

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Final ~~Draft~~ Environmental Assessment (EA) for: Proposed Amended Rule (PAR) 1146.2 – Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers

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PREFACE

The Draft Environmental Assessment (EA) for the proposed amendments to Rule 1146.2 – Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers was circulated for a 45-day public review and comment period from October 8, 2004 to November 23, 2004. One public comment letter was received. Minor modifications have been made to the Draft EA, and a response to the public comment has been prepared. The document is now the Final EA and the response to the public comment is included in Appendix E. The modifications (deletions and additions) to the text of the EA are denoted using ~~striethrough~~ and underlined, respectively. The changes to the document are minor and do not change the conclusions made in the Draft EA or worsen the environmental impact analyzed in the Draft EA. Pursuant to CEQA Guidelines §15073.5(c)(2), recirculation is not necessary since the information provided does not result in new avoidable significant effects.

CHAPTER 1

OVERVIEW

Introduction

California Environmental Quality Act

Related CEQA Documentation for PAR 1146.2

Intended Uses of this Document

Areas of Controversy

Executive Summary

INTRODUCTION

The California Legislature created the South Coast Air Quality Management District (SCAQMD) in 1977¹ as the agency responsible for developing and enforcing air pollution control rules and regulations in the South Coast Air Basin (Basin), and in portions of the Salton EA Air Basin (SSAB) and Mojave Desert Air Basin (MDAB), referred to collectively as the district. By statute, the SCAQMD is required to adopt an air quality management plan (AQMP) which outlines plans and programs to achieve compliance with national and state ambient air quality standards for all areas within the district². The SCAQMD must then adopt rules and regulations that carry out the AQMP³. The 2003 AQMP concluded that major reductions in emissions of volatile organic compounds (VOCs) and oxides of nitrogen (NOx) are necessary to attain the air quality standards for ozone and particulate matter (PM10).

Pursuant to the California Environmental Quality Act (CEQA) (California Public Resources Code §§21000 et seq.), an Environmental Assessment (EA) has been prepared to analyze potential adverse environmental impacts from implementing the proposed amendments to Rule 1146.2. The Initial Study (IS) identified “air quality” as the only area that may be adversely affected by the proposed project (See Appendix A).

Rule 1146.2 requires emission limits to reduce NOx emissions from natural gas-fired large (commercial) water heaters, small (industrial) boilers, and process heaters. In addition to emission limits, Rule 1146.2 required that district staff, in cooperation with industry and members of the public, continue to evaluate specific aspects of the rule and to prepare an implementation study 18 months before each of the three rule compliance dates. The three implementation studies have been completed and submitted to the SCAQMD Governing Board. At the time Rule 1146.2 was adopted in 1998, it was anticipated that equipment manufacturers or suppliers would make retrofit burners available for popular types of units to extend the life of existing units. The availability of retrofit burners did not develop as expected. Only one manufacturer has certified retrofit burners. Other manufacturers have elected to provide burners but each ~~unit~~ burner must then be source tested to meet in compliance with the emission limits in Rule 1146.2.

The proposed amendments to Rule 1146.2 will extend the compliance date from January 1, 2005 to January 1, 2006~~7~~ for existing Type 2 units with a rated heat input greater than 1,000,000 Btu/hr but less than or equal to 2,000,000 Btu/hr manufactured on or after January 1, 1992. Specifically, on or after January 1, 2007 no person shall operate any existing Type 2 unit with a rated heat input greater than 1,000,000 Btu/hr but less than or equal to 2,000,000 Btu/hr more than 15 years old based on the date of manufacture, unless the certified NOx emissions are less than or equal to 30 ppm. Further, on or after January 1, 2006, no person shall operate in the district any unit more than 15 years old, based on the original date of manufacture with a rated heat input greater than 400,000 Btu/hr, but less than or equal to 1,000,000 Btu/hr the 2006 retrofit requirements for existing Type 2 units 400,000 Btu/hr to 1,000,000 Btu/hr manufactured prior to January 1, 2000 will be removed from Rule 1146.2, unless the certified NOx emissions are less than or equal to 30 ppm. This

¹ The Lewis-Presley Air Quality Management Act, Health & Safety Code, §§40400-40540.

² Health & Safety Code, §40460 (a).

³ Health & Safety Code, §40440 (a).

~~requirement in the rule is being removed because industry has stated that it is technically infeasible to retrofit many of the units in this size category (low NO_x burners are not available).~~

The Final Draft EA ~~will~~ evaluates the potential significant adverse air quality impacts associated with the proposed amendments. Throughout this document, references to “proposed project” or “PAR 1146.2” are used interchangeably. In addition, all references to “units” include large water heaters, small boilers and process heaters collectively, unless otherwise stated.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

Proposed Amended Rule (PAR) 1146.2 is a “project” as defined by the California Environmental Quality Act (CEQA) [California Public Resources Code §21065]. The SCAQMD is the lead agency for the proposed project and has prepared the appropriate environmental analysis pursuant to its certified regulatory program. California Public Resources Code §21080.5 allows public agencies with certified regulatory programs to prepare a plan or other written document in lieu of an environmental impact report once the Secretary of the Resources Agency has certified the regulatory program. The SCAQMD’s regulatory program was certified by the Secretary of the Resources Agency on March 1, 1989, and is in SCAQMD Rule 110.

CEQA and Rule 110 require that the potential adverse environmental impacts of proposed projects be evaluated and that feasible methods to reduce or avoid significant adverse environmental impacts of these projects be identified. To fulfill the purpose and intent of CEQA, the SCAQMD has prepared this EA to address the potential environmental impacts associated with the proposed amendments to Rule 1146.2. This EA is intended to: (a) provide the lead agency, responsible agencies, decision makers and the general public with detailed information on the environmental effects of the proposed project; and (b) to be used as a tool by decision makers to facilitate decision making on the proposed project.

An environmental impact is defined as an impact to the physical conditions which exist within the area which would be affected by a proposed project, including land, air, water, minerals, flora, fauna, noise, or objects of historic significance. CEQA and SCAQMD Rule 110 both require that potential adverse environmental impacts of proposed projects be evaluated and feasible methods to reduce or avoid significant adverse environmental impacts of these projects be identified.

The NOP/IS for the proposed project was circulated for a 30-day public review and comment period between August 26, 2004 and September 24, 2004. One letter was received during the NOP/IS public review and comment period. The NOP/IS comment and response to the comment are included in Appendix B.

The Draft EA for the proposed project was circulated for a 45-day public review and comment period between October 8, 2004 and November 23, 2004. One comment letter was received. The Draft EA comment and response to the comment are included in Appendix E of this Final EA.

RELATED CEQA DOCUMENTATION FOR PAR 1146.2

This Final Draft EA is a comprehensive environmental document that analyzes the environmental impacts from the currently proposed amendments to Rule 1146.2. SCAQMD rules, as ongoing regulatory programs, have the potential to be revised over time due to a variety of factors (e.g. regulatory decisions by other agencies, new data, and lack of progress in advancing the effectiveness of control technologies to comply with requirements in technology forcing rules, etc.). The proposed project is the first amendment to Rule 1146.2 since its adoption in 1998. The following summary of the previous CEQA analyses for Rule 1146.2 is provided for informational purposes only. The Final Draft EA focuses on the currently proposed amendments and does not rely on any previously prepared environmental documents.

Notice of Exemption (NOE) for Proposed Rule (PR) 1146.2 - (July 1997): The proposed project was reviewed pursuant to the CEQA three-step process for determining the appropriate CEQA document. The first step involves a determination of whether CEQA applies at all. If the project is exempt, the process does not need to proceed any further and a NOE may be prepared. By reducing NOx emissions in the district by approximately nine tons per day, PR 1146.2 was found to provide an air quality benefit without adversely impacting any other environmental category. Therefore, PR 1146.2 was exempt from the requirements of CEQA because it could be seen with certainty that the proposed rule has no adverse effect on air quality or any other environmental category pursuant to CEQA Guidelines §15061(b)(3). A NOE was prepared in accordance with CEQA Guidelines §15062 and SCAQMD Rule 110. The NOE was filed with the county clerks in Los Angeles, Orange, Riverside and San Bernardino counties immediately following the adoption of PR 1146.2 at the January 9, 1998 Governing Board hearing.

Initial Study and Notice of Preparation (NOP/IS) of Draft Environmental Assessment (EA) for the Proposed Amendments to Rule 1146.2 – (August 2004): The preliminary proposed amendments to Rule 1146.2 were evaluated, and it was determined that additional evaluation in a Draft EA would be required to analyze potential significant impacts to air quality based on the potential anticipated NOx emission reductions foregone. The NOP/IS was circulated for a 30-day public review and comment period between August 26, 2004 and September 24, 2004. One comment was received during this time period.

INTENDED USES OF THIS DOCUMENT

A CEQA document is an informational document intended to advise public agency decision-makers, and the public in general, of the potentially significant adverse environmental effects of a proposed project, identify possible ways to avoid or minimize the significant effects, and describe reasonable alternatives to the project (CEQA Guidelines §15121(a)). Decision-makers must consider the information in a CEQA document prior to making a decision on the project. Accordingly, this Final Draft EA is intended to: (a) provide the SCAQMD Governing Board and the public with information on the environmental effects of PAR 1146.2; and (b) be used as a tool by the SCAQMD Governing Board to facilitate decision making on the proposed rule.

Additionally, CEQA Guidelines §15124(d)(1) requires a public agency to identify the following specific types of intended uses of a CEQA document:

1. A list of the agencies that are expected to use the EA in their decision-making;
2. A list of permits and other approvals required to implement the project; and
3. A list of related environmental review and consultation requirements required by federal, state, or local laws, regulations, or policies.

To the extent that local public agencies, such as cities and county planning commissions, are responsible for making land use and planning decisions related to projects that must comply with the proposed amendments to Rule 1146.2, they could possibly rely on this Final Draft EA during their decision-making process. Similarly, other single purpose public agencies approving projects at facilities that must comply with the proposed amendments to Rule 1146.2 may also rely on this Final Draft EA.

AREAS OF CONTROVERSY

CEQA Guidelines §15123(b)(2) requires a public agency to identify areas of controversy, including issues raised by other agencies and the public. The district has not been made aware of any areas of controversy, nor has it received any comments during the NOP/IS or Draft EA public review and comment periods identifying any areas of controversy.

EXECUTIVE SUMMARY

CEQA Guidelines §15123 requires a CEQA document to include a brief summary of the proposed action and its consequences. This Final Draft EA consists of the following chapters: Chapter 1 – Overview; Chapter 2 – Project Description; Chapter 3 – Existing Setting, Chapter 4 – Environmental Impacts and Mitigation Measures; Chapter 5 – Project Alternatives; Chapter 6 – Other CEQA Topics; and various appendices. The following subsections briefly summarize the contents of each chapter.

Summary of Chapter 1

Chapter 1 includes an introduction to the proposed project, a discussion of the legislative authority that allows SCAQMD to develop and adopt air pollution control rules, the applicability of CEQA to the proposed project, related CEQA documentation for PAR 1146.2, the intended uses for this CEQA document, the areas of controversy, and a summary of the six chapters that comprise this Final Draft EA.

Summary of Chapter 2

Chapter 2 includes the project location, project objective, background, existing Rule 1146.2 requirements, and a summary of the proposed project. Since Rule 1146.2 is an existing SCAQMD program, the proposed amendments to Rule 1146.2 are the proposed project. Unless specifically stated, all other aspects of the Rule 1146.2 will remain the same.

The draft amended rule language is included in Appendix F D. A summary of the provisions of the proposed project are outlined below.

PAR 1146.2 involves amendments to an existing rule intended to reduce NO_x emissions from natural gas-fired large (commercial) water heaters, small (industrial) boilers, and process heaters.

- The proposed amendments will extend the compliance date from January 1, 2005 to January 1, 2006⁷ for existing Type 2 units with a rated heat input greater than 1,000,000 Btu/hr but less than or equal to 2,000,000 Btu/hr manufactured on or after January 1, 1992, and that are more than 15 years old from the date of manufacture.
- Further, the proposed amendments will require that on or after January 1, 2006, no person shall operate in the District any unit 400,000 Btu/hr to 1,000,000 Btu/hr more than 15 years old, based on the original date of manufacture, which does not meet the emission limits of 30 ppm. ~~remove the 2006 retrofit requirements for existing Type 2 units 400,000 Btu/hr to 1,000,000 Btu/hr manufactured prior to January 1, 2000.~~
- ~~The proposed amendments will require the owner or operation of existing Type 2 units greater than or equal to 1,000,000 Btu/hr to perform a tune up of the equipment a minimum of once a calendar year beginning in year 2006.~~

Summary of Chapter 3

CEQA Guidelines §15125 requires that a CEQA document include a description of the physical environmental conditions in the vicinity of the project as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time the environmental analysis is commenced, from both a local and regional perspective. The environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. Chapter 3 describes the existing setting for air quality in the district, which was the only environmental topic area identified to require evaluation in the Final Draft EA.

Air Quality

Air quality in the district has improved over the last two decades; however, some federal and state air quality standards are still exceeded frequently and by a wide margin. The South Coast Air Basin is designated as an “extreme” nonattainment area for ozone. Of the National Ambient Air Quality Standards (NAAQS) established for six criteria pollutants (ozone, lead, sulfur dioxide (SO₂), NO₂, CO and PM₁₀), the SCAQMD is designated as in attainment with SO₂, NO₂ and lead standards. The CO standard was only exceeded once in the last three years so the district qualifies as an attainment area for this pollutant, but has not yet been designated as attainment. It should be noted that NO_x is a precursor to ozone, and in order to reach attainment for ozone, further reductions of NO_x are required. This section will provide an overview of the existing air quality setting for each criteria pollutant, as well as the human health effects resulting from exposure to each criteria pollutant.

Summary of Chapter 4

CEQA Guidelines §15126 requires that a CEQA document identify and focus on the potential significant adverse environmental effects of a proposed project, feasible mitigation measures which could minimize significant adverse impacts, and the environmental effects which although mitigated, cannot be reduced to a level of insignificance.

Air Quality

Chapter 4 of the Final Draft EA includes an air quality analysis of the emission reductions foregone from (a) extending the compliance date from January 1, 2005 to January 1, 2006~~7~~ for existing Type 2 units greater than 1,000,000 Btu/hr manufactured on or after January 1, 1992, and that are more than 15 years old from the date of manufacture; and (b) requiring that on or after January 1, 2006, no person shall operate in the district any unit more than 15 years old, based on the original date of manufacture with a rated heat input greater than 400,000 Btu/hr, but less than or equal to 1,000,000 Btu/hr manufactured prior to January 1, 2000 unless the certified NOx emissions are less than or equal to 30 ppm. ~~removing the 2006 retrofit requirements for existing Type 2 units 400,000 to 1,000,000 Btu/hr.~~ These air quality impacts are expected to result in anticipated NOx emission reductions foregone that exceed the SCAQMD’s daily NOx significance threshold of 55 lbs/day.

**TABLE 1-1
SUMMARY OF AIR QUALITY IMPACTS AND MITIGATION MEASURES**

EMISSION REDUCTIONS FOREGONE	SIGNIFICANT	MITIGATION MEASURES
Extending the compliance date from 2005 to 2007 for existing Type 2 units >1,000,000 Btu/hr manufactured on or after January 1, 1992, and that are 15 years old from the date of manufacture.	YES	No project-specific mitigation measures were identified that could reduce air quality impacts to a level of insignificance.
<u>Requiring that on or after January 1, 2006, no person shall operate in the district any unit more than 15 years old, based on the original date of manufacture with a rated heat input greater than 400,000 Btu/hr, but less than or equal to 1,000,000 Btu/hr manufactured prior to January 1, 2000 unless the certified NOx emissions are less than or equal to 30 ppm.</u> Remove 2006 retrofit requirements for existing Type 2 units 400,000 to 1,000,000 Btu/hr.	YES	No project-specific mitigation measures were identified that could reduce air quality impacts to a level of insignificance.

