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

Regulation 12, Rule 13: Foundry and Forging Operations

And

Regulation 6, Rule 4: Metal Recycling and Shredding Operations

Prepared for:

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CHAPTER 1

Introduction

1.1 PURPOSE OF THIS DOCUMENT

This Negative Declaration assesses the environmental impacts of the proposed adoption of Regulation 12, Rule 13: Foundry and Forging Operations, and Regulation 6, Rule 4: Metal Recycling and Shredding Operations (Regulations 12-13 and 6-4), by the Bay Area Air Quality Management District (BAAQMD or District). This assessment is required by the California Environmental Quality Act (CEQA) and in compliance with the state CEQA Guidelines (Title 14 California Code of Regulations §15000 et seq.). A Negative Declaration serves as an informational document to be used in the decision-making process for a public agency that intends to carry out a project; it does not recommend approval or denial of the project analyzed in the document. The BAAQMD is the lead agency under CEQA and must consider the impacts of the proposed new rules 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 Regulations 12-13 and 6-4.

1.2 SCOPE OF THIS DOCUMENT

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

- aesthetics,
- agriculture and forestry resources,
- air quality,
- biological resources,
- cultural resources,
- geology / soils,
- greenhouse gas emissions,
- hazards & hazardous materials,
- hydrology / water quality,
- land use / planning,
- mineral resources,
- noise,
- population / housing,

- public services,
- recreation,
- transportation / traffic, and
- utilities / service systems.

1.3 IMPACT TERMINOLOGY

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

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

1.4 ORGANIZATION OF THIS DOCUMENT

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

- Chapter 1, "Introduction," identifies the purpose, scope, and terminology of the document.
- Chapter 2, "Description of the Proposed Rule," provides background information of Regulation 12, Rules 13 and 14, 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.

CHAPTER 2

Description of the Proposed Rule

2.1 BACKGROUND

The BAAQMD regulates particulate matter (PM) (including toxic metals that are toxic air contaminants), volatile organic compounds (VOC) (including toxic and odorous substances), and other pollutants from foundry and forging operations and metal recycling and shredding operations under a variety of District regulations. Foundries in the Bay Area are subject to many air pollution control regulations which largely depend on the types of metals processed and the pollutants emitted. In addition to District rules, foundries are subject to a State Airborne Toxic Control Measure (ATCM) and at least five National Emissions Standards for Hazardous Air Pollutants (NESHAP). District rules that impact foundry and forging operations and metal recycling and shredding operations include Regulation 1: General Provisions and Definitions, Regulation 2: Rule 1: General Requirements, Rule 2: New Source Review, Rule 5: New Source Review of Toxic Air Contaminants, and Rule 6: Major Facility Review, Regulation 6: Particulate Matter, Rule 1: General Requirements, and Regulation 7: Odorous Substances.

The BAAQMD has identified approximately 20 facilities that conduct foundry or forging operations in the District. These facilities can sometimes also contain metal recycling operations. Foundries and forges process "ferrous" metals, "non-ferrous" metals, or a combination of both. Ferrous metals and alloys have iron as the largest metal component. Non-ferrous metals and alloys contain metal(s) other than iron as the major (base) component, e.g., aluminum, copper, magnesium, zinc, brass, and bronze.

The BAAQMD has identified over 100 facilities that conduct metal recycling operations and two facilities that conduct shredding of automobiles and other materials in the Bay Area. Metal recycling facilities collect, sort and recycle scrap metal collected from peddlers and scrap yards and other satellite facilities. Scrap metal includes ferrous and non-ferrous metals. The scrap metal must be shredded and the various ferrous and non-ferrous metals segregated from each other and other non-metallic materials.

All of these operations have associated with them some degree of emissions, such as PM, including metals; VOCs (including odorous compounds such as phenols and creosols); and/or toxics compounds. Emissions data and other compliance information allow these facilities to be segregated into three types of emissions sources:

- Criteria pollutants and precursors:
  - VOCs
  - PM

- Toxic Emissions
- Nuisance / Odors
  - Phenol and associated compounds
  - Creosol and associated compounds

The casting of molten metals is the primary emission source of PM and odorous substances such as phenolic compounds at foundries. These emissions occur when the hot molten metals contact the molds and cores that are often formulated with binders that contain organic compounds. Metal forges can emit PM and odorous substances. Operations at metal recycling facilities result in the emissions of PM and visible emissions from metal management and shredding operations, including resultant shredder residue.

2.2 OBJECTIVES

The objective of the proposed Regulation 12, Rule 13: Foundry and Forging Operations (Rule 12-13) and Regulation 6, Rule 4: Metal Recycling and Shredding Operations (Rule 6-4) is to reduce fugitive emissions of PM, including toxic air contaminants, and odorous substances from foundry and forging operations and metal recycling and shredding operations, in order to reduce PM concentrations in the Bay Area and reduce the impacts of fugitive PM emissions and odor complaints on surrounding neighborhoods.

The Bay Area is not in attainment of State particulate matter standards and further reductions in PM are needed to ensure compliance with federal standards.[1] Odorous substances in foundry operations may sometimes be toxic air contaminants. PM and odorous substance emission reductions can be achieved by abatement from point sources, fugitive capture enhancement, and pollution prevention practices.

The U.S. EPA has set primary national ambient air quality standards for air pollutants to define the levels considered safe for human health. The California Air Resources Board (CARB) has also set California ambient air quality standards. The Bay Area is a non-attainment area for the state one-hour ozone standard and federal eight-hour ozone standard. In addition, the Bay Area is not in attainment of California ambient air standards for particulate matter of 10 microns or less (PM10) or for particulate matter of 2.5 microns or less (PM2.5). Under State law, non-attainment areas must prepare plans showing how they will attain the state standards. The BAAQMD has prepared, approved and is currently implementing, the 2010 Clean Air Plan (CAP) which provides a plan to show how the district will meet applicable air quality standards. The CAP included SSM-1, which considered emission reductions of organic compounds, fine particulates, toxic compounds, and odor from metal melting facilities (foundries).

[1] On October 29, 2012, EPA issued a Notice of Proposed Rulemaking that found that the Bay Area has met the 24-hour National Ambient Air Quality Standard for PM2.5. The BAAQMD will not seek redesignation to attainment for this pollutant at this time, however, as seasonal variation may impact future year compliance.

2.3 RULE AMENDMENTS BEING CONSIDERED

The District is drafting two new rules that would address fugitive emissions of PM and odorous substances from foundries and forges and major metal recycling/shredding facilities in the Bay Area: proposed Regulation 12, Rule 13: Foundry and Forging Operations (Rule 12-13) and proposed Regulation 6, Rule 4: Metal Recycling and Shredding Operations (Rule 6-4). Both of these rules would rely on the implementation of management procedures through the development of Emissions Minimization Plans (EMP) to minimize fugitive emissions. The reliance on the development of an EMP allows each facility to tailor its approach to reducing or minimizing emissions to the unique conditions and configuration of its affected operations.

Rule 12-13 would address fugitive emissions from several general processes of metal melting and casting and associated operations, including:

- Mold and core making;
- Furnace / oven (including tapping);
- Heat treatment of metals;
- Casting and cooling;
- Shake out;
- Finishing;
- Sand reclamation;
- Dross and slag management; and
- Metal management.

Rule 6-4 would focus on reducing fugitive emissions from metal recycling facilities that compile, shred, and sort scrap metal for resale, including the following operations:

- Metal management; and
- Shredding operations, including minimization of automotive shredder residue (ASR) or "fluff.

2.3.1 PROPOSED RULE 12-13: FOUNDRY AND FORGING OPERATIONS

Proposed Rule 12-13: Foundry and Forging Operations would affect foundries and forges. The proposed rule primarily relies upon the development and implementation an EMP that would include practices and procedures to minimize fugitive emissions of PM, visible emissions, and odors. The EMP would ensure that affected facilities employ the best means available to address fugitive emissions and point source emissions that are not fully addressed by the applicable federal rules (NESHAPs).

2.3.1.1 Applicability

Rule 12-13 would affect the facilities that either melt metals (foundries) or heat treat metals (forges). The rule would apply to these operations that require a District permit. Facilities with an annual metal throughput (metal charged to a furnace or heated in an

oven) of 2,500 tons or more per year would be subject to all of the requirements of the rule; those facilities with a throughput between one and 2,500 tons would only be required to keep records on their annual metal throughput. This rule would address those facilities with the greatest potential for emissions of PM and odorous substances.

2.3.1.2 Emission Limits

Rule 12-13 would contain no emissions limits. The District would rely upon the emissions limits already contained in Regulation 11 - Hazardous Pollutants, Rule 15 - Airborne Toxic Control Measure for Emissions of Toxic Metals from Non-Ferrous Metal Melting, and the five applicable NESHAPs that affect metal melting operations:

1. Subpart RRR—National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production.

2. Subpart EEEEE—National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries.

3. Subpart YYYYY—National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities.

4. Subpart ZZZZZ—National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Area Sources.

5. Subpart ZZZZZZ—National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries.

The District believes that the emissions limits contained in these various regulations effectively address process emissions of PM at this time. The District will seek delegation from the US EPA, so that the District would be the enforcing agency for these regulations.

2.3.1.3 Development and Implementation of the Emissions Minimization Plan

Rule 12-13 would require affected facilities to develop and submit to the District for approval an EMP that would detail the practices that have been or will be implemented to minimize fugitive emissions from the following operations and materials:

1. Mold and core making;

2. Metal melting and tapping;

3. Heat treatment of metals;

4. Casting and cooling;

5. Shake-out;

6. Finishing;

7. Sand reclamation;

8. Dross and slag management; and

9. Metal management, including, scrap metal acceptance and handling (to minimize contaminants such as lead, mercury, PCBs, and plastics).

Rule 12-13 would require that affected facilities submit an EMP to the District within one year of the adoption of the rule or within six months of becoming subject to the rule.

2.3.1.4 Evaluation of EMP

Within 30 days of receiving a draft EMP, the District will determine if the EMP is complete, i.e., whether it has addressed all the relevant areas for the facility. If the EMP is not complete, the District would notify the facility that the EMP is not complete and the basis of this determination. Upon receipt of notification of an incomplete EMP, the facility would have 30 days to correct any deficiencies and resubmit the draft EMP. If the District determines that the deficiencies are not corrected, the District would disapprove the EMP. If the EMP is complete, the District would make it available for 30 days for public comment, although this period may be extended at the discretion of the District. Within 30 days of the close of the public comment period, the District would consider comments submitted by the public and may make recommendations – based on technical and economic feasibility – for further revisions to the EMP by the facility to reduce or prevent fugitive emissions.

2.3.1.5 Revision and Approval of the Final EMP

After receiving any District recommendations, the facility would have 30 days to resubmit a revised final EMP reflecting the recommended changes or (in the absence of incorporating the recommendations) an EMP accompanied by written reasons explaining why each specific recommendation was not incorporated into the EMP. Within 30 days of the receipt of the final EMP, the District would review the EMP and determine whether or not it meets the requirements of Rule 12-13. If the District determined that the EMP provides emissions minimization procedures for all affected operations and includes all required elements, the EMP would be approved. If it were determined that all elements were not included, the District would notify the facility of its decision and the basis. The facility would have 30 days to correct the deficiencies in the EMP and resubmit it for approval. If the District finds that that facility failed to correct the deficiencies, the District would disapprove the EMP.

If the District determines that the EMP meets the requirements of the Rule, the District would approve the EMP and provide written notice to the facility of the approval. Then the facility would have 90 days to implement the provisions of the approved EMP. The elements of the EMP would become enforceable under the Rule.

