

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

**Final Subsequent Environmental Assessment for
Proposed Amended Rule 1147 – NOx Reductions From Miscellaneous Sources**

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PREFACE

This document constitutes the Final Subsequent Environmental Assessment (SEA) for Proposed Amended Rule 1147 – NO_x Reductions From Miscellaneous Sources. A Draft SEA was released for a 45-day public review and comment period from April 6, 2011 to May 20, 2011 which identified the topic of “air quality and greenhouse gas emissions,” specifically operational air quality, as an area that would exceed the SCAQMD's significance thresholds associated with implementing the proposed project. One comment letter was received from the public regarding the analysis in the Draft SEA. This comment letter and the responses to individual comments are included in Appendix C of this document. No comments in this letter identified other potentially significant adverse impacts from the proposed project.

Also, since the release of the Draft SEA, a mitigation fee compliance option has been added to PAR 1147 and the SEA has been modified to include an environmental analysis of the mitigation fee compliance option. Although the mitigation fee option has the potential to make significant adverse operational air quality impacts substantially worse, mitigation measures have been required that will reduce the air quality impacts from the mitigation fee option to a level of insignificance. In addition, minor modifications were made to the proposed project. To facilitate identification, modifications to the document are included as underlined text and text removed from the document is indicated by ~~striketrough~~. Staff has reviewed the modifications to the proposed project and concluded that none of the modifications alter any conclusions reached in the Draft SEA, nor provide new information of substantial importance relative to the draft document. As a result, neither the mitigation fee option nor these minor revisions require recirculation of the document pursuant to CEQA Guidelines §15088.5. Therefore, this document now constitutes the Final SEA for the proposed project.

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LIST OF ACRONYMS & TERMS

AAM = annual arithmetic mean
AB = Assembly Bill
AQMP = Air Quality Management Plan
ATCM = Airborne Toxic Control Measure
Basin = South Coast Air Basin
CAA = Clean Air Act
CalEPA = California Environmental Protection Agency
CalOSHA = California Occupational Safety and Health Administration
CARB = California Air Resources Board
CCR = California Code of Regulations
CEQA = California Environmental Quality Act
CFR = Code of Federal Regulations
CO₂ = carbon dioxide
CO₂eq = carbon dioxide equivalent
CO = carbon monoxide
District = South Coast Air Quality Management District
EA = Environmental Assessment
gal = gallons
GHG = greenhouse gases
GMC = Growth Management Chapter
GWP = global warming potential
hr = hour
HSC = Health and Safety Code
lb = pound
MDAB = Mojave Desert Air Basin
mmBTU = million British Thermal Units
MT/yr = metric tons per year
NAAQS = National Ambient Air Quality Standards
NESHAP = National Emission Standard for Hazardous Air Pollutants
NOC = Notice of Completion
NOP/IS = Notice of Preparation/Initial Study
NO_x = oxides of nitrogen
NOV = Notice of Violation
NTC = Notice to Comply
O₃ = ozone
OPR = Office of Planning and Research
OSHA = Occupational Safety and Health Administration
PAR = Proposed Amended Rule
PM = particulate matter
PM_{2.5} = particulate matter with an aerodynamic diameter of 2.5 microns or less
PM₁₀ = particulate matter with an aerodynamic diameter of 10 microns or less
ppm = parts per million
RCPG = Regional Comprehensive Plan Guide
SB = Senate Bill
SCAG = Southern California Association of Governments
SCAQMD = South Coast Air Quality Management District
SEA = Subsequent Environmental Assessment

SIP = State Implementation Plan
SO₂ = sulfur dioxide
SO₃ = sulfur trioxide
SO_x = oxides of sulfur
SSAB = Salton Sea Air Basin
TAC = toxic air contaminant
tons/day = tons per day
μg/m³ = micrograms per cubic meter
USEPA = United States Environmental Protection Agency
VOC = volatile organic compound

CHAPTER 1

EXECUTIVE SUMMARY

Introduction

California Environmental Quality Act

Previous CEQA Documentation for Rule 1147

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 portions of the Salton Sea Air Basin and Mojave Desert Air Basin referred to herein as the district. By statute, the SCAQMD is required to adopt an air quality management plan (AQMP) demonstrating compliance with all federal and state ambient air quality standards for the district². Furthermore, the SCAQMD must adopt rules and regulations that carry out the AQMP³. The 2007 AQMP concluded that major reductions in emissions of oxides of nitrogen (NOx), sulfur oxides (SOx), and particulate matter (PM) are necessary to attain the state and national ambient air quality standards for ozone (the key ingredient of smog), particulate matter with an aerodynamic diameter of 10 microns or less (PM10) and particulate matter with an aerodynamic diameter of 2.5 microns or less (PM2.5). Although volatile organic compound (VOC) emission reductions are also necessary, more emphasis is placed on NOx and SOx emission reductions because they provide greater ozone and PM emission reduction benefits than VOC emission reductions. Ozone, a criteria pollutant, is formed when NOx and VOCs react in the atmosphere and has been shown to adversely affect human health and to contribute to the formation of PM10 and PM2.5.

As part of the NOx reduction goals in the AQMP, SCAQMD adopted Rule 1147 - NOx Reductions From Miscellaneous Sources, in December 2008, to control NOx emissions from miscellaneous gas and liquid fuel fired combustion equipment, including, but not limited to: ovens, dryers, dehydrators, heaters, kilns, calciners, furnaces, heated pots, cookers, roasters, fryers, closed and open heated tanks and evaporators, distillation units, degassing units, incinerators, and soil remediation units. Rule 1147 requires new, modified, relocated and in-use combustion equipment to comply with equipment-specific NOx emission limits. For in-use equipment, compliance dates for emission limits are based on the date of equipment manufacture, and emission limits are applicable to older equipment first. Owners of equipment are provided at least 15 years before they must modify or replace existing equipment to meet emission limits. Rule 1147 also contains test methods and provides alternate compliance options including a process for certification of equipment NOx emissions through an approved testing program. Other requirements include equipment maintenance, meters and recordkeeping.

SCAQMD staff's recent evaluation of the state of compliance with Rule 1147 as well as feedback from industry revealed that some equipment owners/operators are experiencing compliance challenges, in particular, with certain effective dates in the rule. The aforementioned evaluation by SCAQMD staff combined with industry feedback also revealed that the installation of time meters, while helpful, is not essential for compliance determination. Similarly, installation of fuel meters may not be essential for compliance determination depending on the compliance option chosen by the equipment operator. To address these compliance challenges and ensure that equipment owners/operators are not unnecessarily burdened with [additional compliance](#) costs, SCAQMD staff is proposing to amend Rule 1147 to delay implementation of the NOx emission limit compliance dates for existing (in-use) permitted equipment, to eliminate the requirement for the installation of time meters, and to modify the requirement for the installation of fuel meters. In the meantime, so that facilities do not incur unnecessary expenses associated with complying with the current requirements in Rule 1147 that are the focus of the

¹ The Lewis-Presley Air Quality Management Act, 1976 Cal. Stats., ch 324 (codified at Health & Safety Code, §§40400-40540).

² Health & Safety Code, §40460 (a).

³ Health & Safety Code, §40440 (a).

amendments considered as part of this proposed project, the Executive Officer intends to exercise enforcement discretion with regard to Rule 1147 until the proposed rule amendments are presented to the SCAQMD's Governing Board. Enforcement discretion means that the SCAQMD will not issue any new Notices of Violations (NOVs) or Notices to Comply (NTCs) and will cancel any previously issued NOVs and NTCs specifically related to the items that are subject of the proposed rule amendments, until the proposed rule amendments have been acted on by the Governing Board. Proposed Amended Rule (PAR) 1147 will result in a delay of: 1) 0.70 ton per day of NOx emission reductions in compliance years 2010 and 2011; and, 2) 0.06 ton per day of NOx emission reductions in compliance years 2015 and 2016. However, the 0.70 ton per day of NOx delayed emission reductions will be recaptured in compliance years 2012 and 2013 and the 0.06 ton per day of delayed NOx emission reductions will be recaptured in compliance years 2017 and 2018, respectively. Thus, despite the delay in implementation of some of the compliance dates, the same amount of overall NOx emission reductions as estimated in the current rule will be achieved by PAR 1147 (e.g., 3.5 tons per day of NOx emission reductions by 2014 and 3.8 tons per day of NOx emission reductions by 2023).

A [Final Draft](#) Subsequent Environmental Assessment (SEA), prepared pursuant to the California Environmental Quality Act (CEQA), identified the environmental topic “air quality and greenhouse gas (GHG) emissions,” specifically operational air quality, as an area that may be adversely affected by the proposed project. This [Final Draft](#) SEA analyzes whether the potential impacts to this environmental topic are significant. No other potentially significant environmental impacts were identified.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

The proposed amendments to Rule 1147 are considered a “project” as defined by CEQA. CEQA requires that the potential adverse environmental impacts of proposed projects be evaluated and that methods to reduce or avoid identified significant adverse environmental impacts of these projects be implemented if feasible. The purpose of the CEQA process is to inform the SCAQMD's Governing Board, public agencies, and interested parties of potential adverse environmental impacts that could result from implementing the proposed project and to identify feasible mitigation measures or alternatives, when an impact is significant.

California Public Resources Code §21080.5 allows public agencies with regulatory programs to prepare a plan or other written documents 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 Resources Agency on March 1, 1989, and is codified as SCAQMD Rule 110 (the rule which implements the SCAQMD's certified regulatory program). CEQA and Rule 110 require that 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.

The SCAQMD as Lead Agency for the proposed project, prepared a Notice of Preparation/Initial Study (NOP/IS) which identified environmental topics to be analyzed in a Draft Environmental Assessment (EA). The NOP/IS provided information about the proposed project to other public agencies and interested parties prior to the intended release of the Draft EA. The NOP/IS was distributed to responsible agencies and interested parties for a 30-day review and comment period from February 1, 2011, to March 2, 2011. The initial evaluation in the NOP/IS identified the topic of air quality and GHG emissions, specifically operational air quality emissions, as potentially being adversely affected by the proposed project. During that public comment

period, the SCAQMD received no comment letters. The NOP/IS is attached to this SEA as Appendix B, and can also be obtained by visiting the following website at:

<http://www.aqmd.gov/ceqa/documents/2011/aqmd/NOP-IS/PAR1147nop-is.pdf>

Subsequent to the release of the NOP/IS, further analysis of the proposed project indicated that the preparation of a ~~Draft~~ SEA, in lieu of an ~~Draft~~ EA, would be the appropriate document to analyze the potential environmental impacts associated with PAR 1147 because new information of substantial importance, which was not known and could not have been known at the time the Final EA was certified for the adoption of Rule 1147, became available (CEQA Guidelines §15162 (a)(3)). Further, PAR 1147 is expected to have significant effects that were not discussed in the previous Final EA (CEQA Guidelines §15162 (a)(3)(A)). In the event that new information becomes available that would change a project, the lead agency shall prepare a subsequent EIR (CEQA Guidelines §15162 (b)). However, under SCAQMD's certified regulatory program, an equivalent document, a subsequent EA, can be a substitute for preparing a subsequent EIR. As such, this ~~Final Draft~~ SEA has been prepared as a public disclosure document intended to: (a) provide the lead agency, responsible agencies, decision makers and the general public with information on the environmental impacts of the proposed project; and, (b) be used as a tool by decision makers to facilitate decision making on the proposed project.

~~The Draft SEA was released for a 45-day public review and comment period from April 6, 2011 to May 20, 2011. This Draft SEA, was prepared pursuant to CEQA Guidelines §§15162 and 15252, and identified the topic of air quality and GHG emissions, specifically operational air quality, as an area that may be adversely affected by the proposed project. This Draft SEA analyzes whether or not concluded that only the topic of operational air quality emission impacts are would have significant adverse impacts.~~

~~One comment letter was received during the public comment period on the analysis presented in the Draft SEA. Responses to this comment letter have been prepared. The comment letter along with the responses are included in Appendix C of this Final SEA. Any comments received during the public comment period on the analysis presented in this Draft SEA will be responded to and included in the Final SEA.~~

~~Subsequent to the release of the Draft SEA, a mitigation fee compliance option has been added to PAR 1147 and this SEA has been modified to include an environmental analysis of the mitigation fee compliance option. Although the mitigation fee option has the potential to make significant adverse operational air quality impacts substantially worse, a mitigation measure has been included that will reduce the air quality impacts from the mitigation fee option to a level of insignificance. In addition, minor modifications were made to the proposed project. Staff has reviewed the modifications to the proposed project and concluded that none of the modifications alter any conclusions reached in the Draft SEA, nor provide new information of substantial importance relative to the draft document. As a result, neither the mitigation fee option nor these minor revisions require recirculation of the document pursuant to CEQA Guidelines §15088.5. Therefore, this document now constitutes the Final SEA for the proposed project. Lastly, pPrior to making a decision on the proposed amendments to Rule 1147, the SCAQMD Governing Board must review and certify the Final SEA, including responses to comments, ~~for the if any~~ comment letters ~~are that was~~ received.~~

PREVIOUS CEQA DOCUMENTATION FOR RULE 1147

This ~~Final Draft~~ SEA is a comprehensive environmental document that analyzes potential environmental impacts from the proposed amendments to Rule 1147. 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.). Rule 1147 was adopted in December 2008 and has not been amended; thus, only one previous environmental analysis has been prepared. The following summarizes the previously prepared CEQA document for Rule 1147 and is included for informational purposes. The following document can be obtained by submitting a Public Records Act request to the SCAQMD's Public Records Unit. In addition, a link for downloading the file from the SCAQMD's website is provided. The following is a summary of the contents of this document.

Final Environmental Assessment for Proposed Rule 1147 – NO_x Reductions from Miscellaneous Sources; December 2008 (SCAQMD No. 081015JJI; State Clearinghouse No. 2008101082): Rule 1147 - NO_x Emissions from Miscellaneous Sources was adopted to implement 2007 AQMP control measures CMB-01 (NO_x Reductions from Non-RECLAIM Ovens, Dryers, and Furnaces) and MCS-01 (Facility Modernization) to achieve NO_x reductions from miscellaneous gas and liquid fuel fired combustion equipment, including, but not limited to: ovens, dryers, dehydrators, heaters, kilns, calciners, furnaces, heated pots, cookers, roasters, fryers, closed and open heated tanks and evaporators, distillation units, degassing units, incinerators, and soil remediation units. At the time of adoption, Rule 1147 was estimated to reduce annual average emissions of NO_x by 3.5 tons per day by 2014 and 3.8 tons per day by 2023. A Draft EA for the adoption of Rule 1147 was released for a 30-day public review and comment period from October 16, 2008 to November 14, 2008. No comment letters were received from the public relative to the Draft EA. The environmental analysis in the Draft EA concluded that the adoption of proposed Rule 1147 would not generate any significant adverse environmental impacts. After circulation of the Draft EA, a Final EA was prepared and certified by the SCAQMD Governing Board on December 5, 2008. This document can be obtained by visiting the following website at:

<http://www.aqmd.gov/ceqa/documents/2008/aqmd/finalEA/FEA1147.pdf>

INTENDED USES OF THIS DOCUMENT

In general, a CEQA document is an informational document that informs a public agency's decision-makers and the public generally of potentially significant adverse environmental effects of a project, identifies possible ways to avoid or minimize the significant effects, and describes reasonable alternatives to the project (CEQA Guidelines §15121). A public agency's decision-makers must consider the information in a CEQA document prior to making a decision on the project. Accordingly, this ~~Final Draft~~ SEA is intended to: (a) provide the SCAQMD Governing Board and the public with information on the environmental effects of the proposed project; and, (b) be used as a tool by the SCAQMD Governing Board to facilitate decision making on the proposed project.

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 SEA 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.

There are no permits or other approvals required to implement the project. Moreover, the project is not subject to any other related environmental review or consultation requirements.

To the extent that local public agencies, such as cities, county planning commissions, et cetera, are responsible for making land use and planning decisions related to projects that must comply with the requirements in the proposed project, they could possibly rely on this SEA during their decision-making process. Similarly, other single purpose public agencies approving projects at facilities complying with the proposed project may rely on this SEA.

AREAS OF CONTROVERSY

CEQA Guidelines §15123(b)(2) requires a public agency to identify the areas of controversy in the CEQA document, including issues raised by agencies and the public. Over the course of developing the proposed project, the predominant concerns expressed by representatives of industry and environmental groups, either in public meetings or in written comments, regarding the proposed project are highlighted in Table 1-1.

Table 1-1
Areas of Controversy

	Area of Controversy	Topics Raised by the Public	SCAQMD Evaluation
1.	Burner Availability	Suppliers cannot consistently provide a burner that meets the emission limit for a particular application.	SCAQMD staff has reviewed available products from the six major suppliers of burners for the affected equipment. For each major category of equipment regulated by Rule 1147, at least three companies provide burners that currently meet the emission limits in the rule. For types of equipment where there are a limited number of available burners or burner sizes, the current version of Rule 1147 as well as PAR 1147 provides additional time for both new and existing equipment to comply (e.g., spray booths, heated process tanks, and food ovens).
2.	Burner Fuel Penalty and Fuel Efficiency	For some retrofits, installing a burner with a higher BTU rating than the original may be necessary depending on the equipment category and retrofit burner availability. Doing so can result in a less efficient system and more fuel use.	<p>The choice of retrofit burner is made by the owner and their consultant, as applicable, based upon process requirements. In some cases, a retrofit burner with an identical heat rating (e.g., BTU per hour) may not be available. Instead, the retrofit burner may have a higher heat rating than the original burner. Having a higher heat rating, however, does not necessarily mean that the overall system would operate at that higher capacity because many of the new low NOx burners are replacing “atmospheric” burners which do not premix fuel and air prior to combustion. The new low NOx burners use less fuel than the atmospheric burners because they combust the fuel more efficiently.</p> <p>A common technique used to lower NOx emissions is by increasing the amount of extra primary combustion air mixed with the fuel prior to combustion (e.g., increasing the amount of excess air). Increasing the amount of excess air will reduce the flame temperature and NOx emissions, as well as also reduce the temperature of combustion gasses through dilution. While this reduction in flue gas temperature has the potential to reduce process efficiency if no other adjustments are made, processes can be adjusted to compensate for the higher levels of excess air in the burner with no loss in efficiency or increase in fuel consumption. The increase in air going through the burner can be</p>

		offset by reducing the amount of other air pulled into the system by a blower or exhaust fan. This can be done by reducing the speed of the exhaust fan (which saves energy also) or by adjusting the intake damper so that less air is pulled in for heating. When a process pulls in the same amount of air, regardless of the source, and produces heated air at the same temperature, the same fuel use and efficiency will occur. Lastly, higher excess air entering the burners can also maintain a more uniform temperature by minimizing temperature stratification to produce a better product and reduce fuel use.
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Pursuant to CEQA Guidelines §15131(a), “Economic or social effects of a project shall not be treated as significant effects on the environment.” CEQA Guidelines §15131(b) states further, “Economic or social effects of a project may be used to determine the significance of physical changes caused by the project.” Physical changes caused by the proposed project have been evaluated in Chapter 4 of this SEA. No direct or indirect physical changes resulting from economic or social effects have been identified as a result of implementing the proposed project.

Of the topics discussed to address the concerns raised relative to CEQA and the secondary impacts that would be associated with implementing the proposed project, to date, no other controversial issues were raised as a part of developing the proposed project.

EXECUTIVE SUMMARY

CEQA Guidelines §15123 requires a CEQA document to include a brief summary of the proposed actions and their consequences. In addition, areas of controversy including issues raised by the public must also be included in the executive summary (see preceding discussion).

This [Final Draft](#) SEA consists of the following chapters: Chapter 1 – Executive Summary; Chapter 2 – Project Description; Chapter 3 – Existing Setting, Chapter 4 – Potential 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 – Executive Summary

Chapter 1 includes a discussion of the legislative authority that allows the SCAQMD to amend and adopt air pollution control rules, identifies general CEQA requirements and the intended uses of this CEQA document, and summarizes the remaining five chapters that comprise this [Final Draft](#) SEA.

Summary of Chapter 2 - Project Description

The proposed amendments to Rule 1147 would apply to the following categories of gaseous and liquid fuel-fired combustion equipment: 1) remediation units; 2) tar pots; 3) other units manufactured prior to 1986; 4) other units manufactured prior to 1992; and 5) other units manufactured prior to 1998. Specifically, the following amendments would:

- remove the requirements for the installation of time meters;
- remove the requirements for the installation of non-resettable totalizing fuel meters if the operator intends to comply with the Rule 1147 NOx emission limits in terms of parts per million (ppm); ~~and~~,

- extend [the](#) NOx emission limit compliance dates in Table 2 – Compliance Schedule for In-Use Units for certain equipment categories by up to two years; [and](#),-
- [extend the NOx emission limit compliance dates for units with emissions of more than one pound per day by up to three years provided that an alternate compliance plan is submitted and an emissions mitigation fee is paid in lieu of meeting the applicable NOx emission limit in Table 1 – NOx Emission Limit.](#)

Other minor changes are also proposed for clarity and consistency throughout the rule. A copy of PAR 1147 can be found in Appendix A of this [Final Draft](#) SEA.

Summary of Chapter 3 - Existing Setting

Pursuant to the CEQA Guidelines §15125, Chapter 3 – Existing Setting, includes descriptions of those environmental areas that could be adversely affected by the proposed project as identified in the NOP/IS (Appendix [B](#)~~C~~). The following subsection briefly highlights the existing setting for the topic of air quality and GHG emissions which has been identified as having potentially significant adverse affects from implementing the proposed project.

Air Quality and GHG Emissions

Air quality in the area of the SCAQMD's jurisdiction has shown substantial improvement over the last two decades. Nevertheless, some federal and state air quality standards are still exceeded frequently and by a wide margin. Of the National Ambient Air Quality Standards (NAAQS) established for seven criteria pollutants (ozone, lead, sulfur dioxide, nitrogen dioxide, carbon monoxide, PM10 and PM2.5), the area within the SCAQMD's jurisdiction is only in attainment with carbon monoxide, sulfur dioxide, and nitrogen dioxide standards. Air monitoring for PM10 indicates that SCAQMD has attained the NAAQS but USEPA has not yet approved the SCAQMD's request for re-designation. Effective December 31, 2010, the Los Angeles County portion of the SCAQMD has been designated as non-attainment for the new federal standard for lead, based on emissions from two specific facilities. Chapter 3 provides a brief description of the existing air quality setting for each criteria pollutant, as well as the human health effects resulting from exposure to each criteria pollutant. In addition, this section includes a discussion on greenhouse gases (GHGs), climate change and toxic air contaminants (TACs).

Summary of Chapter 4 - Environmental Impacts

CEQA Guidelines §15126(a) requires that a CEQA document shall identify and focus on the “significant environmental effects of the proposed project.” Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects.

The proposed project could cause significant adverse environmental impacts to operational air quality emissions). Specifically, analysis of these environmental impacts revealed that potentially significant operational air quality impacts may result from delaying the implementation of some of the compliance dates contained in Rule 1147. Implementation of PAR 1147 means that the compliance dates for meeting the NOx emission limits for existing (in-use) permitted equipment will be delayed by up to two years and the requirement for the installation of time meters will be eliminated. Lastly, PAR 1147 will remove the requirements for installation of non-resettable totalizing fuel meters if the operator intends to comply with the Rule 1147 NOx emission limits in terms of ppm. (This means that the installation of fuel meters will only be required if the operator intends to comply with the NOx emission limits in terms of lb/MMBTU.) Because PAR 1147 is mainly a delay in implementation, no new physical changes requiring construction are involved with the proposed project. Instead, the same construction

activities and the same environmental impacts associated with installing ultra-low NO_x burners at the time Rule 1147 was adopted will continue to occur under PAR 1147 but on a delayed schedule. Thus, each affected owner/operator will be expected to comply with the lowered NO_x emission limits by installing ultra-low NO_x burners or installing new, compliant equipment, but on a delayed implementation schedule.

PAR 1147 will result in a delay of: 1) 0.70 ton per day of NO_x emission reductions in compliance years 2010 and 2011; and, 2) 0.06 ton per day of NO_x emission reductions in compliance years 2015 and 2016. However, the 0.70 ton per day of NO_x delayed emission reductions will be recaptured in compliance years 2012 and 2013 and the 0.06 ton per day of delayed NO_x emission reductions will be recaptured in compliance years 2017 and 2018, respectively. The amount of NO_x emission reductions delayed is expected to exceed the operational air quality NO_x significance threshold of 55 pounds per day. For these reasons, operational air quality impacts associated with implementation of PAR 1147 are potentially significant.

Based on the type and size of equipment affected by PAR 1147, at the time of adoption of Rule 1147, carbon dioxide (CO₂) emissions (e.g., GHG emissions) from the operation of the retrofitted or replaced equipment were estimated to slightly decrease from current levels due to improved burner efficiency. Thus, the delay in compliance dates in PAR 1147, operation of ultra-low NO_x burners will continue to be expected to result in a similar slight, decrease in GHG emissions. However, the delay in compliance dates in PAR 1147 means the any reductions in GHG emissions will also be delayed. Nonetheless, the amount GHG emission reductions that may be delayed as a result of implementing the proposed project is not expected to exceed the SCAQMD's GHG significance threshold for industrial sources. Thus, implementing PAR 1147 is not expected to generate significant adverse cumulative GHG emission impacts.

Cumulative air quality impacts from the proposed project and all other AQMP control measures considered together are not expected to be significant because the amount of emission reductions to be achieved by the proposed project for NO_x are expected to meet the emission reduction projections and commitments made by control measures in the 2007 AQMP. Thus, despite the interim delay in implementation of some of the compliance dates, the same amount of overall NO_x emission reductions as estimated in the current rule will be achieved by PAR 1147 (e.g., 3.5 tons per day of NO_x emission reductions by 2014 and 3.8 tons per day of NO_x emission reductions by 2023).

Thus, in consideration of the total net accumulated emission reductions projected overall, the delay in NO_x emission reductions would not interfere with the air quality progress and attainment demonstration projected in the AQMP. Indeed, the 2007 AQMP indicated that, based on future anticipated overall reduction in emissions, the Basin would achieve the federal ozone ambient air quality standard by the year 2024 and the PM_{2.5} standard by 2015 (SCAQMD, 2007). Therefore, cumulative air quality impacts from the proposed project and all other AQMP control measures, when considered together, are not expected to be significant because implementation of all AQMP control measures is expected to result in net emission reductions and overall air quality improvement.

Potential Environmental Impacts Found Not To Be Significant

The Initial Study for the proposed project includes an environmental checklist of approximately 17 environmental topics to be evaluated for potential adverse impacts from a proposed project. Review of the proposed project at the NOP/IS stage identified one topic (air quality and GHG

emissions) for further review. Where the Initial Study concluded that the project would have no significant direct or indirect adverse effects on the remaining environmental topics, of the comments received on the NOP/IS or at the public meetings, none of the comments changed this conclusion. The screening analysis concluded that the following environmental areas would not be significantly adversely affected by the proposed project:

- aesthetics
- air quality and greenhouse gases during construction (and greenhouse gases during operation)
- agriculture and forestry resources
- biological resources
- cultural resources
- energy
- geology and soils
- hazards and hazardous materials
- hydrology and water quality
- land use and planning
- mineral resources
- noise
- population and housing
- public services
- recreation
- solid/hazardous waste
- transportation/traffic

Consistency

The Southern California Association of Governments (SCAG) and the SCAQMD have developed, with input from representatives of local government, the industry community, public health agencies, the USEPA-Region IX and the California Air Resources Board (CARB), guidance on how to assess consistency within the existing general development planning process in the Basin. Pursuant to the development and adoption of its Regional Comprehensive Plan Guide (RCPG), SCAG has developed an Intergovernmental Review Procedures Handbook (June 1, 1995). The SCAQMD also adopted criteria for assessing consistency with regional plans and the AQMP in its CEQA Air Quality Handbook. The proposed project is considered to be consistent with SCAG's RCPG because it does not interfere with achieving any of the goals identified in any of the RCPG policies.

Other CEQA Topics

CEQA documents are required to address the potential for irreversible environmental changes, growth-inducing impacts and inconsistencies with regional plans. Consistent with the Final Program Environmental Impact Report (EIR) prepared for the 2007 AQMP, additional analysis of the proposed project confirms that it would not result in irreversible environmental changes or the irretrievable commitment of resources, foster economic or population growth or the construction of additional housing, or be inconsistent with regional plans.