Potential Environmental Impacts Found Not To Be Significant

Chapter 4 also includes a discussion of the following environmental topics which were found not to be significant.

- aesthetics
- agriculture resources
- biological resources
- mineral resources
- recreation
- transportation/traffic
- geology/soils
- hydrology and water quality
- land use and planning
- solid/hazardous waste
- hazards and hazardous materials
- public services
- noise
- cultural resources
- population and housing
- energy

Consistency

Chapter 4 includes a discussion of the consistency between the proposed project and relevant regional plans. The SCAQMD and the Southern California Association of Governments (SCAG) have developed, with input from representatives of local government, industry, community, public health agencies, USEPA Region IX and the California Air Resource Board (CARB), guidance on how to assess consistency with the general development planning process in the Basin. This section includes a discussion demonstrating consistency between PAR 1146.2 and the Regional Comprehensive Plan and Guidance in accordance with SCAG and SCAQMD guidelines.

Summary of Chapter 5

CEQA Guidelines §15126.6 requires an environmental document to describe a range of reasonable alternatives to the project which would feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of each alternative. Three alternatives to the proposed project, including the “No Project” alternative, are discussed in detail in Chapter 5.

Summary of Chapter 6

CEQA Guidelines §15126 require environmental documents to include a discussion about potential significant environmental effects which cannot be avoided if the proposed project is implemented, potential significant irreversible environmental changes which would be caused by the proposed project should it be implemented, and potential growth-inducing impacts of the proposed project. This discussion is provided in Chapter 6 and concludes that the proposed project may cause significant air quality impacts which cannot be avoided; however, the proposed project is not expected to result in irreversible environmental changes, or foster economic or population growth.

CHAPTER 2

PROJECT DESCRIPTION

Project Location

Background

Project Objective

Existing Rule 1146.2 Requirements

Project Description (Proposed Amendments)

PROJECT LOCATION

The SCAQMD has jurisdiction over an area of 10,473 square miles (referred to hereafter as the district), consisting of the four-county South Coast Air Basin (Basin) (Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino counties) and the Riverside County portions of the SSAB and the MDAB. The Basin, which is a subregion of the SCAQMD's jurisdiction, is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Riverside County portion of the SSAB is bounded by the San Jacinto Mountains to the west and spans eastward up to the Palo Verde Valley. The federal nonattainment area (known as the Coachella Valley Planning Area) is a subregion of Riverside County and the SSAB is bounded by the San Jacinto Mountains to the west and the eastern boundary of the Coachella Valley to the east. The entire district is shown in Figure 2-1.

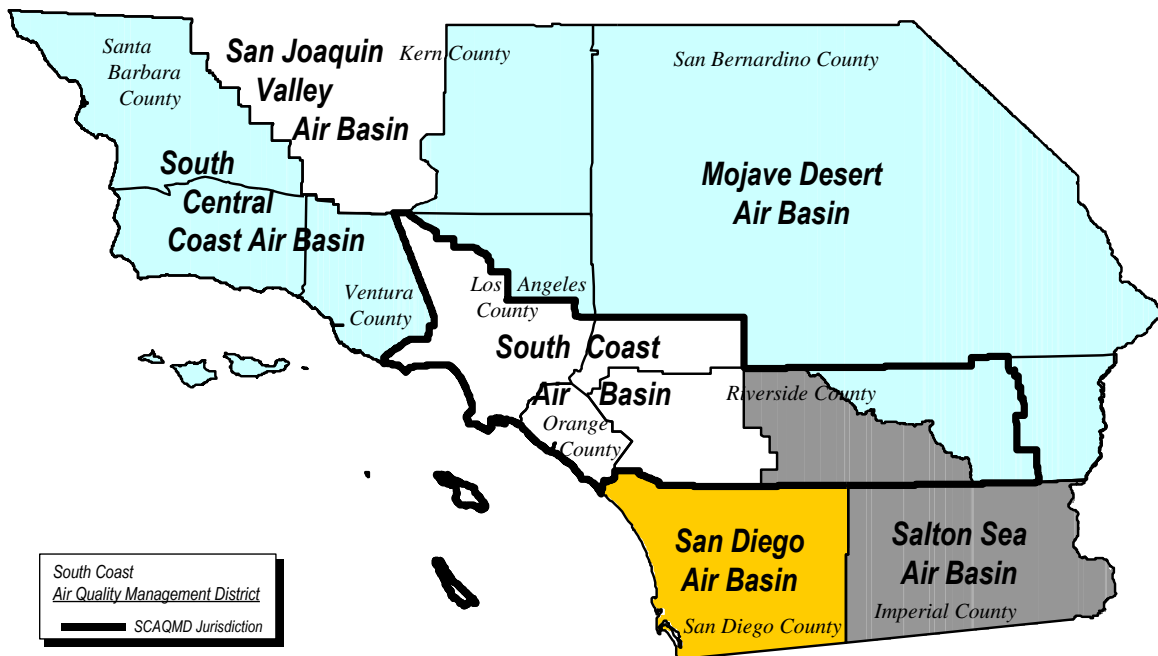


FIGURE 2-1
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

PROJECT OBJECTIVE

The objectives of the proposed amendments to Rule 1146.2 are to allow additional time for affected businesses to retrofit or replace existing Type 2 units greater than or equal to 1,000,000 Btu/hr but less than or equal to 2,000,000 manufactured on or after January 1, 1992 and 15 years or older unless they ~~to~~ meet the emission limit of 30 ppm. Also, on or after January 1, 2006, no person shall operate in the district any unit more than 15 years old, based on the original date of manufacture with a rated heat input greater than 400,000 Btu/hr, but less than or equal to 1,000,000 Btu/hr manufactured prior to January 1, 2000 unless the certified NOx emissions are less than or equal to 30 ppm. ~~the retrofit requirements for the existing Type 2 units 400,000 Btu/hr but less than or equal to 1,000,000 Btu/hr will be removed.~~ PAR 1146.2 is being amended to provide a longer lead time for the development of additional certified retrofit kits, source testing, and the demonstration of compliance if a non-certified retrofit kit is used; and to allow existing units to reach their useful life if a facility elects to comply with the NOx emission limit through replacing the existing unit.

BACKGROUND

Proposed Rule 1146.2 was originally identified as a control measure in the 1994 AQMP to reduce NOx emissions without increasing carbon monoxide (CO) emissions from small boilers and process heaters (less than two million Btu/hr). The 1998 staff report for Rule 1146.2 estimated that there were 23,000 units in that size range resulting in about six tons per day of NOx emissions. The control measure was carried forward and included in the 1997 AQMP. Rule 1146.2 was adopted in January 1998.

Rule 1146.2 reduces NOx emissions from water heaters and boilers with a rated heat input greater than 75,000 up to and including 2,000,000 Btu/hr. The rule requires the manufacturer to certify new equipment to meet the NOx emission standards, thereby eliminating the need for the end user to independently verify the emission level. For retrofitting equipment, it was anticipated that equipment manufacturers would either certify retrofit kits for popular types of units to provide a way to retrofit, or provide burners that can meet the new emission limits based on a source test after installation.

When Rule 1146.2 was adopted, it was envisioned that retrofit kits would be widely available to provide emission reductions while allowing the useful life of existing equipment to continue. The availability of retrofit kits did not develop as expected. Most companies that provide retrofit burners have elected to source test units individually after installation instead of certifying the burners prior to installation.

Implementation Studies

Rule 1146.2 required district staff, in cooperation with industry and members of the public, to study the implementation of the rule and report back to the Governing Board at least 18 months prior to the compliance dates for the following categories: new units (greater than or equal to 75,000 Btu/hr and less than or equal to 4,000,000 Btu/hr), new and retrofit units (greater than 400,000 Btu/hr and less than or equal to 1,000,000 Btu/hr), and new and retrofit units (greater than 1,000,000 Btu/hr and less than or equal to 2,000,000 Btu/hr).

The three implementation studies for Rule 1146.2 covered various sizes of equipment. In July 1999, the first report evaluated the technical feasibility of new emission limits in the rule for new units between 75,000 Btu/hr and 400,000 Btu/hr. The results of that study indicated that the new emissions limits were technically feasible and that the cost-effectiveness for low NO_x units was within the acceptable range projected in the 1998 rule staff report.

The second implementation study in December 2000 examined the availability and cost-effectiveness of retrofit burners for units greater than 1,000,000 Btu/hr and less than 2,000,000 Btu/hr. The study found that retrofits burners meeting the emission limit were available and the cost for retrofit of an existing unit was within the range projected in the 1998 rule staff report.

The third implementation study in July 2004 examined the availability and cost of new low NO_x retrofit burners for units between 400,000 Btu/hr to 1,000,000 Btu/hr. The results of this study indicated that while retrofit burners meeting the new emission limits were available for some units, there is a wide variety types of equipment in this size range for which retrofit burners are not available. In addition, the cost to retrofit a 400,000 Btu/hr to 1,000,000 Btu/hr unit was found to be high and it would be more cost effective for businesses to simply replace an old unit with a new 400,000 to 1 mm Btu/hr unit.

OVERVIEW OF EXISTING RULE 1146.2 REQUIREMENTS

Rule 1146.2 – Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers, was adopted by the AQMD Governing Board on January 9, 1998. Rule 1146.2 established NO_x emission limits for large water heaters and small boilers ranging from 75,000 Btu/hr up to and including 2,000,000 Btu/hr heat input. Commercial/industrial boilers and hot water heaters in this size range predominantly burn natural gas and are used to heat water and steam for a variety of industrial uses.

The existing Rule 1146.2 requires the following NO_x emission limits:

- 30 ppm for new Type 2 units greater than 400,000 Btu/hr by January 1, 2000;
- 55 ppm for new Type 1 units from 75,000 up to and including 400,000 Btu/hr by January 1, 2001;
- 30 ppm for existing Type 2 units greater than 1,000,000 Btu/hr but less than or equal to 2,000,000 Btu/hr manufactured prior to January 1, 1992 by July 1, 2002;
- 30 ppm for existing Type 2 units greater than 1,000,000 Btu/hr but less than or equal to 2,000,000 Btu/hr manufactured between 1992 and 1999, by January 1, 2005; and
- 30 ppm for existing Type 2 units greater than 400,000 Btu/hr, but less than or equal to 1,000,000 Btu/hr manufactured prior to January 1, 2000, by January 1, 2006.

A Type 1 unit is any unit with a rated heat input of 75,000 up to and including 400,000 Btu/hr. A Type 2 unit is any unit with a rated heat input of 400,000 up to and including 2,000,000 Btu/hr.

Rule 1146.2 also establishes a process for certifying new units and retrofits complying with emission limits (Rule 1146.2 Certification Program) through which manufacturers submit documentation, including source reports, to demonstrate compliance with rule emission limits.

Units used in recreational vehicles, mobile homes, or RECLAIM facilities are exempt from the requirements of Rule 1146.2. Rule 1146.2 also provides an exemption from requirements for in-use units for residential units, and existing Type 2 units greater than 1,000,000 but less than 2,000,000 Btu/hr demonstrated to use less than 9,000 therms of natural gas during every calendar year beginning with 2005.

The existing rule does not require the tune-up of equipment. Tune-ups typically ensure energy efficiency, which ultimately means less natural gas to operate the units. As a result, less combustion emissions are generated.

PROJECT DESCRIPTION (PROPOSED AMENDMENTS)

The following discussion summarizes the proposed changes to PAR 1146.2. Unless stated otherwise, all components of the existing rule do not change. A copy of PAR 1146.2 is located in Appendix G D.

Purpose and Applicability

This section does not change.

Definitions

This section does not change.

Requirements

The requirements section of Rule 1146.2 has been changed. The proposed rule language is located in Appendix G D.

- Existing language in the rule is proposed to be modified to extend the compliance date of January 1, 2005 to January 1, 2006~~7~~, wherein no person shall operate any unit 15 years or older, based on the date of manufacture, with a rated heat input greater than 1,000,000 Btu/hr manufactured on or after January 1, 1992, which does not meet the NOx emissions of less than or equal to 30 ppm.
- ~~Remove the 2006 retrofit requirement F~~for existing Type 2 units greater than 400,000 but less than or equal to 1,000,000 Btu/hr manufactured prior to January 1, 2000, any unit more than 15 years old, based on the date of manufacture shall not be operated in the District unless it meets the NOx emission limit of 30 ppm..
- ~~A new section is proposed to be added to Rule 1146.2 to require the owner or operator of existing Type 2 units greater than 1,000,000 Btu/hr to perform a tune-up of units manufactured on or after January 1, 1992, at a minimum, once per calendar year, beginning in 2006.~~

Certification

This section does not change.

Modification (Retrofit) Provisions and Demonstration of Compliance with Emission Limits

The proposed amendments revise this section of Rule 1146.2 to require that any unit may be modified (retrofit) as long as the unit meets, and demonstrates compliance with, the prescribed emission limits for that particular size unit.

Identification of Compliant Units

This section does not change.

Enforcement

This section does not change.

Exemptions

PAR 1146.2 modifies the exemptions for existing units to reflect that any unit greater than 400,000 Btu/hr, but less than or equal to 2,000,000 Btu/hr that demonstrates it uses less than 9,000 therms of natural gas during every calendar year is exempt.

~~only the Type 2 units rated greater than 1,000,000 Btu/hr. Therm exemptions for Type 2 units between 400,000 and 1,000,000 Btu/hr were no longer applicable and removed since the retrofit provision for these units was removed.~~

Implementation Study

This section will be removed.

CHAPTER 3

EXISTING SETTING

Introduction

Air Quality

Rule 1146.2 Baseline Emission Reductions

INTRODUCTION

In order to determine the significance of the impacts associated with a proposed project, it is necessary to evaluate the project's impacts against the backdrop of the environment as it exists at the time the notice of preparation is published, or if no notice of preparation is published, at the time the environmental analysis is commenced. CEQA Guidelines define "environment" as "the physical conditions that exist within the area which will be affected by a proposed project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance" (CEQA Guidelines §15360 and California Public Resources Code §21060.5). Furthermore, a CEQA document must include a description of the physical environment in the vicinity of the project, as it exists from both a local and regional perspective.

The following section summarizes the existing setting for air quality in the district. Air quality was the only environmental topic identified as being potentially adversely affected by PAR 1146.2. A more complete discussion of current and future air quality throughout the district, with and without additional control measures can be found in the Final Program Environmental Impact Report (PEIR) for the 2003 AQMP and in the Final 2003 AQMP and the five associated appendices. The Final PEIR to the 2003 AQMP contains more comprehensive information on the existing and future environmental settings for all environmental areas discussed in this chapter. Copies of the above-referenced documents are available for downloading at www.aqmd.gov or available from the SCAQMD's Public Information Center by calling (909) 396-2039.

AIR QUALITY

Criteria Pollutants

It is the responsibility of the SCAQMD to ensure that state and federal ambient air quality standards are achieved and maintained within its geographical jurisdiction. Health-based air quality standards have been established by California and the federal government for the following criteria air pollutants: ozone, CO, nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter less than 10 microns (PM₁₀), particulate matter less than 2.5 microns (PM_{2.5}), 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 and in the case of PM₁₀ and SO₂, far more stringent. California has also established standards for sulfates, visibility reducing particles, 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 SCAQMD monitors levels of various criteria pollutant emissions at 32 monitoring stations. The most recent air quality data (year 2003) from SCAQMD's monitoring stations are presented in Table 3-2.

