

**Initial Study/Negative Declaration for the
Bay Area Air Quality Management District**

**BAAQMD Regulation 12, Rule 15 (Regulation 12-15):
Petroleum Refining Emissions Tracking**

Prepared for:

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CHAPTER 1

Introduction

1.1 PURPOSE OF THIS DOCUMENT

This Negative Declaration assesses the environmental impacts of the proposed Regulation 12-15: Petroleum Refining Emissions Tracking (proposed project) by the Bay Area Air Quality Management District (BAAQMD or District). This assessment is required by the California Environmental Quality Act (CEQA) and in compliance with the state CEQA Guidelines (Title 14 California Code of Regulations §15000 et seq.). A Negative Declaration serves as an informational document to be used in the decision-making process for a public agency that intends to carry out a project, it does not recommend approval or denial of the project analyzed in the document. The BAAQMD is the lead agency under CEQA and must consider the impacts of the proposed new rule when determining whether to adopt the proposed project. The BAAQMD has prepared this Negative Declaration because no significant adverse impacts are expected to result from the Petroleum Refinery Emissions Tracking rule.

1.2 SCOPE OF THIS DOCUMENT

This document evaluates the potential impacts of the proposed amendments on the following resource areas:

- 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, and
- utilities / service systems.

1.3 IMPACT TERMINOLOGY

The following terminology is used in this Initial Study/Negative Declaration to describe the levels of significance of impacts that would result from the proposed rule amendments:

- An impact is considered *beneficial* when the analysis concludes that the project would have a positive effect on a particular resource.
- A conclusion of *no impact* is appropriate when the analysis concludes that there would be no impact on a particular resource from the proposed project.
- An impact is considered *less than significant* if the analysis concludes that an impact on a particular resource topic would not be significant (i.e., would not exceed certain criteria or guidelines established by BAAQMD). Impacts are frequently considered less than significant when the changes are minor relative to the size of the available resource base or would not change an existing resource.
- An impact is considered *less than significant with mitigation incorporated* if the analysis concludes that an impact on a particular resource topic would be significant (i.e., would exceed certain criteria or guidelines established by BAAQMD), but would be reduced to a less than significant level through the implementation of mitigation measures.

1.4 ORGANIZATION OF THIS DOCUMENT

The content and format of this document, described below, are designed to meet the requirements of CEQA.

- Chapter 1, “Introduction,” identifies the purpose, scope and terminology of the document.

- Chapter 2, “Description of the Proposed Rule,” provides background information of Petroleum Refinery Emissions Reduction Strategy, describes the proposed rule, and describes the area and facilities that would be affected by the rules.
- Chapter 3, “Environmental Checklist,” presents the checklist responses for each resource topic. This chapter includes a brief setting description for each resource area and identifies the impact of the proposed rule amendments on the resources topics listed in the checklist.
- Chapter 4, “References,” identifies all printed references and personal communications cited in this report.

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CHAPTER 2

Description of the Proposed Rule

2.1 INTRODUCTION

The Bay Area Air Quality Management District (BAAQMD or District) is proposing a new rule that would apply to petroleum refineries located in the San Francisco Bay Area. The proposed new rule is Regulation 12, Rule 15 (Regulation 12-15): Petroleum Refining Emissions Tracking (herein “Tracking Rule”).

Rule 12-15 would require that all Bay Area refineries:

1. Submit consistent, enhanced periodic emissions inventory information, including information about cargo carriers;
2. Submit periodic crude slate information, including volumes and composition data, for imported pre-processed feedstocks as well as for crude oil;
3. Install and operate new air monitoring facilities at refinery fence lines and in nearby communities; and
4. Submit available energy utilization analyses.

