increases are still required to be addressed in the causal analysis described in Section 12-16-401.1, but need not be addressed in the emissions reductions measures discussed in Section 12-16-401.2. This exemption avoids confusion and conflict with CARB's Cap-and–Trade Program. However, since the proposed Tracking and Mitigation rules require the collection of information relevant to GHGs, the District is positioned to take action at a later date based on sound emissions data if appropriate.

1.5.2.2 Administrative Procedures

The Mitigation Rule would require various reports and plans be submitted to the Air District and subjected to public review. Comments received from the public would be considered by Air District staff prior to taking final action. Commenters would be notified of final actions and approved reports and plans would be posted on the Air District's website.

1.5.2.3 Emissions Trigger Levels

Sections 12-16-301.1 through Sections 12-16-301.3 would provide threshold trigger levels that will require a refinery owner/operator to submit an Emission Reduction Plan (ERP). The thresholds are defined in relation to the PREP required by the Tracking Rule.

The trigger levels for criteria pollutant described in Section 12-16-301.1 were designed to take into account fluctuations that occur in refineries on a year-to-year basis that may be the result of process changes and degradation of processes. Emissions variations like these are considered to be in the "noise" of emissions inventories and the ability of the inventory calculations to provide accurate, repeatable results. By allowing these thresholds, staff believes ERPs will be able to better identify and address equipment that can produce effective and lasting emission reductions.

The threshold triggers for TACs described in Section 12-16-301.2 were developed to ensure that health impacts at the maximally exposed individual, as defined by the HRA required in the Tracking Rule, do not increase by more than 10 in one million for cancer risk or by more than 1 for chronic hazard index. Section 12-16-301.3 establishes a more stringent threshold of "any" increase in toxicity weighted emissions, if the HRA required by the Tracking Rule finds that a refinery has health impacts greater than the Air District's Air Toxic Hot Spots (AB-2588) Mandatory Risk Reduction Thresholds.

1.5.2.4 Pollutant and Source Coverage

Since the Rule 12-16, the Mitigation Rule, is designed to work in tandem with the Rule 12-15, Tracking Rule, pollutants and sources covered are the same. However, mitigation of GHG's is not required at this time in deference to CARB's Cap-and-Trade Program. ERPs can propose reductions at any source that will bring overall refinery emissions below threshold triggers. This will allow flexibility to determine the most effective measures to reduce emissions. The feasibility of the reduction measures will be judged based on the cost effectiveness levels contained in Table 3 in Section 12-16-401.3.3.

1.5.2.5 Emissions Reduction Plan (ERP)

Section 401 of the proposed Mitigation Rule would require the refinery owner/operator to prepare and submit to the District an ERP that contains: 1) a causal analysis of why emissions increased above trigger thresholds (Section 12-16-401.1); 2) a legal commitment to measures that are planned to reduce emissions (Section 12-16-401.2); and, 3) potentially, an emission reduction audit requiring implementation of all feasible measures for further reductions (Section 12-16-401.3) if planned reductions would not result in emissions being reduced to below trigger thresholds within two years. An updated ERP would be required if the emissions are not reduced to below trigger levels as provided in the initial ERP (Section 12-16-402). While all sources are intended to be covered by proposed Regulation 12, Rule 16, it is the intent of staff to not require additional controls or limits on sources where all feasible measures are already in place. It is expected that each ERP that requires permitting would be reviewed pursuant to the CEQA.

1.5.2.6 Toxic Air Contaminant Trigger Levels and HRAs

Specific trigger levels for each refinery would be set based on the HRAs developed in the Tracking Rule and are discussed in Section 12-16-404. These trigger levels would be set to ensure that risks don't increase above the health risk thresholds based on the latest information included in OEHHA guidelines. Staff believes that allowing the refinery owners/operators flexibility in reducing TACs to below trigger levels allows for the most effective targeting of reduction strategies.

Section 12-16-303 requires an updated HRA in addition to the requirements of Section 401, to verify that the ERP measures have reduced risk from the facility to below AB 2588 mandatory risk reduction thresholds. An updated HRA is not required if the inventory year showing the emissions increase is less than five years from the inventory year for the most recent Air District-approved HRA. HRA updates are appropriate for sites that are subject to mandatory risk reduction measures to ensure that the risk reduction measures employed are effectively reducing health impacts. These provisions also ensure that additional information regarding TACs and health risks are incorporated and reviewed by Air District staff and will provide additional assurance that refinery health impacts will not increase in the future.

1.5.2.7 Crude Oil Throughput

The proposed rule would exempt emissions caused solely by increased throughput of crude oil. This allows refineries to respond to demand by either market forces or reduced production of other California refineries. Refineries must always maintain compliance with any limitations currently contained in Air District operating permits, but as a matter of practice rarely operate at this "maximum" rate. Increases in throughput consistent with compliance with Air District permit limits thus would not trigger the requirements of the Mitigation Rule.

Staff considered various ways to allow flexibility in production rate while still requiring all feasible mitigation of changes that affect emissions. Relating emissions to inputs is an extremely difficult, if not impossible, task. Refineries vary output of products depending on market demands, which affects emissions. In addition, operation of various units and processes may vary, also affecting emissions. These changes in emissions can occur without varying crude oil throughput. Inputs besides crude oil, commonly called intermediates, also have an effect on emissions without necessarily being related to crude oil throughput. Attempting to track and accurately relate all these variables to changes in overall annual emissions may prove to be extremely difficult and would not allow for flexibility in managing overall refinery emissions.

Staff believes the methodology presented in Section 12-16-405 represents the clearest, most efficient way to provide flexibility in allowing crude oil throughput variability. Refinery owner/operators will be able to quickly determine whether emissions changes are tied to crude oil throughput and, therefore, better manage overall refinery emissions to meet the thresholds presented in the proposed rule.

Chapter 2

Environmental Checklist

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 project.

GENERAL INFORMATION

Project Title:	Bay Area Air Quality Management District (BAAQMD) Proposed Regulation 12, Rule 15: Petroleum Refining Emissions Tracking and Regulation 12, Rule 16: Petroleum Refining Emissions Analysis, Thresholds and Mitigation
Lead Agency Name:	Bay Area Air Quality Management District
Lead Agency Address:	939 Ellis Street San Francisco, California 94109
Contact Person:	Eric Stevenson
Contact Phone Number:	415-749-4695
Project Location:	Proposed Rules 12-15 and 12-16 would apply to the five refineries 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. The five refineries include Chevron (Richmond), Phillips 66 (Rodeo), Shell (Martinez), Tesoro (Martinez) and Valero (Benicia).
Project Sponsor's Name:	Bay Area Air Quality Management District
Project Sponsor's Address:	939 Ellis Street San Francisco, California 94109
General Plan Designation:	Rules 12-15 and 12-16 would apply to refineries in the Bay Area, which are primarily located in industrial areas.
Zoning:	See “General Plan Designation” above
Description of Project:	See “Background” in Chapter 1.
Surrounding Land Uses and Setting:	See “Affected Area” in Chapter 1.
Other Public Agencies Whose Approval is Required:	None

Environmental Factors Potentially Affected:

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

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

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: February 23, 2015
Printed Name: Eric Stevenson	Date: February 23, 2015

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.