**Table 3-1
State and Federal Ambient Air Quality Standards**

AIR POLLUTANT	STATE STANDARD	FEDERAL PRIMARY STANDARD	MOST RELEVANT EFFECTS
	CONCENTRATION, AVERAGING TIME		
Carbon Monoxide (CO)	>20 ppm, 1-hour average >9 ppm, 8-hour average	>35 ppm, 1-hour average >9 ppm, 8-hour average	(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; and, (d) Possible increased risk to fetuses. (a) Short-term exposures: 1) Pulmonary function decrements and localized lung edema in humans and animals; and, 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; and, (d) Property damage.
Ozone (O ₃)	>0.09 ppm, 1-hour average	>0.12 ppm, 1-hour average >0.08 ppm, 8-hour average	
Nitrogen Dioxide (NO ₂)	>0.25 ppm, 1-hour average	>0.0534 ppm, AAM	(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; and, (c) Contribution to atmospheric discoloration.
Sulfur Dioxide (SO ₂)	>0.25 ppm, 1-hour average >0.04 ppm, 24-hour average	>0.03 ppm, AAM >0.14 ppm, 24-hour average	(a) Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma.
Suspended Particulate Matter (PM10)	>20 µg/m ³ , AAM >50 µg/m ³ , 24-hour average	>50 µg/m ³ , AAM >150 µg/m ³ , 24-hour average	(a) Excess deaths from short-term exposures and exacerbation of symptoms in sensitive patients with respiratory disease; and, (b) Excess seasonal declines in pulmonary function, especially in children.
Suspended Particulate Matter (PM2.5)	>12 µg/m ³ , AAM	>15 µg/m ³ , AAM >65 µg/m ³ , 24-hour average	(a) Increased hospital admissions and emergency room visits for heart and lung disease; (b) Increased respiratory symptoms and disease; and, (c) Decreased lung functions and premature death.
Lead	≥1.5 µg/m ³ , 30-day average	>1.5 µg/m ³ , calendar quarterly average	(a) Increased body burden; and, (b) Impairment of blood formation and nerve conduction.
Sulfates (SO _x)	≥25 µg/m ³ , 24-hour average	No Federal standard established.	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; and, (f) Property damage.
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 percent, 8-hour average (10am – 6pm PST)	No Federal standard established	Nephelometry and AISI Tape Sampler; instrumental measurement on days when relative humidity is less than 70 percent.
Hydrogen Sulfide	≥0.03 ppm, 1-hour average	No Federal standard established	Odor annoyance.
Vinyl Chloride	≥0.010 ppm, 24-hour average	No Federal standard established	Known carcinogen.

KEY: ppm = parts per million; AAM = Annual Arithmetic Mean; µg/m³ = micrograms per cubic meter; AGM = Annual Geometric Mean

Table 3-2
2003 Air Quality Data – South Coast Air Quality Management District

CARBON MONOXIDE (CO)						
Source Receptor Area No.	Location of Air Monitoring Station	No. Days of Data	Max. Conc. (ppm, 1-hour)	Max. Conc. (ppm, 8-hour)	No. Days Standard Exceeded ^a	
					Federal ≥ 9.5 ppm, 8-hour	State > 9.0 ppm, 8-hour
LOS ANGELES COUNTY (Co)						
1	Central Los Angeles	365	6	4.6	0	0
2	Northwest Coast Los Angeles Co	365	5	2.7	0	0
3	Southwest Coast Los Angeles Co	361	7	5.0	0	0
4	South Coast Los Angeles Co	363	6	4.7	0	0
6	West San Fernando Valley	365	6	4.1	0	0
7	East San Fernando Valley	349	5*	4.7*	0*	0*
8	West San Fernando Valley	365	5	3.8	0	0
9	East San Gabriel Valley 1	365	5	2.6	0	0
9	East San Gabriel Valley 2	357	3	2.1	0	0
10	Pomona/Walnut Valley	365	6	4.4	0	0
11	South San Gabriel Valley	365	5	4.0	0	0
12	South Central Los Angeles Co	362	12	7.3	0	0
13	Santa Clarita Valley	363	3	1.7	0	0
ORANGE COUNTY						
16	North Orange County	365	8	4.1	0	0
17	Central Orange County	365	6	3.9	0	0
18	North Coastal Orange County	365	7	5.8	0	0
19	Saddleback Valley	362	3	1.8	0	0
RIVERSIDE COUNTY						
22	Norco/Corona	--	--	--	--	--
23	Metropolitan Riverside County 1	365	5	3.7	0	0
23	Metropolitan Riverside County 2	360	5	3.4	0	0
24	Perris Valley	--	--	--	--	--
25	Lake Elsinore	345	4*	1.3*	0*	0*
29	Banning Airport	--	--	--	--	--
30	Coachella Valley 1**	339	3*	1.3*	0*	0*
30	Coachella Valley 2**	--	--	--	--	--
SAN BERNARDINO COUNTY						
32	NW San Bernardino Valley	363	4	2.9	0	0
33	SW San Bernardino Valley	--	--	--	--	--
34	Central San Bernardino Valley 1	--	--	--	--	--
34	Central San Bernardino Valley 2	365	5	4.6	0	0
35	East San Bernardino Valley	--	--	--	--	--
37	Central San Bernardino Mountains	--	--	--	--	--
38	East San Bernardino Mountains	--	--	--	--	--
DISTRICT MAXIMUM			12	7.3	0	0
SOUTH COAST AIR BASIN			12	7.3	0	0

KEY:

ppm = parts per million parts of air, by volume	* Less than 12 full months of data. May not be representative.
-- = Pollutant not monitored	** Salton Sea Air Basin

^a The federal 1-hour standard (1-hour average CO > 35 ppm) and state 1-hour standard (1-hour average CO > 20 ppm) were not exceeded.

Table 3-2 (Continued)
2003 Air Quality Data – South Coast Air Quality Management District

OZONE (O ₃)									
							No. Days Standard Exceeded		
							Federal		State
Source Receptor Area No.	Location of Air Monitoring Station	No. Days of Data	Max. Conc. (ppm, 1-hour)	Max. Conc. (ppm, 8-hour)	Fourth Highest Conc. (ppm, 8-hour)	Health Advisory ≥ 0.15 ppm, 1-hour	> 0.12 ppm, 1-hour	> 0.08 ppm, 8-hour	> 0.09 ppm, 1-hour
LOS ANGELES (LA) COUNTY (Co)									
1	Central LA	365	0.152	0.088	0.083	1	1	2	11
2	NW Coast LA Co	365	0.134	0.105	0.083	0	1	1	11
3	SW Coast LA Co	365	0.110	0.078	0.073	0	0	0	2
4	South Coast LA Co	365	0.099	0.071	0.063	0	0	0	1
6	W San Fernando Valley	365	0.179	0.129	0.119	1	14	49	68
7	E San Fernando Valley	341	0.134*	0.108*	0.097*	0*	4*	20*	37*
8	W San Fernando Valley	365	0.152	0.108	0.103	1	7	28	44
9	E San Gabriel Valley 1	365	0.150	0.124	0.107	1	11	21	40
9	E San Gabriel Valley 2	365	0.162	0.134	0.123	7	22	41	61
10	Pomona/Walnut Valley	365	0.161	0.123	0.109	3	13	24	39
11	S San Gabriel Valley	364	0.128	0.097	0.084	0	1	2	18
12	South Central LA Co	361	0.081	0.063	0.059	0	0	0	0
13	Santa Clarita Valley	363	0.194	0.152	0.137	15	35	69	89
ORANGE (OR) COUNTY (Co)									
16	North OR Co	365	0.165	0.087	0.082	1	1	2	7
17	Central OR Co	365	0.136	0.087	0.082	0	2	1	11
18	North Coastal OR Co	364	0.107	0.088	0.080	0	0	1	4
19	Saddleback Valley	362	0.153	0.105	0.097	1	4	8	16
RIVERSIDE (RV) COUNTY (Co)									
22	Norco/Corona	--	--	--	--	--	--	--	--
23	Metropolitan RV Co 1	365	0.169	0.140	0.123	4	18	62	56
23	Metropolitan RV Co 2	--	--	--	--	--	--	--	--
24	Perris Valley	357	0.155	0.121	0.119	1	7	47	59
25	Lake Elsinore	345	0.154*	0.137*	0.113*	2*	7*	35*	52
29	Banning Airport	365	0.166	0.146	0.127	3	27	63	64
30	Coachella Valley 1**	359	0.141	0.111	0.108	0	4	44	49
30	Coachella Valley 2**	365	0.123	0.105	0.102	0	0	19	24
SAN BERNARDINO (SB) COUNTY									
32	Northwest SB Valley	365	0.155	0.134	0.116	2	15	35	48
33	Southwest SB Valley	--	--	--	--	--	--	--	--
34	Central SB Valley 1	351	0.176	0.148	0.134	7	26	48	65
34	Central SB Valley 2	358	0.160	0.137	0.123	4	19	45	59
35	East SB Valley	365	0.174	0.153	0.138	12	38	72	91
37	Central SB Mountains	341	0.163*	0.142*	0.130*	6*	34*	74*	84*
38	East SB Mountains	--	--	--	--	--	--	--	--
DISTRICT MAXIMUM			0.194	0.153	0.138	15	38	74	91
SOUTH COAST AIR BASIN			0.194	0.153	0.138	36	68	119	133

KEY:

ppm = parts per million parts of air, by volume	* Less than 12 full months of data. May not be representative.
-- = Pollutant not monitored	** Salton Sea Air Basin

Table 3-2 (Continued)
2003 Air Quality Data – South Coast Air Quality Management District

NITROGEN DIOXIDE (NO ₂)				
Source Receptor Area No.	Location of Air Monitoring Station	No. Days of Data	Max. Conc. (ppm, 1-hour ^b)	Annual Average ^b AAM Conc. (ppm)
LOS ANGELES COUNTY				
1	Central Los Angeles	361	0.16	0.0338
2	Northwest Coast Los Angeles County	352	0.12	0.0231
3	Southwest Coast Los Angeles County	363	0.12	0.0238
4	South Coast Los Angeles County	341	0.14*	0.0288*
6	West San Fernando Valley	364	0.13*	0.0260*
7	East San Fernando Valley	344	0.14*	0.0356*
8	West San Fernando Valley	356	0.14	0.0322
9	East San Gabriel Valley 1	347	0.12*	0.0296*
9	East San Gabriel Valley 2	361	0.12	0.0271
10	Pomona/Walnut Valley	365	0.12	0.0352
11	South San Gabriel Valley	360	0.14	0.0353
12	South Central Los Angeles County	356	0.13	0.0312
13	Santa Clarita Valley	363	0.12	0.0221
ORANGE COUNTY				
16	North Orange County	361	0.16	0.0284
17	Central Orange County	362	0.13	0.0240
18	North Coastal Orange County	362	0.11	0.0199
19	Saddleback Valley	--	--	--
RIVERSIDE COUNTY				
22	Norco/Corona	--	--	--
23	Metropolitan Riverside County 1	360	0.09	0.0217
23	Metropolitan Riverside County 2	--	--	--
24	Perris Valley	--	--	--
25	Lake Elsinore	328	0.08*	0.0182*
29	Banning Airport	346	0.09*	0.0193*
30	Coachella Valley 1**	347	0.06*	0.0173*
30	Coachella Valley 2**	--	--	--
SAN BERNARDINO COUNTY				
32	Northwest San Bernardino Valley	363	0.11	0.0349
33	Southwest San Bernardino Valley	--	--	--
34	Central San Bernardino Valley 1	355	0.12	0.0307
34	Central San Bernardino Valley 2	362	0.10	0.0270
35	East San Bernardino Valley	--	--	--
37	Central San Bernardino Mountains	--	--	--
38	East San Bernardino Mountains	--	--	--
DISTRICT MAXIMUM			0.16	0.0356
SOUTH COAST AIR BASIN			0.16	0.0356

KEY:

ppm = parts per million parts of air, by volume	* Less than 12 full months of data. May not be representative.
AAM = Annual Arithmetic Mean	** Salton Sea Air Basin
-- = Pollutant not monitored	

^b The state standard (1-hour average NO₂ > 0.25 ppm) and the federal standard (AAM NO₂ > 0.0534 ppm) were not exceeded.

Table 3-2 (Continued)
2003 Air Quality Data – South Coast Air Quality Management District

SULFUR DIOXIDE (SO ₂)				
Source Receptor Area No.	Location of Air Monitoring Station	No. Days of Data	Maximum Concentration ^c	
			(ppm, 1-hour)	(ppm, 24-hour)
LOS ANGELES COUNTY				
1	Central Los Angeles	349	0.05*	0.006*
2	Northwest Coast Los Angeles County	--	--	--
3	Southwest Coast Los Angeles County	365	0.03	0.006
4	South Coast Los Angeles County	361	0.03	0.008
6	West San Fernando Valley	--	--	--
7	East San Fernando Valley	338	0.01*	0.005*
8	West San Fernando Valley	--	--	--
9	East San Gabriel Valley 1	--	--	--
9	East San Gabriel Valley 2	--	--	--
10	Pomona/Walnut Valley	--	--	--
11	South San Gabriel Valley	--	--	--
12	South Central Los Angeles County	--	--	--
13	Santa Clarita Valley	--	--	--
ORANGE COUNTY				
16	North Orange County	--	--	--
17	Central Orange County	--	--	--
18	North Coastal Orange County	354	0.02	0.012
19	Saddleback Valley	--	--	--
RIVERSIDE COUNTY				
22	Norco/Corona	--	--	--
23	Metropolitan Riverside County 1	363	0.02	0.012
23	Metropolitan Riverside County 2	--	--	--
24	Perris Valley	--	--	--
25	Lake Elsinore	--	--	--
29	Banning Airport	--	--	--
30	Coachella Valley 1**	--	--	--
30	Coachella Valley 2**	--	--	--
SAN BERNARDINO COUNTY				
32	Northwest San Bernardino Valley	--	--	--
33	Southwest San Bernardino Valley	--	--	--
34	Central San Bernardino Valley 1	361	0.01	0.004
34	Central San Bernardino Valley 2	--	--	--
35	East San Bernardino Valley	--	--	--
37	Central San Bernardino Mountains	--	--	--
38	East San Bernardino Mountains	--	--	--
DISTRICT MAXIMUM			0.05	0.012
SOUTH COAST AIR BASIN			0.05	0.012

KEY:

ppm = parts per million parts of air, by volume	* Less than 12 full months of data. May not be representative.
AAM = Annual Arithmetic Mean	** Salton Sea Air Basin
-- = Pollutant not monitored	

^c The state standards (1-hour average SO₂ > 0.25 ppm and 24-hour average SO₂ > 0.04 ppm) and the federal standards (AAM SO₂ > 0.03 ppm, 24-hour average SO₂ > 0.14 ppm, and 3-hour average SO₂ > 0.50 ppm) were not exceeded.