2.2 PROJECT LOCATION

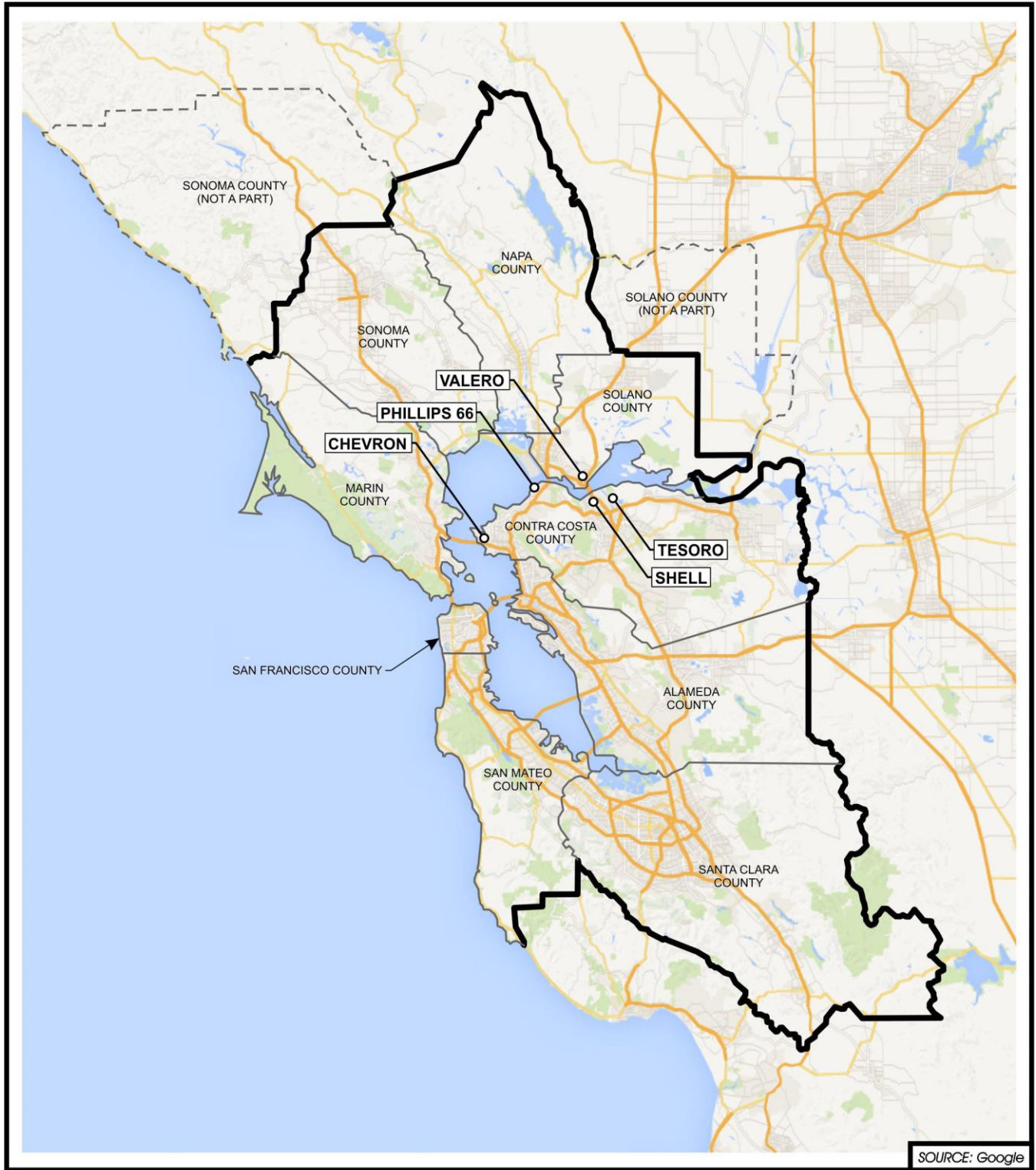
The BAAQMD has jurisdiction of an area encompassing 5,600 square miles. The Air District includes all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties, and portions of southwestern Solano and southern Sonoma counties. The San Francisco Bay Area is characterized 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 2.2-1). Proposed Regulation 12-15 would affect five refineries within the Bay Area:


1. Chevron Products Company, Richmond (BAAQMD Plant #10)
2. Phillips 66 Company—San Francisco Refinery, Rodeo (BAAQMD Plant #21359)
3. Shell Martinez Refinery, Martinez (BAAQMD Plant #11)
4. Tesoro Refining and Marketing Company, Martinez (BAAQMD Plant #14628)
5. Valero Refining Company—California, Benicia (BAAQMD Plant #12626)

Regulation 12-15 would also apply to five refinery-related facilities (“support facilities” in the draft rule):

1. Chemtrade West sulfuric acid plant, Richmond (BAAQMD Plant #23)
2. Eco Services sulfuric acid plant, Martinez (BAAQMD Plant #22789)
3. Air Products and Chemicals hydrogen plant, Martinez (BAAQMD Plant #10295)
4. Air Liquide hydrogen plant, Rodeo (BAAQMD Plant #17419)
5. Phillips 66 coke calcining plant, Rodeo (BAAQMD Plant #21360)

These five support facilities are included in the rule because their operation is closely linked to the operations of the five refineries and because they are significant sources of air pollutants. Support facilities would be subject only to emissions inventory requirements would not be required to install or operate air monitoring systems.



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BAY AREA AIR QUALITY MANAGEMENT DISTRICT

2.3 OBJECTIVES

The U.S. EPA has set primary national ambient air quality standards for air pollutants to define the levels considered safe for human health. The California Air Resources Board (CARB) has also set California ambient air quality standards. The Bay Area is a non-attainment area for the state one-hour ozone standard and federal eight-hour ozone standard. In addition, the Bay Area is not in attainment of California ambient air standards for particulate matter of 10 microns or less (PM10) or PM2.5. The ultimate goal of the District's rules and regulations is to attain and maintain compliance with the state and federal ambient air quality standards.

The objective of the proposed new rule is for the District to gather additional emissions inventory and crude slate information from refineries and increase air monitoring activities at refinery fence lines and in nearby communities. The collection of energy efficiency information would allow comparisons on a refinery-by-refinery basis and aid in the potential identification of possible increases in efficiency of equipment and processes.

The specific objectives of the proposed rule amendments for the District are the following:

- Accurately and consistently characterize emissions of all pollutants (criteria, toxic, and greenhouse gases) from refinery-related emissions sources in an on-going basis to determine if there is room for improvement;
- Determine if significant changes to the crude slate (such as the refining of heavier and/or more sour crude oil) result in increased emissions of air pollutants.
- Determine areas of less-than-optimum energy efficiency at the refineries; and
- Provide information to the public on refinery emissions and significant crude slate changes.

2.4 BACKGROUND

The District is proposing Regulation 12-15, the details of which are summarized in this subsection. The specific proposed rule is included in Appendix A of this Negative Declaration.

Currently five petroleum refineries are located in the Bay Area within the jurisdiction of the Air District (see Figure 2.2-1):

1. Chevron Products Company, Richmond (BAAQMD Plant #10)
2. Phillips 66 Company—San Francisco Refinery, Rodeo (BAAQMD Plant #21359)
3. Shell Martinez Refinery, Martinez (BAAQMD Plant #11)
4. Tesoro Refining and Marketing Company, Martinez (BAAQMD Plant #14628)
5. Valero Refining Company—California, Benicia (BAAQMD Plant #12626)

Regulation 12-15 would also apply to five refinery-related facilities ("support facilities" in the draft rule):

1. Chemtrade West sulfuric acid plant, Richmond (BAAQMD Plant #23)
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3. Air Products and Chemicals hydrogen plant, Martinez (BAAQMD Plant #10295)
4. Air Liquide hydrogen plant, Rodeo (BAAQMD Plant #17419)
5. Phillips 66 coke calcining plant, Rodeo (BAAQMD Plant #21360)

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).