ENVIRONMENTAL CHECKLIST AND DISCUSSION

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
I.	**AESTHETICS.**				
	Would the project:				
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☑
b)	Substantially damage to scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway?	☐	☐	☐	☑
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☑	☐
d)	Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	☑	☐

Setting

The BAAQMD 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 four of the refineries affected by the proposed rules are located in Contra Costa County and one is located in Solano County (Valero).

The proposed new rules focus on tracking air emissions and crude oil quality characteristics from Bay Area petroleum refineries over time, completing health risk assessments for the petroleum refineries, and establishing monitoring systems to provide detailed air quality data along refinery boundaries and in nearby communities, as well as, establishing emission thresholds, triggering causal analysis if thresholds are exceeded, and establishing Emission Reduction Plans (ERPs). The proposed new rules will affect five refineries currently operating within the Bay Area which are located in industrial areas. Scenic highways or corridors are generally not located in the vicinity of these facilities.

Regulatory Background

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

Discussion of Impacts

I. a, b, and c). The proposed new Rules 12-15 and 12-16 would track air emissions and crude oil characteristics from Bay Area petroleum refineries, would require health risk assessments and establish monitoring systems, as well as establish emission thresholds, trigger causal analysis, and establish ERPs if those thresholds are exceeded.

Proposed Rule 12-15 is not expected to require the construction of any substantial new structures that would impact the views of the refineries or areas outside of existing refinery boundaries. Rule 12-15 is a recordkeeping/monitoring rule that would require the installation of fenceline monitors as well as community monitoring stations near each refinery. The fenceline monitors are within the refinery boundaries and are expected to be approximately the same height as the existing fences and would be compatible with the existing industrial structures within the Refinery. Community air monitors are also required under Rule 12-15 and would be placed near each refinery. The community monitors may or may not be visible to the community, depending on their location. If a community monitor is placed on an existing building/structure it is not likely to be visible to the community. At some locations, a portable trailer may be used for monitoring, which would also require security fencing to protect the monitoring station. In this case, the monitoring station could be visible to the community, but the height of the monitoring station is expected to be eight to ten feet.

Proposed Rule 12-16 could require air pollution control equipment on various refinery sources, (e.g. boilers and heaters.) These emission controls could lead to changes in operations or installation of new air pollution control devices. While these control devices may be visible to surrounding areas, they would be installed within existing industrialized areas and are not expected to be taller than existing refinery structures. Any new equipment would be located within the refineries, would be compatible with the urban/developed nature of the refineries, are not expected to block any scenic vista, degrade the visual character or quality of the area, or result in any adverse aesthetic impacts. Once implemented, equipment associated with the new rule is not expected to be noticeably visible within the refineries. Therefore, the proposed new rule is not expected to have adverse aesthetic impacts to the surrounding community.

I. d). The refineries affected by the proposed Rule 12-16 may be required to install additional air pollution control equipment or modify operations. Further, refinery modifications may require additional lighting. However, refineries are already lighted for night-time operations and safety measures, and are located in appropriately zoned areas that are not usually located next to residential areas. New light sources, if any, are not expected to be noticeable in residential areas. Most local land use agencies have ordinances that limit the intensity of lighting and its effects on adjacent property owners. Therefore, the proposed new rules are not expected to have significant adverse aesthetic impacts to the surrounding community.

Conclusion

Based upon the above considerations, significant adverse project-specific impacts to aesthetics are not expected to occur due to implementation of Rules 12-15 and 12-16 and, therefore, will not be further evaluated in the Draft EIR.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
II. AGRICULTURE and FORESTRY 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?	☐	☐	☐	☑
b) Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?	☐	☐	☐	☑
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))?				
d) Result in the loss of forest land or conversion of forest land to non-forest use?				
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?	☐	☐	☐	☑

Setting

The BAAQMD 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.

The proposed new rules focus on tracking air emissions and crude oil quality characteristics from Bay Area petroleum refineries over time, completing health risk assessments for the petroleum refineries, and establishing monitoring systems to provide detailed air quality data along refinery boundaries and in nearby communities, as well as, establishing emission thresholds, triggering causal analysis, and establishing ERPs if those thresholds are exceeded. The proposed new rules will affect five refineries currently operating within the Bay Area which are located in industrial areas. Agricultural or forest resources are currently not located within the confines of the existing refineries that would be required to comply with Regulations 12-15 and 12-16.

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.

Discussion of Impacts

II. a, b, c, d, and e). The affected refineries are located in industrial areas where agricultural or forest resources are generally not located. No substantial construction activities are expected to comply with reporting and monitoring activities associated with proposed Rule 12-15. Rule 12-16 could require air pollution control equipment on various refinery sources or changes in operations at any or all of the Bay Area refineries. Construction activities may be associated with compliance with Rule 12-16 and the implementation of ERPs. Such construction activities are expected to be limited to the existing refineries. No agricultural or forest resources are located within the boundaries of the existing refineries and construction activities would not convert any agricultural or forest land into non-agricultural or non-forest use, or involve Williamson Act contracts.

Conclusion

Based upon the above considerations, significant adverse project-specific impacts to agriculture and forest resources are not expected to occur due to implementation of Rules 12-15 and 12-16 and, therefore, will not be further evaluated in the Draft EIR.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY.				
Where 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 BAAQMD 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 (NO_2), particulate matter less than 10 microns in diameter (PM_{10}), particulate matter less than 2.5 microns in diameter ($PM_{2.5}$), sulfur dioxide (SO_2), and lead.

Air quality conditions in the San Francisco Bay Area have improved since the Air District was created in 1955. Ambient concentrations of air pollutants and the number of days on which the region exceeds air quality standards have fallen. The Air District is in attainment of the State and federal ambient air quality standards for CO, nitrogen oxides (NOx), and SO_2 and the federal 24-hour PM2.5 standard. The Air District is not considered to be in attainment with the State PM_{10} and $PM_{2.5}$ standards. At The Bay Area is designated as non-attainment for the federal 8-hour and California one- and eight-hour ozone standards.

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, the California Air Resources Board (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 air emission inventories, collected air quality and meteorological data, and approved state implementation plans. At a local level, California's air districts, including the BAAQMD, are responsible for overseeing stationary source emissions, approving permits, maintaining emission inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality-related sections of environmental documents required by CEQA.

The BAAQMD is governed by a 22-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 BAAQMD 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

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 National Emissions Standards for Hazardous Air Pollutants (NESHAP) 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 three regulatory programs for the control of TACs. Each of the programs is discussed in the following subsections.

Control of TACs Under the TAC Identification and Control Program: California's TAC identification and control program, adopted in 1983 as Assembly Bill 1807 (AB 1807) (California Health and Safety Code §39662), is 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. Since adoption of the program, CARB has identified 18 TACs, and CARB adopted a regulation designating all 189 federal HAPs as TACs.

Control of TACs Under the Air Toxics "Hot Spots" Act: The Air Toxics Hot Spot Information and Assessment Act of 1987 (AB 2588) (California Health and Safety Code §39656) establishes 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. Inventory reports must be updated every four years under current state law. The BAAQMD uses a maximum individual cancer risk of 10 in one million, or an ambient concentration above a non-cancer reference exposure level, as the threshold for notification.

