



BAY AREA  
AIR QUALITY  
MANAGEMENT  
DISTRICT

## California Environmental Quality Act

### Notice of Preparation of Draft Environmental Impact Report for Regulation 11: Hazardous Pollutants, Rule 18: Reduction of Risk from Air Toxic Emissions at Existing Facilities (Rule 11-18) and Regulation 12: Miscellaneous Standards of Performance, Rule 16: Petroleum Refining Facility-Wide Emissions Limits (Rule 12-16).

**Lead Agency:** Bay Area Air Quality Management District  
**Contact:** Greg Nudd **Phone:** (415) 749-4786

#### **SUBJECT: NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT**

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

**Project Title:** Air District Regulation 11: Hazardous Pollutants, Rule 18: Reduction of Risk from Air Toxic Emissions at Existing Facilities (Rule 11-18) and Regulation 12: Miscellaneous Standards of Performance, Rule 16: Petroleum Refining Facility-Wide Emissions Limits (Rule 12-16).

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

**Project Description:** Rule 11-18 would ensure that emissions of toxic air contaminants (TACs) from existing facilities do not pose an unacceptable health risk to people living and working nearby. The rule would use the most up-to-date assumptions about the risk of compounds and would require affected facilities to take action to reduce risk to a low level.

Rule 12-16 would limit the emissions of climate pollutants: greenhouse gases (GHGs); and three criteria pollutants: particulate matter (PM), oxides of nitrogen (NOx), and sulfur dioxide (SO<sub>2</sub>) from the five Bay Area petroleum refineries and three associated facilities. The rule would establish facility-wide emissions limits for the covered pollutants at each of the affected facilities to ensure there is no emissions increase due to changes in operation, crude or product slates, or increases in production.

**Scoping Meetings:** Notice is also given pursuant to California Public Resource Code, Sections 15206 and 15082 (c) that the Air District will conduct California Environmental Quality Act (CEQA) scoping meetings at the Air District Headquarters' Yerba Buena Room, 375 Beale Street, San Francisco, California, on November 14, 2016 at 2:00 p.m. and at the Martinez City Hall, 525 Henrietta Street, Martinez, California, on November 16, 2016 at 2:00 p.m. to discuss and accept oral comments on the scope and content described in a Notice of Preparation and an Initial Study (NOP/IS) prepared in anticipation of a draft Environmental Impact Report (DEIR) that would be prepared for two new proposed rules.

**Reviewing the Notice of Preparation/Initial Study (NOP/IS):** The NOP/IS are available at the District headquarters or on the Air District's website at <http://www.baaqmd.gov/rules-and-compliance/rule-development/regulatory-workshops> or by request. Requests for copies of the NOP/IS should be directed to Jocelyn Orpia ([jorpia@baaqmd.gov](mailto:jorpia@baaqmd.gov)) at (415) 749-4763.

**Comment Procedure:** Comments relating to the environmental analysis in the NOP/IS should be addressed to Victor Douglas, Bay Area Air Quality Management District, 375 Beale Street, Suite 600, San Francisco, CA 94105. Comments may also be sent by e-mail to [vdouglas@baaqmd.gov](mailto:vdouglas@baaqmd.gov). Comments on the NOP/IS will be accepted from October 14, 2016 until December 2, 2016 at 5:00 p.m.



# CEQA NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT

BAY AREA  
AIR QUALITY  
MANAGEMENT  
DISTRICT

October 14, 2016

To: Interested Parties

From: Executive Officer/APCO

**Subject: Notice of Preparation of a Draft Environmental Impact Report**

**Project Title: Air District Regulation 11: Hazardous Pollutants, Rule 18: Reduction of Risk from Air Toxic Emissions at Existing Facilities (Rule 11-18) and Regulation 12: Miscellaneous Standards of Performance, Rule 16: Petroleum Refining Facility-Wide Emissions Limits (Rule 12-16).**

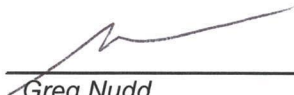
In accordance with the California Environmental Quality Act (CEQA) (California Code of Regulations, Title 14, Sections 15082(a)), the Bay Area Air Quality Management District (District) will be the Lead Agency for the project identified above and described in the attached Initial Study. Through this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

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice. Comments focusing on your area of expertise, your agency's area of jurisdiction, or issues relative to the environmental analysis should be addressed to Mr. Victor Douglas at the address shown below, or by e-mail to [vdouglas@baaqmd.gov](mailto:vdouglas@baaqmd.gov). Comments must be received no later than 5:00 PM on December 2, 2016. Please include the name and phone number of the contact person for your agency. Questions relative to the proposed Rule amendments should be directed to Mr. Victor Douglas (415) 749-4752, or by email to [vdouglas@baaqmd.gov](mailto:vdouglas@baaqmd.gov).

The following CEQA scoping meetings are scheduled for the rules:

Air District Headquarters Yerba Buena Room 375 Beale Street San Francisco, California November 14, 2016 at 2:00 p.m.	Martinez City Hall 525 Henrietta Street Martinez, California November 16, 2016 at 2:00 p.m
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Date: October 14, 2016

Signature:   
\_\_\_\_\_  
Greg Nudd  
Rule Development Manager

**BAY AREA AIR QUALITY MANAGEMENT DISTRICT**  
**375 Beale Street, Suite 600, San Francisco, California 94105**

**NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT  
REPORT**

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**Project Title:**

Air District Regulation 11: Hazardous Pollutants, Rule 18: Reduction of Risk from Air Toxic Emissions at Existing Facilities (Rule 11-18) and Regulation 12: Miscellaneous Standards of Performance, Rule 16: Petroleum Refining Facility-Wide Emissions Limits (Rule 12-16).

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**Project Location:**

The rules would apply within the Bay Area Air Quality Management District (“District”), which includes all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties, and the southern portions of Solano and Sonoma counties.

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**Description of Nature, Purpose, and Beneficiaries of Project:**

Rule 11-18 would ensure that emissions of toxic air contaminants (TACs) from existing facilities do not pose an unacceptable health risk to people living and working nearby. The rule would use the most up-to-date assumptions about the risk of compounds and would require affected facilities to take action to reduce risk to a low level.

Rule 12-16 would limit the emissions of climate pollutants: greenhouse gases (GHGs); and three criteria pollutants: particulate matter (PM), oxides of nitrogen (NO<sub>x</sub>), and sulfur dioxide (SO<sub>2</sub>) from the five Bay Area petroleum refineries and three associated facilities. The rule would establish facility-wide emissions limits for the covered pollutants at each of the affected facilities to ensure there is no emissions increase due to changes in operation, crude or product slates, or increases in production.

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**Lead Agency:**

Bay Area Air Quality Management District

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**Initial Study and all Supporting Documentation are Available at:**

BAAQMD Headquarters

375 Beale Street, Suite 600

San Francisco, CA 94105

Or by Calling:

(415) 749-4763

Attn: Jocelyn Orpia ([jorpia@baaqmd.gov](mailto:jorpia@baaqmd.gov)) at (415) 749-4763

Or by accessing: <http://www.baaqmd.gov/rules-and-compliance/rule-development/regulatory-workshops>

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**Scheduled Scoping Meeting Dates:**

Air District Headquarters Yerba Buena Room 375 Beale Street San Francisco, California November 14, 2016 at 2:00 p.m.	Martinez City Hall 525 Henrietta Street Martinez, California November 16, 2016 at 2:00 p.m
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**The Notice of Preparation is provided through the following:**

- Office of Planning & Research, State Clearinghouse
- Newspaper
- Interested Parties

- BAAQMD Website
- BAAQMD Mailing List

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**Review Period:**

October 14, 2016 through December 2, 2016

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**Contact Person:**

Victor Douglas

**Phone Number:**

(415) 749-4752

**E-Mail Address**

vdouglas@baaqmd.gov

**BAY AREA AIR QUALITY MANAGEMENT DISTRICT**

**Initial Study for**

**Regulation 11, Rule 18: Reduction of Risk from Air Toxic  
Emissions at Existing Facilities**

**&**

**Regulation 12, Rule 16: Petroleum Refining Facility-Wide  
Emissions Limits**

**Prepared by:**

**Staff of the Bay Area Air Quality Management District  
375 Beale Street, Suite 600  
San Francisco, California 94105**

**Contact: Victor Douglas  
415-749-4752**

**October 2016**

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## Table of Contents

<b>CHAPTER 1: PROJECT DESCRIPTION</b>	<b>1.1</b>
Introduction	1.2
Agency Authority	1.3
Project Location	1.3
Background	1.5
Project Description	1.7
<b>CHAPTER 2: ENVIRONMENTAL CHECKLIST</b>	<b>2.1</b>
General Information	2.1
Environmental Factors Potentially Affected	2.2
Determination	2.3
Evaluation of Environmental Impacts	2.4
Environmental Checklist and Discussion	2.6
I.    Aesthetics	2.6
II.   Agriculture and Forestry Resources	2.9
III.  Air Quality	2.12
IV.  Biological Resources	2.18
V.   Cultural Resources	2.22
VI.  Geology and Soils	2.25
VII. Greenhouse Gas Emissions	2.31
VIII. Hazards and Hazardous Materials	2.35
IX.  Hydrology and Water Quality	2.43
X.   Land Use and Planning	2.48
XI.  Mineral Resources	2.50
XII. Noise	2.52
XIII. Population and Housing	2.55
XIV. Public Services	2.57
XV.  Recreation	2.60
XVI. Transportation / Traffic	2.62
XVII. Utilities / Service Systems	2.67
XVIII. Mandatory Findings of Significance	2.71
<b>CHAPTER 3: REFERENCES</b>	<b>3.1</b>

## **PROJECT DESCRIPTION**

Introduction
Agency Authority
Project Location
Background
Project Description
References



## 1.0 PROJECT DESCRIPTION

### 1.1 INTRODUCTION

Petroleum refineries are significant sources of harmful pollutants on both the global (greenhouse gases) and local scale (toxic air contaminants and criteria pollutants). Many Bay Area residents have expressed concern about the impact of this pollution on the environment and public health, particularly those that may disproportionately impact communities near refineries. Though refinery emissions have declined over time, it is possible that as refinery operations change in the future, emissions of these pollutants could increase.

In response to these concerns, the Board of Directors of the Bay Area Air Quality Management District (Air District) has directed staff to bring forward two rules for their consideration, one that reflects policy recommended by some environmental advocacy organizations, and an approach recommended by Air District staff.

Communities for a Better Environment (CBE) and several associated organizations (CBE) have recommended that the Air District adopt new Regulation 12, Rule 16: Petroleum Refining Facility-Wide Emissions Limits (Rule 12-16 or “Refining Caps Rule”). This rule would set numeric limits on specific refinery emissions. Rule 12-16 would apply only to the Bay Area’s five petroleum refineries and three facilities associated with the refineries.

The staff of the Air District has developed a different approach that directly addresses concerns about health risks to communities exposed to air pollution. The staff recommendation is that the Air District adopt a new Regulation 11, Rule 18: Reduction of Risk from Air Toxic Emissions at Existing Facilities (Rule 11-18 or “Toxic Risk Reduction Rule”). Rule 11-18 would apply to all facilities whose emissions of toxic air contaminants may result in a significant risk to nearby residents and workers – this would include petroleum refineries. The purpose of Rule 11-18 is to reduce the public’s exposure to health risks associated with the emissions of toxic air contaminants (TACs) from stationary sources by reducing those risks to the lowest feasible levels

Because the Board of Directors of the Air District intends to consider these rules within the same timeframe, staff is preparing one Environmental Impact Report (EIR) to cover both rules. The intent of the single EIR is to ensure that all of the potential environmental impacts for both rules are considered and comprehensively addressed. Although they are being considered at the same time and both would affect refineries, the two rules are functionally independent. Adoption of one does not depend on adoption of the other. The Board of Directors could adopt either rule, both rules or neither rule.

#### 1.1.1 Rule 12-16 – Refinery Emissions Caps Rule

Rule 12-16 reflects a policy recommendation from CBE and their associated organizations (henceforth called “CBE”). The rule, as proposed by CBE, would limit the emissions of climate pollutants and three criteria pollutants: greenhouse gases (GHGs), particulate matter (PM), oxides of nitrogen (NO<sub>x</sub>), and sulfur dioxide (SO<sub>2</sub>) from petroleum refineries and three associated facilities. The rule would establish facility-wide emissions limits for the covered pollutants at each of the affected facilities to ensure that

each facility does not increase emissions due to changes in operation, crude or product slates, or increases in production. Each facility emissions limit would be set at the maximum-annual emissions reported for that facility in the period from 2011 through 2015<sup>1</sup> with an additional allowance or “threshold factor” of seven percent over the maximum annual emission rate for each pollutant.

### **1.1.2 Rule 11-18 – Toxic Risk Reduction Rule**

Rule 11-18, as drafted by Air District staff, would ensure that emissions of toxic air contaminants (TACs) from existing facilities do not pose an unacceptable health risk to people living and working nearby. The rule would use the most up-to-date assumptions about the risk of compounds and would require the facility to take action to reduce risk below a specified risk threshold, if the facility exceeds the risk thresholds. If the facility could not devise a means to reduce the risk below the specified risk level, the facility would be required to install best available retrofit control technology for toxic pollutants (TBARCT) on every significant source of TAC emissions at the facility.

