# Initial Study/Negative Declaration for the Amendments to Bay Area Air Quality Management District Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants

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# CHAPTER 1

# INTRODUCTION

## PURPOSE OF THIS DOCUMENT

This Negative Declaration assesses the environmental impacts of the proposed adoption of amendments to Regulation 2, Rule 5 (Regulation 2-5) – New Source Review of Toxic Air Contaminants (TACs) by the Bay Area Air Quality Management District (BAAQMD or District). This assessment is required by the California Environmental Quality Act (CEQA) and in compliance with the state CEQA Guidelines (Title 14 California Code of Regulations §15000 et seq.). A Negative Declaration serves as an informational document to be used in the decision-making process for a public agency that intends to carry out a project; it does not recommend approval or denial of the project analyzed in the document. The BAAQMD is the lead agency under CEQA and must consider the impacts of the proposed rule amendments when determining whether to adopt them. The BAAQMD has prepared this Negative Declaration because no significant adverse impacts are expected to result from the proposed rule amendments.

## SCOPE OF THIS DOCUMENT

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

- aesthetics,
- agricultural resources,
- air quality,
- biological resources,
- cultural resources,
- geology and soils,
- hazards and hazardous materials,
- hydrology and water quality,
- land use planning,
- mineral resources,

- noise,
- population and housing,
- public services,
- recreation,
- transportation and traffic, and
- utilities and service systems.

## IMPACT TERMINOLOGY

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

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

## ORGANIZATION OF THIS DOCUMENT

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

- Chapter 1, “Introduction,” identifies the purpose, scope, and terminology of the document.
- Chapter 2, “Description of the Proposed Rule,” provides background information of Regulation 2-5, describes the proposed rule amendments, and describes the area and facilities that would be affected by the amendments.

- Chapter 3, "Environmental Checklist," presents the checklist responses for each resource topic. This chapter includes a brief setting description for each resource area and identifies the impact of the proposed rule amendments on the resources topics listed in the checklist.

- Chapter 4, "References Cited," identifies all printed references and personal communications cited in this report.

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# CHAPTER 2

# DESCRIPTION OF THE PROPOSED RULE

## BACKGROUND

The Bay Area Air Quality Management District (District or BAAQMD) is proposing amendments to Regulation 2, Rule 5: Air Toxics New Source Review (Regulation 2-5) to increase the stringency of the standards for new and modified stationary sources by adopting updates to Cal/EPA's Office of Environmental Health Hazard Assessment's (OEHHA's) health risk assessment guidelines, particularly new Age Sensitivity Factors that will increase lifetime residential cancer risk estimates by a factor of 1.7. Staff also proposes tracking of toxic emission increases and reductions in Priority Communities in order to assess cumulative risk. The rule and Health Risk Screening Analysis (HRSA) Guidelines would be updated with revised health effects values adopted by OEHHA as of June 1, 2009.

### AIR TOXICS NEW SOURCE REVIEW PROGRAM

The Air Toxics New Source Review (NSR) Program was established in 1987 at the direction of the District's Board of Directors, and was initially implemented based on policies and procedures established by the District's Air Pollution Control Officer (APCO). In 2005, the District updated the Air Toxics NSR Program and codified the Air Toxics NSR policies and procedures in Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants, in the Manual of Procedures, Volume II, Part 4: New and Modified Sources of Toxic Air Contaminants, and in the BAAQMD Health Risk Screening Analysis (HRSA) Guidelines.

The goal of the Air Toxics NSR Program is to prevent significant increases in health risks resulting from new and modified stationary sources of TACs based on preconstruction permit review. The program is also intended to reduce existing health risks by requiring updated control requirements when older, more highly polluting, sources are modified or replaced. Regulation 2, Rule 5 contains health risk based thresholds at which a new or modified source must employ Best Available Control Technology for Toxics (TBACT) and health risk limits that each project cannot exceed. The rule also delineates the procedures to be used for calculating TAC emission increases and reductions.

When evaluating heath impacts from new and modified sources, the District follows the BAAQMD Health Risk Screening Analysis (HRSA) Guidelines, which generally conform to State Air Toxics Hot Spots Health Risk Assessment (HRA) guidelines. The California Office of Environmental Health Hazard Assessment (OEHHA) periodically revises the State HRA guidelines and has made a number of changes since the BAAQMD

HRSA Guidelines were adopted in 2005. The goals of this rule development project are: (a) to provide an additional margin of public health safety for children and residential receptors, and (b) to increase conformity with the State HRA guidelines.

## CARE PROGRAM

In 2004, the District initiated the Community Air Risk Evaluation (CARE) program, which focuses on assessing air pollution health impacts for specific Bay Area Priority Communities and sensitive receptors and reducing health disparities for highly impacted individuals. The CARE program takes a broader look at air pollution health impacts than the District's other toxic programs by including both stationary and mobile sources of air pollution in the health impacts analysis and by evaluating the cumulative health impacts that arise from multiple causes of air pollution in a community.

Through the CARE program, the District has determined that diesel PM is the primary contributor to Bay Area air pollution health impacts, and the CARE Workgroup has identified six "Priority Communities" in the Bay Area that have comparatively high health impacts, sensitive populations, and other deleterious factors. The District is pursuing multiple mitigation measures (e.g. grants, incentives, land use guidance, and regulations) to reduce health impacts related to air pollution in these Priority Communities.

Data indicate that stationary source contributions to health impacts in Priority Communities are generally small compared to impacts from mobile sources, nevertheless the District has committed to tracking emission increases and reductions, and evaluating cumulative impacts in each priority community and is planning regulations to mitigate risk from specific stationary source categories (e.g., steel foundries and metal melting).

## HEALTH RISK ASSESSMENTS

As required by Regulation 2, Rule 5, HRSAs for new and modified sources are conducted in accordance with the procedures identified in the BAAQMD HRSA Guidelines (adopted in 2005). The BAAQMD HRSA Guidelines generally conform to OEHHA's health risk assessment guidelines for the Air Toxics Hot Spots program. Since 2005, OEHHA has made a number of revisions to these guidelines and is considering additional revisions that are expected to be adopted in 2010.

BAAQMD staff has been working closely with OEHHA to understand the effects that these adopted and pending revisions to health risk assessment methodologies may have on Regulation 2-5. These changes reflect new scientific knowledge and techniques, and in particular, explicitly include consideration of possible differential effects on the health of infants, children and other sensitive subpopulations in accordance with the mandate of the Children's Environmental Health Protection Act (Senate Bill 25, Escutia). In particular, OEHHA adopted Age Sensitivity Factors (ASFs) on June 1, 2009 to account for inherent increased susceptibility to carcinogens during infancy and childhood. ASFs are used to estimate cancer risk as follows: (1) a factor of 10 for exposures that occur from the third trimester of pregnancy to 2 years of age, and (2) a factor of 3 for exposures

that occur from 2 years through 15 years of age. These factors increase lifetime residential cancer risk estimates by 70 percent. OEHHA also adopted revisions to health effects values for a number of TACs.

OEHHA is considering additional revisions to the Exposure Assessment and Stochastic Analysis Technical Support Document. OEHHA has indicated that these changes in exposure assessment methodology, when combined with ASFs, may increase estimates of cancer risk by a factor of 2 to 3 relative to existing procedures. BAAQMD expects that the revised exposure assessment methodology will be health protective and plans to incorporate these revisions into the District HRSA guidelines after adoption by OEHHA.

## OBJECTIVES

BAAQMD is proposing amendments to Regulation 2-5 to increase conformity with State health risk assessment guidelines and to add a tracking provision for emission increases and reductions of toxic air contaminants in order to assess cumulative impacts in Priority Communities. Specifically, the District is proposing to implement OEHHA's Age Sensitivity Factors and to incorporate any health effects value revisions that OEHHA has adopted as of June 1, 2009. The proposed amendments will result in an increase in stringency of Toxic-Best Available Control Technology (T-BACT) and Project Risk cancer risk standards by a factor of 1.7 for residential receptors relative to existing requirements. These changes are expected to provide an additional margin of public health and safety for children and residential receptors.

## PROPOSED AMENDMENTS

The District is proposing to amend Regulation 2-5: New Source Review of Toxic Air Contaminants. The adoption of the proposed revisions to Regulation 2, Rule 5 will update and enhance program requirements and increase conformity with state risk assessment guidelines. The rule is organized into six sections as follows: General (section numbers in the 100's), Definitions (200's), Standards (300's), Administrative Requirements (400's), Monitoring and Records (500's), and Manual of Procedures (600's). Regulation 2-5 also includes Toxic Air Contaminant Trigger Levels.

### AMENDMENTS TO GENERAL REQUIREMENTS

The general requirements define the applicability of the rule and identify any exemptions from the rule or from specific sections of the rule. The BAAQMD is proposing amendments to Section 2-5-111: Exemption, Emergency Standby Engines. The District is proposing to exempt emissions occurring during initial start-up testing of emergency standby engines. Start-up testing may be necessary to demonstrate compliance with emission standards, efficacy of abatement systems, or adequate performance. These emissions are not routine or entirely predictable. Operation of these engines is also limited by provisions of the State Airborne Toxics Control Measures (ATCM).

## DEFINITION AMENDMENTS

The BAAQMD is proposing to modify four existing definitions and to add three new definitions to Regulation 2-5. These definitions are considered necessary to explain the District's new terms and clarify risk assessment procedures.

**Modified Definitions:**

Section 2-5-206: *Cancer Risk*: Addition of a phrase to definition to indicate consideration of Age Sensitivity Factors, where appropriate, to account for inherent increased susceptibility to carcinogens during infancy and childhood.

Section 2-5-212: *Maximally Exposed Individual (MEI)*: Addition of a sentence to clarify that MEI locations are determined for each type of health impact (cancer risk, chronic hazard index, and acute hazard index) and for all potential receptors (residential, worker, and student). The highest health impact for any type of receptor is the MEI for that particular health impact. The MEI location for cancer risk may be different than the MEI location for chronic hazard index or the MEI location for acute hazard index.

Section 2-5-216: *Project*: Clarification that a project involving a modified source may include any contemporaneous risk reduction that occurs at that modified source as a result of the project.

Section 2-5-218: *Receptor Location*: Addition of reference to student receptor.

**New Definitions:**

Section 2-5-225: *K-12 School*: The proposed definition for a K-12 school is based on the California Health and Safety Code Section 42301.9(a) definition of "school," and consistent with the definition of a school in Diesel ATCMs. BAAQMD proposes to use this school definition because the BAAQMD has procedures in place to identify these schools and is currently using this definition for the purpose of satisfying the public noticing requirements for schools (Regulation 2-1-412).

Section 2-5-226: *Student Receptor*: This section defines the term: "student receptor" and is necessary to clearly identify the applicability of risk limits.

Section 2-5-227: *Priority Community*: This definition describes the general concept of a priority community, which was developed through the BAAQMD's CARE Program.

## ADMINISTRATIVE REQUIREMENT AMENDMENTS

The BAAQMD is proposing to add Section 2-5-404: Designation of Priority Communities, which is a requirement for the Air Pollution Control Officer to publish and update a list of the designated Priority Communities. The designation procedures and selection criteria were initially developed through the District's CARE program and are documented and will be periodically updated in the District's Guidelines for Designation of Priority Communities. The BAAQMD is also proposing the addition of Section 2-5-405: Cumulative Impact Summary for Priority Communities, which will require the APCO to publish and update a cumulative impact summary report. For each priority

community, the BAAQMD will track all toxic emission increases and reductions occurring after January 1, 2010 and will periodically evaluate the cumulative impact for each priority community.

## MANUAL OF PROCEDURES

The District is proposing revisions to Section 2-5-601: Emission Calculation Procedures to clarify existing procedures for modified sources. The District is proposing to add Section 2-5-604: Calculation Procedures for Toxicity Weighted Emissions to explain the toxicity weighted emission calculation procedures, which will be used for tracking health impact changes in Priority Communities.

## AMENDMENTS TO TABLE 2-5-1 – HEALTH EFFECTS VALUES

The proposed TAC trigger levels shown in Table 2-1 (revised Regulation 2-5, Table 2-5-1) are used to determine the need for a site-specific health risk screening analysis (HRSA) for projects involving new and modified sources. The proposed TAC trigger levels are also used: (1) to establish permit requirements for certain sources that may otherwise qualify for permit exemptions, (2) as part of the applicability of the accelerated permit program, and (3) in determining permit fees. The proposed TAC trigger levels are considered to be reasonable de minimus emission rates for use at a project-level. Projects with emissions below the TAC trigger levels are unlikely to cause, or contribute significantly to, adverse health risks.

The proposed TAC trigger levels were calculated using: (1) target health risk levels that are considered de minimus for project-level risks, (2) OEHHA/ARB health effect values, (3) generally conservative modeling procedures which establish the extent to which a TAC is transported and dispersed in the atmosphere after its release from the source, and (4) health-protective assumptions regarding the extent of an individual's exposure to an emitted TAC, including the new Age Sensitivity Factors.