Air pollutants are categorized and regulated based on their properties and there are three primary categories of regulated air pollutants: (1) criteria pollutants; (2) toxic air contaminants (TACs); and (3) greenhouse gas emissions (GHGs). Additional categories of air pollutants 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 (NO₂) and oxides of nitrogen (NO_x); (3) PM₁₀; and PM_{2.5}; (4) volatile organic compounds (VOC); and SO₂. Each of these criteria pollutants are emitted by petroleum refineries.

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.

Climate pollutants (e.g., greenhouse gases, or GHGs) are emissions that include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and three groups of fluorinated compounds (i.e., hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆)), and are the major anthropogenic GHGs. GHGs emitted from petroleum refineries include CO₂, CH₄ and N₂O.

The proposed regulatory approach for Regulation 12-15 is as follows:

- Report on-going annual emissions inventories of all regulated air pollutants based on consistent upgraded methods, including emissions from cargo carriers;
- Report on-going crude oil and other pre-processed feedstock volumes and characteristics with annual emissions inventories, as well as historic crude oil and feedstock data;
- Report Energy Utilization Analysis results so that the Air District can determine which refineries have options for reducing GHG emissions through economically and technically feasible improvements in energy efficiency; and

- Establish new fence-line and community air monitoring systems.

2.5 PROJECT DESCRIPTION

Regulation 12-15 is referred to as the refinery Tracking Rule and includes requirements to track and monitor criteria and toxic air emissions from refineries (GHG emissions are also required to be tracked), which are summarized below.

2.5.1 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. These terms are defined in the proposed rule. The definition of TAC 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 health risks. GHGs are included in the proposed rule and are required to be reported to address climate change issues.

Odororous 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 odororous compound emitted from refineries, is a covered TAC; visible emissions are typically fine particulate matter (PM_{2.5}), a covered criteria pollutant).

2.5.2 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 in which Air District desires to understand emissions from these mobile sources, such as when ships and trains are unloading or loading products at the refinery, and thus are included in the requirements of the rule. This concept is addressed in the definition of “emissions inventory” in the proposed rule. Several other definitions in the proposed rule are intended to clarify source coverage. This includes the definition of “petroleum refinery”, the definition of “source”, and the definition of “emissions inventory.”

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).

Processing crude oil from new sources may result in increased emissions. As a result, the draft Tracking Rule would require that each refinery report its “crude slate” as defined in the proposed

rule, including sulfur and nitrogen content, API gravity, total acid number, and other specified properties. By gathering this information about crude oil and other pre-processed feedstocks fed into the refinery processes, the Air District will be better able to enforce existing permitting regulations related to modification of sources.

2.5.3 ADMINISTRATIVE REQUIREMENTS

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

2.5.3.1 Emissions Inventories

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.

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, the Tracking Rule does not include detailed emissions inventory methodologies. The 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. The proposed rule requires that emissions inventories submitted under the rule must be prepared following District-published guidelines.

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).

2.5.3.2 Crude Slate Report

The crude slate report required as part of Rule 12–15 will address the following parameters:

- Total volume processed by the crude unit(s) and other pre-processed feedstocks that are refined, blended, or processed at other process units;
- API gravity as it relates to higher crude density;
- Sulfur content;
- Nitrogen content;

- Acid content;
- Vapor pressure;
- Total Reduced Sulfur (hydrogen sulfide and mercaptan content);
- Benzene, toluene, ethylbenzene, and xylenes (BTEX) contents; and
- Selected metals (nickel, vanadium, and iron) content.

The refinery operators are required to collect monthly values on each of these parameters and report that information to the District on an annual basis.

2.5.3.3 Energy Utilization Analysis

Although the GHG Cap-and-Trade program under AB 32 requires an overall GHG emission reduction in the state, it is possible that Bay Area refineries will partially meet their GHG reduction requirements by purchasing GHG allowances generated outside the Bay Area.

The Energy Utilization Analysis element of Rule 12-15 would provide refinery data that District staff could use to determine areas of possible improvement in energy efficiency at the Bay Area refineries. If there are areas of energy management that can be significantly improved, and especially if the refineries opt to purchase GHG allowances rather than implement best practices in energy management, the Energy Utilization Analysis would allow Air District staff to pursue rule-making to achieve GHG emission reductions at Bay Area refineries in order to ensure the achievement of GHG emissions reduction goals.

2.5.4 MONITORING REQUIREMENTS

The proposed Tracking Rule would require the refinery owner/operator to prepare and submit to the District an air monitoring plan for establishing and operating a fence-line monitoring system and a community air monitoring system. The terms “fence-line monitoring system” and “community air monitoring system” are defined in the proposed rule. The air monitoring plans would need to be prepared in accordance with air monitoring guidelines that are published by the District.

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 District’s Work Plan for Action Items Related to Accidental Releases from Industrial Facilities. Under this Action Item, the District 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 District in developing the air monitoring guidelines.

Under the proposed rule, within one year of 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 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.

The Air District would review the initial air monitoring guideline document within a five-year period of the publication of the initial guideline document. The guidelines would be updated if necessary 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.

2.6 AFFECTED AREA

The proposed project would apply to petroleum refineries under BAAQMD jurisdiction. The BAAQMD jurisdiction 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 (approximately 5,600 square miles). 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.