Table 3-2 (Continued)
2003 Air Quality Data – South Coast Air Quality Management District

SUSPENDED PARTICULATE MATTER PM10 ^d						
Source Receptor Area No.	Location of Air Monitoring Station	No. Days of Data	Max. Conc. ($\mu\text{g}/\text{m}^3$, 24-hour)	No. (%) Samples Exceeding Standard		Annual Average ^e AAM Conc. ($\mu\text{g}/\text{m}^3$)
				Federal > 150 $\mu\text{g}/\text{m}^3$, 24-hour	State > 50 $\mu\text{g}/\text{m}^3$, 24-hour	
LOS ANGELES COUNTY (Co)						
1	Central Los Angeles	61	81	0	6(9.8)	34.6
2	NW Coast Los Angeles County	--	--	--	--	--
3	SW Coast Los Angeles County	61	58	0	3(4.9)	29.7
4	South Coast Los Angeles County	61	63	0	4(6.6)	32.8
6	West San Fernando Valley	--	--	--	--	--
7	East San Fernando Valley	50	81*	0*	7(14.0)*	38.1*
8	West San Fernando Valley	--	--	--	--	--
9	East San Gabriel Valley 1	60	119	0	21(35.0)	44.4
9	East San Gabriel Valley 2	--	--	--	--	--
10	Pomona/Walnut Valley	--	--	--	--	--
11	South San Gabriel Valley	--	--	--	--	--
12	South Central Los Angeles County	--	--	--	--	--
13	Santa Clarita Valley	61	72	0	10(16.4)	31.8
ORANGE COUNTY						
16	North Orange County	--	--	--	--	--
17	Central Orange County	61	96	0	6(9.8)	32.7
18	North Coastal Orange County	--	--	--	--	--
19	Saddleback Valley	57	64	0	2(3.5)	26.7
RIVERSIDE COUNTY						
22	Norco/Corona	58	116	0	15(25.9)	40.5
23	Metropolitan Riverside County 1	109	164	2(1.8)	62(56.9)	56.9
23	Metropolitan Riverside County 2	--	--	--	--	--
24	Perris Valley	58	142	0	19(32.8)	43.9
25	Lake Elsinore	--	--	--	--	--
29	Banning Airport	60	79	0	9(15.0)	29.0
30	Coachella Valley 1**	60	108	0	4(6.7)	27.1
30	Coachella Valley 2**	112	124 ⁺	0 ⁺	47(42.0) ⁺	50.2 ⁺
SAN BERNARDINO COUNTY						
32	NW San Bernardino Valley	--	--	--	--	--
33	SW San Bernardino Valley	62	149	0	18(29.0)	42.9
34	Central San Bernardino Valley 1	50	101*	0*	27(54.0)*	47.2*
34	Central San Bernardino Valley 2	59	98	0	23(39.0)	44.9
35	East San Bernardino Valley	58	92	0	15(25.9)	37.0
37	Central San Bernardino Mountains	50	47*	0*	0*	25.6*
38	East San Bernardino Mountains	--	--	--	--	--
DISTRICT MAXIMUM			164	2	62	56.9
SOUTH COAST AIR BASIN			164	2	69	56.9

KEY: $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter; -- = Pollutant not monitored; AAM = Annual Arithmetic Mean; ** Salton Sea Air Basin
^d PM10 samples were collected every six days at all sites except for Station Numbers 4144 and 4157 where samples were collected every three days.

^e The federal standard is AAM PM10 > 50 $\mu\text{g}/\text{m}^3$ and the state standard is AAM PM10 > 20 $\mu\text{g}/\text{m}^3$ (replaced the annual geometric mean AGM PM10 > 30 $\mu\text{g}/\text{m}^3$ effective July 5, 2003).

+ The data for five samples collected on high-wind days (178 $\mu\text{g}/\text{m}^3$ on 01/06/03, 132 $\mu\text{g}/\text{m}^3$ on 02/02/03, 227 $\mu\text{g}/\text{m}^3$ on 05/15/03, 148 $\mu\text{g}/\text{m}^3$ on 06/20/03, and 309 $\mu\text{g}/\text{m}^3$ on 06/23/03) were excluded in accordance with EPA's Natural Events Policy.

Table 3-2 (Continued)
2003 Air Quality Data – South Coast Air Quality Management District

SUSPENDED PARTICULATE MATTER PM _{2.5} ^f					
				No. (%) Samples Exceeding Standard	Annual Averages ^g
Source Receptor Area No.	Location of Air Monitoring Station	No. Days of Data	Max. Conc. (µg/m ³ , 24-hour)	Federal > 65 µg/m ³ , 24-hour	AAM Conc. (µg/m ³)
LOS ANGELES COUNTY					
1	Central Los Angeles	330	83.7	5(1.5)	21.3
2	Northwest Coast Los Angeles County	--	--	--	--
3	Southwest Coast Los Angeles County	--	--	--	--
4	South Coast Los Angeles County	324	115.2	3(0.9)	18.0
6	West San Fernando Valley	115	47.5	0	16.4
7	East San Fernando Valley	92	120.6	1(1.1)	20.9
8	West San Fernando Valley	110	89.0	1(0.9)	18.6
9	East San Gabriel Valley 1	314	121.2	3(1.0)	19.2
9	East San Gabriel Valley 2	--	--	--	--
10	Pomona/Walnut Valley	--	--	--	--
11	South San Gabriel Valley	111	90.3	1(0.9)	20.6
12	South Central Los Angeles County	117	54.8	0	20.2
13	Santa Clarita Valley	--	--	--	--
ORANGE COUNTY					
16	North Orange County	--	--	--	--
17	Central Orange County	340	115.5	3(0.9)	17.3
18	North Coastal Orange County	--	--	--	--
19	Saddleback Valley	109	50.6	0	13.1
RIVERSIDE COUNTY					
22	Norco/Corona	--	--	--	--
23	Metropolitan Riverside County 1	350	104.3	8(2.3)	24.9
23	Metropolitan Riverside County 2	116	73.3	1(0.9)	22.6
24	Perris Valley	--	--	--	--
25	Lake Elsinore	--	--	--	--
29	Banning Airport	--	--	--	--
30	Coachella Valley 1**	112	21.2	0	9.0
30	Coachella Valley 2**	118	26.8	0	11.4
SAN BERNARDINO COUNTY					
32	Northwest San Bernardino Valley	--	--	--	--
33	Southwest San Bernardino Valley	118	88.9	3(2.5)	23.8
34	Central San Bernardino Valley1	111	98.1	1(0.9)	21.8
34	Central San Bernardino Valley2	119	73.9	1(0.8)	22.2
35	East San Bernardino Valley	--	--	--	--
37	Central San Bernardino Mountains	--	--	--	--
38	East San Bernardino Mountains	55	35.0	0	10.5
DISTRICT MAXIMUM			121.2	8	24.9
SOUTH COAST AIR BASIN			121.2	14	24.9

KEY:

µg/m ³ = micrograms per cubic meter	-- = Pollutant not monitored
AAM = Annual Arithmetic Mean	** Salton Sea Air Basin

^f PM_{2.5} samples were collected every three days at all sites except for Station Numbers 060, 072, 087, 3176, and 4144 where samples were taken every day, and Station Number 5818 where samples were taken every six days.

^g The federal standard is AAM PM_{2.5} > 15 µg/m³ and the state standard is AAM PM_{2.5} > 12 µg/m³ (new standard, established July 5, 2003).

Table 3-2 (Continued)
2003 Air Quality Data – South Coast Air Quality Management District

TOTAL SUSPENDED PARTICULATES TSP ^h				
Source Receptor Area No.	Location of Air Monitoring Station	No. Days of Data	Max. Conc. ($\mu\text{g}/\text{m}^3$, 24-hour)	Annual Average AAM Conc. ($\mu\text{g}/\text{m}^3$)
LOS ANGELES COUNTY (Co)				
1	Central Los Angeles	61	157	73.5
2	Northwest Coast Los Angeles Co	59	114	49.4
3	Southwest Coast Los Angeles Co	61	122	56.7
4	South Coast Los Angeles Co	64	159	63.9
6	West San Fernando Valley	--	--	--
7	East San Fernando Valley	--	--	--
8	West San Fernando Valley	59	111	54.3
9	East San Gabriel Valley 1	55	176	83.9
9	East San Gabriel Valley 2	--	--	--
10	Pomona/Walnut Valley	--	--	--
11	South San Gabriel Valley	60	160	75.4
12	South Central Los Angeles Co	60	449	105.2
13	Santa Clarita Valley	--	--	--
ORANGE COUNTY				
16	North Orange County	--	--	--
17	Central Orange County	--	--	--
18	North Coastal Orange County	--	--	--
19	Saddleback Valley	--	--	--
RIVERSIDE COUNTY				
22	Norco/Corona	--	--	--
23	Metropolitan Riverside County 1	58	283	105.6
23	Metropolitan Riverside County 2	60	225	85.0
24	Perris Valley	--	--	--
25	Lake Elsinore	--	--	--
29	Banning Airport	--	--	--
30	Coachella Valley 1**	--	--	--
30	Coachella Valley 2**	--	--	--
SAN BERNARDINO COUNTY				
32	NW San Bernardino Valley	60	269	69.6
33	SW San Bernardino Valley	--	--	--
34	Central San Bernardino Valley 1	59	335	119.8
34	Central San Bernardino Valley 2	60	242	97.8
35	East San Bernardino Valley	--	--	--
37	Central San Bernardino Mountains	--	--	--
38	East San Bernardino Mountains	--	--	--
DISTRICT MAXIMUM			449	119.8
SOUTH COAST AIR BASIN			449	119.8

KEY:

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter	-- = Pollutant not monitored
AAM = Annual Arithmetic Mean	** Salton Sea Air Basin

^h Total suspended particulates, lead, and sulfates were determined from samples collected every six days by the high volume sampler method, on glass fiber filter media.

Table 3-2 (Concluded)
2003 Air Quality Data – South Coast Air Quality Management District

Source Receptor Area No.	Location of Air Monitoring Station	LEAD ⁱ		SULFATES (SO _x) ⁱ	
		Max. Monthly Average Conc. ^j (µg/m ³)	Max. Quarterly Average Conc. ^j (µg/m ³)	Max. Conc. (µg/m ³ , 24-hour)	No. (%) Samples Exceeding State Standard ≥ 25 µg/m ³ , 24-hour
LOS ANGELES COUNTY (Co)					
1	Central Los Angeles	0.15	0.15	14.6	0
2	Northwest Coast Los Angeles Co	--	--	14.3	0
3	Southwest Coast Los Angeles Co	0.17	0.10	16.4	0
4	South Coast Los Angeles Co	--	0.05	17.8	0
6	West San Fernando Valley	--	--	--	--
7	East San Fernando Valley	--	--	--	--
8	West San Fernando Valley	--	--	12.7	0
9	East San Gabriel Valley 1	--	--	11.7	0
9	East San Gabriel Valley 2	--	--	--	--
10	Pomona/Walnut Valley	--	--	--	--
11	South San Gabriel Valley	0.05	0.04	14.4	0
12	South Central Los Angeles Co	0.04	0.04	14.9	0
13	Santa Clarita Valley	--	--	--	--
ORANGE COUNTY					
16	North Orange County	--	--	--	--
17	Central Orange County	--	--	--	--
18	North Coastal Orange County	--	--	--	--
19	Saddleback Valley	--	--	--	--
RIVERSIDE COUNTY					
22	Norco/Corona	--	--	--	--
23	Metropolitan Riverside County 1	0.02	0.02	10.1	0
23	Metropolitan Riverside County 2	0.02	0.01	10.0	0
24	Perris Valley	--	--	--	--
25	Lake Elsinore	--	--	--	--
29	Banning Airport	--	--	--	--
30	Coachella Valley 1**	--	--	--	--
30	Coachella Valley 2**	--	--	--	--
SAN BERNARDINO COUNTY					
32	NW San Bernardino Valley	0.02	0.02	11.8	0
33	SW San Bernardino Valley	--	--	--	--
34	Central San Bernardino Valley 1	--	--	11.9	0
34	Central San Bernardino Valley 2	0.14	0.08	12.1	0
35	East San Bernardino Valley	--	--	--	--
37	Central San Bernardino Mountains	--	--	--	--
38	East San Bernardino Mountains	--	--	--	--
DISTRICT MAXIMUM		0.17	0.15	17.8	0
SOUTH COAST AIR BASIN		0.17	0.15	17.8	0

KEY: µg/m³ = micrograms per cubic meter; ** Salton Sea Air Basin; -- = Pollutant not monitored

i Total suspended particulates, lead, and sulfate were determined from samples collected every six days by the high volume sampler method, on glass fiber filter media.

j The federal standard (quarterly average lead > 1.5 µg/m³) and the state standard (monthly average lead ≥ 1.5 µg/m³) were not exceeded. In 2003, special monitoring immediately downwind of stationary sources of lead was carried out at four locations. The maximum monthly average lead concentration measured 0.35 µg/m³ and the maximum quarterly average lead concentration measured 0.29 µg/m³, both recorded in Central Los Angeles.

Carbon Monoxide

CO is a colorless, odorless gas formed by the incomplete combustion of fuels. CO competes with oxygen, often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs in the body. The ambient air quality standard for carbon monoxide is intended to protect persons whose medical condition already compromises their circulatory systems' ability to deliver oxygen. These medical conditions include certain heart ailments, chronic lung diseases, and anemia. Persons with these conditions have reduced exercise capacity even when exposed to relatively low levels of CO. Fetuses are at risk because their blood has an even greater affinity to bind with CO. Smokers are also at risk from ambient CO levels because smoking increases the background level of CO in their blood.

CO was monitored at 23 locations in the district in 2003 and no locations exceeded the federal and state eight-hour CO standards. The highest eight-hour average CO concentration of the year (7.3 ppm) was 77 percent of the federal standard and it was measured at Source/Receptor Area No. 12, South Central Los Angeles County (Station No. 084).

Ozone

Unlike primary criteria pollutants that are emitted directly from an emissions source, ozone is a secondary pollutant. It is formed in the atmosphere through a photochemical reaction of VOC, NO_x, oxygen, and other hydrocarbon materials with sunlight. As a precursor to ozone, VOC contributes to regional air quality impacts.

Ozone is a deep lung irritant, causing the passages to become inflamed and swollen. Exposure to ozone produces alterations in respiration, the most characteristic of which is shallow, rapid breathing and a decrease in pulmonary performance. Ozone reduces the respiratory system's ability to fight infection and to remove foreign particles. People who suffer from respiratory diseases such as asthma, emphysema, and chronic bronchitis are more sensitive to ozone's effects. In severe cases, ozone is capable of causing death from pulmonary edema. Early studies suggested that long-term exposure to ozone results in adverse effects on morphology and function of the lung and acceleration of lung-tumor formation and aging. Ozone exposure also increases the sensitivity of the lung to bronchoconstrictive agents such as histamine, acetylcholine, and allergens.

Studies have linked air pollution with an increase in asthmatics' acute symptoms and emergency room visits and a decrease in their lung function. Asthma is a serious public health concern across the country and reported cases have risen dramatically during the last decade. Asthma is the number one cause of school absences, the leading cause of children's visits to emergency rooms and the cause of more than 5,000 deaths a year. Low-income and uninsured residents are particularly at risk because they do not have access to preventive and ongoing medical care to control asthma and instead receive treatment only during acute asthma attacks in emergency rooms.

Ozone levels in the district were monitored at 28 locations in 2003. Maximum one-hour average and eight-hour average ozone concentrations in 2003 (0.194 ppm and 0.153 ppm) were 162 percent and 191 percent of the federal one-hour and eight-hour standards, respectively. Ozone concentrations exceeded the one-hour state standard at all, but one of the monitored locations in 2003.

In 1997, the USEPA promulgated a new national ambient air quality standard for ozone. The new ozone standard is based on an eight-hour average exposure (the current federal ozone air quality standard is based on a one-hour average period). The new eight-hour standard (0.08 ppm) represents a tightening of the existing one-hour ozone standard (0.12 ppm) and is intended to provide for greater health protection against the effects of prolonged exposure. Soon thereafter, a court decision ordered that the USEPA could not enforce the new standard until adequate justification for the new standard was provided. The USEPA appealed the decision to the Supreme Court.

On February 27, 2001, the Supreme Court upheld USEPA's authority and methods to establish clean air standards. Thus, the one-hour ozone standard was retained. The Supreme Court, however, ordered the EPA to revise its State Implementation Plan (SIP) for the new ozone standard. Under a consent decree that was reached in response to a lawsuit that was filed by nine environmental groups, USEPA promulgated the air quality designations of the various regions for the new eight-hour ozone standards effective June 15, 2004 (69 FR 23858). Also, based on current EPA thinking, the SIP for the eight-hour ozone standard is not expected to be due until approximately 2007. Thus, current regulatory control strategies will continue to focus on attaining the one-hour standard with the recognition that these controls will have benefits toward attaining the eight-hour standard, while ensuring that no backsliding will occur. In addition, based on the same consent decree plus EPA's draft implementation guidance, it is most likely that the Basin will have to meet the eight-hour ozone standard by 2001.

Meanwhile, the California Air Resources Board (CARB) and local air districts continue to collect technical information in order to prepare for an eventual SIP to reduce unhealthful levels of ozone in areas violating the new federal standard. California has previously developed a SIP for the current ozone standard, which has been approved by USEPA for the South Coast Air Basin.