**Target Health Risk Levels:** For chronic health risk, a lifetime cancer risk of 1.0 in a million ($1.0 \times 10^{-6}$) and a non-cancer hazard index of 0.2 are used as the target health risk levels to derive the chronic trigger levels; these are the risk thresholds at which TBACT is required (Section 2-1-301). For acute health risk, a hazard index of 1.0 is used as the target health risk level, which is the same as the acute non-cancer hazard index limit (Section 2-1-302.3).

**Health Effects Values:** The proposed changes to Table 2-5-1 (shown in Table 2-1) incorporate the most recent health effects values adopted by OEHHA/ARB (through June 2009) for use in the ATHS Program. Revisions in health effects values (other than 8-hour RELs) adopted between January 1, 2005 and June 1, 2009 are reflected in the proposed Table 2-5-1. OEHHA has adopted 8-hour RELs for a few compounds; however, the District is not proposing to add these 8-hour RELs to Table 2-5-1at this time, because the risk assessment guidance procedures that would use these 8-hour RELs

are not complete. Table 2-1 identifies the new and revised health effects values that are being incorporated into revised Table 2-5-1 (shown as Table 2-1).

**TABLE 2-1**

**REVISED HEALTH EFFECTS VALUES**
**REVISED TABLE 2-5-1**

| Chemical | Acute Inhalation REL ($\mu g/m^3$) | Chronic Inhalation REL ($\mu g/m^3$) | Chronic Oral REL (mg/kg-day) | Inhalation Cancer Potency Factor $(mg/kg\text{-}day)^{-1}$ |
|---|---|---|---|---|
| Acetaldehyde | 4.7E+02 | ***1.4E+02*** ~~***9.0E+00***~~ | | 1.0E-02 |
| Acrolein | ***2.5E+00*** ~~***1.9E-01***~~ | ***3.5E-01*** ~~***6.0E-02***~~ | | |
| Arsenic and compounds (inorganic) | ***2.0E-01*** ~~***1.9E-01***~~ | ***1.5E-02*** ~~***3.0E-02***~~ | ***3.5E-06*** ~~***3.0E-04***~~ | 1.2E+01 |
| Arsine | ***2.0E-01*** ~~***1.6E+-2***~~ | ***1.5E-02*** ~~***5.0E-02***~~ | | |
| Ethylbenzene | | 2.0E+03 | | ***8.7E-03*** |
| Formaldehyde | ***5.5E+01*** ~~***9.4E+01***~~ | ***9.0E+00*** ~~***3.0E+00***~~ | | 2.1E-02 |
| Manganese | | ***9.0E-02*** ~~***2.0E-01***~~ | | |
| Mercury and compounds (inorganic) | ***6.0E-01*** ~~***1.8E+00***~~ | ***3.0E-02*** ~~***9.0E-02***~~ | ***1.6E-04*** ~~***3.0E-04***~~ | |
| Mercuric chloride | ***6.0E-01*** ~~***1.8E+00***~~ | ***3.0E-02*** ~~***9.0E-02***~~ | ***1.6E-04*** ~~***3.0E-04***~~ | |
| Silica (crystalline, respirable) | | ***3.0E+00*** | | |
| Sulfur trioxide | 1.2E+02 | ***1.0E+00*** | | |

Note: Values in *italics* have been added or revised.

OEHHA has developed and adopted new risk assessment guidelines that update and replace CAPCOA's Air Toxics "Hot Spots" Program Revised 1992 Risk Assessment Guidelines, October 1993. OEHHA has deleted old CAPCOA chronic RELs and USEPA RfCs for many chemicals. The BAAQMD is revising Table 2-5-1 to incorporate these chronic REL deletions. Table 2-2 identifies chemicals for which the chronic REL is being deleted, but the chemical will remain in revised Table 2-5-1 because it has other established health effects values. Table 2-3 identifies the chemicals that will be removed from revised Table 2-5-1 because their chronic RELs are being deleted and these chemicals have no other established health effects values.

**Weighting Factors:** For purposes of calculating toxicity weighted emissions for mitigated project risk, chronic reference exposure level (CREL) and cancer potency (CP) weighting factors were added to the revised Table 2-5-1 (shown as Table 2-1). These factors were developed assuming multi-pathway exposure where applicable, and continuously operating sources for residential receptor exposure.

**TABLE 2-2**

**CHEMICALS FOR WHICH THE CHRONIC REL WAS DELETED IN TABLE 2-5-1**

| |
|---|
| Acrylamide |
| Acrylic acid |
| Allyl chloride |
| Aniline |
| Benzidine (and its salts) |
| benzidine based dyes |
| direct black 38 |
| direct blue 6 |
| direct brown (technical grade) |
| Benzyl chloride |
| Copper and compounds |
| Dibromo-3-chloropropane, 1,2-(DBCP) |
| Di(2-ethylhexyl)phthalate (DEHP) |
| Ethylene glycol butyl ether – EGBE (2-butoxy ethanol; butyl cellosolve) |
| Hexachlorobenzene |
| Hexachlorocyclohexanes (mixed or technical grade) |
| Hexachlorocyclohexane, alpha- |
| Hexachlorocyclohexane, beta- |
| Hexachlorocyclohexane, gamma- (lindane) |
| Methyl ethyl ketone (MEK) (2-butanone) |
| Ozone |
| Pentachlorophenol |
| PCBs (polychlorinated biphenyls) |
| Sodium Hydroxide |
| Sulfates |
| Vinyl chloride |

**TABLE 2-3**

**CHEMICALS REMOVED FROM TABLE 2-5-1**

| | |
|---|---|
| Antimony compounds | Freons |
| Antimony trioxide | Hexachlorocyclopentadiene |
| Bromine and compounds | Methyl mercury |
| bromine pentafluoride | Methyl methacrylate |
| hydrogen bromide | Mineral fibers (<1% free silica) |
| 2-Chloroacetophenone | ceramic fibers (man- made) |
| Chlorodifluoromethane (Freon 22) | glasswool (man- made fibers) |
| Chlorofluorocarbons | mineral fibers (fine: man- made) |
| 2-Chlorophenol | rockwool (man- made fibers) |
| Chloroprene | slagwool (man -made fibers) |
| Ethyl acrylate | Nitrobenzene |
| Fluorocarbons (chlorinated) | 2-Nitropropane |
| chlorinated fluorocarbon (CFC-113) | Phosphorus (white) |
| chlorodifluoromethane (Freon 22) | Tetrachlorophenols |
| dichlorofluoromethane (Freon 21) | Vinyl bromide |
| trichlorofluoromethane (Freon 11) | Zinc and compounds |
| fluorocarbons (brominated) | zinc oxide |

## ADDITIONAL AMENDMENTS

To clarify the scope and to enhance the enforceability of the Regulation 2, Rule 5, The BAAQMD is also proposing a number of other changes in the form of modifications and additional amendments, including revisions to the Manual of Procedures relating to the rule amendments.

## AFFECTED FACILIIES

The proposed rule amendments will incorporate OEHHA age sensitivity factors (ASFs) into the residential cancer risk calculation procedures. Using these ASFs will result in a 70 percent increase in the cancer risk for residential receptors compared to current risk calculation procedures. Use of ASFs and OEHHA's revised health effects values for numerous TACs will also be incorporated into the District's procedures for establishing the risk screen trigger levels listed in Table 2-5-1. On average, the annual risk screen trigger levels for carcinogenic TACs are about 58% of the previous risk screen trigger levels. For non-carcinogenic TACs, the health affects value changes are variable. Some non-carcinogenic TACs will have risk screen trigger level increases, some non-carcinogenic TACs will have trigger level decreases, and some non-carcinogenic compounds will be removed from Table 2-5-1, depending on the specific health affect value change that OEHHA adopted for that compound.

The proposed amendments are expected to require more projects to undergo site-specific risk screening analyses due to the proposed lower risk screen thresholds for carcinogens. In addition, more projects that emit carcinogens will require TBACT, emission reductions, and other risk reduction measures due to the 70% increase in residential cancer risk.

For mercury, the acute and chronic reference exposure levels (RELs) are approximately one third of the previous values. These mercury REL changes may result in substantially higher acute and chronic hazard index levels for projects involving sources with mercury emissions. Crematories, in particular, are likely to be impacted by this change. The District does not expect any substantial impacts due to the REL and trigger level changes that are proposed for other non-carcinogenic compounds, because either the non-carcinogenic health impacts resulting from the revised RELs are not expected to be substantial in comparison to the carcinogenic health impacts from the same sources or few sources are affected by the proposed REL change.

In order to determine potential impacts to future projects based on the proposed rule amendments, the District has also reviewed recent risk assessment data. In 2008, the BAAQMD conducted 399 HRSAs on new or modified sources. The projects evaluated included new or modified diesel engines (78 percent), gasoline dispensing facilities (4 percent), and a variety of other commercial and industrial sources, such as gas fired combustion devices, crematories, petroleum refinery projects, cement plants and landfills. Potential impacts to the three most common source categories: diesel-fired emergency generator engines, gasoline dispensing facilities (GDFs), and crematories; are discussed in more detail below.

Diesel-Fired Emergency Generator Engines

The District reviewed 50 HRSAs that were conducted in 2009 for new diesel-fired emergency standby engines. Based on this review and considering the proposed rule amendments, the District estimates that an additional 10 percent of new and modified emergency standby diesel engine projects will require the use of cleaner diesel engines or diesel PM controls. An additional 12 percent of these diesel engine projects are expected to achieve compliance with Regulation 2-5 by accepting lower annual operating rate limits than would be required without these proposed amendments. The remainder of the diesel engine projects would be expected to comply using cleaner diesel engines (i.e., Tier 3 or Tier 4 CARB and EPA engines) or diesel particulate filters. By 2011, all diesel engines larger than 175 bhp will be subject to CARB's interim Tier 4 diesel particulate matter standards that are lower than the current TBACT/ATCM limit of 0.15 g/bhp-hr. By 2011, only 8 percent of the projects in compliance with CARB's diesel particulate matter standards, will require emission controls, and only 4 percent of the projects will require cleaner engines or diesel PM filters to achieve compliance with Regulation 2-5. By 2013, all projects in compliance with CARB's diesel particulate matter standards, are expected to comply with the Regulation 2-5's project risk limits without any additional diesel PM reductions.

Gasoline Dispensing Facilities

The District evaluated 100 HRSAs for gasoline dispensing facilities (GDFs) that were conducted during 2004-2009. Most of the GDF projects that will be subject to Regulation 2-5 in the future are expected to involve new retail facilities. Most retail gasoline dispensing facilities are now required to have enhanced vapor recovery (EVR). These EVR upgrades are expected to reduce cancer risk weighted emissions by about 50 percent compared to current Phase II balance systems. For new gasoline dispensing facilities equipped with EVR upgrades, maximum allowable throughput limits will be 41 percent lower than the throughput limits allowed under the current regulation. However, the maximum allowable throughput limit for a new EVR station subject to the proposed Regulation 2-5 amendments will be 17 percent higher than the throughput limit that would have been allowed for comparable new station equipped with the older Phase II balance system. Thus, the recent EVR requirements for retail GDF will mitigate the impacts of the proposed Regulation 2-5 amendments.

Crematories

The District reviewed 19 HRSAs for crematories in the Bay Area. The cancer risks for these projects ranged from 0.6 in a million to 10.0 in a million for most sites. One site had a cancer risk of 90 in a million. For 18 new and modified crematory projects that the District review during the last five years, 7 crematory projects (39%) would require additional emission or risk reduction measures under the proposed new residential cancer risk calculation procedures. Most of these projects would likely be able to comply with minor project refinements, but 2 or 3 of these crematory projects would require substantial add-on controls.

**Remaining Affected Facilities**

A variety of other commercial and industrial sources, such as gas fired combustion devices, petroleum refinery projects, cement plants and landfills may have minor impacts due to the proposed rule changes. Additional more detailed and refined HRSAs will be required to determine what action may be required under Regulation 2-5. Any facility required to reduce health impacts from a project would have the option of refining emission calculation and/or health risk assessment procedures, reducing the scale of the project, limiting project emissions, installing abatement equipment, relocating proposed sources, making stack height changes, or altering other project variables that could reduce the health impacts resulting from the project.