## **1.2 AGENCY AUTHORITY**

The California Environmental Quality Act (CEQA), Public Resources Code §21000 et seq., requires that the environmental impacts of proposed projects be evaluated and that feasible methods to reduce, avoid or eliminate significant adverse impacts of these projects be identified and implemented. To fulfill the purpose and intent of CEQA, the Air District is the lead agency for Regulation 12, Rule 16 and Regulation 11, Rule 18 and has prepared this Notice of Preparation (NOP) of an Environmental Impact Report (EIR) and Initial Study (NOP/IS) to address the potential environmental impacts associated with the rules.

## **1.3 PROJECT LOCATION**

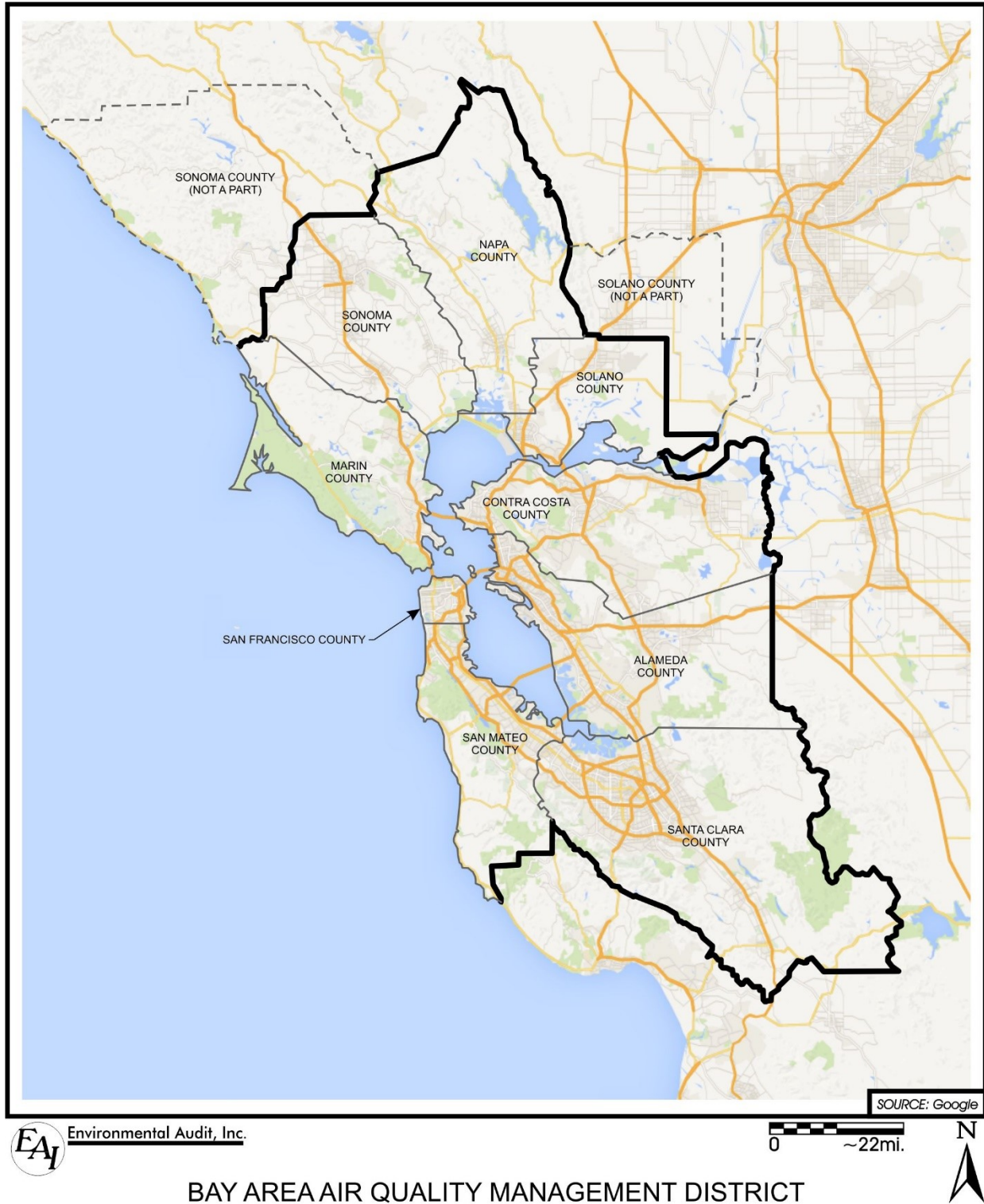
The Air District has jurisdiction over an area encompassing 5,600 square miles. The Air District includes all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties, and portions of southwestern Solano and southern Sonoma counties. The San Francisco Bay Area is characterized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

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<sup>1</sup> GHG emissions are based on the 2011-2014 time period, since 2015 data is not available from the Air Resources Board yet.

Figure 1-1

Geographic Jurisdictional Boundaries of the Bay Area Air Quality Management District



## 1.4 BACKGROUND

Rule 12-16 would affect the five petroleum refineries currently located in the Bay Area within the jurisdiction of the Air District:

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

The rule would also affect three refinery-related facilities:

- Air Liquide (Richmond),
- Air Products (Martinez), and
- Martinez Cogen LP (Martinez).

Rule 11-18 would affect hundreds of facilities that emit TACs. The Air District has determined that these toxic emissions need to be reduced in order to be more protective of public health. These facilities include data centers, petroleum refineries, a cement kiln, gasoline dispensing facilities, etc., and emit a variety of TACs that can adversely impact public health. TACs include compounds such as diesel particulate matter (DPM), benzene, polycyclic aromatic hydrocarbons (PAHs), and 1,3-butadiene.

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

Air pollutants are categorized based on their properties, and the programs under which they are regulated. Air pollutants include: (1) criteria pollutants, (2) toxic pollutants (or TACs), and (3) climate pollutants (or GHGs). Additional categories of air contaminants include odorous compounds and visible emissions.

Criteria pollutants are emissions for which Ambient Air Quality Standards (AAQS) have been set and include: (1) carbon monoxide (CO), (2) nitrogen dioxide (NO<sub>2</sub>) and NO<sub>x</sub>, (3) PM in two size ranges – aerodynamic diameter of 10 micrometers or less (PM<sub>10</sub>), and aerodynamic diameter of 2.5 micrometers or less (PM<sub>2.5</sub>), (4) volatile organic compounds (VOC), and (5) sulfur dioxide (SO<sub>2</sub>). Other compounds, specifically volatile organic compounds (VOC), can react in the atmosphere to form ozone and are often regulated along with criteria pollutants. These compounds can have both localized and regional impacts. Each of these criteria pollutants are emitted by petroleum refineries, as well as numerous other stationary sources and mobile sources (automobiles, trucks, locomotive engines, marine vessels, construction equipment, etc.).

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. These compounds tend to have more localized impacts. There are many TACs potentially emitted from industrial sources, including refineries.

GHGs are emissions that include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and three groups of fluorinated compounds (i.e., hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>)), and are the major anthropogenic GHGs. These compounds are global in nature and require a global reduction to a beneficial benefit on the global climate. GHGs emitted from petroleum refineries include CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O.

The regulatory approaches for Rules 11-18 and 12-16 are summarized below and include the following basic elements.

### **Regulation 11, Rule 18**

- The Air District would screen all facilities that report toxic emissions. From this screening, the Air District would determine each facility's priority score (PS). The Air District would conduct health risk assessments (HRA) for facilities with a cancer risk prioritization score of 10 or greater or a non-cancer prioritization score of 1.0 or greater. The HRAs would incorporate the new Office of Environmental Health Hazard Assessment (OEHHA) protocol and health risk values adopted in March 2015, the Risk Management Guidelines adopted in July 2015 by the California Air Resources Board (ARB) and the California Air Pollution Control Officers Association (CAPCOA) and revised Air District HRA guidelines. The Air District will prioritize the development of the HRAs according to priority score and then according to type of facility. This is described in more detail later in this document.
- Facilities that pose a cancer risk in excess of 10 per million or a chronic or acute hazard index in excess of 1.0 must either:
  - Reduce the facility cancer risk below 10/M and reduce the chronic and acute hazard indices below 1.0; or
  - Install TBARCT on all significant sources of toxic emissions.

### **Regulation 12, Rule 16**

- Would apply to each of the Bay Area petroleum refineries and three support facilities.
- Would establish facility-wide emissions limits for GHGs, PM<sub>2.5</sub> and PM<sub>10</sub>, NO<sub>x</sub>, and SO<sub>2</sub> at each of the affected facilities based on the following method:
  - Each facility emissions limit would be set at the maximum-annual emissions reported for that facility in the period from 2011 through 2015,<sup>2</sup> and
  - Include an additional allowance or "threshold factor" that would equal seven percent over the maximum for GHGs, PM<sub>2.5</sub> and PM<sub>10</sub>, NO<sub>x</sub>, and SO<sub>2</sub>.
- Emissions from start-up, shut-down, maintenance and malfunction would be subject to the cap.
- Compliance with the emissions limits would be based on comparing the annual emissions inventory with the facility-wide emissions limit for each covered pollutant. Any annual emissions inventory that exceeds the established pollutant emissions limit for the affected facility would be a violation of the rule.

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<sup>2</sup> Except GHGs, which are based on 2011 through 2014 emissions due to the current unavailability of 2015 data.

## 1.5 PROJECT DESCRIPTION

The description of Regulation 11, Rule 18 and Regulation 12, Rule 16 are provided below.

### 1.5.1 REGULATION 11, RULE 18

The rule would require facilities that pose a site-wide health risk in excess of the risk action level threshold of ten per million (10/M) cancer risk or 1.0 hazard index for both chronic and acute risk to reduce that risk below the threshold through the implementation of a risk reduction plan approved by the Air District or demonstrate that all significant sources of toxic emissions are controlled TBARCT; a significant source of toxic emission is one that poses a health risk of 1.0/M cancer or 0.2 hazard index. The rule would be implemented in four phases based on either a facility's priority score (PS) or the toxic emissions source.

#### 1.5.1.1 Objectives

The objectives of Toxic Risk Reduction Rule are to:

- 1) Reduce the public's exposure to health risks associated with the emissions of TACs from stationary sources;
- 2) Incorporate the most up-to-date health risk methodologies and health values into the Air District's risk evaluation process for existing stationary sources of TACs;
- 3) Ensure the facilities that impact the most sensitive and overburdened communities reduce their associated health risk in an efficient and expeditious manner;
- 4) Provide the public opportunity to comment on the draft HRAs to provide transparency and clarity to the process; and
- 5) Provide the public opportunity to comment on risk reduction plans as they are drafted by the affected facilities.

#### 1.5.1.2 Administrative Procedures

The Toxic Risk Reduction Rule would utilize the annual toxic emissions inventories reported to the Air District by sources that emit toxic compounds. From the toxic emissions inventory data, Air District<sup>3</sup> would conduct a site-specific Health Risk Screening Analysis (HRSAs). The HRSAs assesses the potential for adverse health effects from public exposure to routine and predictable emissions of TACs. Procedures used for completing HRSAs are based on guidelines adopted by CARB/CAPCOA. From these HRSAs, the Air District would determine each facility's priority score (PS). The facility PS or the toxic emissions source type would be used to determine which phase a facility would be placed. In establishing the priority level for a facility, the Air District would consider:

- (1) The amount of toxic pollutants emitted from the facility;
- (2) The toxicity of these materials;
- (3) The proximity of the facility to potential receptors; and
- (4) Any other factors that the Air District deems to be important.

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<sup>3</sup> In order to complete the analyses in a timely manner. Some of the work may be completed by independent contractors working for the Air District under direction of Air District staff.

The rule would be implemented in four phases based on either a facility’s PS or the toxic emissions source type as illustrated in Table 1.1. (Priority scores for all potentially affected facilities are expected to be completed by the end of 2017).

**Table 1.1  
Implementation Phases**

Phase	Criterion	HRAs	Risk Reduction Plans	Plan Implementation
1	Cancer PS > 250 or Non-cancer PS >2.5	2017 – 2018	2018 – 2019	2019 – 2022
2	Cancer PS > 10 or Non-cancer PS >1.0	2019 – 2021	2021 – 2022	2022 – 2025
3	Diesel IC Engines	2021 – 2023	2023 – 2024	2024 – 2027
4	Retail Gas Stations	2023 – 2024	2024 – 2025	2025 – 2028

The Air District would conduct HRAs for facilities in accordance with the OEHHA HRA Guidelines and the CARB/CAPCOA Risk Management Guidelines that were updated in 2015. These Guidelines were updated pursuant to the Children's Environmental Health Protection Act (Senate Bill 25), which required that OEHHA develop health risk assessment procedures that ensure infants and children are protected from the harmful effects of air pollution. Using the results of the HRAs, the Air District would determine whether a facility would be affected by Rule 11-18. The rule would affect facilities with health risk impacts that exceeded any of the risk action level thresholds of ten per million (10/M) cancer risk or 1.0 hazard index for both chronic and acute risk. The Air District would notify facilities of their health risk score. A facility with a risk action level exceeding the threshold(s) will be required to reduce the risk below the threshold(s) by implementing a risk reduction plan within three years of plan approval, or demonstrate that all significant sources of toxic emissions are controlled by TBARCT within the same three-year period; a significant source of toxic emission is one that poses a health risk of 1.0/M cancer or 0.2 hazard index.