Nitrogen Dioxide

NO₂ is a brownish gas that is formed in the atmosphere through a rapid reaction of the colorless gas nitric oxide (NO) with atmospheric oxygen. NO and NO₂ are collectively referred to as NO_x. NO₂ can cause health effects in sensitive population groups such as children and people with chronic lung diseases. It can cause respiratory irritation and constriction of the airways, making breathing more difficult. People with asthma and chronic bronchitis may also experience headaches, wheezing and chest tightness at high ambient levels of NO₂. NO₂ is suspected to reduce resistance to infection, especially in young children.

By 1991, exceedances of the federal standard were limited to one location in Los Angeles County. The Basin was the only area in the United States classified as nonattainment for the federal NO₂ standard under the 1990 Clean Air Act Amendments. No location in the area of SCAQMD's jurisdiction has exceeded the federal standard since 1992 and the South Coast Air Basin was designated attainment for the national standard in 1998. In 2003, 23 stations monitored NO₂ levels in the district and the maximum annual arithmetic mean (AAM) was measured at 0.0356 ppm which represents 67 percent of the federal standard (the federal standard is an AAM of NO₂ greater than 0.0534 ppm). The more stringent one-hour state standard (0.25 ppm) was not exceeded in year 2003. Despite declining NO_x

emissions over the last decade, further NO_x emissions reductions are necessary to ensure no further exceedances of the NO₂ standard and because NO_x emissions are PM₁₀ and ozone precursors.

Sulfur Dioxide

SO₂ is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Health effects include acute respiratory symptoms and difficulty in breathing for children. In 2003, seven locations monitored SO₂ levels and neither the state nor the federal standards were exceeded. Although SO₂ concentrations have been reduced to levels well below state and federal standards, further reductions are needed because SO₂ is a precursor for sulfates, PM₁₀, and PM_{2.5}.

Particulate Matter (PM₁₀)

PM₁₀ is defined as suspended particulate matter measuring 10 microns or less in diameter and includes a complex mixture of man-made and natural substances including sulfates, nitrates, metals, elemental carbon, sea salt, soil, organics and other materials. PM₁₀ may have adverse health impacts because these microscopic particles are able to penetrate deeply into the respiratory system. In some cases, the particulates themselves may cause actual damage to the alveoli of the lungs or they may contain adsorbed substances that are injurious. Children can experience a decline in lung function and an increase in respiratory symptoms from PM₁₀ exposure. People with influenza, chronic respiratory disease and cardiovascular disease can be at risk of aggravated illness from exposure to fine particles. Increases in death rates have been statistically linked to corresponding increases in PM₁₀ levels.

In 2003, PM₁₀ was monitored at 19 locations in the district. There was one exceedance of the federal 24-hour standard (150 µg/m³), while the state 24-hour standard (50 µg/m³) was exceeded at all 18 monitored locations. The federal standard (AAM greater than 50 µg/m³) was exceeded in two locations.

Particulate Matter (PM_{2.5})

In 1997, the USEPA promulgated a new national ambient air quality standard for PM_{2.5}, particulate matter 2.5 microns or less in diameter. The PM_{2.5} standard is a subset of PM₁₀ such that it complements existing national and state ambient air quality standards that target the full range of inhalable PM₁₀. In addition to the health effects for PM₁₀, additional effects from exposure to PM_{2.5} may result in increased hospital admissions and emergency room visits for heart and lung disease, increased respiratory symptoms and disease, decreased lung functions, and premature death.

The SCAQMD began regular monitoring of PM_{2.5} in 1999. In 2003, concentrations of PM_{2.5} were monitored at 18 locations throughout the district. The federal 24-hour standard (65 µg/m³) was exceeded at 12 locations. The federal standard (AAM greater than 15 µg/m³) was exceeded in 14 locations, and the state standard (AAM greater than 12 µg/m³) was exceeded in 15 locations.

Total Suspended Particulates (TSP)

TSP is a complex mixture of solid material suspended in the atmosphere. The federal and state standards for lead and sulfate are based on analyses of TSP samples. In 2001, TSP samples were collected by the District at 13 sites. These samples were analyzed for sulfate and nitrate and were found to contain an average of from five to 19 percent sulfate and five to 21 percent nitrate, depending on the location. Lead concentrations were determined for nine of the sites, and the average lead concentration ranged from 0.03 to 0.06 percent of the TSP.

The fine fraction of TSP has greater effects on health and visibility than the coarse fraction. In 1987 EPA adopted PM₁₀ standards, which replaced the earlier TSP standards. In 1997, the U.S. EPA adopted new federal air quality standards for finer particulate matter, PM_{2.5}, to complement existing PM₁₀ standards that target the full range of inhalable particulate matter.

Lead

Lead concentrations once exceeded the state and national ambient air quality standards by a wide margin, but have not exceeded state or federal standards at any regular monitoring station since 1982. Though special monitoring sites immediately downwind of lead sources recorded very localized violations of the state standard in 1994, no violations were recorded at these stations since that time.

Sulfates

Sulfates or SO_x are a group of chemical compounds containing the sulfate group, which is a sulfur atom with four oxygen atoms attached. The 24-hour state sulfate standard (25 µg/m³) was exceeded at one location in 1999, 2000 and 2001; however, was not exceeded at any locations in 2002 and 2003. There are no federal air quality standards for sulfate.

Visibility Reducing Particles

Since deterioration of visibility is one of the most obvious manifestations of air pollution and plays a major role in the public's perception of air quality, the state of California has adopted a standard for visibility or visual range. Until 1989, the standard was based on visibility estimates made by human observers. The standard was changed to require measurement of visual range using instruments that measure light scattering and absorption by suspended particles.

Volatile Organic Compounds

It should be noted that there are no state or national ambient air quality standards for VOCs because they are not classified as criteria pollutants. VOCs are regulated, however, because limiting VOC emissions reduces the rate of photochemical reactions that contribute to the formation of ozone. They are also transformed into organic aerosols in the atmosphere, contributing to higher PM₁₀ and lower visibility levels.

Although health-based standards have not been established for VOCs, health effects can occur from exposures to high concentrations of VOCs because of interference with oxygen uptake. In general, ambient VOC concentrations in the atmosphere are suspected to cause coughing, sneezing, headaches, weakness, laryngitis, and bronchitis, even at low concentrations. Some hydrocarbon components classified as VOC emissions are thought or

known to be hazardous. Benzene, for example, one hydrocarbon component of VOC emissions, is known to be a human carcinogen.

Non-Criteria Pollutant Emissions

Although the SCAQMD's primary mandate is attaining the State and National Ambient Air Quality Standards for criteria pollutants within the district, SCAQMD also has a general responsibility pursuant to the Health and Safety Code §41700 to control emissions of air contaminants and prevent endangerment to public health. As a result, over the last few years the SCAQMD has regulated pollutants other than criteria pollutants such as TACs, greenhouse gases and stratospheric ozone depleting compounds. The SCAQMD has developed a number of rules to control non-criteria pollutants from both new and existing sources. These rules originated through state directives, CAA requirements, or the SCAQMD rulemaking process.

In addition to promulgating non-criteria pollutant rules, the SCAQMD has been evaluating AQMP control measures as well as existing rules to determine whether or not they would affect, either positively or negatively, emissions of non-criteria pollutants. For example, rules in which VOC components of coating materials are replaced by a non-photochemically reactive chlorinated substance would reduce the impacts resulting from ozone formation, but could increase emissions of other substances that may have adverse impacts on human health.

The following sections summarize the existing setting for the two major categories of non-criteria pollutants: compounds that contribute to ozone depletion and global warming, and TACs.

Ozone Depletion and Global Warming

The SCAQMD adopted a "Policy on Global Warming and Stratospheric Ozone Depletion" on April 6, 1990. The policy commits the SCAQMD to consider global impacts in rulemaking and in drafting revisions to the AQMP.

In March of 1992, the SCAQMD Governing Board reaffirmed this policy and adopted amendments to the policy to include the following directives:

- phase out the use and corresponding emissions of chlorofluorocarbons (CFCs), methyl chloroform (1,1,1-trichloroethane or TCA), carbon tetrachloride, and halons by December 1995;
- phase out the large quantity use and corresponding emissions of hydrochlorofluorocarbons (HCFCs) by the year 2000;
- develop recycling regulations for HCFCs;
- develop an emissions inventory and control strategy for methyl bromide; and
- support the adoption of a California greenhouse gas emission reduction goal.

In support of these policies, the SCAQMD Governing Board has adopted several rules to reduce ozone depleting compounds. Several other rules concurrently reduce global warming gases and criteria pollutants.

On March 17, 2000, the SCAQMD Governing Board approved "An Air Toxics Control Plan for the Next Ten Years." The Air Toxics Control Plan identifies potential strategies to reduce toxic levels in the Basin over the ten years following adoption. To the extent the

strategies are implemented by the relative agencies, the plan will improve public health by reducing health risks associated with both mobile and stationary sources. Exposure to toxic air contaminants (TACs) can increase the risk of contracting cancer or result in other deleterious health effects which target such systems as cardiovascular, reproductive, hematological, or nervous. The health effects may be through short-term, high-level or “acute” exposure or long-term, low-level or “chronic” exposure.

Toxic Air Contaminants

Historically, the SCAQMD has regulated criteria air pollutants using either a technology-based or an emissions limit approach. The technology-based approach defines specific control technologies that may be installed to reduce pollutant emissions. The emission limit approach establishes an emission limit, and allows industry to use any emission control equipment, as long as the emission requirements are met. The regulation of toxic air contaminants (TACs) requires a similar regulatory approach as explained 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 (AB) 1807, 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. CARB has adopted a regulation designating all 188 federal hazardous air pollutants (HAPs) as TACs.

ATCMs are developed by CARB and implemented by the SCAQMD and other air districts through the adoption of regulations of equal or greater stringency. Generally, the ATCMs reduce emissions to achieve exposure levels below a determined health threshold. If no such threshold levels are determined, emissions are reduced to the lowest level achievable through the best available control technology unless it is determined that an alternative level of emission reduction is adequate to protect public health.

Under California state law, a federal National Emission Standard for Hazardous Air Pollutants (NESHAP) automatically becomes a state ATCM, unless CARB has already adopted an ATCM for the source category. Once a NESHAP becomes an ATCM, CARB and the air pollution control or air quality management district have certain responsibilities related to adoption or implementation and enforcement of the NESHAP/ATCM.

Control of TACs Under the Air Toxics "Hot Spots" Act

The Air Toxics Hot Spots Information and Assessment Act of 1987 (AB2588) establishes a statewide program to inventory and assess the risks from facilities that emit TACs and to notify the public about significant health risks associated with the emissions. Facilities are phased into the AB2588 program based on their emissions of criteria pollutants or their occurrence on lists of toxic emitters compiled by the SCAQMD. Phase I consists of facilities that emit over 25 tons per year (tpy) of any criteria pollutant and facilities present on the SCAQMD's toxics list. Phase I facilities entered the program by reporting their air TAC emissions for calendar year 1989. Phase II consists of facilities that emit between 10 and 25 tons per year of any criteria pollutant, and submitted air toxic inventory reports for calendar year 1990 emissions. Phase III consists of certain designated types of facilities which emit less than 10 tons per year of any criteria pollutant, and submitted inventory

reports for calendar year 1991 emissions. Inventory reports are required to be updated every four years under the state law.

In October 1992, the SCAQMD Governing Board adopted public notification procedures for Phase I and II facilities. These procedures specify that AB2588 facilities must provide public notice when exceeding the following risk levels:

- Maximum Individual Cancer Risk: greater than 10 in 1 million (10×10^{-6})
- Total Hazard Index: greater than 1.0 for TACs except lead, or >0.5 for lead

Public notice is to be provided by letters mailed to all addresses and all parents of children attending school in the impacted area. In addition, facilities must hold a public meeting and provide copies of the facility risk assessment in all school libraries and a public library in the impacted area.

The SCAQMD continues to complete its review of the health risk assessments submitted to date and may require revision and resubmission as appropriate before final approval. Notification will be required from facilities with a significant risk under the AB2588 program based on their initial approved health risk assessments and will continue on an ongoing basis as additional and subsequent health risk assessments are reviewed and approved.

Control of TACs With Risk Reduction Audits and Plans

Senate Bill (SB) 1731, enacted in 1992 and codified at Health and Safety Code §44390 et seq., amended AB2588 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. SCAQMD Rule 1402 - Control of Toxic Air Contaminants from Existing Sources, was adopted on April 8, 1994, to implement the requirements of SB1731.

In addition to the TAC rules adopted by SCAQMD under authority of AB1807 and SB1731, the SCAQMD has adopted source-specific TAC rules, based on the specific level of TACs emitted and the needs of the area. These rules are similar to the state's ATCMs because they are source-specific and only address emissions and risk from specific compounds and operations.

Cancer Risks from Toxic Air Contaminants

New and modified sources of toxic air contaminants in the SCAQMD are subject to Rule 1401 - New Source Review of Toxic Air Contaminants and Rule 212 - Standards for Approving Permits. Rule 212 requires notification of the SCAQMD's intent to grant a permit to construct a significant project, defined as a new or modified permit unit located within 1000 feet of a school (a state law requirement under AB3205), a new or modified permit unit posing a maximum individual cancer risk of one in one million (1×10^{-6}) or greater, or a new or modified facility with criteria pollutant emissions exceeding specified daily maximums. Distribution of notice is required to all addresses within a 1/4-mile radius, or other area deemed appropriate by the SCAQMD. Rule 1401 currently controls emissions of carcinogenic and non-carcinogenic (health effects other than cancer) air contaminants from new, modified and relocated sources by specifying limits on cancer risk and hazard index (explained further below), respectively.

Health Effects of Toxic Air Contaminants

One of the primary health risks of concern due to exposure to TACs is the risk of contracting cancer. The carcinogenic potential of TACs is a particular public health concern because it is currently believed by many scientists that there is no "safe" level of exposure to carcinogens and that any exposure to a carcinogen poses some risk of causing cancer. It is currently estimated that about one in four deaths in the United States is attributable to cancer. About two percent of cancer deaths in the United States may be attributable to environmental pollution (Doll and Peto 1981). The proportion of cancer deaths attributable to air pollution has not been estimated using epidemiological methods.

Non-Cancer Health Risks from Toxic Air Contaminants

Unlike carcinogens, for most noncarcinogens it is believed that there is a threshold level of exposure to the compound below which it will not pose a health risk. The California Environmental Protection Agency (CalEPA) Office of Environmental Health Hazard Assessment (OEHHA) develops Reference Exposure Levels (RELs) for TACs which are health-conservative estimates of the levels of exposure at or below which health effects are not expected. The noncancer health risk due to exposure to a TAC is assessed by comparing the estimated level of exposure to the REL. This comparison is expressed as the ratio of the estimated exposure level to the REL, or hazard index (HI).

Rule 1146.2 Emission Reductions

Rule 1146.2 requires manufacturers, distributors, retailers, refurbishers, installers and operators to reduce NO_x emissions from natural gas-fired large (commercial) water heaters, small (industrial) boilers, and process heaters. The NO_x emissions in this rule refer to the sum of nitrogen oxide and nitrogen dioxide in the flue gas, collectively expressed as nitrogen dioxide.

Rule 1146.2 currently requires NO_x emissions limits of:

- 30 ppm for new Type 2 units greater than 400,000 Btu/hr by January 1, 2000;
- 55 ppm for new Type 1 units 75,000 up to and including 400,000 Btu/hr by January 1, 2001;
- 30 ppm for existing Type 2 units greater than 1,000,000 Btu/hr manufactured prior to January 1, 1992, by July 1, 2002;
- 30 ppm for existing Type 2 units greater than 1,000,000 Btu/hr manufactured between 1992 and 1999, by January 1, 2005;
- 30 ppm for units greater than 400,000 Btu/hr but less than or equal to 1,000,000 Btu/hr manufactured prior to January 1, 2000, by January 1, 2006.