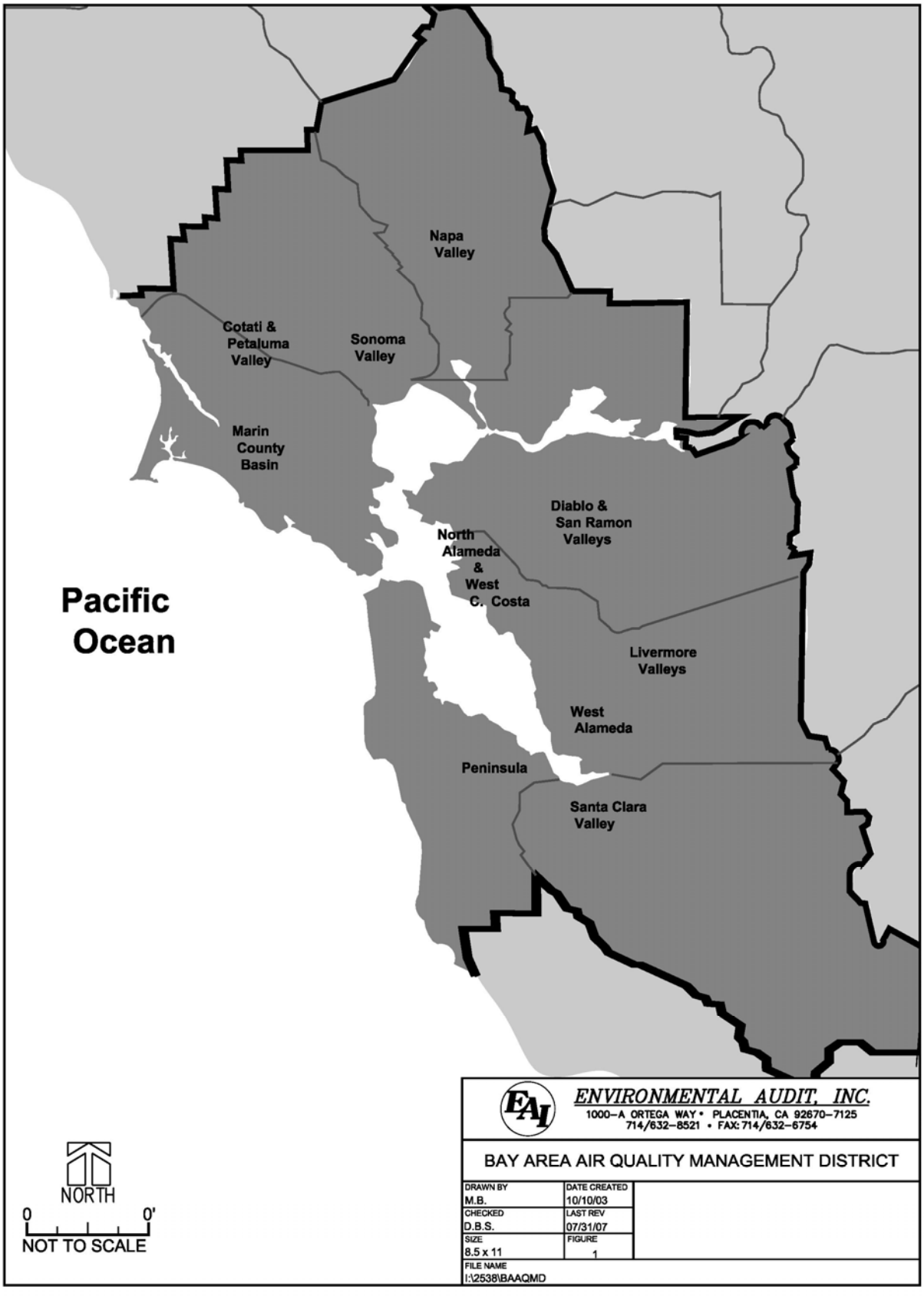
The direct air quality impact from these proposed rule amendments is a reduction in toxic risk associated with new and modified sources, thus providing an air quality benefit and avoiding potential future impacts. Any potential adverse environmental impacts from changing cancer risk calculation procedures or non-cancer health effects values would typically be secondary or cross-media impacts generated by the installation and operation of air pollution control equipment. However, because of the source types (gasoline dispensing facilities and IC engines), risk reduction would most likely involve product or equipment replacement or a process change (e.g., reduce usage or alter facility practices).

Very few additional projects are expected to require abatement equipment with cross-media impacts and these impacts are not expected to be significant.

## AFFECTED AREA

The proposed rule amendments would apply to facilities and operations under BAAQMD jurisdiction. The BAAQMD jurisdiction includes all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma counties (approximately 5,600 square miles). The San Francisco Bay Area is characterized by a large, shallow basin surrounded by coastal mountain ranges tapering into sheltered inland valleys. The combined climatic and topographic factors result in increased potential for the accumulation of air pollutants in the inland valleys and reduced potential for buildup of air pollutants along the coast. The Basin is bounded by the Pacific Ocean to the west and includes complex terrain consisting of coastal mountain ranges, inland valleys, and bays.

The facilities affected by the proposed rule amendments are located within the jurisdiction of the BAAQMD (see Figure 1).


Napa Valley
Cotati & Petaluma Valley
Sonoma Valley
Marin County Basin
Diablo & San Ramon Valleys
North Alameda & West C. Costa
Pacific Ocean
Livermore Valleys
West Alameda
Peninsula
Santa Clara Valley
NORTH
0
0'
NOT TO SCALE
ENVIRONMENTAL AUDIT, INC.
1000-A ORTEGA WAY • PLACENTIA, CA 92670-7125
714/632-8521 • FAX: 714/632-6754
BAY AREA AIR QUALITY MANAGEMENT DISTRICT
DRAWN BY M.B.
DATE CREATED 10/10/03
CHECKED D.B.S.
LAST REV 07/31/07
SIZE 8.5 x 11
FIGURE 1
FILE NAME I:\2538\BAAQMD

# CHAPTER 3

# ENVIRONMENTAL CHECKLIST

## ENVIRONMENTAL CHECKLIST FORM

| | |
|---|---|
| 1. Project Title: | Bay Area Air Quality Management District (BAAQMD) Proposed Amendments to Regulation 2: Permits, Rule 5: New Source Review of Toxic Air Contaminant |
| 2. Lead Agency Name and Address: | Bay Area Air Quality Management District<br>939 Ellis Street<br>San Francisco, California 94109 |
| 3. Contact Person and Phone Number: | Scott Lutz, Engineering Manager<br>749-4676 or slutz@baaqmd.gov |
| 4. Project Location: | This rule amendment applies to the area within the jurisdiction of the Bay Area Air Quality Management District, which encompasses all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. |
| 5. Project Sponsor's Name and Address: | Bay Area Air Quality Management District<br>939 Ellis Street<br>San Francisco, California 94109 |
| 6. General Plan Designation: | Not applicable. |
| 7. Zoning | Not applicable. |
| 8. Description of Project | See "Background" in Chapter 2. |
| 9. Surrounding Land Uses and Setting | See "Affected Area" in Chapter 2. |
| 10. Other Public Agencies Whose Approval Is Required | None |

## ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would potentially be affected by this Project (i.e., the project would involve one impact that is a "Potentially Significant Impact"), as indicated by the checklist on the following pages.

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

## DETERMINATION

On the basis of this initial evaluation:

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

☐ I find that although the proposed project could have a significant effect on the environment, there will not be significant effects in this case because revisions to 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 an impact on the environment that is "potentially significant" or "potentially significant unless mitigated" 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 ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

_____ _____

Signature Date

_____ _____

Printed Name For

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

# Setting

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

The proposed rule amendments are aimed to increase the stringency of the standards for new and modified stationary sources of TACs in the BAAQMD. These types of sources include new or modified diesel engines, gasoline dispensing facilities, and a variety of other commercial and industrial sources, such as gas fired combustion devices, crematories, petroleum refinery projects, cement plants, and landfills. These types of facilities and equipment are most often found in commercial or industrial areas. Scenic highways or corridors may be, but are not commonly located, near commercial or industrial areas.

# 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-c.** The proposed rule amendments are not expected to trigger major construction activities or substantial physical changes to existing facilities potentially affected by the proposed project. The proposed rule amendments may require the installation of or replacement of equipment at new or existing facilities due to the more stringent TBACT requirements, result in coating or product reformulation, or result in process changes. The construction and installation of additional equipment would occur within the confines of existing or new industrial/commercial developments. The construction associated with the installation of such units is expected to be minor and would be installed at the time other equipment (the proposed new source, e.g., tank, gas dispensing facility, etc.) would be installed. Air pollution control equipment generally would be fabricated off-site at the manufacturing facility, delivered to the site, and installed. Therefore, substantial construction equipment, construction workers, and construction materials will not be needed and stockpiling of construction materials will not result from the proposed project. Equipment replacement could result in minor construction activities, which would be temporary, and expected to be equivalent replacement of existing equipment with newer equipment that may improve aesthetics. No scenic resources will be damaged and since no major new construction activities associated with new buildings or other structures is anticipated, scenic resources will not be obstructed and the existing visual character of any site in the vicinity of affected facilities will not be degraded. On the contrary, scenic vistas and visual character of the site may improve as old equipment is replaced as a result of implementing the proposed project.

**I d.** There are no components in the amendments to Regulation 2-5 that would require construction activities at night. Therefore, no additional lighting at facilities would be required. Similarly, the proposed project has no provisions that would require affected equipment to operate at night. Thus, the proposed project is not expected to create a new source of substantial light or glare that would adversely affect day or nighttime views in the area. Therefore, the proposed project is not expected to create significant adverse aesthetic impacts.

Based on the above consideration, significant adverse impacts to aesthetics are not expected from the proposed amendments to Regulation 2-5. Since there are no significant adverse impacts, no mitigation measures are required.

| | | Potentially Significant Impact | Less Than Significant Impact With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| **II.** | **AGRICULTURE 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. Would the project: | | | | | |
| a) | Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | ☐ | ☐ | ☐ | ☑ |
| b) | Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract? | ☐ | ☐ | ☐ | ☑ |
| c) | Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? | ☐ | ☐ | ☐ | ☑ |

# Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses. Some of these agricultural lands are under Williamson Act contracts.

The industrial and commercial operations affected by the proposed rule amendments are primarily located in commercial or industrial areas of the BAAQMD.

# Regulatory Background

Agricultural 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-c.** As discussed previously under "Aesthetics," no major construction activities associated with modification of existing structures nor construction of new structures is anticipated to result from adopting and implementing the proposed project. The rule amendments are not expected to result in any construction of new buildings or other structures that would require converting farmland to non-agricultural use or conflict with zoning for agricultural use or a Williamson Act contract. Minor construction activities within the confines of existing or new facilities would be expected. Since the proposed project would not substantially change the facilities from which TACs are emitted, there are no provisions in the proposed rule that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments and no land use or planning requirements relative to agricultural resources will be altered by the proposed project.

Based on the above consideration, significant adverse impacts to agriculture resources are not expected from the proposed rule amendments and impact assessment for facilities subject to Regulation 2-5. Since there are no significant adverse impacts, no mitigation measures are required.

| | Potentially Significant Impact | Less Than Significant Impact With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **III. AIR QUALITY:** | | | | |
| When available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project: | | | | |
| a) Conflict with or obstruct implementation of the applicable air quality plan? | ☐ | ☐ | ☐ | ☑ |
| b) Violate any air quality standard or contribute to an existing or projected air quality violation? | ☐ | ☐ | ☐ | ☑ |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a non-attainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)? | ☐ | ☐ | ☐ | ☑ |
| d) Expose sensitive receptors to substantial pollutant concentrations? | ☐ | ☐ | ☐ | ☑ |
| e) Create objectionable odors affecting a substantial number of people? | ☐ | ☐ | ☐ | ☑ |
| f) Diminish an existing air quality rule or future compliance requirement resulting in a significant increase in air pollutant(s)? | ☐ | ☐ | ☐ | ☑ |

# Setting

Meteorological Conditions

The summer climate of the West Coast is dominated by a semi-permanent high centered over the northeastern Pacific Ocean. Because this high pressure cell is quite persistent, storms rarely affect the California coast during the summer. Thus the conditions that persist along the coast of California during summer are a northwest air flow and negligible precipitation. A thermal low pressure area from the Sonoran-Mojave Desert also causes air to flow onshore over the San Francisco Bay Area much of the summer.

In winter, the Pacific High weakens and shifts southward, upwelling ceases, and winter storms become frequent. Almost all of the Bay Area's annual precipitation takes place in the November through April period. During the winter rainy periods, inversions are

weak or nonexistent, winds are often moderate and air pollution potential is very low. During winter periods when the Pacific high becomes dominant, inversions become strong and often are surface based; winds are light and pollution potential is high. These periods are characterized by winds that flow out of the Central Valley into the Bay Area and often include tule fog.

Topography

The San Francisco Bay Area is characterized by complex terrain consisting of coastal mountain ranges, inland valleys, and bays. Elevations of 1,500 feet are common in the higher terrain of this area. Normal wind flow over the area becomes distorted in the lower elevations, especially when the wind velocity is not strong. This distortion is reduced when stronger winds and unstable air masses move over the areas. The distortion is greatest when low level inversions are present with the surface air, beneath the inversion, flowing independently of the air above the inversion.

Winds

In summer, the northwest winds to the west of the Pacific coastline are drawn into the interior through the Golden Gate and over the lower portions of the San Francisco Peninsula. Immediately to the south of Mount Tamalpais, the northwesterly winds accelerate considerably and come more nearly from the west as they stream through the Golden Gate. This channeling of the flow through the Golden Gate produces a jet that sweeps eastward but widens downstream producing southwest winds at Berkeley and northwest winds at San Jose; a branch curves eastward through the Carquinez Straits and into the Central Valley. Wind speeds may be locally strong in regions where air is channeled through a narrow opening such as the Carquinez Strait, the Golden Gate, or San Bruno Gap.