Summary Chapter 5 - Alternatives

Three alternatives to the proposed project are summarized in Table 1-2: Alternative A (No Project), Alternative B (Delayed Compliance), and Alternative C (Expedited Compliance). Pursuant to the requirements in CEQA Guidelines §15126.6 (b) to mitigate or avoid the

significant effects that a project may have on the environment, a comparison of the potentially significant adverse operational air quality impacts from each of the project alternatives for the individual rule components that comprise the proposed project is provided in Table 1-3. Aside from operational air quality impacts, no other potentially significant adverse impacts were identified for the proposed project or any of the project alternatives. The proposed project is considered to provide the best balance between emission reductions and the adverse environmental impacts due to construction and operation activities while meeting the objectives of the project. Therefore, the proposed project is preferred over the project alternatives.

Table 1-2
Summary of PAR 1147 & Project Alternatives

Rule Components									
Equipment Category	Current Compliance Schedule	Proposed Project	NOx Emission Reductions Delayed per Compliance Year (tons/day)	Alternative A: No Project	NOx Emission Reductions Delayed per Compliance Year (tons/day)	Alternative B: Delayed Compliance	NOx Emission Reductions Delayed per Compliance Year (tons/day)	Alternative C: Expedited Compliance	NOx Emission Reductions Delayed per Compliance Year (tons/day)
In-Use Remediation Units	January 1, 2011	Delay Compliance Date by 1 year & 2 months to January March 1, 2012	0.014 (2011) 0.014 (2012)	No change	0	Delay Compliance Date by 2 years to January 1, 2013	0.014 (2011) 0.014 (2012)	Delay Compliance Date by 6 months to July 1, 2011	0.014 (2011)
In-Use Tar Pots	January 1, 2012	Delay Compliance Date by 1 year to January 1, 2013	0.003 (2012)	No change	0	Delay Compliance Date by 2 years to January 1, 2014	0.003 (2012) 0.003 (2013)	Delay Compliance Date by 6 months to July 1, 2012	0.003 (2012)
Other In-Use Units manufactured prior to 1986	July 1, 2010	Delay Compliance Date by 2 years to July 1, 2012	0.700 (2010); 0.700 (2011)	No change	0	Delay Compliance Date by 3 years to July 1, 2013	0.697 (2010) 0.697 (2011) 0.697 (2012)	Delay Compliance Date by 1.5 years to January 1, 2012	0.700 (2010) 0.700 (2011)
Other In-Use Units manufactured prior to 1992	July 1, 2011	Delay Compliance Date by 1 year to July 1, 2012	0.686 (2011)	No change	0	Delay Compliance Date by 2 years to July 1, 2013	0.684 (2011) 0.684 (2012)	Delay Compliance Date by 6 months to January 1, 2012	0.686 (2011)
Other In-Use Units manufactured prior to 1998	July 1, 2012	Delay Compliance Date by 1 year to July 1, 2013	0.697 (2012)	No change	0	Delay Compliance Date by 2 years to July 1, 2014	0.694 (2012) 0.694 (2013)	Delay Compliance Date by 6 months to January 1, 2013	0.697 (2012)
In-Use Equipment Emitting ≤ 1 lb/day NOx	Varies by Equipment Category	Delay schedule in paragraph (c)(6) by 1 to 2 years	0.060 (2015) 0.060 (2016) 0.060 (2017)	No change	0	Exempt from NOx limits & compliance schedule per equipment category	0.3 to 0.9 (2015 & each year after)	Same as Proposed Project	0.060 (2015) 0.060 (2016) 0.060 (2017)
Multiple In-Use Equipment Units operating in series	Varies by Equipment Category	No Change	0	Same as Proposed Project	0	Harmonize compliance dates to the latest of applicable compliance dates, no later than January 1, 2014	0.003 (2010) 0.003 (2011) 0.003 (2012) 0.003 (2013)	Harmonize compliance dates to the earliest applicable compliance date	0

Table 1-2 (continued)

Summary of PAR 1147 & Project Alternatives

Rule Components									
Equipment Category	Current Compliance Schedule	Proposed Project	NOx Emission Reductions Delayed per Compliance Year (tons/day)	Alternative A: No Project	NOx Emission Reductions Delayed per Compliance Year (tons/day)	Alternative B: Delayed Compliance	NOx Emission Reductions Delayed per Compliance Year (tons/day)	Alternative C: Expedited Compliance	NOx Emission Reductions Delayed per Compliance Year (tons/day)
New Afterburners, Degassing Units, Thermal Oxidizers, Catalytic Oxidizers, Vapor Incinerators & Spray Booth Make-Up Air Heaters	15 years if installed after December 5, 2008 & before January 1, 2011	No Change	0	Same as Proposed Project	0	Extend eligibility date for exempt equipment installation by 1 year to January 1, 2012	Accounted for in “Other In-Use Units manufactured prior to 1992” equipment category	Same as Proposed Project	0
New or Relocated Remediation Units	15 years if installed after December 5, 2008 & before January 1, 2011	No Change	0	Same as Proposed Project	0	Extend eligibility date for exempt equipment installation by 1 year to January 1, 2012	Accounted for in “Other In-Use Units manufactured prior to 1992” equipment category	Same as Proposed Project	0
New Food Ovens, Fryers, Heated Process Tanks, Parts Washers & Evaporators	15 years if installed after December 5, 2008 & before January 1, 2013	No Change	0	Same as Proposed Project	0	Extend eligibility date for exempt equipment installation by 1 year to January 1, 2014	Accounted for in “Other In-Use Units manufactured prior to 1998” equipment category	Same as Proposed Project	0

**Table 1-2 (concluded)
Summary of PAR 1147 & Project Alternatives**

Rule Components									
Equipment Category	Current Compliance Schedule	Proposed Project	NOx Emission Reductions Delayed per Compliance Year (tons/day)	Alternative A: No Project	NOx Emission Reductions Delayed per Compliance Year (tons/day)	Alternative B: Delayed Compliance	NOx Emission Reductions Delayed per Compliance Year (tons/day)	Alternative C: Expedited Compliance	NOx Emission Reductions Delayed per Compliance Year (tons/day)
In-Use Afterburners, Degassing Units, Catalytic Oxidizers, Thermal Oxidizers, Vapor Incinerators, Evaporators, Food Ovens, Fryers, Heated Process Tanks, Parts Washers & Spray Booth Make-Up Air Heaters manufactured prior to 1988	July 1, 2013	Delay Compliance Date by 1 year to July 1, 2014 No Change	0 Accounted for in “Other In-Use Units manufactured prior to 1998” equipment category	Same as Proposed Project No Change	0	Delay Compliance Date by 1 year to July 1, 2014	Accounted for in “Other In-Use Units manufactured prior to 1998” equipment category	Same as Proposed Project No Change	0
Mitigation Fee Option eligible for any unit with emissions of more than 1 pound per day	None	Delay Compliance Date by 3 years (date varies by equipment category)	0 ⁴	No Change	0	No Change	0	No Change	0
Potential NOx Emission Reductions Delayed			0.70 (2010) 1.40 (2011) 0.71 0 (2012) 0 (2013-2014) 0.06 (2015) 0.06 (2016) 0.06 (2017) 0 (2018-2019)		0		0.70 (2010) 1.40 (2011) 1.40 (2012) 0.70 (2013) 0 (2014) 0.30 – 0.90 (2015 & each year after)		0.70 (2010) 1.40 (2011) 0.70 (2012) 0 (2013-2014) 0.06 (2015) 0.06 (2016) 0.06 (2017) 0 (2018-2019)

⁴ [Impacts for NOx emission reductions delayed are mitigated by funding leaf blower exchange programs.](#)

**Table 1-3
Comparison of Adverse Environmental Impacts of the Alternatives**

Category	Proposed Project	Alternative A: No Project	Alternative B: Delayed Compliance	Alternative C: Expedited Compliance
Air Quality (during operation)	Delays daily NOx emission reductions as follows: 0.70 ton/day in 2010 1.40 ton/day in 2011 0.710 ton/day in 2012 0 ton/day in 2013 0 ton/day in 2014 0.06 ton/day in 2015 0.06 ton/day in 2016 0.06 ton/day in 2017 0 ton/day in 2018 0 ton/day in 2019	No change to NOx emission reduction schedule.	Additional delays in daily NOx emission reductions as follows: 0.70 ton/day in 2010 1.40 ton/day in 2011 1.40 ton/day in 2012 0.70 ton/day in 2013 0 ton/day in 2014 0.30 to 0.90 ton/day in 2015 and for each year after	Fewer delays in daily NOx emission reductions as follows: 0.70 ton/day in 2010 1.40 ton/day in 2011 0.70 ton/day in 2012 0 ton/day in 2013 0 ton/day in 2014 0.06 ton/day in 2015 0.06 ton/day in 2016 0.06 ton/day in 2017 0 ton/day in 2018 0 ton/day in 2019
Air Quality Operational Impacts Significant?	Significant for delayed NOx emission reductions.	Not significant for any pollutant. However, compliance cannot be achieved by the original compliance schedule for most equipment.	Significant for delayed NOx emission reductions and more significant (less stringent) than the proposed project for years 2012, 2013, 2015 and for each year after.	Significant for delayed NOx emission reductions and equivalent to proposed project.

CHAPTER 2

PROJECT DESCRIPTION

Project Location

Project Background

Project Objective

Project Description

Summary of Affected Equipment and Methods of Compliance

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 and the Riverside County portions of the Salton Sea Air Basin (SSAB) and the Mojave Desert Air Basin (MDAB). The Basin, which is a subarea 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 6,745 square-mile Basin includes all of Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino counties. The Riverside County portion of the SSAB and MDAB is bounded by the San Jacinto Mountains in 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 both Riverside County and the SSAB and is bounded by the San Jacinto Mountains to the west and the eastern boundary of the Coachella Valley to the east (Figure 2-1).



Figure 2-1
Boundaries of the South Coast Air Quality Management District

PROJECT BACKGROUND

Adopted in December 2008, Rule 1147 controls NO_x emissions from miscellaneous gas and liquid fuel fired combustion equipment, including, but not limited to: ovens, dryers, dehydrators, heaters, kilns, calciners, furnaces, heated pots, cookers, roasters, fryers, closed and open heated tanks and evaporators, distillation units, degassing units, incinerators, and soil remediation units. Under Rule 1147, regulated equipment must meet an emission limit of 30 ppm to 60 ppm of NO_x based on the type of equipment. Alternatively, equipment may meet a NO_x limit between 0.036 pounds per million British Thermal Units (lb/MMBTU) and 0.080 lb/MMBTU based on the type of equipment.

Compliance is phased in for equipment based on age. Effective January 1, 2010, new, relocated, or modified equipment (except for tar pots) must comply with the emission limits in Rule 1147.

For in-use equipment, compliance dates for emission limits are based on the date of equipment manufacture, and emission limits are applicable to older equipment first. Owners of equipment are provided at least 15 years before they must modify or replace existing equipment to meet emission limits. Rule 1147 also contains test methods and provides alternate compliance options including a process for certification of equipment NO_x emissions through an approved testing program. Other requirements include equipment maintenance, meters and recordkeeping.

Rule 1147 contains a phased-in approach for imposing NO_x emission limits on equipment based on age. For example, as of July 1, 2010, equipment aged 25 years or older was required to meet a specified NO_x emission limit. One year later, equipment aged between 20 and 25 years old will also be required to meet a specified NO_x emission limit. Lastly, equipment aged 15 years old will be required to meet another NO_x emission limit. Exceptions to the basic schedule include soil remediation equipment that must comply on or after January 1, 2011, when a combustion modification or change of location occurs or when a new unit begins operating. Rule 1147 provides additional time for specific categories of equipment that have recently replaced burners or have a permit limit of less than one pound per day NO_x at the time of Rule 1147 was adopted. The compliance objectives of Rule 1147 are tied to the following compliance dates: 1) 2014 to achieve the federal PM 2.5 standard; and, 2) 2023 to achieve the federal 8-hour ozone standard.

Since the adoption of Rule 1147, some equipment owners/operators are experiencing compliance challenges with certain components of the rule due to the economic downturn, specifically, the cost impacts associated with installing fuel and time meters for each affected unit by January 1, 2011. SCAQMD staff conducted more research and found that installation of time meters is not essential for determining compliance with Rule 1147. Further, SCAQMD staff determined that the need to install fuel meters is essential for determining compliance only for certain circumstances that depend on the compliance option chosen by the equipment operator.

In response to these compliance challenges, SCAQMD staff is proposing to amend Rule 1147 to delay implementation of the NO_x emission limit compliance dates for existing (in-use) permitted equipment, to eliminate the requirement for the installation of time meters, and to remove the requirement for the installation of non-resettable totalizing fuel meters if the operator intends to comply with the Rule 1147 NO_x emission limits in terms of ppm.

So that facilities do not incur unnecessary expenses associated with complying with the current requirements in Rule 1147 that are the focus of the amendments considered as part of this proposed project, the Executive Officer is exercising enforcement discretion with regard to Rule 1147 until PAR 1147 is presented to the SCAQMD's Governing Board. Enforcement discretion means that the SCAQMD will not issue any new NOV's or NTC's and will cancel any previously issued NOV's and NTC's specifically related to the items that are subject of PAR 1147, until PAR 1147 is acted on by the Governing Board.

At the time of adoption, Rule 1147 was estimated to reduce annual average emissions of NO_x by 3.5 tons per day by 2014 and 3.8 tons per day by 2023. Delaying the compliance dates in PAR 1147 means that there will be adjustments to the annual NO_x emission reductions during varying compliance years as summarized in Table 2-1:

**Table 2-1
Annual Adjustments to NOx Emission Reductions**

Compliance Year	Current NOx Emission Reductions in Rule 1147 (tons/day)	Proposed NOx Emission Reductions in PAR 1147 (tons/day)
2010	0.70	0
2011	0.70	0
2012	0.70	1.40
2013	0.70	1.40
2014	0.70	0.70
2015	0.06	0
2016	0.06	0
2017	0.06	0.12
2018	0.06	0.12
2019	0.06	0.06

Specifically, implementing PAR 1147 will result in a delay of: 1) 0.70 ton per day of NOx emission reductions in compliance years 2010 and 2011; and, 2) 0.06 ton per day of NOx emission reductions in compliance years 2015 and 2016. However, the 0.70 ton per day of NOx delayed emission reductions will be recaptured in compliance years 2012 and 2013 and the 0.06 ton per day of delayed NOx emission reductions will be recaptured in compliance years 2017 and 2018, respectively. Thus, despite the delay in implementation of some of the compliance dates, the same amount of overall NOx emission reductions as estimated in the current rule will be achieved by PAR 1147 (e.g., 3.5 tons per day of NOx emission reductions by 2014 and 3.8 tons per day of NOx emission reductions by 2023).

PROJECT OBJECTIVE

The primary focus of the proposed project is to amend Rule 1147 in order to bring compliance relief to owners/operators of affected combustion equipment by: 1) delaying implementation of certain NOx emission limit compliance dates for existing (in-use) permitted equipment; 2) removing the requirement for the installation of gas fuel meters for equipment that currently comply with the NOx emission level in terms of the ppm compliance option; and, 3) removing the requirement for time meters. Other minor changes are proposed for clarity and consistency throughout the proposed amended rule. While PAR 1147 will delay the implementation of some of the compliance dates, the objective is to achieve the same amount of overall NOx emission reductions in PAR 1147 as estimated in the current rule (e.g., 3.5 tons per day of NOx emission reductions by 2014 and 3.8 tons per day of NOx emission reductions by 2023).

PROJECT DESCRIPTION

The proposed amendments to Rule 1147 would apply to the following categories of gaseous and liquid fuel-fired combustion equipment: 1) remediation units; 2) tar pots; 3) other units manufactured prior to 1986; 4) other units manufactured prior to 1992; and 5) other units manufactured prior to 1998. Specifically, the following amendments would:

- remove the requirements for the installation of time meters;
- remove the requirements for the installation of non-resettable totalizing fuel meters if the operator intends to comply with the Rule 1147 NOx emission limits in terms of ppm; ~~and,~~

- extend the NOx emission limit compliance dates in Table 2 – Compliance Schedule for In-Use Units for certain equipment categories by up to two years; and,
- extend the NOx emission limit compliance dates for units with emissions of more than one pound per day by up to three years provided that an alternate compliance plan is submitted and an emissions mitigation fee is paid in lieu of meeting the applicable NOx emission limit in Table 1 – NOx Emission Limit.

The following is a summary of the key proposed amendments to Rule 1147. Other minor changes are proposed for clarity and consistency throughout the proposed amended rule. A copy of PAR 1147 can be found in Appendix A of this Final Draft SEA.

Subdivision (b) – Definitions

For clarity and consistency throughout the rule, a new definition of “in-use unit” has been added and the definition of “make-up air heater” has been modified.

Subdivision (c) – Requirements

The compliance dates in paragraph (c)(1), Table 2 for certain equipment categories have been extended as follows: 1) from January 1, 2011 to March January 1, 2012 for remediation units; 2) from January 1, 2012 to January 1, 2013 for tar pots; 3) from January 1, 2010 to January 1, 2012 for other units manufactured prior to 1986; 4) from January 1, 2011 to January 1, 2012 for other units manufactured prior to 1992; and, 5) from January 1, 2012 to January 1, 2013 for other units manufactured prior to 1998; and, 6) from July 1, 2013 to July 1, 2014 for afterburners, degassing units, catalytic oxidizers, thermal oxidizers, vapor incinerators, evaporators, food ovens, fryers, heated process tanks, parts washers or spray booth make-up air heaters manufactured prior to 1998. In addition, Table 2 has been modified to include permit application submittal dates for each of the equipment categories.

Paragraph (c)(2) has been modified to clarify the starting operations date criteria for any tunnel kiln or crematory rebuilt prior to January 1, 2010.

The compliance determination requirements in paragraph (c)(3) have been modified to rely on the permit schedule, and not the flue gas oxygen concentration, to determine compliance with the NOx emission limits in Table 1.

Paragraph (c)(6) has been clarified to include criteria for demonstrating how NOx emissions of one pound per day or less will be determined when deferring compliance with the applicable NOx emission limits in Table 1.

Paragraph (c)(7) has been clarified to require the installer’s or maintenance company’s written maintenance schedule to be maintained on site at the facility as part of the maintenance activity records.

Lastly, Paragraph (c)(8) has been modified to remove the requirement for time meters and to remove the requirements for installation of non-resettable totalizing fuel meters if the operator intends to comply with the Rule 1147 NOx emission limits in terms of ppm.

Paragraph (c)(12) has been modified to: 1) remove the requirement that the shipping container contain the model number and rated heat input capacity of compliant unit and instead require the

information to be posted on the unit or burner; and 2) require the manufacturer or installer to demonstrate the gross heat input.

Lastly, paragraph (c)(14) has been modified to: 1) extend the submittal date of an alternate compliance plan from July 1, 2009 to January 1, 2012 to phase-in compliance of all units starting April 1, 2012 and ending before January 1, 2015; 2) require an alternate compliance plan to identify the units included in the plan and to include a schedule that specifies when each unit will comply with the emission limit and when the compliance determination for each unit will be completed; and, 3) allow the synchronization of all compliance dates into one date for multiple units in series that would otherwise have different compliance dates provided that the compliance date is no later than December 1, 2013.

Subdivision (d) – Compliance Determination

Paragraph (d)(1) has been modified to require compliance determinations to be: 1) calculated after unit start up; 2) based on the maximum heat input range at which the unit normally operates; and, 3) based on a heat input of less than 35 percent of the rated heat input capacity for units with process temperatures less than 1200 degrees Fahrenheit that operate with variable heat input that falls below 50 percent rated heat input capacity during normal operation.

Paragraph (d)(3) has been reorganized to clarify when District Source Test Method 7.1 is chosen to demonstrate compliance with the NO_x emission limits, District Source Test Method 10.1 shall also be used to determine stack-gas oxygen and carbon dioxide concentrations.

New paragraph (d)(7) has been added to specify compliance demonstration requirements for either: 1) equipment with two or more units in series; 2) multiple units with a common exhaust; or, 3) units with one dual purpose burner that both heats the process and incinerates VOC, toxic or PM emissions.

Subdivision (e) – Certification

Paragraph (e)(6) has been modified to increase the time that a certification status would be valid from four years to five years and to require recertification after the fifth year.

Subdivision (g) – Exemptions

Subparagraph (g)(3)(D) has been modified to clarify the exemption for integrated thermal fluid heat exchanger that capture heat from the afterburner or vapor incinerator and oven or furnace exhaust in order to reduce fuel consumption by an oven, afterburner or vapor incinerator.

Paragraph (g)(4) has been modified to extend the end date of the exemption for new afterburners, degassing units, thermal oxidizers, catalytic oxidizers, vapor incinerators and spray booth make-up air heaters from January 1, 2011 to March 1, 2012.

Paragraph (g)(5) has been modified to extend the end installation date of the exemption for new or relocated remediation unit to March 1, 2012. However, the exemption will expire if there is a combustion modification or change of location that occurs on or after January 1, 2012.

Subdivision (h) – Technology Assessment

New subdivision (h) has been added to require the SCAQMD's Executive Officer to conduct a technology assessment and report to the Governing Board on or before December 7, 2015

regarding the availability of burner systems and units for processes with NOx emissions of one pound per day or less.

Subdivision (i) – Mitigation Fee Compliance Option

New paragraph (i)(1) has been added to allow an extension of the NOx emission limit compliance dates for units with emissions of more than one pound per day by up to three years provided that an alternate compliance plan is submitted and an emissions mitigation fee is paid in lieu of meeting the applicable NOx emission limit in Table 1 – NOx Emission Limit.

New paragraph (i)(2) has been added to require a compliance demonstration for units that will be subject to the mitigation fee compliance option.

New paragraph (i)(3) has been added to establish plan submittal requirements for the alternate compliance plan.

SUMMARY OF AFFECTED EQUIPMENT AND METHODS OF COMPLIANCE

There are approximately 6,600 units located at 3,000 facilities that are subject to the emission limits in Rule 1147. Of these, approximately 1,600 units located at 800 facilities currently meet the NOx emission limits in Rule 1147. At the time Rule 1147 was adopted, SCAQMD staff estimated that there were as many as 2,500 permitted units (excluding remediation units) with NOx emission limits greater than one pound per day that would potentially become subject to the emission limits in Rule 1147 between compliance years 2010 and 2014. Further, an additional 2,500 permitted units with NOx emission limits of less than one pound per day were expected to become subject to the emission limits in Rule 1147 between compliance years 2015 and 2019. In addition, SCAQMD staff estimated that 100 to 200 remediation units per year will become subject to the NOx emission limits in Rule 1147 starting in 2011, and all units would be required to meet the applicable NOx emission limit by 2023.

Table 2-2 provides a summary of the various types of equipment that are subject to the requirements in Rule 1147.

**Table 2-2
Summary of Equipment Categories and NO_x Emission Limits in Rule 1147**

Equipment Category	NO _x Emission Limit ppm @ 3% O ₂ , dry or lb/mmBtu heat input		
	Process Temperature		
Gaseous Fuel-Fired Equipment	≤ 800 °F	> 800 °F and < 1200 °F	≥ 1200 °F
	Asphalt Manufacturing Operation	40 ppm	40 ppm
Afterburner, Degassing Unit, Remediation Unit, Thermal Oxidizer, Catalytic Oxidizer or Vapor Incinerator ¹	30 ppm or 0.036 lb/mmBtu	60 ppm or 0.073 lb/mmBtu	60 ppm or 0.073 lb/mmBtu
Evaporator, Fryer, Heated Process Tank, or Parts Washer	60 ppm or 0.073 lb/mmBtu	60 ppm or 0.073 lb/mmBtu	60 ppm or 0.073 lb/mmBtu
Metal Heat Treating, Metal Melting Furnace, Metal Pot, or Tar Pot	60 ppm or 0.073 lb/mmBtu	60 ppm or 0.073 lb/mmBtu	60 ppm or 0.073 lb/mmBtu
Oven, Dehydrator, Dryer, Heater, Kiln, Crematory, Incinerator, Calciner, Cooker, Roaster, Furnace, or Heated Storage Tank	30 ppm or 0.036 lb/mmBtu	30 ppm or 0.036 lb/mmBtu	60 ppm or 0.073 lb/mmBtu
Make-Up Air Heater or other Air Heater located outside of building with temperature controlled zone inside building	30 ppm or 0.036 lb/mmBtu	30 ppm or 0.036 lb/mmBtu	60 ppm or 0.073 lb/mmBtu
Tenter Frame or Fabric or Carpet Dryer	30 ppm or 0.036 lb/mmBtu	30 ppm or 0.036 lb/mmBtu	60 ppm or 0.073 lb/mmBtu
Other Unit or Process Temperature	30 ppm or 0.036 lb/mmBtu	30 ppm or 0.036 lb/mmBtu	60 ppm or 0.073 lb/mmBtu
Liquid Fuel-Fired Equipment	Process Temperature		
	≤ 800 °F	> 800 °F and < 1200 °F	≥ 1200 °F
All liquid fuel-fired Units	40 ppm or 0.053 lb/mmBtu	40 ppm or 0.053 lb/mmBtu	60 ppm or 0.080 lb/mmBtu

¹ Emission limit applies to burners in units fueled by 100 percent natural gas that are used to incinerate air toxics, VOCs, or other vapors; or to heat a unit. The emission limit applies solely when burning 100 percent fuel and not when the burner is incinerating air toxics, VOCs, or other vapors. The unit shall be tested or certified to meet the emission limit while fueled with natural gas.

As was assumed at the time of adoption of Rule 1147, delayed compliance with the specified NO_x emission limits for in-use units as proposed in PAR 1147 is expected to continue to be achieved primarily by installing ultra-low NO_x burners, but on a delayed installation schedule. For existing (in-use) equipment, compliance with PAR 1147 means that the owner/operator will either retrofit the existing unit with an ultra-low NO_x burner that the manufacturer has obtained SCAQMD certification as compliant with the NO_x emission standard or if the existing unit is at the end of its useful life, replace it with a new compliant unit. Retrofitting an existing unit would consist of utilizing a retrofit kit that requires removing the existing burner and replacing it with a compliant, ultra-low NO_x burner. Similarly, compliance with PAR 1147 for a new unit means that the equipment, at the time of manufacture, will be equipped with compliant ultra-low NO_x burner technology that the manufacturer has obtained SCAQMD certification to achieve the NO_x emission standards. No add-on control equipment is expected to be used for either new or existing units to comply with the new NO_x emission limits because compliance with the existing

NOx limits on a delayed scheduled can be achieved with ultra-low NOx burners. Typically, the size of an ultra-low NOx burner will be about the same size or slightly larger than the burner being replaced. For example, the dimensions of an ultra-low NOx burner are approximately two feet by four feet for an 18 mmBTU/hr unit.

Subsequent to the release of the Draft SEA, the proposed project has been revised to extend the NOx emission limit compliance dates for units with emissions of more than one pound per day by up to three years (e.g., by 2014) provided that an alternate compliance plan is submitted and an emissions mitigation fee is paid in lieu of meeting the applicable NOx emission limit through the aforementioned compliance methods.

By allowing an extension in the compliance dates in PAR 1147, some operators of affected equipment may delay their decision to make physical changes to their affected units and instead, take advantage of the mitigation fee option. Doing so could potentially cause additional delays in achieving the proposed NOx emission reductions contained in PAR 1147 by 0.175 ton per day (350 pounds per day) to 0.350 ton per day (700 pounds per day) by 2014.

To address the delay in NOx emissions reductions that may result from participation in the mitigation fee option, the SCAQMD has identified a mitigation measure that would require applying the emissions mitigation fee to fund leaf blower exchange programs to generate equivalent concurrent emission reductions. Thus, any delayed NOx emission reductions that may occur would be expected to be fully offset by the emission reductions occurring from leaf blower exchange program as explained in Chapter 4. In addition, potential indirect impacts from the leaf blower exchange programs are also considered in Chapter 4.

Based on past leaf blower exchange programs, it is expected that they could supply up to 3,000 pounds of NOx emission reductions per year because past leaf blower exchange events have already generated these NOx emission reductions and future events are expected to continue to generate this level of NOx emission reductions. Further, the leaf blower exchanges have been over-subscribed events based on the high demand for the newer, more efficient leaf blowers. In addition, since leaf blowers have a much shorter life-span than lawn mowers, for example, leaf blowers need to be replaced more often. Based on the high demand for the new, more efficient leaf blowers, participation in the future leaf blower exchanges are anticipated to continue to occur at the same levels as in the past. Thus, the NOx emission reductions to be generated by the leaf blower exchange program are expected to be available to offset any additional NOx emission reduction delays that may occur as a result of implementing the mitigation fee option in PAR 1147.