2.3.1.6 Reporting Requirements

Intended Emission Reduction Projects: Along with the EMP, affected facilities would be required to report to the District any equipment, processes or procedures that would be installed or implemented within the next five years to reduce or prevent fugitive

emissions along with a schedule of implementation. This report would be independent of the EMP and considered a forecast of efforts intended by the facility and may be subject to change by the facility.

Reporting Requirements for Emissions Capture/Collection Systems Required Under the NESHAPs or Non-Ferrous Metal Melting ATCM: Facilities subject to the Non-Ferrous Metal Melting ATCM or one of the four federal NESHAPs that require the installation of an emissions capture/collection system capable of meeting "accepted engineering standards, such as those published by the American Conference of Governmental Industrial Hygienists" would be required to report to the District which of the NESHAP and ATCM provisions and the manner in which these requirements are met. The specific sections are:

- 40 CFR Part 63, Subpart RRR: NESHAP for Secondary Aluminum Production, §§63.1506(c)(1) through (c)(3) Capture/collection systems design, installation, and operation;
- 40 CFR Part 63, Subpart EEEEE: NESHAP for Major Source Iron and Steel Foundries, §63.7690(b)(1);
- 40 CFR Part 63, Subpart YYYYY: NESHAP for Area Sources: Electric Arc Furnace Steelmaking Facilities, §63.10686;
- 40 CFR Part 63, Subpart ZZZZZ: NESHAP for Iron and Steel Foundries Area Sources, §63.10895(b);
- Regulation 11: Hazardous Pollutants, Rule 15: Airborne Toxic Control Measure for Emissions of Toxic Metals from Non-Ferrous Metal Melting, §§11-15 (b)(1) and (b)(3).

Reporting Requirements for Operations and Maintenance Plans: The proposed rule also requires facilities subject to one of the five federal NESHAP regulations that require the development of operation and maintenance (O&M) plans to submit a copy of those approved O&M plans to the District within six months of the adoption of the Rule. The specific sections are:

- 40 CFR Part 63, Subpart RRR: NESHAP for Secondary Aluminum Production, §63.1510(b);
- 40 CFR Part 63, Subpart EEEEE: NESHAP for Major Source Iron and Steel Foundries, §63.7710(b);
- 40 CFR Part 63, Subpart YYYYY: NESHAP for Area Sources - Electric Arc Furnace Steelmaking Facilities, §63.10685(a) and (b);
- 40 CFR Part 63, Subpart ZZZZZ: NESHAP for Iron and Steel Foundries Area Sources, §63.10896;
- 40 CFR Part 63, Subpart ZZZZZZ: NESHAP: Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries, §63.11550(a)(3).

Review of Alternative Binder Formulations: Affected facilities that use mold and core binders made with odorous substances, defined as phenol and phenolic compounds, would be required to investigate the availability and efficacy of alternative binders that produce fewer emissions of odorous substances than currently used at that facility. The facility would have to complete and report the results of this investigation to the District no later than two years after the adoption of the Rule and again before each two year anniversary of the receipt of the initial report.

Clean Aluminum Exemption: Die casting facilities that melt only aluminum or other alloy, excluding lead, solder and zinc scrap that certifiably contains less than 0.004 percent cadmium and 0.002 percent arsenic would be exempt from the EMP development and all other requirements, except certain reporting requirements of the proposal. However, to retain this exemption, the facilities must maintain records certifying the cleanliness of the aluminum used. This exemption is intended to duplicate an exemption in the Non-Ferrous Metal Melting ATCM.

2.3.2 PROPOSED RULE 6-4: METAL RECYCLING AND SHREDDING OPERATIONS

Proposed Rule 6-4: Metal Recycling and Shredding Operations would also rely upon the development and implementation an EMP that would include practices and procedures to minimize fugitive emissions of PM. However, proposed Rule 6-4 differs from proposed Rule 12-13 in that it applies specifically to scrap metal recycling and shredding operations and focuses on those operations and materials specific to this industry.

2.3.2.1 Applicability

Proposed Rule 6-4 would apply to scrap metal recycling facilities that receive at least 1,000 tons of scrap metal per year. Metal recycling facilities with an annual metal throughput of 50,000 tons or more would be subject to the general requirements of the rule; those recycling facilities with an annual metal throughput between 50,000 and 1,000 tons would only be required to keep records of their annual metal throughput. Based on this applicability, the general requirements of Rule 6-4 would apply to only three Bay Area metal recycling operations: Schnitzer Steel at the Port of Oakland and Sims Metals at the Port of Redwood City and at the Port of Richmond. Two of these facilities operate large-scale shredders that size and sort scrap metal and the other is a large-scale metal recycling operation.

2.3.2.2 Emission Limits

Like Rule 12-13, draft Rule 6-4 does not contain emission limits – there are no federal NESHAPs that apply to this industry, with the exception of the Subpart T—National Emission Standards for Halogenated Solvent Cleaning and the Subpart B—Servicing of Motor Vehicle Air Conditioners for refrigerants which are currently addressed in District Regulation 8, Rule 16: Solvent Cleaning Operations and Regulation 12, Rule 7: Motor Vehicle Air Conditioner Refrigerant, respectively. These rules would only apply to these

facilities if they operate solvent cleaning apparatus using one of the six regulated chemicals or remove air conditioning refrigerant from automobiles. However, the shredding operations are subject to District Regulation 6, Rule 1: Particulate Matter, General Requirements and have permit limits that address process PM emissions from these operations.

2.3.2.3 Development and Implementation of Minimization Plans

Like draft Rule 12-13, § 6-4-401 of Rule 6-4 would require affected facilities to develop and implement an EMP that would detail the practices and equipment that have been or will be implemented to minimize fugitive emissions from the following operations, areas, and materials:

- Roadways and other trafficked areas.
- Scrap metal, including: (1) Handling and storage operations; (2) Crushing operations; (3) sorting operations; and (4) shredding / hammermill operations.
- Receipt of scrap metal from providers.
- Auto shredder residue.
- Depollution operations, including those addressing removal of lead batteries, polychlorinated biphenyl capacitors, mercury switches, sodium azide canisters, free liquids, and lead tire weights.
- Lead batteries.
- Polychlorinated biphenyl capacitors.
- Mercury switches.
- Sodium azide canisters.

2.3.2.4 Evaluation of the Emission Minimization Plans

Within 30 days of receiving a draft EMP, the District will determine if the EMP is complete, i.e., whether it has addressed all the relevant areas for the facility. If the EMP is not complete, the District would notify the facility that the EMP is not complete and the basis of this determination. Upon receipt of notification of an incomplete EMP, the facility would have 30 days to correct any deficiencies and resubmit the draft EMP. If the District determines that the deficiencies are not corrected, the District would disapprove the EMP. If the EMP is complete, the District would make it available for 30 days for public comment. Within 30 days of the close of the public comment period, the District would consider comments submitted by the public and may make recommendations – based on technical and economic feasibility – for further revisions to the EMP by the facility to reduce or prevent fugitive emissions.

2.3.2.5 Revision and Approval of the Final EMP

After receiving any District recommendations, the facility would have 30 days to resubmit a revised final EMP reflecting the recommended changes or (in the absence of incorporating the recommendations) an EMP accompanied by written reasons explaining why each specific recommendation was not incorporated into the EMP. Within 30 days

of the receipt of the final EMP, the District would review the EMP and determine whether or not it meets the requirements of the Rule. If the District determines that the EMP provides emissions minimization procedures for all affected operations and includes all required elements, the EMP would be approved. If the District determines that not all requirements were met, the District would notify the facility of its decision and the basis. The facility would have 30 days to correct the deficiencies in the EMP and resubmit it for approval. If the District finds that that facility failed to correct the deficiencies, the District would disapprove the EMP.

2.3.2.6 Reporting

Along with the EMP, affected facilities would be required to report to the District any equipment, processes or procedures that would be installed or implemented within the next five years to reduce or prevent fugitive emissions along with a schedule of implementation. This report would be independent of the EMP and considered a forecast of efforts intended by the facility and maybe be subject to change.

2.3.2.7 Exemptions

Metal recycling facilities that would have to comply with the EMP requirements of Rule 12-13: Foundry and Forging Operations would not have to develop a separate EMP for the Metal Recycling and Shredding rule provided the requirements for an EMP under draft Rule 12-13-401 and § 6-4-401 were met.

2.3.2.8 Limited Exemption

Metal recycling facilities with an annual metal throughput of 50,000 tons or less would not be required to develop and implement a District-approved EMP. These facilities however, would be required to maintain records on their metal throughput and provide the basis for the throughput determination.

2.3.3 ELIMINATE THE PERMIT EXEMPTION FOR MOLD MAKING EQUIPMENT

Staff also proposes to eliminate the permit exemption for heated shell core and shell mold manufacturing machines in District Regulation 2, Rule 1: General Requirements (Rule 2-1). Currently, shell core and shell mold manufacturing machines are exempt from permits under § 2-1-122.3. Because these machines are sources of emissions of PM and odorous substances and would be regulated under proposed Rule 12-13, their exemption from permit requirements would be removed. The proposed amendment to Rule 2-1 would read as follows:

- Exemption, Casting, and Molding Equipment: The following equipment is exempt from the requirements of 2-1-301 and 302, provided that the source does not require permitting pursuant to 2-1-319.
    a. Molds used for the casting of metals.

b. Foundry sand mold and core-forming equipment, including shell core and shell-mold manufacturing machines, to which no heat is applied, except processes utilizing organic binder yielding in excess of 0.25 percent free phenol by weight of sand.

c. Equipment used for extrusion, compression molding and injection molding of plastics. The use of mold release products or lubricants is not exempt unless the VOC content of these materials is less than or equal to one percent, by weight, or unless the total facility-wide uncontrolled VOC emissions from the use of these materials are less than 150 pounds per year.

d. Die casting machines.

When a source becomes subject to permit requirements by a change in District rules, the operator of that source has 90 days to submit a permit application. Unlike a new source, an Authority to Construct is not required.

2.4 PROPOSED METHOD OF CONTROL

Both of these proposed rules would rely on the implementation of management procedures through the development of EMPs to minimize emissions. The reliance on the development of an EMP allows each facility to tailor its approach to reducing or minimizing emissions to the unique conditions and configuration of its affected operations.

The methods used to reduce the emission of pollutants from any source or operation fall into three main categories: 1) emissions abatement from point sources, such as an exhaust stack from a furnace or engine, through the use of a control such as carbon adsorption systems or fabric filters; 2) fugitive emission reduction through enhanced capture techniques; and 3) pollution prevention practices that can be used to prevent the emissions of a pollutant, such as reformulations and the reuse or recycling of by-products of production.