In winter, the Bay Area experiences periods of storminess and moderate-to-strong winds and periods of stagnation with very light winds. Winter stagnation episodes are characterized by outflow from the Central Valley, nighttime drainage flows in coastal valleys, weak onshore flows in the afternoon, and otherwise light and variable winds.

Temperature

In summer, the distribution of temperature near the surface over the Bay Area is determined in large part by the effect of the differential heating between land and water surfaces. This process produces a large-scale gradient between the coast and the Central Valley as well as small-scale local gradients along the shorelines of the ocean and bays. The winter mean temperature high and lows reverse the summer relationship; daytime variations are small while mean minimum nighttime temperatures show large differences and strong gradients. The moderating effect of the ocean influences warmer minimums along the coast and penetrating the Bay. The coldest temperatures are in the sheltered valleys, implying strong radiation inversions and very limited vertical diffusion.

Inversions

A primary factor in air quality is the mixing depth, i.e., the vertical dimension available for dilution of contaminant sources near the ground. Over the Bay Area, the frequent occurrence of temperature inversions limits this mixing depth and consequently limits the availability of air for dilution. A temperature inversion may be described as a layer or layers of warmer air over cooler air.

Precipitation

The San Francisco Bay Area climate is characterized by moderately wet winters and dry summers. Winter rains (December through March) account for about 75 percent of the average annual rainfall; about 90 percent of the annual total rainfall is received in November to April period; and between June and September, normal rainfall is typically less than 0.10 inches. Annual precipitation amounts show greater differences in short distances. Annual totals exceed 40 inches in the mountains and are less than 15 inches in the sheltered valleys.

Pollution Potential

The Bay Area is subject to a combination of physiographic and climatic factors which result in a low potential for pollutant buildups near the coast and a high potential in sheltered inland valleys. In summer, areas with high average maximum temperatures tend to be sheltered inland valleys with abundant sunshine and light winds. Areas with low average maximum temperatures are exposed to the prevailing ocean breeze and experience frequent fog or stratus. Locations with warm summer days have a higher pollution potential than the cooler locations along the coast and bays.

In winter, pollution potential is related to the nighttime minimum temperature. Low minimum temperatures are associated with strong radiation inversions in inland valleys that are protected from the moderating influences of the ocean and bays. Conversely, coastal locations experience higher average nighttime temperatures, weaker inversions, stronger breezes and, consequently, less air pollution potential.

Air Quality

**Criteria Pollutants:** It is the responsibility of the BAAQMD to ensure that state and federal ambient air quality standards are achieved and maintained in its geographical jurisdiction. Health-based air quality standards have been established by California and the federal government for the following criteria air pollutants: ozone, carbon monoxide (CO), nitrogen dioxide ($NO_2$), particulate matter less than 10 microns in diameter (PM10), particulate matter less than 2.5 microns in diameter (PM2.5), sulfur dioxide ($SO_2$), and lead. These standards were established to protect sensitive receptors with a margin of safety from adverse health impacts due to exposure to air pollution. The California standards are more stringent than the federal standards. California has also established standards for sulfate, visibility, hydrogen sulfide, and vinyl chloride.

The state and national ambient air quality standards for each of these pollutants and their associated health effects are summarized in Table 3-1. The BAAQMD monitors levels of various criteria pollutants at 25 monitoring stations. The 2008 air quality data from the BAAQMD's monitoring stations are presented in Table 3-2.

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 dramatically (see Table 3-3). The Air District is in attainment of the State and federal ambient air quality standards for CO, nitrogen oxides (NOx), and sulfur oxides (SOx). The Air District is unclassified for the federal 24-hour PM10 standard. Unclassified means that the monitoring data were incomplete and at the time of designations did not support a designation of attainment or non-attainment. However, the Air District does not comply with the State 24-hour PM10 standard.

The 2008 air quality data from the BAAQMD monitoring stations are presented in Table 3-2. All monitoring stations were below the State standard and federal ambient air quality standards for CO, $NO_2$, and $SO_2$. The Bay Area is designated as a non-attainment area for the federal and state 8-hour ozone standards. The State 8-hour standard was exceeded on 20 days in 2008 in the Air District, most frequently in the Eastern District (Bethel Island, Livermore, Concord, and Benecia) (see Table 3-2). The federal 8-hour standard was exceeded on 12 days in 2008.

All monitoring stations were in compliance with the federal PM10 standards. The California PM10 standards were exceeded on five days in 2008, most frequently in the Eastern District (Bethel Island). The area under the jurisdiction of the BAAQMD exceeded the federal PM2.5 standard on 12 days in 2008, most frequently in Vallejo and San Jose (see Table 3-2).

## TABLE 3-1

## Federal and State Ambient Air Quality Standards

| | STATE STANDARD | FEDERAL PRIMARY STANDARD | MOST RELEVANT EFFECTS |
|---|---|---|---|
| AIR POLLUTANT | CONCENTRATION/ AVERAGING TIME | CONCENTRATION/ AVERAGING TIME | |
| Ozone | 0.09 ppm, 1-hr. avg. > 0.070 ppm, 8-hr | 0.075 ppm, 8-hr avg. > | (a) Short-term exposures: (1) Pulmonary function decrements and localized lung edema in humans and animals (2) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (b) Long-term exposures: Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (c) Vegetation damage; (d) Property damage |
| Carbon Monoxide | 9.0 ppm, 8-hr avg. > 20 ppm, 1-hr avg. > | 9 ppm, 8-hr avg.> 35 ppm, 1-hr avg.> | (a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; (d) Possible increased risk to fetuses |
| Nitrogen Dioxide | 0.25 ppm, 1-hr avg. > | 0.053 ppm, ann. avg.> | (a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) Contribution to atmospheric discoloration |
| Sulfur Dioxide | 0.04 ppm, 24-hr avg.> 0.25 ppm, 1-hr. avg. > | 0.03 ppm, ann. avg.> 0.14 ppm, 24-hr avg.> | (a) Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma |
| Suspended Particulate Matter (PM10) | 20 $\mu g/m^3$, annarithmetic mean > 50 $\mu g/m^3$, 24-hr average> | 50 $\mu g/m^3$, annual arithmetic mean > 150 $\mu g/m^3$, 24-hr avg.> | (a) Excess deaths from short-term exposures and exacerbation of symptoms in sensitive patients with respiratory disease; (b) Excess seasonal declines in pulmonary function, especially in children |
| Suspended Particulate Matter (PM2.5) | 12 $\mu g/m^3$, annual arithmetic mean> | 15 $\mu g/m^3$, annual arithmetic mean> 35 $\mu g/m^3$, 24-hour average> | Decreased lung function from exposures and exacerbation of symptoms in sensitive patients with respiratory disease; elderly; children. |
| Sulfates | 25 $\mu g/m^3$, 24-hr avg. >= | | (a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) Property damage |
| Lead | 1.5 $\mu g/m^3$, 30-day avg. >= | 1.5 $\mu g/m^3$, calendar quarter> | (a) Increased body burden; (b) Impairment of blood formation and nerve conduction |
| Visibility-Reducing Particles | In sufficient amount to give an extinction coefficient >0.23 inverse kilometers (visual range to less than 10 miles) with relative humidity less than 70%, 8-hour average (10am – 6pm PST) | | Nephelometry and AISI Tape Sampler; instrumental measurement on days when relative humidity is less than 70 percent |

# TABLE 3-2
## Bay Area Air Pollution Summary 2008

| MONITORING STATIONS | Ozone | | | | | | CARBON MONOXIDE | | | NITROGEN DIOXIDE | | | SULFUR DIOXIDE | | | PM10 | | | | PM2.5 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Max 1-Hr | Cal 1-Hr Days | Max 8-Hr | Nat. 8-Hr Days | Cal Days | 3-Yr Avg | Max 1-Hr | Max 8-Hr | Nat/Cal Days | Max 1-Hr | Ann Avg | Nat/Cal Days | Max 24-Hr | Ann Avg | Nat/Cal Days | Ann Avg | Max 24-Hr | Nat Day | Cal Days | Max 24-Hr | Nat Days | 3-Yr Avg | Ann Avg | 3-Yr Avg |
| **NORTH COUNTIES** | (ppb) | | (ppb) | | | | (ppm) | | | (ppb) | | | (ppb) | | | ($\mu g/m^3$) | | | | ($\mu g/m^3$) | | | ($\mu g/m^3$) | |
| Napa | 107 | 1 | 77 | 2 | 2 | 61 | 3.2 | 1.8 | 0 | 64 | 10 | 0 | -- | -- | -- | 21.6 | 50 | 0 | 0 | -- | -- | -- | -- | -- |
| San Rafael | 85 | 0 | 69 | 0 | 0 | 50 | 1.8 | 1.1 | 0 | 56 | 13 | 0 | -- | -- | -- | 18.6 | 41 | 0 | 0 | -- | -- | -- | -- | -- |
| Santa Rosa* | 76 | 0 | 64 | 0 | 0 | 51 | 3.5 | 1.5 | 0 | 49 | 11 | 0 | -- | -- | -- | * | * | * | * | 30.8 | 0 | 30.4 | 8.6 | 8.4 |
| Vallejo* | 109 | 1 | 75 | 0 | 3 | 60 | 2.7 | 2.3 | 0 | 67 | 10 | 0 | 4 | 1.2 | 0 | * | * | * | * | 50.0 | 7 | 36.4 | 9.9 | 9.8 |
| **COAST & CENTRAL BAY** | | | | | | | | | | | | | | | | | | | | | | | | |
| Berkley* | 53 | 0 | 49 | 0 | 0 | * | 2.8 | 1.7 | 0 | 55 | 14 | 0 | 4 | 13 | 0 | 22.5 | 44 | 0 | 0 | -- | -- | -- | -- | -- |
| Oakland* | 86 | 0 | 64 | 0 | 0 | * | 3.0 | 1.6 | 0 | 70 | 15 | 0 | -- | -- | -- | -- | -- | -- | -- | 30.1 | 0 | * | 9.5 | * |
| Richmond | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 8 | 1.5 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| San Francisco | 82 | 0 | 66 | 0 | 0 | 46 | 5.7 | 2.3 | 0 | 62 | 16 | 0 | 5 | 1.5 | 0 | 22.0 | 41 | 0 | 0 | 29.4 | 0 | 26.3 | 9.8 | 9.4 |
| San Pablo | 84 | 0 | 63 | 0 | 0 | 50 | 2.5 | 1.3 | 0 | 67 | 12 | 0 | 4 | 1.4 | 0 | 20.9 | 44 | 0 | 0 | -- | -- | -- | -- | -- |
| **EASTERN DISTRICT** | | | | | | | | | | | | | | | | | | | | | | | | |
| Benecia* | 123 | 2 | 86 | 3 | 7 | * | 1.0 | 0.8 | 0 | 38 | 7 | 0 | 5 | 1.6 | 0 | 18.1 | 52 | 0 | 1 | -- | -- | -- | -- | -- |
| Bethel Island | 109 | 4 | 90 | 4 | 10 | 76 | 1.5 | 1.1 | 0 | 41 | 7 | 0 | 4 | 1.4 | 0 | 24.1 | 77 | 0 | 3 | -- | -- | -- | -- | -- |
| Concord | 119 | 3 | 88 | 6 | 8 | 78 | 1.6 | 1.1 | 0 | 50 | 10 | 0 | 4 | 1.2 | 0 | 17.5 | 51 | 0 | 1 | 60.3 | 3 | 34.6 | 9.3 | 9.0 |
| Crockett | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 13 | 2.1 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Fairfield | 116 | 2 | 90 | 1 | 2 | 68 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Livermore* | 141 | 5 | 110 | 6 | 8 | 81 | 2.4 | 1.4 | 0 | 58 | 13 | 0 | -- | -- | -- | * | * | * | * | 38.6 | 2 | 36.2 | 10.1 | 9.6 |
| Martinez | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 6 | 1.7 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Pittsburg* | 106 | 1 | 83 | 1 | 2 | 71 | 2.8 | 1.4 | 0 | 56 | 10 | 0 | 6 | 1.8 | 0 | * | * | * | * | -- | -- | -- | -- | -- |
| **SOUTH CENTRAL BAY** | | | | | | | | | | | | | | | | | | | | | | | | |
| Fremont* | 112 | 1 | 78 | 1 | 3 | 61 | 1.9 | 1.4 | 0 | 62 | 14 | 0 | -- | -- | -- | * | * | * | * | 28.6 | 0 | 28.8 | 9.4 | 9.5 |
| Hayward | 114 | 1 | 86 | 1 | 3 | 63 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Redwood City* | 82 | 0 | 69 | 0 | 0 | 53 | 4.3 | 1.9 | 0 | 69 | 14 | 0 | -- | -- | -- | * | * | * | * | 27.9 | 0 | 29.3 | 9.1 | 9.0 |
| San Leandro | 96 | 1 | 68 | 0 | 0 | 55 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **SANTA CLARA VALLEY** | | | | | | | | | | | | | | | | | | | | | | | | |
| Gilroy* | 103 | 1 | 79 | 1 | 4 | 73 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 25.5 | 0 | * | -- | -- |
| Los Gatos | 122 | 2 | 97 | 2 | 6 | 72 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| San Jose Central | 118 | 1 | 80 | 2 | 3 | 65 | 3.3 | 2.5 | 0 | 80 | 17 | 0 | -- | -- | -- | 23.4 | 57 | 0 | 1 | 41.9 | 5 | 35.8 | 11.5 | 11.0 |
| San Martin | 123 | 2 | 77 | 2 | 5 | 76 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Sunnyvale | 93 | 0 | 76 | 1 | 2 | 60 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **Total Bay Area Days over Standard** | | **9** | | **12** | **20** | | | | **0** | | | **0** | | | **0** | | | **0** | **5** | | **12** | | | |