CHAPTER 3

EXISTING SETTING

Introduction

Existing Setting

Air Quality and Greenhouse Gas Emissions

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 NOP/IS is published. The 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; see also 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 at the time the NOP/IS is published, from both a local and regional perspective (CEQA Guidelines §15125). Therefore, the "environment" or "existing setting" against which a project's impacts are compared consists of the immediate, contemporaneous physical conditions at and around the project site (Remy, et al; 1996).

The following section summarizes the existing setting for air quality and GHG emissions which is the only environmental topic identified in the NOP/IS that may be adversely affected by the proposed project. The Final Program EIR for the 2007 AQMP also contains comprehensive information on existing and projected environmental settings for the topic of air quality and GHG emissions. Copies of the referenced document are available from the SCAQMD's Public Information Center by calling (909) 396-2039.

EXISTING SETTING

Rule 1147 affects the following categories of gaseous and liquid fuel-fired combustion equipment: 1) remediation units; 2) tar pots; 3) other units manufactured prior to 1986; 4) other units manufactured prior to 1992; and, 5) other units manufactured prior to 1998. Specifically, Rule 1147 controls NO_x emissions from miscellaneous gas and liquid fuel fired combustion equipment, including, but not limited to: ovens, dryers, dehydrators, heaters, kilns, calciners, furnaces, heated pots, cookers, roasters, fryers, closed and open heated tanks and evaporators, distillation units, degassing units, incinerators, and soil remediation units. Under Rule 1147, regulated equipment must meet an emission limit of 30 ppm to 60 ppm of NO_x based on the type of equipment. Alternatively, equipment may meet a NO_x limit between 0.036 lb/MMBTU and 0.080 lb/MMBTU based on the type of equipment

Baseline Emission Inventory

Rule 1147 applies to manufacturers (NAICS 333), distributors and wholesalers (NAICS 423) of combustion equipment, as well as owners and operators of ovens, dryers, furnaces, and other equipment in the district (NAICS 23, 31, 32, and 33, respectively). The units subject to Rule 1147 are used in industrial, commercial and institutional settings for a wide variety of processes. Rule 1147 is applicable to 6,600 units located at 3,000 facilities. At the time Rule 1147 was adopted in 2008, approximately 1,600 units located at 800 facilities already complied with the NO_x emission limits. The baseline emission inventory for equipment subject to Rule 1147, as summarized in Table 3-1, is 4.9 tons per day of NO_x (from 2002 NO_x emissions inventory in the 2007 AQMP). The percent of equipment subject to emission limits in each specific year was based upon a survey of the SCAQMD permit database.

**Table 3-1
NOx Baseline Emission Inventory for Rule 1147 Equipment**

Fuel	Equipment Category	Typical Uncontrolled NOx Emissions	Rule 1147 NOx Emission Limit	No. of Units	NOx Baseline Emission Inventory (tons/day)
Natural Gas	Asphalt Operations	90-120 ppm	40 ppm	71	0.071
	Open Heated Tank or Evaporator	120 ppm	60 ppm or 0.073 lb/mmBTU	200	0.199
	Degassing, Incinerator, or Soil Remediation > 1200° F	120 ppm		480	0.478
	Fryer	120 ppm		101	0.100
	Metal Heat Treating	150-210 ppm		136	0.135
	Metal Melting Furnace	150-210 ppm		118	0.117
	Metal or Tar Pot	90-210 ppm		237	0.236
	Other > 1200° F	120 ppm		295	0.293
	Oven, Dehydrator, Dryer, Heater, etc. ≤ 800° F	120 ppm		20 ppm or 0.024 lb/mmBTU	2,335
	Degassing, Incinerator, or Soil Remediation ≤ 1200° F	120 ppm	30 ppm or 0.036 lb/mmBTU	479	0.477
	Make Up Air Heater	120 ppm	30 ppm or 0.036 lb/mmBTU	34	0.034
	Oven, Dehydrator, Dryer, Heater, etc. > 800 and ≤ 1200° F	120 ppm		161	0.160
	Tenter Frame or Carpet Dryer	90-120 ppm		45	0.048
	Other Air Heater Outside Building	120 ppm		15	0.015
	Other with Process Temperature ≤ 1200° F	120 ppm		196	0.195
Liquid Fuel	Liquid Fuel > 1200° F	120-180 ppm	60 ppm or 0.080 lb/mmBTU	0	0
	Liquid Fuel ≤ 1200° F	120-180 ppm	40 ppm or 0.053 lb/mmBTU	21	0.021
Total:				4,924	4.899

AIR QUALITY AND GREENHOUSE GAS EMISSIONS

This section provides an overview of air quality in the District. A more detailed discussion of current and projected future air quality in the District, with and without additional control measures can also be found in the Final Program EIR for the 2007 AQMP (Chapter 3).

It is the responsibility of the SCAQMD to ensure that state and federal ambient air quality standards are achieved and maintained in its geographical jurisdiction. Health-based air quality standards have been established by California and the federal government for the following criteria air pollutants: ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), particulate matter less than 10 microns (PM₁₀), particulate matter less than 2.5 microns (PM_{2.5}) sulfur dioxide

(SO₂) 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 3-2. The SCAQMD monitors levels of various criteria pollutants at 34 monitoring stations. The 2009 air quality data from SCAQMD's monitoring stations are presented in Table 3-3.

**Table 3-2
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 > 9.0 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.
Ozone (O ₃)	0.07 ppm, 8-hour average >	0.075 ppm, 8-hour average >	(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.
Nitrogen Dioxide (NO ₂)	0.18 ppm, 1-hour average > 0.030 ppm, annual 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 >	0.075 ppm (99 th percentile) 0.14 ppm, 24-hour average > 0.03 ppm, AAM >	Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma.
Suspended Particulate Matter (PM ₁₀)	50 µg/m ³ , 24-hour > 20 µg/m ³ , AAM >	150 µg/m ³ , 24-hour >	(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.

KEY:

ppm = parts per million

AAM = Annual Arithmetic Mean

µg/m³ = micrograms per cubic meter

Table 3-2 (concluded)
State and Federal Ambient Air Quality Standards

AIR POLLUTANT	STATE STANDARD	FEDERAL PRIMARY STANDARD	MOST RELEVANT EFFECTS
	CONCENTRATION, AVERAGING TIME		
Suspended Particulate Matter (PM _{2.5})	12 µg/m ³ , AAM >	15 µg/m ³ , AAM > 35 µg/m ³ , 24-hour >	(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 >=	0.15 µg/m ³ , rolling three-month average > 1.5 µg/m ³ , 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 >=		(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	Insufficient 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)		Nephelometry and AISI Tape Sampler; instrumental measurement on days when relative humidity is less than 70 percent.
Vinyl Chloride	0.010 ppm, 24-hour average >=		Known carcinogen.
Hydrogen Sulfide	0.03 ppm, 1-hour average >=		Odor annoyance.

KEY:

ppm = parts per million

AAM = Annual Arithmetic Mean

µg/m³ = micrograms per cubic meter

Table 3-3
2009 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 > 9.0 ppm, 8-hour	State > 9.0 ppm, 8-hour
LOS ANGELES COUNTY						
1	Central Los Angeles	357	3	2.2	0	0
2	Northwest Coastal Los Angeles County	365	2	1.5	0	0
3	Southwest Coastal Los Angeles County	349	2	1.9	0	0
4	South Coastal Los Angeles County 1	362	3	2.2	0	0
4	South Coastal Los Angeles County 2	--	--	--	--	--
6	West San Fernando Valley	365	4	2.8	0	0
7	East San Fernando Valley	365	3	2.9	0	0
8	West San Gabriel Valley	365	4	2.1	0	0
9	East San Gabriel Valley 1	357	3	1.7	0	0
9	East San Gabriel Valley 2	351	3	2.1	0	0
10	Pomona/Walnut Valley	365	3	1.8	0	0
11	South San Gabriel Valley	365	3	2.1	0	0
12	South Central Los Angeles County	354	7	4.6	0	0
13	Santa Clarita Valley	361	2	1.4	0	0
ORANGE COUNTY						
16	North Orange County	365	4	2.3	0	0
17	Central Orange County	365	3	2.7	0	0
18	North Coastal Orange County	362	3	2.2	0	0
19	Saddleback Valley	362	2	1.0	0	0
RIVERSIDE COUNTY						
22	Norco/Corona	--	--	--	--	--
23	Metropolitan Riverside County 1	364	2	1.9	0	0
23	Metropolitan Riverside County 2	365	3	1.8	0	0
23	Mira Loma	364	3	2.4	0	0
24	Perris Valley	--	--	--	--	--
25	Lake Elsinore	365	1	0.7	0	0
29	Banning Airport	--	--	--	--	--
30	Coachella Valley 1**	365	2	0.7	0	0
30	Coachella Valley 2**	--	--	--	--	--
SAN BERNARDINO COUNTY						
32	Northwest San Bernardino Valley	365	2	1.5	0	0
33	Southwest San Bernardino Valley	--	--	--	--	--
34	Central San Bernardino Valley 1	365	2	1.5	0	0
34	Central San Bernardino Valley 2	363	3	1.9	0	0
35	East San Bernardino Valley	--	--	--	--	--
37	Central San Bernardino Mountains	--	--	--	--	--
38	East San Bernardino Mountains	--	--	--	--	--
DISTRICT MAXIMUM			7	4.6	0	0
SOUTH COAST AIR BASIN			7	4.6	0	0

KEY:

ppm = parts per million

-- = Pollutant not monitored

** Salton Sea Air Basin

- a) The federal 8-hour standard (8-hour average CO > 9 ppm) and state 8-hour standard (8-hour average CO > 9.0 ppm) were not exceeded. The federal and state 1-hour standards (35 ppm and 20 ppm) were not exceeded either.

Table 3-3 (continued)
2009 Air Quality Data – South Coast Air Quality Management District

OZONE (O ₃)											
Source Receptor Area No.	Location of Air Monitoring Station	No. Days of Data	Max. Conc. in ppm 1-hr	Max. Conc. in ppm 8-hr	4th High Conc. ppm 8-hr	No. Days Standard Exceeded					
						Health Advisory	Federal ^{b)}			State ^{c)}	
						≥ 0.15 ppm 1-hr	> 0.12 ppm 1-hr	> 0.08 ppm 8-hr	> 0.075 ppm 8-hr	> 0.09 ppm 1-hr	> 0.070 ppm 8-hr
LOS ANGELES COUNTY											
1	Central Los Angeles	365	0.14	0.100	0.073	0	1	2	3	5	365
2	Northwest Coastal Los Angeles County	365	0.13	0.094	0.075	0	1	3	6	5	365
3	Southwest Coastal Los Angeles County	352	0.08	0.070	0.061	0	0	0	--	--	352
4	South Coastal Los Angeles County 1	363	0.09	0.068	0.064	0	0	0	--	--	363
4	South Coastal Los Angeles County 2	--	--	--	--	--	--	--	--	--	--
6	West San Fernando Valley	365	0.13	0.100	0.093	0	1	19	15	31	365
7	East San Fernando Valley	365	0.15	0.096	0.086	1	1	14	16	28	365
8	West San Gabriel Valley	365	0.18	0.114	0.095	1	3	12	12	19	365
9	East San Gabriel Valley 1	365	0.15	0.107	0.091	1	4	17	23	32	365
9	East San Gabriel Valley 2	352	0.15	0.118	0.108	3	7	42	45	64	352
10	Pomona/Walnut Valley	365	0.14	0.099	0.095	0	1	23	25	37	365
11	South San Gabriel Valley	365	0.13	0.101	0.072	0	1	3	8	6	365
12	South Central Los Angeles County	354	0.10	0.086	0.064	0	0	1	2	1	354
13	Santa Clarita Valley	357	0.14	0.122	0.103	0	5	64	57	77	357
ORANGE COUNTY											
16	North Orange County	365	0.11	0.082	0.075	0	0	3	4	9	365
17	Central Orange County	365	0.09	0.077	0.068	0	0	1	--	2	365
18	North Coastal Orange County	365	0.09	0.075	0.066	0	0	0	--	3	365
19	Saddleback Valley	362	0.12	0.095	0.084	0	0	10	7	14	362
RIVERSIDE COUNTY											
22	Norco/Corona	--	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	346	0.12	0.100	0.089	0	0	35	25	57	346
23	Metropolitan Riverside County 2	--	--	--	--	--	--	--	--	--	--
23	Mira Loma	364	0.12	0.090	0.086	0	0	22	15	37	364
24	Perris Valley	354	0.13	0.108	0.101	0	1	67	53	88	354
25	Lake Elsinore	365	0.13	0.105	0.096	0	1	37	24	65	365
29	Banning Airport	359	0.13	0.104	0.100	0	1	70	55	93	359
30	Coachella Valley 1**	365	0.12	0.098	0.096	0	0	53	--	73	365
30	Coachella Valley 2**	365	0.10	0.090	0.085	0	0	24	--	41	365
SAN BERNARDINO COUNTY											
32	Northwest San Bernardino Valley	365	0.15	0.121	0.102	1	3	49	51	71	365
33	Southwest San Bernardino Valley	--	--	--	--	--	--	--	--	--	--
34	Central San Bernardino Valley 1	365	0.14	0.128	0.100	0	3	48	45	65	365
34	Central San Bernardino Valley 2	363	0.15	0.126	0.101	1	2	62	53	79	363
35	East San Bernardino Valley	365	0.15	0.122	0.100	1	1	73	62	91	365
37	Central San Bernardino Mountains	364	0.15	0.121	0.110	2	7	92	70	107	364
38	East San Bernardino Mountains	--	--	--	--	--	--	--	--	--	--
DISTRICT MAXIMUM			0.18	0.128	0.110	3	7	92	70	107	
SOUTH COAST AIR BASIN			0.18	0.128	0.110	6	15	113	102	133	

KEY:

ppm = parts per million

-- = Pollutant not monitored

** Salton Sea Air Basin

- b) The federal 1-hour ozone standard was revoked and replaced by the 8-hour average ozone standard effective June 15, 2005. USEPA has revised the federal 8-hour ozone standard from 0.084 ppm to 0.075 ppm, effective May 27, 2008.
- c) The 8-hour average California ozone standard of 0.070 ppm was established effective May 17, 2006.

Table 3-3 (continued)
2009 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. ^{d)} ppm, 1-hour	98 th Percentile Conc. ppm, 1-hour	Annual Average ^{d)} AAM Conc. ppm
LOS ANGELES COUNTY					
1	Central Los Angeles	365	0.12	0.07	0.0281
2	Northwest Coastal Los Angeles County	355	0.17 0.08	0.06	0.0170
3	Southwest Coastal Los Angeles County	--	0.08	0.07	0.0159
4	South Coastal Los Angeles County 1	362	0.11	0.07	0.0212
4	South Coastal Los Angeles County 2	--	--	--	--
6	West San Fernando Valley	365	0.07	0.06	0.0171
7	East San Fernando Valley	353	0.09	0.07	0.0274
8	West San Gabriel Valley	365	0.08	0.06	0.0221
9	East San Gabriel Valley 1	365	0.10	0.07	0.0194
9	East San Gabriel Valley 2	350	0.09	0.06	0.0170
10	Pomona/Walnut Valley	365	0.10	0.08	0.0274
11	South San Gabriel Valley	361	0.10	0.07	0.0259
12	South Central Los Angeles County	--	0.09	0.07	0.0214
13	Santa Clarita Valley	--	0.13 0.06	0.05	0.0151
ORANGE COUNTY					
16	North Orange County	365	0.10	0.06	0.0206
17	Central Orange County	365	0.07	0.06	0.0179
18	North Coastal Orange County	365	0.07	0.06	0.0130
19	Saddleback Valley	--	--	--	--
RIVERSIDE COUNTY					
22	Norco/Corona	--	--	--	--
23	Metropolitan Riverside County 1	357	0.08	0.06	0.0171
23	Metropolitan Riverside County 2	365	0.08	0.06	0.0200
23	Mira Loma	--	0.08	0.05	0.0158
24	Perris Valley	--	--	--	--
25	Lake Elsinore	365	0.06	0.04	0.0129
29	Banning Airport	--	0.06	0.05	0.0109
30	Coachella Valley 1**	349	0.05	0.04	0.0081
30	Coachella Valley 2**	--	--	--	--
SAN BERNARDINO COUNTY					
32	Northwest San Bernardino Valley	363	0.11	0.07	0.0239
33	Southwest San Bernardino Valley	--	--	--	--
34	Central San Bernardino Valley 1	365	0.11	0.07	0.0235
34	Central San Bernardino Valley 2	363	0.08	0.06	0.0196
35	East San Bernardino Valley	--	--	--	--
37	Central San Bernardino Mountains	--	--	--	--
38	East San Bernardino Mountains	--	--	--	--
DISTRICT MAXIMUM			0.17	0.08	0.0281
SOUTH COAST AIR BASIN			0.17	0.08	0.0281

KEY:

ppm = parts per million

AAM = Annual Arithmetic Mea

-- = Pollutant not monitored

** Salton Sea Air Basin

d) The federal standard is annual arithmetic mean NO₂ > 0.534 ppm. CARB has revised the NO₂ 1-hour standard from 0.25 ppm to 0.18 ppm and has established a new annual standard of 0.030 ppm, effective March 20, 2008.

Table 3-3 (continued)
2009 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 Conc. ^{e)} ppm, 1-hour	Maximum Conc. ^{e)} ppm, 24-hour
LOS ANGELES COUNTY				
1	Central Los Angeles	365	0.01	0.002
2	Northwest Coastal Los Angeles County	--	--	--
3	Southwest Coastal Los Angeles County	--	0.02	0.006
4	South Coastal Los Angeles County 1	361	0.02	0.005
4	South Coastal Los Angeles County 2	--	--	--
6	West San Fernando Valley	--	--	--
7	East San Fernando Valley	362	0.01	0.003
8	West San Gabriel 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	364	0.01	0.004
19	Saddleback Valley	--	--	--
RIVERSIDE COUNTY				
22	Norco/Corona	--	--	--
23	Metropolitan Riverside County 1	364	0.01	0.003
23	Metropolitan Riverside County 2	--	--	--
23	Mira Loma	--	--	--
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	365	0.01	0.002
34	Central San Bernardino Valley 2	--	--	--
35	East San Bernardino Valley	--	--	--
37	Central San Bernardino Mountains	--	--	--
38	East San Bernardino Mountains	--	--	--
DISTRICT MAXIMUM				0.02
SOUTH COAST AIR BASIN				0.02

KEY:

ppm = parts per million

-- = Pollutant not monitored

** Salton Sea Air Basin

- e) The state standards are 1-hour average SO₂ > 0.25 ppm and 24-hour average SO₂ > 0.04 ppm. The federal standards are annual arithmetic mean SO₂ > 0.03 ppm, 24-hour average > 0.14 ppm, and 3-hour average > 0.50 ppm. The federal and state SO₂ standards were not exceeded.

Table 3-3 (continued)
2009 Air Quality Data – South Coast Air Quality Management District

SUSPENDED PARTICULATE MATTER PM10 ^{f)}						
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 ^{g)} 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						
1	Central Los Angeles	60	72	0	4(6.7)	33.1
2	Northwest Coastal Los Angeles County	--	--	--	--	--
3	Southwest Coastal Los Angeles County	60	52	0	1(1.7)	25.4
4	South Coastal Los Angeles County 1	57	62	0	3(5.3)	30.5
4	South Coastal Los Angeles County 2	56	83	0	5(8.9)	33.2
6	West San Fernando Valley	--	--	--	--	--
7	East San Fernando Valley	60	80	0	11(18.3)	39.2
8	West San Fernando Valley	--	--	--	--	--
9	East San Gabriel Valley 1	52	74	0	7(13.5)	32.0
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	53	56	0	1(1.9)	23.4
ORANGE COUNTY						
16	North Orange County	--	--	--	--	--
17	Central Orange County	56	63	0	1(1.8)	30.9
18	North Coastal Orange County	--	--	--	--	--
19	Saddleback Valley	59	41	0	0	23.0
RIVERSIDE COUNTY						
22	Norco/Corona	59	79	0	7(11.9)	35.6
23	Metropolitan Riverside County 1	118	77	0	34(28.8)	42.5
23	Metropolitan Riverside County 2	--	--	--	--	--
23	Mira Loma	59	108	0	33(55.9)	53.4
24	Perris Valley	58	80	0	9(15.5)	34.8
25	Lake Elsinore	--	--	--	--	--
29	Banning Airport	59	99	0	1(1.7)	25.9
30	Coachella Valley 1**	54	140	0	1(1.9)	22.6
30	Coachella Valley 2**	120	132	0	9(7.5)	32.5
SAN BERNARDINO COUNTY-						
32	Northwest San Bernardino Valley	--	--	--	--	--
33	Southwest San Bernardino Valley	61	70	0	8(13.1)	35.3
34	Central San Bernardino Valley 1	60	75	0	13(21.7)	40.2
34	Central San Bernardino Valley 2	52	66	0	11(21.2)	41.5
35	East San Bernardino Valley	60	52	0	2(3.3)	30.2
37	Central San Bernardino Mountains	50	57	0	1(2.0)	24.1
38	East San Bernardino Mountains	--	--	--	--	--
DISTRICT MAXIMUM				140	0	34
SOUTH COAST AIR BASIN				108	0	59

KEY:

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

- f) PM10 samples were collected every six days at all sites except for Station Number 4144 and 4157 where samples were collected every three days.
- g) Federal annual PM 10 standard (AAM > 50 $\mu\text{g}/\text{m}^3$) was revoked effective December 17, 2006. State standard is annual average (AAM) >20 $\mu\text{g}/\text{m}^3$.

Table 3-3 (continued)
2009 Air Quality Data – South Coast Air Quality Management District

SUSPENDED PARTICULATE MATTER PM _{2.5} ^{h)}						
Source Receptor Area No.	Location of Air Monitoring Station	No. Days of Data	Max. Conc. $\mu\text{g}/\text{m}^3$, 24-hour	98 th Percentile Conc. in $\mu\text{g}/\text{m}^3$ 24-hr	No. (%) Samples Exceeding Federal Std $> 35 \mu\text{g}/\text{m}^3$, 24-hour	Annual Average ⁱ⁾ AAM Conc. $\mu\text{g}/\text{m}^3$
LOS ANGELES COUNTY						
1	Central Los Angeles	365	61.7	34.0	7(1.9)	14.3
2	Northwest Coastal Los Angeles County	--	--	--	--	--
3	Southwest Coastal Los Angeles County	--	--	--	--	--
4	South Coastal Los Angeles County 1	365	63.4	34.2	6(1.6)	13.0
4	South Coastal Los Angeles County 2	365	55.8	30.5	4(1.1)	12.5
6	West San Fernando Valley	122	39.9	27.2	1(0.8)	11.4
7	East San Fernando Valley	295	67.5	34.4	4(1.4)	14.4
8	West San Gabriel Valley	122	52.0	35.7	3(2.5)	12.3
9	East San Gabriel Valley 1	189	72.1	42.9	6(3.2)	12.8
9	East San Gabriel Valley 2	--	--	--	--	--
10	Pomona/Walnut Valley	--	--	--	--	--
11	South San Gabriel Valley	124	71.1	35.4	3(2.4)	14.8
12	South Central Los Angeles County	122	69.2	37.7	3(2.5)	14.7
13	Santa Clarita Valley	--	--	--	--	--
ORANGE COUNTY						
16	North Orange County	--	--	--	--	--
17	Central Orange County	365	64.6	32.1	4(1.1)	11.8
18	North Coastal Orange County	--	--	--	--	--
19	Saddleback Valley	122	39.2	23.8	1(0.8)	9.5
RIVERSIDE COUNTY						
22	Norco/Corona	--	--	--	--	--
23	Metropolitan Riverside County 1	365	54.5	39.6	12(3.4)	15.3
23	Metropolitan Riverside County 2	122	42.2	34.0	2(1.6)	13.4
23	Mira Loma	295	49.3	40.6	16(5.4)	16.9
24	Perris Valley	--	--	--	--	--
25	Lake Elsinore	--	--	--	--	--
29	Banning Airport	--	--	--	--	--
30	Coachella Valley 1**	122	21.8	14.6	0	6.7
30	Coachella Valley 2**	122	27.6	17.0	0	7.9
SAN BERNARDINO COUNTY						
32	Northwest San Bernardino Valley	--	--	--	--	--
33	Southwest San Bernardino Valley	122	46.9	35.9	3(2.5)	14.7
34	Central San Bernardino Valley 1	122	46.4	32.7	2(1.6)	14.3
34	Central San Bernardino Valley 2	122	37.9	35.2	3(2.4)	13.0
35	East San Bernardino Valley	--	--	--	--	--
37	Central San Bernardino Mountains	--	--	--	--	--
38	East San Bernardino Mountains	61	40.8	29.4	1(1.6)	9.9
DISTRICT MAXIMUM				72.1	42.9	16
SOUTH COAST AIR BASIN				72.1	42.9	27

KEY:

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

- h) PM_{2.5} samples were collected every three days at all sites except for the following sites: Station Numbers 060, 072, 077, 087, 3176, and 4144 where samples were taken every day, and Station Number 5818 where samples were taken every six days.
i) USEPA has revised the federal 24-hour PM_{2.5} standard from 65 $\mu\text{g}/\text{m}^3$ to 35 $\mu\text{g}/\text{m}^3$, effective December 17, 2006.
j) Federal PM_{2.5} standard is annual average (AAM) $> 15 \mu\text{g}/\text{m}^3$. State standard is annual average (AAM) $> 12 \mu\text{g}/\text{m}^3$.

Table 3-3 (continued)
2009 Air Quality Data – South Coast Air Quality Management District

TOTAL SUSPENDED PARTICULATES TSP ^{k)}				
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				
1	Central Los Angeles	61	148	66.8
2	Northwest Coastal Los Angeles County	59	99	50.8
3	Southwest Coastal Los Angeles County	48	87	42.4
4	South Coastal Los Angeles County 1	60	128	55.4
4	South Coastal Los Angeles County 2	59	159	65.2
6	West San Fernando Valley	--	--	--
7	East San Fernando Valley	--	--	--
8	West San Gabriel Valley	59	153	48.5
9	East San Gabriel Valley 1	58	208	74.9
9	East San Gabriel Valley 2	--	--	--
10	Pomona/Walnut Valley	--	--	--
11	South San Gabriel Valley	59	194	69.7
12	South Central Los Angeles County	57	118	59.6
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	60	161	87.6
23	Metropolitan Riverside County 2	61	162	66.0
23	Mira Loma	--	--	--
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	59	123	58.5
33	Southwest San Bernardino Valley	--	--	--
34	Central San Bernardino Valley 1	58	185	84.3
34	Central San Bernardino Valley 2	61	125	74.3
35	East San Bernardino Valley	--	--	--
37	Central San Bernardino Mountains	--	--	--
38	East San Bernardino Mountains	--	--	--
DISTRICT MAXIMUM				208
SOUTH COAST AIR BASIN				208

KEY:

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

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

Table 3-3 (concluded)
2009 Air Quality Data – South Coast Air Quality Management District

Source Receptor Area No.	Location of Air Monitoring Station	LEAD ¹⁾		SULFATES (SO _x) ¹⁾	
		Max. Monthly Average Conc. ^{m)} $\mu\text{g}/\text{m}^3$	Max. Quarterly Average Conc. ^{m)} $\mu\text{g}/\text{m}^3$	Max. Conc. $\mu\text{g}/\text{m}^3$, 24-hour	No. (%) Samples Exceeding State Standard $\geq 25 \mu\text{g}/\text{m}^3$, 24-hour
LOS ANGELES COUNTY					
1	Central Los Angeles	0.02	0.02	0.00	0.00
2	Northwest Coastal Los Angeles County	--	--	--	--
3	Southwest Coastal Los Angeles County	0.01	0.01		
4	South Coastal Los Angeles County 1	0.01	0.01	0.00	0.00
4	South Coastal Los Angeles County 2	0.01	0.01		
6	West San Fernando Valley	--	--	--	--
7	East San Fernando Valley	--	--	--	--
8	West San Gabriel Valley	--	--	--	--
9	East San Gabriel Valley 1	--	--	--	--
9	East San Gabriel Valley 2	--	--	--	--
10	Pomona/Walnut Valley	--	--	--	--
11	South San Gabriel Valley	0.02	0.02	0.01	0.01
12	South Central Los Angeles County	0.03	0.02	0.01	0.01
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	0.00	0.00	7.3	0
23	Metropolitan Riverside County 2	0.00	0.00	6.8	0
23	Mira Loma	--	--	--	--
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	0.00	0.00	6.8	0
33	Southwest San Bernardino Valley	--	--	--	--
34	Central San Bernardino Valley 1	--	--	6.7	0
34	Central San Bernardino Valley 2	0.01	0.00	7.1	0
35	East San Bernardino Valley	--	--	--	--
37	Central San Bernardino Mountains	--	--	--	--
38	East San Bernardino Mountains	--	--	--	--
DISTRICT MAXIMUM		0.01	0.01	13.6	0
SOUTH COAST AIR BASIN		0.01	0.01	13.6	0

KEY:

 $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter of air

-- = Pollutant not monitored

** Salton Sea Air Basin

1) Lead and sulfate were determined from samples collected every 6 days by the high volume sampler method, on glass fiber filter media.

m) Federal lead standard is quarterly average $> 1.5 \mu\text{g}/\text{m}^3$; and state standard is monthly average $\geq 1.5 \mu\text{g}/\text{m}^3$. USEPA has established the federal standard of $0.15 \mu\text{g}/\text{m}^3$, rolling 3-month average, as of October 15, 2008.