2.5 POTENTIAL EMISSION REDUCTIONS

The proposed new rules would address fugitive emissions of PM (which may include toxic metals) and odorous substances. The implementation of various federal, state, and District regulations has addressed emissions of pollutants from most point and some fugitive sources located at metal melting and processing facilities and metal recycling facilities. Point sources include exhaust from furnaces, ovens, shredders, and core and mold making apparatus. However, the degree of control of fugitive sources varies. Because of the controls on point sources, fugitive emissions from the metal melting and processing operations comprise a significant portion of the overall emissions from these facilities. Most fugitive emissions are released at ground level. Modeling indicates that these ground level fugitive emissions may have a disproportionately greater impact on nearby receptors than stack emissions. Therefore, reductions in fugitive ground-level

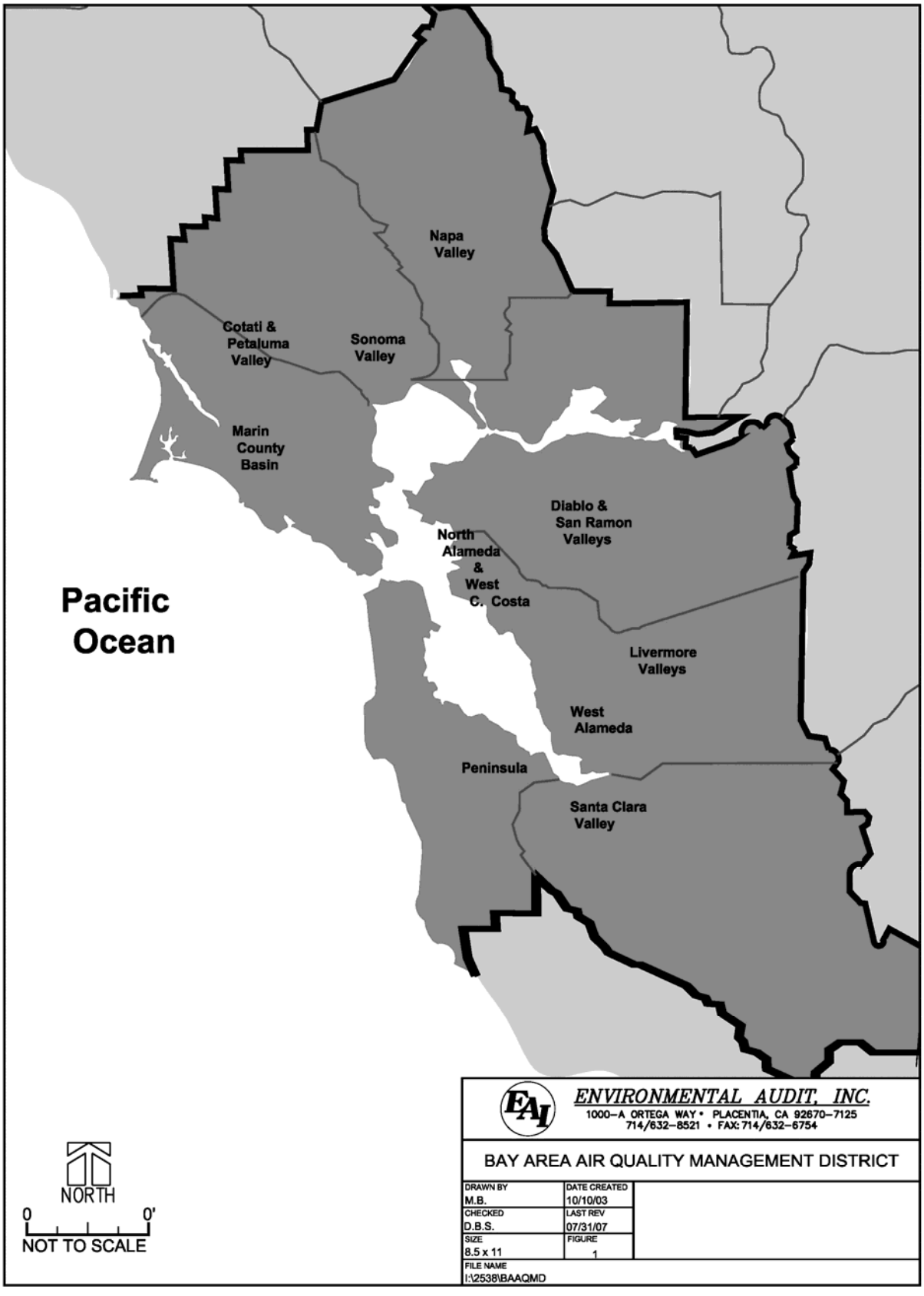
emissions would have a beneficial effect on associated risk relative to an equivalent reduction in stack emissions of the same pollutant. Because stack emissions are currently subject to a high degree of control, these rules are specifically aimed at reducing fugitive emissions that may not be sufficiently addressed.

The proposed new rules address these fugitive emissions through the identification and implementation of site-specific management practices detailed in the EMP developed by each affected facility. Although estimating emissions reductions is difficult, it is estimated that adoption of these rules will reduce PM emissions by 15.8 to 32.2 tons per year.

2.6 AFFECTED AREA

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

BAAQMD proposes to regulate fugitive emissions of PM and odorous substances from foundries and forges and metal recycling and shredding operations. The facilities affected by the proposed rule amendments are located within the jurisdiction of the Bay Area Air Quality Management District (see Figure 1).


Napa Valley
Cotati & Petaluma Valley
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North Alameda & West C. Costa
Pacific Ocean
Livermore Valleys
West Alameda
Peninsula
Santa Clara Valley
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ENVIRONMENTAL AUDIT, INC.
1000-A ORTEGA WAY • PLACENTIA, CA 92670-7125
714/632-8521 • FAX: 714/632-6754
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FIGURE 1
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CHAPTER 3

Environmental Checklist

INTRODUCTION

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

GENERAL INFORMATION

Project Title:	Bay Area Air Quality Management District (BAAQMD) BAAQMD Draft Regulations 12-13 and 6-4.
Lead Agency Name:	Bay Area Air Quality Management District
Lead Agency Address:	939 Ellis Street San Francisco, California 94109
Contact Person:	Victor Douglas
Contact Phone Number:	415-749-4752
Project Location:	These draft rules apply to the area within the jurisdiction of the Bay Area Air Quality Management District, which encompasses all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties.
Project Sponsor's Name:	Bay Area Air Quality Management District
Project Sponsor's Address:	939 Ellis Street San Francisco, California 94109
General Plan Designation:	Rule 12-13 and 6-4 apply to foundry and forging operations and metal recycling and shredding operations located throughout the District, which are primarily located in land use areas designated as industrial.
Zoning:	Rule 12-13 and 6-4 apply to foundry and forging operations and metal recycling and shredding operations throughout the District, which are primarily located in industrially zoned areas.
Description of Project:	See “Background” in Chapter 2.
Surrounding Land Uses and Setting:	See “Affected Area” in Chapter 2.
Other Public Agencies Whose Approval is Required:	None

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

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

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

DETERMINATION

On the basis of this initial evaluation:

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

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

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

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

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

Signature: Date:

Printed Name: Date:

EVALUATION OF ENVIRONMENTAL IMPACTS:

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

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

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

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

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

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

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

   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

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

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

9) The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and

   b) the mitigation measure identified, if any, to reduce the impact to less than significance.

ENVIRONMENTAL CHECKLIST AND DISCUSSION

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

Setting

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

The proposed new rules focus on PM and VOC emissions from metal melting, recycling and shredding operations and associated facilities. New rules for these metal working operations will affect more than 20 facilities currently operating within the Bay Area. Metal melting, recycling, and shredding operations are generally located in heavy industrial areas. Scenic highways or corridors are generally not located in the vicinity of industrial land uses.

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-d. The proposed Draft Regulations 12-13 and 6-4 would further reduce fugitive PM and odorous emissions from metal foundries and forges, as well as metal recycling and shredding operations in the Bay Area. The proposed new rules are not expected to require the construction of any major new structures that would be outside of existing metal melting and processing or metal recycling and shredding operations boundaries, and are not expected to result in any adverse aesthetic impacts. The metal melting, recycling, and shredding facilities affected by the proposed new rules are located within existing industrial facilities within the Bay Area, which are not typically located in areas with scenic vistas.

The metal working facilities may install air pollution control equipment such as carbon adsorption systems, fabric filters, or enhanced capture techniques, or enclosures to minimize air draft, fences, and fugitive dust suppression equipment. While this equipment may be visible from surrounding areas, the locations of the affected facilities are highly industrialized, and the equipment will be of the same size and shape, and operate in the same location as existing equipment. Since any new equipment would be similar in size and location to existing equipment, the proposed Regulations 12-13 and 6-4 are not expected to generate significant aesthetic impacts. Therefore, the installation of control equipment within an industrial area is not expected to generate significant adverse impacts on aesthetics.

Additional lighting for safety and security purposes would not be expected to be required on new equipment. New equipment would be placed within the confines of existing facilities and any new light sources would also be located within the confines of existing industrial facilities. Therefore, the proposed Regulations 12-13 and 6-4 are also not expected to generate any new sources of light or glare.

Based upon these considerations, no significant adverse aesthetic impacts are expected from the adoption of Regulations 12-13 and 6-4.

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

II. AGRICULTURE and FOREST RESOURCES.

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

a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☑
b)	Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?	☐	☐	☐	☑
c)	Conflict with existing zoning for, or cause rezoning of, forest land as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☑
d)	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☑
e)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☑

Setting

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

The proposed new rules will affect metal melting, recycling and shredding operations within the Bay Area. These facilities are primarily located in industrialized areas. Agricultural or forest resources are typically not located within these industrialized areas within the Bay Area.

Regulatory Background

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

Discussion of Impacts

II a-e. The proposed Regulations 12-13 and 6-4 would further reduce fugitive PM and odorous emissions from metal foundries and forges, and from metal recycling and shredding operations. The affected facilities are located in industrial areas where no agricultural or forest resources are located. The metal working facilities operating within the Bay Area may comply with Regulations 12-13 and 6-4 by installing air pollution control equipment and implementing Emission Minimization Plans (EMP). Any facility changes would be made within the confines of the existing industrial facilities. No development outside of existing industrial facilities would be required by the proposed new rules, and no agricultural or forest land resources would be impacted.

Based upon these considerations, no significant adverse impacts to agricultural and forest resources are expected from the adoption of Regulations 12-13 and 6-4.

	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 nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	☑
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☑
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☑

Setting

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), PM_{10}, $PM_{2.5}$, 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 effects on health are summarized in Table 3-1. The BAAQMD monitored levels of various criteria pollutants at 22 monitoring stations in 2011.

The 2011 air quality data from the BAAQMD monitoring stations are presented in Table 3-2. The data indicate that the air quality at all monitoring stations were below the state standard and federal ambient air quality standards for CO, NO_2, and SO_2. The federal 8-hour ozone standard was exceeded on 4 days in the District in 2011, while the state 8-hour standard was exceeded on 10 days. The State 1-hour ozone standard was exceeded on 5 days in 2011 in the District. The ozone standards are most frequently exceeded in the Eastern District (Bethel Island (4 days in excess of the State 1-hour ozone standard), Concord (5 days), Fairfield (3 days) and Livermore (9 days)), and the Santa Clara Valley (San Martin (2 days), Los Gatos (1 day) and Gilroy (1 day)) (see Table 3-2).

Air quality conditions in the San Francisco Bay Area have improved since the 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 District is in attainment of the State and federal ambient air quality standards for CO, NO_2, and SO_2. The District is not considered to be in attainment with the ozone standards and State PM_{10} and $PM_{2.5}$ standards.