*Station Information: $PM_{2.5}$ monitoring at Gilroy began Mar. 1, 2007, three-year average statistics not available. Benicia and Berkeley sites opened in 2007, Apr. 1 and Dec. 13 respectively; no three-year ozone statistics available. Oakland site opened Nov. 1, 2007, no three-year ozone or $PM_{2.5}$ statistics available. $PM_{10}$ monitoring was discontinued on June 30, 2008 at Freemont, Livermore, Pittsburg, Redwood City, Santa Rosa, and Vallejo, statistics no longer available. $SO_2$ monitoring was discontinued at San Francisco Dec. 31, 2008

(ppb) = parts per billion (ppm) = parts per million, ($\mu g/m^3$) = micrograms per cubic meter

**TABLE 3-3**

**Ten-Year Bay Area Air Quality Summary**
**(days over standard)**

| Year | Ozone | | | Carbon Monoxide | | | | Nitrogen Dioxide | Sulfur Dioxide | | PM10 | | PM2.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 8-Hr | 1-Hr | 8-Hr | 1-Hr | | 8-Hr | | 1-Hr | 24-Hr | | 24-Hr* | | 24-Hr** |
| | Nat. | Cal. | Cal. | Nat. | Cal. | Nat. | Cal. | Cal. | Nat. | Cal. | Nat. | Cal. | Nat. |
| 1998 | 16 | 29 | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | -- |
| 1999 | 9 | 20 | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | -- |
| 2000 | 4 | 12 | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 1 |
| 2001 | 7 | 15 | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 5 |
| 2002 | 7 | 16 | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 7 |
| 2003 | 7 | 19 | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 |
| 2004 | 0 | 7 | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 1 |
| 2005 | 1 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 |
| 2006 | 12 | 18 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 10 |
| 2007 | 1 | 4 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 14 |
| 2008 | 12 | 9 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 12 |

* PM10 is sampled every sixth day – actual days over standard can be estimated to be six times the numbers listed.

** On Dec. 17, 2006, the U.S. EPA implemented a more stringent national 24-hour PM2.5 standard – revising it from 5 g/m3 to 25 g/m3. PM2.5 exceedance days for 2006 and 2007 reflect the new standard.

Toxic Air Contaminants

Table 3-4 (BAAQMD, 2007) contains a summary of ambient air toxics monitoring data of toxic air contaminants (TACs) measured at monitoring stations in the Bay Area by the District in 2003. One of the primary health risks of concern due to exposure to TACs is the risk of contracting cancer. A number of VOCs currently used in composite manufacturing and cleaning operations have also been identified as TACs, such as styrene.

For the last twenty-two years, the District's Air Toxics Program has sought to evaluate and reduce the public's exposure to TACs through the control of emissions from stationary sources. The District's Air Toxics Program, along with other programs in place at the State and national level, has significantly reduced ambient exposure to TACs from stationary sources, motor vehicles, fuels, and consumer products. Reformulated fuel and vapor recovery regulations have reduced concentrations of benzene (about 85 percent reduction) and 1,3-butadiene. MTBE has been eliminated from gasoline. Hexavalent chromium was prohibited in cooling towers and limited in chrome plating facilities so hexavalent chromium emissions have been reduced by about 80 percent. Perchloroethylene has been reduced dramatically because of state and BAAQMD dry cleaner rules (estimated 95 percent reduction). Cleaner-burning diesel engines and cleaner diesel fuel have reduced diesel concentrations over 50 percent (BAAQMD, 2009). Future toxic emission reductions mandated by the pending phase-out of perchloroethylene dry cleaners, multiple diesel regulations, and other local, state and federal toxics regulations will provide a continuation of these downward trends in toxic exposure.

**TABLE 3-4**

**Summary of 2003 BAAQMD Ambient Air Toxics Monitoring Data**

| Compound | LOD (ppb)[1] | % of Samples < LOD[2] | Max. Conc. (ppb)[3] | Min. Conc. (ppb)[4] | Mean Conc. (ppb)[5] |
|---|---|---|---|---|---|
| Acetone | 0.30 | 0 | 121.4 | 0.6 | 6.80 |
| Benzene | 0.10 | 1.78 | 2.4 | 0.5 | 0.401 |
| 1,3-butadiene | 0.15 | 75.7 | 0.89 | 0.075 | 0.12 |
| Carbon tetrachloride | 0.01 | 0 | 0.16 | 0.09 | 0.108 |
| Chloroform | 0.02 | 62.5 | 1.47 | 0.01 | 0.024 |
| Ethylbenzene | 0.10 | 44.2 | 0.90 | 0.05 | 0.135 |
| Ethylene dibromide | 0.02 | 100 | 0.01 | 0.01 | 0.01 |
| Ethylene dichloride | 0.10 | 100 | 0.05 | 0.05 | 0.05 |
| Methylene chloride | 0.50 | 82.9 | 3.40 | 0.25 | 0.356 |
| Methyl ethyl ketone | 0.20 | 7.7 | 5.80 | 0.1 | 0.496 |
| Metyl tert-butyl ether | 0.30 | 32.9 | 4.80 | 0.15 | 0.532 |
| Perchloroethylene | 0.01 | 42.4 | 0.28 | 0.005 | 0.026 |
| Toluene | 0.10 | 0.2 | 6.0 | 0.05 | 1.062 |
| 1,1,1-Trichloroethane | 0.05 | 72.3 | 2.47 | 0.025 | 0.084 |
| Trichloroethylene | 0.05 | 93.8 | 0.33 | 0.025 | 0.029 |
| Trichlorofluoromethane | 0.01 | 0 | .046 | 0.18 | 0.266 |
| 1,1,2-trichlorotrifluoroethane | 0.01 | 0 | 1.16 | 0.06 | 0.077 |
| Vinyl chloride | 0.30 | 100 | 0.15 | 0.15 | 0.15 |
| m/p-xylene | 0.10 | 2.8 | 3.40 | 0.05 | 0.535 |
| o-xylene | 0.10 | 27.9 | 1.30 | 0.05 | 0.186 |

NOTES: Table 3-4 summarizes the results of the BAAQMD gaseous toxic air contaminant monitoring network for the year 2003. These data represent monitoring results at 19 of the 20 separate sites at which samples were collected. Data from the Fort Cronkhite "clean-air" background site was not included. Data from the Oakland-Davie Stadium site was available from January through March.

(1) "LOD" is the limit of detection of the analytical method used.

(2) "% of samples < LOD" is the percent of the total number of air samples collected in 2003 that had pollutant concentrations less than the LOD.

(3) "Maximum Conc." is the highest daily concentration measured at any of the 19 monitoring sites.

(4) "Minimum Conc." is the lowest daily concentration measured at any of the 19 monitoring sites.

(5) "Mean Conc." is the arithmetic average of the air samples collected in 2003 at the 19 monitoring sites. In calculating the mean, samples with concentrations less than the LOD were assumed to be equal to one half the LOD concentration.

# Regulatory Background

Criteria Pollutants

At the federal level, the Clean Air Act (CAA) Amendments of 1990 give the U.S. EPA additional authority to require states to reduce emissions of ozone precursors and particulate matter in non-attainment areas. The amendments set attainment deadlines based on the severity of problems. At the state level, CARB has traditionally established state

ambient air quality standards, maintained oversight authority in air quality planning, developed programs for reducing emissions from motor vehicles, developed air emission inventories, collected air quality and meteorological data, and approved state implementation plans. At a local level, California's air districts, including the BAAQMD, are responsible for overseeing stationary source emissions, approving permits, maintaining emission inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality-related sections of environmental documents required by CEQA.

The BAAQMD is governed by a 22-member Board of Directors composed of publicly-elected officials apportioned according to the population of the represented counties. The Board has the authority to develop and enforce regulations for the control of air pollution within its jurisdiction. The BAAQMD is responsible for implementing emissions standards and other requirements of federal and state laws. It is also responsible for developing air quality planning documents required by both federal and state laws.

Toxic Air Contaminants

TACs are regulated in the District through federal, state, and local programs. At the federal level, TACs are regulated primarily under the authority of the CAA. Prior to the amendment of the CAA in 1990, source-specific National Emission Standards for Hazardous Air Pollutants (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 must be made by the years 1992 (at least 40 source categories), 1994 (25 percent of the listed categories), 1997 (50 percent of remaining listed categories), and 2000 (remaining balance). The 1992 requirement was met; however, many of the four-year standards were not promulgated as scheduled. Promulgation of those standards has been rescheduled based on court ordered deadlines, or the aim to satisfy all Section 112 requirements in a timely manner.

Many of the sources of TACs that have been identified under the CAA are also subject to the California TAC regulatory programs. CARB developed three regulatory programs for the control of TACs. Each of the programs is discussed in the following subsections.

Control of TACs under the TAC Identification and Control Program: California's TAC identification and control program, adopted in 1983 as Assembly Bill 1807 (AB 1807) (California Health and Safety Code §39662), is a two-step program in which substances are identified as TACs, and airborne toxic control measures (ATCMs) are adopted to control emissions from specific sources. Since adoption of the program, CARB has identified 18 TACs, and CARB adopted a regulation designating all 189 federal HAPs as TACs.

Control of TACs under the Air Toxics "Hot Spots" Act: The Air Toxics Hot Spot Information and Assessment Act of 1987 (AB 2588) (California Health and Safety Code §39656) establishes a state-wide program to inventory and assess the risks from facilities that emit TACs and to notify the public about significant health risks associated with those emissions. Inventory reports must be updated every four years under current state law. The BAAQMD uses a maximum individual cancer risk of 10 per one million, or an ambient concentration above a non-cancer reference exposure level, as the threshold for notification.

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

The District's efforts to reduce public exposure to TACs include the promotion of measures directed at reducing emissions from motor vehicles, which are the largest source of TACs. In 2004, the District initiated the Community Air Risk Evaluation (CARE) Program to investigate the cumulative impact of stationary, area, and mobile sources at a neighborhood-level. These investigations have confirmed that motor vehicle emissions, especially emissions of diesel PM, are the largest contributor to neighborhood-level health impacts from air pollution. The CARE Program identified a number of Bay Area communities that have comparatively high air pollution related health impacts and designated six "Priority Communities" where risk reduction efforts should be focused. The District is considering revisions to several stationary source air toxics programs that will require additional mitigation measures for stationary sources located in these Priority Communities. BAAQMD will use information derived from the CARE program to develop and implement targeted risk reduction programs, including grant and incentive programs, community outreach efforts, collaboration with other governmental agencies, model ordinances, new regulations for stationary sources and indirect sources, and advocacy for additional legislation.

Greenhouse Gas Emissions

In June 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05, which established GHG emissions reduction targets for the state, as well as a process to ensure that the targets are met. As a result of this executive order, the California Climate Action Team (CAT), led by the Secretary of the California State Environmental Protection Agency (CalEPA), was formed. The CAT published its report in March 2006, in which it laid out several recommendations and strategies for reducing GHG emissions and reaching the targets established in the Executive Order. The greenhouse gas targets are:

- By 2010, reduce to 2000 emission levels;
- By 2020, reduce to 1990 emission levels; and,

- By 2050, reduce to 80 percent below 1990 levels.

In September 2006, Governor Schwarzenegger signed California's Global Warming Solutions Act of 2006 (AB32). AB32 required CARB to:

- Establish a statewide GHG emissions cap for 2020, based on 1990 emissions, by January 1, 2008;

- Adopt mandatory reporting rules for significant sources of GHG emissions by January 1, 2008;

- Adopt an emissions reduction plan by January 1, 2009, indicating how emissions reductions will be achieved via regulations, market mechanisms, and other actions; and

- Adopt regulations to achieve the maximum technologically feasible and cost-effective reductions of GHGs by January 1, 2011.

SB1368, a companion bill to AB32, requires the CPUC and the CEC to establish GHG emission performance standards for the generation of electricity, whether generated inside the State, or generated outside, and then imported into California. SB1368 provides a mechanism for reducing the emissions of electricity providers, thereby assisting CARB to meet its mandate under AB32.