**1.5.1.3 Health Risk Assessments**

The Air District uses a variety of tools to determine where air quality health impacts may be occurring in the Bay Area, to assess the relative magnitude of these health impacts compared to other locations, and to determine how to best focus Air District resources in order to reduce these health impacts. HRAs are one of the tools that can be used to assess the relative magnitude of health hazards. HRAs are designed to quantify the potential health impacts that people and communities may be experiencing due to specific sources or facilities or that may occur in the future due to proposed projects or proposed changes at a facility. An HRA consists of four basic steps: 1) hazard identification; 2) exposure assessment; 3) dose response assessment; and 4) risk characterization. The Air District conducts HRAs using standardized methodologies for each of these steps. The Air District HRAs would be prepared in accordance with the most recent guidelines adopted by OEHHA in March 2015.

Air District staff believes that new facility-wide HRAs should be performed including improved emission inventories, updated health effects values, and the most recent HRA methodologies. rule 11-18 would require that the Air District conduct HRAs utilizing the most recent OEHHA HRA Guidelines along with more refined emissions inventories.

#### 1.5.1.4 Pollutant Coverage

The Toxic Risk Reduction Rule would address TAC emissions from existing stationary sources. TAC emissions from new and modified sources are addressed under Air District Regulation 2, Rule 5. The California Health and Safety Code section 39655 defines a TAC as “an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health. A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the federal act (42 U.S.C. Sec. 7412(b)) is a toxic air contaminant.” For the purposes of this rule, TACs consists of the substances listed in Air District Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants, Table 2-5-1.

Some of the key pollutants to be addressed under the Toxic Risk Reduction Rule include the following:

**Benzene:** Benzene is highly carcinogenic and occurs throughout the Bay Area. Most of the benzene emitted in the Bay Area comes from motor vehicles, including evaporative leakage and unburned fuel exhaust. Stationary sources contribute 13 percent of the benzene statewide. The primary stationary sources of benzene emissions include gasoline stations, petroleum refining, electricity generation, and cement production.

**1,3-Butadiene:** 1,3-butadiene is another carcinogen, with similar origins to benzene, namely mainly from gasoline evaporation and motor vehicle exhaust, biomass burning, petroleum refining and electricity generation.

**Polycyclic aromatic hydrocarbons (PAHs):** PAHs are a set of hydrocarbons formed of multiple benzene rings. Several PAHs have been shown to be carcinogenic, the best-studied of which is Benzo(a)pyrene. Although PAHs are emitted during petroleum refining, in the Bay Area the vast majority derive from fossil fuel and wood combustion.

**Diesel Particulate Matter (DPM):** DPM is the primary source of ambient risk based on risk analysis, followed by benzene and 1,3-butadiene. DPM emissions sources mainly include mobile sources, such as heavy-duty trucks, buses, construction equipment, locomotives, and ships, but also stationary sources such as stationary diesel engines and backup generators.

#### 1.5.1.5 Source Coverage

The Toxic Risk Reduction Rule would apply to all sources of TAC emissions from “stationary sources” in the Bay Area. Stationary sources, as opposed to mobile sources such as trucks and other vehicles, are the sources over which the Air District has regulatory jurisdiction.

The Toxic Risk Reduction Rule would apply to a wide variety of sources and facilities located throughout the Bay Area, including data centers, petroleum refineries, chemical plants, waste water treatment facilities, foundries, forges, landfill operations, hospitals, crematoria, gasoline dispensing facilities (GDF) (i.e., gasoline stations), colleges and universities, military facilities and installations and airline operations. The Air District estimates that hundreds of facilities could be impacted by this rule.



## 1.5.2 REGULATION 12, RULE 16

### 1.5.2.1 Objectives

The objectives of the Refining Emission Caps are to:

- 1) Protect air quality, public health, and the climate from increases in annual facility-wide mass emissions of GHGs, PM, NO<sub>x</sub>, and SO<sub>x</sub> caused by changes in refinery oil feed quality or quantity, refinery or support equipment or operation, or combinations of these causes, by preventing any significant increase in these emissions;
- 2) Protect the climate and public health by preventing any significant increase in these emissions at refineries and associated facilities from increasing the emission intensity of the production of transportation fuels;
- 3) Protect community and public health by preventing any significant increase in these emissions from worsening hazards for which HRA methods may not account, including but not limited to acute and chronic ambient PM, NO<sub>x</sub>, SO<sub>x</sub>, and PM exposure hazards;
- 4) Complement other air quality, public health, and climate measures by discouraging investment in new refinery equipment that would lead to increased emissions of GHG, PM, NO<sub>x</sub>, or SO<sub>x</sub> from Bay Area refineries.

### 1.5.2.2 Pollutant Coverage

The Refining Cap Rule would limit the emissions of climate pollutants (GHGs) and three criteria pollutants (PM – both PM<sub>10</sub> and PM<sub>2.5</sub>, NO<sub>x</sub>, and SO<sub>2</sub>) from refineries and other refining related facilities to a specific baseline plus an allowance; thereby establishing a “cap” for each of these emissions that the facility could not exceed.

**Greenhouse Gases (GHGs):** GHGs refer to gases that contribute to global warming. In addition to negative impacts on air quality as higher temperatures contribute to increased levels of ozone and PM, climate change may cause a wide range of ecological, social, economic, and demographic impacts. GHGs include carbon dioxide, methane, nitrous oxide, and fluorinated hydrocarbons. CO<sub>2</sub> is released to the atmosphere when fossil fuels (oil, gasoline, diesel, natural gas, and coal), solid waste, and wood or wood products are burned. CH<sub>4</sub> is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from the decomposition of organic waste in municipal solid waste landfills and the raising of livestock. N<sub>2</sub>O is emitted during agricultural and industrial activities, as well as during combustion of solid waste and fossil fuels. Fluorinated hydrocarbons: HFCs, PFCs, and SF<sub>6</sub>, are generated in a variety of industrial processes. Although these gases are small in terms of their absolute mass, they are potent agents of climate change as expressed by their global warming potential.

**Particulate Matter (PM):** PM is a complex pollutant composed of an assortment of tiny airborne particles that vary in size and mass (ultrafine, fine, and coarse), physical state (solid or liquid), chemical composition, toxicity, and how they behave in the atmosphere. These particles originate from a variety of man-made and natural sources, including fossil fuel combustion, residential wood burning and cooking, wildfires, volcanoes, sea salt, and dust. Fine and ultrafine particles are so small, they can bypass the body’s natural defenses and penetrate deep into the lungs, bloodstream, brain and other vital organs, and individual cells. Health studies have shown that exposure to PM can have a wide range of negative health effects, including triggering asthma attacks, chronic bronchitis, impaired lung

development in children, heart attack, stroke, and premature death. Residential wood burning is the largest source of PM in the Bay Area during winter days. On an annual basis, mobile sources such as cars, trucks, ships and trains are the largest source of PM in the Bay Area.

**Nitrogen Oxides (NOx):** Nitrogen oxides are a group of gases that form when nitrogen reacts with oxygen during combustion, especially at high temperatures. These compounds (including nitric oxide and nitrogen dioxide), can contribute significantly to air pollution, especially in cities and areas with high motor vehicle traffic. In the Bay Area, nitrogen dioxide appears as a brown haze. At higher concentrations, nitrogen dioxide can damage sensitive crops, such as beans and tomatoes, and aggravate respiratory problems.

**Sulfur Oxides (SOx):** Heating and burning fossil fuels (such as coal and oil) release the sulfur present in these materials. In areas where large quantities of fossil fuels are used, sulfur oxides can be a major air pollution problem. The most common kind of sulfur oxide is SO<sub>2</sub>. This substance can react with oxygen to form sulfur trioxide, which can form sulfuric acid mist in the presence of moisture. These contaminants can damage vegetation and negatively impact the health of both humans and animals.

### 1.5.2.3 Affected Facilities

The Refining Caps Rule would apply to each of the Bay Area's five petroleum refineries and to three additional support facilities. The five refineries are Chevron Refinery in Richmond, Shell Refinery in Martinez, Phillips 66 Refinery in Rodeo, Tesoro Refinery in Martinez, and Valero Refinery in Benicia. The three affected support facilities are Air Liquide in Richmond, Air Products in Martinez, and Martinez Cogen LP in Martinez.

### 1.5.2.4 The Emissions Limits

The draft emissions limit for each covered pollutant and each affected facility are shown in Table 1.2. A numeric limit on the annual mass emission rate of each air pollutant specified would be applied to each facility specified in the table. The limit is equal to the maximum-year actual emissions reported in 2011–2015<sup>4</sup> plus the additional allowance, or threshold factor, of seven percent that is intended to account for normal year-to-year variations in emissions.

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<sup>4</sup> Except GHGs, which are based on 2011 through 2014 emissions due to the current unavailability of 2015 data.

**Table 1.2**  
**The Enforceable Emissions Limits on Refinery-Wide Emissions <sup>a</sup>**

Facility Name & Number	Pollutants				
	GHG <sup>b</sup> (thousands of metric tons)	PM <sub>2.5</sub> <sup>c</sup> (tons)	PM <sub>10</sub> <sup>c</sup> (tons)	NO <sub>x</sub> <sup>c</sup> (tons)	SO <sub>2</sub> <sup>c</sup> (tons)
Chevron <sup>d</sup> : A-0010	4,774	502	526	971	394
Shell: A-0011	4,560	495	589	1,068	1,455
Phillips 66: A-0016	1,608	75	83	334	443
Tesoro: B-2758 / B-2759	2,615	77.7	97	1,015	644
Valero: B-2626 / B-3193	3,145	133	133	1,300	69.6
Martinez Cogen LP: A-1820	451	18.8	18.8	119	2.3
Air Liquide: B-7419	947	16.1	17.3	13.8	2.5
Air Products: B-0295	290	9.7	10.4	3.4	2.3

a. Annual facility-wide emission limits.

b. GHG: greenhouse gas emissions (CO<sub>2</sub>e) as reported under Air Resources Board Mandatory Reporting. PM: filterable and condensable particulate matter.

c. PM<sub>2.5</sub> (“fine” particulate matter), PM<sub>10</sub> (“respirable” particulate matter), NO<sub>x</sub>: oxides of nitrogen; SO<sub>2</sub>: sulfur dioxide as reported in the Facility’s annual emission inventory.

d. Facility owners or operators, as of August 2016, shown for information and context.

### 1.5.2.5 Changes in Monitoring Methods

CBE intends that these limits would change if the quantity of reported emissions changed solely due to a change in the method of monitoring or estimating emissions. Air District staff will work with CBE to capture this intent either in the rule language or in the plan for implementing the rule.

## Chapter 2

# Environmental Checklist

## INTRODUCTION

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

## GENERAL INFORMATION

Project Title:	Regulation 11, Rule 18: Reduction of Risk from Air Toxic Emissions at Existing Facilities and Regulation 12, Rule 16: Petroleum Refining Facility-Wide Emissions Limits
Lead Agency Name and Address:	Bay Area Air Quality Management District 375 Beale Street, Suite 600 San Francisco, California 94105
Contact Person:	Victor Douglas
Contact Phone Number:	415-749-4752
Project Location:	The rules would apply to a multitude of 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.
Project Sponsor's Name and Address:	Bay Area Air Quality Management District 375 Beale Street, Suite 600 San Francisco, California 94105
General Plan Designation:	Rule 11-18 would apply to facilities that emit toxic pollutants and Rule 12-16 would affect the five petroleum refineries and three refinery-related facilities currently located in the Bay Area within the jurisdiction of the Air District: <ul style="list-style-type: none"> <li>• Chevron Products Company (Richmond),</li> <li>• Phillips 66 Company – San Francisco Refinery (Rodeo),</li> <li>• Shell Martinez Refinery (Martinez),</li> <li>• Tesoro Refining and Marketing Company (Martinez), and</li> <li>• Valero Refining Company – California (Benicia).</li> </ul> Rule 12-16 would also affect: <ul style="list-style-type: none"> <li>• Air Liquide (Richmond),</li> <li>• Air Products (Martinez), and</li> <li>• Martinez Cogen LP (Martinez).</li> </ul>
Zoning:	See “General Plan Designation” above
Description of Project:	See “Background” in Chapter 1.
Surrounding Land Uses and Setting:	See “Affected Area” in Chapter 1.
Other Public Agencies Whose Approval Is Required:	None

## ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The following environmental impact areas have been assessed to determine their potential to be affected by the proposed project. As indicated by the checklist on the following pages, environmental topics marked with an "☑" 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.

	<b>Rule 11-18</b>	<b>Rule 12-16</b>		<b>Rule 11-18</b>	<b>Rule 12-16</b>		<b>Rule 11-18</b>	<b>Rule 12-16</b>
Aesthetics	<input type="checkbox"/>	<input type="checkbox"/>	Agriculture and Forestry Resources	<input type="checkbox"/>	<input type="checkbox"/>	Air Quality	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Biological Resources	<input type="checkbox"/>	<input type="checkbox"/>	Cultural Resources	<input type="checkbox"/>	<input type="checkbox"/>	Geology / Soils	<input type="checkbox"/>	<input type="checkbox"/>
Greenhouse Gas Emissions	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Hazards & Hazardous Materials	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Hydrology / Water Quality	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Land Use / Planning	<input type="checkbox"/>	<input type="checkbox"/>	Mineral Resources	<input type="checkbox"/>	<input type="checkbox"/>	Noise	<input type="checkbox"/>	<input type="checkbox"/>
Population / Housing	<input type="checkbox"/>	<input type="checkbox"/>	Public Services	<input type="checkbox"/>	<input type="checkbox"/>	Recreation	<input type="checkbox"/>	<input type="checkbox"/>
Transportation / Traffic	<input type="checkbox"/>	<input type="checkbox"/>	Utilities / Service Systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Mandatory Findings of Significance	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## 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.