BAAQMD proposes to regulate criteria pollutants, GHG, and TAC from the five Bay Area refineries and associated facilities. The equipment affected by the proposed project are located within the jurisdiction of the Bay Area Air Quality Management District (see Figure 2.2-1).

CHAPTER 3

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.
Lead Agency Name:	Bay Area Air Quality Management District
Lead Agency Address:	939 Ellis Street San Francisco, California 94109
Contact Person:	Victor Douglas
Contact Phone Number:	415-749-4752
Project Location:	Proposed Regulation 12-15 would apply to the five refineries and five proximate support facilities 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:	Regulation 12-15 would apply to refineries and five proximate support facilities in the Bay Area, which are primarily located in industrial areas.
Zoning:	See "General Plan Designation" above.
Description of Project:	See "Background" in Chapter 2.
Surrounding Land Uses and Setting:	See "Affected Area" in Chapter 2.
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 "✓" 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.

- | | | |
|---|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology / Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology / Water Quality |
| <input type="checkbox"/> Land Use / Planning | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population / Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation / Traffic | <input type="checkbox"/> Utilities / Service Systems | <input type="checkbox"/> 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.
- 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.

Signature:

Date:

Printed Name:

Date:

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage to scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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. Four of the refineries affected by the proposed rule are located in Contra Costa County and one is located in Solano County (Valero). The five affected support facilities are located in Contra Costa County.

The proposed new rule focuses on tracking air emissions and crude oil volumes and quality characteristics at Bay Area petroleum refineries over time, and establishing monitoring systems to provide detailed air quality data along refinery boundaries and in nearby communities. The proposed new rule will affect five refineries and five proximate support facilities 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 Regulation 12-15 would require reporting of air emissions, and reporting of volume and characteristics of crude oil and other feedstocks, and reporting of data related to energy management, and require construction and operation of air monitoring systems. The construction and operation of air monitoring systems (both within fencelines and in surrounding communities) are the only physical impacts that would result from this rule, and these air monitoring systems would be required for the five affected refineries, but NOT for the five proximate support facilities.

Regulation 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. Regulation 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 Regulation 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 8-10 feet. Since the monitoring stations are located within the community, they would be adjacent to or near existing buildings and residential areas. Therefore, they would not be expected to impact scenic resources or vistas or degrade the existing visual character of any site or its surroundings.

I. d). 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. No new light sources are expected as a result of the proposed new Rule as the monitoring stations are not expected to require lighting. Most local land use agencies have ordinances that limit the intensity of lighting and its effects on adjacent property owners. Therefore, the proposed new rule is not expected to have significant adverse light and glare impacts to the surrounding community.

Conclusion

Based upon the above considerations, no significant adverse impacts to aesthetics are expected to occur due to implementation of Regulation 12-15.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
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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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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 rule focuses on tracking air emissions and crude oil quality characteristics from Bay Area petroleum refineries over time and establishing monitoring systems to provide detailed air quality data along refinery boundaries and in nearby communities. The proposed new rule will affect five refineries and five support facilities 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 or facilities that would be required to comply with Regulation 12-15.

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 be required to comply with reporting and monitoring activities associated with proposed Regulation 12-15. Construction activities for the new monitoring stations are expected to be limited to, or adjacent 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, no significant adverse impacts to agriculture and forest resources are expected to occur due to implementation of Regulation 12-15.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
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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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Violate any air quality standard or contribute to an existing or projected air quality violation? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Expose sensitive receptors to substantial pollutant concentrations? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Create objectionable odors affecting a substantial number of people? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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 (NO₂), particulate matter less than 10 microns in diameter (PM₁₀), particulate matter less than 2.5 microns in diameter (PM_{2.5}), sulfur dioxide (SO₂), 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 (NO_x), and SO₂ and the federal 24-hour PM_{2.5} standard. The Air District is not considered to be in

attainment with the State PM₁₀ and PM_{2.5} standards, as the Bay Area is designated as non-attainment for the federal 8-hour and California 1- and 8-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, 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 District through federal, state, and local programs. At the federal level, TACs are regulated primarily under the authority of the CAA. Title III of the 1990 CAA amendments required U.S. EPA to promulgate National Emission Standards for Hazardous Air Pollutants (NESHAPs) 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. NESHAPs for various hazardous air pollutants have been promulgated since 1992.

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 will 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 TAC 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 Regulation 12-15 is 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 District's Board of Directors on September 15, 2010, and is the approved air quality plan that the District operates under. The proposed new Regulation 12-15 would require reporting of air emissions, and reporting of volume and characteristics of crude oil and other feedstocks, and reporting of data related to energy management, and require construction and operation of air monitoring systems. The construction and operation of air monitoring systems (both within fencelines and in surrounding communities) are the only physical impacts that would result from this rule, and these air monitoring systems would be required for the five affected refineries, but NOT for the five proximate support facilities. Proposed Regulation 12-15 would not conflict with or obstruct implementation of the 2010 CAP as it would not interfere with any other District rules and regulations.

III. b, c, and d). The proposed new Regulation 12-15 would require reporting of air emissions, and reporting of volume and characteristics of crude oil and other feedstocks, and reporting of data related to energy management, and require construction and operation of air monitoring systems. The construction and operation of air monitoring systems (both within fencelines and in surrounding communities) are the only physical impacts that would result from this rule, and these air monitoring systems would be required for the five affected refineries, but NOT for the five proximate support facilities. Regulation 12-15 would require increased TAC monitoring at refinery fence lines and in nearby communities. Installation of air monitors has the potential to require some construction, but construction activities would be minimal and would not contribute to significant adverse construction air quality impacts as explained in the following paragraph.