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	0.03 ppm, annual avg.> 0.18 ppm, 1-hr avg. >	0.053 ppm, ann. avg.> 0.10 ppm, 1-hr 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. >	0.5 ppm, 3-hr. avg.> 0.075 ppm, 1-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 (PM_{10})	20 µg/m3, annual arithmetic mean > 50 µg/m3, 24-hr average>	150 µg/m3, 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 ($PM_{2.5}$)	12 µg/m3, annual arithmetic mean>	15 µg/m3, annual arithmetic mean> 35 µg/m3, 24-hour average>	Decreased lung function from exposures and exacerbation of symptoms in sensitive patients with respiratory disease; elderly; children.
Sulfates	25 µg/m3, 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 µg/m3, 30-day avg. >=	1.5 µg/m3, calendar quarter> 0.15 µg/m3, 3-mo. avg. >	(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 – 2011

MONITORING STATIONS	OZONE						CARBON MONOXIDE			NITROGEN DIOXIDE			SULFUR DIOXIDE			PM_{10}				$PM_{2.5}$				
	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 1-hr	Max 24-hr	Nat/ Cal Days	Ann Avg	Max 24-hr	Nat Days	Cal Days	Max 24-hr	Nat Days	3-Yr Avg	Ann Avg	3-Yr Avg
North Counties	(ppb)						(ppm)			(ppb)			(ppb)			(μm^3)				(μm^3)				
Napa	83	0	69	0	0	65	2.4	1.8	0	45	8	0	--	--	--	20.2	55	0	1	--	--	--	--	--
San Rafael*	92	0	70	0	0	53	1.9	1.0	0	53	12	0	--	--	--	16.5	54	0	1	42.2	1	*	9.9	*
Santa Rosa	73	0	53	0	0	50	1.8	1.2	0	41	9	0	--	--	--	--	--	--	--	33.2	0	24	8.6	8.0
Vallejo	90	0	69	0	0	61	3.0	2.4	0	47	10	0	7.4	2.6	0	--	--	--	--	54.2	6	29	9.8	9.1
Coast/Central Bay																								
Oakland	91	0	51	0	0	49	4.1	1.5	0	56	13	0	--	--	--	--	--	--	--	49.3	3	25	10.1	9.0
Oakland West*	57	0	48	0	0	*	3.5	2.7	0	62	16	0	19.3	3.8	0	--	--	--	--	--	--	--	--	--
Richmond	--	--	--	--	--	--	--	--	--	--	--	--	20.7	3.2	0	--	--	--	--	--	--	--	--	--
San Francisco	70	0	54	0	0	47	1.8	1.2	0	93	14	0	--	--	--	19.5	46	0	0	47.5	2	27	9.5	9.9
San Pablo*	78	0	58	0	1	*	1.9	1.0	0	51	10	0	14.4	6.0	0	19.7	73	0	1	--	--	--	--	--
Eastern District																								
Bethel Island	91	0	78	2	4	74	1.4	0.9	0	36	7	0	8.0	2.7	0	18.8	72	0	1	--	--	--	--	--
Concord	57	2	78	2	5	73	1.6	1.2	0	42	9	0	9.3	2.6	0	15.7	59	0	1	47.5	2	27	7.8	7.8
Crockett	--	--	--	--	--	--	--	--	--	--	--	--	53.5	5.9	0	--	--	--	--	--	--	--	--	--
Fairfield	94	0	76	1	3	69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Livermore	115	3	84	2	9	76	--	--	--	57	11	0	--	--	--	--	--	--	--	45.4	2	28	7.8	8.2
Martinez	--	--	--	--	--	--	--	--	--	--	--	--	28.9	4.7	0	--	--	--	--	--	--	--	--	--
South Central Bay																								
Hayward*	88	0	70	0	0	*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Redwood City	76	0	61	0	0	56	3.8	1.7	0	56	12	0	--	--	--	--	--	--	--	39.7	1	25	8.7	8.6
Santa Clara Valley																								
Cupertino*	86	0	67	0	0	*	1.2	1.0	0	42	9	0	35.1	6.6	0	14.2	29	0	0	--	--	--	--	--
Gilroy	81	0	73	0	1	71	--	--	--	--	--	--	--	--	--	--	--	--	--	35.5	1	22	8.1	8.4
Los Gatos	91	0	75	0	1	70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Jose Central	98	1	67	0	0	63	2.5	2.3	0	61	15	0	7.2	2.4	0	19.2	44	0	0	50.5	3	30	9.9	9.6
San Martin	91	0	72	0	2	70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Days over Standard		**5**		**4**	**10**				**0**			**0**			**0**			**0**	**4**		**8**			

* $PM_{2.5}$ monitoring began at San Rafael in October, 2009. 3-year average ozone statistics are not available. Ozone monitoring at Oakland-West began in December, 2010. 3-year average ozone statistics are not available. The San Pablo site was temporarily closed from March 2009 to May 2010 due to damage from a building fire. 3-year ozone statistics are not available. The Hayward site was temporarily closed in 2010 due to a major construction project adjacent to the site. 3-year average ozone statistics are not available. A new site was opened in Cupertino on September 1, 2010 for an air monitoring study. 3-year average ozone statistics are not available.

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

TABLE 3-3

Bay Area Air Quality Summary
Days over Standards

YEAR	OZONE			CARBON MONOXIDE				NO_2	SULFUR DIOXIDE		PM_{10}		$PM_{2.5}$
	1-Hr	8-Hr	8-Hr*	1-Hr		8-Hr		1-Hr	24-Hr		24-Hr*		24-Hr**
	Cal	Cal	Nat	Nat	Cal	Nat	Cal	Cal	Nat	Cal	Nat	Cal	Nat
2001	15	--	7	0	0	0	0	0	0	0	0	10	5
2002	16	--	7	0	0	0	0	0	0	0	0	6	7
2003	19	--	7	0	0	0	0	0	0	0	0	6	0
2004	7	--	0	0	0	0	0	0	0	0	0	7	1
2005	9	9	1	0	0	0	0	0	0	0	0	6	0
2006	18	22	12	0	0	0	0	0	0	0	0	15	10
2007	4	9	1	0	0	0	0	0	0	0	0	4	14
2008	9	20	12	0	0	0	0	0	0	0	0	5	12
2009	11	13	8	0	0	0	0	0	0	0	0	1	11
2010	8	11	9	0	0	0	0	0	0	0	0	2	6
2011	5	10	4	0	0	0	0	0	0	0	0	4	8

* Ozone exceedance days beginning in 2008 reflect new U.S.EPA standard of 0.075 ppm.
** $PM_{2.5}$ exceedance days beginning in 2006 reflect new U.S.EPA standard of 35 $\mu g/m^3$.

Toxic Air Pollutants

The BAAQMD maintains a database that contains information concerning emissions of TACs from permitted stationary sources in the Bay Area. This inventory, and a similar inventory for mobile and area sources compiled by CARB, is used to plan strategies to reduce public exposure to TACs. The detailed concentrations of various TACs are reported in the BAAQMD, Toxic Air Contaminant Control Program, 2003 Annual Report (BAAQMD, 2007) and summarized in Table 3-4. The 2003 TAC data show decreasing concentrations of many TACs in the Bay Area. The most dramatic emission reductions in recent years have been for certain chlorinated compounds that are used as solvents including 1,1,1-trichloroethane, methylene chloride, and perchloroethylene. Table 3-4 contains a summary of ambient air toxics listed by compound.

TABLE 3-4

Summary of BAAQMD Ambient Air Toxics Monitoring Data[1]

Pollutant	Units	Average MDL [1]	% less than MDL	Max Sample Value	Min Sample Value	Average Sample Value [2] [3]
1,3-Butadiene	ppb	5.00E-02	87%	2.60E-01	0.00E+00	3.51E-02
Acetaldehyde	ppb	1.00E-01	1%	2.66E+00	1.00E-01	6.47E-01
Acetone	ppb	3.00E-01	0%	4.30E+01	4.00E-01	2.53E+00
Acetonitrile	ppb	3.00E-01	29%	1.25E+00	0.00E+00	3.88E-01
Antimony	ng/m^3	3.00E+00	98%	3.10E+00	1.50E+00	1.53E+00
Arsenic	ng/m^3	1.50E+00	98%	9.30E+00	7.50E-01	8.70E-01
Benzene	ppb	5.00E-02	1%	1.11E+00	0.00E+00	2.04E-01
Bromomethane	ppb	3.00E-02	92%	7.00E-02	1.50E-02	1.79E-02
Cadmium	ng/m^3	1.50E+00	96%	2.80E+00	7.50E-01	8.14E-01
Carbon Tetrachloride	ppb	1.00E-02	0%	1.50E-01	1.00E-02	9.81E-02
Chlorine	$\mu g/m^3$	7.18E-03	12%	1.87E+00	0.00E+00	2.54E-01
Chloroform	ppb	2.00E-02	66%	5.90E-01	0.00E+00	1.71E-02
Chromium	ng/m^3	3.00E+00	54%	8.50E+01	1.50E+00	4.76E+00
Cis-1,3-Dichloropropylene	ppb	1.00E-01	100%	5.00E-02	5.00E-02	5.00E-02
Cobalt	ng/m^3	1.50E+00	98%	4.10E+00	7.50E-01	7.90E-01
Copper	ng/m^3	1.50E+00	0%	4.00E+01	3.00E+00	1.38E+01
Dichloromethane	ppb	1.00E-01	48%	8.67E+00	0.00E+00	1.65E-01
Ethyl Alcohol	ppb	6.60E-01	4%	9.00E+01	0.00E+00	2.48E+01
Ethylbenzene	ppb	2.00E-01	48%	1.01E+00	0.00E+00	9.66E-02
Ethylene Dibromide	ppb	1.00E-02	100%	0.00E+00	0.00E+00	5.00E-03
Ethylene Dichloride	ppb	1.00E-01	100%	0.00E+00	0.00E+00	5.00E-02
Formaldehyde	ppb	1.00E-01	0%	4.60E+00	2.72E-01	1.07E+00
Lead	ng/m^3	1.50E+00	4%	2.50E+01	7.50E-01	5.94E+00
M/P Xylene	ppb	2.00E-01	11%	3.31E+00	0.00E+00	3.55E-01
Magnesium	$\mu g/m^3$	1.33E-02	47%	2.02E-01	0.00E+00	3.30E-02
Manganese	ng/m^3	1.50E+00	8%	1.70E+02	7.50E-01	1.71E+01
Mercury	$\mu g/m^3$	6.08E-03	98%	1.04E-02	0.00E+00	3.12E-03
Methyl Chloroform	ppb	2.00E-02	89%	1.16E+00	0.00E+00	2.60E-02
Methyl Ethyl Ketone	ppb	1.00E-01	31%	1.71E+00	0.00E+00	1.81E-01
Naphthalene	ng/m^3	6.35E-01	0%	2.09E+02	1.74E+01	6.97E+01
Nickel	ng/m^3	9.00E+00	67%	1.00E+02	4.50E+00	1.05E+01
O-Xylene	ppb	1.00E-01	29%	1.14E+00	0.00E+00	1.27E-01

TABLE 3-4 (Concluded)

Pollutant	Units	Average MDL [1]	% less than MDL	Max Sample Value	Min Sample Value	Average Sample Value [2] [3]
PAHs[4]	ng/m^3					1.79E-01
Selenium	ng/m^3	1.50E+00	84%	5.40E+01	7.50E-01	1.74E+00
Styrene	ppb	1.00E-01	98%	8.40E-01	5.00E-02	6.01E-02
Tetrachloroethylene	ppb	1.00E-02	29%	2.00E+00	0.00E+00	2.26E-02
Toluene	ppb	2.00E-01	2%	3.38E+00	4.00E-02	6.54E-01
Trans-1,3-Dichloropropylene	ppb	1.00E-01	100%	5.00E-02	5.00E-02	5.00E-02
Trichloroethylene	ppb	2.00E-02	87%	7.70E-01	0.00E+00	1.40E-02
Trichlorofluoromethane	ppb	1.00E-02	0%	7.40E-01	1.60E-01	2.58E-01
Vanadium	ng/m^3	1.50E+00	34%	6.10E+01	7.50E-01	3.79E+00
Vinyl Chloride	ppb	1.00E-01	100%	0.00E+00	0.00E+00	5.00E-02
Zinc	ng/m^3	3.00E+00	0%	5.90E+01	8.00E+00	2.45E+01

(1) Source: BAAQMD 2008 Toxic Air Contaminant Monitoring Data. Data are a summary of data from all monitoring stations within the District.
(2) Some samples (especially metals) have individual MDLs for each sample. An average of these MDLs was used to determine 1/2 MDL for the Average Sample Value.
(3) If an individual sample value was less than the MDL (Method Detection Limit), then 1/2 MDL was used to determine the Average Sample Value.
(4) These substances are PAH-derivatives that have OEHHA-developed Potency Equivalency Factors (PEFs). PAHs should be evaluated as benzo(a)pyrene equivalents. This evaluation process consists of multiplying individual PAH-specific emission levels with their corresponding PEFs listed below. The sum of these products is the benzo(a)pyrene-equivalent level.