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Signature:

Date:

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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

## I. AESTHETICS.

Would the project:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?  <div style="text-align: right;"> <b>Rule 11-18</b>  <b>Rule 12-16</b> </div>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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?  <div style="text-align: right;"> <b>Rule 11-18</b>  <b>Rule 12-16</b> </div>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings  <div style="text-align: right;"> <b>Rule 11-18</b>  <b>Rule 12-16</b> </div>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input 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?  <div style="text-align: right;"> <b>Rule 11-18</b>  <b>Rule 12-16</b> </div>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>

### Setting

The Air District covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles), so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses. Rule 11-18 would affect hundreds of facilities that cover a wide variety of industries and operations that emit toxic pollutants located throughout the Air District, including data centers, petroleum refineries, a cement kiln, gasoline dispensing facilities, hospitals, crematoria, etc. The rule would require affected facilities to reduce the health risk they pose using various risk reduction measure and controls. Rule 12-16 would affect the four petroleum refineries that are located in Contra Costa County and one that is located in Solano County (Valero) and also three refinery-related facilities located in Contra Costa County, all of which are in areas designated for industrial facilities.

The methods of control expected to be used to comply with Rule 11-18 are not expected to result in any aesthetic alterations of the facilities. Refineries and other facilities affected by Rule 12-16 are generally located in industrial areas and compliance is not expected to result in any aesthetic changes to the facilities. 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).

Rule 11-18: Rule 11-18 would require facilities whose health risk is determined to exceed a specific action level to either reduce the facility risk below the action level or to install best available retrofit control technology on all significant sources of risk. Some control options include stack modifications. Stack modifications are another common and generally inexpensive risk reduction measure that are often used to reduce risk from back-up generators and soil remediation operations. Changing the direction of a stack (from horizontal to vertical, for example) and increasing the height of a stack to just above the height of nearby buildings will increase the dispersion of the emissions from that stack and will typically result in lower ground level air concentrations at nearby receptors and lower health risks. Stack modifications may change the existing visual character or quality of a facility but are not expected to have significant adverse aesthetic impacts to the surrounding community as they would be expected to occur in industrial or commercial areas. Regulation 11-18 could also result in the installation of new air pollution control equipment to mitigate TAC emissions. While these control devices may be visible to surrounding areas, they would be installed within existing industrial or commercial areas, would be subject to local height limits, and are not expected to block any scenic vista, degrade the visual character or quality of the area, or result in significant adverse aesthetic impacts.

Rule 12-16: Rule 12-16 would limit air emissions of GHGs and certain criteria pollutants (PM<sub>2.5</sub>, PM<sub>10</sub>, NO<sub>x</sub>, and SO<sub>2</sub>) from Bay Area petroleum refineries and three refinery-related facilities to the historic highest emission rate over a recent multi-year period, with an additional seven-percent margin to account for operational variations. Rule 12-16 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, provided existing crude and product slates remain relatively constant. However, because crude and product slates vary over time and these changes may result in changes in the emissions profile of a refinery, there is the potential that Rule 12-16 could result in the need for better controls on various refinery sources, (e.g. boilers and heaters) to mitigate any potential emissions increase. These emission controls could lead to changes in operations or installation of new air pollution control devices. While these control devices may be visible to surrounding areas, they would be installed within existing industrialized areas and are not expected to be taller than existing refinery structures. Any new equipment would be located within the refineries, would be compatible with the urban/developed nature of the refineries, are not expected to block any scenic vista, degrade the visual character or quality of the area, or result in any adverse aesthetic impacts. Once implemented,

equipment associated with the rule is not expected to be noticeably visible within the refineries. Therefore, the rule is not expected to have adverse aesthetic impacts to the surrounding community.

**I. d).**

Rule 11-18: The facilities affected by Rule 11-18, including petroleum refineries, may need to install or modify air pollution control equipment or modify operations as to implement risk reduction measures. However, it is unlikely that any of the changes would result in additional night-time operation that would require extra lighting. New light sources, if any, are not expected to be noticeable in residential areas. Most local land use agencies have ordinances that limit the intensity of lighting and its effects on adjacent property owners. Therefore, the rule is not expected to have significant adverse aesthetic impacts to the surrounding community.

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

## Conclusions

Based upon the above considerations, significant adverse project-specific impacts to aesthetics are not expected to occur due to implementation of either Rule 11-18 or Rule 12-16 and, therefore, will not be further evaluated in the Draft EIR.

## 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:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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))?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
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?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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.

Rule 11-18 would affect hundreds of facilities that cover a wide variety of industries and operations that emit toxic pollutants located throughout the Air District, including data centers, petroleum refineries, a cement kiln, gasoline dispensing facilities, hospitals, crematoria, etc. The rule would require affected facilities to reduce the health risk they pose using various risk reduction measure and controls. Rule 12-16 would affect the four petroleum refineries that are located in Contra Costa County and one that is located in Solano County (Valero) and also three refinery-related facilities located in Contra Costa County.

## 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).

Rule 11-18: The facilities and operation that would be affected by Rule 11-18 are located primarily in industrial and commercial areas where agricultural or forest resources are generally not located. Some construction activity is expected to result from compliance with Rule 11-18; but such activities are expected to occur on the premises of the affected facilities and, therefore, would not impact agricultural and forestry resources.

Rule 12-16: The affected refineries and refinery-related facilities are located in industrial areas where agricultural or forest resources are generally not located. Rule 12-16 could require air pollution control equipment on various refinery sources or changes in operations at any or all of the Bay Area refineries to ensure compliance with the emissions limits. Construction activities may be associated with compliance with Rule 12-16. Such construction activities are expected to be limited to the existing refineries. No agricultural or forest resources are located within the boundaries of the existing refineries, and construction activities would not convert any agricultural or forest land into non-agricultural or non-forest use, or involve Williamson Act contracts.

## Conclusions

Based upon the above considerations, significant adverse project-specific impacts to agriculture and forest resources are not expected to occur due to implementation of either Rule 11-18 or Rule 12-16 and, therefore, will not be further evaluated in the Draft EIR.

### 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:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute to an existing or projected air quality violation? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input 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)? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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 (NO<sub>2</sub>), particulate matter less than 10 microns in diameter (PM<sub>10</sub>), particulate matter less than 2.5 microns in diameter (PM<sub>2.5</sub>), sulfur dioxide (SO<sub>2</sub>), 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<sub>x</sub>), and SO<sub>2</sub> and the federal 24-hour standard for PM<sub>2.5</sub>. The Air District is not considered to be in attainment with the State PM<sub>10</sub> and PM<sub>2.5</sub> standards. 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 monitoring stations, overseeing agricultural burning permits, and reviewing air quality-related sections of environmental documents required by CEQA.

The BAAQMD is governed by a 24-member Board of Directors composed of publicly-elected officials apportioned according to the population of the represented counties. The Board has the authority to develop and enforce regulations for the control of air pollution within its jurisdiction. The 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. Prior to the amendment of the CAA in 1990, source-specific NESHAPs were promulgated under Section 112 of the CAA for certain sources of radionuclides and Hazardous Air Pollutants (HAPs).

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



Many of the sources of TACs that have been identified under the CAA are also subject to the California TAC regulatory programs. CARB developed 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) established a state-wide program to inventory and assess the risks from facilities that emit TACs and to notify the public about significant health risks associated with those emissions. Inventory reports must be updated every four years under current state law. In its implementation of that program, the BAAQMD used a maximum individual cancer risk of 10 in one million (10/M), or an ambient concentration above a non-cancer reference exposure level, as the threshold for notification. Using the best science available at the time, only a relatively small number of facilities exceeded that threshold.

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 to 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 (100/M). The BAAQMD adopted risk reduction requirements for perchloroethylene dry cleaners to fulfill the requirements of SB 1731. No facilities within the Bay Area currently exceed the 100/M threshold that would require risk reductions.

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

## Discussion of Impacts

### III. a).

Neither Rule 11-18 nor Rule 12-16 is expected to conflict with or obstruct implementation of the applicable air quality plan. The 2010 Bay Area Clean Air Plan (CAP) was approved by the Air

District’s Board of Directors on September 15, 2010 and is the approved air quality plan that the Air District operates under.

**Rule 11-18:** Rule 11-18 would require facilities that pose a health risk in excess of the risk action level threshold of ten per million (10/M) cancer risk or 1.0 hazard index for both chronic and acute risk to reduce that risk below the threshold through the implementation of a risk reduction plan approved by the Air District or demonstrate that all significant sources of toxic emissions are control by TBARCT; a significant source of toxic emission would be one that poses a health risk of 1.0/M cancer or 0.2 hazard index. The rule would be implemented in four phases based on either a facility’s priority score (PS) or the toxic emissions source type as illustrated in Table 2.1. (Priority scores for all potentially affected facilities are expected to be completed by the end of 2017). Reducing TAC emissions from these facilities would be in harmony with the aims of the 2010 CAP and, therefore, Rule 11-18 would not conflict with or obstruct implementation of the 2010 CAP as it is not expected to interfere with any other District rules and regulations.

**Table 2.1 – Rule 11-18 Implementation Phases**

Phase	Criterion	HRAs	Risk Reduction Plans	Plan Implementation
1	Cancer PS > 250 or Non-cancer PS >2.5	2017 – 2018	2018 – 2019	2019 – 2022
2	Cancer PS > 10 or Non-cancer PS >1.0	2019 – 2021	2021 – 2022	2022 – 2025
3	Diesel Engines	2021 – 2023	2023 – 2024	2024 – 2027
4	Retail Gas Stations	2023 – 2024	2024 – 2025	2025 – 2028

**Rule 12-16:** Rule 12-16 would establish facility-wide emissions limits for GHGs, PM<sub>2.5</sub> and PM<sub>10</sub>, NOx, and SO<sub>2</sub> at each of the five Bay Area refineries and three refinery-related facilities. Any affected facility that exceeds an emission limit would be a violation of the rule. Limiting emissions from these facilities would be in harmony with the aims of the 2010 CAP and, therefore, Rule 12-16 would not conflict with or obstruct implementation of the 2010 CAP.

**III. b, c, and d).**

**Rule 11-18:** Rule 11-18 would reduce the health risk level at which facilities must reduce their risk. There are a large variety of control technologies and measures that could be used to reduce the health risk posed by a facility. A limited listing of such measures is presented in Table 2.2 below.

**Table 2.2 – Risk Reduction Measures and Target Substances**

Risk Reduction Measure	Substance Group	Control Efficiency
Enclosures	Particulates	Varied
Capture and Collection Systems	VOCs and Particulates	Varied
Diesel Particulate Filter	Particulates	85%
Baghouse	Particulates	99-99.9%

<b>Risk Reduction Measure</b>	<b>Substance Group</b>	<b>Control Efficiency</b>
HEPA filter and pre-filter	Particulates	99.9-99.99%
Carbon Adsorption	VOCs	90-99%
Thermal and Catalytic Oxidizers	VOCs and Inorganic Gases	98-99.9%
Reduced Throughput or Operating Time	VOCS and Particulates	Varied
Alternative Technologies	Particulates	Up to 100%
Product Substitution	VOCs	Up to 100%
Relocate Source or Stack	All TAC Types	Not Applicable
Stack Modifications	All TAC Types	Not Applicable

While the primary purpose of implementing risk reduction measures such as installing air pollution control equipment or making operational changes is to reduce health risks, some types of control equipment have the potential to create secondary adverse air quality impacts. For example, increased NOx emissions could result if VOC emissions are controlled through a combustion process (e.g., afterburner) or require additional energy to operate.

Because of the potential for secondary emissions from air pollution control equipment, there is a potential that sensitive receptors could be exposed to increased pollutant concentrations, which could be significant. As a result, these potential air quality impacts will be evaluated in the Draft EIR.

**Rule 12-16:** A number of air quality rules and regulations that apply to refineries are enforced by the BAAQMD. These existing rules and regulations require: (1) air permits; (2) the use of best available control technology (BACT); (3) new source review for new emission sources and offsets for new emissions; (4) control of toxic air contaminants; (5) control of fugitive emission sources including storage tanks, equipment leaks, bulk loading, and wastewater separators; and (6) control of emissions from combustion sources, including process heaters, boilers, internal combustion engines, gas turbines, catalytic cracking and reforming units, and flares. Rule 12-16 could require modifications to refineries to ensure changes in operations do not result in emissions increases either through the installation of air pollution control equipment or changes in operations.

Although the primary effect of installing air pollution control equipment is to reduce emissions of a particular pollutant, e.g., VOCs, some types of control equipment have the potential to create secondary adverse air quality impacts, e.g., increased NOx emissions if VOC emissions are controlled through a combustion process (e.g., afterburner) or require additional energy to operate. Control measures aimed at reducing NOx from stationary sources may use ammonia for control (e.g., selective catalytic reduction). Ammonia use could result in increased ammonia emissions and, since ammonia is a precursor to particulate formation, increased particulate formation in the atmosphere. Because of the potential for secondary emissions from air pollution control equipment, there is a potential that sensitive receptors could be exposed to increased pollutant concentrations, which could be significant. As a result, these potential air quality impacts of Rule 12-16 will be evaluated in the Draft EIR.

### III. e).

Rule 11-18: Rule 11-18 would require facilities that pose significant health risks to develop a plan to reduce that risk or apply TBARCT to all significant sources of risk at the facility. The measures that a facility could potentially implement to reduce its risk are listed above in Table 2.2 and generally would not result in the creation of objectionable odors that could affect a substantial number of people.