As shown above, the emissions limits are the same for units in the same size category; however, the emission limits and compliance dates differ based on the rated heat input of the unit and whether the unit is new or existing. At the time Rule 1146.2 was adopted in 1998, it was anticipated that retrofit kits would be widely available for popular types of units to provide an easy way to extend the life of existing units. The availability of retrofit kits (e.g. burners) did not develop as expected. Most manufacturers that provide retrofit burners have

elected not to certify them in advance of installation. As a result, the burners must be source tested after they are installed. Further, retrofit burners are not available for all units, particularly units in the smaller size categories.

The emission reductions (existing conditions and “no project” alternative) for Rule 1146.2 are set forth in Table 3-3 below (in pounds per day [lbs/day]). These emission reductions assume that the existing version of Rule 1146.2 is implemented through year 2015.

TABLE 3-3
RULE 1146.2 EMISSION REDUCTIONS
(lbs/day)

	YEAR										
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
New Type 1 ≤400,000	1,145	1,373	1,602	1,831	2,060	2,289	2,518	2,747	2,976	3,205	3,434
New Type 2 >400,000	5,623	5,623	5,623	5,623	5,623	5,623	5,623	5,623	5,623	5,623	5,623
Existing Type 2 >1,000,000 (manufactured prior to 1992)	5,061	5,061	5,061	5,061	5,061	5,061	5,061	5,061	5,061	5,061	5,061
Existing Type 2 >1,000,000 (manufactured on or after January 1, 1992)	2,530	2,530	2,530	2,530	2,530	2,530	2,530	2,530	2,530	2,530	2,530
Existing Type 2 - 400,000 to 1,000,000 (prior to 2000)	∅	843	843	843	843	843	843	843	843	843	843
TOTALS (a)	14,358	15,431	15,659	15,888	16,117	16,346	16,575	16,804	17,033	17,262	17,491

(a) Emission reductions based on the February 4, 1998 SIP Submittal for Rule 1146.2. See Appendix C for a detailed table.

(b) Slight variations in the absolute differences shown in the table are due to rounding, converting tons per day to pounds per day, etc.

The emissions reductions in Table 3-3 are the emission reductions which would occur should the existing version of Rule 1146.2 be implemented through the year 2015. These emission reductions were derived from the SIP submittal completed for Rule 1146.2 in 1998.

The 1998 staff report for the adoption of Rule 1146.2 estimated that there were 43,600 Type 1 units (75,000 Btu/hr up to and including 400,000 Btu/hr) and 22,000 Type 2 units (400,000 Btu/hr up to and including 2,000,000 Btu/hr) in the district; and that the NO_x emissions inventory was between 12.2 and 14.2 tons per day (tpd). The AQMP SIP submittal for Rule 1146.2 estimated that less than 3.5 tpd of NO_x emissions would remain after all units met (replaced or retrofit) the emissions standards required in the rule by the year 2015.

The general formula for calculating the Rule 1146.2 emissions in the 1998 staff report is below.

- E = Emissions of NO_x (in tons/day)
- U = Number of Units (in a particular size category)
- HR = Heat Rating (MMBtu/hr)
- ER = Emissions Rate (tons of NO_x per Btu)
- CF = Capacity Factor

$$E = U \times HR \times ER \times CF \times \frac{24 \text{ hours}}{\text{day}}$$

CHAPTER 4

ENVIRONMENTAL IMPACTS

Introduction

Potential Environmental Impacts and Mitigation Measures

Potential Environmental Impacts Found Not to be Significant

Consistency

INTRODUCTION

CEQA Guidelines require environmental documents to identify significant environmental effects that may result from a proposed project, including those which cannot be avoided through mitigation (CEQA Guidelines §15126.2(a)). In assessing the impact of a proposed project, the evaluation should be limited to changes in the existing physical conditions in the affected area as they exist at the time of the environmental evaluation. Direct and indirect significant effects of a project on the environment should be identified and described, with consideration given to both short-term and long-term impacts. If significant adverse environmental impacts are identified, CEQA Guidelines require a discussion of mitigation measures that could either avoid or substantially reduce any adverse environmental impacts to the greatest extent feasible (CEQA Guidelines §15126.4).

CEQA Guidelines indicate that the degree of specificity required in a CEQA document depends on the type of project being proposed (CEQA Guidelines §15146). The detail of the environmental analysis for certain types of projects cannot be as great as for others. For example, the environmental document for projects such as the adoption or amendment of a comprehensive zoning ordinance or local general plan should focus on the secondary effects that can be expected to follow from the adoption or amendment, but the analysis need not be as detailed as the analysis of the specific construction projects that might follow. Accordingly, this CEQA document analyzes impacts primarily on a regional level and impacts on a local level where feasible.

The categories of environmental impacts to be analyzed in a CEQA document are established by law (California Public Resources Code §21000 et seq., and the CEQA Guidelines), as promulgated by the State of California Secretary of Resources. CEQA Guidelines include 17 environmental categories in which potential adverse impacts from a project must be evaluated. Projects are evaluated against these environmental categories in a checklist and those environmental categories that may be adversely affected by the project are further analyzed in the appropriate CEQA document.

POTENTIAL ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Pursuant to CEQA, 17 environmental topics were evaluated to determine which areas would be potentially affected by the proposed amendments to Rule 1146.2. Of the 17 potential environmental impact categories, only air quality was identified as being potentially adversely affected by the proposed project.

The analysis of potential adverse air quality impacts in this Final Draft EA incorporates a “worst-case” approach. This approach entails the premise that whenever the analysis requires that assumptions be made, the assumptions that result in the greatest adverse impacts are typically chosen. This method ensures that all potential effects of the proposed project are documented for the decision-makers and the public. Accordingly, the following analysis uses a conservative “worst-case” approach for evaluating the potentially significant adverse environmental impacts associated with the implementation of the proposed project.

Air Quality

Significance Criteria

To determine whether or not air quality impacts from adopting and implementing the proposed amendments to Rule 1146.2 are significant, activities associated with the proposed project will be evaluated and compared to the following criteria. If any activities result in air quality impacts which are equal to, or exceed, the thresholds in Table 4-1, the impacts will be considered significant. All feasible mitigation measures will be identified and implemented to reduce significant impacts to the maximum extent feasible.

**TABLE 4-1
SCAQMD AIR QUALITY SIGNIFICANCE THRESHOLDS**

Mass Daily Thresholds		
Pollutant	Construction	Operational
NO _x	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM10	150 lbs/day	150 lbs/day
SO _x	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Toxic Air Contaminants and Odor Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk \geq 10 in 1 million Hazard Index \geq 1.0 (project increment) Hazard Index \geq 3.0 (facility-wide)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Ambient Air Quality for Criteria Pollutants		
NO ₂ 1-hour average annual average	20 $\mu\text{g}/\text{m}^3$ or 1.0 parts per hundred million 1 $\mu\text{g}/\text{m}^3$ or 0.05 parts per hundred million	
PM10 24-hour average annual geometric average	2.5 $\mu\text{g}/\text{m}^3$ 1.0 $\mu\text{g}/\text{m}^3$	
Sulfate 24-hour average	1 $\mu\text{g}/\text{m}^3$	
CO 1-hour average 8-hour average	1.1 mg/m^3 or 1.0 parts per million 0.50 mg/m^3 or 0.45 parts per million	

$\mu\text{g}/\text{m}^3$ = microgram per cubic meter; mg/m^3 = milligram per cubic meter; lbs/day = pounds per day; \geq greater than or equal to

Construction Emissions

Construction-related emissions can be distinguished as either onsite or offsite. Onsite emissions generated during construction principally consist of exhaust emissions (NO_x, SO_x, CO, VOC, and PM10) from the operation of heavy-duty construction equipment, fugitive dust (as PM10) from disturbed soil, and VOC emissions from asphaltic paving and painting. Offsite emissions during the construction phase normally consist of exhaust emissions and entrained paved road dust (as PM10) from worker commute trips, material delivery trips, and haul truck material removal trips to and from the construction site.

PROJECT-SPECIFIC IMPACTS: Based on the above description of construction activities, the proposed project is not expected to generate construction-related emissions. There are no requirements in PAR 1146.2 to perform any construction or associated activities (e.g. demolition or building of structures, facilities, infrastructure, or installation of control equipment) because the proposed amendments do not require any physical modifications at affected manufacturing facilities.

Further, PAR 1146.2 extends the compliance date for Type 2 units greater than 1,000,000 Btu/hr from January 1, 2005 to January 1, 2006~~7~~, and requires that on or after January 1, 2006, no person shall operate in the district any unit more than 15 years old, based on the original date of manufacture with a rated heat input greater than 400,000 Btu/hr, but less than or equal to 1,000,000 Btu/hr manufactured prior to January 1, 2000 unless the certified NOx emissions are less than or equal to 30 ppm. ~~and removes the 2006 retrofit requirement for existing Type 2 units between 400,000 and 1,000,000 Btu/hr.~~ These proposed amendments will not create construction impacts. Those facilities that elect to retrofit their units will likely replace the burners with low NOx burners. No emission-generating construction equipment will be needed to retrofit these existing units. PAR 1146.2 does not accelerate the purchase of new units; however, PAR 1146.2 requires that when a new unit is purchased that it meets a specified emission limit. The footprint of a new low NOx unit that meets the 30 ppm emission limit of PAR 1146.2 is not expected to be greater than a similarly sized existing non-compliant unit. As a result, no significant construction impacts or building modifications are expected from PAR 1146.2.

PROJECT-SPECIFIC MITIGATION: No mitigation is required.

REMAINING CONSTRUCTION EMISSION IMPACTS: None.

CUMULATIVE IMPACTS: Cumulative impacts refer to two or more individual affects which, when considered together, are considerable or which compound or increase other environmental impacts. There are no provisions of PAR 1146.2 that result in either project-specific or cumulative construction emission impacts. Since the proposed project does not require any construction or related activities, it is not expected to create significant adverse project-specific construction emission impacts. Therefore, the proposed project's contribution to significant adverse cumulative construction emission impacts is not considered to be cumulatively considerable as defined in CEQA Guidelines §§15065(c) and 15130(a)(3) and, therefore, is not significant.

CUMULATIVE IMPACT MITIGATION: None.

Operational Emissions

PAR 1146.2 involves amendments to an existing rule that will cause anticipated NOx emission reductions foregone from natural gas-fired large (commercial) water heaters, small (industrial) boilers, and process heaters. The proposed amendments will extend the compliance date from January 1, 2005 to January 1, 2006~~7~~ for existing Type 2 units with a rated heat input greater than 1,000,000 Btu/hr but less than or equal to 2,000,000 Btu/hr manufactured on or after January 1, 1992, and that are more than 15 years ~~old or older~~ from the date of manufacture. On or after January 1, 2006~~7~~ no person shall operate any existing Type 2 unit more than 15 years

old, based on the date of manufacture, unless the NOx emissions are less than or equal to 30 ppm. Further, on or after January 1, 2006, no person shall operate in the district any unit more than 15 years old, based on the original date of manufacture with a rated heat input greater than 400,000 Btu/hr, but less than or equal to 1,000,000 Btu/hr manufactured prior to January 1, 2000 unless the certified NOx emissions are less than or equal to 30 ppm. ~~the 2006 retrofit requirement for existing Type 2 units 400,000 Btu/hr to 1,000,000 Btu/hr will be removed from Rule 1146.2.~~

Anticipated NOx emission reductions foregone will occur from:

- **EXTENDING THE COMPLIANCE DATE** from January 1, 2005 to January 1, 2006~~7~~ for existing Type 2 units greater than 1,000,000 Btu/hr but less than or equal to 2,000,000 Btu/hr manufactured on or after January 1, 1992, and that are more than 15 years old ~~or older~~ from the date of manufacture, is expected to result in anticipated NOx emission reductions foregone that exceed the SCAQMD's daily NOx significance threshold of 55 lbs/day.
- ~~**REMOVING MODIFYING THE 2006 RETROFIT REQUIREMENT** that on or after January 1, 2006, no person shall operate in the district any unit more than 15 years old, based on the original date of manufacture with a rated heat input greater than 400,000 Btu/hr, but less than or equal to 1,000,000 Btu/hr manufactured prior to January 1, 2000 unless the certified NOx emissions are less than or equal to 30 ppm. for existing Type 2 units 400,000 to 1,000,000 Btu/hr is expected to result in anticipated NOx emission reductions foregone that exceed the SCAQMD's daily NOx significance threshold.~~

Operational emissions impacts will occur from implementing the proposed amendments to Rule 1146.2. The impacts are limited to changes to requirements for existing units. PAR 1146.2 does not change the requirements for new Type 1 or Type 2 units.

PROJECT-SPECIFIC IMPACTS:

There are two potentially significant adverse impacts associated with the proposed amendments to Rule 1146.2 is (1) extending the compliance date from January 1, 2005 to January 1, 2006~~7~~ for existing Type 2 units greater than 1,000,000 Btu/hr but less than or equal to 2,000,000 Btu/hr manufactured on or after January 1, 1992, and that are more than 15 years old from the date of manufacture; and (2) requiring that on or after January 1, 2006, no person shall operate in the district any unit more than 15 years old, based on the original date of manufacture with a rated heat input greater than 400,000 Btu/hr, but less than or equal to 1,000,000 Btu/hr manufactured prior to January 1, 2000 unless the certified NOx emissions are less than or equal to 30 ppm. ~~removing the 2006 retrofit requirements for existing Type 2 units 400,000 to 1,000,000 Btu/hr manufactured prior to January 1, 2000.~~ Although there are no increases in NOx emissions from PAR 1146.2, there are emission reductions foregone annually beginning in 2005 and up to and including 2013~~4~~. As shown in Table 4-2 the greatest emission reductions foregone occur in the year 2005 with 2,530 pound per day of NOx emissions foregone. The annual NOx emissions foregone decrease over time as the existing units are replaced with new or retrofitted low NOx units. Thus, based on a 15 year useful life, it is assumed that all units will be replaced or retrofitted by 2015. Since the CEQA significance threshold for operational emissions is 55 pounds per day, PAR 1146.2 will result in a significant adverse air quality

impact. In 2014~~5~~ emission reductions anticipated to occur from the existing Rule 1146.2 will be completely realized.

Table 4-2 illustrates the emission reductions foregone anticipated for each year from 2005 through 2013~~5~~, for the proposed project. Overall, the total emission reductions originally anticipated from Rule 1146.2 would be realized by 2014~~5~~.

**TABLE 4-2
AIR QUALITY IMPACTS ASSOCIATED WITH THE PROPOSED PROJECT
(lbs/day)**

	YEAR										
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Rule 1146.2 Emission Reductions (a)	14358	15431	15659	15888	16117	16346	16575	16804	17033	17262	17491
PAR 1146.2 Emission Reductions	11828	12994 <u>13056</u>	13457 <u>13592</u>	13920 <u>14108</u>	14384 <u>14634</u>	14847 <u>15154</u>	15310 <u>15634</u>	15773 <u>16210</u>	16236 <u>16736</u>	16699 <u>17262</u>	17491
Proposed Project Emission Reductions Foregone (b)	2530	2437 <u>2375</u>	2202 <u>2067</u>	1968 <u>1780</u>	1734 <u>1483</u>	1499 <u>1187</u>	1265 <u>891</u>	1031 <u>594</u>	796 <u>247</u>	562 <u>0</u>	0

(a) Emission reductions based on February 4, 1998 SIP Submittal to CARB for Rule 1146.2.

(b) Total emission reductions foregone are derived by subtracting the emission reductions from PAR 1146.2 from the Rule 1146.2 emission reductions. Slight variations in the absolute differences shown in the table are due to rounding, converting tons per day to pounds per day, etc. Please see Appendix C for detailed emission reductions and emission reductions foregone.