SB97, passed in August 2007, is designed to work in conjunction with CEQA and AB32. SB97 requires the California Office of Planning and Research (OPR) to prepare and develop guidelines for the mitigation of GHG emissions or the effects thereof, including but not limited to, effects associated with transportation and energy consumption. These guidelines were required to be transmitted to the Resources Agency by July 1, 2009 and to be certified and adopted by January 1, 2010. The OPR and the Resources Agency shall periodically update these guidelines to incorporate new information or criteria established by CARB pursuant to AB32. SB97 will apply to any EIR, negative declaration, mitigated negative declaration, or other document required by CEQA, prepared for a limited number of types of projects. SB 97 will be automatically repealed January 1, 2010.

# Discussion of Impacts

**III a**. The objectives of the proposed rule amendments are aimed to increase the stringency of the standards for new and modified stationary sources of TACs in the BAAQMD, including new or modified diesel engines, gasoline dispensing facilities, and a variety of other commercial and industrial sources, such as gas fired combustion devices, crematories, petroleum refinery projects, cement plants, and landfills. Consequently, the proposed rule amendments are expected to reduce exposure to TACs and provide overall health benefits. A number of TACs that will be more strictly regulated are VOCs, and reduced VOC concentrations are necessary to attain the ambient air quality standards for ozone. Therefore, the proposed rule amendments are not expected to conflict with an Air Quality

Plan, but instead would further the objectives of the 2005 Ozone Strategy, ultimately reducing ozone concentrations in the Bay Area.

**III b,d.** The proposed project would not violate any ambient air quality standards, but, as noted above, would contribute to the BAAQMD's progress in reducing toxic risk and allow further progress towards attaining the ambient air quality standards for ozone as well. No significant adverse air quality impact is anticipated from installation of new abatement equipment or process changes that could occur at the potentially affected facilities. Some new equipment is expected to replace similar equipment in size, throughput, location, etc. Thus, no new foundations or support equipment (e.g., power lines to source, piping, etc.) are expected to be required, except for the rare case of a new large abatement system. The only construction activity is expected to be delivery, removal of old equipment and minor installation work (e.g., welding). The new abatement equipment is expected to be built and assembled offsite.

If equipment installation is required at more than one facility, it is highly unlikely the construction activity would take place on the same day. Thus, the construction activity calculated in Table 3-5 would be the peak daily construction emissions from the proposed project. As shown in Table 3-5, the delivery and installation of the one piece of equipment would not exceed the BAAQMDs existing or proposed NOx significance threshold (54 pounds per day) from the construction phase of the project. It is assumed for a worst-case scenario, one crane and one welder would be necessary to install the equipment.

The direct air quality impact from regulating a TAC is a reduction in toxic risk, thus a related air quality and health risk. The proposed rule amendments are expected to reduce emissions from TACs and reduce the related health impacts as additional TACs would be regulated. Therefore, TAC exposure to sensitive receptors would be reduced. Any potential adverse environmental impacts from adding age sensitivity factors to health risk calculation procedures or from revising health effects values for TACs would typically be secondary or cross-media impacts generated by the installation and operation of new air pollution control equipment. However, because of the sources types potentially affected (e.g., gasoline dispensing facilities and diesel engines), the risk reduction measures would most likely involve product or equipment replacement (Tier 3 or 4 engines) or process change (e.g., reduction in use or throughput or altered facility practices).

## TABLE 3-5

## Construction Emissions from Equipment Installation (Year 2010)

| Equipment Type | Distance Traveled (miles/day) | Hours of Daily Operation | NOx Emission Factor[1] | NOx Emissions (pounds/day) | Total NOx Emissions (pounds/day) |
|---|---|---|---|---|---|
| Heavy –duty delivery truck | 50 | n/a | 0.03822102 pounds/mile[2] | 1.9 | 9.6 |
| Crane | On-site | 4 | 1.4515 pounds/hour[3] | 5.8 | |
| Welder | On-site | 6 | 0.2920 pounds/hour[3] | 1.8 | |
| Employee Vehicle | 75[4] | n/a | 0.00091814 pounds/mile[5] | 0.07 | |

1. NOx was used as the driver because it would be criteria pollutant with highest emissions.
2. Source : EMFAC2007 Emission Factors http ://www.aqmd.gov/ceqa/handbook/onroad/onroadEFHHDT07_26.xls
3. Because the horsepower of the equipment is unknown at this time, the composite factor was used. Source : http ://www.aqmd.gov/ceqa/handbook/offroad/offroadEF07_25.xls
4. Assumes 25 mile roundtrip for three construction employees (25 miles/day x 3 = 75 miles/day).
5. Source : EMFAC2007 Emission Factors for On-Road Passenger Vehicles http ://www.aqmd.gov/ceqa/handbook/onroad/onroadEF07_26.xls

**III c.** Implementing the proposed project is not expected to require the construction of new structures. Since the proposed amendments to Regulation 2-5 is not expected to generate significant adverse project-specific construction or operational air quality impacts, it is not expected to cause cumulative impacts in conjunction with other projects that may occur concurrently with or subsequent to the proposed project (CEQA Guidelines §15130(a)). Because the equipment replacement is expected to be identical of similar in process, if not more efficient, any operational GHG emissions are also expected to be identical or less than current equipment. The proposed project's contribution to a potentially significant cumulative impact is rendered less than cumulatively considerable and, thus, is not significant (CEQA Guidelines §15064(h)(2)).

**III e.** Objectionable odors are often associated with a number of polluting sources. To the extent that the proposed project could result in equipment replacement or process changes, odors may continue or cease to be experienced. It is expected that implementing the proposed project will provide a benefit by reducing population exposures from odors associated with TACs. Therefore, no significant adverse odor impacts are expected from implementing the proposed project and impact assessment for facilities subject to Regulation 2-5.

**III f.** The proposed project will not diminish an existing air quality rule or future compliance requirement. The analysis concludes that the proposed project will provide air quality benefits from TACs and cancer risk reduction. Secondary impacts from risk reduction actions, equipment replacement or process changes, is not expected to change or worsen the existing air quality conditions at the affected facilities and, therefore, any potential adverse air quality impact from the proposed project is not significant.

Based on the above consideration, significant adverse impacts to air quality are not expected from amendments to Regulation 2-5. Since there are no significant adverse impacts, no mitigation measures are required.

| | | Potentially Significant Impact | Less Than Significant Impact With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| **IV.** | **BIOLOGICAL RESOURCES.** Would the project: | | | | |
| a) | Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | ☐ | ☐ | ☐ | ☑ |
| b) | Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | ☐ | ☐ | ☐ | ☑ |
| c) | Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means? | ☐ | ☐ | ☐ | ☑ |
| d) | Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | ☐ | ☐ | ☐ | ☑ |
| e) | Conflicting with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | ☐ | ☐ | ☐ | ☑ |
| f) | Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan? | ☐ | ☐ | ☐ | ☑ |

# Setting

The 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 entire area under the jurisdiction of the BAAQMD is affected by the proposed rule amendments, and is located within 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. A majority of the affected areas have been graded to develop various commercial or residential structures. Native vegetation, other than landscape vegetation, has generally been removed from areas to minimize safety and fire hazards. Any new development would fall under the requirements of the City or County General Plans.

# Regulatory Background

Biological resources are generally protected by the City and/or County General Plans through land use and zoning requirements which minimize or prohibit development in biologically sensitive areas. Biological resources are also protected by the California Department of Fish and Game, 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 Game administers the California Endangered Species Act which prohibits impacting endangered and threatened species. The U.S. Army Corps of Engineers and the U.S. EPA regulate the discharge of dredge or fill material into waters of the United States, including wetlands.

# Discussion of Impacts

**IV a,b,d.** No impacts on biological resources are anticipated from the proposed rule amendments which would apply to facilities which are primarily located in industrial and commercial areas, which generally lack native vegetation. The proposed amendments are not expected to require the construction of any major new facilities and would not require construction activities outside of existing facilities. The construction associated with the installation of such units is expected to be minor and would be installed at the time other equipment would be installed. New equipment generally would be fabricated off-site at the manufacturing facility, delivered to the site, and installed. Most areas where commercial and industrial facilities are located have typically been graded and developed, and biological resources, with the exception of landscape species, have generally been removed. The amendments to Regulation 2-5 would not require development outside of existing areas and would not impact any native biological resources.

**IV c.** Acquisition of protected wetlands is not expected to be necessary to reduce the cancer risk from TACs in the BAAQMD. Operators of affected facilities would replace equipment or reduce hours of operation which would not require removing, filling or interrupting any hydrological system or have an adverse effect on federally protected wetlands.

**IV e-f.** There are no provisions in the proposed rule that would adversely affect land use plans, local policies or ordinances, or regulations. Land use and other planning considerations are determined by local governments and no land use or planning requirements will be altered by the proposed project. Amendments to Regulation 2-5 would not affect in any way habitat

conservation or natural community conservation plans, agricultural resources or operations, and would not create divisions in any existing communities.

Based on the above consideration, significant adverse impacts to biological resources are not expected from Regulation 2-5. Since there are no significant adverse impacts, no mitigation measures are required.

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

# Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses vary greatly and include commercial, industrial, residential, agricultural and open space uses. Cultural resources are defined as buildings, sites, structures, or objects which might have historical architectural, archaeological, cultural, or scientific importance.

The Carquinez Strait represents the entry point for the Sacramento and San Joaquin Rivers into the San Francisco Bay. This locality lies within the San Francisco Bay and the west end of the Central Valley archaeological regions, both of which contain a rich array of prehistoric and historical cultural resources. The areas surrounding the Carquinez Strait and Suisun Bay have been occupied for millennia given their abundant combination of littoral and oak woodland resources. The facilities affected by the proposed rule amendments to Regulation 2-5 are primarily located in industrial and commercial areas of the BAAQMD which have been graded and developed.

# 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 Section 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 Section 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 Sections 50020.1(k) and 5024.1(g).

# Discussion of Impacts

**V a – d.** There are existing laws in place that are designed to protect and mitigate potential impacts to cultural resources. Affected facilities will not be required to perform major construction activities such as grading, trenching, etc., to comply with the proposed rule amendments. Equipment replacement is expected to take place on the same foundation already previously graded and paved. Therefore, cultural resources would not be disturbed. As a result, the proposed project has no potential to cause a substantial adverse change to a historical or archaeological resource, directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, or disturb any human remains, including those interred outside a formal cemeteries.

Based on the above consideration, significant adverse impacts to cultural resources are not expected from amendments to Regulation 2-5. Since there are no significant adverse impacts, no mitigation measures are required.

| | Potentially Significant Impact | Less Than Significant Impact With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **VI. GEOLOGY AND SOILS**. Would the project: | | | | |
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | ☐ | ☐ | ☐ | ☑ |
| • 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. | ☐ | ☐ | ☐ | ☑ |
| • Strong seismic groundshaking? | ☐ | ☐ | ☐ | ☑ |
| • Seismic–related ground failure, including liquefaction? | ☐ | ☐ | ☐ | ☑ |
| • Landslides? | ☐ | ☐ | ☐ | ☑ |
| b) Result in substantial soil erosion or the loss of topsoil? | ☐ | ☐ | ☐ | ☑ |
| c) Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse? | ☐ | ☐ | ☐ | ☑ |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? | ☐ | ☐ | ☐ | ☑ |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater? | ☐ | ☐ | ☐ | ☑ |

# Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses. Facilities affected by the proposed rule amendments are located primarily in industrial and commercial areas within the jurisdiction of the BAAQMD.

The Bay Area is located in the natural region of California known as the Coast Ranges geomorphic province. The province is characterized by a series of northwest trending ridges

and valleys controlled by tectonic folding and faulting, examples of which include the Suisun Bay, East Bay Hills, Briones Hills, Vaca Mountains, Napa Valley, and Diablo Ranges.

Regional basement rocks consist of the highly deformed Great Valley Sequence, which include massive beds of sandstone inter-fingered with siltstone and shale. Unconsolidated alluvial deposits, artificial fill, and estuarine deposits, (including Bay Mud) underlie the low-lying region along the margins of the Carquinez Straight and Suisun Bay. The estuarine sediments found along the shorelines of Solano County are soft, water-saturated mud, peat and loose sands. The organic, soft, clay-rich sediments along the San Francisco and San Pablo Bays are referred to locally as Bay Mud and can present a variety of engineering challenges due to inherent low strength, compressibility and saturated conditions. Landslides in the region occur in weak, easily weathered bedrock on relatively steep slopes.

The San Francisco Bay Area is a seismically active region, which is situated on a plate boundary marked by the San Andreas Fault System. Several northwest trending active and potentially active faults are included with this fault system. Under the Alquist-Priolo Earthquake Fault Zoning Act, Earthquake Fault Zones were established by the California Division of Mines and Geology along "active" faults, or faults along which surface rupture occurred in Holocene time (the last 11,000 years). In the Bay area, these faults include the San Andreas, Hayward, Rodgers Creek-Healdsburg, Concord-Green Valley, Greenville-Marsh Creek, Seal Cove/San Gregorio and West Napa faults. Other smaller faults in the region classified as potentially active include the Southampton and Franklin faults.