Rule 12-16: Rule 12-16 would establish facility-wide emissions limits for GHGs, PM<sub>2.5</sub> and PM<sub>10</sub>, NO<sub>x</sub>, and SO<sub>2</sub> at each of the five Bay Area refineries and three refinery-related facilities. The rule is not expected to result in an increase in odorous emissions at the refineries. Odorous emissions are not specifically covered by Rule 12-16 and while not specifically aimed at reducing emissions of compounds that are considered odorous, e.g., hydrogen sulfide (H<sub>2</sub>S), which is the primary odorous compound emitted from the refineries, the rule would not result in an increase in H<sub>2</sub>S or other odorous sulfur-containing compounds. Therefore, the rule is not expected to result in an increase in the generation of emissions that could generate odors.

## Conclusions

Implementation of Rule 11-18 would reduce risk from facilities that emit toxic air contaminants throughout the Bay Area. However, certain risk reduction measures have the potential to increase emissions of other pollutants, such as GHGs and criteria pollutants. Implementation of Rule 12-16 would prevent refinery emissions of GHGs and some criteria pollutants from increasing. Similarly, secondary adverse air quality impacts could occur from installing control equipment at individual refineries in response to changes that could increase emissions of criteria pollutants. Adverse impacts include increased criteria pollutant and TAC emissions from certain types of air pollution control equipment. Therefore, potential adverse secondary air quality impacts which could result from implementing either Rule 11-18 or Rule 12-16 will be evaluated in the Draft EIR. No significant impacts were identified on air quality plans or the generation of odors and these topics will not be addressed further in the Draft EIR.

### IV. BIOLOGICAL RESOURCES.

Would the project:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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?  <div style="text-align: right;"><b>Rule 11-18</b> <b>Rule 12-16</b></div>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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?  <div style="text-align: right;"><b>Rule 11-18</b> <b>Rule 12-16</b></div>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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?  <div style="text-align: right;"><b>Rule 11-18</b> <b>Rule 12-16</b></div>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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?  <div style="text-align: right;"><b>Rule 11-18</b> <b>Rule 12-16</b></div>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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?  <div style="text-align: right;"><b>Rule 11-18</b> <b>Rule 12-16</b></div>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>

Would the project:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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 rules are located in the Bay Area-Delta Bioregion (as defined by the State’s Natural Communities Conservation Program). This Bioregion is comprised of a variety of natural communities, which range from salt marshes to chaparral to oak woodland.

Rule 11-18: Hundreds of facilities located throughout the Bioregion would be affected by Rule 11-18. The facilities that would be affected by Rule 11-18 are expected to be located in developed commercial and industrial areas within the Bay Area. These commercial/industrial areas have been graded to develop the various structures, and are typically surrounded by other commercial and industrial facilities. Native vegetation, other than landscape vegetation, has usually been removed from these facilities.

Rule 12-16: Four of the refineries affected by the Rule 12-16 are located in Contra Costa County and one is located in Solano County (Valero). The refineries affected by Rule 12-16 have been developed with 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 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).

Rule 11-18: The facilities affected by Rule 11-18 are expected to be located in the commercial and industrial areas within the Bay Area. These commercial/industrial areas have been graded to develop the various structures, and are typically surrounded by other commercial and industrial facilities. Native vegetation, other than landscape vegetation, has usually been removed from these facilities.

Similarly, modifications at existing facilities would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with native or resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. Further, since the Rule 11-18 would primarily regulate stationary emission sources at commercial or industrial facilities, it would not directly or indirectly affect riparian habitat or other sensitive natural communities identified in local or regional plans, policies, or regulations, or identified by the CDFG or U.S. Fish and Wildlife Service. Improved air quality resulting from Rule 11-18 would be expected to provide health benefits to plant and animal species in the District.

Rule 12-16: No impacts on biological resources are anticipated from the Rule 12-16 which would apply to existing refineries. The refinery facilities have been graded and developed, and biological resources, with the exception of landscape species, have been removed. Construction of any air pollution control equipment would take place within the operating portions of existing refineries which are void of biological resources. As a result, there would be no direct or indirect impact on sensitive biological resources riparian habitats, or protected wetlands. The installation of air pollution control equipment would also not interfere with the movement of any migratory fish or wildlife species or affect 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).

Rule 11-18: No direct or indirect impacts from implementing the Rule 11-18 were identified which could adversely affect plant and/or animal species in the District. Implementing the Rule 11-18 would result in installation of new or modifications of existing equipment at commercial or industrial facilities to control or further control toxic emissions. Existing commercial or industrial facilities are generally located in appropriately zoned commercial or industrial areas, this work would not impact marshes, vernal pools, wetlands, etc. For these reasons the 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.

Rule 12-16: Compliance with the Rule 12-16 could result in the installation of additional air pollution control equipment at existing refineries. The installation of air pollution control equipment at these facilities would be consistent with industrial land uses. The operating portions of the existing refineries do not contain marshes, vernal pools, wetlands, etc. Therefore, construction would not impact these biological resources. For these reasons the 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).**

Rule 11-18: Rule 11-18 may require modifications at existing industrial or commercial facilities to control or further control emissions at these affected facilities. As a result, the rule will not conflict with any land use policies or ordinances protecting biological resources. Similarly, the rule will not conflict with any habitat conservation or natural community conservation plans, agricultural resources or operations, and would not create divisions in any existing communities.

Rule 12-16: Rule 12-16 will not conflict with any land use plans, local policies or ordinances, or regulations protecting biological resources for the reasons already given. Similarly, the rule is not expected to conflict with any habitat conservation or natural community conservation plans, agricultural resources or operations, and would not create divisions in any existing communities.

## **Conclusions**

Based upon the above considerations, significant adverse project-specific impacts to biological resources are not expected to occur due to implementation of either Rule 11-18 or Rule 12-16 and, therefore, will not be further evaluated in the Draft EIR.



## V. CULTURAL RESOURCES.

Would the project:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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.

## 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).

Rule 11-18: Implementing Rule 11-18 is primarily expected to result in controlling stationary source emissions at commercial or industrial facilities. Affected facilities are typically located in appropriately zoned commercial or industrial areas that have previously been graded and developed. Because stationary source emissions from existing facilities does not typically require extensive cut-and-fill activities, or excavation, it is unlikely that additional stationary source control measures that may result from Rule 11-18 will: (1) adversely affect historical or archaeological resources as defined in CEQA Guidelines §15064.5; (2) destroy unique paleontological resources or unique geologic features; or (3) disturb human remains interred outside formal cemeteries.

In a small number of cases, the Rule 11-18 may require minor site preparation and grading at an affected facility to install new or modify existing equipment. Under this circumstance, it is possible that archaeological or paleontological resources could be uncovered. Even if this circumstance were to occur, significant adverse cultural resource impacts are not anticipated because there are existing laws in place that are designed to protect and mitigate potential adverse impacts to cultural resources. As with any construction activity, should archaeological resources be found during construction that results from implementing the rule, the activity would cease until a thorough archaeological assessment is conducted.

Rule 12-16: No impacts on cultural resources are anticipated from the Rule 12-16 that would apply to existing refineries. Historic resources are typically not located within refineries and no demolition activities are expected to be required. As a result, no impacts on historic resources are expected. Construction activities would be limited to areas within existing refineries boundaries, 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.

## Conclusions

Based upon the above considerations, significant adverse project-specific impacts to cultural resources are not expected to occur due to implementation of Rule 11-18 and 12-16 and, therefore, will not be further evaluated in the Draft EIR.

## VI. GEOLOGY AND SOILS.

Would the project:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
iv) Landslides?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input 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?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>

Would the project:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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 rules are located primarily in commercial and industrial areas within the Bay Area.

The affected 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.

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 local City or County building codes and ordinances that regulate 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.

All City or County General Plans include a Safety Element. The Element identifies 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).

Rule 11-18: The rule will not directly expose people or structures to earthquake faults, seismic shaking, seismic-related ground failure including liquefaction, landslides, mudslides or substantial soil erosion, as BAAQMD rules or regulations do not directly or indirectly result in construction of new structures. Some new structures, or structural modifications at existing affected facilities may occur as a result of installing control equipment or making process modifications. In any event, existing affected facilities or modifications to existing facilities would be required to comply with relevant California Building Code requirements in effect at the time of initial construction or modification of a structure.

New structures must be designed to comply with the California Building Code Zone 4 requirements since the Air District is located in a seismically active area. The local cities or counties are responsible for assuring that projects comply with the Uniform Building Code and can conduct inspections to ensure compliance. The California Building Code is considered to be a standard safeguard against major

structural failures and loss of life. The goal of the Code is to provide structures that will: (1) resist minor earthquakes without damage; (2) resist moderate earthquakes without structural damage but with some non-structural damage; and (3) resist major earthquakes without collapse but with some structural and non-structural damage. The California Building Code bases seismic design on minimum lateral seismic forces ("ground shaking") and operates 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 represents the foundation conditions at the site.

Any potentially affected facilities that are located in areas where there has been historic occurrence of liquefaction, e.g., coastal zones, or existing conditions indicate a potential for liquefaction, including expansive or unconsolidated granular soils and a high water table, may have the potential for liquefaction induced impacts at the project sites. The California Building Code requirements consider liquefaction potential and establish more stringent requirements for building foundations in areas potentially subject to liquefaction. Therefore, compliance with the California Building Code requirements is expected to minimize the potential impacts associated with liquefaction. The issuance of building permits from the local cities or counties will assure compliance with the California Building Code requirements. Therefore, no significant impacts from liquefaction are expected.

Because facilities affected by any Air District control equipment requirements are typically located in industrial or commercial areas, which are not usually located near known geological hazards (e.g., landslide, mudflow, seiche, or volcanic hazards), no significant adverse geological impacts are expected. In addition, although refineries and possibly other facilities are located along the shoreline and may be affected by flooding from tsunamis, modifying existing equipment or installing new equipment to further control emissions from an existing facility will not expose people to new risks from tsunamis.

Rule 12-16: The petroleum refineries affected by Rule 12-16 already exist and operate within the confines of existing industrial facilities in the Bay Area. Construction activities could be required to install air pollution control equipment associated with complying with the refinery-wide emissions limits. Any substantial construction activities associated with new refinery equipment would occur within the confines of existing refineries and would be required to comply with the California Building Code. The California Building Code is considered to be a standard safeguard against major structural failures and loss of life. Any construction at industrial facilities regulated by the rule will 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 bases 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 rule would be required to obtain building permits, as applicable, for new foundations and structures at any site. The issuance of building permits from the local agency will assure compliance with the California Building Code, which include

requirements for building within seismic hazard zones. No significant impacts from seismic hazards are expected since the construction of any new structures would be required to comply with the California Building Code.

Because facilities affected by any Air District control equipment requirements are typically located in industrial or commercial areas, which are not usually located near known geological hazards (e.g., landslide, mudflow, seiche, or volcanic hazards), no significant adverse geological impacts are expected. In addition, although refineries and possibly other facilities are located along the shoreline and may be affected by flooding from tsunamis, modifying existing equipment or installing new equipment to further control emissions from an existing facility will not expose people to new risks from tsunamis.

**VI. b).**

Rule 11-18: Although Rule 11-18 may require modifications at existing industrial or commercial facilities, such modifications are not expected to require substantial grading or construction activities. Any new air pollution control equipment is not expected to substantially increase the area subject to compaction since the subject areas would be limited in size and, typically, have already been graded or displaced in some way. Therefore, significant adverse soil erosion impacts are not anticipated from implementing Rule 11-18.

Rule 12-16: Any construction activities would be limited to the confines of existing refineries which are already graded and developed. Rule 12-16 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).**

Rule 11-18: The CEQA environmental checklist includes a discussion of septic tanks and alternative wastewater disposal systems within the discussion of Geology and Soils. Therefore, a discussion of septic tanks and alternative septic systems is included herein for completeness. Septic tanks or other similar alternative wastewater disposal systems are typically associated with small residential projects in remote areas. The rule does not contain any requirements which generate construction of residential projects in remote areas. Rule 11-18 would only affect existing industrial or commercial facilities, which already are hooked up to appropriate sewerage facilities, and therefore no impacts on septic tanks or alternative wastewater disposal systems are expected.

Rule 12-16: Septic tanks or other similar alternative wastewater disposal systems are typically associated with small residential projects in remote areas. Rule 12-16 would only 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 Rule 12-16.



## Conclusions

Based upon the above considerations, significant adverse project-specific impacts to geology and soils are not expected to occur due to implementation of Rule 11-18 and 12-16 and, therefore, will not be further evaluated in the Draft EIR.

## VII. GREENHOUSE GAS EMISSIONS.

Would the project:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input 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?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input 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 (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), sulfur hexafluoride (SF<sub>6</sub>), haloalkanes (HFCs), and perfluorocarbons (PFCs). The GHGs absorb longwave radiant energy reflected by the earth, which warms the atmosphere. GHGs also radiate longwave radiation both upward to space and back down toward the surface of the earth. The downward part of this longwave radiation absorbed by the atmosphere is known as the "greenhouse effect." Some studies indicate that the potential effects of global climate change may include rising surface temperatures, loss in snow pack, sea level rise, more extreme heat days per year, and more drought years.