Senate Bill (SB) 1731, enacted in 1992 (California Health and Safety Code §44390 et seq.), amended AB 2588 to include a requirement for facilities with significant risks to prepare and implement a risk reduction plan which would reduce the risk below a defined significant risk level within specified time limits. At a minimum, such facilities must, as quickly as feasible, reduce cancer risk levels that exceed 100 per one million. The BAAQMD adopted risk reduction requirements for perchloroethylene dry cleaners to fulfill the requirements of SB 1731.

Targeted Control of TACs Under the Community Air Risk Evaluation Program: In 2004, BAAQMD established the Community Air Risk Evaluation (CARE) program to identify locations with high emissions of toxic air contaminants (TAC) and high exposures of sensitive populations to TACs and to use this information to help establish policies to guide mitigation strategies that obtain the greatest health benefit from TAC emission reductions. For example, BAAQMD will use 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.

Discussion of Impacts

III. a). Proposed Rules 12-15 and 12-16 are not expected to conflict with or obstruct implementation of the applicable air quality plan. The 2010 Bay Area Clean Air Plan (CAP) was approved by the Air District's Board of Directors on September 15, 2010, and is the approved air quality plan that the Air District operates under. Proposed Rules 12-15 and 12-16 would track air emissions and crude oil characteristics from Bay Area petroleum refineries, require health risk assessments refineries, establish monitoring systems, establish emission thresholds, require causal analysis if the thresholds are exceed, and require preparation of ERPs. The proposed regulations would require recordkeeping and monitoring and may require the modification of any existing emission sources. Proposed Rules 12-15 and 12-16 would not conflict with or obstruct implementation of the 2010 CAP as it is not expected to interfere with any other District rules and regulations.

III. b, c, and d). A number of air quality rules and regulation that apply to refineries are enforced by the BAAQMD. These existing rules and regulations require: (1) air permits; (2) the use of best available control technology (BACT); (3) new source review for new emission sources and offsets for new emissions; (4) control of toxic air contaminants; (5) control of fugitive emission sources including storage tanks, equipment leaks, bulk loading, and wastewater separators; and (6) control of emissions from combustion sources, including process heaters, boilers, internal combustion engines, gas turbines, catalytic cracking and reforming units, and flares. Rule 12-15 would require recordkeeping and monitoring. However, Rule 12-16 could require the modification to refineries to further reduce emissions either through the installation of air pollution control equipment or changes in operations.

Although the primary effect of installing air pollution control equipment is to reduce emissions of a particular pollutant, e.g., VOCs, some types of control equipment have the potential to create secondary adverse air quality impacts, e.g., increased NOx emissions if VOC emissions are controlled through a combustion process (e.g., afterburner) or require additional energy to operate. Control measures aimed at reducing NOx from stationary sources may use ammonia for control (e.g., selective catalytic reduction). Ammonia use could result in increased ammonia emissions and, since ammonia is a precursor to particulate formation, increased particulate emissions. Because of the potential for secondary emissions from air pollution control equipment, there is a potential that sensitive receptors could be exposed to increased pollutant concentrations, which may be significant. As a result, these potential air quality impacts will be evaluated in the Draft EIR.

III. e). Rules 12-15 and 12-16 would track air emissions and crude oil characteristics from Bay Area petroleum refineries, require health risk assessments refineries, establish monitoring systems, establish emission thresholds, require causal analysis if the thresholds are exceed, and require preparation of ERPs. The proposed new rules are not expected to result in an increase in odorous emissions at the refineries. Odorous emissions are not specifically proposed to be covered by the Rules 12-15 and 12-16, although most of these pollutants are also included in one of the categories of regulated air pollutants that would be covered, e.g., hydrogen sulfide, which is the primary odorous compound emitted from the refineries, is included as a TAC. The information gathered as part of proposed Rule 12-15 and 12-16 would be used to develop emission limitations which could include odorous emissions. Therefore, the proposed new rules are not expected to result in an increase in the generation of emissions that could generation odors.

Conclusion

Implementation of Rules 12-15 and 12-16 are expected to minimize refinery emissions of criteria pollutants and TACs. However, secondary adverse air quality impacts could occur from implementing ERPs at individual refineries due to localized increases in criteria pollutant or toxic air contaminant emissions from certain types of air pollution control equipment. Therefore, potential adverse secondary air quality impacts resulting from implementing Rules 12-16 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.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
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 Wildlife 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 Wildlife 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 BAAQMD 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 areas affected by the proposed new rules are located in the Bay Area-Delta Bioregion (as defined by the State's Natural Communities Conservation Program). This Bioregion is comprised of a variety of natural communities, which range from salt marshes to chaparral to oak woodland. Four of the refineries affected by the proposed rules are located in Contra Costa County and one is located in Solano County (Valero). The refineries affected by the proposed new Rules have been graded to develop various permanent refinery structures, buildings, operating units and storage tanks. Native vegetation, other than landscape vegetation, has generally been removed from the refineries to minimize safety and 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. Environmental Protection Agency (U.S. EPA) regulate the discharge of dredge or fill material into waters of the United States, including wetlands.

Discussion of Impacts

IV. a), b, and d). No impacts on biological resources are anticipated from the proposed new rules which would apply to existing refineries. Monitoring and air pollution control equipment associated with the proposed new rules will operate primarily within existing refineries which do not typically include sensitive biological species. The refinery facilities have been graded and developed, and biological resources, with the exception of landscape species, have been removed. Construction activities would be limited to monitoring or air pollution control equipment within existing refineries or small portable monitoring stations in nearby communities. Construction associated with monitoring equipment whether on fencelines or in nearby communities will be minimal. Construction of any air pollution control equipment would take place within the operating portions of existing refineries which are void of biological resources and would not impact sensitive biological resources directly or indirectly, impact riparian habitats, or protected wetlands. The installation of monitors or air pollution control equipment would also not interfere with the movement of any migratory fish or wildlife species

or impacts migratory corridors; would not conflict with local policies or ordinances protecting biological resources; and would not conflict with an adopted habitat conservation plan.

IV. c). ERPs could result in the installation of additional air pollution control equipment at existing refineries. The installation of air pollution control equipment at these facilities would be consistent with industrial land uses. The operating portions of the existing refineries do not contain marshes, vernal pools, wetlands, etc. Therefore, construction would not impact these biological resources. For these reasons the proposed new rules are not expected to adversely affect protected wetlands as defined by §404 of the Clean Water Act, including, but not limited to marshes, vernal pools, coastal wetlands, etc., through direct removal, filling, hydrological interruption or other means.

IV. e and f). Proposed Rules 12-15 and 12-16 are not expected to affect land use plans, local policies or ordinances, or regulations protecting biological resources such as a tree preservation policy or ordinances for the reasons already given. Land use and other planning considerations are determined by local governments and land use or planning requirements are not expected to be altered by the proposed project. Similarly, the proposed new rules are not expected to affect any habitat conservation or natural community conservation plans, agricultural resources or operations, and would not create divisions in any existing communities.