Criteria Pollutants

Carbon Monoxide

CO is a colorless, odorless, relatively inert gas. It is a trace constituent in the unpolluted troposphere, and is produced by both natural processes and human activities. In remote areas far from human habitation, carbon monoxide occurs in the atmosphere at an average background concentration of 0.04 ppm, primarily as a result of natural processes such as forest fires and the oxidation of methane. Global atmospheric mixing of CO from urban and industrial sources creates higher background concentrations (up to 0.20 ppm) near urban areas. The major source of CO in urban areas is incomplete combustion of carbon-containing fuels, mainly gasoline. In 2002, approximately 98 percent of the CO emitted into the Basin's atmosphere was from mobile sources. Consequently, CO concentrations are generally highest in the vicinity of major concentrations of vehicular traffic.

CO is a primary pollutant, meaning that it is directly emitted into the air, not formed in the atmosphere by chemical reaction of precursors, as is the case with ozone and other secondary pollutants. Ambient concentrations of CO in the Basin exhibit large spatial and temporal variations due to variations in the rate at which CO is emitted and in the meteorological conditions that govern transport and dilution. Unlike ozone, CO tends to reach high concentrations in the fall and winter months. The highest concentrations frequently occur on weekdays at times consistent with rush hour traffic and late night during the coolest, most stable portion of the day.

Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of worsening oxygen supply to the heart.

Inhaled CO has no direct toxic effect on the lungs, but exerts its effect on tissues by interfering with oxygen transport by competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. Individuals most at risk include patients with diseases involving heart and blood vessels, fetuses (unborn babies), and patients with chronic hypoxemia (oxygen deficiency) as seen in high altitudes.

Reductions in birth weight and impaired neurobehavioral development have been observed in animals chronically exposed to CO resulting in COHb levels similar to those observed in smokers. Recent studies have found increased risks for adverse birth outcomes with exposure to elevated CO levels. These include pre-term births and heart abnormalities.

Carbon monoxide concentrations were measured at 25 locations in the Basin and neighboring SSAB areas in 2009. Carbon monoxide concentrations did not exceed the standards in 2009. The highest one-hour average carbon monoxide concentration recorded (7.0 ppm in the South Central Los Angeles County area) was 20 percent of the federal one-hour carbon monoxide standard of 35 ppm. The highest eight-hour average carbon monoxide concentration recorded (4.6 ppm in the South Central Los Angeles County area) was 51 percent of the federal eight-hour carbon monoxide standard of 9.0 ppm. The state one-hour standard is also 9.0 ppm. The highest eight-hour average carbon monoxide concentration is 23 percent of the state eight-hour carbon monoxide standard of 20 ppm.

The 2003 AQMP revisions to the SCAQMD's CO Plan served two purposes: it replaced the 1997 attainment demonstration that lapsed at the end of 2000; and it provided the basis for a CO maintenance plan in the future. In 2004, the SCAQMD formally requested the USEPA to re-designate the Basin from non-attainment to attainment with the CO National Ambient Air Quality Standards. On February 24, 2007, USEPA published in the Federal Register its proposed decision to re-designate the Basin from non-attainment to attainment for CO. The comment period on the re-designation proposal closed on March 16, 2007 with no comments received by the USEPA. On May 11, 2007, USEPA published in the Federal Register its final decision to approve the SCAQMD's request for re-designation from non-attainment to attainment for CO, effective June 11, 2007.

Ozone

Ozone (O₃), a colorless gas with a sharp odor, is a highly reactive form of oxygen. High ozone concentrations exist naturally in the stratosphere. Some mixing of stratospheric ozone downward through the troposphere to the earth's surface does occur; however, the extent of ozone transport is limited. At the earth's surface in sites remote from urban areas ozone concentrations are normally very low (e.g., from 0.03 ppm to 0.05 ppm).

While ozone is beneficial in the stratosphere because it filters out skin-cancer-causing ultraviolet radiation, it is a highly reactive oxidant. It is this reactivity which accounts for its damaging effects on materials, plants, and human health at the earth's surface.

The propensity of ozone for reacting with organic materials causes it to be damaging to living cells and ambient ozone concentrations in the Basin are frequently sufficient to cause health effects. Ozone enters the human body primarily through the respiratory tract and causes respiratory irritation and discomfort, makes breathing more difficult during exercise, and reduces the respiratory system's ability to remove inhaled particles and fight infection.

Individuals exercising outdoors, children and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible subgroups for ozone effects. Short-term exposures (lasting for a few hours) to ozone at levels typically observed in southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. In recent years, a correlation between elevated ambient ozone levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple sports and live in high ozone communities. Elevated ozone levels are also associated with increased school absences.

Ozone exposure under exercising conditions is known to increase the severity of the abovementioned observed responses. Animal studies suggest that exposures to a combination of pollutants which include ozone may be more toxic than exposure to ozone alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.

In 2009, the SCAQMD regularly monitored ozone concentrations at 29 locations in the Basin and SSAB. All areas monitored were below the stage 1 episode level (0.20 ppm), but the maximum concentrations in the Basin exceeded the health advisory level (0.15 ppm). Maximum

ozone concentrations in the SSAB areas monitored by the SCAQMD were lower than in the Basin and were below the health advisory level.

In 2009, the maximum ozone concentrations in the Basin continued to exceed federal standards by wide margins. Maximum one-hour and eight-hour average ozone concentrations were 0.18 ppm and 0.128 ppm (the maximum one-hour was recorded in the West San Gabriel Valley area, the eight-hour maximum was recorded in the Central San Bernardino Valley area). The federal one-hour ozone standard was revoked and replaced by the eight-hour average ozone standard effective June 15, 2005. USEPA has revised the federal eight-hour ozone standard from 0.84 ppm to 0.075 ppm, effective May 27, 2008. The maximum eight-hour concentration was 171 percent of the new federal standards. The maximum eight-hour concentration was 183 percent of the eight-hour state ozone standard of 0.070 ppm.

The objective of the 2007 AQMP is to attain and maintain ambient air quality standards. Based upon the modeling analysis described in the Program Environmental Impact Report for the 2007 AQMP, implementation of all control measures contained in the 2007 AQMP is anticipated to bring the District into compliance with the federal eight-hour ozone standard by 2024 and the state eight-hour ozone standard beyond 2024.

Nitrogen Dioxide

NO₂ is a reddish-brown gas with a bleach-like odor. Nitric oxide (NO) is a colorless gas, formed from the nitrogen (N₂) and oxygen (O₂) in air under conditions of high temperature and pressure which are generally present during combustion of fuels; NO reacts rapidly with the oxygen in air to form NO₂. NO₂ is responsible for the brownish tinge of polluted air. The two gases, NO and NO₂, are referred to collectively as NO_x. In the presence of sunlight, NO₂ reacts to form nitric oxide and an oxygen atom. The oxygen atom can react further to form ozone, via a complex series of chemical reactions involving hydrocarbons. Nitrogen dioxide may also react to form nitric acid (HNO₃) which reacts further to form nitrates, components of PM_{2.5} and PM₁₀.

Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposures to NO₂ at levels found in homes with gas stoves, which are higher than ambient levels found in southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO₂ in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma and/or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups. More recent studies have found associations between NO₂ exposures and cardiopulmonary mortality, decreased lung function, respiratory symptoms and emergency room asthma visits.

In animals, exposure to levels of NO₂ considerably higher than ambient concentrations results in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of ozone exposure increases when animals are exposed to a combination of ozone and NO₂.

In 2009, nitrogen dioxide concentrations were monitored at 20 locations. No area of the Basin or SSAB exceeded the federal or state standards for nitrogen dioxide. The Basin has not exceeded the federal standard for nitrogen dioxide (0.0534 ppm) since 1991, when the Los Angeles County portion of the Basin recorded the last exceedance of the standard in any county within the United States.

In 2009, the maximum annual average concentration was recorded at 0.0281 ppm in the Central Los Angeles area. Effective March 20, 2008, CARB has revised the nitrogen dioxide one-hour standard from 0.25 ppm to 0.18 ppm and established a new annual standard of 0.30 ppm. In addition, USEPA has established a new federal one-hour NO₂ standard of 0.100 ppm (98th percentile concentration), effective April 7, 2010. The highest one-hour average concentration recorded (~~0.12-0.17 ppm~~ in ~~Northwest Coastal-Central~~ Los Angeles County) was ~~67-94~~ percent of the state one-hour standard. NO_x emission reductions continue to be necessary because it is a precursor to both ozone and PM (PM_{2.5} and PM₁₀) concentrations.

Sulfur Dioxide

SO₂ is a colorless gas with a sharp odor. It reacts in the air to form sulfuric acid (H₂SO₄), which contributes to acid precipitation, and sulfates, which are components of PM₁₀ and PM_{2.5}. Most of the SO₂ emitted into the atmosphere is produced by burning sulfur-containing fuels.

Exposure of a few minutes to low levels of SO₂ can result in airway constriction in some asthmatics. All asthmatics are sensitive to the effects of SO₂. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, is observed after acute higher exposure to SO₂. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO₂.

Animal studies suggest that despite SO₂ being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract.

Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO₂ levels. In these studies, efforts to separate the effects of SO₂ from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.

No exceedances of federal or state standards for sulfur dioxide occurred in 2009 at any of the six SCAQMD locations monitored. The maximum one-hour sulfur dioxide concentration was 0.02 ppm, as recorded in both the Southwest Coastal Los Angeles County and South Coastal Los Angeles County areas. The maximum 24-hour sulfur dioxide concentration was 0.006 ppm, as recorded in Southwest Coastal Los Angeles County area. The USEPA revised the federal sulfur dioxide standard by establishing a new one-hour standard of 0.075 ppm and revoking the existing annual arithmetic mean (0.03 ppm) and the 24-hour average (0.14 ppm), effective August 2, 2010. The state standards are 0.25 ppm for the one-hour average and 0.04 ppm for the 24-hour average. Though sulfur dioxide concentrations remain well below the standards, sulfur dioxide is a precursor to sulfate, which is a component of fine particulate matter, PM₁₀, and PM_{2.5}. Standards for PM₁₀ and PM_{2.5} were both exceeded in 2009. Sulfur dioxide was not measured at SSAB sites in 2009. Historical measurements showed concentrations to be well below standards and monitoring has been discontinued.

Particulate Matter (PM₁₀ and PM_{2.5})

Of great concern to public health are the particles small enough to be inhaled into the deepest parts of the lung. Respirable particles (particulate matter less than about 10 micrometers in diameter) can accumulate in the respiratory system and aggravate health problems such as

asthma, bronchitis and other lung diseases. Children, the elderly, exercising adults, and those suffering from asthma are especially vulnerable to adverse health effects of PM10 and PM2.5.

A consistent correlation between elevated ambient fine particulate matter (PM10 and PM2.5) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. Studies have reported an association between long term exposure to air pollution dominated by fine particles (PM2.5) and increased mortality, reduction in life-span, and an increased mortality from lung cancer.

Daily fluctuations in fine particulate matter concentration levels have also been related to hospital admissions for acute respiratory conditions, to school and kindergarten absences, to a decrease in respiratory function in normal children and to increased medication use in children and adults with asthma. Studies have also shown lung function growth in children is reduced with long-term exposure to particulate matter. In addition to children, the elderly, and people with pre-existing respiratory and/or cardiovascular disease appear to be more susceptible to the effects of PM10 and PM2.5.

The SCAQMD monitored PM10 concentrations at 21 locations in 2009. The federal 24-hour PM10 standard ($150 \mu\text{g}/\text{m}^3$) was not exceeded at any of the locations monitored in 2009. The maximum 24-hour PM10 concentration of $140 \mu\text{g}/\text{m}^3$ was recorded in the Coachella Valley No. 1 area. The maximum 24-hour PM10 concentration in the Coachella Valley No. 1 area is 93 percent of the federal standard. The much more stringent state 24-hour PM10 standard ($50 \mu\text{g}/\text{m}^3$) was exceeded in all but one of the 21 monitoring stations. The maximum annual average PM10 concentration of $53.4 \mu\text{g}/\text{m}^3$ was recorded in Mira Loma. The maximum annual average PM10 concentration in Mira Loma is 267 percent of the state standard. The federal annual PM10 standard has been revoked.

In 2009, PM2.5 concentrations were monitored at 20 locations throughout the District. USEPA revised the federal 24-hour PM2.5 standard from $65 \mu\text{g}/\text{m}^3$ to $35 \mu\text{g}/\text{m}^3$, effective December 17, 2006. In 2009, the maximum PM2.5 concentrations in the Basin exceeded the new federal 24-hour PM2.5 standard in all but two locations. The maximum 24-hour PM2.5 concentration of $72.1 \mu\text{g}/\text{m}^3$ was recorded in the East San Gabriel Valley No. 1 area, which represents 206 percent of the federal standard of $35 \mu\text{g}/\text{m}^3$. The maximum annual average concentration of $16.9 \mu\text{g}/\text{m}^3$ was recorded in Mira Loma, which represents 113 percent of the federal standard of $15 \mu\text{g}/\text{m}^3$ and 141 percent of the state standard of $12 \mu\text{g}/\text{m}^3$.

Similar to PM10 concentrations, PM2.5 concentrations were higher in the inland valley areas of San Bernardino and Metropolitan Riverside counties. However, PM2.5 concentrations were also high in Central Los Angeles County. The high PM2.5 concentrations in Los Angeles County are mainly due to the secondary formation of smaller particulates resulting from mobile and stationary source activities. In contrast to PM10, PM2.5 concentrations were low in the Coachella Valley area of SSAB. PM10 concentrations are normally higher in the desert areas due to windblown and fugitive dust emissions.

Lead

Lead in the atmosphere is present as a mixture of a number of lead compounds. Leaded gasoline and lead smelters have been the main sources of lead emitted into the air. Due to the phasing out of leaded gasoline, there was a dramatic reduction in atmospheric lead in the Basin over the past 28 years.

Fetuses, infants, and children are more sensitive than others to the adverse effects of lead exposure. Exposure to low levels of lead can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased lead levels are associated with increased blood pressure.

Lead poisoning can cause anemia, lethargy, seizures, and death. It appears that there are no direct effects of lead on the respiratory system. Lead can be stored in the bone from early-age environmental exposure, and elevated blood lead levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland), and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of lead because of previous environmental lead exposure of their mothers.

The federal and state standards for lead were not exceeded in any area of the SCAQMD in 2008. There have been no violations of the standards at the SCAQMD's regular air monitoring stations since 1982, as a result of removal of lead from gasoline. The maximum quarterly average lead concentration ($0.01 \mu\text{g}/\text{m}^3$ at monitoring stations in South San Gabriel Valley, South Central Los Angeles County, and Central San Bernardino Valley No. 2) was 0.7 percent of the federal quarterly average lead standard ($1.5 \mu\text{g}/\text{m}^3$). The maximum monthly average lead concentration ($0.01 \mu\text{g}/\text{m}^3$ in South San Gabriel Valley and South Central Los Angeles County), measured at special monitoring sites immediately adjacent to stationary sources of lead was 0.7 percent of the state monthly average lead standard. No lead data were obtained at SSAB and Orange County stations in 2009. Because historical lead data showed concentrations in SSAB and Orange County areas to be well below the standard, measurements have been discontinued.

On November 12, 2008, USEPA published new national ambient air quality standards for lead, which became effective January 12, 2009. The existing national lead standard, $1.5 \mu\text{g}/\text{m}^3$, was reduced to $0.15 \mu\text{g}/\text{m}^3$, averaged over a rolling three-month period. The new federal standard was not exceeded at any source/receptor location in 2009. Nevertheless, USEPA designated the Los Angeles County portion of the Basin as non-attainment for the new lead standard, effective December 31, 2010, based on emissions from two battery recycling facilities. In addition, in November 2010, the SCAQMD adopted Rule 1420.1 – Emissions Standard for Lead from Large Lead-Acid Battery Recycling Facilities to ensure that lead emissions do not exceed the new federal standard.

Sulfates

Sulfates (SO_x) are chemical compounds which contain the sulfate ion and are part of the mixture of solid materials which make up PM₁₀. Most of the sulfates in the atmosphere are produced by oxidation of SO₂. Oxidation of sulfur dioxide yields sulfur trioxide (SO₃) which reacts with water to form sulfuric acid, which contributes to acid deposition. The reaction of sulfuric acid with basic substances such as ammonia yields sulfates, a component of PM₁₀ and PM_{2.5}.

Most of the health effects associated with fine particles and SO₂ at ambient levels are also associated with SO_x. Thus, both mortality and morbidity effects have been observed with an increase in ambient SO_x concentrations. However, efforts to separate the effects of SO_x from the effects of other pollutants have generally not been successful.

Clinical studies of asthmatics exposed to sulfuric acid suggest that adolescent asthmatics are possibly a subgroup susceptible to acid aerosol exposure. Animal studies suggest that acidic particles such as sulfuric acid aerosol and ammonium bisulfate are more toxic than non-acidic particles like ammonium sulfate. Whether the effects are attributable to acidity or to particles remains unresolved.

In 2009, the state 24-hour sulfate standard ($25 \mu\text{g}/\text{m}^3$) was not exceeded in any of the monitoring locations in the Basin. No sulfate data were obtained at SSAB and Orange County stations in 2009. Historical sulfate data showed concentrations in the SSAB and Orange County areas to be well below the standard; thus, measurements in these areas have been discontinued. There are no federal sulfate standards.

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.

The visibility standard is based on the distance that atmospheric conditions allow a person to see at a given time and location. Visibility reduction from air pollution is often due to the presence of sulfur and nitrogen oxides, as well as particulate matter. Visibility degradation occurs when visibility reducing particles are produced in sufficient amounts such that the extinction coefficient is greater than 0.23 inverse kilometers (to reduce the visual range to less than 10 miles) at relative humidity less than 70 percent, 8-hour average (from 10 am to 6 pm) according to the state standard. Future-year visibility in the Basin is projected empirically using the results derived from a regression analysis of visibility with air quality measurements. The regression data set consisted of aerosol composition data collected during a special monitoring program conducted concurrently with visibility data collection (prevailing visibility observations from airports and visibility measurements from District monitoring stations). A full description of the visibility analysis is given in Technical Report V-C of the 1994 AQMP.

With future year reductions of PM_{2.5} from implementation of all proposed emission controls for 2015, the annual average visibility would improve from 12 miles (calculated for 2005) to over 20 miles at Rubidoux, for example. Visual range in 2021 at all other Basin sites is expected to equal or exceed the Rubidoux visual range. Visual range is expected to double from the 2005 baseline due to reductions of secondary PM_{2.5}, directly emitted PM_{2.5} (including diesel soot) and lower nitrogen dioxide concentrations as a result of 2007 AQMP controls.

Vinyl Chloride

Vinyl chloride is a colorless compound that is highly toxic and a known carcinogen that causes a rare cancer of the liver (USEPA, 2001). At room temperature, vinyl chloride is a gas with a sickly sweet odor that is easily condensed. However, it is stored as a liquid. Due to the hazardous nature of vinyl chloride to human health there are no end products that use vinyl chloride in its monomer form. Vinyl chloride is a chemical intermediate, not a final product. It is an important industrial chemical chiefly used to produce polymer polyvinyl chloride (PVC). The process involves vinyl chloride liquid fed to polymerization reactors where it is converted from a monomer to a polymer PVC. The final product of the polymerization process is PVC in either a flake or pellet form. Billions of pounds of PVC are sold on the global market each year. From its flake or pellet form, PVC is sold to companies that heat and mold the PVC into end

products such as PVC pipe and bottles. The SCAQMD does not monitor for vinyl chloride at their air monitoring stations.

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. VOCs 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 Pollutants

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 HSC §41700 to control emissions of air contaminants and prevent endangerment to public health. Additionally, state law requires the SCAQMD to implement airborne toxic control measures (ATCM) adopted by CARB, and to implement the Air Toxics "Hot Spots" Act. As a result, 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, Clean Air Act (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 toxic compounds or 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.

Greenhouse Gases

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 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.

Gases that trap heat in the atmosphere are often called greenhouse gases (GHGs), comparable to a greenhouse, which captures and traps radiant energy. GHGs are emitted by natural processes and human activities. The accumulation of greenhouse gases in the atmosphere regulates the earth's temperature. Global warming is the observed increase in average temperature of the earth's surface and atmosphere. The primary cause of global warming is an increase of GHGs in the atmosphere. The six major GHGs are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), hydrofluorocarbons (HFCs), and perfluorocarbon (PFCs). The GHGs absorb longwave radiant energy emitted by the Earth, which warms the atmosphere. The GHGs also emit longwave radiation both upward to space and back down toward the surface of the Earth. The downward part of this longwave radiation emitted by the atmosphere is known as the "greenhouse effect." Emissions from human activities such as electricity production and vehicles have elevated the concentration of these gases in the atmosphere.

CO₂ is an odorless, colorless natural greenhouse gas. Natural sources include the following: decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic (human caused) sources of CO₂ are from burning coal, oil, natural gas, and wood. CO₂ emissions in the Basin were determined for the year 2002, which was the base year used in determining GHG emissions for the 2007 AQMP. The total CO₂ emissions in the Basin were estimated to be about 153 million metric tons (SCAQMD, 2007 AQMP) of which:

- 48 percent was contributed by on-road mobile sources;
- 34 percent was contributed by point sources;
- 12 percent was contributed by area sources; and
- 6 percent was contributed off-road mobile sources.

CH₄ is a flammable gas and is the main component of natural gas. N₂O, also known as laughing gas, is a colorless greenhouse gas. Some industrial processes such as fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions also contribute to the atmospheric load of N₂O. HFCs are synthetic man-made chemicals that are used as a substitute for chlorofluorocarbons (whose production was stopped as required by the Montreal Protocol) for automobile air conditioners and refrigerants. The two main sources of PFCs are primary aluminum production and semiconductor manufacture. SF₆ is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF₆ is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

Scientific consensus, as reflected in recent reports issued by the United Nations Intergovernmental Panel on Climate Change, is that the majority of the observed warming over the last 50 years can be attributable to increased concentration of GHGs in the atmosphere due to human activities. Industrial activities, particularly increased consumption of fossil fuels (e.g., gasoline, diesel, wood, coal, etc.), have heavily contributed to the increase in atmospheric levels of GHGs. As reported by the California Energy Commission (CEC), California contributes 1.4 percent of the global and 6.2 percent of the national GHGs emissions (CEC, 2006). The most

recent GHG inventory for California is presented in Table 3-4 (CARB, 2007). Approximately 80 percent of GHGs in California are from fossil fuel combustion and over 70 percent of GHG-CO₂ equivalent emissions are CO₂ emissions (see Table 3-4).

**Table 3-4
California GHG Emissions and Sinks Summary
(Million MTCO₂eq)**

Categories Included in the Inventory	1990	2004
ENERGY	386.41	420.91
<i>Fuel Combustion Activities</i>	381.16	416.29
Energy Industries	157.33	166.43
Manufacturing Industries & Construction	24.24	19.45
Transport	150.02	181.95
Other Sectors	48.19	46.29
Non-Specified	1.38	2.16
<i>Fugitive Emissions from Fuels</i>	5.25	4.62
Oil and Natural Gas	2.94	2.54
Other Emissions from Energy Production	2.31	2.07
INDUSTRIAL PROCESSES & PRODUCT USE	18.34	30.78
Mineral Industry	4.85	5.90
Chemical Industry	2.34	1.32
Non-Energy Products from Fuels & Solvent Use	2.29	1.37
Electronics Industry	0.59	0.88
Product Uses as Substitutes for Ozone Depleting Substances	0.04	13.97
Other Product Manufacture & Use Other	3.18	1.60
Other	5.05	5.74
AGRICULTURE, FORESTRY, & OTHER LAND USE	19.11	23.28
Livestock	11.67	13.92
Land	0.19	0.19
Aggregate Sources & Non-CO ₂ Emissions Sources on Land	7.26	9.17
WASTE	9.42	9.44
Solid Waste Disposal	6.26	5.62
Wastewater Treatment & Discharge	3.17	3.82
EMISSION SUMMARY		
Gross California Emissions	433.29	484.4
Sinks and Sequestrations	-6.69	-4.66
Net California Emissions	426.60	479.74

Source: CARB, 2007

In June 2005, Governor Schwarzenegger signed Executive Order #S-3-05 which established the following greenhouse gas reduction targets:

- By 2010, reduce GHGs to 2000 emission levels,
- By 2020, reduce GHGs to 1990 emission levels, and
- By 2050, reduce GHGs to 80 percent below 1990 emission levels.

On September 27, 2006, Assembly Bill (AB) 32, the California Global Warming Solutions Act, of 2006 was enacted by the State of California and signed by Governor Schwarzenegger. AB 32

expanded on Executive Order #S-3-05. The legislature stated that “global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California.” AB 32 represents the first enforceable state-wide program in the United States to cap all GHG emissions from major industries that includes penalties for non-compliance. While acknowledging that national and international actions will be necessary to fully address the issue of global warming, AB 32 lays out a program to inventory and reduce greenhouse gas emissions in California and from power generation facilities located outside the state that serve California residents and businesses.

AB 32 requires CARB to:

- Establish a statewide GHG emissions cap for 2020, based on 1990 emissions by January 1, 2008;
- Adopt mandatory reporting rules for significant sources of GHG by January 1, 2008;
- Adopt an emissions reduction plan by January 1, 2009, indicating how emissions reductions will be achieved via regulations, market mechanisms, and other actions; and
- Adopt regulations to achieve the maximum technologically feasible and cost-effective reductions of GHG by January 1, 2011.

The combination of Executive Order #S-3-05 and AB 32 will require significant development and implementation of energy efficient technologies and shifting of energy production to renewable sources.

Consistent with the requirement to develop an emission reduction plan, CARB prepared a Scoping Plan indicating how GHG emission reductions will be achieved through regulations, market mechanisms, and other actions. The Scoping Plan was released for public review and comment in October 2008 and approved by CARB on December 11, 2008. The Scoping Plan calls for reducing greenhouse gas emissions to 1990 levels by 2020. This means cutting approximately 30 percent from business-as-usual (BAU) emission levels projected for 2020, or about 15 percent from today’s levels. Key elements of CARB staff’s recommendations for reducing California’s greenhouse gas emissions to 1990 levels by 2020 contained in the Scoping Plan include the following:

- Expansion and strengthening of existing energy efficiency programs and building and appliance standards;
- Expansion of the Renewables Portfolio Standard to 33 percent;
- Development of a California cap-and-trade program that links with other Western Climate Initiative (WCI) Partner programs to create a regional market system;
- Establishing targets for transportation-related greenhouse gases and pursuing policies and incentives to achieve those targets;
- Adoption and implementation of existing State laws and policies, including California’s clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Targeted fees, including a public good charge on water use, fees on high GWP gases and a fee to fund the state’s long-term commitment to AB 32 administration.

In response to the comments received on the Draft Scoping Plan and at the November 2008 public hearing, CARB made a few changes to the Draft Scoping Plan, primarily to:

- State that California “will transition to 100 percent auction” of allowances and expects to “auction significantly more [allowances] than the Western Climate Initiative minimum;”

- Make clear that allowance set-asides could be used to provide incentives for voluntary renewable power purchases by businesses and individuals and for increased energy efficiency;
- Make clear that allowance set-asides can be used to ensure that voluntary actions, such as renewable power purchases, can be used to reduce greenhouse gas emissions under the cap;
- Provide allowances are not required from carbon neutral projects; and
- Mandate that commercial recycling be implemented to replace virgin raw materials with recyclables.