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

# Regulatory Background

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

The City or County General Plan includes the Seismic Safety Element. The Element serves primarily to identify seismic hazards and their location in order that they may be taken into account in the planning of future development. The Uniform 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.** Facilities affected already exist so the proposed project will not expose people to substantial geological effects greater than what they are exposed to already. Since the proposed rule amendments will not require any additional major equipment beyond what is already operating, amendments to Regulation 2-5 will not expose people or structures to risks of loss, injury, or death involving: rupture of an earthquake fault, seismic ground shaking, ground failure or landslides.

**VII b.** The proposed project will not require major construction activities (e.g., grading, trenching, refilling and repaving), so no potential impacts to existing geophysical conditions are anticipated. Because affected facilities are primarily located at existing sites on established foundations, no soil will need to be disrupted. Therefore, no substantial soil erosion or loss of topsoil is expected from the existing affected facilities as a result of controlling emissions and toxic risk from TACs in the BAAQMD.

**VII c and d.** Affected facilities are primarily located at existing sites and, therefore, will not involve locating any structures on soil that is unstable or expansive. However, as already noted, no soil disturbance is anticipated from the proposed project, therefore, no further destabilization of unstable soils would be expected that could cause on- or off-site landslides, lateral spreading, subsidence, liquefaction or collapse.

**VII e.** The proposed project does not involve the installation of septic tanks or alternative waste water disposal systems. Therefore, this type of soil impact will not occur.

Based on the above considerations, significant adverse impacts to geology and soils are not expected from amendments to Regulation 2-5. Since there are no significant adverse impacts, no mitigation measures are required.

| | | Potentially Significant Impact | Less Than Significant Impact With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| **VII.** | **HAZARDS AND HAZARDOUS MATERIALS.** Would the project: | | | | |
| a) | Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | ☐ | ☐ | ☐ | ☑ |
| b) | Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | ☐ | ☐ | ☐ | ☑ |
| c) | Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | ☐ | ☐ | ☐ | ☑ |
| d) | Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | ☐ | ☐ | ☐ | ☑ |
| e) | Be located within an airport land use plan or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area? | ☐ | ☐ | ☐ | ☑ |
| f) | Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area? | ☐ | ☐ | ☐ | ☑ |
| g) | Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | ☐ | ☐ | ☐ | ☑ |
| h) | Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | ☐ | ☐ | ☐ | ☑ |
| i) | Significantly increased fire hazard in areas with flammable materials? | ☐ | ☐ | ☐ | ☑[ |

# Setting

The affected industrial/commercial facilities handle and process measurable 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.

Hazards are related to the risks of fire, explosions, or releases of hazardous substances in the event of accident or upset conditions. Hazards are thus related to the production, use, storage, and transport of hazardous materials. Industrial production and processing facilities are potential sites for hazardous materials. Some facilities produce hazardous materials as their end product, while others use such materials as an input to their production processes. Examples of hazardous materials used by consumers include fuels, paints, paint thinner, nail polish, and solvents. Hazardous materials may be stored at facilities producing such materials and at facilities where hazardous materials are part of the production processes. Storage refers to the bulk handling of hazardous materials before and after they are transported to the general geographical area of use. Currently, hazardous materials are transported throughout the Bay Area in great quantities via all modes of transportation including rail, highway, water, air, and pipeline.

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.

- 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.

# Regulatory Background

The use, storage and transport of hazardous materials are subject to numerous laws and regulations at all levels of government. The most relevant existing hazardous materials laws and regulations include hazardous materials management planning, hazardous materials transportation, hazardous materials worker safety requirements, hazardous waste handling requirements, and emergency response to hazardous materials and waste incidents. There are many federal and state rules and regulations that facilities handling hazardous materials must comply with which serve to minimize the potential impacts associated with hazards at these facilities.

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

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

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

The Hazardous Materials Transportation (HMT) Act is the federal legislation that regulates transportation of hazardous materials. The primary regulatory authorities are the U.S. Department of Transportation, the Federal Highway Administration, and the Federal Railroad Administration. The HMT Act requires that carriers report accidental releases of hazardous materials to the U.S. 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 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

**VII a - c.** Equipment replacement or process changes are not expected to require any new transport, use, or disposal of hazardous materials, thus, no new significant hazard to the public or the environment from a release of hazardous materials will occur as a result of the proposed beyond the current risk of upset. So, for a worst-case scenario, the hazard impacts from commercial and industrial operations remain constant from the current condition. Because no new transport of hazardous materials will occur as a result of the proposed project, emissions of hazardous emissions, or handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school will not occur as a result of the proposed project. Consequently, proposed amended Regulation 2-5 will not create a significant new hazard to the public or create a reasonably foreseeable upset condition involving the release of hazardous materials.

**VII d.** No impacts on hazardous material sites are anticipated from the proposed rule amendments. Some of the affected areas may be located on the hazardous materials sites list pursuant to Government Code Section 65962.5. However, the proposed rule amendments would have no affect on hazardous materials nor would the amendment create a significant hazard to the public or environment. Affect facilities are primarily located and operated within the confines of industrial and commercial facilities. The proposed rule amendments neither require, nor are likely to result in, activities that would affect existing site contamination or change existing hazardous waste management practices. Therefore, no significant adverse impacts on hazards are expected.

**VII e – f.** Regardless of whether or not affected facilities are located near airports or private airstrips, the proposed project will not create new safety hazards. No new hazards will be introduced at affected facilities that could create safety hazards at local airports or private airstrips.

**VII g.** The proposed project could result in equipment replacement or process changes. However, the proposed rule amendments are not expected to physically interfere with implementing adopted emergency response plans and emergency evacuation plans.

**VII h-i.** Since the proposed rule amendments will not require any changes to the affected facility or operational process that will 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. Because affected facility operations are not expected to change substantially, except for possibly a reduction in the annual hours of operation, there will be not significant increase of fire hazards in areas with flammable materials than what currently exists already.

Based on the above considerations, significant adverse impacts to hazards and hazardous materials are not expected from Regulation 2-5. Since there are no significant adverse impacts, no mitigation measures are required.

| | | Potentially Significant Impact | Less Than Significant Impact With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| **VIII. HYDROLOGY AND WATER QUALITY.** Would the project: | | | | | |
| a) | Violate any water quality standards or waste discharge requirements? | ☐ | ☐ | ☐ | ☑ |
| b) | Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)? | ☐ | ☐ | ☐ | ☑ |
| c) | Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or offsite? | ☐ | ☐ | ☐ | ☑ |
| d) | Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite? | ☐ | ☐ | ☐ | ☑ |
| e) | Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? | ☐ | ☐ | ☐ | ☑ |
| f) | Otherwise substantially degrade water quality? | ☐ | ☐ | ☐ | ☑ |
| g) | Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | ☐ | ☐ | ☐ | ☑ |
| h) | Place within a 100-year flood hazard area structures that would impede or redirect flood flows? | ☐ | ☐ | ☐ | ☑ |
| i) | Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? | ☐ | ☐ | ☐ | ☑ |
| j) | Inundation by seiche, tsunami, or mudflow? | ☐ | ☐ | ☐ | ☑ |

# Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses and affected environment vary substantially throughout the area and include commercial, industrial, residential, agricultural, and open space uses.

Facilities affected by the proposed rule amendments are primarily located in industrial and commercial areas within the Bay Area. 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 Bay Area is 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 (SWRCB), 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, which implements the state's responsibilities under the Federal Clean Water Act but also establishes state wastewater discharge requirements. The Regional Water Quality Control Board (RWQCB) administers the state requirements as specified under the Porter-Cologne Water Quality Act, which include storm water discharge permits. The water quality in the Bay Area is under the jurisdiction of the San Francisco Bay RWQCB.

In response to the Federal Act, the State Water Resources Control Board (SWRCB) prepared two state-wide plans in 1991 and 1995 that address storm water runoff: the California Inland Surface Waters Plan and the California Enclosed Bays and Estuaries Plan, which have been updated in 2005 as the Policy for Implementation of Toxics Standards for Inland Surface

Waters, Enclosed Bays, and Estuaries of California. Enclosed bays are indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. San Francisco Bay, and its constituent parts, including Carquinez Strait and Suisun Bay, fall under this category.

The San Francisco Bay Basin Plan identifies the: (1) beneficial water uses that need to be protected; (2) the water quality objectives needed to protect the designated beneficial water uses; and (3) strategies and time schedules for achieving the water quality objectives. The beneficial uses of the Carquinez Strait that must be protected include water contact and non-contact recreation, navigation, ocean commercial and sport fishing, wildlife habitat, estuarine habitat, fish spawning and migration, industrial process and service supply, and preservation of rare and endangered species.

# Discussion of Impacts

**VIII a,b,f.** None of proposed amendments are expected to have direct or indirect impact on hydrology and water quality because operators at affected facilities are not expected to use water to a greater extent than they currently use. Therefore, amendments to Regulation 2-5 will not adversely affect water resources, water quality standards, groundwater supplies or water quality degradation.

**VIII c-e.** The proposed project would primarily affect operations at existing facilities. As discussed previously, no major construction activities will be necessary to comply with amendments to Regulation 2-5, so the proposed project will not alter any existing drainage patterns, nor increase the rate or amount of surface runoff water that would exceed the capacity of existing or planned stormwater drainage systems.

**VIII g and h.** Amendments to Regulation 2-5 do not involve or require the construction of housing so it will not result in placing housing in a 100- year flood hazard areas that could create new flood hazards. The proposed project would affect operations at existing industrial and commercial facilities so any flood hazards would be part of the existing setting.

**VIII i and j.** Amendments to Regulation 2-5 primarily reduce TACs in the BAAQMD and risk at existing facilities and do not require construction of new structures. The amendments will not create new flood risks or risks from seiches, tsunamis or mudflow conditions. Any risks from seiches, tsunamis, or mudflows would be part of the existing setting.

Based upon these considerations, no significant adverse hydrology and water quality impacts are expected from the implementation of the proposed rule amendments.

| | | Potentially Significant Impact | Less Than Significant Impact With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| **IX.** | **LAND USE AND PLANNING.** Would the project: | | | | |
| a) | Physically divide an established community? | ☐ | ☐ | ☐ | ☑ |
| b) | Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to a general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | ☐ | ☐ | ☐ | ☑ |
| c) | Conflict with any applicable habitat conservation plan or natural community conservation plan? | ☐ | ☐ | ☐ | ☑ |

# Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses. The facilities affected by the proposed rule amendments are primarily located within industrial and commercial areas of the BAAQMD.

# 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

**IX a.** Since amendments to Regulation 2-5 primarily reduce toxic emissions and risk, the proposed project will not create divisions in any existing communities because this provision applies generally to operations at existing facilities. Similarly, the proposed project does not require construction of new structures that could physically divide an established community. Any new structures would be built for reasons other than to comply with the proposed project, such as starting a new, or relocating an existing business.

**IX b and c.** No provisions of the proposed amendments to Regulation 2-5 would directly affect applicable land use plans, zoning ordinances, habitat conservation, or natural community conservation plans. Any changes required to existing facilities are expected to occur within the confines of existing commercial and industrial facilities. No construction activities outside of

the confines of existing facilities are expected to be required due to the adoption of the proposed amendments to Regulation 2-5, so no impacts on land use are expected. Operations at affected facilities would still be expected to comply, and not interfere, with any applicable land use plans, zoning ordinances, habitat conservation or natural community conservation plans. There are no provisions of the proposed project that would directly affect these plans, policies, or regulations. Land use and other planning considerations are determined by local governments and no present or planned land uses in the region or planning requirements will be altered by the proposed project.

Based upon these considerations, no significant adverse impacts to land use are expected due to the proposed rule amendments.

| | | Potentially Significant Impact | Less Than Significant Impact With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| **X.** | **MINERAL RESOURCES.** Would the project: | | | | |
| a) | Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | ☐ | ☐ | ☐ | ☑ |
| b) | Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan? | ☐ | ☐ | ☐ | ☑ |

# Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses and the affected environment vary greatly throughout the area. The facilities affected by the proposed rule amendments are primarily located within industrial and commercial areas of the BAAQMD.

# 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

**X a-b.** There are no provisions of the proposed rule that would directly result in the loss of availability of a known mineral resource, such as aggregate, coal, shale, etc., 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. The proposed rule amendments are aimed at increasing the stringency of the standards for new and modified stationary sources of TACs in the BAAQMD. Based on the above considerations, significant adverse impacts to mineral resources are not expected from the proposed amendments to Regulation 2-5. Since there are no significant adverse impacts, no mitigation measures are required.