It is expected that fence line air samplers would be similar to samplers such as the Xonteck Model 924 Toxic Air Sampler, which is designed for unattended field use to collect ambient air samples for laboratory analysis of toxic compounds. The sampler is modular in design for ease of assembly, installation, operation and service. The air sampler typically consists of a control unit, pump box assembly, rain shield, sampling head mount and has a temperature-controlled heater and fans for cold or hot weather operation. For onsite fenceline monitoring, this type of air sampler is simply secured in place, typically using hand tools, and needs no other construction equipment or activities except for one medium-duty truck to deliver the necessary number of monitors. For community monitoring, depending on the location, some minor construction may be necessary to build fences or other types of structures for security purposes. In this situation construction would likely require, one medium-duty truck to deliver monitors, a construction crew of three workers, a posthole digger, forklift, and hand tools. Based on this scenario, installation of air monitors would result in less than significant construction emissions.

Once data are collected, Regulation 12-15 does not impose any air pollution control requirements. CEQA recognizes that regulatory requirements consisting of data collection or information gathering, for example, do not typically generate environmental impacts (see for example, CEQA Guidelines §15306). Regulation 12-15 has been evaluated and it has been concluded that it has no potential to generate any other potentially significant adverse air quality impacts.

III. e). Regulation 12-15 would track air emissions and crude oil characteristics from Bay Area petroleum refineries and establish monitoring systems. The proposed new Rule would not result in an increase in odorous emissions at the refineries. Odorous emissions are not specifically proposed to be covered by Regulation 12-15. The information gathered as part of proposed Regulation 12-15 may be used to develop emission limitations which could include odorous emissions. Therefore, the proposed new regulation are not expected to result in an increase in the generation of emissions that could generation odors.

Conclusion

Based upon the above considerations, no significant adverse impacts to air quality, air quality plans, or the generation of odors are expected to occur due to implementation of Regulation 12-15.

	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflicting with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 rule 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 rule are located in Contra Costa County and one is located in Solano County (Valero). The refineries affected by the proposed new regulation 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 Rule which would apply to existing refineries. Monitoring and reporting of refinery emissions and crude oil characteristics, as well as collecting energy efficiency information associated with the proposed new rule will occur 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 equipment within existing refineries or small portable monitoring stations in nearby developed communities. Construction associated with monitoring equipment whether on fence lines or in nearby communities will be minimal, and would take place within the existing refineries or within already developed areas (e.g., residential areas) 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 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). Installation of monitoring equipment at refineries and neighboring communities would be consistent with industrial land uses. The operating portions of the existing refineries do not usually contain marshes, vernal pools, wetlands, etc. Therefore, construction would not impact these biological resources. For these reasons the proposed new Rule is 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 Regulation 12-15 is 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 Rule is 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, no significant adverse impacts to biological resources are expected to occur due to implementation of Regulation 12-15.

	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 rule 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 rule which would apply to existing refineries. Monitoring and reporting of refinery emissions and crude oil characteristics, as well as collecting energy efficiency information associated with the proposed new rule will occur 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. 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, no significant adverse impacts to cultural resources are expected to occur due to implementation of Regulation 12-15.

	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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 rule are located primarily in industrial areas within the Bay Area.

The affected petroleum refineries and support facilities 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.

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

1. Chevron Richmond: The portions of the refinery immediately adjacent to the Bay are identified as areas subject to liquefaction. A landslide area is noted in the upper portions of the hill. No faults are identified in the immediate area of the refinery.
2. Shell Martinez: The portions of the refinery immediately adjacent to the Bay are identified as areas subject to liquefaction. Generally, areas southwest of Highway 680 are not subject to liquefaction, which is where the operating portion of the refinery is located. A portion of the Concord fault is located east of Highway 680 and east of the

Shell Refinery. A portion of the Southhampton fault is located west of the refinery. No landslides have been identified in the vicinity of the refinery.

3. Tesoro Martinez: The portions of the refinery immediately adjacent to the Bay are identified as areas subject to liquefaction. The operating refinery is generally located outside of the areas subject to liquefaction. A portion of the Concord fault is located east of Highway 680 and west of the Tesoro Refinery. A portion of the Southhampton fault is located west of the refinery. No landslides have been identified in the vicinity of the refinery.
4. Valero Benicia: The operating portions of the refinery are not subject to liquefaction. The refinery is located west of the Concord fault and east of the Southhampton fault. No landslides have been identified in the vicinity of the refinery.
5. Phillips 66 Rodeo: Areas along the northeastern and southwestern boundaries of the refinery may be subject to liquefaction. The Franklin fault is located east of the refinery. No landslides have been identified in the vicinity of the refinery.

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

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 and support facilities 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. The California Building Code is considered to be a standard safeguard against major structural failures and loss of life. Any construction at industrial facilities would be 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. 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 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. Monitoring equipment would be placed within the confines of or adjacent to the existing refineries which are already graded and developed. Proposed Regulation 12-15 is 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. Regulation 12-15 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 Regulation 12-15.

Conclusion

Based upon the above considerations, no significant adverse impacts to geology and soils are expected to occur due to implementation of Regulation 12-15.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
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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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
-

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 (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), 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.) may have 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 required 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 committed to achieving an 80 percent reduction below 1990 levels by 2050. CARB has implemented these mandates through adoption of regulatory requirements to reduce GHG emissions (among other agency implementation actions). All refineries affected by the proposed new regulations 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 required 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). Proposed Regulation 12-15 would require reporting of air emissions, and reporting of volume and characteristics of crude oil and other feedstocks, and reporting of data related to energy management, and require construction and operation of air monitoring systems. The construction and operation of air monitoring systems (both within fencelines and in surrounding communities) are the only physical impacts that would result from this rule, and these air monitoring systems would be required for the five affected refineries, but NOT for the five proximate support facilities. Installation of air monitors has the potential to require some construction, but construction activities would be minimal and would not contribute to significant adverse construction greenhouse gas emissions impacts as explained in the following paragraph.