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

### Regulatory Background

In response to growing scientific and political concern regarding global climate change, California has taken the initiative to address the state’s greenhouse gas emissions. California has adopted the Global Warming Solutions Act of 2006, also known as AB 32, which requires the state to reduce its GHG emissions to 1990 levels by 2020. In addition, in 2005 Governor Schwarzenegger adopted Executive Order S-3-05, which commits to achieving an 80 percent reduction below 1990 levels by 2050. The

California Air Resources Board (CARB) has begun implementation of these mandates through adoption of regulatory requirements to reduce GHG emissions (among other agency implementation actions). Major sources of GHG emissions are under CARB's AB32 cap and trade program, which established a limit on GHG emissions for each source. GHG emissions over the limit require additional GHG emission reductions or purchase of GHG emission credits from sources that had excess emission credits.

**Senate Bills 1078 and 107 and Executive Order S-14-08 (2008):** SB 1078 (Chapter 516, Statutes of 2002) required retail sellers of electricity to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. In November 2008, then Governor Schwarzenegger signed EO S-14-08, which expands the state's Renewable Portfolio Standard to 33 percent renewable power by 2020. Governor Brown signed EO B-30-15 in 2015 in order to reduce GHG emissions by 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing GHG emissions to 80 percent of 1990 levels by 2050.

The Clean Energy and Pollution Reduction Act of 2015, SB 350 (Chapter 547, Statutes of 2015) was approved by Governor Brown on October 7, 2015. SB 350 will (1) increase the standards of the California RPS program by requiring that the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased to 50 percent by December 31, 2030; (2) require the State Energy Resources Conservation and Development Commission to establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas final end uses of retail customers by January 1, 2030; (3) provide for the evolution of the Independent System Operator (ISO) into a regional organization; and (4) require the state to reimburse local agencies and school districts for certain costs mandated by the state through procedures established by statutory provisions.

**SB 862:** In June 2014, SB 862 (Chapter 36, Statutes of 2014) established long-term funding programs from the Cap and Trade program for transit, sustainable communities and affordable housing, and high speed rail. SB 862 allocates 60 percent of ongoing Cap and Trade revenues, beginning in 2015–2016, to these programs. The remaining 40 percent is to be determined by future legislatures. A minimum of 25 percent of Cap and Trade dollars must go to projects that provide benefits to disadvantaged communities, and a minimum of 10 percent must go to projects located within those disadvantaged communities. In addition, this bill established the CalRecycle Greenhouse Gas Reduction Revolving Loan Program and Fund.

Most recently, SB 32 was signed into law in September 2016 and requires the California Air Resources Board (ARB) to ensure that statewide greenhouse gas emissions are reduced to 40% below the 1990 level by 2030. ARB is developing a 2030 Target Scoping Plan to implement this charge and expects to release a draft of the plan around the end of the year.

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

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

## Discussion of Impacts

### VII. a).

Rule 11-18: Rule 11-18 is designed to reduce the health risk associated with facilities that emit toxic air contaminants. There are several ways the risk associated with a facility can be reduced, which are outline in Table 2. 2. Included under this listing are:

- Enclosures and collection systems for particulate matter TACs;
- Filtration for toxic aerosols and particulate matter;
- Carbon adsorption and adsorption-oxidation systems for VOCs;
- Chemical absorption for VOCs;
- Thermal and catalytic oxidation for inorganic gases (such as hydrogen sulfide) and organic compounds; and
- Combination systems for the control of halogenated VOCs;

Each of the control options listed above has associated with it the potential to increase use of fuels, for combustion sources (e.g., electricity, natural gas, or refinery fuel gas), potentially generating additional greenhouse gas emission impacts. Construction activities for new and modified control devices may also result in GHG emissions. Therefore, GHG impacts from Rule 11-18 will be evaluated in the Draft EIR.

Rule 12-16: Rule 12-16 is designed to limit facility-wide emissions of GHGs and three criteria pollutants from the five petroleum refineries located within the jurisdiction of the BAAQMD. Rule 12-16 sets limits on the amount of these pollutants each refinery could emit annually and could require the installation of additional air pollution control equipment or modification of refinery operations to ensure each refinery stays within those limits. The rule could require new construction activities and the operation of new/modified refinery equipment. While, the goal of Rule 12-16 is to minimize overall refinery emissions, however, refinery modifications could result in the increased use of fuel for combustions sources (e.g., electricity, natural gas, or refinery fuel gas), potentially generating additional greenhouse gas emission impacts. As a result, the impacts of this rule on greenhouse gases will be further evaluated in the Draft EIR.

### VII. b).

Rule 11-18: Rule 11-18 would require facilities that pose a health risk in excess of a risk action level either reduce risks below the thresholds or apply TBARCT. However, these requirements would not conflict with any efforts by the state or the Air District to reduce GHG emissions. Because no potential

conflicts on GHG plans, policies or regulations were identified, this topic will not be evaluated in the Draft EIR for Rule 11-18.

Rule 12-16: As written, Rule 12-16 would have a direct impact on GHG emissions from all Bay Area refineries by setting an upper limit on the amount of GHGs each refinery can emit. The AB 32 Cap and Trade program allows covered facilities to buy and sell GHG emissions credits. Under Rule 12-16, Bay Area refineries would not be allowed to purchase GHG credits that would allow an increase in excess of the refinery-wide GHG limit. So, theoretically, under the Cap and Trade program, the GHG emissions of an individual refinery could increase while the overall goals of the program are being met. Because the GHG limits of Rule 12-16 could conflict with this aspect of the ARB's AB32 cap and trade program, the potential impacts of this conflict will be evaluated in the Draft EIR.

## Conclusions

Based upon the above considerations, the potential GHG emissions associated with Rules 11-18 and 12-16 will be evaluated in the Draft EIR. No significant impacts on GHG plans, policies, or regulations were identified for Rule 11-18, so this topic will not be addressed further in the Draft EIR for Rule 11-18. However, potentially significant impacts were identified for Rule 12-16, and therefore this topic will be addressed in the Draft EIR.

### VIII. HAZARDS AND HAZARDOUS MATERIALS.

Would the project:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input 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? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input 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? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input 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? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>

Would the project:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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?  <div style="text-align: right;"> <b>Rule 11-18</b>  <b>Rule 12-16</b> </div>	<input type="checkbox"/>  <input type="checkbox"/>	<input type="checkbox"/>  <input type="checkbox"/>	<input checked="" type="checkbox"/>  <input type="checkbox"/>	<input type="checkbox"/>  <input checked="" type="checkbox"/>

## Setting

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

Facilities and operations within the Air District handle and process substantial quantities of flammable materials and acutely toxic substances. Accidents involving these substances can result in worker or public exposure to fire, heat, blast from an explosion, or airborne exposure to hazardous substances.

Fires can expose the public or workers to heat. The heat decreases rapidly with distance from the flame and therefore poses a greater risk to workers at specific facilities where flammable materials and toxic substances are handled than to the public. Explosions can generate a shock wave, but the risks from explosion also decrease with distance. Airborne releases of hazardous materials may affect workers or the public, and the risks depend upon the location of the release, the hazards associated with the material, the winds at the time of the release, and the proximity of receptors.

For all facilities and operations handling flammable materials and toxic substances, risks to the public are reduced if there is a buffer zone between process units and residences or if prevailing winds blow away from residences. Thus, the risks posed by operations at a given facility or operation are unique and determined by a variety of factors.

Rule 11-18 has the potential to affect a large variety of facilities that emit toxic pollutants, including petroleum refineries, chemical plants, foundries, a cement kiln, gasoline dispensing facilities, data centers, hospitals, crematoria, residential buildings, fire stations, schools and universities, military installations, etc. Rule 12-16 would affect petroleum refineries that 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 facility are unique and determined by a variety of factors. The areas affected by the rules are typically located in industrial areas.

## Regulatory Background

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

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



Section 112 (r) of the Clean Air Act Amendments of 1990 [42 U.S.C. 7401 et. Seq.] and Article 2, Chapter 6.95 of the California Health and Safety Code require facilities that handle listed regulated substances to develop Risk Management Programs (RMPs) to prevent accidental releases of these substances, U.S. EPA regulations are set forth in 40 CFR Part 68. In California, the California Accidental Release Prevention (CalARP) Program regulation (CCR Title 19, Division 2, Chapter 4.5) was issued by the Governor's Office of Emergency Services (OES). RMPs consist of three main elements: a hazard assessment that includes off-site consequences analyses and a five-year accident history, a prevention program, and an emergency response program. California is proposing modifications to the CalARP Program along with the state's PSM program in response to an accident at the Chevron Richmond Refinery. The regulations were released for public comment on July 15, 2016 and the public comment period closes on September 15, 2016.

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).

Rule 11-18: Rule 11-18 has the potential to create direct or indirect hazard impacts associated with affected facility modifications employed to reduce risks. The rule is designed to reduce health risk associated with the emissions of TACs from existing stationary sources in the Bay Area. The rule is not

expected to require substantial new development. Any new air pollution control equipment or enclosures would be expected to occur within existing commercial or industrial facilities. The rule is expected to increase the control and capture of TACs, thus limiting TAC emissions and exposure to TACs and ultimately, reduce health risks.

Facility modifications associated with the rule are largely expected to include limiting throughput or hours of operations; increased use of diesel particulate filters; additional enclosures and bag houses, and thermal oxidizers or carbon adsorption systems. The hazards associated with the use of these types of air pollution control equipment and systems are minimal.

- Limiting throughput or hours of operations would not result in increased hazards as no new equipment, hazardous materials uses, or hazards would be generated.
- Diesel particulate filters and baghouses are not expected to result in additional hazards as they would simply filter exhaust.

Operation of carbon adsorption systems has potential hazards associated with the desorption cycle when there is minor risk for explosion or release of VOC into the atmosphere. Carbon adsorption systems may also represent a fire risk during operation when carbon particles are saturated with volatile organic compounds. The potential hazard impacts would depend on the flammability of the material, concentration of VOC adsorbed into the activated carbon, ambient oxygen levels, characteristics of the carbon adsorption system, and the operating conditions. Carbon adsorption units would concentrate hazardous organic compound into the spent carbon, requiring recycling or disposal.

The risk of explosion or release of VOC from carbon adsorption systems is not expected to be significant. The engineering specifications for a carbon adsorption unit are typically designed to operate within an acceptable range of temperatures for the carbon bed. Good engineering practice means this range of temperatures should not exceed the lower explosive limit (LEL) of the compound(s) being adsorbed. There is little risk of fire if the LEL is not exceeded.

Oxidation systems can be susceptible to compressor failure and flame flashbacks, particularly during startup and shutdown. As a result, oxidation systems could pose potential hazard risks primarily to workers or to a lesser extent the public in the event of explosions or fires. Oxidation systems historically have a good safety record when operated properly according to the manufacturers' instruction. Proper tune-up and maintenance is also important and necessary to avoid failures or explosions. When installed, operated, and maintained properly, oxidation systems are not expected to create fire or explosion hazards to workers or the public in general.

In addition to following good engineering practice for both oxidization systems, thermal oxidizers and carbon adsorption systems, Health and Safety Code §25506 specifically requires all businesses handling hazardous materials to submit a business emergency response plan to assist local administering agencies in the event of an emergency release or threatened release of a hazardous material. Business emergency response plans generally require the following:

- Types and quantities of hazardous materials used and their locations;
- Training programs for employees including safe handling of hazardous materials and emergency response procedures and resources.

- Procedures for emergency response notification;
- Proper use of emergency equipment;
- Procedures to mitigate a release or threatened release of hazardous materials and measures to minimize potential harm or damage to individuals, property, or the environment; and
- Evacuation plans and procedures.

Hazardous materials are expected to be used in compliance with established OSHA or Cal/OSHA regulations and procedures, including providing adequate ventilation, using recommended personal protective equipment and clothing, posting appropriate signs and warnings, and providing adequate worker health and safety training. The exposure of employees is regulated by Cal-OSHA in Title 8 of the CCR. Specifically, 8 CCR 5155 establishes permissible exposure levels (PELs) and short-term exposure levels (STELs) for various chemicals. These requirements apply to all employees. The PELs and STELs establish levels below which no adverse health effects are expected. These requirements protect the health and safety of the workers, as well as the nearby population including sensitive receptors.

In general, all local jurisdictions and all facilities using a minimum amount of hazardous materials are required to formulate detailed contingency plans to eliminate, or at least minimize, the possibility and effect of fires, explosion, or spills. In conjunction with the California Office of Emergency Services, local jurisdictions have enacted ordinances that set standards for area and business emergency response plans. These requirements include immediate notification, mitigation of an actual or threatened release of a hazardous material, and evacuation of the emergency area.

The above regulations provide comprehensive measures to reduce hazards of explosive or otherwise hazardous materials. Compliance with these and other federal, state and local regulations and proper operation and maintenance of equipment should ensure the potential for explosions or accidental releases of hazardous materials is not significant. Therefore, the rule is not expected to create a significant hazard to the public or environment.

Schools may be located within a quarter mile of commercial, industrial or institutional facilities affected by Rule 11-18. It would be expected that these facilities are taking the appropriate and required actions to ensure proper handling of hazardous materials, substances or wastes near school sites. The rule would not generate hazardous emissions, handling of hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school. Rather, the rule would be more likely to control TACs from existing facilities near school sites. Therefore, no increase in hazardous emissions from implementation of Rule 11-18 would be expected.

Rule 12-16: Rule 12-16 has the potential to create direct or indirect hazard impacts associated with refinery modifications. The requirement to limit refinery emissions of certain pollutants could result in additional construction activities at the refineries, refinery modifications, and/or changes in refinery operations. Some refinery modifications and changes in operations could generate additional hazard impacts. In particular, NO<sub>x</sub> emission reduction measures could result in the increased use of ammonia, which is a hazardous material, in selective catalytic reduction (SCR) units. These potential hazard impacts will be further evaluated in the Draft EIR.