On August 24, 2007, Governor Schwarzenegger signed into law Senate Bill (SB) 97 – CEQA: Greenhouse Gas Emissions stating, “This bill advances a coordinated policy for reducing greenhouse gas emissions by directing the Office of Planning and Research (OPR) and the Resources Agency to develop CEQA guidelines on how state and local agencies should analyze, and when necessary, mitigate greenhouse gas emissions.” Specifically, SB 97 requires OPR, by July 1, 2009, to prepare, develop, and transmit guidelines to the Resources Agency for the feasible mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions, as required by CEQA, including, but not limited to, effects associated with transportation or energy consumption. The Resources Agency would be required to certify and adopt those guidelines by January 1, 2010. The OPR would be required to periodically update the guidelines to incorporate new information or criteria established by the CARB pursuant to the California Global Warming Solutions Act of 2006. SB 97 also identifies a limited number of types of projects that would be exempt under CEQA from analyzing GHG emissions. Finally, SB 97 will be repealed on January 1, 2010.

Consistent with SB 97, on June 19, 2008, OPR released its “Technical Advisory on CEQA and Climate Change,” which was developed in cooperation with the Resources Agency, the California Environmental Protection Agency (CalEPA), and the CARB. According to OPR, the “Technical Advisory” offers the informal interim guidance regarding the steps lead agencies should take to address climate change in their CEQA documents, until CEQA guidelines are developed pursuant to SB 97 on how state and local agencies should analyze, and when necessary, mitigate greenhouse gas emissions.

According to OPR, lead agencies should determine whether greenhouse gases may be generated by a proposed project, and if so, quantify or estimate the GHG emissions by type and source. Second, the lead agency must assess whether those emissions are individually or cumulatively significant. When assessing whether a project’s effects on climate change are “cumulatively considerable” even though its GHG contribution may be individually limited, the lead agency must consider the impact of the project when viewed in connection with the effects of past, current, and probable future projects. Finally, if the lead agency determines that the GHG emissions from the project as proposed are potentially significant, it must investigate and implement ways to avoid, reduce, or otherwise mitigate the impacts of those emissions.

On July 30, 2008, USEPA released a draft Advance Notice of Proposed Rulemaking (ANPR) “Regulating Greenhouse Gas Emissions Under the Clean Air Act.” The ANPR solicits public comments, which must be received on or before November 28, 2008, and presents the following relevant information:

- Reviews the various CAA provisions that may be applicable to regulate GHGs;
- Examines the issues that regulating GHGs under those provisions may raise;

- Provides information regarding potential regulatory approaches and technologies for reducing GHG emissions; and
- Raises issues relevant to possible legislation and the potential for overlap between legislation and CAA regulation.

The SCAQMD has established a policy, adopted by the SCAQMD Governing Board at its September 5, 2008 meeting, to actively seek opportunities to reduce emissions of criteria, toxic, and climate change pollutants. The policy includes the intent to assist businesses and local governments implementing climate change measures, decrease the agency's carbon footprint, and provide climate change information to the public. The SCAQMD will take the following actions:

1. Work cooperatively with other agencies/entities to develop quantification protocols, rules, and programs related to greenhouse gases;
2. Share experiences and lessons learned relative to the Regional Clean Air Incentives Market (RECLAIM) to help inform state, multi-state, and federal development of effective, enforceable cap-and-trade programs. To the extent practicable, staff will actively engage in current and future regulatory development to ensure that early actions taken by local businesses to reduce greenhouse gases will be treated fairly and equitably. SCAQMD staff will seek to streamline administrative procedures to the extent feasible to facilitate the implementation of AB 32 measures;
3. Review and comment on proposed legislation related to climate change and greenhouse gases, pursuant to the 'Guiding Principles for SCAQMD Staff Comments on Legislation Relating to Climate Change' approved at the Board Special Meeting in April 2008;
4. Provide higher priority to funding Technology Advancement Office (TAO) projects or contracts that also reduce greenhouse gas emissions;
5. Develop recommendations through a public process for an interim greenhouse gas CEQA significance threshold, until such time that an applicable and appropriate statewide greenhouse gas significance level is established. Provide guidance on analyzing greenhouse gas emissions and identify mitigation measures. Continue to consider GHG impacts and mitigation in SCAQMD lead agency documents and in comments when SCAQMD is a responsible agency;
6. Revise the SCAQMD's Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning to include information on greenhouse gas strategies as a resource for local governments. The Guidance Document will be consistent with state guidance, including CARB's Scoping Plan;
7. Update the Basin's greenhouse gas inventory in conjunction with each Air Quality Management Plan. Information and data used will be determined in consultation with CARB, to ensure consistency with state programs. Staff will also assist local governments in developing greenhouse gas inventories;
8. Bring recommendations to the Board on how the agency can reduce its own carbon footprint, including drafting a Green Building Policy with recommendations regarding SCAQMD purchases, building maintenance, and other areas of products and services. Assess employee travel as well as other activities that are not part of a GHG inventory and determine what greenhouse gas emissions these activities represent, how they could be reduced, and what it would cost to offset the emissions;
9. Provide educational materials concerning climate change and available actions to reduce greenhouse gas emissions on the SCAQMD website, in brochures, and other

venues to help cities and counties, businesses, households, schools, and others learn about ways to reduce their electricity and water use through conservation or other efforts, improve energy efficiency, reduce vehicle miles traveled, access alternative mobility resources, utilize low emission vehicles and implement other climate friendly strategies; and

10. Conduct conferences, or include topics in other conferences, as appropriate, related to various aspects of climate change, including understanding impacts, technology advancement, public education, and other emerging aspects of climate change science.

On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold for projects where the SCAQMD is lead agency. SCAQMD's recommended interim GHG significance threshold proposal uses a tiered approach to determining significance. Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA. Tier 2 consists of determining whether or not the project is consistent with a GHG reduction plan that may be part of a local general plan, for example. Tier 3 establishes a screening significance threshold level to determine significance using a 90 percent emission capture rate approach, which corresponds to 10,000 metric tons of CO₂ equivalent emissions per year (MTCO₂eq/yr). Tier 4, to be based on performance standards, is yet to be developed. Under Tier 5 the project proponent would allow offsets to reduce GHG emission impacts to less than the proposed screening level. If CARB adopts statewide significance thresholds, SCAQMD staff plans to report back to the Governing Board regarding any recommended changes or additions to the SCAQMD's interim threshold.

On April 13, 2009, OPR submitted to the Natural Resources Agency its proposed amendments to the CEQA Guidelines for GHG emissions. The proposed amendments provided guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in draft CEQA documents. The Natural Resources Agency conducted a formal rulemaking process and on December 20, 2009, they adopted amendments to the CEQA Guidelines for GHG emissions as directed by SB 97. On February 16, 2010, the Office of Administrative Law approved the amendments, and filed them with the Secretary of State for inclusion in the California Code of Regulations (CCR). The amendments became effective on March 18, 2010.

Climate Change

Global climate change is a change in the average weather of the earth, which can be measured by wind patterns, storms, precipitation, and temperature. Historical records have shown that temperature changes have occurred in the past, such as during previous ice ages. Some data indicate that the current temperature record differs from previous climate changes in rate and magnitude.

The United Nations Intergovernmental Panel on Climate Change constructed several emission trajectories of greenhouse gases needed to stabilize global temperatures and climate change impacts. It concluded that a stabilization of greenhouse gases at 400 to 450 ppm carbon dioxide-equivalent concentration is required to keep global mean warming below two degrees Celsius, which is assumed to be necessary to avoid dangerous climate change.

The potential health effects from global climate change may arise from temperature increases, climate-sensitive diseases, extreme events, and air quality. There may be direct temperature effects through increases in average temperature leading to more extreme heat waves and less extreme cold spells. Those living in warmer climates are likely to experience more stress and heat-related problems (i.e., heat rash and heat stroke). In addition, climate sensitive diseases may

increase, such as those spread by mosquitoes and other disease carrying insects. Those diseases include malaria, dengue fever, yellow fever, and encephalitis. Extreme events such as flooding and hurricanes can displace people and agriculture, which would have negative consequences. Drought in some areas may increase, which would decrease water and food availability. Global warming may also contribute to air quality problems from increased frequency of smog and particulate air pollution.

The impacts of climate change will also affect projects in various ways. Effects of climate change are specifically mentioned in AB 32 such as rising sea levels and changes in snow pack. The extent of climate change impacts at specific locations remains unclear. However, it is expected that California agencies will more precisely quantify impacts in various regions of the State. As an example, it is expected that the DWR will formalize a list of foreseeable water quality issues associated with various degrees of climate change. Once state government agencies make these lists available, they could be used to more precisely determine to what extent a project creates global climate change impacts.

Toxic Air Contaminants

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 relevant 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.

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) often uses a health risk-based approach, but may also require a regulatory approach similar to criteria pollutants, 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 AB 1807, is a two-step program in which substances are identified as TACs, and 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 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 each 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 (AB 2588) establishes a state-wide program to inventory and assess the risks from facilities that emit TACs and to notify the public about significant health risks associated with the emissions. Facilities are phased into the AB 2588 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 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 AB 2588 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 AB 2588 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 HSC §44390 et seq., amended AB 2588 to include a requirement for facilities with significant risks to prepare and implement a risk reduction plan which will reduce the risk below a defined significant risk level within specified time limits. SCAQMD Rule 1402 - Control of Toxic Air Contaminants From Existing Sources, was adopted on April 8, 1994, to implement the requirements of SB 1731.

In addition to the TAC rules adopted by SCAQMD under authority of AB 1807 and SB 1731, the SCAQMD has adopted source-specific TAC rules, based on the specific level of TAC 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 District 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 AB 3205), a new or modified permit unit posing an 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 in the following discussion), respectively.

Health Effects

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. 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 TAC non-carcinogens it is believed that there is a threshold level of exposure to the compound below which it will not pose a health risk. CalEPA's Office of Environmental Health Hazard Assessment (OEHA) 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 non-cancer health risk due to exposure to a TAC is assessed by comparing the estimated level of exposure to the REL. The comparison is expressed as the ratio of the estimated exposure level to the REL, called the hazard index (HI).

CHAPTER 4

ENVIRONMENTAL IMPACTS

Introduction

Potential Environmental Impacts and Mitigation Measures

Potential Environmental Impacts Found Not to be Significant

Significant Irreversible Environmental Changes

Potential Growth-Inducing Impacts

Consistency

INTRODUCTION

The CEQA Guidelines require environmental documents to identify significant environmental effects that may result from a proposed project [CEQA Guidelines §15126.2(a)]. Direct and indirect significant effects of a project on the environment should be identified and described, with consideration given to both short- and long-term impacts. The discussion of environmental impacts may include, but is not limited to: the resources involved; physical changes; alterations of ecological systems; health and safety problems caused by physical changes; and, other aspects of the resource base, including water, scenic quality, and public services. If significant adverse environmental impacts are identified, the CEQA Guidelines require a discussion of 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 a 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. As a result, this ~~Final Draft~~ SEA analyzes impacts on a regional level and impacts on the level of individual industries or individual facilities only where feasible.

The categories of environmental impacts to be studied in a CEQA document are established by CEQA [Public Resources Code, §21000 et seq.], and the CEQA Guidelines, as promulgated by the State of California Secretary of Resources. Under the CEQA Guidelines, there are approximately 17 environmental categories in which potential adverse impacts from a project are evaluated. Projects are evaluated against the environmental categories in an Environmental Checklist and those environmental categories that may be adversely affected by the proposed project are further analyzed in the appropriate CEQA document.

POTENTIAL ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Pursuant to CEQA, an Initial Study, including an environmental checklist, was prepared for this project (see Appendix [BC](#)). Of the 17 potential environmental impact categories, one (air quality and GHG emissions) was identified as being potentially adversely affected by the proposed project. No comment letters were received on the Initial Study.

The topic of operational air quality emissions is further evaluated in detail in this ~~Final Draft~~ SEA. The environmental impact analysis for this environmental topic incorporates a “worst-case” approach. This approach entails the premise that whenever the analysis requires that assumptions be made, those 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 analyses use a conservative “worst-case” approach for analyzing the potentially significant adverse environmental impacts associated with the implementation of the proposed project.

AIR QUALITY

The initial evaluation in the NOP/IS identified the topic of air quality and GHG emissions as potentially being adversely affected by the proposed project. Under this topic, the construction impacts for air quality and GHG emissions and operational GHG emissions were determined in the NOP/IS to be less than significant and therefore, not requiring further evaluation in this [Final Draft-SEA](#). Thus, only operational air quality emissions were identified in the NOP/IS as needing further analysis in this [Final Draft-SEA](#).

Significance Criteria

To determine whether air quality impacts from adopting and implementing the proposed project are significant, impacts will be evaluated and compared to the following criteria. If impacts exceed any of the significance thresholds in Table 4-1, they will be considered significant. All feasible mitigation measures will be identified and implemented to reduce significant impacts to the maximum extent feasible. The proposed project will be considered to have significant adverse air quality impacts if any one of the thresholds in Table 4-1 are equaled or exceeded.

The SCAQMD makes significance determinations for construction impacts based on the maximum or peak daily emissions during the construction period, which provides a “worst-case” analysis of the construction emissions. Similarly, significance determinations for operational emissions are based on the maximum or peak daily allowable emissions during the operational phase.

Project-Specific Air Quality Impacts During Operation

There are approximately 6,600 units located at 3,000 facilities that are subject to the emission limits in Rule 1147. Of these, approximately 1,600 units located at 800 facilities currently meet the NO_x emission limits in Rule 1147. At the time Rule 1147 was adopted, SCAQMD staff estimated that there were as many as 2,500 permitted units (excluding remediation units) with NO_x emission limits greater than one pound per day that would potentially become subject to the emission limits in Rule 1147 between compliance years 2010 and 2014. Further, an additional 2,500 permitted units with NO_x emission limits of less than one pound per day were expected to become subject to the emission limits in Rule 1147 between compliance years 2015 and 2019. In addition, SCAQMD staff estimated that 100 to 200 remediation units per year will be subject to the NO_x emission limits in Rule 1147 starting in 2011, and all units would be required to meet the applicable NO_x emission limit by 2023.

At the time of adoption of Rule 1147, the NO_x emissions inventory for equipment subject to Rule 1147 as summarized in Table 3-1, was 4.9 tons per day of NO_x (from the 2002 NO_x emissions inventory in the 2007 AQMP). Further, the 2014 annual average NO_x inventory was projected to be 6.2 tons per day. At the time of adoption, Rule 1147 was estimated to reduce annual average emissions of NO_x by 3.5 tons per day by 2014 and 3.8 tons per day by 2023.

Emission reductions were calculated based on typical uncontrolled emissions, the emission limits, and information from the SCAQMD permit database. Based on a review of equipment permit limits, approximately 25 percent of the equipment in each category already met the NO_x emission limits. SCAQMD staff estimated the average reduction for uncontrolled units would be approximately 75 percent. Applying a 75 percent reduction to three-fourths of the inventory produces an overall reduction of about 56 percent.

**Table 4-1
SCAQMD Air Quality Significance Thresholds**

Mass Daily Thresholds ^a		
Pollutant	Construction ^b	Operation ^c
NOx	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM10	150 lbs/day	150 lbs/day
PM2.5	55 lbs/day	55 lbs/day
SOx	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Toxic Air Contaminants (TACs), Odor, and GHG Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk \geq 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas \geq 1 in 1 million) Chronic & Acute Hazard Index \geq 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
GHG	10,000 MT/yr CO ₂ eq for industrial facilities	
Ambient Air Quality Standards for Criteria Pollutants ^d		
NO₂ 1-hour average annual arithmetic mean	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.18 ppm (state) 0.03 ppm (state) and 0.0534 ppm (federal)	
PM₁₀ 24-hour average annual average	10.4 $\mu\text{g}/\text{m}^3$ (construction) ^e & 2.5 $\mu\text{g}/\text{m}^3$ (operation) 1.0 $\mu\text{g}/\text{m}^3$	
PM_{2.5} 24-hour average	10.4 $\mu\text{g}/\text{m}^3$ (construction) ^e & 2.5 $\mu\text{g}/\text{m}^3$ (operation)	
SO₂ 1-hour average 24-hour average	0.25 ppm (state) & 0.075 ppm (federal – 99 th percentile) 0.04 ppm (state)	
Sulfate 24-hour average	25 $\mu\text{g}/\text{m}^3$ (state)	
CO 1-hour average 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) and 35 ppm (federal) 9.0 ppm (state/federal)	
Lead 30-day Average Rolling 3-month average Quarterly average	1.5 $\mu\text{g}/\text{m}^3$ (state) 0.15 $\mu\text{g}/\text{m}^3$ (federal) 1.5 $\mu\text{g}/\text{m}^3$ (federal)	

^a Source: SCAQMD CEQA Handbook (SCAQMD, 1993)

^b Construction thresholds apply to both the South Coast Air Basin and Coachella Valley (Salton Sea and Mojave Desert Air Basins).

^c For Coachella Valley, the mass daily thresholds for operation are the same as the construction thresholds.

^d Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.

^e Ambient air quality threshold based on SCAQMD Rule 403.

KEY: lbs/day = pounds per day ppm = parts per million $\mu\text{g}/\text{m}^3$ = microgram per cubic meter \geq = greater than or equal to
MT/yr CO₂eq = metric tons per year of CO₂ equivalents > = greater than

Emission reduction estimates for each rule category were based upon the number of units in that rule category and an average emission reduction per unit. Yearly reduction estimates were based on the percentage of equipment that was anticipated to be subject to the emission limits in that year. Emission reductions in the first five years would be attributed to units with permitted NOx emission limits greater than one pound per day. Emission reductions in the last eight years would be due to NOx reductions from units with permit limits of one pound per day or less.

Delaying the compliance dates in PAR 1147 means that there will be adjustments to the annual operational NOx emission reductions during varying compliance years as summarized in Table 4-2. In addition, Table 4-43 summarizes the NOx emission reductions delayed on an equipment category basis per compliance year.

Table 4-2
Annual Adjustments to NOx Emission Reductions

Compliance Year	Current NOx Emission Reductions in Rule 1147 (tons/day)	Proposed NOx Emission Reductions in PAR 1147 (tons/day)
2010	0.70	0
2011	0.70	0
2012	0.70	1.40
2013	0.70	1.40
2014	0.70	0.70
2015	0.06	0
2016	0.06	0
2017	0.06	0.12
2018	0.06	0.12
2019	0.06	0.06

Implementing PAR 1147 will result in a delay of: 1) 0.70 tons/day (1,400 lbs/day) of NOx emission reductions in compliance years 2010 and 2011; and, 2) 0.06 tons/day (120 lbs/day) of NOx emission reductions in compliance years 2015 and 2016. However, the 0.70 tons/day of NOx delayed emission reductions will be recaptured in compliance years 2012 and 2013 and the 0.06 tons/day of delayed NOx emission reductions will be recaptured in compliance years 2017 and 2018, respectively. Thus, despite the delay in implementation of some of the compliance dates, the same amount of overall NOx emission reductions as estimated in the current rule will be achieved by PAR 1147 (e.g. 3.5 tons per day of NOx emission reductions by 2014 and 3.8 tons per day of NOx emission reductions by 2023). However, the quantity of NOx emission reductions delayed exceeds the NOx significance threshold for operation of 55 pounds per day. Thus, PAR 1147 will result in adverse significant operational air quality impacts.

Mitigation Fee Option - Direct Air Quality Impacts

Subsequent to the release of the Draft SEA, the proposed project has been revised to extend the NOx emission limit compliance dates for units with emissions of more than one pound per day by up to three years (e.g. by 2014) provided that an alternate compliance plan is submitted and an emissions mitigation fee is paid in lieu of meeting the applicable NOx emission limit through the aforementioned compliance methods.

By allowing an extension in the compliance dates in PAR 1147, some operators of affected equipment may delay their decision to make physical changes to their affected units and instead, take advantage of the mitigation fee option. Doing so could potentially cause additional delays in achieving the proposed NOx emission reductions contained in PAR 1147 by an additional 0.175 ton per day (350 pounds per day) to 0.350 ton per day (700 pounds per day) by 2014. This potential delay in NOx emission reductions is considered to be a substantial increase in operational air quality impacts from PAR 1147 that were already concluded to be significant.

Mitigation Fee Option - Indirect and Cumulative Air Quality Impacts

In an effort to mitigate direct air quality impacts from implementing the mitigation fee option (see Project-Specific Mitigation for Air Quality Impacts During Operation), all mitigation fees will be used to reduce NOx emissions through the SCAQMD's leaf blower exchange program. Indirect air quality effects that may be generated by the leaf blower exchange program have been previously evaluated in the Final Program Environmental Assessment (PEA) for Proposed Rule 2702 – Greenhouse Gas Reduction Program⁵ (SCAQMD, 2008) which will be used as a surrogate air quality analysis for the mitigation fee option.

The adoption of Rule 2702 established a Greenhouse Gas (GHG) Reduction Program for GHG reduction projects in the district and provided GHG certified emission reductions through SCAQMD-funded projects to reduce emissions using money from program participants who need certified GHG reductions. All GHG reduction projects are required to follow approved protocols and funding from parties seeking GHG emission reductions will be submitted to the SCAQMD, which will fund projects through contractual agreements. Projects funded through the GHG Reduction Program may also provide co-benefits of reducing criteria or toxic pollutants that can benefit local and regional air quality. The mitigation fee option proposed in PAR 1147 would rely on NOx emission reduction co-benefits that will be achieved by the leaf blower exchange program.

GHG Reduction Program protocols were developed in collaboration with CARB and were analyzed in the Final PEA for the following project categories: 1) boiler efficiency; 2) lawn mowers; 3) leaf blowers; 4) truck stop electrification; and, 5) replacement of High Global Warming Potential (GWP) refrigerants. Each of these protocols identify what actions can be taken to reduce GHGs, how those reductions will be quantified, and how long the project will be considered additional (i.e., how many years the project may qualify for certified GHG reductions).

The following describes the assumptions of indirect air quality impacts that could occur under the leaf blower protocol analyzed in the Final PEA. The analysis of the leaf blower exchange protocol for Rule 2702 assumed the program funding of \$2.8 million, which was based on the potential funding availability at the time. Based on the cost of leaf blowers at the time, the \$2.8 million was assumed to cover the cost of purchasing 15,730 leaf blowers⁶.

The Rule 2702 analysis assumed that old leaf blowers are exchanged at store locations that normally sell leaf blowers. Because more leaf blowers would be expected to be delivered to assure sufficient supply, new delivery truck trips were expected and analyzed for Rule 2702.

⁵ SCAQMD, Final Program Environmental Assessment for: Proposed Rule 2702 – Greenhouse Gas Reduction Program, SCH No. 2008111002, SCAQMD No. 081104MK, December 31, 2008.

⁶ To date, most of the emission reductions through Rule 2702 have been directed to tree planting programs and some funding has been directed to boil protocol projects. No funding has been directed to the leaf blower exchange program.

However, because store locations were assumed to only be able accommodate a minor increase in the number of leaf blowers due to space limitations, fewer leaf blowers get sold at each exchange resulting in the need for more exchanges each year. More exchanges were concluded to result in less vehicle distance traveled as it is more likely that a participant would visit a local exchange than an exchange located farther away. On average, three to five leaf blowers have been exchanged per purchaser. Historically, 1,500 leaf blowers have been exchanged at six to ten events per year. The leaf blower exchange events are popular and all of the available leaf blowers have been over-subscribed for each event. Because of the program's popularity, a maximum of 500 leaf blowers were assumed to be exchanged on any given day and a maximum of 32 events were assumed to be conducted to exchange all 15,730 leaf blowers that were assumed to be financed by the initial program funding for Rule 2702. Thus, if five leaf blowers are exchanged per purchaser, 100 vehicles were assumed to be traveling to the local store location on a given day. Further, two haul trucks were assumed to be needed to transport the old leaf blower units to a scrap and destruction location.

The peak daily emissions from conducting a leaf blower exchange based on exchanging 15,730 leaf blowers per year were estimated to be 1.63 pound per day of VOC, 14.49 pounds per day of CO, 5.56 pounds per day of NOx, 0.02 pound per day of SOx, 0.25 pound per day of PM10, and 0.20 pound per day of PM2.5. In addition, the construction activities were estimated to generate 25.2 metric tons of CO₂eq emissions per year. Thus, the peak daily indirect emissions from conducting a leaf blower exchange event pursuant to Rule 2702 would not generate significant adverse air quality impacts because none of the criteria pollutant emissions exceed the SCAQMD's CEQA significance thresholds for the construction phase of a project. Subsequent to adoption of Rule 2702, \$1,500,000 was collected and used for tree planting programs. In addition \$300,000 was used for boiler replacement programs. No other funding has been provided to fund any of the other approved protocols, including leaf SCAQMD leaf blower exchanges.

The maximum number of leaf blowers that would be needed for PAR1147 is 9,000 total, so the analysis for Rule 2702 is an over-estimation of the potential impacts of the leaf blower exchange program for PAR 1147. Therefore, since fewer leaf blowers would be exchanged using the mitigation fee option, direct and indirect air quality impacts would be less than impacts identified for Rule 2702 and, as a result, would also be less than significant.

With the exception of GHG and criteria pollutant emission reductions, no other operational air quality impacts, either positive or negative, as explained in subsequent sections, were identified as a result of using new low emission leaf blowers to mitigate direct air quality impacts from implementing the mitigation fee option.

Project-Specific Mitigation For Air Quality Impacts During Operation: The analysis indicates that there will be a temporary delay in the overall reduction in NOx emissions during the operational phase of the proposed project. The amount of NOx emission reductions delayed exceeds the applicable significance threshold (55 pounds per day) during operation for NOx. Thus, there are adverse significant air quality impacts with the operational phase of the proposed project. If significant adverse environmental impacts are identified in a CEQA document, the CEQA document shall describe feasible measures that could minimize the significant adverse impacts (CEQA Guidelines §15126.4).

Because of the compliance challenges with certain effective dates in the rule that face operators of equipment subject to Rule 1147, there are no feasible mitigation measures that would achieve the delayed NO_x emissions on the original schedule. Consequently, the operational air quality impacts from the proposed project cannot be mitigated.

Because the mitigation fee option has the potential to make a significant adverse impact substantially worse, the following mitigation measures will be required to be implemented:

- AQ-1 SCAQMD is required to apply the mitigation fees received from implementing the mitigation fee option in PAR 1147 to fund additional leaf blower exchange events. Except for GHG emission reductions, all other criteria pollutant and VOC emission reductions must be applied to reducing significant adverse NO_x emission impacts or retired for the benefit of the environment and cannot be applied to other programs.
- AQ-2 The new leaf blowers used in the leaf blower exchange program are required to be certified by CARB and must meet certified emission levels no higher than those identified by CARB in Table 4-3.
- AQ-3 Manufacturers that participate in providing the qualifying leaf blowers for the leaf blower exchange program must contractually agree to not request emission credits for the NO_x emission reductions or any other reductions generated by the sale of leaf blowers.
- AQ-4 Mitigation fees applied to the leaf blower exchange program must be in addition to any existing funding applied to that program (i.e., mitigation fees cannot replace any existing leaf blower exchange funding). However, this does not guarantee that existing levels of funding will be continued but only that SCAQMD will not substitute mitigation fees for existing funding sources.

Since 2006, the SCAQMD has annually conducted leaf blower exchange programs to encourage professional gardeners and landscapers operating within the SCAQMD's four-county jurisdiction to surrender their old, polluting backpack leaf blowers and purchase new, low-emission/low-noise leaf blowers at a reduced price. The programs have been very successful, resulting in the exchange of over 6,000 leaf blowers to date.

In order for manufacturers to participate in the leaf blower exchange programs, the new leaf blower engines need to be certified by CARB for sale in California, and must meet certified emission levels no higher than those identified by CARB as shown in Table 4-3. The analysis also showed that the operation of more efficient leaf blowers will provide an air quality benefit as old dirty equipment will be replaced with low emission equipment. As shown in Table 4-3, the current hydrocarbon(HC) + NO_x emission standard for leaf blowers ranges from 25 grams/kilowatt-hour to 36 grams/kilowatt-hour, depending on the engine size. However, emissions would be 19 grams/kilowatt-hour from a new more efficient leaf blower. Similarly, while the current CO emission standard is 536 grams/kilowatt-hour, emissions from a new leaf blower would be 490 grams/kilowatt-hour.