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 NESHAPs were promulgated under Section 112 of the CAA for certain sources of radionuclides and Hazardous Air Pollutants (HAPs).

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

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

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

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

Senate Bill (SB) 1731, enacted in 1992 (California Health and Safety Code §44390 et seq.), amended AB 2588 to include a requirement for facilities with significant risks to prepare and implement a risk reduction plan which will reduce the risk below a defined significant risk level within specified time limits. At a minimum, such facilities must, as quickly as

feasible, reduce cancer risk levels that exceed 100 per one million. The BAAQMD adopted risk reduction requirements for perchloroethylene dry cleaners to fulfill the requirements of SB 1731.

Targeted Control of TACs Under the Community Air Risk Evaluation Program: In 2004, BAAQMD established the Community Air Risk Evaluation (CARE) program to identify locations with high emissions of toxic air contaminants (TAC) and high exposures of sensitive populations to TAC and to use this information to help establish policies to guide mitigation strategies that obtain the greatest health benefit from TAC emission reductions. For example, BAAQMD uses information derived from the CARE program to develop and implement targeted risk reduction programs, including grant and incentive programs, community outreach efforts, collaboration with other governmental agencies, model ordinances, new regulations for stationary sources and indirect sources, and advocacy for additional legislation.

Discussion of Impacts

III a. The 2010 Clean Air Plan is the most recently adopted air quality plan for the Bay Area. SSM-1 in the Bay Area 2010 Clean Air Plan committed the BAAQMD investigate the potential rule to reduce organic compounds, fine particulates, toxic compounds and odor emissions from metal melting, recycling, and shredding operations. Regulation 12-13 and 6-4 are being proposed with the objective of implementing SSM 1 from the Bay Area 2010 Clean Air Plan. Because the proposed new rules would directly implement a stationary source measure in the 2010 Clean Air Plan, the proposed amendments are in compliance with the local air quality plan and are expected to provide beneficial impacts associated with reduced PM concentrations in the Bay Area.

III b. BAAQMD is currently proposing Draft Regulation 12, Rule 13: Foundry and Forging Operations, and Regulation 6, Rule 4: Metal Recycling and Shredding Operations. Both of these draft rules are expected to result in emission reductions through the development and implementation of Emissions Minimization Plans to minimize fugitive emissions. The reliance on the development of an EMP allows each facility to tailor its approach to reducing or minimizing fugitive emissions to the unique conditions and configuration of its affected operations.

The seven largest potentially affected facilities (foundries, forges, and recyclers) emit, collectively, about 1348 pounds of particulate matter per day or 246 tons/year. Point source emissions of PM at various metal melting and processing facilities are subject to stringent controls. Source test results show that PM control levels range from 0.0005 to 0.078 grains per dry standard cubic feet. This level of control of point sources is due to permit conditions based on current District, State, and federal regulations. However, fugitive emissions of PM and odorous substances are not always adequately addressed and there are additional opportunities to further reduce fugitive emissions from these industrial sectors. Additionally, PM emissions from foundries, forges, and metal recycling operations may contain toxic metals, which would also be reduced by targeting these emissions.

The requirements of the EMP are aimed at minimizing PM and odorous emissions. The proposed rules would allow each facility to identify practices for reducing fugitive emissions according to the needs and capabilities of their operations. Accordingly, an estimation of emission reductions due to the adoption of the proposed rules is difficult to estimate at this time. Nonetheless, additional control of fugitive emissions is expected to result in an overall reduction in PM emissions.

PM is a mixture of suspended particles and liquid droplets and includes elements such as carbon and metals, compounds such as nitrates, organics and sulfates and complex mixtures such as diesel exhaust and wood smoke. PM is a leading health concern. A large body of evidence suggests that exposure to PM, particularly fine PM, can cause a wide range of health effects, including aggravation of asthma and bronchitis, an increase in visits to the hospital with respiratory and cardio-vascular symptoms, and a contribution to heart attacks and deaths. The Bay Area is not in attainment of the California standards for either PM of 10 microns or less aerodynamic diameter (PM10) or PM of 2.5 microns or less aerodynamic diameter (PM2.5). In addition, most of the facilities proposed to be regulated are located in or near BAAQMD Community Air Risk Evaluation (CARE) communities. Reducing PM2.5 emissions, which also contains toxic metals, in these communities will help improved health and air quality in these communities.

III c. CEQA Guidelines indicate that cumulative impacts of a project shall be discussed when the project's incremental effect is cumulatively considerable, as defined in CEQA Guidelines §15065(c). The overall impact of the proposed Regulations 12-13 and 6-4 is a decrease in fugitive PM and odorous emissions. Therefore, the cumulative air quality impacts of the proposed new rules are expected to be beneficial, resulting in a decrease in PM and odorous emissions.

III d. Metal working facilities are expected to comply with the proposed Regulations 12-13 and 6-4 with minor facility upgrades, modifications, as well as, practices and procedures designed to minimize fugitive emissions of PM and odorous substances. Fugitive PM from metal working facilities are often sources of TACs. The expected modifications, upgrades and procedural changes from affected facilities are expected to decrease PM emissions, which would include reduction in TAC emissions. Therefore, the proposed new rules are expected to result in a decrease in TAC emissions to sensitive receptors. Therefore, no significant TAC impacts are expected as a result of Regulations 12-13 and 6-4.

III e. The proposed new rules are being developed to minimize PM and odorous substance emissions from foundry and forging and metal recycling and shredding operations. Odors associated with foundries are key components of the proposed new Regulations 12-13. Affected facilities that use mold and core binders made with odorous substances, such as phenol, would be required to investigate the availability and efficacy of alternative binders that produce fewer emissions of odorous substances. The facility would have to complete and report the results of this investigation to the District no later than two years after the adoption of the rule and again at two year anniversary of the receipt of the initial report. The facilities are tasked to periodically research alternatives to binders formulated with phenols or other odorous substances. Although, currently, not all casting jobs can be performed using low phenolic binder, manufacturers are constantly developing and testing new

formulations that may allow foundries to replace binders formulated with phenol. Such replacements could greatly reduce, if not eliminate, the emissions of phenolic compounds which contribute to odorous emissions. Therefore, implementation of the proposed rules is expected to result in beneficial impacts on odors.

Based upon these considerations, no significant adverse air quality impacts are expected from the implementation of the proposed new rules. In fact, the proposed new rules are expected to provide beneficial air quality impacts by reducing PM and odorous emissions and improve health benefits associated with reduce exposure to these compounds.

		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 areas affected by the proposed new rules are located in the Bay Area-Delta Bioregion (as defined by the State's Natural Communities Conservation Program). This Bioregion is comprised of a variety of natural communities, which range from salt marshes to chaparral to oak woodland. The areas affected by the proposed new rules are located within the boundaries of existing metal melting, recycling and shredding facilities within the Bay Area. The affected areas have been graded to develop various industrial operations. Native vegetation, other than landscape vegetation, has generally been removed from industrial areas to minimize safety and fire hazards. Any new development would fall under compliance with 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 – f. No impacts on biological resources are anticipated from the proposed new rules which would apply to existing metal working facilities. Existing foundries and forges and recycling and shredding facilities affected by the proposed Regulations 12-13 and 6-4 are located within existing industrial areas, which do not typically include sensitive biological species. These industrial areas have been graded and developed, and biological resources, with the exception of landscape species, have been removed. Any construction activities associated with the proposed Regulations 12-13 and 6-4 are expected to be limited to within the boundaries of existing metal working facilities and no development outside of existing facilities is expected.

Based upon these considerations, no significant adverse impacts to biological resources are expected from the adoption of Regulations 12-13 and 6-4.

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

Setting

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

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

The metal melting and processing and metal recycling and shredding facilities affected by the proposed new rules are primarily located within industrialized areas in the Bay Area. These facilities have already been graded to develop metal melting and processing, as well as, metal recycling and shredding facilities and are typically surrounded by other industrial uses. Cultural resources are generally not located within these areas.

Regulatory Background

The State CEQA Guidelines define a significant cultural resource as a "resource listed or eligible for listing on the California Register of Historical Resources" (Public Resources Code 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. No impacts on cultural resources are anticipated from the proposed new rules that would apply to foundries and forges and metal recycling and shredding facilities. The facilities affected by the proposed new rules already exist and are located within the confines of existing developed, industrial facilities. Any modifications to existing equipment and any new equipment is expected to be installed or modified within the boundaries of existing facilities. The existing areas have been graded and developed. No new construction would be required outside of the existing facility boundaries due to the adoption of the new rules. Therefore, no significant adverse impacts to cultural resources are expected due to Regulations 12-13 and 6-4.

Based upon these considerations, no significant adverse impacts to cultural resources are expected from the implementation of the proposed Regulations 12-13 and 6-4.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VI.	**GEOLOGY AND SOILS.**				
	Would the project:				
a)	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i)	Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a know fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☑
ii)	Strong seismic ground shaking?	☐	☐	☑	☐
iii)	Seismic-related ground failure, including liquefaction?	☐	☐	☑	☐
iv)	Landslides?	☐	☐	☐	☑
b)	Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☑
c)	Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☑
d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☑
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?	☐	☐	☐	☑

Setting

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

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

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

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

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

Regulatory Background

Construction is regulated by the local City or County building codes that provide requirements for construction, grading, excavations, use of fill, and foundation work including type of materials, design, procedures, etc. which are intended to limit the

probability of occurrence and the severity of consequences from geological hazards. Necessary permits, plan checks, and inspections are generally required.

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

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

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

Discussion of Impacts

VI a. The metal working facilities affected by the proposed new rules already exist and are located within the confines of existing industrial areas in the Bay Area. Any new construction activities associated with the implementation of Regulations 12-13 and 6-4 are expected to be minor modifications to existing structures, occur completely within the confines of the existing industrial facilities, and would consist more of modifications and upgrades to existing equipment than new construction. Any new structural construction must be designed to comply with the California Building Code requirements. The local cities and counties are responsible for assuring that new construction complies with the California Building Code as part of the issuance of the building permits and can conduct inspections to ensure compliance. The California Building Code is considered to be a standard safeguard against major structural failures and loss of life. The goal of the code is to provide structures that will: (1) resist minor earthquakes without damage; (2) resist moderate earthquakes without structural damage, but with some non-structural damage; and (3) resist major earthquakes without collapse, but with some structural and non-structural damage. The California Building Code bases seismic design on minimum lateral seismic forces ("ground shaking"). The California Building Code requirements operate on the principle that providing appropriate foundations, among other aspects, helps to protect buildings from failure during earthquakes. The basic formulas used for the California Building Code seismic design require determination of the seismic zone and site coefficient, which represent the foundation conditions at the site.

Any new development within the confines of existing industrial facilities would be required to obtain building permits, as applicable, for new structures at any site. The issuance of building permits from the local agency will assure compliance with the California Building Code requirements which include requirements for building within seismic hazard zones. No significant impacts from seismic hazards are expected since any new development would be required to comply with building codes.

VII b. No new significant construction activities would be required due to the adoption of Regulations 12-13 and 6-4. Metal working facilities and the associated equipment affected by the proposed new rules already exist and are located within the confines of existing industrial facilities. Any new equipment, or any upgrades to existing equipment, would be installed within the confines of the existing boundaries in similar locations. Therefore, the proposed amendments are not expected to require substantial grading or construction that would result in substantial soil erosion or the loss of topsoil.

VII c – e. The metal working facilities affected by the proposed new rules already exist and are located within the confines of existing industrial facilities and no major construction activities are expected. New structures are expected to be limited to new control equipment, enclosures, improved roadways, or fencing. Since the metal working facilities already exist, no major construction activities are expected to occur on a geologic unit or soil that is unstable or that would become unstable, or potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse. Likewise, no structure would be constructed on expansive soil, as defined in Table 18-1-B of the California Building Code (1994), creating substantial risks to life or property. Compliance with the California Building Code would minimize the impacts associated with existing geological hazards. Construction would not affect 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, as the proposed new rules have no impact on wastewater treatment/disposal systems. Therefore, no adverse significant impacts to geology and soils are expected due to the proposed Regulations 12-13 and 6-4.