Conclusion

Based upon the above considerations, significant adverse project-specific impacts to biological resources are not expected to occur due to implementation of Rules 12-15 and 12-16 and, therefore, will not be further evaluated in the Draft EIR.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
V.	**CULTURAL RESOURCES.** Would the project:				
a)	Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☑
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	☑
c)	Directly of indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☑
d)	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☑

Setting

The BAAQMD 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.

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.

The petroleum refineries and nearby communities affected by the proposed new rules are existing facilities within the Bay Area. These facilities have already been graded or developed, and are typically surrounded by other industrial uses. Cultural resources are generally not located within these areas.

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).

Discussion of Impacts

V. a, b, c and d). No impacts on cultural resources are anticipated from the proposed new rules which would apply to existing refineries. Monitoring equipment and new emission control equipment associated with the proposed Rules 12-15 and 12-16 would operate primarily within existing refineries which have been graded and developed. Historic resources are typically not located within refineries and no demolition activities are expected to be required so no impacts on historic resources are expected. Construction activities would be limited to areas within existing refineries and the placement of monitoring stations near/adjacent to the fencelines and within nearby communities, i.e., within areas that have already been graded and developed. Any construction activities which may be required to implement ERPs under Rule 12-16 are expected to be limited to within refinery boundaries. Therefore, construction activities are not expected to impact cultural resources, including historical and archaeological resources, either directly or indirectly, or disturb human remains.

Conclusion

Based upon the above considerations, significant adverse project-specific impacts to cultural resources are not expected to occur due to implementation of Rules 12-15 and 12-16 and, therefore, will not be further evaluated in the Draft EIR.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
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 know 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

The BAAQMD 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 facilities affected by the proposed new rules are located primarily in industrial areas within the Bay Area.

The affected petroleum refineries are located in the natural region of California known as the Coast Ranges geomorphic province. The province is characterized by a series of northwest trending ridges and valleys controlled by tectonic folding and faulting, examples of which include the Suisun Bay, East Bay Hills, Briones Hills, Vaca Mountains, Napa Valley, and Diablo Ranges.

Regional basement rocks consist of the highly deformed Great Valley Sequence, which include massive beds of sandstone inter-fingered with siltstone and shale. 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 estuarine sediments found along the shorelines of Solano County are soft, water-saturated mud, peat and loose sands. 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 plate boundary marked by the San Andreas Fault System. Several northwest trending active and potentially active faults are included with this 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). In the Bay area, these faults include the San Andreas, Hayward, Rodgers Creek-Healdsburg, Concord-Green Valley, Greenville-Marsh Creek, Seal Cove/San Gregorio and West Napa faults. 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.

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 review procedures that will reduce losses from ground failure during future earthquakes.

Discussion of Impacts

VI. a, c, and d). The petroleum refineries affected by the proposed rule already exist and operate within the confines of existing industrial facilities in the Bay Area. Construction activities would be required to place monitoring stations near/adjacent to the refinery fencelines and within nearby communities. Construction activities could also be required to install air pollution control equipment associated with implementation of ERPs. Any substantial construction activities associated with new refinery equipment would occur within the confines of existing refineries and would be required to comply with the California Building Code. The California Building Code is considered to be a standard safeguard against major structural failures and loss of life. Any construction at industrial facilities regulated by the new rule will be, or have been, constructed in compliance with the California Building Code. 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. The California Building Code basis seismic design on minimum lateral seismic forces ("ground shaking"). The California Building Code requirements operate on the principle that providing appropriate foundations, among other aspects, helps to protect buildings from failure during earthquakes. The basic formulas used for the California Building Code seismic design require determination of the seismic zone and site coefficient, which represent the foundation conditions at the site. Compliance with the California Building Code would minimize the impacts associated with existing geological hazards.

Any new development at the petroleum refineries affected by the new rule would be required to obtain building permits, as applicable, for new foundations and structures at any site. The issuance of building permits from the local agency will assure compliance with the California Building Code, which include requirements for building within seismic hazard zones. No significant impacts from seismic hazards are expected since the construction of any new structures would be required to comply with the California Building Code.

VI. b). Construction activities would be limited to the confines of existing refineries or the placement of monitoring stations near/adjacent to refinery fencelines and within nearby communities. Community monitors are expected to be placed on existing structures or within portable trailers that could take up about an 8 feet by 12 feet area. New refinery equipment would be placed within the confines of the existing refineries which are already graded and developed. Proposed Rules 12-15 and 12-16 are not expected to result in substantial soil erosion or the loss of topsoil as construction activities would be limited to areas that have been already been graded and developed, and adjacent to other existing refinery operations.

VI. e). Septic tanks or other similar alternative wastewater disposal systems are typically associated with small residential projects in remote areas. Rules 12-15 and 12-16 would affect existing refineries that are already connected to appropriate wastewater facilities. Based on these considerations, septic tanks or other alternative wastewater disposal systems are not expected to be impacted by Rules 12-15 and 12-16.

Conclusion

Based upon the above considerations, significant adverse project-specific impacts to geology and soils are not expected to occur due to implementation of Rules 12-15 and 12-16 and, therefore, will not be further evaluated in the Draft EIR.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
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 warming, a related concept, is the observed increase in the average temperature of the earth's surface and atmosphere. One identified cause of global warming is an increase of greenhouse gases (GHGs) in the atmosphere. The six major GHGs identified by the Kyoto Protocol are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), haloalkanes (HFCs), and perfluorocarbons (PFCs). The GHGs absorb longwave radiant energy reflected by the earth, which warms the atmosphere. GHGs also radiate longwave radiation both upward to space and back down toward the surface of the earth. The downward part of this longwave radiation absorbed by the atmosphere is known as the "greenhouse effect." Some studies indicate that the potential effects of global climate change may include rising surface temperatures, loss in snow pack, sea level rise, more extreme heat days per year, and more drought years.

Events and activities, such as the industrial revolution and the increased combustion of fossil fuels (e.g., gasoline, diesel, coal, etc.), have heavily contributed to the increase in atmospheric levels of GHGs. Approximately 80 percent of GHG emissions in California are from fossil fuel combustion and over 70 percent of GHG emissions are carbon dioxide emissions (BAAQMD, 2010).

Regulatory Background

In response to growing scientific and political concern regarding global climate change, California has taken the initiative to address the state's greenhouse gas emissions. California has adopted the Global Warming Solutions Act of 2006, also known as AB 32, which requires the state to reduce its GHG emissions to 1990 levels by 2020. In addition, in 2005 Governor Schwarzenegger adopted Executive

Order S-3-05, which commits to achieving an 80% reduction below 1990 levels by 2050. The California Air Resources Board (CARB) has begun implementation of these mandates through adoption of regulatory requirements to reduce GHG emissions (among other agency implementation actions). All refineries affected by the proposed new rules are under CARB's AB32 cap and trade program, which established a limit on GHG emissions for each refinery. GHG emissions over the limit require additional GHG emission reductions or purchase of GHG emission credits from sources that had excess emission credits.