Table 4-3
CARB's Leaf Blower Emission Standards

<u>Leaf Blower Engine Size</u>	<u>Hydrocarbon plus NOx</u>	<u>Carbon Monoxide</u>	<u>Particulate Matter (PM standard applies only to 2-stroke engines)</u>
<50 cc	25 g/kW-hr	536 g/kW-hr	2.0 g/kW-hr
50-80cc inclusive	36 g/kW-hr	536 g/kW-hr	2.0 g/kW-hr

Since the new leaf blowers are quieter and operate with 50 percent less emissions than the older models being replaced, the leaf blower exchange program results in reductions in both emissions and noise. The quantity of NOx emission reductions projected to be generated by the leaf blower exchange program for years 2012, 2013 and 2014 would be approximately 0.175 ton per day to 0.350 ton per day for an exchange of 1,400 to 2,800 leaf blowers per year, respectively. In addition, manufacturers that participate in providing the qualifying leaf blowers for the program must contractually agree to not request emission credits for the NOx emission reductions generated by the sale of leaf blowers.

Thus, any delayed NOx emission reductions that may occur as part of the mitigation fee option in PAR 1147 would be expected to be fully offset by NOx emission reductions occurring from leaf blower exchange program.

For these reasons, implementation of the mitigation fee option in PAR 1147 in conjunction with obtaining NOx emission reductions generated by the leaf blower exchange program, will not cause any new significant air quality impacts or make the significant air quality impacts previously analyzed in the Draft SEA substantially worse. Further, the modifications to the proposed project relative to implementing the mitigation fee option will not alter any conclusions previously reached in the Draft SEA, nor provide new information of substantial importance relative to the draft document. Thus, even with the addition of the mitigation fee option and associated mitigation measures, PAR 1147 will continue to result in adverse significant operational air quality impacts.

Remaining Air Quality Impacts During Operation: The air quality analysis concluded that significant adverse operational air quality impacts could be created by the proposed amendments because of a delay of 0.70 tons/day (1,400 lbs/day) of NOx emission reductions in compliance years 2010 and 2011; and, 0.06 tons/day (120 lbs/day) of NOx emission reductions in compliance years 2015 and 2016, would exceed the SCAQMD's NOx significance thresholds of 55 pounds per day. The air quality analysis also concluded that implementation of the mitigation fee option has been shown to create additional significant adverse operational air quality impacts due to the potential for additional delays in NOx emission reductions. However, the mitigation measures for the leaf blower exchange program and the NOx emission reductions that may be generated from the leaf blower exchange program is expected to fully offset any additional delays in NOx emissions reductions from the mitigation fee option in PAR 1147. Thus, implementation of the mitigation fee option will not create additional remaining air quality impacts during operation. Because PAR 1147 will result in significant adverse operational air quality impacts, ~~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 hearings for the proposed amendments.

Table 4-43

Baseline NOx Emission Inventory and Projected NOx Emission Reductions Delayed per Equipment Category and Compliance Year

Fuel	Equipment Category	Typical Uncontrolled NOx Emissions	Current NOx Emission Limit	No. of Units	NOx Baseline Emission Inventory (tons/day)	Originally Estimated NOx Emission Reductions (tons/day)	PAR 1147 Emission Reductions Delayed per Compliance Year (tons/day)									
							2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Natural Gas	Asphalt Operations	90-120 ppm	40 ppm	71	0.071	0.055	0.010	0.010	0.010	0	0	0.001	0.001	0.001	0	0
	Open Heated Tank or Evaporator	120 ppm	60 ppm or 0.073 lb/mmBtu	200	0.199	0.154	0.028	0.028	0.028	0	0	0.002	0.002	0.002	0	0
	Degassing, Incinerator, or Soil Remediation > 1200° F	120 ppm		480	0.478	0.370	0.068	0.068	0.068	0	0	0.006	0.006	0.006	0	0
	Fryer	120 ppm		101	0.1	0.078	0.014	0.014	0.014	0	0	0.001	0.001	0.001	0	0
	Metal Heat Treating	150-210 ppm		136	0.135	0.105	0.019	0.019	0.019	0	0	0.002	0.002	0.002	0	0
	Metal Melting Furnace	150-210 ppm		118	0.117	0.091	0.017	0.017	0.017	0	0	0.001	0.001	0.001	0	0
	Metal or Tar Pot	90-210 ppm		237	0.236	0.184	0.034	0.034	0.034	0	0	0.003	0.003	0.003	0	0
	Other > 1200° F	120 ppm		295	0.293	0.228	0.042	0.042	0.042	0	0	0.004	0.004	0.004	0	0
	Oven, Dehydrator, Dryer, Heater, etc. ≤ 800° F	120 ppm		20 ppm or 0.024 lb/mmBtu	2335	2.32	1.802	0.332	0.332	0.332	0	0	0.028	0.028	0.028	0
	Degassing, Incinerator, or Soil Remediation ≤ 1200° F	120 ppm	30 ppm or 0.036 lb/mmBtu	479	0.477	0.370	0.068	0.068	0.068	0	0	0.006	0.006	0.006	0	0

Table 4-43 (concluded)

Baseline NOx Emission Inventory and Projected NOx Emission Reductions Delayed per Equipment Category and Compliance Year

Fuel	Equipment Category	Typical Uncontrolled NOx Emissions	Current NOx Emission Limit	No. of Units	NOx Baseline Emission Inventory (tons/day)	Originally Estimated NOx Emission Reductions (tons/day)	PAR 1147 Emission Reductions Delayed per Compliance Year (tons/day)									
							2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Natural Gas	Make Up Air Heater	120 ppm	30 ppm or 0.036 lb/mmBtu	34	0.034	0.026	0.005	0.005	0.005	0	0	0.000	0.000	0.000	0	0
	Oven, Dehydrator, Dryer, Heater, etc. > 800 and Tenter Frame or Carpet Dryer	120 ppm		161	0.16	0.124	0.023	0.023	0.023	0	0	0.002	0.002	0.002	0	0
	Other Air Heater Outside Building	90-120 ppm		45	0.048	0.035	0.006	0.006	0.006	0	0	0.001	0.001	0.001	0	0
	Other Air Heater Outside Building	120 ppm		15	0.015	0.012	0.002	0.002	0.002	0	0	0.000	0.000	0.000	0	0
	Other with Process Temperature ≤ 1200° F	120 ppm		196	0.195	0.151	0.028	0.028	0.028	0	0	0.002	0.002	0.002	0	0
Liquid Fuel	Liquid Fuel > 1200° F	120-180 ppm	60 ppm or 0.080 lb/mmBtu	0	0	0	0.000	0.000	0.000	0	0	0.000	0.000	0.000	0	0
	≤ 1200*			21	0.021	0.016	0.003	0.003	0.003	0	0	0.000	0.000	0.000	0	0
Total:				4,924	4.899	3.800	0.700	0.700	0.700	0	0	0.060	0.060	0.060	0	0

Cumulative Air Quality Impacts During Operation:

In general, the preceding analysis concluded that air quality impacts during operation would be significant from implementing the proposed project because the SCAQMD's significance threshold for operation will be exceeded for NOx. Thus, the air quality impacts during operation are considered to be cumulatively considerable pursuant to CEQA Guidelines §15064 (h)(1) and therefore, generate significant adverse cumulative air quality operation impacts. It should be noted, however, that the air quality analysis is a conservative, "worst-case" analysis so the actual operation impacts may not be as great as estimated here if facility operators meet the compliance schedule earlier than planned.

Further, the operational impacts are temporary when compared to the permanent projected emission reductions of NOx as a result of the proposed project. In other words, despite the delay in implementation of some of the compliance dates, the same amount of overall NOx emission reductions as estimated in the current rule will be achieved by PAR 1147 (e.g. 3.5 tons per day of NOx emission reductions by 2014 and 3.8 tons per day of NOx emission reductions by 2023). Further, the amount of emission reductions to be achieved by the proposed project for NOx will, at the very least, meet the emission reduction projections and commitments made in the AQMP.

Even though the proposed project will cause a temporary and significant adverse increase in air emissions during operation, the temporary net amount of NOx emission reductions delayed during operation combined with the total permanent emission reductions projected overall during operation would not interfere with the air quality progress and attainment demonstration projected in the AQMP. Further, based on regional modeling analyses performed for the 2007 AQMP, implementing control measures contained in the 2007 AQMP, in addition to the air quality benefits of the existing rules, is anticipated to bring the District into attainment with all national and most state ambient air quality standards by the year 2023. Therefore, cumulative operational air quality impacts from the proposed project, previous amendments and all other AQMP control measures considered together, are not expected to be significant because implementation of all AQMP control measures is expected to result in net emission reductions and overall air quality improvement. This determination is consistent with the conclusion in the 2007 AQMP Final Program EIR that cumulative air quality impacts from all AQMP control measures are not expected to be significant (SCAQMD, 2007). Therefore, there will be no significant cumulative adverse operational air quality impacts from implementing the proposed project.

Cumulative Mitigation Measures During Operation: The analysis indicates that the proposed project will result a delay of NOx emission reductions during operation of the proposed project, but the delay will not result in adverse significant cumulative air quality impacts because the amount of emission reductions to be achieved by the proposed project for NOx will, at the very least, meet the emission reduction projections and commitments made in the AQMP. Thus, no cumulative mitigation measures for operation are required.

POTENTIAL ENVIRONMENTAL IMPACTS FOUND NOT TO BE SIGNIFICANT

While all the environmental topics required to be analyzed under CEQA were reviewed to determine if the proposed project would create significant impacts, the screening analysis concluded that the following environmental areas would not be significantly adversely affected by the proposed project: air quality and GHG emissions during construction and GHG emissions during operation, aesthetics, agriculture and forestry resources, biological resources, cultural resources, energy, geology and soils, hazards and hazardous materials, hydrology and water

quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, solid/hazardous waste, and transportation/traffic. The following is a brief discussion of each topic found not to be significant in the NOP/IS.

Air Quality and GHG Emissions During Construction

Compliance with PAR 1147 means the delayed installation of new compliant units or retrofitting existing units with ultra-low NO_x burner technology and the reduced installation of time meters and fuel meters that would have otherwise been installed under Rule 1147. Any operator who chooses to install new equipment or retrofit an existing unit to comply with the delayed compliance limits in PAR 1147 is not expected to construct any new buildings or other structures as part of the equipment replacement or retrofit process. However, as was previously analyzed in the December 2008 Final EA, some physical modifications would be necessary depending on whether the operator chooses to replace the existing equipment with a new unit or to retrofit the existing unit with ultra-low NO_x burner. For example, for completely replacing existing equipment with new compliant equipment, the existing equipment would need to be shut down and allowed to cool, disconnected from fuel and electric utilities, dismantled and removed. For the purpose of this discussion, the new equipment is assumed to be installed at or near the location of the existing equipment.

The physical modifications that are typically involved with retrofitting existing equipment would be removing the old burners, installing new burners, and installing new or reworking existing flue gas ductwork. Specifically, owners/operators of affected facilities who choose to replace existing burners with ultra-low NO_x burners will first need to pre-order and purchase the appropriate size, style and number of burners, shut down the combustion unit to let it cool, and change out the burners. The burner change-out may involve a contractor or vendor to remove the bolts, possibly cut and re-weld metal seals and re-fire the burners for equipment start-up. Additional work may be necessary such as upgrading the operation control system or installing a new fuel injection system with electronic controls. Once the ultra-low NO_x burners are in place, the combustion equipment can be fired up and can operate with lower NO_x emissions.

Due to the relatively straightforward nature and ease of retrofitting existing equipment with ultra low-NO_x burners, no heavy duty construction activities or equipment are anticipated. Further, the potential adverse construction air quality and GHG impacts were previously analyzed in the December 2008 Final EA and the proposed delay in the compliance dates contained in PAR 1147 will not alter the assumptions or alter the analysis for construction emissions (e.g., criteria pollutants and GHGs). Thus, no new secondary construction impacts are anticipated from the delayed retrofit of equipment with ultra low-NO_x burners.

As previously discussed in the Indirect and Cumulative Air Quality Impacts section, implementation of the mitigation fee option in PAR 1147 in conjunction with mitigation measures AQ-1, AQ-2, AQ-3, and AQ-4 to obtain NO_x emission reductions generated by the leaf blower exchange program, will generate peak daily emissions of approximately 1.63 pound per day of VOC, 14.49 pounds per day of CO, 5.56 pounds per day of NO_x, 0.02 pound per day of SO_x, 0.25 pound per day of PM₁₀, and 0.20 pound per day of PM_{2.5}. In addition, the leaf blower exchange program activities were estimated to generate 25.2 metric tons of CO₂eq emissions per year from haul trucks delivering leaf blowers to exchange locations and motorists traveling to the exchange event locations to exchange old leaf blowers for new leaf blowers. This GHG emission increase does not take into consideration any potential GHG emission reductions from operating new leaf blowers and retiring the old leaf blowers. Thus, the peak daily indirect emissions from conducting a leaf blower exchange event would not generate

significant adverse air quality impacts because none of the criteria pollutant emissions exceed the SCAQMD's applicable CEQA significance thresholds. These additional indirect emissions attributable to the leaf blower exchange program would not make the significant air quality impacts previously analyzed in the Draft SEA substantially worse. Thus, bBased upon these considerations, no significant air quality and GHG emission impacts are expected from the proposed project during construction.

GHG Emissions During Operation

Based on the type and size of equipment affected by PAR 1147, CO₂ emissions (e.g., GHGs) from the operation of the retrofitted or replaced equipment are likely to decrease from current levels due to improved burner efficiency. Further, there is no fuel penalty associated with operating equipment with ultra-low NO_x burners. Thus, even with the delay in compliance dates, operation of ultra-low NO_x burners are expected to result in a similar slight, less than significant decrease in GHG emissions as was previously analyzed in the December 2008 Final EA. However, the delay in compliance dates means the any reductions in GHG emissions will also be delayed. Based upon these considerations, no significant GHG impacts are expected from the proposed project during operation.

Aesthetics

Since compliance with PAR 1147 means the delayed installation of new compliant units or retrofitting existing units with ultra-low NO_x burner technology and the reduced installation of time meters and fuel meters that would have otherwise been installed under Rule 1147, only minor construction-related activities associated with installing compliant equipment or retrofitting existing equipment with ultra-low NO_x burners at affected facilities are expected to occur as a result of PAR 1147 and these construction activities are expected to be confined within the existing footprint of the affected facilities.

The footprint of a compliant new replacement unit versus the footprint of an existing, retrofitted unit that meets the ultra-low NO_x standards was determined to be similar to each other such that owners/operators who replaced their existing units with new compliant units or retrofit their existing units with ultra-low NO_x burners, implementation of Rule 1147 would not require the construction of new buildings or other structures that would obstruct scenic resources or degrade the existing visual character of a site, including but not limited to, trees, rock outcroppings, or historic buildings. Further, implementation of Rule 1147 was not determined to involve the demolition of any existing buildings or facilities, to require any subsurface activities, or to require the acquisition of any new land or the surrendering of existing land, or the modification of any existing land use designations or zoning ordinances. Thus, any compliance relief provided by PAR 1147 will only delay the installation or retrofit of ultra-low NO_x burners and reduce the number time meters and fuel meters that would have otherwise been installed under Rule 1147.

In addition, implementation of the mitigation fee option in PAR 1147 in conjunction with obtaining NO_x emission reductions generated by the leaf blower exchange program is not expected to have any direct or indirect impacts on aesthetics because leaf blowers are already used by gardening and landscaping services and would not be permanently located in areas that could adversely affect scenic vistas or the visual character or an area. The leaf blower exchange program only results in exchanging existing old, higher polluting leaf blowers used for gardening and landscaping with new low emission leaf blowers. The maximum number of leaf blowers anticipated to be exchanged using the PAR 1147 mitigation fees is 3,000 per year or 9,000 over the three-year delay. Further, leaf blowers are not a new source of substantial light or glare

which would adversely affect day or nighttime views in the area because leaf blowing is an existing activity that typically takes place during daylight hours. For this reason, the replacement of existing leaf blowers with more efficient new equipment was concluded in the Final SEA for Rule 2702 to have no significant adverse impacts on aesthetics (SCAQMD, 2008). Since fewer leaf blowers would be exchanged using the PAR 1147 mitigation fee (e.g., 9,000 versus 15,730) any impacts to aesthetics resources would be substantially less compared to Rule 2702.

For these reasons, PAR 1147 is not expected to degrade the visual character of any site where a facility is located and that operates an affected unit or its surroundings, affect any scenic vista, damage scenic resources. Further, since PAR 1147 does not require existing facilities to operate at night, no new sources of substantial light or glare are expected. Therefore, for these aforementioned reasons, the proposed project is not expected to create significant adverse aesthetics impacts.

Agriculture and Forestry Resources

As mentioned previously in the summary of aesthetics, any construction and operational activities that would occur as a result of implementing PAR 1147 are expected to be minimal and to occur within the confines of the existing affected facilities. The proposed project would be consistent with the industrial or commercial zoning requirements for the various facilities and there are no agricultural or forestry resources or operations on or near the affected facilities. No agricultural resources including Williamson Act contracts are located within or would be impacted by construction activities at the affected facilities. Therefore, any delays of installing new equipment units or retrofitting existing units to comply with revised compliance timelines in PAR 1147 would not result in any new construction of buildings or other structures that would convert any classification of farmland to non-agricultural use or conflict with zoning for agricultural use or a Williamson Act contract.

PAR 1147 would also not result in any new construction of buildings or other structures that would cause the loss of forest land or conversion of forest land to non-forest use. Because there are no forestry resources or operations on or near the affected facilities, PAR 1147 would not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code §12220(g)), timberland (as defined by Public Resources Code §4526), or timberland zoned Timberland Production (as defined by Government Code §51104 (g)).

Lastly, since PAR 1147 would not substantially change the facility or process for which the NOx control equipment are utilized, there are no provisions in PAR 1147 that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments and no land use or planning requirements relative to agriculture and forestry resources will be altered by PAR 1147.

In addition, implementation of the mitigation fee option in PAR 1147 in conjunction with obtaining NOx emission reductions generated by the leaf blower exchange program is not expected to have any direct or indirect impacts on agriculture or forestry leaf blowers are portable equipment that are already used by gardening and landscaping services in typically urban areas. The leaf blower exchange program only results in exchanging existing old, higher polluting leaf blowers used for gardening and landscaping with new low emission leaf blowers. The maximum number of leaf blowers anticipated to be exchanged using the PAR 1147 mitigation fees is 3,000 per year or 9,000 over the three-year delay. Thus, implementation of the mitigation fee option in PAR 1147 will not require converting farmland to non-agricultural use or conflict with zoning for agricultural use or a Williamson Act contract because commercial

agricultural activities do not typically occur in urban settings due to zoning restrictions. For these reasons, the replacement of existing leaf blowers with more efficient new equipment was concluded in the Final SEA for Rule 2702 to have no significant adverse impacts on agriculture resources (SCAQMD, 2008). Since fewer leaf blowers would be exchanged using the PAR 1147 mitigation fee (e.g., 9,000 versus 15,730) any impacts to agriculture and forestry resources would be substantially less compared to Rule 2702.

Therefore, for these aforementioned reasons, the proposed project is not expected to create significant adverse agriculture and forestry resource impacts.

Biological Resources

With only minor construction-related activities associated with installing compliant equipment or retrofitting existing equipment with ultra-low NO_x burners at affected facilities expected to occur as a result of PAR 1147 and that these construction activities are expected to be confined within the existing footprint of the affected facilities, the delayed installation of new equipment units or retrofit of existing units to comply with PAR 1147 would not result in any new construction of buildings or other structures. Further, all of the affected units operating at existing facilities are located primarily in industrial and commercial areas, which have already been greatly disturbed. In general, these areas currently do not support riparian habitat, federally protected wetlands, or migratory corridors. Additionally, special status plants, animals, or natural communities are not expected to be found within close proximity to the affected facilities. Therefore, the proposed project would have no direct or indirect impacts that could adversely affect plant or animal species or the habitats on which they rely in the SCAQMD's jurisdiction. The current and expected future land use development to accommodate population growth is primarily due to economic considerations or local government planning decisions. A conclusion in the Final Program EIR for the 2007 AQMP was that population growth in the region would have greater adverse effects on plant species and wildlife dispersal or migration corridors in the basin than SCAQMD regulatory activities, (e.g., air quality control measures or regulations). The current and expected future land use development to accommodate population growth is primarily due to economic considerations or local government planning decisions.

Further, the proposed project is not envisioned to conflict with local policies or ordinances protecting biological resources or local, regional, or state conservation plans. Land use and other planning considerations are determined by local governments and no land use or planning requirements will be altered by the proposed project. Additionally, the proposed project will not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or any other relevant habitat conservation plan, and would not create divisions in any existing communities because all activities associated with complying with the proposed project will occur at existing industrial and commercial facilities.

The SCAQMD, as the Lead Agency for the proposed project, has found that, when considering the record as a whole, there is no evidence that PAR 1147 will have potential for any new adverse effects on wildlife resources or the habitat upon which wildlife depends. Accordingly, based upon the preceding information, the SCAQMD has, on the basis of substantial evidence, rebutted the presumption of adverse effect contained in §753.5 (d), Title 14 of the California Code of Regulations.

In addition, implementation of the mitigation fee option in PAR 1147 in conjunction with obtaining NO_x emission reductions generated by the leaf blower exchange program is not expected to have any direct or indirect impacts on biological resources because the usage of leaf

blowers are currently used in existing urban environments with the purpose of landscaping, grass cutting, weed control, and leaf management. The leaf blower exchange program only results in exchanging existing old, higher polluting leaf blowers used for gardening and landscaping with new low emission leaf blowers. The maximum number of leaf blowers anticipated to be exchanged using the PAR 1147 mitigation fees is 3,000 per year or 9,000 over the three-year delay. Further, no new property is required for the exchange and operation of new leaf blowers. For these reasons, the replacement of existing leaf blowers with more efficient new equipment was concluded in the Final SEA for Rule 2702 to have no significant adverse impacts on biological resources (SCAQMD, 2008). Since fewer leaf blowers would be exchanged using the PAR 1147 mitigation fee (e.g., 9,000 versus 15,730) any impacts to biological resources would be substantially less compared to Rule 2702.

Therefore, the proposed project is not expected to create significant adverse biological resource impacts.

Cultural Resources

There are existing laws in place that are designed to protect and mitigate potential impacts to cultural resources. Installing ultra-low NOx burner technology and any other associated equipment to comply with PAR 1147 may require disturbance of previously disturbed areas, i.e., existing industrial or commercial facilities. However, since construction-related activities are expected to be confined within the existing footprint of the affected facilities, PAR 1147 is not expected to require physical changes to the environment, which may disturb historical, paleontological or archaeological resources. Furthermore, it is envisioned that these areas are already either devoid of significant cultural resources or whose cultural resources have been previously disturbed. Therefore, the proposed project has no potential to cause a substantial adverse change to a historical or archaeological resource, directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, or disturb any human remains, including those interred outside a formal cemeteries. PAR 1147 is, therefore, not anticipated to result in any activities or promote any programs that could have a significant adverse impact on cultural resources in the District.

In addition, implementation of the mitigation fee option in PAR 1147 in conjunction with obtaining NOx emission reductions generated by the leaf blower exchange program is not expected to have any direct or indirect impacts on cultural resources because leaf blowers are currently used in existing urban environments with the purpose of landscaping, grass cutting, weed control, and leaf management and the exchanges of leaf blowers do not involve any level of construction that would have any impact on cultural resources. The leaf blower exchange program only results in exchanging existing old, higher polluting leaf blowers used for gardening and landscaping with new low emission leaf blowers. The maximum number of leaf blowers anticipated to be exchanged using the PAR 1147 mitigation fees is 3,000 per year or 9,000 over the three-year delay. For these reasons, the replacement of existing leaf blowers with more efficient new equipment was concluded in the Final SEA for Rule 2702 to have no significant adverse impacts on cultural resources (SCAQMD, 2008). Since fewer leaf blowers would be exchanged using the PAR 1147 mitigation fee (e.g., 9,000 versus 15,730) any impacts to cultural resources would be substantially less compared to Rule 2702.

PAR 1147 is, therefore, not anticipated to result in any activities or promote any programs that could have a significant adverse impact on cultural resources in the District.

Energy

The majority of the universe of sources that are regulated by PAR 1147 is fired with natural gas. As discussed in the air quality section regarding GHG emissions, due to ultra-low NOx burner retrofits that will occur on a delayed implementation schedule, PAR 1147 is expected to result in a slight decrease in the demand for natural gas, as new burners are expected to be more efficient than existing affected equipment. However, when this decrease in natural gas is scheduled to occur will vary according to the delayed compliance dates proposed in PAR 1147. Nevertheless, based upon these considerations, PAR 1147 is not expected to use energy in a wasteful manner, and will not exceed SCAQMD energy significance thresholds. There will be no substantial depletion of energy resources nor will significant amounts of fuel be needed when compared to existing supplies.

As a result, PAR 1147 would not conflict with energy conservation plans, use non-renewable resources in a wasteful manner, or result in the need for new or substantially altered power or natural gas systems. Since PAR 1147 would primarily affect existing equipment operating at existing facilities and because compliant equipment, if installed, will be more efficient than existing equipment, the proposed project will not conflict with adopted energy conservation plans because existing facilities would be expected to continue implementing any existing energy conservation plans. Additionally, operators of affected facilities are expected to comply with existing energy conservation plans and standards to minimize operating costs, while still complying with the requirements of PAR 1147.

Lastly, PAR 1147 would not create any significant effects on peak and base period demands for electricity and other forms of energy since no construction of buildings or other structures are anticipated as a result of the affected facilities operating equipment that is either manufactured or retrofitted with ultra-low NOx burner technology.

Implementation of the mitigation fee option in PAR 1147 in conjunction with obtaining NOx emission reductions generated by the leaf blower exchange program is expected to have a less than significant impact on energy because there will be a temporary increased need for diesel and gasoline fuel to power on-road mobile sources, such as delivery trucks, haul trucks and workers' vehicles. The leaf blower exchange program only results in exchanging existing old, higher polluting leaf blowers used for gardening and landscaping with new low emission leaf blowers. The maximum number of leaf blowers anticipated to be exchanged using the PAR 1147 mitigation fees is 3,000 per year or 9,000 over the three-year delay. The Final PEA for Rule 2702 estimated that the leaf blower exchange program would result in an increase of approximately 427 gallons of diesel fuel and 1,728 gallons of gasoline during activities associated with exchanging 15,730 leaf blowers per year. However, during leaf blowing operations, there will be an energy benefit because gasoline-fueled leaf blowers are expected to be 26 percent more efficient than the 2-stroke engine older models so there will be 26 percent less gasoline used than with the current older models. For these reasons, the replacement of existing leaf blowers with more efficient new equipment was concluded in the Final SEA for Rule 2702 to have a less than significant adverse impact on energy (SCAQMD, 2008). Since fewer leaf blowers would be exchanged using the PAR 1147 mitigation fee (e.g., 9,000 versus 15,730) any impacts to energy resources would be substantially less compared to Rule 2702.

In light of the preceding discussion, PAR 1147 would not create any significant effects on peak and base period demands for electricity and other forms of energy and it is expected to comply with existing energy standards. Therefore, PAR 1147 is not expected to generate significant adverse energy impacts.

Geology and Soils

Southern California is an area of known seismic activity. Structures must be designed to comply with the Uniform Building Code Zone 4 requirements if they are located in a seismically active area. The local city or county is responsible for assuring that a proposed project complies with the Uniform Building Code as part of the issuance of the building permits and can conduct inspections to ensure compliance. The Uniform Building Code is considered to be a standard safeguard against major structural failures and loss of life. The goal of the code is to provide structures that will: 1) resist minor earthquakes without damage; 2) resist moderate earthquakes without structural damage but with some non-structural damage; and, 3) resist major earthquakes without collapse but with some structural and non-structural damage.

The Uniform Building Code bases seismic design on minimum lateral seismic forces (“ground shaking”). The Uniform Building Code requirements operate on the principle that providing appropriate foundations, among other aspects, helps to protect buildings from failure during earthquakes. The basic formulas used for the Uniform Building Code seismic design require determination of the seismic zone and site coefficient, which represent the foundation conditions at the site. Accordingly, the existing buildings and equipment at existing affected facilities are likely to conform to the Uniform Building Code and all other applicable state codes in effect at the time they were constructed.

Since implementing PAR 1147 is expected to involve the delayed installation of new compliant equipment or the retrofitting of existing units with ultra-low NOx burners at existing facilities, no new buildings or structures are expected to be constructed and no soil disruption from excavation, grading, or filling activities; changes in topography or surface relief features; erosion of beach sand; or changes in existing siltation rates are anticipated. Since soil disruption is not expected to occur as a result of implementing the proposed project, the soil types present at the affected facilities will not be further susceptible to expansion or liquefaction. Similarly, subsidence is not anticipated to be a problem since no excavation, grading, or filling activities will occur at affected facilities. Further, PAR 1147 would not involve drilling or removal of underground products (e.g., water, crude oil, et cetera) that could produce new, or make worse existing subsidence effects. Additionally, the affected areas are not envisioned to be prone to new risks from landslides or have unique geologic features since the existing affected facilities are located in industrial or commercial areas where such features have already been altered or removed. As a result, substantial exposure of people or structure to the risk of loss, injury, or death involving seismic-related activities is not anticipated.