**VIII. d).** Government Code §65962.5 requires creation of lists of facilities that may be subject to Resource Conservation and Recovery Act (RCRA) permits or site cleanup activities.

Rule 11-18: It is not known if the affected commercial or industrial facilities are located on the hazardous materials sites list pursuant to Government Code §65962.5. However, the rule is expected to increase the control of TAC emissions and would not interfere with site cleanup activities or create additional site contamination, and would not create a significant hazard to the public or environment.

Rule 12-16: The refineries affected by the 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. Rule 12-16 is not expected to interfere with site cleanup activities or create additional site contamination. Therefore, this topic is less than significant and will not be further evaluated in the Draft EIR.

**VIII. e and f).**

Rules 11-18 and 12-16: Neither rule is 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 rules, which are expected to increase the control of criteria and toxic pollutant emissions. Modifications are expected to be confined to the existing commercial or industrial land uses. Therefore, no significant adverse impacts on an airport land use plan or on a private air strip are expected.

**VIII. g).** Rules 11-18 and 12-16: No impacts on emergency response plans are anticipated from Rule 11-18 and Rule 12-16 that would apply to existing facilities (including refineries, etc.). The facilities affected by the rules already exist and operate within the confines of existing industrial facilities. The rules neither require, nor are likely to result in, activities that would impact any emergency response plan. The existing facilities affected by the rules already store and transport hazardous materials, so emergency response plans already include hazards associated with existing refinery operations. The rules are not expected to require any changes in emergency response planning. Therefore, no significant adverse impacts on emergency response plans are expected.

**VIII. h).** Rules 11-18 and 12-16: No increase in hazards associated with wildfires is anticipated from Rule 11-18 or Rule 12-16. The existing facilities (including petroleum refineries, etc.) affected by the rules already exist and operate within the confines of existing commercial or industrial facilities. Native vegetation has been removed from the operating portions of the affected facilities to minimize fire hazards. Neither Rule 11-18 nor Rule 12-16 is expected to increase the risk of hazards associated with wildland fires in general and specifically in areas with flammable materials. Therefore, neither Rule 11-18 nor Rule 12-16 would expose people or structures to significant risk of loss, injury or death involving wildland fires.

## Conclusions

Rule 11-18: Based upon these considerations, no significant adverse hazards and hazardous materials impacts are expected from the implementation of Rule 11-18.

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

## IX. HYDROLOGY AND WATER QUALITY.

Would the project:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input 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)? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input 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? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>

Would the project:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
g) Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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 affected environment vary substantially throughout the area and include commercial, industrial, residential, agricultural, and open space uses.

The facilities affected by the rule are located within all 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 Regional Water Quality Control Boards (RWQCB) administer 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).

Rule 11-18: The rule is designed to reduce risk from existing stationary sources located throughout the Bay Area. Potential risk reduction measures include measures that would limit emissions of TACs. The rule is not expected to require any new development. Modifications are expected to be limited to existing commercial or industrial facilities. Physical changes are expected to be limited to new air pollution control equipment and construction of enclosures. No significant increase in wastewater



discharge is expected from the project, and therefore no impacts on water quality resources are anticipated from the rule.

Minor construction may be necessary to install control systems. Construction would likely require a couple of pieces of off-road equipment, medium-duty truck trips to deliver equipment, and a small construction crew. The construction of enclosures may require some grading and foundations work. Grading and foundation work is not expected to last more than one week per project, therefore, minimal water will be required for dust mitigation. No wet gas scrubbers are expected as a result of the rule. All existing and new facilities will still be required to have applicable wastewater discharge permits and storm water pollution prevention plans (SWPPP).

No significant increase in water use is expected as a result of the rule. The Air District anticipates that facilities will implement various control measures, but no wet gas scrubbers are expected. Thus, water concerns will be limited to construction, which is expected to involve minor construction activities within existing facilities or buildings. Minor water use for construction purposes will not substantially increase water demand or interfere with groundwater recharge or cause any notable change in the groundwater table level.

Rule 12-16: Rule 12-16 could require the installation of additional air pollution control equipment or modify refinery operations. The rule could require new construction activities and the operation of new/modified refinery equipment. The goal of Rule 12-16 is to limit overall refinery emissions of certain pollutants, however, refinery modifications could result in the increased use of water. For example, control measures for particulate matter and/or SO<sub>x</sub> emissions could require additional water use and wastewater discharge from devices like wet gas scrubbers. The potential increase and water use and the potential to deplete groundwater supplies will be evaluated in the Draft EIR.

#### **IX. c, d, and e).**

Rule 11-18: The rule 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 primarily within existing facilities that have already been graded. Additionally, facilities are typically expected to develop a SWPPP to address storm water impacts. Rule 11-18 is also 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 as there will be no major construction or significant water use. Therefore, no significant adverse impacts to storm water runoff or existing drainage patterns are expected as a result of the rule.

Rule 12-16: Rule 12-16 would limit the emissions of certain air pollutant and could require the installation of additional air pollution control equipment or modify refinery operations if those thresholds are exceeded. The rule does not have the potential to substantially increase the area subject to runoff since the construction activities are expected to be limited in size and would be located within existing refineries that have already been graded and developed. In addition, storm water drainage within refineries has been controlled and construction activities are not expected to alter the storm water drainage within the refineries. Therefore, the 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 rule is not expected to create or contribute to runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of contaminated runoff. Therefore, no significant adverse impacts to storm water runoff are expected, and it will not be further evaluated in the Draft EIR.

**IX. g, h, i, and j):** Rules 11-18 and 12-16: Neither of the rules 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 rules would not be expected to create or substantially increase risks from flooding; expose people or structures to significant risk of loss, injury or death involving flooding; or increase existing risks, if any, of inundation by seiche, tsunami, or mudflow. Consequently, this topic will not be evaluated further in the Draft EIR.

## Conclusions

Rule 11-18: Based upon these considerations, no significant adverse impacts to hydrology and water quality are expected from the adoption of the rule.

Rule 12-16: The potential increase in water use and the potential to deplete groundwater supplies will be evaluated in the Draft EIR. No significant adverse water quality impacts were identified for stormwater runoff, flood hazards, or inundation hazards and these topics will not be addressed in the Draft EIR.

## X. LAND USE AND PLANNING.

Would the project:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Physically divide an established community? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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 rules are primarily located in commercial and 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)

Rule 11-18: The rule is designed to reduce risk from existing stationary sources located throughout the Bay Area. Potential risk reduction measures include measures that would limit emissions of TACs. The rule does not include any components that would require major modifications to existing commercial or industrial facilities and therefore the rule would not result in impacts that would physically divide an established community or generate additional development.

The rule is not expected to require any new substantial construction or development. New or modified pollution control equipment or enclosures would be located within existing commercial or industrial facilities. Construction activities would be limited to the confines of existing facilities which are zoned for commercial or industrial land use. Modifications to equipment would be limited to the confines of existing facilities and are not expected to affect adjacent land uses, divide an established community, conflict with any applicable land use plan or policy or conflict with any habitat conservation plan.

Rule 12-16: Construction activities could also be required to install air pollution control equipment associated with compliance with Rule 12-16. Any substantial construction activities associated with new refinery equipment would occur within the confines of existing refineries. The land use within the refineries is typically zoned for heavy industrial uses. Land uses surrounding the refineries can vary considerably and include industrial areas, commercial areas, open space, and residential areas. Construction activities would be limited to the confines of the refineries. The installation of air monitors or air pollution control equipment would not change or impact existing land uses.

## **Conclusions**

Based upon the above considerations, significant adverse project-specific impacts to land use and planning are not expected to occur due to implementation of either Rule 11-18 or Rule 12-16 and, therefore, will not be further evaluated in the Draft EIR.

## XI. MINERAL RESOURCES.

Would the project:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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 Rules 11-18 and 12-16 are primarily located in commercial and 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).

Rule 11-18: Rule 11-18 is designed to reduce risk from existing stationary sources located throughout the Bay Area. Potential risk reduction measures include measures that would limit emissions of TACs. The 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.

Rule 12-16: Rule 12-16 would limit the emissions of certain air pollutant and could require the installation of additional air pollution control equipment or modify refinery operations if those

thresholds are exceeded. The 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.

## **Conclusions**

Based upon the above considerations, significant adverse project-specific impacts to mineral resources are not expected to occur due to implementation of either Rule 11-18 or Rule 12-16 and, therefore, will not be further evaluated in the Draft EIR.

## XII. NOISE.

Would the project:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Exposure of persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input 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?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input 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?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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 rules are located in commercial and industrial areas of the Bay Area.

## Regulatory Background

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

## Discussion of Impacts

### **XII. a, b, c, and d).**

Rule 11-18: Rule 11-18 is designed to reduce risk from existing stationary sources located throughout the Bay Area. Potential risk reduction measures include measures that would limit emissions of TACs. New modifications are expected to be limited to the commercial and industrial facilities. The existing noise environment at each of the affected facilities is typically dominated by noise from existing equipment onsite, vehicular traffic around the facilities, and trucks entering and exiting facility premises. No new major industrial equipment is expected to be required to be installed due to the rule so that no noise impacts associated with the operation of the rule are expected. Air pollution control equipment is not generally a major noise source. Further, all noise producing equipment must comply with local noise ordinances and applicable OSHA and Cal/OSHA noise requirements. Therefore, industrial operations affected by the rule are not expected to have a result in noise exposure that would exceed levels established by local noise control laws or ordinances.

Construction activities associated with the rule may generate some noise associated with temporary construction equipment and construction-related traffic. Construction would likely require truck trips to deliver equipment, a construction crew of up to about 15 workers, and a few pieces of construction equipment (e.g., forklift, welders, backhoes, cranes, and generators). All construction activities would be temporary and are expected to occur within the confines of existing commercial or industrial facilities so that no significant increase in noise is expected.

Rule 11-18 is not expected to generate or expose people to excessive groundborne vibration or groundborne noise. No major construction equipment that would generate vibration (e.g., backhoes, graders, jackhammers, etc.) is expected to be required. Therefore, the rule is not expected to generate excessive groundborne vibration or noise.

Rule 12-16: The petroleum refineries affected by Rule 12-16 already exist and operate within the confines of existing industrial facilities in the Bay Area. Any substantial construction activities



associated with new refinery equipment would occur within the confines of existing refineries, located within industrial areas. However, those construction activities would be required to comply with local noise ordinances, which generally prohibit construction during the nighttime, in order to minimize noise impacts. Compliance with the local noise ordinances is expected to minimize noise impacts associated with construction activities to less than significant.

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

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

## **XII. e and f).**

Rule 11-18: It is not known if the existing commercial or industrial facilities affected by the rule are located within existing airport land use plans. The addition of new or modification of existing air pollution control equipment or enclosures would not expose people residing or working in the project area to excessive noise levels associated with airports, as air pollution control equipment are not typically noise generating equipment. Rule 11-18 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 rule that would substantially increase ambient noise levels, either intermittently or permanently.

Rule 12-16: If applicable, the petroleum refineries affected by Rule 12-16 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. Rule 12-16 would not locate residents or commercial buildings or other sensitive noise sources closer to airport operations. As noted in the previous item, there are no components of the rule that would substantially increase ambient noise levels, either intermittently or permanently.

## **Conclusions**

Based upon the above considerations, no significant adverse project-specific noise impacts are expected due to implementation of either Rule 11-18 or Rule 12-16; therefore, noise impacts will not be further evaluated in the Draft EIR.

### XIII. POPULATION AND HOUSING.

Would the project:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Induce substantial population growth in an area either directly (e.g., by proposing new homes and businesses) or indirectly (e.g. through extension of roads or other infrastructure)?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
b) Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
c) Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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 Rules 11-18 and 12-16 are generally industrial and commercial facilities within the jurisdiction of the BAAQMD.

### Regulatory Background

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

### Discussion of Impacts

**XIII. a).** According to the Association of Bay Area Governments (ABAG), population in the Bay Area is currently about seven million people and is expected to grow to about nine million people by 2035 (ABAG, 2006).

Rule 11-18: Rule 11-18 is not anticipated to generate any significant effects, either directly or indirectly, on the Bay Area’s population or population distribution. The rule would affect commercial and industrial facilities. It is expected that the existing labor pool would accommodate the labor

requirements for any new or modified equipment at the facilities. In addition, it is not expected that the affected facilities would need to hire additional personnel to implement the rule. In the event that new employees are hired, it is expected that the existing local labor pool in the Bay Area can accommodate any increase in demand for workers that might occur as a result of adopting the rule. As such, adopting propose Rule 11-18 is not expected to induce substantial population growth.

Rule 12-16: Rule 12-16 is not anticipated to generate any significant effects, either directly or indirectly, on the Bay Area's population or population distribution. The rule would affect five refineries and three associated 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 new control equipment on site because air pollution control equipment is typically not labor intensive equipment. In the event that new employees are hired, it is expected that the existing local labor pool in the Bay Area can accommodate any increase in demand for workers that might occur as a result of adopting the rule. As such, adopting Rule 12-16 is not expected to induce substantial population growth.

**XIII. b and c).** Rules 11-18 and 12-16: Both of the rules could result in the installation of air pollution control equipment operated in commercial and industrial settings. However, Rules 11-18 and 12-16 are not expected to result in the creation of any industry that would affect population growth, directly or indirectly induce the construction of single- or multiple-family units, or require the displacement of people or housing elsewhere in the Bay Area. Based upon these considerations, significant population and housing impacts are not expected from the implementation of the rules.