Based upon these considerations, no significant geology and soils impacts are expected from the implementation of the proposed new rules.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GREENHOUSE GAS EMISSIONS.					
Would the project:					
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☑	☐
b)	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☑

Setting

Global climate change refers to changes in average climatic conditions on the earth as a whole, including temperature, wind patterns, precipitation and storms. Global warming, a related concept, is the observed increase in the average temperature of the earth's surface and atmosphere. One identified cause of global warming is an increase of greenhouse gases (GHGs) in the atmosphere. The six major GHGs identified by the Kyoto Protocol are (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), haloalkanes (HFCs), and perfluorocarbons (PFCs). The GHGs absorb longwave radiant energy reflected by the earth, which warms the atmosphere. GHGs also radiate longwave radiation both upward to space and back down toward the surface of the earth. The downward part of this longwave radiation absorbed by the atmosphere is known as the "greenhouse effect." Some studies indicate that the potential effects of global climate change may include rising surface temperatures, loss in snow pack, sea level rise, more extreme heat days per year, and more drought years.

Events and activities, such as the industrial revolution and the increased combustion of fossil fuels (e.g., gasoline, diesel, coal, etc.), have heavily contributed to the increase in atmospheric levels of GHGs. Approximately 80 percent of GHG emissions in California are from fossil fuel combustion and over 70 percent of GHG emissions are carbon dioxide emissions (CARB, 2007 and CARB, 2009). The emission inventory in Table 3-5 focuses on GHG emissions due to human activities only, and compiles estimated emissions from industrial, commercial, transportation, domestic, forestry, and agriculture activities in the San Francisco Bay Area region of California. The GHG emission inventory in Table 3-5 reports direct emissions generated from sources within the Bay Area and estimates future GHG emissions.

TABLE 3-5

Bay Area Greenhouse Gas Emission Inventory Projections

(million metric tons CO_2-Equivalent)

SOURCE CATEGORY	Year	2005	2009	2012	2015	2020
INDUSTRIAL/COMMERCIAL						
Oil Refineries						
Refining Processes		3.4	3.5	3.6	3.7	3.9
Refinery Make Gas Combustion		4.7	4.9	5.0	5.2	5.4
Natural Gas and Other Gases Combustion		4.8	5.0	5.1	5.3	5.5
Liquid Fuel Combustion		0.1	0.1	0.1	0.1	0.1
Solid Fuel Combustion		1.0	1.0	1.1	1.1	1.1
Waste Management						
Landfill Combustion Sources		0.0	0.0	0.0	0.0	0.0
Landfill Fugitive Sources		1.2	1.2	1.2	1.2	1.2
Composting/POTWs		0.4	0.4	0.4	0.4	0.4
Other Industrial/ Commercial						
Cement Plants		0.9	0.9	0.9	0.9	1.0
Commercial Cooking		0.1	0.1	0.1	0.1	0.2
ODS Substitutes/Nat. Gas Distrib./Other		3.6	5.2	6.3	7.5	9.4
Reciprocating Engines		0.6	0.6	0.6	0.7	0.7
Turbines		0.4	0.4	0.4	0.4	0.4
Natural Gas- Major Combustion Sources		1.6	2.5	2.6	2.7	2.8
Natural Gas- Minor Combustion Sources		8.8	9.2	9.5	9.9	10.4
Coke Coal		1.0	1.0	1.1	1.1	1.2
Other Fuels Combustion		0.3	0.4	0.4	0.4	0.4
Subtotal		32.8	36.3	38.4	40.6	44.2
RESIDENTIAL FUEL USAGE						
Natural Gas		6.4	6.6	6.8	6.9	7.2
LPgas/Liquid Fuel		0.2	0.2	0.2	0.2	0.2
Solid Fuel		0.1	0.2	0.2	0.2	0.2
Subtotal		6.7	6.9	7.1	7.2	7.5
ELECTRICITY/ CO-GENERATION						
Co-Generation		5.5	5.5	5.7	6.0	6.4
Electricity Generation		2.8	3.1	3.2	3.3	3.5
Electricity Imports		6.8	7.3	7.6	7.9	8.3
Subtotal		15.1	15.8	16.5	17.2	18.3
OFF-ROAD EQUIPMENT						
Lawn and Garden Equipment		0.1	0.1	0.1	0.1	0.1
Construction Equipment		1.7	1.9	1.9	2.0	2.2
Industrial Equipment		0.7	0.8	0.8	0.9	1.0
Light Commercial Equipment		0.2	0.2	0.3	0.3	0.3
Subtotal		2.8	3.0	3.2	3.3	3.6
TRANSPORTATION						
Off-Road						
Locomotives		0.1	0.1	0.1	0.1	0.1
Ships		0.7	0.8	0.8	0.9	1.0
Boats		0.6	0.6	0.5	0.5	0.6

TABLE 3-5 (concluded)

SOURCE CATEGORY Year	2005	2009	2012	2015	2020
Commercial Aircraft	1.8	2.0	2.1	2.3	2.6
General Aviation	0.2	0.2	0.2	0.3	0.3
Military Aircraft	0.5	0.5	0.5	0.5	0.5
On-Road					
Passenger Cars/Trucks up to 10,000 lbs	26.6	27.1	27.9	29.0	30.9
Medium/Heavy Duty Trucks > 10,000 lbs	3.3	3.3	3.4	3.5	3.7
Urban, School and Other Buses	0.8	0.8	0.8	0.8	0.9
Motor-Homes and Motorcycles	0.2	0.2	0.2	0.2	0.2
Subtotal	34.8	35.6	36.7	38.1	40.7
AGRICULTURE/FARMING					
Agricultural Equipment	0.2	0.2	0.2	0.2	0.2
Animal Waste	0.6	0.6	0.6	0.6	0.6
Soil Management	0.3	0.3	0.3	0.3	0.3
Biomass Burning	0.0	0.0	0.0	0.0	0.0
Subtotal	1.1	1.1	1.1	1.1	1.1
GRAND TOTAL EMISSIONS	**93.4**	**98.7**	**103.0**	**107.5**	**115.4**

Source: BAAQMD, 2009

Regulatory Background

In response to growing scientific and political concern regarding global climate change, California has recently adopted a series of laws over the last decade to reduce both the level of GHGs in the atmosphere and to reduce emissions of GHGs from commercial and private activities within the state.

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-effect reductions of GHGs by January 1, 2011

In October 2011, CARB approved the cap-and-trade regulation, marking a significant milestone toward reducing California's greenhouse gas emissions under its AB 32 law. The regulation sets a statewide limit on the emissions from sources responsible for 80 percent of

California's greenhouse gas emissions. The regulation will cover 360 businesses representing 600 facilities and is divided into two broad phases: an initial phase beginning in 2012 that will include all major industrial sources along with utilities; and, a second phase that starts in 2015 and brings in distributors of transportation fuels, natural gas and other fuels.

Companies are not given a specific limit on their greenhouse gas emissions but must supply a sufficient number of allowances (each covering the equivalent of one ton of carbon dioxide) to cover their annual emissions. Each year, the total number of allowances issued in the state drops, requiring companies to find the most cost-effective and efficient approaches to reducing their emissions. By the end of the program in 2020 there will be a 15 percent reduction in greenhouse gas emissions compared to today, reaching the same level of emissions as the state experienced in 1990, as required under AB 32.

There has also been activity at the federal level on the regulation of GHGs. On October 30, 2009, the U.S. EPA issued the Final Mandatory Report of Greenhouse Gases Rule. The rule requires reporting of GHG emissions from large sources and suppliers (facilities that emit 25,000 metric tons of GHGs per year or more) in the United States, and is intended to collect accurate and timely emissions data to inform policy decision.

Discussion of Impacts

VII a and b. Combustion of conventional hydrocarbon fuel results in the release of energy as bonds between carbon and hydrogen are broken and reformed with oxygen to create water vapor and CO_2. CO_2 is not a pollutant that occurs in relatively low concentrations as a by-product of the combustion process; CO_2 is a necessary combustion product of any fuel containing carbon. Therefore, attempts to reduce emissions of greenhouse gases from combustion focus on increasing energy efficiency – consuming less fuel to provide the same useful energy output.

The analysis of GHG emissions is a different analysis than for criteria pollutants for the following reasons. For criteria pollutant, significance thresholds are based on daily emissions because attainment or non-attainment is typically based on daily exceedances of applicable ambient air quality standards. Further, several ambient air quality standards are based on relatively short-term exposure effects to human health, e.g., one-hour and eight-hour. Using the half-life of carbon dioxide (CO_2), 100 years, for example, the effects of GHGs are longer-term, affecting the global climate over a relatively long time frame. GHGs do not have human health effects like criteria pollutants. Rather, it is the increased accumulation of GHGs in the atmosphere that may result in global climate change. Due to the complexity of conditions and interactions affecting global climate change, it is not possible to predict the specific impact, if any, attributable to GHG emissions associated with a single project. Furthermore, the GHG emissions associated with the proposed rules would be small relative to total global or even state-wide GHG emissions. Thus, the significance of potential impacts from GHG emissions related to the proposed rules has been analyzed for long-term operations on a cumulative basis, as discussed below.

Cumulative GHG impacts in the Bay Area are generally evaluated in terms of the air quality management plan that controls overall air emissions within the District. Therefore, the cumulative GHG impacts include the proposed Rules 12-13 and 6-4 along with implementing the control measures in the 2010 Clean Air Plan, the most recent air quality plan approved in the District.

The proposed rules could result in additional air pollution control equipment. These devices may have some minor energy penalty associated with their operation, such as back-pressure on the production process on which a baghouse is installed, but this would be relatively minor compared to the scope of the underlying production process. Most of the facilities that would be regulated by Rules 12-13 and 6-4 already have existing air pollution control equipment. Measures to control fugitive emissions usually do not require additional control equipment but would include measures such as water mists and enclosures to minimize fugitive dust. Therefore, the proposed rules are not expected to result in a substantial increase in electricity or generate substantial GHG emissions. The potential increase in electricity could result in an increase in GHG emissions, which must be evaluated with other cumulative GHG emissions associated with the 2010 CAP. In addition, construction activities could require construction equipment which could also generate GHG emissions.

The proposed rules are not expected to result in a significant increase in GHG emissions, although there could be minor increases associated with additional electricity as discussed above. However, the proposed amendments, along with the 2010 CAP as a whole, are expected to promote a net decrease in GHG emissions. The 2010 CAP control measure strategy promotes fuel efficiency and pollution prevention, which also reduces greenhouse gas emissions. Measures that reduce fuel use and/or increase use of alternative fuels will also be beneficial. In general, strategies that conserve energy and promote clean technologies usually also reduce greenhouse gas emissions. As shown in Table 3-5, the fuel combustion and the generation of electricity are responsible for a large portion of greenhouse gases produced in California.

Based on the above discussion, implementation of the proposed new rules is not expected to result in a significant increase in GHG emissions. Based on the above, no significant adverse GHG impacts are expected due to implementation Regulations 12-13 and 6-4.

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

Setting

The affected foundries and forges and recycling and shredding facilities can handle hazardous materials. Accidents involving these substances can result in worker or public exposure to fire, heat, blast from an explosion, or airborne exposure to hazardous substances.

The potential hazards associated with handling such materials are a function of the materials being processed, processing systems, and procedures used to operate and maintain the facilities where they exist. The hazards that are likely to exist are identified by the physical and chemical properties of the materials being handled and their process conditions, including the following events.