In addition, implementation of the mitigation fee option in PAR 1147 in conjunction with obtaining NOx emission reductions generated by the leaf blower exchange program is not expected to have any direct or indirect impacts on geology and soils because leaf blowers are portable equipment that are currently used in existing urban environments for the purpose of landscaping, grass cutting, weed control, and leaf management without being dependent upon soil structure or stability in order to function. The leaf blower exchange program only results in exchanging existing old, higher polluting leaf blowers used for gardening and landscaping with new low emission leaf blowers. The maximum number of leaf blowers anticipated to be exchanged using the PAR 1147 mitigation fees is 3,000 per year or 9,000 over the three-year delay. Thus, exchanging existing leaf blowers with new leaf blowers will not expose people or structures to new risks of loss, injury, or death involving: rupture of an earthquake fault, seismic ground shaking, ground failure or landslides. For these reasons, the replacement of existing leaf blowers with more efficient new equipment was concluded in the Final SEA for Rule 2702 to have no significant adverse impacts on geology and soils (SCAQMD, 2008). Since fewer leaf

blowers would be exchanged using the PAR 1147 mitigation fee (e.g., 9,000 versus 15,730) any impacts to geology and soils would be substantially less compared to Rule 2702.

Lastly, since PAR 1147 will affect operations at primarily existing facilities, it is expected that people or property will not be exposed to new impacts relative to expansive soils or soils incapable of supporting water disposal, nor will any existing impacts be made worse. Further, PAR 1147 would not require installation of septic tanks or other alternative waste water systems.

Based upon the aforementioned considerations, significant geology and soils impacts are not expected from the implementation of the proposed project.

Hazards and Hazardous Materials

There are no provisions in PAR 1147 that would increase the amount of hazardous materials used or generated by facility owners/operators. Further, because implementation of PAR 1147 will be the delayed installation of new compliant equipment or the retrofitting of existing units with ultra-low NOx burners at the affected facilities, no raw material deliveries or waste disposal truck trips that handle hazardous materials will be associated with the proposed project after the applicable compliance dates.

As indicated in the discussion under energy, PAR 1147 applies to combustion equipment operations that are mainly fired with natural gas, though a small percentage are fired with liquid fuel; both are flammable substances. Because the ultra-low NOx burner technology is more efficient than existing burner technologies, upon installation, implementation of PAR 1147 is expected to slightly reduce the demand for fuel compared to what is currently used at existing affected facilities. As a result, implementation of PAR 1147 is not expected to noticeably change or may slightly reduce any existing flammability hazard that may be associated with operating these combustion devices. In summary, implementation of PAR 1147 is not expected to increase any existing flammability hazard associated with firing ultra-low NOx burners.

Since PAR 1147 would primarily affect existing combustion equipment that is primarily located at existing facilities, existing emergency planning is anticipated to adequately minimize the risk associated installing new compliant equipment or retrofitting existing equipment with ultra-low NOx burners. Businesses are required to report increases in the storage or use of flammable and otherwise hazardous materials to local fire departments. PAR 1147 is not expected to increase the amount of materials used or generated at affected facilities that would contain hazardous materials nor is it expected to significantly increase the demand of fuels (natural gas and liquid fuel) or other flammable substances.

In addition, local fire departments ensure that adequate permit conditions are in place to protect against potential risk of upset. The Uniform Fire Code and Uniform Building Code are set standards intended to minimize risks from flammable or otherwise hazardous materials. Local jurisdictions are required to adopt the uniform codes or comparable regulations. Local fire agencies require permits for the use or storage of hazardous materials and permit modifications for proposed increases in their use. Permit conditions depend on the type and quantity of the hazardous materials at the facility. Permit conditions may include, but are not limited to, specifications for sprinkler systems, electrical systems, ventilation, and containment. The fire departments make annual business inspections to ensure compliance with permit conditions and other appropriate regulations.

Further, all hazardous materials are expected to be used in compliance with established Occupational Safety and Health Administration (OSHA) or California Occupational Safety and Health Administration (CalOSHA) regulations and procedures, including providing adequate ventilation, using recommended personal protective equipment and clothing, posting appropriate signs and warnings, and providing adequate worker health and safety training. When taken together, the aforementioned regulations provide comprehensive measures to reduce hazards of explosive or otherwise hazardous materials. Compliance with these and other federal, state and local regulations and proper operation and maintenance of equipment should ensure the potential for explosions or accidental releases of hazardous materials is not significant.

In general, the purpose of PAR 1147 is to bring compliance relief to owners/operators of affected combustion equipment by: 1) delaying implementation of certain NO_x emission limit compliance dates for existing (in-use) permitted equipment; 2) removing the requirement for the installation of gas fuel meters for equipment that currently comply with the NO_x emission level in terms of ppm; and, 3) removing the requirement for time meters. While delaying implementation will delay some NO_x emission reductions originally projected during the adoption of Rule 1147, eventually the overall NO_x emission reductions will be achieved from a large variety of combustion equipment at existing facilities, which will ultimately improve air quality and reduce adverse human health impact related to poor air quality. Since operations of these equipment categories occur primarily at existing facilities located in industrial or commercial areas, implementation of PAR 1147 is not expected to increase existing, or create any new hazardous emissions which would adversely affect existing/proposed schools or public/private airports located in close proximity to the affected facilities.

Even if some affected facilities are designated pursuant to Government Code §65962.5 as a large quantity generator of hazardous waste, it is not anticipated that complying with PAR 1147 will alter in any way how operators of affected facilities manage their hazardous wastes and that they will continue to be managed in accordance with all applicable federal, state, and local rules and regulations.

Aside from the use of natural gas and liquid fuel needed to fuel the equipment, it should again be noted that PAR 1147 has no provisions that dictate the use of, or generate any new hazardous material. Under PAR 1147, owners or operators of the affected facilities will still have the flexibility and more time to choose the type of compliant combustion equipment (i.e., to install new equipment or retrofit existing equipment with ultra-low NO_x burners) for their operations. Either way, the installation of new compliant equipment or the retrofit of existing equipment will not pose a substantial safety hazard. Therefore, it is not anticipated that PAR 1147 would require changes to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

In addition, Health and Safety Code (HSC) §25506 specifically requires all businesses handling hazardous materials to submit a business emergency response plan to assist local administering agencies in the emergency release or threatened release of a hazardous material. Business emergency response plans generally require the following:

- Identification of individuals who are responsible for various actions, including reporting, assisting emergency response personnel and establishing an emergency response team;

- Procedures to notify the administering agency, the appropriate local emergency rescue personnel, and the California Office of Emergency Services;
- Procedures to mitigate a release or threatened release to minimize any potential harm or damage to persons, property or the environment;
- Procedures to notify the necessary persons who can respond to an emergency within the facility;
- Details of evacuation plans and procedures;
- Descriptions of the emergency equipment available in the facility;
- Identification of local emergency medical assistance; and
- Training (initial and refresher) programs for employees in:
 1. The safe handling of hazardous materials used by the business;
 2. Methods of working with the local public emergency response agencies;
 3. The use of emergency response resources under control of the handler;
 4. Other procedures and resources that will increase public safety and prevent or mitigate a release of hazardous materials.

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

Since the facilities that operate equipment subject to the requirements in PAR 1147 are located at existing industrial or commercial sites in urban areas where wildlands are not prevalent, risk of loss or injury associated with wildland fires is not expected.

Implementation of the mitigation fee option in PAR 1147 in conjunction with obtaining NOx emission reductions generated by the leaf blower exchange program is expected to have a less than significant impact on hazards and hazardous materials because there will be a temporary increased need for diesel and gasoline fuel to power on-road mobile sources, such as delivery trucks, haul trucks and workers' vehicles. The leaf blower exchange program only results in exchanging existing old, higher polluting leaf blowers used for gardening and landscaping with new low emission leaf blowers. The Final PEA for Rule 2702 estimated that the leaf blower exchange program would result in an increased demand of approximately 427 gallons of diesel fuel and 1,728 gallons of gasoline during the activities associated with exchanging 15,730 leaf blowers per year. The maximum number of leaf blowers anticipated to be exchanged using the PAR 1147 mitigation fees is 3,000 per year or 9,000 over the three-year delay. The leaf blower exchanges are carefully monitored so in the event an accidental release of gasoline occurs, the disposal will be handled by professional employees properly trained in material handling and disposal. During leaf blower operations, there will be a hazards and hazardous materials benefit because gasoline-fueled leaf blowers are expected to be 26 percent more efficient than the 2-stroke engine older models so there will be 26 percent less gasoline used than with the current older models. Thus, the probability of a risk of upset from fuel transport and usage for leaf

blowers is reduced. For these reasons, the replacement of existing leaf blowers with more efficient new equipment was concluded in the Final SEA for Rule 2702 to have no significant adverse impacts on hazards and hazardous materials (SCAQMD, 2008). Since fewer leaf blowers would be exchanged using the PAR 1147 mitigation fee (e.g., 9,000 versus 15,730) any impacts to hazards and hazardous materials would be substantially less compared to Rule 2702.

Based upon these considerations, no significant adverse hazards and hazardous materials impacts are expected from the implementation of PAR 1147.

Hydrology and Water Quality

Since ultra-low NOx burner technology does not utilize water as part of the NOx control process, no additional water demand or wastewater generation is expected to result from the operation of the units equipped with ultra-low NOx burners at the affected facilities. Further, PAR 1147 has no provision that would require the construction of additional water resource facilities, increase the need for new or expanded water entitlements, or alter existing drainage patterns. The proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. PAR 1147 would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Further, since compliance with PAR 1147 does not involve water that would generate wastewater processes, there would be no change in the composition or volume of existing wastewater streams from the affected facilities. For these reasons, PAR 1147 is not expected to require additional wastewater disposal capacity, violate any water quality standard or wastewater discharge requirements, or otherwise substantially degrade water quality.

Complying with PAR 1147 will not change existing operations at affected facilities, nor would it result in an increased water demand that would cause a generation of increased volumes of wastewater because the ultra-low NOx burners do not require water as part of the NOx control process. As a result, there are no potential changes in water demand or wastewater volume or composition expected from facilities complying with the requirements in PAR 1147. Further, PAR 1147 is not expected to cause affected facilities to violate any water quality standard or wastewater discharge requirements since there would be no water needed and no wastewater volumes generated as a result of implementing with PAR 1147. PAR 1147 is not expected to have any water demand or water quality impacts for the following reasons:

- The proposed project does not increase demand on the existing water supply.
- The proposed project does not increase demand for total water by more than 5,000,000 gallons per day.
- The proposed project does not increase demand for potable water by more than 262,820 gallons per day.
- The proposed project does not require construction of new water conveyance infrastructure.
- The proposed project does not create a substantial increase in mass inflow of effluents to public wastewater treatment facilities.
- The proposed project does not result in a substantial degradation of surface water or groundwater quality.

- The proposed project does not result in substantial increases in the area of impervious surfaces, such that interference with groundwater recharge efforts occurs.
- The proposed project does not result in alterations to the course or flow of floodwaters.

Lastly, PAR 1147 will not increase storm water discharge, since no major construction activities are expected at affected facilities. Further, no new areas at existing affected facilities are expected to be paved, so PAR 1147 will not increase storm water runoff during operation. Therefore, no new storm water discharge treatment facilities or modifications to existing facilities will be required due to the implementation of PAR 1147. Accordingly, PAR 1147 is not expected to generate any impacts relative to construction of new storm water drainage facilities.

Because the NOx control process of the burners in the equipment affected by PAR 1147 does not rely on water, no increase to any affected facilities' existing water demand is expected. Because ultra-low NOx burner technology does not utilize water, implementation of PAR 1147 will not increase demand for, or otherwise affect groundwater supplies or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. In addition, implementation of PAR 1147 will not increase demand for water from existing entitlements and resources, and will not require new or expanded entitlements. Since equipment affected by PAR 1147 generally occur in existing structures at existing facilities, no paving is required that might interfere with groundwater recharge. Therefore, no water demand impacts are expected as the result of implementing PAR 1147.

Implementation of PAR 1147 will occur at existing facilities that are typically located in industrial or commercial areas that are paved and already have drainage infrastructures in place. Since PAR 1147 does not involve major construction activities that would include activities such as site preparation, grading, et cetera, no changes to storm water runoff, drainage patterns, groundwater characteristics, or flow are expected. Therefore, these impact areas are not expected to be affected by PAR 1147.

The proposed project will not require construction of new housing, contribute to the construction of new building structures, or require modifications or changes to existing structures. Further, PAR 1147 is not expected to require additional workers at affected facilities. Therefore, PAR 1147 is not expected to generate construction of any new structures in 100-year flood areas as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood delineation map. As a result, PAR 1147 is not expected to expose people or structures to any new flooding risks, or make worse any existing flooding risks. Finally, PAR 1147 will not affect any potential flood hazards inundation by seiche, tsunami, or mud flow that may already exist relative to existing facilities or create new hazards at existing facilities.

In addition, implementation of the mitigation fee option in PAR 1147 in conjunction with obtaining NOx emission reductions generated by the leaf blower exchange program is not expected to have any direct or indirect impacts on water resources, water quality are expected standards, groundwater supplies, water quality degradation, existing water supplies or wastewater treatment facilities because the exchange and operation of leaf blowers typically do not involve the use of water or generation of wastewater. The leaf blower exchange program only results in exchanging existing old, higher polluting leaf blowers used for gardening and

landscaping with new low emission leaf blowers. The maximum number of leaf blowers anticipated to be exchanged using the PAR 1147 mitigation fees is 3,000 per year or 9,000 over the three-year delay. For these reasons, the replacement of existing leaf blowers with more efficient new equipment was concluded in the Final SEA for Rule 2702 to have no significant adverse impacts on hydrology and water quality (SCAQMD, 2008). Since fewer leaf blowers would be exchanged using the PAR 1147 mitigation fee (e.g., 9,000 versus 15,730) any impacts to hydrology and water quality would be substantially less compared to Rule 2702.

Based upon these considerations, no hydrology and water quality impacts are expected from the implementation of PAR 1147.

Land Use and Planning

The proposed project does not require construction of new facilities, but any physical effects will occur at existing facilities and, thus, it will not result in physically dividing any established communities. There are no provisions in the proposed project that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments and no land use or planning requirements will be altered by the proposed project. Further, the proposed project would be consistent with the typical industrial, heavy manufacturing zoning of the affected facilities. All proposed modifications are expected to occur within the confines of the existing facilities. The proposed project would not affect in any way habitat conservation or natural community conservation plans, agricultural resources or operations, and would not create divisions in any existing communities. Further, no new development or alterations to existing land designations will occur as a result of the implementation of the proposed project. Therefore, present or planned land uses in the region will not be affected as a result of the proposed project.

In addition, implementation of the mitigation fee option in PAR 1147 in conjunction with obtaining NOx emission reductions generated by the leaf blower exchange program is not expected to have any direct or indirect impacts on land use and planning because leaf blowers are portable equipment and their operation would have no effect on land use designations. The leaf blower exchange program only results in exchanging existing old, higher polluting leaf blowers used for gardening and landscaping with new low emission leaf blowers. The maximum number of leaf blowers anticipated to be exchanged using the PAR 1147 mitigation fees is 3,000 per year or 9,000 over the three-year delay. For these reasons, the replacement of existing leaf blowers with more efficient new equipment was concluded in the Final SEA for Rule 2702 to have no significant adverse impacts on land use and planning (SCAQMD, 2008). Since fewer leaf blowers would be exchanged using the PAR 1147 mitigation fee (e.g., 9,000 versus 15,730) any impacts to land use and planning would be substantially less compared to Rule 2702.

Based upon these considerations, significant land use planning impacts are not expected from the implementation of the proposed project.

Mineral Resources

There are no provisions of the proposed project that would result in the loss of availability of a known mineral resource of value to the region and the residents of the state such as aggregate, coal, clay, shale, et cetera, or of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

In addition, implementation of the mitigation fee option in PAR 1147 in conjunction with obtaining NOx emission reductions generated by the leaf blower exchange program is expected

[to no impact on mineral resources because operation of the new, more efficient leaf blowers does not require the use of minerals such as ores, sand, gravel et cetera, and thus, would not change the existing uses of, or create new demand for mineral resources. The leaf blower exchange program only results in exchanging existing old, higher polluting leaf blowers used for gardening and landscaping with new low emission leaf blowers. The maximum number of leaf blowers anticipated to be exchanged using the PAR 1147 mitigation fees is 3,000 per year or 9,000 over the three-year delay. For these reasons, the replacement of existing leaf blowers with more efficient new equipment was concluded in the Final SEA for Rule 2702 to have no significant adverse impacts on mineral resources \(SCAQMD, 2008\). Since fewer leaf blowers would be exchanged using the PAR 1147 mitigation fee \(e.g., 9,000 versus 15,730\) any impacts to mineral resources would be substantially less compared to Rule 2702.](#)

Noise

Implementation of PAR 1147 is expected to involve the delayed installation of new compliant equipment or retrofitting of existing units with ultra-low NOx burners at existing facilities. PAR 1147 would only affect combustion equipment at existing facilities. Since installation of new equipment or retrofitting existing equipment does not require heavy-duty construction equipment, no significant adverse noise impacts are anticipated during the construction phase.

No other physical modifications or changes associated with the implementation of PAR 1147 are expected. Thus, PAR 1147 is not expected to expose persons to the generation of excessive noise levels above current facility levels because the proposed project will result in affected facilities operating the same type of equipment at equivalent or similar noise levels and ultra-low NOx combustion technology is not typically a noise intensive technology. It is expected that any facility affected by PAR 1147 will comply with all existing noise control laws or ordinances. Further, OSHA and CalOSHA have established noise standards to protect worker health. It is expected that all workers at affected facilities will continue complying with applicable noise standards.

PAR 1147 is not anticipated to expose people to or generate excessive groundborne vibration or groundborne noise levels since no major construction activities are expected to occur at the existing facilities and the affected equipment are not inherently noisy or create excessive vibrations.

A permanent increase in ambient noise levels at the affected facilities above existing levels as a result of implementing the proposed project is unlikely to occur because any new equipment that would be installed as part of implementing PAR 1147 will be replacing existing equipment with the same or similar noise profiles and retrofitting existing equipment with ultra-low NOx burners will not change the noise profile of the existing equipment. Therefore, the existing noise levels are unlikely to change and raise ambient noise levels in the vicinities of the existing facilities to above a level of significance in response to implementing PAR 1147.

Implementation of PAR 1147 would not consist of improvements within the existing facilities that would require major construction activities. Even if an affected facility is located near a public/private airport, there are no new noise impacts expected from any of the existing facilities as a result of complying with the proposed project. Thus, PAR 1147 is not expected to expose people residing or working in the project vicinities to excessive noise levels.

[Implementation of the mitigation fee option in PAR 1147 in conjunction with obtaining NOx emission reductions generated by the leaf blower exchange program is expected to have no](#)

significant direct or indirect impacts on noise because the use of low emission leaf blowers is expected to provide a noise reduction benefit since the new leaf blowers are rated at a noise level of 65 dBA, which is much lower than the older leaf blower models. The leaf blower exchange program only results in exchanging existing old, higher polluting leaf blowers used for gardening and landscaping with new low emission leaf blowers. The maximum number of leaf blowers anticipated to be exchanged using the PAR 1147 mitigation fees is 3,000 per year or 9,000 over the three-year delay. For this reason, the replacement of existing leaf blowers with more efficient new equipment was concluded in the Final SEA for Rule 2702 to have no significant adverse impacts on noise (SCAQMD, 2008). Since fewer leaf blowers would be exchanged using the PAR 1147 mitigation fee (e.g., 9,000 versus 15,730) any impacts to noise would be substantially less compared to Rule 2702.

Based upon the aforementioned considerations, significant noise impacts are not expected from the implementation of the proposed project.

Population and Housing

The minimal construction activities associated with the proposed project at each affected facility are not expected to involve the relocation of individuals, require new housing or commercial facilities, or change the distribution of the population. The reason for this conclusion is that operators of affected facilities who need to perform any construction activities to comply with the proposed project can draw from the existing labor pool in the local southern California area. For example, under PAR 1147, the installation of new equipment or retrofitting of existing equipment will likely require the same number of construction workers as previously analyzed at the time of adoption of Rule 1147. That is, only two construction workers at most (one to deliver materials and one to install it) would be needed to either install new compliant equipment or retrofit existing units with ultra-low NOx burners. Nonetheless, it is expected that construction workers needed to implement PAR 1147 can be drawn from the existing labor pool in southern California. Further, PAR 1147 is not anticipated to generate any significant effects, either direct or indirect, on the district's population or population distribution as no additional workers for equipment operation are anticipated to be required at facilities subject to the proposed amendments. Human population within the jurisdiction of the SCAQMD is anticipated to grow regardless of implementing PAR 1147. As such, PAR 1147 will not result in changes in population densities or induce significant growth in population

Because the proposed project includes modifications and/or changes at existing facilities located in industrial and commercial settings, the proposed project is not expected to result in the creation of any industry that would affect population growth, directly or indirectly induce the construction of single- or multiple-family units, or require the displacement of people or housing elsewhere in the District.

Implementation of the mitigation fee option in PAR 1147 in conjunction with obtaining NOx emission reductions generated by the leaf blower exchange program is expected to have no significant direct or indirect impacts on population and housing because the replacement of existing leaf blower with a new low emission leaf blower will not change leaf blowing activities in any way such that no construction workers or any change in the existing labor force would be required. The leaf blower exchange program only results in exchanging existing old, higher polluting leaf blowers used for gardening and landscaping with new low emission leaf blowers. The maximum number of leaf blowers anticipated to be exchanged using the PAR 1147 mitigation fees is 3,000 per year or 9,000 over the three-year delay. For this reason, the replacement of existing leaf blowers with more efficient new equipment was concluded in the

Final SEA for Rule 2702 to have no significant adverse impacts on population and housing (SCAQMD, 2008). Since fewer leaf blowers would be exchanged using the PAR 1147 mitigation fee (e.g., 9,000 versus 15,730) any impacts to population and housing would be substantially less compared to Rule 2702.

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

Public Services

Compliance with PAR 1147 means the delayed installation of new compliant units or retrofitting existing units with ultra-low NOx burner technology and the reduced installation of time meters and fuel meters that would have otherwise been installed under Rule 1147. No other physical modifications or changes associated with the implementation of PAR 1147 are expected. The overall amount of natural gas and liquid fuel usage at any one facility over their current levels is not expected to change substantially or increase the chances for fires or explosions that could affect local fire departments. Finally, PAR 1147 is not expected to increase the need for security at affected facilities, which could adversely affect local police departments.

The local labor pool (e.g., workforce) of particular affected facility areas is expected to remain the same since PAR 1147 would not trigger any changes to current facility operations. Therefore, with no increase in local population anticipated, no significant adverse impacts are expected to local schools.

PAR 1147 will result in the delayed replacement of existing equipment with functionally identical new equipment or retrofit of existing equipment with ultra-low NOx burners at existing facilities. Besides permitting the equipment or altering permit conditions, there is no other need for government services. Further, implementation of PAR 1147 would not result in the need for new or physically altered public facilities in order to maintain acceptable service ratios, response times, or other performance objectives. There will be no increase in population and, therefore, no need for physically altered public facilities.

Implementation of the mitigation fee option in PAR 1147 in conjunction with obtaining NOx emission reductions generated by the leaf blower exchange program is expected to have no significant direct or indirect impacts on public services because leaf blower exchange events are carefully monitored so if accidental releases of gasoline were to occur, the amount of gasoline released would not likely cause the need for fire department responders because of the available safety equipment and personnel available at the exchange events. The leaf blower exchange program only results in exchanging existing old, higher polluting leaf blowers used for gardening and landscaping with new low emission leaf blowers. The maximum number of leaf blowers anticipated to be exchanged using the PAR 1147 mitigation fees is 3,000 per year or 9,000 over the three-year delay. Further, the disposal of gasoline fuel from the exchanges of leaf blowers is handled by professional employees properly trained in material handling and disposal. For these reasons, the replacement of existing leaf blowers with more efficient new equipment was concluded in the Final SEA for Rule 2702 to have no significant adverse impacts on public services (SCAQMD, 2008). Since fewer leaf blowers would be exchanged using the PAR 1147 mitigation fee (e.g., 9,000 versus 15,730) any impacts to public services would be substantially less compared to Rule 2702.

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

Recreation

As discussed previously under “Land Use,” there are no provisions to the proposed project that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments; no land use or planning requirements are expected to be altered by the proposed project. Further, the proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities or include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment because the proposed project is not expected to induce population growth.

Implementation of the mitigation fee option in PAR 1147 in conjunction with obtaining NOx emission reductions generated by the leaf blower exchange program is expected to have no significant direct or indirect impacts on recreation because operation of new leaf blowers will take place at existing locations as part of regular grounds keeping maintenance and would not increase the use of existing neighborhood or regional parks or other recreational facilities. The leaf blower exchange program only results in exchanging existing old, higher polluting leaf blowers used for gardening and landscaping with new low emission leaf blowers. The maximum number of leaf blowers anticipated to be exchanged using the PAR 1147 mitigation fees is 3,000 per year or 9,000 over the three-year delay. Further, the leaf blower exchange program would not require the construction or expansion of existing recreational facilities that might create an adverse physical effect on the environment. For these reasons, the replacement of existing leaf blowers with more efficient new equipment was concluded in the Final SEA for Rule 2702 to have no significant adverse impacts on recreation (SCAQMD, 2008). Since fewer leaf blowers would be exchanged using the PAR 1147 mitigation fee (e.g., 9,000 versus 15,730) any impacts to recreation would be substantially less compared to Rule 2702.

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

Solid/Hazardous Waste

Compliance with PAR 1147 means the delayed installation of new compliant units or retrofitting existing units with ultra-low NOx burner technology and the reduced installation of time meters and fuel meters that would have otherwise been installed under Rule 1147. No other physical modifications or changes associated with the implementation of PAR 1147 are expected. Because affected equipment has a finite lifetime, it will ultimately have to be replaced at the end of its useful life. However, the delayed compliance dates for some equipment mean that PAR 1147 may delay replacement. However, affected equipment may also be refurbished and used elsewhere. In addition, any scrap metal from replaced units has economic value and is expected to be recycled, so any solid or hazardous waste impacts specifically associated with PAR 1147 are expected to be minor. As a result, no substantial change in the amount or character of solid or hazardous waste streams is expected to occur. For these reasons, PAR 1147 is not expected to increase the volume of solid or hazardous wastes from affected facilities, require additional waste disposal capacity, or generate waste that does not meet applicable local, state, or federal regulations.

Based upon these considerations, PAR 1147 is not expected to increase the volume of solid or hazardous wastes that cannot be handled by existing municipal or hazardous waste disposal facilities, or require additional waste disposal capacity. Further, implementing PAR 1147 is not

expected to interfere with any affected facility's ability to comply with applicable local, state, or federal waste disposal regulations.

Implementation of the mitigation fee option in PAR 1147 in conjunction with obtaining NOx emission reductions generated by the leaf blower exchange program is expected to have no significant direct or indirect impacts on solid/hazardous waste because the metal components of old leaf blowers have economic value and are expected to be recycled for metal content. The leaf blower exchange program only results in exchanging existing old, higher polluting leaf blowers used for gardening and landscaping with new low emission leaf blowers. The maximum number of leaf blowers anticipated to be exchanged using the PAR 1147 mitigation fees is 3,000 per year or 9,000 over the three-year delay. Therefore, the amount of solid waste that would be sent to a landfill as a result of the leaf blower exchange program would be relatively small since most of the equipment being replaced are comprised primarily of metal components that have commercial value as scrap metal. In addition, fuel from the old leaf blowers will be properly removed from the equipment by professional employees trained in the removal and disposal of the fuel. Because of the high cost of gasoline, the old leaf blowers are not expected to be exchanged with a full tank. Gasoline retrieved from the old equipment is collected at the disposal facility and reused in vehicles. For these reasons, the replacement of existing leaf blowers with more efficient new equipment was concluded in the Final SEA for Rule 2702 to have no significant adverse impacts on solid/hazardous waste (SCAQMD, 2008). Since fewer leaf blowers would be exchanged using the PAR 1147 mitigation fee (e.g., 9,000 versus 15,730) any impacts to solid/hazardous waste would be substantially less compared to Rule 2702

Based upon these considerations, significant solid/hazardous waste impacts are not expected from the implementation of the proposed project.