It is expected that fence line air samplers would be similar to samplers such as the Xonteck Model 924 Toxic Air Sampler, which is designed for unattended field use to collect ambient air samples for laboratory analysis of toxic compounds. The sampler is modular in design for ease of assembly, installation, operation and service. The air sampler typically consists of a control unit, pump box assembly, rain shield, sampling head mount and has a temperature-controlled heater and fans for cold or hot weather operation. For onsite fenceline monitoring, this type of air sampler is simply secured in place, typically using hand tools, and needs no other construction equipment or activities except for one medium-

duty truck to deliver the necessary number of monitors. For community monitoring, depending on the location, some minor construction may be necessary to build fences or other types of structures for security purposes. In this situation construction would likely require, one medium-duty truck to deliver monitors, a construction crew of three workers, a posthole digger, forklift, and hand tools. Based on this scenario, installation of air monitors would result in less than significant construction emissions.

VII. b). All refineries affected by the proposed new regulation are regulated under CARB's AB32 cap and trade program. Regulation 12-15 requires monitoring and recordkeeping for various refinery emissions, including GHG emissions. As such, the proposed new rule is not expected to conflict with an existing plan, policy or regulation.

Conclusion

Based upon the above considerations, no significant adverse impacts to greenhouse gas emissions are expected to occur due to implementation of Regulation 12-15.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
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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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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 refineries affected by the proposed new rule are located in industrial areas.

Regulatory Background

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

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

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

Affected facilities that store materials are required to have a Spill Prevention Control and Countermeasures (SPCC) Plan per the requirements of 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 Regulation 12-15 is a monitoring and recordkeeping rule that is not expected to generate additional hazards. Proposed Regulation 12-15 does not have the potential to create direct or indirect hazard impacts associated with refinery modifications. Any construction associated the proposed project would be limited to the installation of monitoring stations primarily located within the confines of or adjacent to existing refineries and are not associated with hazards or hazardous materials in any way. The proposed project is not expected to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Additionally, the proposed project is not expected to 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 or emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Therefore, the proposed project is not expected to have a significant adverse impact on hazards and hazardous materials.

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 rule 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 Rule 12-15 is not expected to interfere with site cleanup activities or create additional site contamination. Therefore, the proposed project is not expected to create a significant hazard to the public or the environment.

VIII. e and f). Regulation 12-15 is 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 rule 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 or adjacent 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 rule that would apply to existing petroleum refineries. The refineries affected by the proposed new rule 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 rule is 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 Regulation 12-15. 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. Regulation 12-15 is not expected to increase the risk of hazards associated with wildland fires in general and specifically in areas with flammable materials. Therefore, Regulation 12-15 would not expose people or structures to significant risk of loss, injury or death involving wildland fires.

Conclusion

Based upon the above considerations, no significant adverse impacts to hazards and hazardous materials are expected to occur due to implementation of Regulation 12-15.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
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IX. HYDROLOGY AND WATER QUALITY.

Would the project:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Violate any water quality standards or waste discharge requirements? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Otherwise substantially degrade water quality? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| i) Expose people or structures to a significant risk of | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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

The petroleum refineries and support facilities 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 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). Proposed Regulation 12-15 is a monitoring and recordkeeping rule. Any construction associated the proposed project would be limited to the installation of monitoring stations primarily located within the confines of or adjacent to existing refineries and are not associated with hydrology and water quality. 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. Volume or discharge limits would not change as a result of implementing the proposed project. Implementation of Regulation 12-15 would not violate any water quality standards or waste discharge requirements, substantially deplete groundwater supplies or interfere substantially with groundwater recharge, or otherwise substantially degrade water quality. Therefore, no significant adverse impacts on hydrology or water quality are expected.

IX. c, d, and e). Regulation 12-15 is a recordkeeping/monitoring rule that would require the installation of fence-line 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. 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 areas that have already been graded. In addition, storm water drainage within refineries has been controlled and minor 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 rule is not expected to create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of contaminated runoff. Therefore, no significant adverse impacts to storm water runoff are expected as a result of the proposed project.

IX. g, 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. Therefore, impacts associated with the proposed project regarding flooding, seiche, tsunami, or mudflow are expected to be less than significant.

Conclusion

Based upon the above considerations, no significant adverse impacts to hydrology and water quality are expected to occur due to implementation of Regulation 12-15.

	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 rule is 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 rule would be required to place monitoring stations near/adjacent to the refinery fencelines and within nearby communities. For onsite fence line monitoring this type of air sampler is simply secured in place, typically using hand tools, and needs no other construction equipment or activities except for one medium-duty truck to deliver the necessary number of monitors. For community monitoring, depending on the location, some minor construction may be necessary to build fences or other types of structures for security purposes. In this situation construction would likely require, one medium-duty truck to deliver monitors, a construction crew of three workers, a posthole digger, forklift, and hand tools. The land use within the

refineries is zoned for heavy industrial uses. Land uses surrounding the refineries can vary considerably and include industrial areas, commercial areas, open space, and residential areas.