## Conclusions

Based upon the above considerations, significant adverse project-specific impacts to population and housing are not expected to occur due to implementation of either Rule 11-18 or Rule 12-16 and, therefore, will not be further evaluated in the Draft EIR.

### XIV. PUBLIC SERVICES.

Would the project:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Police protection? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Schools? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Parks? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Other public facilities? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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 rules are primarily located in commercial and 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 rules maintain fire-fighting equipment and trained personnel with fire-fighting and emergency response experience. In addition, all affected refineries operated on-site security systems.

## Regulatory Background

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

## Discussion of Impacts

### XIV. a).

Rule 11-18: The rule is designed to reduce toxic health risks from stationary sources in the Bay Area. Rule 11-18 could require minor construction activities and modifications at existing facilities. The modifications are not expected to require additional service from local fire or police departments above current levels.

As noted in the “Population and Housing” discussion above, the 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, modifications to existing facilities are not expected to require an increase in employees. Therefore, there will be no increase in local population and thus no impacts are expected to local schools or parks.

The rule would not result in the need for new or physically altered government facilities in order to maintain acceptable service ratios, response times, or other performance objectives. There will be no increase in population as a result of the adoption of the rule, therefore, no need for physically altered government facilities.

Rule 12-16: Rule 12-16 would limit the emissions of certain air pollutant and could require the installation of additional air pollution control equipment or modify refinery operations if those thresholds are exceeded. As stated above, all refineries affected by the rule, maintain on-site fire-fighting equipment and trained personnel with fire-fighting and emergency response experience. While Rule 12-16 could require new construction activities and the operation of new/modified refinery equipment, the additional equipment is not expected to require additional service from local fire departments above current levels.

Refineries maintain their own security systems. Refineries are fenced and access is controlled at manned gates. Modification associated with the rule would occur within the confines of the existing refineries. Therefore, the rule 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 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 and air pollution control equipment is not expected to require a substantial increase in

employees. Therefore, there will be no increase in local population and thus no impacts are expected to local schools or parks.

## **Conclusions**

Based upon the above considerations, significant adverse project-specific impacts to public services are not expected to occur due to implementation of either Rule 11-18 or Rule 12-16 and, therefore, will not be further evaluated in the Draft EIR.

## XV. RECREATION.

Would the project:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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 there are numerous areas for recreational activities. The refineries affected by the Rules 11-18 and 12-16 are located in industrial areas within the Bay Area. Public recreational land can be located adjacent to, or in reasonable proximity to, these areas.

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

### Regulatory Background

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

## Discussion of Impacts

**XV. a and b).** Rules 11-18 and 12-16: As discussed under “Land Use” above, there are no provisions of the rules that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments; no land use or planning requirements will be altered by either Rule 11-18 or Rule 12-16. Air pollution control equipment, if necessary, would be installed within the confines of existing facilities, including refineries, and would not impact existing recreational facilities.

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

## Conclusions

Based upon the above considerations, significant adverse project-specific impacts to recreation are not expected to occur due to implementation of either Rule 11-18 or Rule 12-16 and, therefore, will not be further evaluated in the Draft EIR.



## XVI. TRANSPORTATION / TRAFFIC.

Would the project:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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 by the county congestion management agency for designated roads or highways?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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)?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
e) Result in inadequate emergency access?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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.

## Regulatory Background

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

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

## Discussion of Impacts

### XVI. a and b).

Rule 11-18: Construction: The rule is designed to reduce health risks from stationary sources in the Bay Area. Any new or modified pollution control equipment is expected to be located in commercial, industrial, or institutional facilities and may require construction activities. Construction impacts were considered for the control measures found in Table 2-1. Control measures that do not require equipment, such as reducing operating time, are not expected to generate any additional traffic. The BAAQMD estimates that approximately 30 facilities per year are expected to meet reductions by implementing either a baghouse or an enclosure. The construction of enclosures is expected to require the most construction equipment and workers. This could require up to 34 delivery and/or disposal trucks and up to about 45 construction worker trips on a peak construction day (during the building construction phase for enclosures). Given the size of the Bay Area, this amount of construction traffic would not be noticeable, particularly since construction activities would be expected at existing commercial, industrial and institutional land uses and would be temporary. The rule is not expected to require modification to circulation for temporary construction activities. As a result, construction traffic from Rule 11-18 would not have significant impacts on the performance of the circulation system or on standards established for congestion management.

Operational: Waste products may be generated from the use of several types of control technologies. Wastes could include: spent carbon generated from the carbon adsorption process; spent metal catalysts from the catalytic oxidation process; and dry solids from filtration controls. The majority of wastes will likely need to be transported to disposal or recycling facilities. The catalysts in catalytic oxidizers need to be replaced every few years so this potential waste product was considered to contribute to the waste transport impacts.

For a “worst case” analysis, it was assumed that about 180 facilities per year would be required to install a control device to comply with the rule. These facilities at any given day would generate an additional one-two truck trips per day in the entire Air District for delivery and disposal. These potential truck trips are not expected to significantly adversely affect circulation patterns on local roadways near affected facilities. In addition, this volume of additional daily truck traffic is negligible over the entire area of the Air District. Finally, the number of waste disposal transport trips substantially overestimates the number of anticipated trips because owners/operators at affected facilities may use other types of add-on control equipment and most are expected to limit throughput rates or operating times which would have no impact on traffic. No increase in worker traffic is expected as the operation of air pollution control equipment of the type expected under the rule is not expected to require any additional employees. Therefore, operational traffic under the Rule 11-18 is expected to be less than significant.

Rule 12-16: The petroleum refineries affected by the rule already exist and operate within the confines of existing industrial facilities in the Bay Area. Construction activities could be required to install air pollution control equipment associated with compliance with the emissions limits contained in the rule. Any substantial construction activities associated with new refinery equipment would occur within the confines of existing refineries. Construction activities are temporary and the related construction worker traffic and delivery trucks would cease following completion of construction. No substantial increase in workers or average daily vehicle or truck trips is anticipated as a result of Rule 12-16. Therefore, the

rule is not expected to result in traffic that would 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 rule and any permanent increase in operation-related traffic is expected to be minimal. Thus, the traffic impacts associated with Rule 12-16 are expected to be less than significant.

#### **XVI. c).**

Rule 11-18: The rule is not expected to involve the delivery of materials via air, so no increase in air traffic is expected. The addition of new or modified air pollution control equipment is not expected to change air traffic patterns or result in a change in location that results in substantial safety risks.

Rule 12-16: Rule 12-16 would not result in a change in air traffic patterns or increase air traffic. Actions that would be taken to comply with the rule, such as installing new air pollution control equipment, would not influence or affect air traffic patterns. Further, air pollution control equipment is expected to be lower in height than other existing structures at the refinery and would not impact navigable air space. Thus, Proposed Rule 12-16 would not result in a change in air traffic patterns including an increase in traffic levels or a change in location that results in substantial safety risks.

#### **XVI. d and e).**

Rule 11-18: Rule 11-18 is not expected to increase traffic hazards or create incompatible uses. The rule does not involve construction of any roadways or other transportation design features, so no changes to current roadway designs that would increase traffic hazards are expected. Emergency access at the commercial and industrial facilities affected by the Proposed Rule 11-18 is not expected to be impacted by the rule. Each affected facility is expected to continue to maintain their existing emergency access. The rule is not expected to increase vehicle trips or to alter the existing long-term circulation patterns. The rule is not expected to require a modification to circulation, thus, no long-term impacts on the traffic circulation system are expected to occur.

Rule 12-16: Rule 12-16 would not alter traffic patterns or existing roadways, as it is not expected to generate any substantial increase in traffic. The rule would not create any traffic hazards or create incompatible uses at or adjacent to refineries. Any construction activities associated with the rule would be temporary and located within the confines of the existing refineries. The rule is not expected to require circulation modifications, thus, no long-term impacts on the traffic circulation system are expected to occur. The rule 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 Rule 12-16. Further, each affected refinery would continue to maintain their existing emergency access gates and installation of new refinery equipment is not expected to impact emergency access.

#### **XVI. f).**

Rule 11-18: The rule is not expected to affect the performance of mass transit or non-motorized travel to street, highways and freeways, pedestrian or bicycle paths. No conflicts with any congestion management programs, to include level of service and travel demand measures, or other standards

established by county congestion management agencies for designated roads or highways, are expected. No changes are expected to parking capacity at or in the vicinity of affected facilities as the rule only pertains to equipment located within existing commercial and industrial facilities. Therefore, no significant adverse impacts resulting in changes to traffic patterns or levels of service at local intersections are expected.

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

## Conclusions

Based upon the above considerations, significant adverse project-specific impacts to transportation/traffic are not expected to occur due to implementation of either Rule 11-18 or Rule 12-16 and, therefore, will not be further evaluated in the Draft EIR.

## XVII. UTILITIES / SERVICE SYSTEMS.

Would the project:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input 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?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input 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?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input 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?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?  <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input 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 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).**

Rule 11-18: Rule 11-18 is designed to reduce health risks from stationary sources in the Bay Area. The facilities affected by the rule already exist and already use water, generate wastewater, treat wastewater, and discharges wastewater under existing wastewater discharge permits. The potential water use and wastewater impacts associated with implementation of Rule 11-18 are addressed under Hydrology and Water Quality (see Section IX a.) and have been determined to be less than significant.

Rule 12-16: The refineries affected by Rule 12-16 already exist and already use water, generate wastewater, treat wastewater, and discharge wastewater under existing wastewater discharge permits. The rule may potentially require additional air pollution control equipment. The potential water use and wastewater impacts associated with implementation of Rule 12-16 are addressed under Hydrology and Water Quality (see Section IX a.).

**XVII. c).**

Rule 11-18: Implementation of Rule 11-18 may require new or modified pollution control equipment within the confines of existing facilities. These modifications would not alter the existing drainage system or require the construction of new storm water drainage facilities. Nor would the changes required by the 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.

Rule 12-16: Rule 12-16 may result in the installation of air pollution control equipment, but would not alter the existing drainage system or require the construction of new storm water drainage facilities. Nor would the 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).**

Rule 11-18: The rule would reduce health risk posed by existing commercial or industrial facilities. The primary method for reducing these health impacts would be to reduce emissions of TACs, including the use of control technology like baghouses and catalytic oxidizers. Baghouses and catalytic oxidizers will generate solid waste, but they are not expected to require annual replacement events. The baghouses and spent catalyst are only expected to generate a few tons of waste per change out. It is assumed that any hazardous material will be taken to the U.S. Ecology Beatty Nevada hazardous waste facility for treatment and disposal. U.S. Ecology, Inc. is currently receiving waste, and is in the process of extending the operational capacity for an additional 35 years (U.S. Ecology, 2015). Clean Harbors in Grassy Mountain, Utah is also available to receive hazardous waste and is expected to continue to receive waste for an additional 70 years (Clean Harbors, 2015). Therefore, the rule impacts on hazardous waste landfills are less than significant.

The rule is not expected to generate any significant increase in solid waste. Therefore, no significant adverse impacts are expected to solid waste as a result of the rule.

Rule 12-16: No significant impacts on waste generation are expected from the implementation of Proposed Rule 12-16 because the rule would potentially result in the installation of additional air pollution control equipment which is not expected to create substantial quantities of solid or hazardous waste. Waste streams from refineries would be processed similarly as current methods, so no significant impact to land disposal facilities would be expected. Therefore, no significant impacts to hazardous waste disposal facilities are expected due to the rule. Facilities are expected to continue to comply with all applicable federal, state, and local statutes and regulations related to solid and hazardous wastes.

**Conclusions**

Rule 11-18: Based upon these considerations, no significant adverse impacts to utilities/service systems are expected from the adoption of the rule.



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

**XVIII. MANDATORY FINDINGS OF SIGNIFICANCE.**

Would the project:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" 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)? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input 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? <b>Rule 11-18</b> <b>Rule 12-16</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>

**Discussion of Impacts**

**XVIII. a).**

Rule 11-18: Rule 11-18 does not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory, as discussed in the previous sections of the CEQA checklist. The rule is designed to reduce health risks from commercial or industrial facilities in the Bay Area, thus providing a beneficial air quality impact and improvement in air quality. As discussed in Section IV, Biological Resources and Section V, Cultural Resources, no significant adverse impacts are expected to biological or cultural resources.

Rule 12-16: Rule 12-16 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. Rule 12-16 may require the installation of emission control equipment. As discussed in Section IV, Biological Resources and Section V, Cultural Resources, no significant adverse impacts are expected to biological or cultural resources, as any construction activities are expected to remain within the confines of existing refineries which have already been graded and developed.

### **XVIII. b and c).**

Rule 11-18: The rule is designed to reduce health risks from commercial, industrial and institutional facilities in the Bay Area, thus providing a beneficial air quality impact and improvement in air quality. However, construction and operation of air pollution control equipment has the potential to increase emissions of other emissions, including GHGs and criteria pollutants. The potential secondary adverse air quality impacts associated with implementing Rule 11-18, including any cumulative air quality impacts will be evaluated in the EIR. The rule is expected to reduce TAC emissions, thus reducing the potential health impacts.

Rule 12-16: Rule 12-16 may require the installation of emission control equipment, if the emissions limits are exceeded. The rule could require construction and installation of new air pollution control equipment which could result in secondary air emissions as well as additional GHG emissions. Therefore, the air quality and cumulative impacts associated with implementation of Rule 12-16 will be evaluated in the Draft EIR.

## **Chapter 3**

### **References**

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

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

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