At the federal level, the U.S. EPA has adopted GHG emissions limits for new light-duty cars and trucks. This regulation of mobile sources has in turn triggered New Source Review and Title V permitting requirements for stationary sources. These requirements include using Best Available Control Technology to control emissions from major facilities. In addition, the U.S. EPA is also in the process of adopting New Source Performance Standards for major GHG source categories (currently limited to electric utility generating units).

The U.S. Congress passed "The Consolidated Appropriations Act of 2008" (HR 2764) in December 2007, which requires reporting of GHG data and other relevant information from large emission sources and suppliers in the United States. The Rule is referred to as 40 Code of Federal Regulations (CFR) 4 Part 98 - Greenhouse Gas Reporting Program (GHGRP). Facilities that emit 25,000 metric tonnes or more per year of GHGs are required to submit annual reports to U.S. EPA.

Discussion of Impacts

VII. a). Rule 12-15 is designed to track air emissions and crude oil characteristics from the five petroleum refineries located within the jurisdiction of the BAAQMD. Rule 12-15 requires recordkeeping and monitoring while Rule 12-16 requires the development of emission thresholds and ERPs, if those thresholds are exceeded. Rules 12-16 could require the installation of additional air pollution control equipment or modify refinery operations. The proposed new rules could require new construction activities and the operation of new/modified refinery equipment. The goal of Rule 12-15 and 12-16 is to minimize overall refinery emissions, however, refinery modifications could result in the increased use of fuel for combustions sources (e.g., electricity, natural gas, or refinery fuel gas), potentially generating additional greenhouse gas emission impacts, which will be evaluated in the Draft EIR.

VII. b). All refineries affected by the proposed new rules are under CARB's AB32 cap and trade program. Rules 12-15 requires monitoring and recordkeeping for various refinery emissions, including GHG emissions. However, Rule 12-16 exempts GHG emissions from the emission reduction requirements of the ERP to avoid confusion and conflict the CARB's cap and trade rule established under AB 32. As such, the proposed new rules are not expected to conflict with an existing plan, policy or regulation.

Conclusion

Based upon the above considerations, the potential GHG emissions associated with Rule 12-16 will be evaluated in the Draft EIR. No significant impacts on GHG plans, policies, or regulations were identified so this topic will not be addressed further in the Draft EIR.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
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 § 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, 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, would the project 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 affected petroleum refineries handle and process large quantities of flammable, hazardous, and acutely hazardous materials. 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 came 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 refinery are unique and determined by a variety of factors. The areas affected by the proposed new rule are typically 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 40 Code of Federal Regulations, §112. The SPCC is designed to prevent spills from on-site facilities (e.g., storage tanks) 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.

Discussion of Impacts

VIII. a, b, and c). Proposed Rule 12-15 is a monitoring and recordkeeping rule that is not expected to generate additional hazards. Proposed Rule 12-16 has the potential to create direct or indirect hazard impacts associated with refinery modifications. The requirement to develop ERPs could result in additional construction activities at the refineries, refinery modifications, and/or changes in refinery operations. Some refinery modifications and changes in operations could generate additional hazard impacts. NOx emission reduction measures could result in the increased use of ammonia in selective catalytic reduction (SCR) units. Ammonia is a hazardous material. These potential hazard impacts will be further evaluated in the Draft EIR.

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. Proposed Rules 12-15 and 12-16 are not expected to interfere with site cleanup activities or create additional site contamination. Therefore, this topic is less than significant and will not be further evaluated in the Draft EIR.

VIII. e and f). Rules 12-15 and 12-16 are not expected to 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 new rules which would apply to petroleum refineries operating in the Bay Area, which are generally not located near public airports or air strips. Any construction activities are expected to be confined to the existing refinery boundaries. 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 rules that would apply to existing petroleum refineries. The refineries affected by the proposed new rules already exist and operate within the confines of existing industrial facilities. The proposed new rule neither requires, nor is likely to result in, activities that would impact any emergency response plan. The existing refineries affected by the proposed new rule already store and transport hazards materials, so emergency response plans already include hazards associated with existing refinery operations. The proposed new rules are not expected to 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 Rules 12-15 and 12-16. The petroleum refineries affected by the proposed new rule already exist and operate within the confines of existing industrial facilities. Native vegetation has been removed from the operating portions of the affected facilities to minimize fire hazards. Rules 12-15 and 12-16 are not expected to increase the risk of hazards associated with wildland fires in general and specifically in areas with flammable materials. Therefore, Rules 12-15 and 12-16 would not expose people or structures to significant risk of loss, injury or death involving wildland fires.

Conclusion

Based upon the above considerations, the potential refinery hazards that may be introduced due to compliance with Rule 12-16 will be evaluated in the Draft EIR. No significant hazard impacts on sites listed pursuant to Government Code §65962.5, public airports or airstrips, emergency response plans or hazards associated with wildfires are expected and these topics will not be addressed further in the Draft EIR.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. HYDROLOGY AND WATER QUALITY.					
Would the project:					
a)	Violate any water quality standards or waste discharge requirements?	☑	☐	☐	☐
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)?	☑	☐	☐	☐
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?	☐	☐	☐	☑
d)	Substantially alter the existing drainage pattern of the site or area, including through the 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?	☐	☐	☐	☑
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?	☐	☐	☐	☑
f)	Otherwise substantially degrade water quality?	☑	☐	☐	☐
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?	☐	☐	☐	☑
h)	Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☐	☑
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?				
j)	Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☑

Setting

The BAAQMD 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 affected environment vary substantially throughout the area and include commercial, industrial, residential, agricultural, and open space uses.

The petroleum refineries, affected by the proposed new rule are located within Contra Costa and Solano counties, under the jurisdiction of the BAAQMD. Affected areas are generally surrounded by other industrial or commercial facilities. Reservoirs and drainage streams are located throughout the area and discharge into the Bays. Marshlands incised with numerous winding tidal channels containing brackish water are located throughout the Bay Area.

The affected areas are located within the San Francisco Bay Area Hydrologic Basin. The primary regional groundwater water-bearing formations include the recent and Pleistocene (up to two million years old) alluvial deposits and the Pleistocene Huichica formation. Salinity within the unconfined alluvium appears to increase with depth to at least 300 feet. Water of the Huichica formation tends to be soft and relatively high in bicarbonate, although usable for domestic and irrigation needs.

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 National Pollutant Discharge Elimination System (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 RWQCB 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 adopted the State Water Resources Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary in 2006. San Francisco Bay, and its constituent parts, including Carquinez Strait and Suisun Bay, are considered to be enclosed bays (indentations along the coast that enclose an area of oceanic water within distinct headlands or harbors). The Plan consists of: (1) beneficial uses to be protected; (2) water quality objectives for the reasonable protection of beneficial uses; and (3) a program of implementation for achieving the water quality objectives. Together, the beneficial uses and the water quality objectives established to reasonably protect the beneficial uses are called water quality standards under the terminology of the federal Clean Water Act. The beneficial uses of the Carquinez Strait that must be protected which include: municipal and domestic water supply systems, industrial service supply systems, agricultural supply systems, ground water recharge, navigation, water contact and non-contact recreation, shell fish harvesting, commercial and sport fishing, cold freshwater habitat, migration of aquatic organisms, spawning reproduction and early development, wildlife habitat, estuarine habitat, and preservation of rare, threatened. and endangered species.