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

1. Richmond General Plan 2030 includes the following land use policies regarding industrial areas (Richmond, 2015).
 - Action LU3.H Industrial Lands Retention and Consolidation Ensure that industrial uses are consolidated around rail and port facilities and work with existing industrial operators, economists and commercial brokers to remain informed about the future demand for industrial land.
 - Action LU3.I Industrial Modernization Support heavy industry's on-going efforts to modernize and upgrade their plants to reduce energy use, increase efficiency and reduce emissions.
2. City of Martinez General Plan includes the following land use policies regarding industrial areas (Martinez, 2015).
 - 21.51 Expansion of the petroleum refining and related industries must proceed in an orderly fashion and be consistent with protection of the community's air, water, scenic and fiscal resources.
 - 30.351 Adequate land for industrial growth and development should be provided. It is the policy of the City to encourage and assist existing industry to relocate away from the southern perimeter of the waterfront.
 - 30.352 The City should consider further annexation to the east of the current Martinez City Limits to provide space for expansion of industry.
 - 30.353 Industrial expansion accompanied by adverse environmental impact will not be permitted.
 - 30.354 Acceptability of any industry shall be based upon its demonstrated ability to conform to performance standards set by the City.
 - 30.355 Architecture of some merit and landscaping of building sites and parking areas should be required; according to design and landscaping criteria for industrial sites.
3. City of Benicia General Plan includes the following land use policies regarding industrial areas (Benicia, 2015).
 - **POLICY 2.6.1:** Preserve industrial land for industrial purposes and certain compatible "service commercial" and ancillary on-site retail uses.

- “Compatible,” as defined in the California General Plan Glossary, means “capable of existing together without conflict or detrimental effects.” Compatibility will often be decided on a case-by-case basis by the Planning Commission and City Council.
 - **POLICY 2.6.2:** Other land uses should not adversely affect existing industrial and commercial land uses.
 - Program 2.6.A: Where General Plan amendments propose to convert industrial land to non-industrial or non-commercial uses, require the preparation of a fiscal and economic impact analysis to ensure that the conversion does not adversely affect the city’s long-term economic development, or the economic vitality of existing industrial/commercial uses.
 - Program 2.6.B: Develop criteria for evaluating whether a proposed non-industrial/non-commercial use would impact the viability of existing industrial/commercial uses. Use the criteria to evaluate non-industrial and non-commercial projects proposed in the Industrial Park.
 - **POLICY 2.6.3:** Facilitate continued development of the Industrial Park. Especially encourage general industrial uses to locate in the basin northeast of Downtown (around Industrial Way between East Second and the freeway).
 - Program 2.6.C: For lands designated limited industrial, reduce the length of time and number of steps required for development proposals to proceed, consistent with CEQA, community development policies and ordinances, and the design review process for general industrial lands.
 - **POLICY 2.6.4:** Link any expansion of Industrial land use to the provision of infrastructure and public services that are to be developed and in place prior to the expansion.
 - Program 2.6.D: Continue to update the overall capital improvements program and infrastructure financing plan for the Industrial Park and other major industrial areas.
 - Program 2.6.E: Develop Industrial Park infrastructure and public services standards, as approved by the City Council.
 - **POLICY 2.6.5:** Establish and maintain a land buffer between industrial/commercial uses and existing and future residential uses for reasons of health, safety, and quality of life.
 - Program 2.6.F: Use topography, landscaping, and distance as a buffer between Industrial Park uses and residential uses.
 - A buffer is “adequate” to the extent that it physically and psychologically separates uses or properties so as to shield, reduce, or block one set of properties from noise, light, or other nuisances generated on or by the other set of properties. Buffers will be determined on a case by case basis.
4. Rodeo: The Contra Costa General Plan Land Use Element identifies the following land use policies (CCC, 2015).
- 3.163. A buffer of agricultural lands around the eastern Union Oil (currently Phillips 66) property is created in this plan to separate the viewpoint residential area from future industrial development on the property. These open space lands should remain undeveloped.

Based on a review of the applicable land use plans, the construction of equipment within the confines of existing refineries is not expected to conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project. The jurisdictions with land use approval recognize and support the continued use of industrial facilities. The minor construction required to comply with the proposed new rule would not interfere with those policies or objectives.

The installation of air monitors would not physically divide an established community, conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project, or conflict with any applicable habitat conservation plan or natural community conservation plan. Therefore, land use and planning impacts associated with the proposed Regulation 12-15 are expected to be less than significant.

Conclusion

Based upon the above considerations, no significant adverse impacts to land use and planning are expected to occur due to implementation of Regulation 12-15.

	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 Regulation 12-15 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). Regulation 12-15 would require the installation of fenceline monitors as well as a community monitoring station near each refinery. The proposed new rule is 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 as a result of the proposed project.

Conclusion

Based upon the above considerations, no significant adverse impacts to mineral resources are expected to occur due to implementation of Regulation 12-15.

	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 rule 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 and proximate support facilities affected by the proposed new 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. For onsite fence line monitoring this type of air sampler is simply secured in place, typically using hand tools, and needs no other construction equipment or activities except for one medium-duty truck to deliver the necessary number of monitors. For community monitoring, depending on the location, some minor construction may be necessary to build fences or other types of structures for security purposes. In this situation construction would likely require, one medium-duty truck to deliver monitors, a construction crew of three workers, a posthole digger, forklift, and hand tools. 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 monitoring 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 monitoring equipment is not typically vibration intensive equipment. Consequently, Regulation 12-15 is not expected to directly or indirectly cause substantial noise or excessive ground borne vibration impacts, thus, noise impacts are considered to be less than significant.

XII. e and f). If applicable, the petroleum refineries affected by the proposed new rule 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.

Regulation 12-15 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 regulation that would substantially increase ambient noise levels, either intermittently or permanently.

Conclusion

Based upon the above considerations, no significant adverse impacts to noise are expected to occur due to implementation of Regulation 12-15.