PROJECT-SPECIFIC MITIGATION:

Although the proposed rule amendments do not result in an increase of NO_x emissions, the two issues that would result in air quality impacts include the following: (1) extending the compliance date from January 1, 2005 to January 1, 2006~~7~~ for existing Type 2 units greater than 1,000,000 Btu/hr but less than or equal to 2,000,000 Btu/hr manufactured on or after January 1, 1992, and that are more than 15 years old ~~or older~~ from the date of manufacture; and (2) requiring that on or after January 1, 2006, no person shall operate in the district any unit more than 15 years old, based on the original date of manufacture with a rated heat input greater than 400,000 Btu/hr, but less than or equal to 1,000,000 Btu/hr manufactured prior to January 1, 2000 unless the certified NO_x emissions are less than or equal to 30 ppm. ~~removing the 2006 retrofit requirements for existing Type 2 units 400,000 to 1,000,000 Btu/hr manufactured prior to January 1, 2000,~~ will result in a significant adverse air quality impact as a result of annual NO_x emission reductions foregone until the year 2014~~5~~.

No feasible mitigation measures were identified that could reduce or eliminate the significant adverse air quality impacts from the proposed project. However, the annual emission reductions foregone from the proposed project will not hinder attainment of the state and federal ozone standards because projects that may result in emission reductions foregone have been accounted for in the 2003 AQMP as part of the SIP reserve.

To achieve air quality goals, adopted and amended rules and regulations that rely on technology forcing emission limits are often needed. Technology forcing emission limits are designed to provide ample time for the development and implementation of new air pollution technologies.

In the event, however, that the new air pollution control technology does not come to fruition by the implementation date of the adopted or amended rule there may be a need to delay or relax the future emission limits. The SIP Reserve (NSR set-aside) of three tons per day of NOx is designed to ensure that delaying or relaxing future emission limits for technology forcing rules will not interfere with the Basin's attainment demonstration. In addition, the SIP Reserve allows the AQMD to adopt and amend rules with technology forcing limits while maintaining SIP approvability if a rule relaxation or delay is needed. (Source: 2003 AQMP, Appendix III, pages III-2-28, Table 2-10 "Summary of Emissions Growth Set-Aside for the 2003 AQMP" and III-2-35)

REMAINING AIR QUALITY IMPACTS:

No mitigation measures are available to reduce or eliminate the significant adverse NOx impacts identified for the proposed project. As a result, a Statement of Findings and a Statement of Overriding Considerations will be prepared for the Governing Board's consideration and approval prior to the public hearing for the proposed rule amendments.

CUMULATIVE AIR QUALITY IMPACTS:

Cumulative impacts refer to two or more individual affects which, when considered together, are considerable or which compound or increase other environmental impacts. Further, the air quality analysis in this Draft EA is a conservative, "worst-case" analysis, and the actual impacts may not be as great as estimated here. Therefore, although project-specific air quality impacts are significant, cumulative air quality impacts will not be significant for the following reasons. Implementing the control measures proposed by the SCAQMD as part of the 2003 AQMP are estimated to achieve a total of five tons per day of NOx by 2010 (2003 Final AQMP Program EIR, page 4.1-63). Further, the control measures to be implemented by CARB and/or USEPA are expected to reduce NOx emissions by an additional 69 tons per day in the district by 2010 (2003 Final AQMP Program EIR, page 4.1-64).

CUMULATIVE MITIGATION: None required.

POTENTIAL ENVIRONMENTAL IMPACTS FOUND NOT TO BE SIGNIFICANT

All the environmental topics required to be analyzed under CEQA were reviewed to determine if the proposed project would create significant adverse impacts. The analysis concluded that the following environmental areas were found not to be significant, or adversely affected by PAR 1146.2: aesthetics, agriculture resources, biological resources, cultural resources, energy, geology/soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, and solid/hazardous waste. Although these topics were not analyzed in further detail in this Final Draft EA, a brief discussion of each is provided below.

Neither the existing rule 1146.2, nor the proposed amendments include any requirements for construction or associated activities, (e.g. demolition; building of structures, facilities or infrastructure). Further, the proposed project does not require the modification of any structures or manufacturing processes or installation of pollution control equipment. For these reasons none of the following environmental topics is expected to be adversely affected by

implementing PAR 1146.2. Additional considerations for why an environmental area will not be adversely affected by the proposed project will be given where necessary.

Aesthetics

PAR 1146.2 involves amendments to an existing rule intended to reduce NOx emissions from natural gas-fired large (commercial) water heaters, small (industrial) boilers, and process heaters. PAR 1146.2 applies to manufacturers, distributors, retailers, refurbishers, installers and operators of new and existing units. No changes to the aesthetic environment are expected. The proposed project has no potential to cause a substantial adverse effect on any scenic vistas, substantially degrade the existing visual character or quality of any site and its surroundings, or create new sources of substantial light or glare which would adversely affect day or nighttime views of an area as explained in the introduction to this section.

Agriculture Resources

There are no requirements in the proposed amendments to acquire land or convert agricultural land to a non-agricultural use, conflict with zoning for agricultural uses, or conflict with a Williamson Act contract for the same reasons given in the introduction to this section.

Biological Resources

No direct or indirect impacts from the proposed project were identified that could adversely affect plant or animal species or the habitats on which they rely within the district. PAR 1146.2 involves amendments to an existing rule intended to reduce NOx emissions from natural gas-fired large (commercial) water heaters, small (industrial) boilers, and process heaters and does not affect biological resources. Consequently, the proposed amendments will not affect any habitat conservation or natural community conservation plans, agricultural resources or operations, and will not create divisions in any existing communities for the same reasons given in the introduction to this section.

Cultural Resources

No direct or indirect impacts from the proposed project were identified that could adversely affect cultural resources within the district. PAR 1146.2 involves amendments to an existing rule intended to reduce NOx emissions from natural gas-fired large (commercial) water heaters, small (industrial) boilers, and process heaters. As a result, the proposed project has no potential to affect the significance of a historical or archaeological resource, directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature, or disturb any human remains, including those interred outside formal cemeteries.

Energy

There are no provisions in the proposed amendments related to the use or generation of energy which would conflict with any energy conservation plans or existing energy standards. There are no provisions in the proposed amendments that would require additional energy, result in the need for new or substantially altered power or natural gas utility systems, or otherwise cause significant impacts on local or regional energy supplies. Similarly, the proposed project will not affect peak or base period demands for electricity or other forms of energy. PAR 1146.2 involves amendments to an existing rule intended to reduce NOx emissions from natural gas-fired large (commercial) water heaters, small (industrial) boilers, and process heaters. The

manufacturing of lower NO_x units is more efficient and requires less natural gas for the combustion process. Furthermore, making the combustion process more efficient results in reducing the energy demand of affected equipment; which is a small, beneficial effect of the proposed project.

Geology and Soils

PAR 1146.2 involves amendments to an existing rule intended to reduce NO_x emissions from natural gas-fired large (commercial) water heaters, small (industrial) boilers, and process heaters and does not include any requirements that physically alter or change the geology or soils existing setting. Since there is no construction associated with the proposed project, its implementation would not result in the erosion of soil, or a change in existing siltation rates. The proposed project will not expose people or property to geological hazards such as earthquakes, landslides, mudslides, ground failure, or other natural hazards. Further, there will be no building on a geologic unit or soil that is unstable or on expansive soil. The proposed project does not generate wastewater, rely on soils capable of supporting septic tanks or alternative wastewater disposal systems, or affect in any way septic tanks or alternative wastewater disposal systems.

Hazards and Hazardous Materials

The proposed project does not involve the handling, storage, use, generation or transportation of hazardous materials. Further, PAR 1146.2 involves amendments to an existing rule intended to reduce NO_x emissions from natural gas-fired large (commercial) water heaters, small (industrial) boilers, and process heaters and will not create a significant hazard to the public or the environment through the routine transport, use, and disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. In addition, there are no provisions of the proposed amendments that would impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. No aspects of the proposed amendments expose, in any way, people or structures to a significant risk of loss, injury or death involving wildland fires, or increase fire hazards within the district.

Hydrology and Water Quality

PAR 1146.2 involves amendments to an existing rule intended to reduce NO_x emissions from natural gas-fired large (commercial) water heaters, small (industrial) boilers, and process heaters, and does not include any requirements which would physically alter the existing hydrology or water quality environment. Therefore, no hydrology or water quality impacts are expected from implementing the proposed project for the same reasons given in the introduction to this section.

Land Use and Planning

PAR 1146.2 involves amendments to an existing rule intended to reduce NO_x emissions from natural gas-fired large (commercial) water heaters, small (industrial) boilers, and process heaters and does not include the acquisition of land or conversion of land from one use to another. There are no provisions of the proposed project that would affect land use plans, policies, or regulations. Land use and other planning considerations determined by local governments will not be altered by the proposed amendments. The proposed project will not affect habitat

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

Mineral Resources

PAR 1146.2 involves amendments to an existing rule intended to reduce NOx emissions from natural gas-fired large (commercial) water heaters, small (industrial) boilers, and process heaters and does not have an effect on mineral resources. Thus, the proposed project would not result in the loss of availability of a known mineral resource 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.

Noise

PAR 1146.2 involves amendments to an existing rule intended to reduce NOx emissions from natural gas-fired large (commercial) water heaters, small (industrial) boilers, and process heaters and does not require the addition of any noise producing pollution control equipment, or require the construction of any structures that could generate noise impacts. The manufacturing of these lower NOx water heaters will occur at manufacturing facilities outside of California. The operation of residential type, natural gas-fired water heaters are not noise intensive equipment. Thus, no potential noise or ground vibration impacts are expected as a result of the proposed project.

Population and Housing

PAR 1146.2 involves amendments to an existing rule intended to reduce NOx emissions from natural gas-fired large (commercial) water heaters, small (industrial) boilers, and process heaters. Human population in the SCAQMD's jurisdiction is anticipated to grow irregardless of the proposed project. The proposed project will not result in the addition of new homes or businesses which would directly or indirectly induce population growth. No existing housing or existing persons will be displaced as a result of the proposed amendments which would necessitate the construction of replacement housing.

Public Services

PAR 1146.2 involves amendments to an existing rule intended to reduce NOx emissions from natural gas-fired large (commercial) water heaters, small (industrial) boilers, and process heaters and does not include any requirements that alter the physical environment (e.g. demolition or construction). PAR 1146.2 does not include any components which would affect public services such as fire and police protection, schools, parks and other public facilities. Further, PAR 1146.2 does not induce population growth which will create a need for additional schools, parks and other public facilities, or include a hazard which would require a response by local fire or police departments.

Recreation

PAR 1146.2 involves amendments to an existing rule intended to reduce NOx emissions from natural gas-fired large (commercial) water heaters, small (industrial) boilers, and process heaters and does not include any provisions which would cause an increase in population or affect population growth. As a result, no aspects of the proposed amendments are expected to increase

the use of existing parks or other recreational facilities, or cause the construction of new, or expansion of existing facilities.

Transportation/Traffic

PAR 1146.2 involves amendments to an existing rule intended to reduce NOx emissions from natural gas-fired large (commercial) water heaters, small (industrial) boilers, and process heaters and does not affect transportation/traffic in the district. The proposed project will not require the transportation of water heaters to a greater extent than is currently required. The proposed project will not increase traffic; create a situation which would exceed level of service standards and increase congestion; conflict with adopted policies, plans or programs supporting alternative transportation; affect airports, air traffic, air safety or air traffic patterns; increase hazards due to any design features or incompatible uses; or conflict with any emergency access or parking requirements.

Solid /Hazardous Waste

PAR 1146.2 does not generate new sources of solid or hazardous waste. The existing solid waste disposal generation at affected businesses will not be affected by the proposed rule amendments for the following reasons: (1) many units will be reaching the end of their useful life and would need to be replaced regardless of PAR 1146.2; (2) units with remaining useful life that must be replaced may be sold to facilities outside the SCAQMD; and (3) various components of existing units may have economic value and would likely be salvaged or recycled. PAR 1146.2 does not require replacement of units. Instead, it allows large (commercial) water heaters, small (industrial) boilers and process heaters to be used to the end of their useful life and then replaced with lower NOx emitting units. Consequently, no additional solid waste impacts are expected beyond what is currently being generated.

CONSISTENCY

The Southern California Association of Governments (SCAG) and the SCAQMD have developed, with input from representatives of local government, industry, community members, public health agencies, USEPA Region IX and CARB, guidance on how to assess consistency with the existing general development planning process in the Basin – The Regional Comprehensive Plan and Guide (RCPG). In accordance with the RCPG, SCAG developed an Intergovernmental Review Procedures Handbook which outlines the process to assess the consistency of proposed projects with regional plans. The SCAQMD has also adopted criteria for assessing consistency with regional plans in the CEQA Air Quality Handbook. The following sections address consistency between PAR 1146.2 and relevant regional plans.

Consistency with Regional Comprehensive Plan and Guide (RCPG) Policies

The RCPG outlines a broad set of goals for the region, and identifies strategies for agencies at all levels to use in guiding their decision-making toward implementation of proposed projects. The RCPG is designed to meet a number of purposes. It is intended to serve the region as a framework for decision making with respect to the growth and changes that can be anticipated during the next 20 years and beyond. It provides a general view of the plans of the various regional agencies that will affect local governments, or that respond to the significant issues facing southern California. Further, it summarizes the plans which describe how the region will

meet certain federal and state requirements with respect to Transportation, Growth Management, Air Quality, Housing, Hazardous Waste Management, and Water Quality Management.

The SCAQMD prepares and adopts an AQMP approximately every three years that includes control measures to reduce PM₁₀, CO, NO_x, SO_x and VOC emissions. PAR 1146.2 is consistent with the objectives of the RCPG in that SCAG is an integral participant in the preparation of the SCAQMD's Air Quality Management Plans (AQMPs) and the AQMP is consistent with SCAG's air quality goals for the region. SCAG is responsible for preparing and approving portions of the AQMP relating to regional demographic projections and integrated regional land use, housing, employment, and transportation programs, measures and strategies. Further, SCAG analyzes and provides emissions data related to its planning responsibilities.

Consistency with RCPG Growth Management Chapter

The Growth Management goals in the RCPG are broken down into three categories. These three categories and the associated goals are presented below:

Standard of Living – Support local land use actions that: (a) minimize public and private development costs; (b) enable individuals to spend less income on housing costs; and (c) enable firms to be more competitive.

Quality of Life – Support local land use actions and urban forms that: (a) preserve open space and natural resources; (b) are aesthetically pleasing and preserve the character of communities; and (c) attain mobility and clean air goals.

Equity – Support development of urban forms that: (a) avoid economic and social polarization; and (b) accommodate a diversity of life cycles.

PAR 1146.2 will not interfere with the achievement of such growth management goals, nor would it interfere with any powers exercised by local land use agencies because it does not affect land use decisions, and does not affect urban forms or produce social or economic polarization. Further, PAR 1146.2 is not expected to interfere with attaining the RCPG growth management goals, but rather to assist in improving the regional quality of life by improving air quality throughout the region.

Consistency with RCPG Regional Mobility Element

The Regional Mobility Element (RME) is the principal transportation policy, strategy, and objective statement of SCAG, proposing a comprehensive strategy for achieving mobility and air quality mandates. The RME describes the region's strategy for adjusting its transportation behavior as it balances the constraints of government-mandated financial and environmental objectives and mobility demands.

The RME links the goal of sustaining mobility with the goals of fostering economic development, enhancing the environment, reducing energy consumption, promoting transportation-friendly development patterns, and encouraging fair and equitable access to residents affected by socio-economic, geographic and commercial limitations.

PAR 1146.2 is consistent with the RCPG RME's goal of enhancing the environment and improving air quality because it will result in lower NOx emissions from natural gas-fired large (commercial) water heaters, small (industrial) boilers and process heaters.