Discussion of Impacts

IX. a, b, and f). Rule 12-15 requires recordkeeping and monitoring while Rule 12-16 requires the development of emission thresholds and ERPs, if those thresholds are exceeded. Rules 12-16 could require the installation of additional air pollution control equipment or modify refinery operations. The proposed new rules could require new construction activities and the operation of new/modified refinery equipment. The goal of Rule 12-15 and 12-16 is to minimize overall refinery emissions, however, refinery modifications could result in the increased use of water. Control measures that reduce particulate and/or SOx emissions could require additional water use and wastewater discharge from devices like wet gas scrubbers. The potential increase and water use and the potential to deplete groundwater supplies will be evaluated in the Draft EIR.

The affected refineries are subject to wastewater discharge and pretreatment requirements and are expected to continue to comply with all relevant wastewater requirements, waste discharge regulations and standards for stormwater runoff, and any other relevant requirements for discharges into sewer systems. These standards and permits require water quality monitoring and reporting for onsite water-related activities. Should the volume or discharge limits change as a result of implementing control measures, the facility would be required to consult with the appropriate regional water quality control board and/or the local sanitation district to discuss these changes. Nonetheless, implementing Rule 12-16 may generate additional wastewater that could impact water quality standards or waste discharge requirements. Therefore, this topic will be evaluated further in the Draft EIR.

IX. c, d, and e). Rule 12-15 requires recordkeeping and monitoring while Rule 12-16 requires the development of emission thresholds and ERPs, if those thresholds are exceeded. Rule 12-15 is a recordkeeping/monitoring rule that would require the installation of fenceline monitors, as well as a community monitoring station near each refinery. The new monitoring equipment is small and would be placed within the existing refineries and in the communities adjacent to the refineries. Rule 12-16 could result in ERPs that require additional control of emissions from refinery equipment on stationary emissions. The proposed project does not have the potential to substantially increase the area subject to runoff since the construction activities are expected to be limited in size and would be located within

existing refineries that have already been graded. In addition, storm water drainage within refineries has been controlled and construction activities are not expected to alter the storm water drainage within the refineries. Therefore the proposed new rule is not expected to substantially 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 rules are 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 and it will not be further evaluated in the Draft EIR.

IX. g, h, i, and j) The proposed project does not include the construction of new or relocation of existing housing or other types of 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"). 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. Consequently, this topic will not be evaluated further in the Draft EIR.

Conclusions

The potential increase and water use and the potential to deplete groundwater supplies will be evaluated in the Draft EIR. No significant adverse water quality impacts were identified for stormwater runofff, flood hazards, or inundation hazards and these topics will not be addressed in the Draft EIR.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
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 BAAQMD 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 facilities affected by the proposed new rules are primarily located in industrial areas throughout the Bay Area.

Regulatory Background

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

Discussion of Impacts

X. a, b, and c) Construction activities associated with the proposed new rules would be required to place monitoring stations near/adjacent to the refinery fencelines and within nearby communities. Construction activities could also be required to install air pollution control equipment associated with implementation of ERPs. Any substantial construction activities associated with new refinery equipment would occur within the confines of existing refineries. The land use within the refineries is typically zoned for heavy industrial uses. Land uses surrounding the refineries can vary considerably and include industrial areas, commercial areas, open space, and residential areas. Construction activities would be limited to the confines of the refineries. The installation of air monitors or air pollution control equipment would not change or impact existing land uses.

Conclusion

Based upon the above considerations, significant adverse project-specific impacts to land use and planning are not expected to occur due to implementation of Rules 12-15 and 12-16 and, therefore, will not be further evaluated in the Draft EIR.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
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 BAAQMD 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 facilities affected by the proposed Rules 12-15 and 12-16 are primarily located in industrial areas within 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.

Discussion of Impacts

XI. a and b). Rules 12-15 and 12-16 would require the installation of fenceline monitors, as well as a community monitoring station near each refinery, and could require construction of air pollution control equipment. The proposed new rules 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, significant adverse project-specific impacts to mineral resources are not expected to occur due to implementation of Rules 12-15 and 12-16 and, therefore, will not be further evaluated in the Draft EIR.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XII.	**NOISE.** Would the project result in:				
a)	Exposure of 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)	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☑	☐
c)	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 would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☑
f)	For a project within the vicinity of a private airstrip would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☑

Setting

The BAAQMD 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 facilities affected by the proposed new rules are located in industrial areas of the Bay Area, which are primarily surrounded by other industrial or commercial facilities.

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.

Discussion of Impacts

XII. a, b, c, and d). The petroleum refineries affected by the proposed new rules already exist and operate within the confines of existing industrial facilities in the Bay Area. Construction activities would be required to place monitoring stations near/adjacent to the refinery fencelines and within nearby communities. Construction activities could also be required to install air pollution control equipment associated with implementation of ERPs. Any substantial construction activities associated with new refinery equipment would occur within the confines of existing refineries, located within industrial areas. However, those construction activities would be required to comply with local noise ordinances, which generally prohibit construction during the nighttime, in order to minimize noise impacts. Compliance with the local noise ordinances is expected to minimize noise impacts associated with construction activities to less than significant.

Ambient noise levels in industrial areas are typically driven primarily by freeway and/or highway traffic in the area and any heavy-duty equipment used for materials manufacturing or processing. It is not expected that any modifications to install air pollution control equipment would substantially increase ambient (operational) noise levels in the area, either permanently or intermittently, or expose people to excessive noise levels that would be noticeable above and beyond existing ambient levels. It is not expected that affected facilities would exceed noise standards established in local general plans, noise elements, or noise ordinances currently in effect. Affected refineries would be required to comply with local noise ordinances and elements, which may require construction of noise barriers or other noise control devices.

It is also not anticipated that the proposed project will cause an increase in ground borne vibration levels because air pollution control equipment is not typically vibration intensive equipment. Consequently, Rules 12-15 and 12-16 are not expected to directly or indirectly cause substantial noise or excessive ground borne vibration impacts. Noise impacts, therefore, will not be further evaluated in the Draft EIR.

XII. e and f). If applicable, the petroleum refineries affected by the proposed new rules 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. Rules 12-15 and 12-16 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 substantially increase ambient noise levels, either intermittently or permanently.

Conclusion

Based upon the above considerations, no significant adverse project-specific noise impacts are expected due to implementation of Rules 12-15 and 12-16, therefore, noise impacts will not be further evaluated in the Draft EIR.

		Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
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)?	☐	☐	☐	☑
b)	Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑
c)	Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑

Setting

The BAAQMD 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 facilities affected by the proposed Rules 12-15 and 12-16 are refineries within the jurisdiction of the BAAQMD, which are located in industrial areas.

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.

Discussion of Impacts

XIII. a). According to the Association of Bay Area Governments (ABAG), population in the Bay Area is currently about seven million people and is expected to grow to about nine million people by 2035 (ABAG, 2006). 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 Rules 12-15 and 12-16 will affect five refineries located in Contra Costa and Solano counties. It is expected that the existing labor pool would accommodate the labor requirements for any modifications at the affect refineries. In addition, it is not expected that the affected refineries would need to hire additional personnel to operate and maintain new control equipment on site because air pollution control equipment is typically not labor intensive equipment. In the event that new employees are hired, it is

expected that the existing local labor pool in the District can accommodate any increase in demand for workers that might occur as a result of adopting the proposed new regulations. As such, adopting the proposed Rules 12-15 and 12-16 are not expected to induce substantial population growth.