Based upon these considerations, significantly adverse impacts to mineral resources not expected from the implementation of the proposed amendments to Regulation 2-5.

| | | Potentially Significant Impact | Less Than Significant Impact With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| **XI.** | **NOISE.** Would the project: | | | | |
| a) | Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | ☐ | ☐ | ☐ | ☑ |
| b) | Expose persons to or generate of excessive groundborne vibration or groundborne noise levels? | ☐ | ☐ | ☐ | ☑ |
| c) | Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | ☐ | ☐ | ☐ | ☑ |
| d) | Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | ☐ | ☐ | ☐ | ☑ |
| e) | Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels? | ☐ | ☐ | ☐ | ☑ |
| f) | Be located within the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels? | ☐ | ☐ | ☐ | ☑ |

# Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses and the affected environment vary greatly throughout the area. The industrial operations affected by the proposed rule amendments are primarily located within industrial and commercial areas of the BAAQMD.

# Regulatory Background

Noise issues related to construction and operational activities are addressed in local General Plan policies and local noise ordinance standards. The General Plan 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

**XI a-d.** Amendments to Regulation 2-5 will not generate additional or new noise, excessive ground-borne vibration, or substantially increase ambient noise levels beyond existing levels. No major construction activities would be required due to the adoption of the proposed amendments to Regulation 2-5 so that no noise impacts associated with the use of construction equipment and construction-related traffic are expected. Any new equipment is expected to produce similar, if not less noise levels, than the current older equipment. Affected facilities who do choose to operate equipment fewer hours per year to reduce toxic risk will produce less noise and vibration, which is considered to be a benefit. As a result, the proposed rule would have no new or additional noise impacts, but may produce beneficial effects relative to noise produced by affected equipment or process.

**XI. e-f.** As indicated in the preceding discussion, noise levels will either not change or will decline as a result of the proposed project and, therefore, will have a neutral effect on noise levels from affected facilities that may be located within two miles of an airport or private airstrip.

Based upon these considerations, significant noise impacts are not expected from the implementation of the proposed rule amendments.

| | | Potentially Significant Impact | Less Than Significant Impact with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| **XII.** | **POPULATION AND HOUSING.** Would the project: | | | | |
| a) | Induce substantial population growth in an area either directly (e.g., by proposing new homes and businesses) or indirectly (e.g. through extension of roads or other infrastructure)? | ☐ | ☐ | ☐ | ☑ |
| b) | Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere? | ☐ | ☐ | ☐ | ☑ |
| c) | Displace a substantial number of people, necessitating the construction of replacement housing elsewhere? | ☐ | ☐ | ☐ | ☑ |

# Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses and the affected environment vary greatly throughout the area. The facilities operations affected by the proposed rule amendments are primarily located in industrial and commercial areas 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

**XII. a-c.** Human population in the BAAQMD's jurisdiction is anticipated to grow regardless of implementing the proposed project. The proposed rule amendments are aimed at increasing the stringency of the standards for new and modified stationary sources of TACs in the BAAQMD, which will not require additional employees at affected facilities. If replacing equipment, a temporary construction crew would be required to conduct the installation of new equipment. This crew would be expected to come from the existing vast labor market in the region and would not require displacement of population or housing. Therefore, the district population will not be affected directly or indirectly as a result of adopting and implementing amendments to Regulation 2-5. The construction of single- or multiple-family housing units would not be required as a result of implementing the proposed project since no new employees will be required at affected facilities. The proposed project will not require relocation of

affected facilities, so existing housing or populations in the district are not anticipated to be displaced necessitating the construction of replacement housing elsewhere.

Based upon these considerations, significant population and housing impacts are not expected from the implementation of the proposed rule amendments.

| | Potentially Significant Impact | Less Than Significant Impact With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **XIII. PUBLIC SERVICES.** Would the project: | | | | |
| a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: | | | | |
| Fire protection? | ☐ | ☐ | ☐ | ☑ |
| Police protection? | ☐ | ☐ | ☐ | ☑ |
| Schools? | ☐ | ☐ | ☐ | ☑ |
| Parks? | ☐ | ☐ | ☐ | ☑ |
| Other public facilities? | ☐ | ☐ | ☐ | ☑ |

# Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses and the affected environment vary greatly throughout the area. The facilities affected by the proposed rule amendments are located throughout the area within the jurisdiction of the BAAQMD, primarily in industrial and commercial areas.

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.

# 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

**XIII a.** The proposed project will not involve the use of acutely hazardous materials. Thus, no new fire hazards or increased use of hazardous materials would be introduced at existing affected facilities. Thus, no new demands for fire or police protection are expected from implementing amendments to Regulation 2-5 and implementation will not require actions warranting additional fire or police protection.

As noted in the "Population and Housing" discussion, implementing amendments to Regulation 2-5 will not require major construction or permanent employees to continue operation at existing affected facilities. The employees required for the day replacement of equipment is expected to come from the extensive existing labor pool in the region and, as a result, the proposed project will have no direct or indirect effects on population growth in the district. Consequently, no new impacts to schools, parks or other recreational facilities are foreseen as a result of implementing the proposed project.

Because the reduction in cancer risk only requires minor modifications at affected facilities, the proposal 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.

Based upon these considerations, significant public services impacts are not expected from the implementation of the proposed rule amendments.

| | | Potentially Significant Impact | Less Than Significant Impact With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| **XIV. RECREATION.** Would the project: | | | | | |
| a) | Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | ☐ | ☐ | ☐ | ☑ |
| b) | Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment? | ☐ | ☐ | ☐ | ☑ |

# 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 facilities affected by the proposed rule amendments are primarily located in industrial and commercial areas throughout the BAAQMD.

# 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

**XIV a-b.** As discussed under "Land Use and Planning" above, there are no provisions in the proposed project that would affect land use plans, policies or ordinances, or regulations. Land use and other planning considerations are determined by local governments; no land use or planning requirements will be altered by the proposal. As already noted in item XII, Population and Housing, the proposed project is not expected to increase population growth in the district because no additional operational employees would be required at affected facilities and construction employees will be a small number, needed temporarily, and can be obtained from the extensive existing labor pool in the region. Therefore, no additional demand for recreation facilities is anticipated. Further, the proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities or include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

Based upon these considerations, significant recreation impacts are not expected from the implementation of the proposed rule amendments.

| | | Potentially Significant Impact | Less Than Significant Impact With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| **XV. TRANSPORTATION/TRAFFIC.** Would the project: | | | | | |
| a) | Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)? | ☐ | ☐ | ☐ | ☑ |
| b) | Cause, either individually or cumulatively, exceedance of a level-of-service standard established by the county congestion management agency for designated roads or highways? | ☐ | ☐ | ☐ | ☑ |
| c) | Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? | ☐ | ☐ | ☐ | ☑ |
| d) | Substantially increase hazards because of a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)? | ☐ | ☐ | ☐ | ☑ |
| e) | Result in inadequate emergency access? | ☐ | ☐ | ☐ | ☑ |
| f) | Result in inadequate parking capacity? | ☐ | ☐ | ☐ | ☑ |
| g) | Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks)? | ☐ | ☐ | ☐ | ☑ |

# 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 multi-lane interstate highways. The Bay Area contains over 19,600 miles of local streets and roads, and over 1,400 miles of state highways. In addition, there are over 9,040 transit route miles of services including rapid rail, light rail, commuter, 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.

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. Caltrans constructed a second freeway bridge adjacent and east of the existing Benicia-Martinez Bridge. The new bridge consists of five northbound traffic lanes. The existing bridge was re-striped to accommodate four lanes for southbound traffic. 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 the California Department of Transportation.

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

# Discussion of Impacts

**XV a,b,f.** As noted in the "Discussion" sections of other environmental topics, compliance with the proposed amendments to Regulation 2-5 is not expected to require major construction to install new equipment, either to the equipment or at the site, e.g., site preparation, construction, etc. If replacing equipment, delivery of new equipment and transport for workers to install the new equipment would result in an estimated four additional vehicle trips on the road. The construction, however, is expected to be minor and temporary. Four additional vehicle trips on a given day is not expected to generate significant increase in traffic. Continuing operation at affected facilities will add no new trips because no new employees are expected to be required.

**XV c.** Air traffic patterns are not expected to be directly or indirectly affected by the proposed rule amendments because the implementation of the risk reduction measures does not involve new additional transport of products beyond what is currently transported by air nor will operation at existing facilities interfere with air traffic. All applicable local, state and federal requirements would continue to be complied with so no increase in any safety risks is expected.

**XV d - e.** Implementing amendments to Regulation 2-5 does not have direct or indirect impacts on specific construction design features because the proposed project does not require or induce the construction of any roadways or other transportation design features. In addition, the proposed project affects existing facilities and is not expected to result in inadequate emergency access beyond what already currently exists.

**XV g.** Affected facilities would still be expected to comply with, and not interfere with adopted policies, plans, or programs supporting alternative transportation. The proposed project will reduce cancer risk from TACs in the BAAQMD and has no provision that will hinder compliance with any applicable alternative transportation plans or policies.

Based upon these considerations, significant transportation/traffic impacts are not expected from the implementation of the proposed rule amendments.

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

# Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses and the affected environment vary greatly throughout the area.

Given the large area covered by the BAAQMD, public utilities are provided by a wide variety of local agencies. The most 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 the various industrial operations, which is not recycled off-site, is required to be disposed of at a licensed hazardous waste disposal facility. Two such facilities are the Chemical Waste Management Inc. (CWMI) Kettleman Hills facility in King's County, and the Safety-Kleen facility in Buttonwillow (Kern County). Hazardous waste can also be transported to permitted facilities outside of California. The nearest out-of-state landfills are U.S. Ecology, Inc., located in Beatty, Nevada; USPCI, Inc., in Murray, Utah; and Envirosafe Services of Idaho, Inc., in Mountain Home, Idaho. Incineration is provided at the following out-of-state facilities: Aptus, located in Aragonite, Utah and Coffeyville, Kansas; Rollins Environmental Services, Inc., located in Deer Park, Texas and Baton Rouge, Louisiana; Chemical Waste Management, Inc., in Port Arthur, Texas; and Waste Research & Reclamation Co., Eau Claire, Wisconsin.

# 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

**XVI a.** Because reducing toxic risk from the affected facilities does not require water, no changes to any existing wastewater treatment permits would be necessary. Any additional equipment is not expected to require any additional water use. Because of the source types potentially affected, the risk reduction measures would most likely involve product or equipment replacement (e.g., Tier 3 or 4 engines) or process change (e.g., reduction in use or throughput or altered facility practices). The replaced equipment is expected to be identical or similar in process, if not more efficient, so any water use is expected to be identical or less than current equipment. As a result, the proposed project is not expected to impact any affected facility's ability to comply with existing wastewater treatment requirements or conditions from any applicable Regional Water Quality Control Board or local sanitation district.

**XVI b-c.** Because reducing toxic risk emissions from the affected facilities does not require water as part of the control equipment or control process, no increase in wastewater from complying with the proposed project that could exceed the capacity of existing stormwater drainage systems or require the construction of new wastewater or stormwater drainage facilities is anticipated.

**XVI d-e.** The proposed project could result in equipment replacement or process changes. None of these activities are expected to have direct or indirect impact on hydrology and water quality because operators at affected facilities are not expected to use water to a greater extent than they currently use for cleaning, etc., because no additional water is required and the new equipment type is expected to be similar to the equipment being replaced. Therefore, the

proposed amendments to Regulation 2-5 will not adversely affect existing water supplies or wastewater treatment facilities.

Based upon these considerations no significant adverse utilities and service systems impacts are expected from the implementation of the proposed rule amendments.

| | | Potentially Significant Impact | Less Than Significant Impact With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| **XVII.** | **MANDATORY FINDINGS OF SIGNIFICANCE.** | | | | |
| a) | Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory? | ☐ | ☐ | ☐ | ☑ |
| b) | Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects) | ☐ | ☐ | ☐ | ☑ |
| c) | Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly? | ☐ | ☐ | ☐ | ☑ |

# Discussion of Impacts

**XVII a.** As discussed in items I through XVII above, amendments to Regulation 2-5 and impact to facilities subject to Rule 2-5 have no potential to cause significant adverse environmental effects because the potential impacts from implementing risk reductions measures at affected facilities are less than significant. Therefore, the proposed project is not expected 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. Similarly, the proposed project includes no provision that would eliminate important examples of the major periods of California history or prehistory or otherwise degrade cultural resources.

**XVII b.** Based on the foregoing analyses, since amendments to Regulation 2-5 and impact to facilities subject to Regulation 2-5 will not result in project-specific significant environmental impacts, the proposed project is not expected to cause cumulative impacts in conjunction with other projects that may occur concurrently with or subsequent to the proposed project. Furthermore, the proposed project impacts will not be "cumulatively considerable" because the incremental impacts are not considerable when viewed in connection with the effects of past, current, or probable future projects.

**XVII c.** Based on the foregoing analyses, amendments to Regulation 2-5 and impact assessment for facilities subject to Regulation 2-5 is not expected to cause significant adverse effects on human beings, either directly, or indirectly

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# CHAPTER 4

# REFERENCES

Bay Area Air Quality Management District (BAAQMD), 2007. Toxic Air Contaminant Control Program Annual Report 2003 Volume I. August 2007.

BAAQMD, 2009. Rule Development Staff Report, Proposed Amendments to Regulation 2: Permits, Rule 5: New Source Review of Toxic Air Contaminants, November, 2009.