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

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

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

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

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

Regulatory Background

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

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

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

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

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

California Assembly Bill 2185 requires local agencies to regulate the storage and handling of hazardous materials and requires development of a business plan to mitigate the release of hazardous materials. Businesses that handle any of the specified hazardous materials must submit to government agencies (i.e., fire departments), an inventory of the hazardous materials, an emergency response plan, and an employee training program. The information in the business plan can then be used in the event of an emergency to determine the appropriate response action, the need for public notification, and the need for evacuation.

Contra Costa County has adopted an industrial safety ordinance that addresses the human factors that lead to accidents. The ordinance requires stationary sources to develop a written human factors program that considers human factors as part of process hazards analyses, incident investigations, training, operating procedures, among others.

Discussion of Impacts

VII a - c. Regulations 12-13 and 6-4 are directed toward further reducing fugitive PM and odorous emissions from existing metal working operations. Major modifications are not expected to be required at the existing industrial facilities. The emission reductions associated with adoption of Regulations 12-13 and 6-4 are primarily associated with emissions abatement from point sources, such as an exhaust stack from a furnace or engine (through the use of a control such as carbon adsorption systems or fabric filters), fugitive emission reduction through enhanced capture techniques, and pollution prevention practices that can be used to prevent the emissions of a pollutant, such as reformulations and the reuse or recycling of by-products of production. There are no provisions in the proposed new rules that would increase the total amount of hazardous materials currently used by affected metal working facilities due to the implementation of Regulation 12-13 and 6-4. None of the control equipment or procedures expected to be used as part of the EMPs are expected to introduce, utilize, or generate new hazardous materials at the affected metal working facilities.

Any operations at the affected metal working facilities are not expected to change from current practice and, thus, the amount of hazardous materials used or transported is not expected to change. As the throughput is not expected to change at metal working facilities as a result of implementing Regulations 12-13 and 6-4, no additional transport of the hazardous materials is expected and, thus, no new hazards to the public will be created through transport, use, or disposal of hazardous materials. As a result, the proposed new rules are not expected to increase the probability of a hazardous material release. Local fire department and OSHA regulations coupled with standard operating practices ensure that conditions are in place to protect against hazard impacts. Therefore, no impacts on hazards are expected.

VII d. No impacts on hazardous material sites are anticipated from the proposed new rules that would typically apply to existing operations at metal melting, recycling or shredding facilities within the District's jurisdiction. Some of the affected areas may be located on the hazardous materials sites list pursuant to Government Code §65962.5. However, the proposed new rules would have no affect on hazardous materials nor would the rules create a significant hazard to the public or environment. The affected metal working facilities already exist and are located within the confines of existing industrial facilities. The proposed new rules neither require, nor are likely to result in, activities that would affect hazardous materials or existing site contamination. Therefore, no significant adverse impacts on hazards are expected.

VII e – f. No impacts on airports or airport land use plans are anticipated from the proposed new rules, which would apply to foundries and forges and metal recycling and shredding operations. The metal working facilities already exist and are located within the confines of industrial facilities. Once the proposed new rules are implemented, facilities would be expected to comply by using fugitive emission reduction and pollution prevention practices. These changes are expected to be made with the confines of the existing metal working facilities. No development

outside of existing facilities is expected to be required by the proposed Regulation 12-13 and 6-4. Therefore, no significant adverse impacts on an airport land use plan or on a private air strip are expected.

VII g. No impacts on emergency response plans are anticipated from the proposed new rules that would apply to existing metal working facilities. The foundries and forges and metal recycling and shredding operations already exist and are located within the confines of existing industrial facilities. The proposed new rules neither require, nor are likely to result in, activities that would impact the emergency response plan, and any new development would consider emergency response as part of the City/County General Plans prior to approval. The affected facilities already store and transport hazardous materials, so emergency response plans already include hazards associated with potential incidents. Therefore, no significant adverse impacts on emergency response plans are expected.

VII h. No increase regarding hazards related to wildfires are anticipated from the proposed new rules. The metal working facilities affected by the proposed new rules already exist and are located within the confines of existing industrial facilities. Native vegetation has been removed from the operating portions of the metal working to minimize fire hazards. Any modifications will occur within the confines of the existing facilities. Therefore, no increase in exposure to wildfires will occur due to the proposed Regulations 12-13 and 6-4.

Based upon these considerations, no significant adverse hazards and hazardous materials impacts are expected from the implementation of Regulations 12-13 and 6-4.

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

	flooding as a result of the failure of a levee or dam?				
j)	Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☑

Setting

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

The metal working facilities affected by the proposed new rules are located throughout the Bay Area. Affected facilities are primarily located in industrial areas. Reservoirs and drainage streams are located throughout the area within the BAAQMD's jurisdiction, and discharge into the Bays. Marshlands incised with numerous winding tidal channels containing brackish water are located throughout the Bay Area.

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

Regulatory Background

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

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

The Porter-Cologne Water Quality Act is California's primary water quality control law. It implements the state's responsibilities under the Federal Clean Water Act but also establishes state wastewater discharge requirements. The Regional Water Quality Control Board administers the state requirements as specified under the Porter-Cologne Water Quality Act,

which include storm water discharge permits. The water quality in the Bay Area is under the jurisdiction of the San Francisco Bay Regional Water Quality Control Board.

In response to the Federal Act, the State Water Resources Control Board prepared two state-wide plans in 1991 and 1995 that address storm water runoff: the California Inland Surface Waters Plan and the California Enclosed Bays and Estuaries Plan, which have been updated in 2005 as the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California. Enclosed bays are indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. San Francisco Bay, and its constituent parts, including Carquinez Strait and Suisun Bay, fall under this category.

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

Discussion of Impacts

VIII a, f. The proposed new rules are not expected to violate any water quality standards or waste discharge requirements, or to substantially degrade water quality, which would apply to existing metal working facilities. The proposed new rules are likely to require additional water use to suppress fugitive dust emission. However, the proposed rules would apply to existing facilities that would already have applicable wastewater discharge permits and storm water pollution prevention plans. The water used for dust suppression would generally be limited to surfaces to increase moisture and minimize fugitive dust emissions. Water application is not expected to result in over-watering such that water runoff would occur. Therefore, no violation of any water quality standards or waste discharge requirements, and no decrease in water quality is expected from the proposed Regulations 12-13 and 6-4.

VIII b. The foundries and forges and metal recycling and shredding operations affected by the proposed new rules already exist and are located within the confines of existing metal working facilities. The proposed Regulations 12-13 and 6-4 may result in an increase in water use by the affected metal working facilities that would choose to implement water suppression activities for fugitive dust control. Groundwater use is generally regulated through agreements and adjudication, which allocates annual water allowance to each user so that aquifer drawdown is prevented. Although the proposed rules may result in an increase in water use, the rules are not expected to result in a depletion of groundwater supplies as the proposed rules are not expected to change the existing water allowance to users. Therefore, the proposed new rules are not expected to deplete groundwater supplies or interfere with groundwater recharge. Therefore, no significant impacts on groundwater supplies are expected due to the proposed Regulations 12-13 and 6-4.

VIII c - f. Metal working facilities are expected to comply with the proposed Regulations 12-13 and 6-4 in the form of point source abatement, enhanced capture techniques, or improved pollution prevention practices. All affected equipment is located in industrial areas, where storm water drainage has been controlled and no construction activities outside of the existing industrial facilities is expected to be required. Therefore the proposed new rules are not expected to substantially alter the existing drainage or drainage patterns, result in erosion or siltation, alter the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite. The proposed rules are not expected to result in an increase in storm water runoff, as no increase in paved surfaces is expected to be required. The existing metal working facilities are subject to the requirements of Storm Water Pollution Prevention Plans and the proposed rules would not alter these requirements. Therefore, the proposed new rules are not expected to create or contribute storm water runoff that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff. The proposed new rules are not expected to substantially degrade water quality. Therefore, no significant adverse impacts to storm water runoff are expected.

VIII g – i. The foundries and forges metal recycling and shredding facilities affected by the proposed new rules are located within industrial areas. No major construction activities outside the boundaries of existing facilities are expected due to the adoption of the proposed Regulations 12-13 and 6-4. Metal working facilities are generally located to avoid flood zone areas and other areas subject to flooding. The proposed new rules are not expected to require any substantial construction activities, place any additional structures within 100-year flood zones, or other areas subject to flooding. Therefore, no significant adverse impacts due to flooding are expected.

VIII j. The metal working facilities affected by the proposed new rules are located within industrial areas. No major construction activities are expected outside of the boundaries of existing facilities due to the adoption of the proposed Regulations 12-13 and 6-4. The proposed new rules are not expected to place any additional structures within areas subject to inundation by seiche, tsunami or mudflow. Therefore, no significant adverse impacts on hydrology/water due to seiche, tsunami or mudflow are expected.

Based upon these considerations, no significant adverse hydrology and water quality impacts are expected from the implementation of the proposed amendments to Regulations 12-13 and 6-4.

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

Setting

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

Regulatory Background

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

Discussion of Impacts

IX a-c. The foundries and forges and metal recycling and shredding operations affected by the proposed new rules already exist and are located within the confines of existing industrial facilities. The metal working operators may comply with Regulation 12-13 and 6-4 by incorporating air pollution control equipment such as carbon adsorption systems, fabric filters, or enhanced capture techniques, or more likely by adding enclosures to minimize air draft, fences, and fugitive dust suppression equipment. These changes are expected to be made within the confines of existing facilities as it applies to existing equipment, and is not expected to physically divide any established community. Any modifications required for compliance is expected to be constructed within the confines of the existing facilities, and will not conflict with any habitat conservation of natural community plan. No new construction outside of the

confines of the existing facilities is expected to be required due to the adoption of the proposed Regulation 12-13 and 6-4.

Based upon these considerations, no significant adverse land use impacts are expected from the implementation of the proposed Regulation 12-13 and 6-4.

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

Setting

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

Regulatory Background

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

Discussion of Impacts

X a-b. The foundries and forges and metal recycling and shredding operations affected by the proposed new rules already exist and are located within the confines of existing industrial facilities. Any new or modified equipment are expected to be installed within the confines of existing facilities. The proposed new rules are not associated with any action that would result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state, or of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. Therefore, no impacts on mineral resources are expected.

Based upon these considerations, significant mineral resource impacts are not expected from the implementation of the proposed new rules.

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

Setting

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

Regulatory Background

Noise issues related to construction and operation activities are addressed in local General Plan policies and local noise ordinance standards. The General Plans and noise ordinances generally

establish allowable noise limits within different land uses including residential areas, other sensitive use areas (e.g., schools, churches, hospitals, and libraries), commercial areas, and industrial areas.

Discussion of Impacts

XI a-d. The foundries and forges and metal recycling and shredding operations affected by the proposed new rule already exist and are located within the confines of existing industrial facilities. The new rules are intended to reduce PM and odorous emissions from these operations. Compliance will be achieved by point source abatement, enhanced capture techniques, or improved pollution prevention practices.

The existing noise environment at each of the affected facilities is typically dominated by noise from existing equipment onsite, vehicular traffic around the facilities, and trucks or other heavy equipment entering and exiting facility premises. Noise from additional equipment installed under the proposed rules is not expected to produce noise in excess of current operations at each of the existing facilities. Any construction activities required due to the proposed to Regulation 12-13 and 6-4 would occur within the confines of the existing facility boundaries. No major construction activities are expected to be required, although minor construction activities would be associated with modifications to existing equipment, construction of air pollution control equipment, or replacement of existing equipment. Construction activities would generally occur during the daytime and avoid the more sensitive nighttime hours. Finally, construction noise sources would be temporary and cease following the completion of construction activities.