Consistency with RCPG Air Quality Chapter

SCAG's RCPG Air Quality Chapter discusses SCAG's air quality planning responsibilities and also describes plans and policies developed by regional, state and federal air agencies. Of SCAG's conformity responsibilities, it has a statutory role in the development of the SCAQMD AQMP and the relationship between transportation and air quality planning. Although, PAR 1146.2 will cause anticipated NOx emission reductions foregone from Rule 1146.2, it will not hinder ambient air quality standard attainment goals established in the AQMP.

CHAPTER 5

ALTERNATIVES

Introduction

Alternatives Rejected As Infeasible

Description of Alternatives

Comparison of Alternatives

Conclusion

INTRODUCTION

This ~~Final Draft~~ EA provides a discussion of a range of reasonable alternatives to the proposed project as required by the CEQA Guidelines. Alternatives include measures for attaining most of the basic objectives of the proposed project, but would avoid or substantially lessen any of the significant effects of the project, and provide a means for evaluating the comparative merits of each alternative. A “No Project” alternative must also be evaluated. The range of alternatives must be sufficient to permit a reasoned choice, but need not include every conceivable project alternative. CEQA Guidelines §15126.6(c) specifically states that the range of alternatives required in a CEQA document is governed by a “rule of reason” and only necessitates that the CEQA document set forth those alternatives necessary to permit a reasoned choice. The key issue is whether the selection and discussion of alternatives fosters informed decision making and meaningful public participation. A CEQA document need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative.

SCAQMD Rule 110 (the rule which implements the SCAQMD’s certified regulatory program) does not impose any greater requirements for a discussion of project alternatives in an environmental assessment than is required for an EIR under CEQA.

The environmental justice (EJ) enhancements adopted by the Governing Board in 2002 included EJ enhancement II-1, which requires SCAQMD EAs that include an alternatives analysis to consider a feasible project alternative with the lowest toxics emissions. This EJ enhancement acknowledged that there could be trade-offs between reducing criteria pollutant emissions versus reducing air toxics.

In the context of PAR 1146.2, although NO_x is a criteria pollutant which causes health effects, there are no toxics in Rule 1146.2 or the proposed amendments. In addition, PAR 1146.2 involves amendments to an existing rule to reduce NO_x emissions from natural gas-fired large (commercial) water heaters, small (industrial) boilers, and process heaters. As a result, an evaluation of a lowest toxics alternative does not apply to PAR 1146.2.

ALTERNATIVES REJECTED AS INFEASIBLE

A CEQA document should identify any alternatives that were considered by the lead agency, but were rejected as infeasible and explain the reasons underlying the lead agency’s determination (CEQA Guidelines §15126.6(c)). No alternatives were considered and rejected as infeasible.

DESCRIPTION OF ALTERNATIVES

The following alternatives were developed by modifying specific components of the proposed project. This rationale for generating feasible alternatives is based on CEQA’s requirement to present “realistic” alternatives; that is, alternatives that can actually be implemented. Table 5-1 summarizes the alternatives to be evaluated for PAR 1146.2. Unless stated otherwise, all components of each alternative are identical to the proposed amendments to the rule.

**TABLE 5-1
SUMMARY OF PAR 1146.2 ALTERNATIVES**

RULE COMPONENTS	PROPOSED PROJECT	ALTERNATIVE A (No Project)	ALTERNATIVE B (10 Year Retrofit)	ALTERNATIVE C (20 Year Retrofit)
Requirements for existing Type 2 units >1,000,000 Btu/hr to meet the 30 ppm NOx concentration limit in paragraph (c)(1) of PAR 1146.2.	On or after January 1, 2006 7 units <u>more than 15 years old or older</u> and manufactured on or after January 1, 1992.	On or after January 1, 2005 for units manufactured between 1992 and 1999 inclusive.	On or after January 1, 2007 for units manufactured between 1992 and 1996 inclusive or units 10 years or older and manufactured on or after January 1, 1997.	On or after January 1, 2012 for units 20 years or older and manufactured on or after January 1, 1992.
Requirements for existing Type 2 units 400,000 to 1,000,000 Btu/hr manufactured prior to 2000.	Remove On or after January 1, 2006, any unit <u>more than 15 years old must be certified that NOx emissions are less than or equal to 30 ppm.</u>	On or after January 1, 2006 units must meet an emission limit of 30 ppm.	Remove	Remove

Alternative A - No Project Alternative

Alternative A is the “No Project” alternative. This alternative would, in effect, be the default condition if the proposed amendments to Rule 1146.2 are not adopted. The compliance date for existing Type 2 units greater than 1,000,000 Btu/hr manufactured on or after January 1, 1992 would remain January 1, 2005. Further, the 2006 retrofit requirements associated with existing Type 2 units 400,000 to 1,000,000 Btu/hr would remain in the rule as a requirement.

Alternative B – 10 Year Retrofit

Alternative B would affect the requirements for existing Type 2 units between 1,000,000 and 2,000,000 Btu/hr. Similar to PAR 1146.2, the compliance date would be extended from January 1, 2005 to January 1, 2007. For existing Type 2 units between 1,000,000 and 2,000,000 Btu/hr that are manufactured between 1992 and 1996 inclusive, and those units that are 10 years or older and manufactured on or after 1997 must meet the 30 ppm NOx concentration requirements specified in paragraph (c)(1) of PAR 1146.2. The age will be determined based on the date of manufacture. Further, under Alternative B, the 2006 retrofit requirement associated with existing Type 2 units 400,000 to 1,000,000 Btu/hr would be removed.

Alternative C – 20 Year Retrofit

Alternative C changes the requirements for existing Type 2 units between 1,000,000 and 2,000,000 Btu/hr. Similar to PAR 1146.2, the compliance date would be extended from

January 1, 2005 to January 1, 2012. For existing Type 2 units between 1,000,000 and 2,000,000 Btu/hr that are 20 years or older and manufactured in or after 1992 must meet the 30 ppm NOx concentration requirements specified in paragraph (c)(1) of PAR 1146.2. The age will be determined based on the date of manufacture. Further, under Alternative C, the 2006 retrofit requirement associated with existing Type 2 units 400,000 to 1,000,000 Btu/hr will be removed from the rule.

COMPARISON OF ALTERNATIVES

Alternative A - No Project

The No Project Alternative is the default condition if the proposed amendments to PAR 1146.2 are not adopted. Table 5-2 illustrates the anticipated NOx emission reductions under the “No Project” alternative (existing rule). The emission reductions presented in Table 5-2 are based on the current Rule 1146.2. Although, Rule 1146.2 requires emission limits to reduce NOx emissions from natural gas-fired large (commercial) water heaters, small (industrial) boilers, and process heaters, industry representatives have stated that they would not be able to meet the current compliance dates of January 1, 2005 for existing Type 2 units greater than 1,000,000 Btu/hr, and January 1, 2006 for existing Type 2 units 400,000 up to and including 1,000,000 Btu/hr. Certified retrofit kits did not develop as anticipated for these size categories and industry has requested additional time to meet the emission limits of 30 ppm. As a result, the “No Project” alternative would not be a feasible compliance option.

TABLE 5-2
EMISSION REDUCTIONS ASSOCIATED WITH NO PROJECT ALTERNATIVE
(lbs/day)

	YEAR										
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Emission Reductions	14,358	15,431	15,659	15,888	16,117	16,346	16,575	16,804	17,033	17,262	17,491

Alternative B – 10 Year Retrofit

Alternative B is similar to the proposed project, in that the compliance date would be extended from January 1, 2005 to January 1, 2007 for existing Type 2 units greater than 1,000,000 Btu/hr. However, on or after January 1, 2007 affected facilities must meet the 30 ppm NOx emission limit for units in the district that were manufactured in or after 1992 and up to and including 1996 or units that are more than 10 years old and manufactured on or after 1997. Compared to the proposed project, Alternative B accelerates the turnover rate of existing units to lower-NOx units. Thus, the annual emissions foregone under Alternative B are less than the proposed project. However, affected facilities would be required to retrofit or replace units at 10 years of age. If an operator elects to comply with the NOx emissions limit by replacing as compared to retrofitting its existing unit, units may be replaced before their useful life had expired. This alternative would be more stringent than the proposed project.

The other component of Alternative B, as with the proposed project, is the annual emissions foregone associated with removing the 2006 retrofit requirement for existing Type 2 units 400,000 to 1,000,000 Btu/hr. These NOx emission reductions foregone are expected to be recovered by year 2014 in Alternative B as a result of the purchase of new units.

The air quality impacts associated with Alternative B are in Table 5-3 below.

**TABLE 5-3
AIR QUALITY IMPACTS ASSOCIATED WITH ALTERNATIVE B
(lbs/day)**

	YEAR										
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Rule 1146.2 Emission Reductions	14358	15431	15659	15888	16117	16346	16575	16804	17033	17262	17491
Alternative B Emission Reductions	11828	12994	13457	13920	14384	14847	15310	15773	16236	16699	17491
Alternative B Emission Reductions Foregone^(a)	2,530	1,617	1,265	914	562	422	316	211	105	0	0

(a) Total emission reductions foregone are derived by subtracting the emission reductions from PAR 1146.2 from the Rule 1146.2 emission reductions. Slight variations in the absolute differences shown in the table are due to rounding, converting tons per day to pounds per day, etc. Please see Appendix C for detailed emission reductions and emission reductions foregone.

Alternative C – 20 Year Retrofit

Alternative C is similar to the proposed project, in that the compliance date would be extended from January 1, 2005 to January 1, 2007 for existing Type 2 units greater than 1,000,000 Btu/hr. However, on or after January 1, 2012 affected facilities are required to meet the 30 ppm NOx emission limit for units in the district more than 20 years old. The annual emissions foregone are greater under Alternative C than PAR 1146.2; however, affected facilities would not be required to replace units until they are 20 years of age. Industry would be allowed additional time to produce the equipment to perform retrofits, or replace old units with new units. This alternative would be the least stringent of the alternatives, and less stringent than the proposed project.

The other component of Alternative C, as with the proposed project, is NOx emission reductions foregone associated with removing the 2006 retrofit requirement for existing Type 2 units 400,000 to 1,000,000 Btu/hr. These NOx emission reductions foregone are not expected to be recovered by the purchase of new units, or the retrofit of existing units, until beyond the year 2015.

The air quality impacts associated with Alternative C are in Table 5-4 below.

TABLE 5-4
AIR QUALITY IMPACTS ASSOCIATED WITH ALTERNATIVE C
(lbs/day)

	YEAR										
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Rule 1146.2 Emission Reductions	14358	15431	15659	15888	16117	16346	16575	16804	17033	17262	17491
Alternative C Emission Reductions	11828	12994	13457	13920	14384	14847	15310	15773	16236	16699	17491
Alternative C Emission Reductions Foregone^(a)	2,530	3,374	3,374	3,374	3,374	3,374	3,374	3,233	3,093	2,952	2,811

(a) Total emission reductions foregone are derived by subtracting the emission reductions from PAR 1146.2 from the Rule 1146.2 emission reductions. Slight variations in the absolute differences shown in the table are due to rounding, converting tons per day to pounds per day, etc. Please see Appendix C for detailed emission reductions and emission reductions foregone.

Environmentally Superior Alternative

Of the alternatives evaluated, the “No Project” is the environmentally superior alternative because anticipated NO_x emission reductions will not be foregone. However, as stated in this Draft EA, this alternative is not technically feasible as low NO_x burners are not available for affected businesses to retrofit many of the existing Type 2 units.

CEQA Guidelines §15126.6(e)(2) states in part that if the environmentally superior alternative is the “No Project” alternative, the CEQA document shall also identify an environmentally superior alternative among the other alternatives.

Among the other alternatives, Alternative B is the environmentally superior alternative because it causes the least amount of emission reductions to be foregone. In addition, these emission reductions foregone are recovered by 2014, earlier than any of the other alternatives. Industry would however, be constrained by the lack of equipment to perform retrofits within 10 years, and having to replace old units with new units could potentially mean replacing old units before their useful life had expired.

Table 5-5 below summarizes the comparison of air quality impacts associated with the proposed project, as well as all three alternatives.

**TABLE 5-5
COMPARISON OF AIR QUALITY IMPACTS [EMISSION REDUCTIONS
FOREGONE] ASSOCIATED WITH THE PROPOSED PROJECT AND ALL
ALTERNATIVES
(lbs/day)**

Emission Reductions Foregone	YEAR										
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Proposed Project	2530	2437 2375	2202 2067	1968 1780	1734 1483	1499 1187	1265 891	1031 594	796 297	562	0
Alternative A (No Project)	0	0	0	0	0	0	0	0	0	0	0
Alternative B (10 year retrofit)	2,530	1,617	1,265	914	562	422	316	211	105	0	0
Alternative C (15 year retrofit)	2,530	3,374	3,374	3,374	3,374	3,374	3,374	3,233	3,093	2,952	2,811

CONCLUSION

When looking at the whole of the projects evaluated (the “No Project,” the proposed project and Alternatives B and C) the proposed project is the preferred action for Rule 1146.2 at this time. The proposed project will provide additional time for affected facilities to either retrofit or replace their existing units to meet the 30 ppm NOx emission limit. Those facilities that elect to retrofit can use a certified retrofit kit, which at this time is very limited; retrofit and source test; or replace their unit. As indicated in the project objective allowing a 15 year timeframe in PAR 1146.2 allows affected units to be operated for their anticipated useful life. Emission reductions foregone from the proposed project will be recovered by 2014. Alternative C, while allowing industry the longest period of time to comply with the 30 ppm emission limits, also takes the longest period of time to recover NOx emission reductions foregone.

CHAPTER 6

OTHER CEQA TOPICS

Significant Environmental Effects which cannot be Avoided if the Proposed Project is Implemented

Significant Irreversible Environmental Changes

Potential Growth-Inducing Impacts

OTHER CEQA TOPICS

Significant Environmental Effects Which Cannot Be Avoided if the Proposed Project is Implemented

The significant environmental effects which cannot be avoided if the proposed project is implemented are the anticipated NOx emission reductions foregone due to extending the compliance date for existing Type 2 units greater than or equal to 1,000,000 manufactured on or after January 1, 1992, and the emission reductions foregone from requiring that on or after January 1, 2006, no person shall operate in the District any unit more than 15 years old, based on the original date of manufacture with a rated heat input greater than 400,000 Btu/hr but less than or equal to 1,000,000 Btu/hr manufactured prior to January 1, 2000 unless the certified NOx emissions are less than or equal to 30 ppm. ~~deleting the retrofit requirements for units 400,000 to 1,000,000 Btu/hr.~~

As a result, a Statement of Findings and Statement of Overriding Considerations will be prepared for the proposed amendments to Rule 1146.2.

Significant Irreversible Environmental Changes

CEQA Guidelines §15126(c) and §15126.2(c) require an environmental analysis to consider "significant irreversible environmental changes which would be involved in the proposed project should it be implemented." Irreversible changes typically refer to the use of nonrenewable resources or the irreversible commitment of nonrenewable resources. Implementing PAR 1146.2 is not anticipated to result in any significant irreversible adverse environmental changes. Further, although the proposed project will cause anticipated NOx emission reductions foregone, and cause emission reductions foregone, NOx emission reductions will recover by 2014.

Potential Growth-Inducing Impacts

CEQA Guidelines §15126(d) and §15126.2(d) require an environmental analysis to consider the "growth-inducing impact of the proposed action." Growth-inducing impacts can generally be characterized in three ways: (1) a project is located in an undeveloped area and brings with it urban infrastructure such that development pressure is placed on immediate and surrounding land; (2) a large project affects the immediate and surrounding area facilitating and indirectly promoting further community growth; and (3) a new type of development is allowed in an area which subsequently establishes a precedent for additional development of a similar character. None of these scenarios characterize the proposed project.

Implementing PAR 1146.2 will not have a direct or an indirect growth-inducing impact because the proposed project will not cause residential, commercial, industrial or infrastructure development, or require activities which would affect population or housing within the district. Further, the proposed project does not directly or indirectly encourage the growth of any industry or neighborhood.