XIII. b and c). Because the proposed new rules include installing air monitoring equipment and possibly air pollution control equipment operated in industrial settings, the proposed Rules 12-15 and 12-16 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, significant population and housing impacts are not expected from the implementation of the proposed new rules.

Conclusion

Based upon the above considerations, significant adverse project-specific impacts to population and housing are not expected to occur due to implementation of Rules 12-15 and 12-16 and, therefore, will not be further evaluated in the Draft EIR.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. 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:				
Fire protection?	☐	☐	☐	☑
Police protection?	☐	☐	☐	☑
Schools?	☐	☐	☐	☑
Parks?	☐	☐	☐	☑
Other public facilities?	☐	☐	☐	☑

Setting

The BAAQMD 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 new rules are primarily located in industrial areas within the Bay Area.

Given the large area covered by the BAAQMD, public services are provided by a wide variety of local agencies. Fire protection and police protection/law enforcement services within the BAAQMD are provided by various districts, organizations, and agencies. There are several school districts, private schools, and park departments within the BAAQMD. Public facilities within the BAAQMD are managed by different county, city, and special-use districts. All refineries affected by the proposed rules, maintain fire-fighting equipment and trained personnel with fire-fighting and emergency response experience. In addition, all affected refineries operated on-site security systems.

Regulatory Background

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

Discussion of Impacts

XIV. a). Rule 12-15 is designed to track air emissions and crude oil characteristics from the five petroleum refineries located within the jurisdiction of the BAAQMD. Rule 12-15 requires recordkeeping and monitoring, while Rule 12-16 requires the development of emission thresholds and ERPs, if those thresholds are exceeded. Rule 12-16 could require the installation of additional air pollution control equipment or modify refinery operations. As stated above, all refineries affected by the proposed rules, maintain on-site fire-fighting equipment and trained personnel with fire-fighting and emergency response experience. While proposed Rules 12-16 could require new construction activities and the operation of new/modified refinery equipment, the additional equipment is not expected to require additional service from local fire departments above current levels.

Refineries maintain their own security systems. Refineries are fenced and access is controlled at manned gates. Refinery would occur within the confines of the existing refineries. Therefore, the proposed project is not expected to increase the need or demand for additional police services above current levels.

As noted in the "Population and Housing" discussion above, the proposed new rules are not expected to induce population growth because the local labor pool (e.g., workforce) is expected to be sufficient to accommodate any activities that may be necessary at affected facilities. Additionally, operation of new air monitoring and air pollution control equipment is not expected to require a substantial increase in employees. Therefore, there will be no increase in local population and thus no impacts are expected to local schools or parks.

Conclusion

Based upon the above considerations, significant adverse project-specific impacts to public services are not expected to occur due to implementation of Rules 12-15 and 12-16 and, therefore, will not be further evaluated in the Draft EIR.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. RECREATION.				
a) Would the project 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) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☑

Setting

The BAAQMD 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 there are numerous areas for recreational activities. The refineries affected by the proposed Rules 12-15 and 12-16 are located in industrial areas within the Bay Area. Public recreational land can be located adjacent to, or in reasonable proximity to, these areas.

As noted in the "Population and Housing" discussion above, the proposed new rules are not expected to induce population growth because the local labor pool (e.g., workforce) is expected to be sufficient to accommodate any activities that may be necessary at affected facilities. Additionally, operation of new air monitoring and air pollution control equipment is not expected to require additional employees. Therefore, there will be no increase in local population and thus no impacts are expected to local schools or parks.

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.

Discussion of Impacts

XV. a and b). As discussed under "Land Use" above, there are no provisions of the proposed new rules that would affect 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 Rules 12-15 and 12-16. Air monitoring equipment would be installed within or adjacent to existing refineries, or on portable trailers, so no changes in land use would be required. Air pollution control equipment, if necessary, would be installed within the confines of existing refineries and would not impact existing recreational facilities.

As noted in the "Population and Housing" discussion above, the proposed new rules are not expected to induce population growth because the local labor pool (e.g., workforce) is expected to be sufficient to accommodate any activities that may be necessary at affected facilities. Additionally, operation of new air monitoring and air pollution control equipment is not expected to require a substantial increase in employees. Therefore, there will be no increase in local population and thus no impacts are expected to local recreational facilities.

Conclusion

Based upon the above considerations, significant adverse project-specific impacts to recreation are not expected to occur due to implementation of Rules 12-15 and 12-16 and, therefore, will not be further evaluated in the Draft EIR.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. TRANSPORTATION/TRAFFIC. Would the project:				
a) 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?	☐	☐	☐	☑
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established b the county congestion management agency for designated roads or highways?	☐	☐	☐	☑
c) 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?	☐	☐	☐	☑
d) Substantially increase hazards because of a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	☐	☐	☐	☑
e) Result in inadequate emergency access?	☐	☐	☐	☑
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☑

Setting

The BAAQMD 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). Transportation systems located within the Bay Area include railroads, airports, waterways, and highways. The Port of Oakland and three international airports in the area serve as hubs for commerce and transportation. 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. In addition, the Bay Area has over 33,000 directional miles of arterials and local streets, providing more localized access to individual communities. Together, these roadway facilities accommodate nearly 17 million vehicle trips a day. There are over 11,500 transit route miles of service including heavy rail (BART), light rail (Muni Metro and VTA Light Rail), commuter rail (Caltrain and ACE), diesel and electric buses, cable cars, and ferries. 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 68 percent in 2010. The portion of commuters that carpool was about 11 percent in 2010, while an additional 10 percent utilize public transit. About 3 percent of commuters walked to work in 2010. In addition, other modes of travel (bicycle, motorcycle, etc.), account for three percent of commuters in 2010 (MTC, 2013). Cars, buses, and commercial vehicles travel about 149 million miles a day (2010) on the Bay Area Freeways and local roads. Transit serves about 1.6 million riders on the average weekday (MTC, 2013).

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. The refineries affected by Rules 12-15 and 12-16 are located in the cities of Richmond, Rodeo, Martinez and Benicia, and are accessed by existing freeways and roads.

Regulatory Background

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

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.

Discussion of Impacts

XVI. a and b). The petroleum refineries affected by the proposed new rules already exist and operate within the confines of existing industrial facilities in the Bay Area. Construction activities would be required to place monitoring stations near/adjacent to the refinery fencelines and within nearby communities. Construction activities could also be required to install air pollution control equipment associated with implementation of ERPs. Any substantial construction activities associated with new refinery equipment would occur within the confines of existing refineries. Construction activities associated with the installation of monitoring equipment is expected to be limited to 1-2 employees and generate minimal traffic. Construction of air pollution control equipment could require more employees and truck delivers if new refineries units were to be construction. Construction activities are temporary and the related construction worker traffic and delivery trucks would cease following completion of construction. No substantial increase in workers or average daily vehicle or truck trips is anticipated as a result of the proposed new rules. Therefore, the proposed rules are not expected to exceed, either individually or cumulatively, the current level of service at intersections in the vicinity of the refineries. The work force at each affected facility is not expected to substantially change as a result of the proposed rules and any permanent increase in operation-related traffic is expected to be minimal. Thus, the traffic impacts associated with the proposed Rules 12-15 and 12-16 are expected to be less than significant.