It is not expected that modifications to install air pollution control equipment would substantially increase ambient operational noise levels in the area, either permanently or intermittently, or expose people to excessive noise levels that would be noticeable above and beyond existing ambient levels. The facilities that would be regulated by Rules 12-13 and 6-4 already have existing air pollution control equipment. Measures to control fugitive emissions usually do not require additional control equipment but would include measures such as water mists and enclosures to minimize fugitive dust. Therefore, the proposed rules are not expected to result in a substantial increase in equipment that would generate noise. It is expected that each facility affected will comply with all existing noise control laws or ordinances. Further, OSHA and California-OSHA (Cal/OSHA) have established noise standards to protect worker health. No significant noise increases are not expected as a result of implementing the proposed new rules, therefore, noise impacts are expected to be less than significant.

It is also not anticipated that air pollution control devices or other new or modified equipment will cause an increase in groundborne vibration levels because air pollution control equipment is not typically vibration intensive equipment. No grading or heavy earthwork equipment is expected to be required as the affected facilities are already developed and graded. Consequently, the proposed new rules are not expected to directly or indirectly cause substantial noise or excessive groundborne vibration impacts.

XI. e-f. Some of the affected metal working facilities may be within two miles of an airport. However, the affected foundries metal recycling and shredding operations would still be

expected to comply, and not interfere, with any applicable airport land use plans. The proposed rules may require modifications to existing facilities, but are not expected to require development outside the boundaries of the existing facilities. Therefore, the proposed rules are not expected to impact any airport land use plan or expose people residing or working in the project area to excessive noise levels.

Based upon these considerations, significant noise impacts are not expected from the implementation of the proposed Regulation 12-13 and 6-4.

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

Setting

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

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. Any construction activities associated with the proposed project at each affected facility are not expected to involve the relocation of individuals, require new housing or commercial facilities, or change the distribution of the population. The reason for this conclusion is that operators of affected facilities who need to perform any construction activities to comply with the proposed new rules can draw from the existing labor pool in the local Bay Area, as no major construction activities would be required. Further, it is not expected that replacing existing equipment with new equipment or installing air pollution control equipment will require new employees to operate the new/modified equipment. Human population within the jurisdiction of the BAAQMD is anticipated to grow regardless of implementing the proposed project. As a

result, the proposed new rules are not anticipated to generate any significant adverse effects, either direct or indirect, on population growth in the district or population distribution.

XII b-c. Because the proposed project includes modifications and/or changes at existing facilities located in industrial settings, the proposed project is not expected to result in the creation of any industry that would affect population growth, directly or indirectly induce the construction of single- or multiple-family units, or require the displacement of people or housing elsewhere in the Bay Area. Based upon these considerations, significant population and housing impacts are not expected from the implementation of the proposed project.

Based upon these considerations, significant population and housing impacts are not expected from the implementation of the proposed Regulation 12-13 and 6-4.

	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 areas affected by the proposed new rules are primarily located in industrial areas throughout the Bay Area.

Given the large area covered by the BAAQMD, public services are provided by a wide variety of local agencies. Fire protection and police protection/law enforcement services within the BAAQMD are provided by various districts, organizations, and agencies. There are several school districts, private schools, and park departments within the BAAQMD. Public facilities within the BAAQMD are managed by different county, city, and special-use districts.

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. Implementation of the proposed regulations by installing new, or modifying existing equipment, is not expected to change current operations or throughput at existing metal working facilities. Currently, in the event of an accidental release hazardous materials or fire, fire departments are typically first responders for control and clean-up. The proposed rules are not

expected to increase the storage or use of hazardous materials or increase the risk of a fire at affected facilities. The proposed rules are also not expected to change the throughput or overall operations at affected facilities. Therefore, no significant impacts on fire protection services are expected.

Affected metal melting, recycling, and shredding operations are fenced, gated, and access to the facilities is generally controlled for safety and security reasons. Any modifications to the affected facilities are expected to occur within the confines of the existing facilities, which already have restricted access. Therefore, the proposed rules are not expected to result in an increase in police services.

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

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

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

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 new rules are located in industrial areas throughout the Bay Area. Public recreational land can be located adjacent to, or in reasonable proximity to these areas.

Regulatory Background

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

Discussion of Impacts

XIV a-b. As discussed under "Land Use" above, there are no provisions of the proposed project that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments; no land use or planning requirements will be altered by the proposed project. Any required modifications would occur within the confines of the existing metal working facilities so no changes in land use would be required. 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 because the proposed project is not expected to induce population growth. Therefore, no significant adverse impacts on recreation are expected.

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

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

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles). Transportation systems located within the Bay Area include railroads, airports, waterways, and highways. The Port of Oakland and three international airports in the area serve as hubs for commerce and transportation. The transportation infrastructure for vehicles and trucks in the Bay Area ranges from single lane roadways to multilane interstate highways. The Bay Area 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. At a regional level, the share of workers driving alone was about 68 percent in 2007. The portion of commuters that carpool was about 10 percent in 2007. About 4 percent of commuters walked to work in 2007. In addition, other modes of travel (bicycle, motorcycle, etc.), account for 3 percent of commuters in 2007 (MTC, 2008). Cars, buses, and commercial vehicles travel about 145 million miles a day (2000) on the Bay Area Freeways and local roads. Transit serves about 1.6 million riders on the average weekday (MTC, 2008).

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

Regulatory Background

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

Discussion of Impacts

XV a-b. Construction activities resulting from implementing the proposed new rules may generate a slight, although temporary, increase in traffic in the areas of each affected facility associated with construction workers, construction equipment, and the delivery of construction materials. Construction activities are expected to be minor and not involve a significant increase in workers or require any substantial equipment. The proposed project is not expected to cause a significant increase in traffic at any metal working facility or require any additional employees. Additionally, the proposed new rules are not expected to have an impact on capacity or throughput at any affected facility. Also, the proposed project is not expected to exceed, either individually or cumulatively, the current level of service of the areas surrounding the affected facilities. The work force at each affected facility is not expected to significantly increase as a result of the proposed project and no increase in operation-related traffic is expected. Thus, the traffic impacts associated with the proposed new rules are expected to be less than significant.

XV c. Though some of the facilities that will be affected by the proposed project may 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, actions that would be taken to comply with the proposed project, such as installing new air pollution control equipment or modifying existing equipment, are not expected to significantly influence or affect air traffic patterns. Further, the size and type of equipment that would be installed would not be expected to affect navigable air space. Thus, the proposed project would not result in a change in air traffic patterns including an increase in traffic levels or a change in location that results in substantial safety risks.

XV d - e. The proposed Regulation 12-13 and 6-4 will not alter traffic patterns or existing roadways. The proposed new rules are not expected to substantially increase traffic hazards or create incompatible uses at or adjacent to the affected facilities. All construction activities, if necessary, will occur within the confines of the existing facilities. Aside from the temporary effects due to a slight increase in construction traffic for those facilities that will undergo construction activities, the proposed project is not expected to alter roads, streets of other transportation systems. The proposed project does not involve construction of any roadways, so there would be no increase in roadway design feature that could increase traffic hazards. Emergency access at each affected facility is not expected to be impacted by the proposed rules. Further, each affected facility is expected to continue to maintain their existing emergency access. Therefore, the proposed rules are not expected to result in an increase in traffic hazards or inadequate emergency access.

XV f. Operation activities resulting from the proposed new rules are not expected to conflict with policies supporting alternative transportation since the proposed rules are not expected to result in an increase in traffic. Therefore, the proposed rules are not expected to affect alternative transportation modes (e.g. bicycles or buses) because the construction and operation activities related to the proposed project will occur solely in existing industrial facilities.

Based upon these considerations, significant transportation/traffic impacts are not expected from the implementation of the proposed Regulation 12-13 and 6-4.

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

Setting

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

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

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

Hazardous waste generated at area facilities, which is not reused on-site, or recycled off-site, is disposed of at a licensed in-state hazardous waste disposal facility. Two 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, c, and e. Metal working facilities are expected to comply with the proposed new rules by point source abatement, enhanced capture techniques, or improved pollution prevention practices. The proposed new rules are not expected to violate any water quality standards or waste discharge requirements, or to substantially degrade water quality, which would apply to existing metal working facilities. The proposed new rules are likely to require additional water use to suppress fugitive dust emissions. However, the proposed rules would apply to existing facilities that would already have applicable wastewater discharge permits and storm water pollution prevention plans. The water used for dust suppression would generally be limited to surfaces to increase moisture and minimize fugitive dust emissions. Water application is not expected to result in over-watering such that water runoff would occur. No other modifications are expected that could result in an increase in wastewater discharges. Therefore, no increase wastewater discharge, no increase in violation of any water quality standards or waste discharge requirements, and no decrease in water quality are expected from the proposed Regulations 12-13 and 6-4.

XVI b and d. The metal recycling and shredding facilities affected by the proposed new rules already exist and are located within the confines of existing industrial facilities that currently have water supplies. Any modifications would occur within the confines of the existing metal working facilities. The proposed new rules could result in the use of additional water associated with dust suppression activities associated with shredders, open spaces, and stockpiles. About nine months of the year, it is assumed that a facility in the Bay Area could rely on precipitation and collected storm and recycled water (three months for precipitation, six months of collected

water). For the remaining three months, the facility would purchase water from a local utility. Of the total amount of water that may be utilized to minimize fugitive dust emissions, approximately 25 percent is expected to be provided through precipitation, 50 percent from collected water (runoff), and the remaining 25 percent purchased from a local utility. There are only three metal recycling facilities in the Bay Area and only two operate auto shredders. Therefore, the use of dust suppression systems that use water injection to minimize dust emissions is expected to be limited to a few facilities. Therefore, no construction of new water and/or wastewater treatment facilities, or expansion of existing facilities, is expected.

XVI f and g. The proposed new rules would not affect the ability of metal working facilities to comply with federal, state, and local statutes and regulations related to solid waste. No significant impacts on waste generation are expected from the proposed new rules, since the proposed new rules would install, upgrade or retrofit equipment over a period of years. Waste is expected to be limited to metal, in the event that old equipment is replaced with new equipment. Metals are usually recycled so no significant impact to land disposal facilities would be expected.

The proposed project is not expected generate hazardous waste. Metal working processing and procedures are not expected to change as a result of the proposed new rules, and none of the controls developed as part of the EMPs are expected to incorporate or generate additional quantities of hazardous material or waste. Therefore, no significant impacts to hazardous waste disposal facilities are expected due to the proposed new rules. Facilities are expected to continue to comply with all applicable federal, state, and local statutes and regulations related to solid and hazardous wastes.

Based upon these considerations, significant impacts to utilities and service systems are not expected from the implementation of Regulation 12-13 and 6-4.

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

18. MANDATORY FINDINGS OF SIGNIFICANCE

Discussion of Impacts

XVII a. The proposed Regulations 12-13 and 6-4 do not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory, as discussed in the previous sections of the CEQA checklist. The proposed new rules are expected to result in emission reductions from foundries and forges and metal recycling and shredding facilities, thus providing a beneficial air quality impact and improvement in air quality. Further, any modifications or upgrades would occur within the confines of existing metal working facilities primary located in industrial areas which have already been graded and disturbed. As discussed in Section IV, Biological Resources and Section V, Cultural Resources, no significant adverse impacts are expected to biological or cultural resources.

XVII b-c. The proposed new rules are expected to result in emission reductions of PM and odors from affected metal working facilities, thus providing a beneficial air quality impact. The proposed new rules are part of a long-term plan to bring the Bay Area into compliance with the state ambient air quality standards, thus reducing the potential health impacts. The proposed new rules do not have adverse environmental impacts that are limited individually, but cumulatively considerable when considered in conjunction with other regulatory control projects. The proposed Regulations 12-13 and 6-4 are not expected to have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly. No significant adverse environmental impacts are expected.

CHAPTER 4

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