	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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 Regulation 12-15 are refineries within the jurisdiction of the BAAQMD, which are located in industrial areas. The population in the Bay Area is currently about 7.2 million people, which is expected to grow to about 9.3 million people by 2040, which is an increase in population of about 30 percent. The number of jobs is expected to grow by 1.1 million between 2010 and 2040, an increase of 33 percent (MTC, 2013).

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). 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 Regulation 12-15 will affect five refineries and five proximate support facilities 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 monitoring equipment on site because air monitoring 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 regulation. As such, adopting the proposed Regulation 12-15 is not expected to induce substantial population growth.

XIII. b and c). Because the proposed new rule includes requirements to establish monitoring and reporting of refinery emissions and crude oil characteristics, the proposed Regulation 12-15 is 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 rule.

Conclusion

Based upon the above considerations, no significant adverse impacts to population and housing are expected to occur due to implementation of Regulation 12-15.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 rule are 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). Regulation 12-15 is designed to establish monitoring and reporting of refinery emissions and crude oil characteristics, as well as collecting energy efficiency information, from the five petroleum refineries located within the jurisdiction of the BAAQMD. All refineries affected by the proposed rule maintain on-site fire-fighting equipment and trained personnel with fire-fighting and emergency response experience. While the proposed project could require construction activities associated with the installation and the operation of monitoring 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. 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 rule is 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 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, no significant adverse impacts to public services are expected to occur due to implementation of Regulation 12-15.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
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XV. RECREATION.

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|----|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
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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 Regulation 12-15 are located in industrial areas within the Bay Area. Public recreational land can be located adjacent to, or in reasonable proximity to, these areas.

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 rule 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 Regulation 12-15. 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 monitoring equipment would be installed within the confines of existing refineries or adjacent communities and would not impact existing recreational facilities.

As noted in the “Population and Housing” discussion above, the proposed new rule is 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 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, no significant adverse impacts to recreation are expected to occur due to implementation of Regulation 12-15.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
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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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Substantially increase hazards because of a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Result in inadequate emergency access? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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 Regulation 12-15 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. The Metropolitan Transportation Commission, or MTC, is the transportation planning, financing and coordinating agency for the nine-county San Francisco Bay Area.

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 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 associated with the installation of monitoring equipment is expected to be limited to 1-3 employees and generate minimal traffic. No substantial increase in workers or average daily vehicle or truck trips is anticipated as a result of the proposed new rule. Therefore, the proposed regulation is 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 project. Thus, the traffic impacts associated with the proposed Regulation 12-15 are expected to be less than significant.

XVI. c). Regulation 12-15 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 rule, such as installing of new monitoring, would not influence or affect air traffic patterns. Further, air monitoring equipment is expected to be lower in height than other existing structures at the refinery and would not impact navigable air space. Thus, Regulation 12-15 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). Regulation 12-15 would not alter traffic patterns or existing roadways, as they are not expected to generate any substantial increase in traffic. The new rule would not create any traffic hazards or create incompatible uses at or adjacent to refineries. Any construction activities associated with the proposed new rule would be temporary and located within the confines of, or adjacent to, 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 Regulation 12-15. Further, each affected refinery would continue to maintain their existing emergency access gates and installation of monitoring equipment is not expected to impact emergency access.

XVI. f). Activities resulting from the proposed Regulation 12-15 would not conflict with policies supporting alternative transportation since the proposed new rule does not involve or affect alternative transportation modes (e.g. bicycles or buses). Any construction activities associated with the proposed new rule 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, no significant adverse impacts to transportation/traffic are expected to occur due to implementation of Regulation 12-15.

	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 Regulation 12-15 already exist and already use water, generate wastewater, treat wastewater, and discharge wastewater under existing wastewater discharge permits. The proposed new rule would require air monitoring equipment and would not increase water use, or generate wastewater so no impacts on water use or wastewater generation are expected. The potential water use and wastewater impacts associated with implementation of proposed Regulation 12-15 were discussed under Hydrology and Water Quality (see Section IX a.).

XVII. c). Regulation 12-15 would require monitoring and reporting of refinery emissions and crude oil characteristics, as well as collecting energy efficiency information, but would not alter the existing drainage system or require the construction of new storm water drainage facilities. Nor would the proposed new rule 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 of Regulation 12-15 because the rule would require additional air monitoring equipment. Air monitoring equipment is not expected to generate 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 rule. Facilities are expected to continue to comply with all applicable federal, state, and local statutes and regulations related to solid and hazardous wastes.

Conclusion

Based upon the above considerations, no significant adverse impacts to utilities/service systems are expected to occur due to implementation of Regulation 12-15.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
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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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) | Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
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Discussion of Impacts

XVIII. a). Proposed Regulation 12-15 does not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory, as discussed in the previous sections of the CEQA checklist. Regulation 12-15 would require recordkeeping and monitoring. As discussed in Section IV, Biological Resources and Section V, Cultural Resources, no significant adverse impacts are expected to biological or cultural resources, as no major construction activities are expected and minor construction associated with the installation of monitoring stations would remain within the confines of, or adjacent to, existing refineries which have already been graded and developed.

XVIII. b and c). Regulation 12-15 requires recordkeeping and monitoring. The proposed project could require minimal construction and installation of new air monitoring equipment which is not expected to result in secondary air emissions or additional GHG emissions. Therefore, the potential health and cumulative impacts associated with implementation of Regulation 12-15 are considered to be less than significant.

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 of GHG emissions or over five million metric tons per year (BAAQMD, 2010). Therefore, implementation of Regulation 12-15, in connection with other 2010 CAP measures, would not generate impacts that would be cumulatively significant.

CHAPTER 4

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