XVI. c). Rules 12-15 and 12-16 are would not result in a change in air traffic patterns or increase air traffic. Actions that would be taken to comply with the proposed new rules, such as installing of new monitoring or air pollution control equipment, would not influence or affect air traffic patterns. Further, air monitoring or air pollution control equipment are expected to be less than other existing structures at the refinery and would not impact navigable air space. Thus, Rules 12-15 and 12-16 would not result in a change in air traffic patterns including an increase in traffic levels or a change in location that results in substantial safety risks.

XVI. d and e). Rules 12-15 and 12-16 would not alter traffic patterns or existing roadways, as they are not expected to generate any substantial increase in traffic. The new rules would not create any traffic hazards or create incompatible uses at or adjacent to refineries. Any construction activities associated with the proposed new rules would be temporary and located within the confines of the existing refineries. The proposed project is not expected to require a modification to circulation, thus, no long-term impacts on the traffic circulation system are expected to occur. The proposed project does not involve construction of any roadways, so there would be no increase in any roadway design feature that could increase traffic hazards. Emergency access at each refinery would not be impacted by implementation of Rules 12-15 and 12-16. Further, each affected refinery would continue to maintain their existing emergency access gates and installation of monitoring equipment or other refinery equipment is not expected to impact emergency access.

XVI. f). Activities resulting from the proposed Rules 12-15 and 12-16 would not conflict with policies supporting alternative transportation since the proposed new rules does not involve or affect alternative transportation modes (e.g. bicycles or buses). Any construction activities associated with the proposed new rules would be conducted at existing refineries and would be temporary so once completed, transportation, including alternative transportation modes, would not be effected.

Conclusion

Based upon the above considerations, significant adverse project-specific impacts to transportation/traffic are not expected to occur due to implementation of Rules 12-15 and 12-16 and, therefore, will not be further evaluated in the Draft EIR.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
XVII. UTILITIES/SERVICE SYSTEMS. Would the project:					
a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☑
b)	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?	☐	☐	☐	☑
c)	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?	☐	☐	☐	☑
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements needed?	☐	☐	☐	☑
e)	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?	☐	☐	☐	☑
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☑
g)	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☑

Setting

The BAAQMD 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.

Given the large area covered by the BAAQMD, public utilities are provided by a wide variety of local agencies. The affected facilities have wastewater and storm water treatment facilities and discharge treated wastewater under the requirements of NPDES permits.

Water is supplied to affected facilities by several water purveyors in the Bay Area. Solid waste is handled through a variety of municipalities, through recycling activities, and at disposal sites.

There are no hazardous waste disposal sites within the jurisdiction of the BAAQMD. Hazardous waste generated at area facilities, which is not reused on-site, or recycled off-site, is disposed of at a licensed in-state hazardous waste disposal facility. Two hazardous waste disposal facilities are located in California: (1) The Clean Harbors facility in Buttonwillow (Kern County); and (2) the Waste Management facility in Kettleman Hills. Hazardous waste also can be transported to permitted facilities outside of California. The nearest out-of-state landfills are U.S. Ecology, Inc., located in Beatty, Nevada and USPCI, Inc., in Murray, Utah.

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.

Discussion of Impacts

XVII. a, b, d and e). The refineries affected by the proposed Rules 12-15 and 12-16 already exist and already use water, generate wastewater, treat wastewater, and discharge wastewater under existing wastewater discharge permits. The proposed new rules would require air monitoring and potentially additional air pollution control equipment. The potential water use and wastewater impacts associated with implementation of proposed Rules 12-15 and 12-16 will be addressed under Hydrology and Water Quality (see Section IX a.).

XVII. c). Rules 12-15 and 12-16 would require air monitoring and possible air pollution control equipment, but would not alter the existing drainage system or require the construction of new storm water drainage facilities. Nor would the proposed new rules 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.

XVII. f and g). No significant impacts on waste generation are expected from the implementation Rules 12-15 and 12-16 because the rules would require additional air monitoring and potentially additional air pollution control equipment. Air monitoring or air pollution control equipment is not expected to create substantial quantities of solid or hazardous waste. Waste streams from refineries would be processed similarly as current methods, so no significant impact to land disposal facilities would be expected. Therefore, no significant impacts to hazardous waste disposal facilities are expected due to the proposed new rules. Facilities are expected to continue to comply with all applicable federal, state, and local statutes and regulations related to solid and hazardous wastes.

Conclusion

The potential water and wastewater impacts associated with implementation of proposed Rules 12-15 and 12-16 will be addressed under Hydrology and Water Quality (see Section IX above). Based upon the above considerations, no additional significant adverse impacts are expected to storm water drainage, solid waste disposal or landfills due to implementation of Rules 12-15 and 12-16. Therefore, the impacts on utilities will not be further evaluated in the Draft EIR (except for the water and wastewater impacts that will be addressed under Hydrology and Water Quality.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII.	**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?	☑	☐	☐	☐

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

Discussion of Impacts

XVIII. a). Proposed Rules 12-15 and 12-16 do 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. Rules 12-15 would requires recordkeeping and monitoring, while Rule 12-16 would require the development of emission thresholds and ERPs, if those thresholds are exceeded. As discussed in Section IV, Biological Resources and Section V, Cultural Resources, no significant adverse impacts are expected to biological or cultural resources, as any construction activities are expected to remain within the confines of existing refineries, which have already been graded and developed.

XVIII. b and c). Rule 12-15 requires recordkeeping and monitoring, while Rule 12-16 requires the development of emission thresholds and ERPs, if those thresholds are exceeded. The proposed project could require construction and installation of new air pollution control equipment which could result in secondary air emissions as well as additional GHG emissions. Therefore, the potential health and cumulative impacts associated with implementation of Rules 12-15 and 12-16 will be evaluated in the Draft EIR.

The 2010 CAP includes measures to reduce criteria pollutants, toxic air contaminants, and GHG emissions and estimates that implementation of the 2010 CAP would result in a reduction of over 15,000 metric tons per day or over five million metric tons per year (BAAQMD, 2010). Therefore, implementation of Rules 12-15 and 12-16, in connection with other 2010 CAP measures, is not expected to be cumulatively significant. Nonetheless, the project-specific impacts of Rules 12-15 and 12-16 on air quality and GHG emissions will be evaluated in the Draft EIR.

Chapter 3

References

Association of Bay Area Governments, 2006. Projections 2007, December 2006.

BAAQMD, 2010. Bay Area 2010 Clean Air Action Plan, September 15, 2010.

Metropolitan Transportation Commission (MTC), 2013. Environmental Impact Report Plan Bay Area Draft. Metropolitan Transportation Commission and Bay Area Association of Governments. April, 2013.