Transportation/Traffic

PAR 1147 affects a large variety of combustion equipment operating primarily at existing facilities and has no potential to adversely affect transportation. Compliance with PAR 1147 means the delayed installation of new compliant units or retrofitting existing units with ultra-low NOx burner technology and the reduced installation of time meters and fuel meters that would have otherwise been installed under Rule 1147. As discussed in the Population and Housing section, the physical modifications or changes associated with the implementation of PAR 1147 would only require two construction workers at most to deliver materials and to install or retrofit equipment. PAR 1147 would have no affect on existing operations at the affected facilities that would change or cause additional transportation demands or services. Therefore, since only two additional construction-related trips per facility and no operational-related trips per facility are anticipated, the implementation of PAR 1147 is not expected to significantly adversely affect circulation patterns on local roadways or the level of service at intersections near affected facilities. Finally, affected facilities are dispersed throughout the District, so it is not expected that construction-related trips to affected facilities would overlap to an appreciable extent.

PAR 1147 will not require operators of existing facilities to construct buildings or other structures that could interfere with flight patterns so the height and appearance of the existing structures are not expected to change. Therefore, implementation of PAR 1147 is not expected to adversely affect air traffic patterns. Further, PAR 1147 will not affect in any way air traffic in the region because it will not require transport of any materials by air.

As the physical modifications that are expected to occur by implementing PAR 1147 are limited to the confines of existing facilities, no offsite modifications to roadways are anticipated for the proposed project that would result in an additional design hazard or incompatible uses.

Any equipment replacements or retrofits associated with implementing PAR 1147 will likely occur in or about the same location within the confines of each existing facility such that no changes to emergency access at or in the vicinity of the affected facilities would be expected. As a result, PAR 1147 is not expected to adversely impact emergency access.

Other than the equipment replacements or retrofits associated with implementing PAR 1147, no facility modifications or changes are expected that would conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Implementation of the mitigation fee option in PAR 1147 in conjunction with obtaining NOx emission reductions generated by the leaf blower exchange program is expected to have no significant direct or indirect impacts on transportation/traffic because impacts to existing traffic, LOS and parking capacity are not expected to substantially worsen by the leaf blower exchange program. The leaf blower exchange program only results in exchanging existing old, higher polluting leaf blowers used for gardening and landscaping with new low emission leaf blowers. The maximum number of leaf blowers anticipated to be exchanged using the PAR 1147 mitigation fees is 3,000 per year or 9,000 over the three-year delay. Further, a leaf blower event could exchange 500 units per event, but up to ten leaf blowers would be allowed to be exchanged per participant (or business). Historically, an average of five leaf blowers has been exchanged per participant. Approximately 102 participant vehicles are expected to travel to the leaf blower event on a given day plus two workers would be necessary to assist in the leaf blower exchange. The maximum traffic impact estimated to occur during a leaf blower exchange, which could cause 104 additional vehicles trips per event on the roadways potentially increasing congestion on local roadways and intersections in the vicinity of the leaf blower exchange. These vehicle trips are not expected to contribute substantially to congestion on local roadways or intersections because interested parties will be distributed throughout the day and, as a result, would not be expected to increase the volume-to-capacity ratio at any intersection by two percent or more. Thus, the leaf blower exchange program does not have the potential to generate traffic impacts that would exceed any of the applicable significance criteria. In addition, the operation of new low emission leaf blowers would continue to perform the same activities as the old equipment, so no additional laborers would be needed. Further, exchanges of leaf blowers will have no affect on parking or existing parking capacity because, aside from vehicle trips and parking at the exchange event location, the use of new leaf blowers would not create new trips requiring new parking. For these reasons, the replacement of existing leaf blowers with more efficient new equipment was concluded in the Final SEA for Rule 2702 to have no significant adverse impacts on transportation/traffic (SCAQMD, 2008). Since fewer leaf blowers would be exchanged using the PAR 1147 mitigation fee (e.g., 9,000 versus 15,730) any impacts to transportation/traffic would be substantially less compared to Rule 2702.

Based upon these considerations, no significant adverse transportation/traffic impacts are expected from implementing PAR 1147.

SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

CEQA Guidelines §15126(c) requires an environmental analysis to consider "any significant irreversible environmental changes which would be involved if the proposed action should be

implemented." This SEA identified the topic of air quality during operation as the only environmental area potentially adversely affected by the proposed project. Facility operators that install new ultra-low NOx burners or replace existing units according to the compliance schedule are likely to operate these systems for the lifetime of the equipment.

The proposed changes to PAR 1147 would delay 0.70 tons/day (1,400 lbs/day) of NOx emission reductions in compliance years 2010 and 2011; and, 0.06 tons/day (120 lbs/day) of NOx emission reductions in compliance years 2015 and 2016. These delayed NOx emissions reductions will not increase existing emissions, but prevent emissions reductions from occurring in the specified years. However, the 0.70 tons/day of NOx delayed emission reductions will be recaptured in compliance years 2012 and 2013 and the 0.06 tons/day of delayed NOx emission reductions will be recaptured in compliance years 2017 and 2018, respectively. Thus, despite the delay in implementation of some of the compliance dates, the same amount of overall NOx emission reductions as estimated in the current rule will be achieved by PAR 1147 (e.g. 3.5 tons per day of NOx emission reductions by 2014 and 3.8 tons per day of NOx emission reductions by 2023). As a result, PAR 1147 would provide human health benefits by reducing population exposures to existing NOx emissions, but on a temporarily delayed schedule. For these aforementioned reasons, the proposed project would not result in irreversible environmental changes or irretrievable commitment of resources.

POTENTIAL GROWTH-INDUCING IMPACTS

CEQA Guidelines §15126(d) requires an environmental analysis to consider the "growth-inducing impact of the proposed action." Implementing the proposed project will not, by itself, have any direct or indirect growth-inducing impacts on businesses in the SCAQMD's jurisdiction because it is not expected to foster economic or population growth or the construction of additional housing and primarily affects existing facilities.

CONSISTENCY

CEQA Guidelines §15125(d) requires an EIR to discuss any inconsistencies between a proposed project and any applicable general plans or regional plans. SCAG and the SCAQMD have developed, with input from representatives of local government, the industry community, public health agencies, the USEPA - Region IX and CARB, guidance on how to assess consistency within the existing general development planning process in the Basin. Pursuant to the development and adoption of its Regional Comprehensive Plan Guide (RCPG), SCAG has developed an Intergovernmental Review Procedures Handbook (June 1, 1995). The SCAQMD also adopted criteria for assessing consistency with regional plans and the AQMP in its CEQA Air Quality Handbook. The following sections address the consistency between the proposed project and relevant regional plans pursuant to the SCAG Handbook and SCAQMD Handbook.

Consistency with Regional Comprehensive Plan and Guide (RCPG) Policies

The RCPG provides the primary reference for SCAG's project review activity. The RCPG serves as a regional framework for decision making for the growth and change that is anticipated during the next 20 years and beyond. The Growth Management Chapter (GMC) of the RCPG contains population, housing, and jobs forecasts, which are adopted by SCAG's Regional Council and that reflect local plans and policies, shall be used by SCAG in all phases of implementation and review. It states that the overall goals for the region are to: 1) re-invigorate the region's economy; 2) avoid social and economic inequities and the geographical isolation of communities; and, 3) maintain the region's quality of life.

Consistency with Growth Management Chapter (GMC) to Improve the Regional Standard of Living

The Growth Management goals are to develop urban forms that enable individuals to spend less income on housing cost, that minimize public and private development costs, and that enable firms to be more competitive, strengthen the regional strategic goal to stimulate the regional economy. The proposed project in relation to the GMC would not interfere with the achievement of such goals, nor would it interfere with any powers exercised by local land use agencies. Further, the proposed project will not interfere with efforts to minimize red tape and expedite the permitting process to maintain economic vitality and competitiveness.

Consistency with Growth Management Chapter (GMC) to Provide Social, Political and Cultural Equity

The Growth Management goals to develop urban forms that avoid economic and social polarization promotes the regional strategic goals of minimizing social and geographic disparities and of reaching equity among all segments of society. Consistent with the Growth Management goals, local jurisdictions, employers and service agencies should provide adequate training and retraining of workers, and prepare the labor force to meet the challenges of the regional economy. Growth Management goals also includes encouraging employment development in job-poor localities through support of labor force retraining programs and other economic development measures. Local jurisdictions and other service providers are responsible to develop sustainable communities and provide, equally to all members of society, accessible and effective services such as: public education, housing, health care, social services, recreational facilities, law enforcement, and fire protection. Implementing the proposed project has no effect on and, therefore, is not expected to interfere with the goals of providing social, political and cultural equity.

Consistency with Growth Management Chapter (GMC) to Improve the Regional Quality of Life

The Growth Management goals also include attaining mobility and clean air goals and developing urban forms that enhance quality of life, accommodate a diversity of life styles, preserve open space and natural resources, are aesthetically pleasing, preserve the character of communities, and enhance the regional strategic goal of maintaining the regional quality of life. The RCPG encourages planned development in locations least likely to cause environmental impacts, as well as supports the protection of vital resources such as wetlands, groundwater recharge areas, woodlands, production lands, and land containing unique and endangered plants and animals. While encouraging the implementation of measures aimed at the preservation and protection of recorded and unrecorded cultural resources and archaeological sites, the plan discourages development in areas with steep slopes, high fire, flood and seismic hazards, unless complying with special design requirements. Finally, the plan encourages mitigation measures that reduce noise in certain locations, measures aimed at preservation of biological and ecological resources, measures that would reduce exposure to seismic hazards, minimize earthquake damage, and develop emergency response and recovery plans. The proposed project will continue to implement an AQMP control measure, which results in improving air quality in the region. Therefore, in relation to the GMC, the proposed project is not expected to interfere, but rather help with attaining and maintaining the air quality portion of these goals.

Consistency with Regional Mobility Element (RMP) and Congestion Management Plan (CMP)

PAR 1147 is consistent with the RMP and CMP since no significant adverse impact to transportation/circulation will result from the temporary delay of NO_x emission reductions

within the district. Because affected facilities will not increase their handling capacities, there will not be an increase in material transport trips associated with the implementation of PAR 1147. Therefore, PAR 1147 is not expected to significantly adversely affect circulation patterns or congestion management.

CHAPTER 5

ALTERNATIVES

Introduction

Alternatives Rejected as Infeasible

Lowest Toxic Alternative

Description of Alternatives

Comparison of Alternatives

Conclusion

INTRODUCTION

This ~~Final Draft~~ SEA provides a discussion of alternatives to the proposed project as required by CEQA. Alternatives include measures for attaining objectives of the proposed 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 notes 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.

Three alternatives to the proposed project are summarized in Table 5-1: Alternative A (No Project), Alternative B (Delayed Compliance), and Alternative C (Expedited Compliance). Pursuant to the requirements in CEQA Guidelines §15126.6 (b) to mitigate or avoid the significant effects that a project may have on the environment, a comparison of the potential operational air quality impacts from each of the project alternatives for the individual rule components that comprise the proposed project is provided in Table 5-2. Aside from this topic, no other significant adverse impacts were identified for the proposed project or any of the project alternatives. The proposed project is considered to provide the best balance between emission reductions and the adverse environmental impacts due operation activities while meeting the objectives of the project. Therefore, the proposed project is preferred over the project alternatives.

ALTERNATIVES REJECTED AS INFEASIBLE

A CEQA document should identify any alternatives that were considered by the lead agency, but were rejected as infeasible during the scoping process and explain the reasons underlying the lead agency’s determination [CEQA Guidelines §15126.6(c)]. No alternative was specifically rejected as being infeasible.

LOWEST TOXIC ALTERNATIVE

In accordance with SCAQMD’s policy document Environmental Justice Program Enhancements for FY 2002-03, Enhancement II-1 recommends that all SCAQMD CEQA assessments include a feasible project alternative with the lowest air toxics emissions. In other words, for any major equipment or process type under the scope of the proposed project that creates a significant environmental impact, at least one alternative, where feasible, shall be considered from a “least harmful” perspective with regard to hazardous air emissions. Because implementation of PAR 1147 would result in a temporary delay in NOx emission reductions, the use of toxic materials is not required or necessary as part of an adjustment to a compliance schedule. Of the alternatives considered, no aspect of any of the alternatives would utilize toxic materials. However, if Alternative A, the no project alternative were implemented, then owners/operators would need to shut down all non-compliant equipment and that would cause a reduction in air toxics. For example, the combustion of diesel fuel produces diesel particulate matter (PM), an air toxic, as a by-product. Thus, any shutdown of non-compliant diesel-fueled equipment would result in a corresponding reduction in the amount of diesel PM emitted. Thus, from the air toxics perspective, when compared to the proposed project and the other alternatives under consideration, if implemented, Alternative A can be considered the lowest toxic alternative.

Table 5-1
Summary of PAR 1147 & Project Alternatives

Rule Components									
Equipment Category	Current Compliance Schedule	Proposed Project	NOx Emission Reductions Delayed per Compliance Year (tons/day)	Alternative A: No Project	NOx Emission Reductions Delayed per Compliance Year (tons/day)	Alternative B: Delayed Compliance	NOx Emission Reductions Delayed per Compliance Year (tons/day)	Alternative C: Expedited Compliance	NOx Emission Reductions Delayed per Compliance Year (tons/day)
In-Use Remediation Units	January 1, 2011	Delay Compliance Date by 1 year & <u>2 months</u> to <u>March January-1, 2012</u>	0.014 (2011) <u>0.014 (2011)</u>	No change	0	Delay Compliance Date by 2 years to January 1, 2013	0.014 (2011) 0.014 (2012)	Delay Compliance Date by 6 months to July 1, 2011	0.014 (2011)
In-Use Tar Pots	January 1, 2012	Delay Compliance Date by 1 year to January 1, 2013	0.003 (2012)	No change	0	Delay Compliance Date by 2 years to January 1, 2014	0.003 (2012) 0.003 (2013)	Delay Compliance Date by 6 months to July 1, 2012	0.003 (2012)
Other In-Use Units manufactured prior to 1986	July 1, 2010	Delay Compliance Date by 2 years to July 1, 2012	0.700 (2010); 0.700 (2011)	No change	0	Delay Compliance Date by 3 years to July 1, 2013	0.697 (2010) 0.697 (2011) 0.697 (2012)	Delay Compliance Date by 1.5 years to January 1, 2012	0.700 (2010) 0.700 (2011)
Other In-Use Units manufactured prior to 1992	July 1, 2011	Delay Compliance Date by 1 year to July 1, 2012	0.686 (2011)	No change	0	Delay Compliance Date by 2 years to July 1, 2013	0.684 (2011) 0.684 (2012)	Delay Compliance Date by 6 months to January 1, 2012	0.686 (2011)
Other In-Use Units manufactured prior to 1998	July 1, 2012	Delay Compliance Date by 1 year to July 1, 2013	0.697 (2012)	No change	0	Delay Compliance Date by 2 years to July 1, 2014	0.694 (2012) 0.694 (2013)	Delay Compliance Date by 6 months to January 1, 2013	0.697 (2012)
In-Use Equipment Emitting ≤ 1 lb/day NOx	Varies by Equipment Category	Delay schedule in paragraph (c)(6) by 1 to 2 years	0.060 (2015) 0.060 (2016) 0.060 (2017)	No change	0	Exempt from NOx limits & compliance schedule per equipment category	0.3 to 0.9 (2015 & each year after)	Same as Proposed Project	0.060 (2015) 0.060 (2016) 0.060 (2017)
Multiple In-Use Equipment Units operating in series	Varies by Equipment Category	No Change	0	Same as Proposed Project	0	Harmonize compliance dates to the latest of applicable compliance dates, no later than January 1, 2014	0.003 (2010) 0.003 (2011) 0.003 (2012) 0.003 (2013)	Harmonize compliance dates to the earliest applicable compliance date	0

Table 5-1 (continued)
Summary of PAR 1147 & Project Alternatives

Rule Components									
Equipment Category	Current Compliance Schedule	Proposed Project	NOx Emission Reductions Delayed per Compliance Year (tons/day)	Alternative A: No Project	NOx Emission Reductions Delayed per Compliance Year (tons/day)	Alternative B: Delayed Compliance	NOx Emission Reductions Delayed per Compliance Year (tons/day)	Alternative C: Expedited Compliance	NOx Emission Reductions Delayed per Compliance Year (tons/day)
New Afterburners, Degassing Units, Thermal Oxidizers, Catalytic Oxidizers, Vapor Incinerators & Spray Booth Make-Up Air Heaters	15 years if installed after December 5, 2008 & before January 1, 2011	No Change	0	Same as Proposed Project	0	Extend eligibility date for exempt equipment installation by 1 year to January 1, 2012	Accounted for in “Other In-Use Units manufactured prior to 1992” equipment category	Same as Proposed Project	0
New or Relocated Remediation Units	15 years if installed after December 5, 2008 & before January 1, 2011	No Change	0	Same as Proposed Project	0	Extend eligibility date for exempt equipment installation by 1 year to January 1, 2012	Accounted for in “Other In-Use Units manufactured prior to 1992” equipment category	Same as Proposed Project	0
New Food Ovens, Fryers, Heated Process Tanks, Parts Washers & Evaporators	15 years if installed after December 5, 2008 & before January 1, 2013	No Change	0	Same as Proposed Project	0	Extend eligibility date for exempt equipment installation by 1 year to January 1, 2014	Accounted for in “Other In-Use Units manufactured prior to 1998” equipment category	Same as Proposed Project	0

Table 5-1 (concluded)
Summary of PAR 1147 & Project Alternatives

Rule Components									
Equipment Category	Current Compliance Schedule	Proposed Project	NOx Emission Reductions Delayed per Compliance Year (tons/day)	Alternative A: No Project	NOx Emission Reductions Delayed per Compliance Year (tons/day)	Alternative B: Delayed Compliance	NOx Emission Reductions Delayed per Compliance Year (tons/day)	Alternative C: Expedited Compliance	NOx Emission Reductions Delayed per Compliance Year (tons/day)
In-Use Afterburners, Degassing Units, Catalytic Oxidizers, Thermal Oxidizers, Vapor Incinerators, Evaporators, Food Ovens, Fryers, Heated Process Tanks, Parts Washers & Spray Booth Make-Up Air Heaters manufactured prior to 1988	July 1, 2013	<u>Delay Compliance Date by 1 year to July 1, 2014</u> <u>No Change</u>	<u>Accounted for in “Other In-Use Units manufactured prior to 1998” equipment category</u>	<u>Same as Proposed Project</u> <u>No Change</u>	0	Delay Compliance Date by 1 year to July 1, 2014	Accounted for in “Other In-Use Units manufactured prior to 1998” equipment category	<u>Same as Proposed Project</u> <u>No Change</u>	0
<u>Mitigation Fee Option eligible for any unit with emissions of more than 1 pound per day</u>	<u>None</u>	<u>Delay Compliance Date by 3 years (date varies by equipment category)</u>	<u>0⁷</u>	<u>No Change</u>	<u>0</u>	<u>No Change</u>	<u>0</u>	<u>No Change</u>	<u>0</u>
Potential NOx Emission Reductions Delayed			0.70 (2010) 1.40 (2011) 0.71 ⁰ (2012) 0 (2013-2014) 0.06 (2015) 0.06 (2016) 0.06 (2017) 0 (2018-2019)		0		0.70 (2010) 1.40 (2011) 1.40 (2012) 0.70 (2013) 0 (2014) 0.30 – 0.90 (2015 & each year after)		0.70 (2010) 1.40 (2011) 0.70 (2012) 0 (2013-2014) 0.06 (2015) 0.06 (2016) 0.06 (2017) 0 (2018-2019)

⁷ Impacts for NOx emission reductions delayed are mitigated by funding leaf blower exchange programs.

**Table 5-2
Comparison of Adverse Environmental Impacts of the Alternatives**

Category	Proposed Project	Alternative A: No Project	Alternative B: Delayed Compliance	Alternative C: Expedited Compliance
Air Quality (during operation)	Delays daily NOx emission reductions as follows: 0.70 ton/day in 2010 1.40 ton/day in 2011 0.710 ton/day in 2012 0 ton/day in 2013 0 ton/day in 2014 0.06 ton/day in 2015 0.06 ton/day in 2016 0.06 ton/day in 2017 0 ton/day in 2018 0 ton/day in 2019	No change to NOx emission reduction schedule.	Additional delays in daily NOx emission reductions as follows: 0.70 ton/day in 2010 1.40 ton/day in 2011 1.40 ton/day in 2012 0.70 ton/day in 2013 0 ton/day in 2014 0.30 to 0.90 ton/day in 2015 and for each year after	Fewer delays in daily NOx emission reductions as follows: 0.70 ton/day in 2010 1.40 ton/day in 2011 0.70 ton/day in 2012 0 ton/day in 2013 0 ton/day in 2014 0.06 ton/day in 2015 0.06 ton/day in 2016 0.06 ton/day in 2017 0 ton/day in 2018 0 ton/day in 2019
Air Quality Operational Impacts Significant?	Significant for delayed NOx emission reductions.	Not significant for any pollutant. However, compliance cannot be achieved by the original compliance schedule for most equipment.	Significant for delayed NOx emission reductions and more significant (less stringent) than the proposed project for years 2012, 2013, 2015 and for each year after.	Significant for delayed NOx emission reductions and equivalent to proposed project.

DESCRIPTION OF ALTERNATIVES

The following proposed alternatives were developed by modifying specific components of the proposed project. The rationale for selecting and modifying specific components of the proposed project to generate feasible alternatives for the analysis is based on CEQA's requirement to present "realistic" alternatives; that is, alternatives that can actually be implemented.

The initial analysis of the proposed project in the NOP/IS determined that, of the amendments proposed, only the components that pertain to the delayed compliance schedule to meet certain NOx emission limits could have potential adverse significant impacts during operation. As such, the following three alternatives were developed by identifying and modifying major components of the proposed project. Specifically, the primary components of the proposed alternatives that have been modified are the source categories that may be affected, and the timing in which compliance with the existing NOx emission limits may be achieved. The alternatives, summarized in Table 5-1 and described in the following subsections, include the following: Alternative A (No Project), Alternative B (Delayed Compliance), and Alternative C (Expedited Compliance). Unless otherwise specifically noted, all other components of the project alternatives are identical to the components of the proposed project. The following subsections provide a brief description of each alternative.

Alternative A - No Project

Alternative A or ‘no project’ means that the proposed project would not be adopted and the current universe of equipment will continue to be subject to the NO_x emission limits according to the current compliance schedule. By not delaying the compliance schedule for certain in-use equipment categories, some equipment owners/operators will continue to experience compliance challenges, in particular, with certain effective dates in the rule. (In some cases, the effective dates may have already passed.) Thus, under Alternative A, owners/operators of equipment not able to meet the applicable NO_x emission limit by the applicable compliance date will need to shut down the equipment. No adverse significant air quality impacts would occur from shutting down non-compliant equipment under Alternative A because the NO_x emission reductions would occur according to the original schedule in Rule 1147. Even though Alternative A, the ‘no project’ alternative, does not achieve the goals of the proposed project, it is the environmentally superior alternative in accordance with CEQA Guidelines §15126.6(e)(2) because shutting down non-compliant equipment would reduce NO_x emissions by the earliest possible dates and, thus, improving air quality in the District.

Alternative B – Delayed Compliance

Alternative B is the delayed compliance alternative because it contains an additional two- to three-year delay in the compliance schedule, depending on the equipment category, beyond what is proposed in PAR 1147, for meeting the NO_x emission limits. Alternative B also contains a unique provision that would harmonize any potential conflicts in compliance dates for multiple in-use equipment units operating in series to the latest of the applicable compliance dates. Lastly, Alternative B contains a provision that would exempt certain in-use equipment emitting less than one pound of NO_x per day from the NO_x limits and compliance schedule. Under Alternative B, the amount of NO_x emission reductions delayed will vary by equipment category and compliance year. In addition, the amount of NO_x emission reductions to be delayed overall would exceed the air quality significance threshold for NO_x during operation and thus, would create significant adverse air quality impacts for NO_x during operation.

Alternative C – Expedited Compliance

Alternative C is the expedited compliance alternative because it contains less of a delay in the compliance schedule (e.g., from six-months to 1.5 years, depending on the equipment category) than what is proposed in PAR 1147 for meeting the NO_x emission limits. Alternative C also contains a unique provision that would harmonize any potential conflicts in compliance dates for multiple in-use equipment units operating in series to the earliest of the applicable compliance dates. Under Alternative C, the amount of NO_x emission reductions delayed will vary by equipment category and compliance year. In addition, the amount of NO_x emission reductions to be delayed overall would exceed the air quality significance threshold for NO_x during operation and thus, would create significant adverse air quality impacts for NO_x during operation.

COMPARISON OF THE ALTERNATIVES

The Environmental Checklist (see Chapter 2 of the Initial Study in Appendix [BC](#)) identified only air quality during operations as the environmental area that could be significantly adversely affected by the proposed project. The following sections describe the potential adverse impacts that may be generated by each project alternative. Potential adverse impacts for the environmental topics are quantified where sufficient data are available. A comparison of the environmental impacts for each project alternative is provided in Table 5-2. No other environmental topics other than operational air quality were determined to be significantly adversely affected by implementing any project alternative.

AIR QUALITY

Alternative A - No Project

Unlike the proposed project, it is not anticipated that Alternative A would generate significant adverse impacts during operation because the owners/operators of affected equipment/source categories would be expected to comply with the applicable NO_x limits in accordance with the current compliance schedule for existing (in-use) equipment. Instead, owners/operators of the affected equipment/source categories would continue existing operations in compliance with the current NO_x limits well as complying with all other applicable SCAQMD, CARB and USEPA requirements and non-compliant equipment would need to be shutdown. By not adopting the proposed project, current operations mean that each owner/operator of affected equipment would not be able to delay the compliance schedule (e.g., retrofitting existing equipment by installing ultra-low NO_x burners or replacing old equipment with new equipment at a later time). Further, by not adopting the proposed project, the projected NO_x emission reductions would be expected to occur according to the original schedule.

This means that there will be no delay in obtaining NO_x reductions and the corresponding health benefits that result from the NO_x reductions. Implementing the NO_x emission reductions according to the current schedule in Rule 1147 would achieve the NO_x reduction goals and compliance objectives in accordance with the following compliance dates: 2014 to achieve the federal PM 2.5 standard; and, 2023 to achieve the federal 8-hour ozone standard.

Alternative A will achieve the 3.5 tons per day of NO_x emission reductions by 2014 and 3.8 tons per day of NO_x emission reductions by 2023. However, Alternative A does not achieve all of the goals of the proposed project because it does not acknowledge that for some equipment categories, the retrofit technology was not available to meet some of compliance dates in 2010 for and may not be available in time to meet the compliance dates in 2011.

Alternative B – Delayed Compliance

Because Alternative B applies the same NO_x emission reduction targets as the proposed project but on a more extended compliance schedule (e.g., delayed compliance by two- to three- years for certain equipment categories). The amount of NO_x emission reductions delayed will vary by equipment category and compliance year under Alternative B. In addition, the amount of NO_x emission reductions to be delayed overall would create significant adverse air quality impacts for NO_x during operation under Alternative B. When compared to the proposed project, Alternative B would cause equivalent but significant delays in NO_x emission reductions during compliance years 2010, 2011, and 2014 and more significant delays in NO_x emissions reductions during compliance years 2012, 2013, 2015 and for each year thereafter. Alternative B does not fully achieve the goals of the proposed project because even though it will achieve 3.5 tons per day of NO_x emission reductions by 2014, it will not achieve the 3.8 tons per day of NO_x emission reductions by 2023.

In summary, if Alternative B were implemented, less NO_x reductions would be achieved and less health benefits from reducing NO_x overall will be realized between compliance years 2015 and 2023. Alternative B does not minimize the delay in NO_x emission reductions as compared to the proposed project. Table 5-1 summarizes the NO_x emission reduction benefits per day for Alternative B.

Alternative C – Expedited Compliance

Alternative C proposes the same NOx emission limits as the proposed project but on a more expedited schedule (e.g., delayed compliance by 6 months to 1.5 years for certain equipment categories). The amount of NOx emission reductions delayed will vary by equipment category and compliance year under Alternative C. In addition, the amount of NOx emission reductions to be delayed overall would create significant adverse air quality impacts for NOx during operation under Alternative C. When compared to the proposed project, the expedited compliance schedule under Alternative C will not change the compliance year in which the delay in NOx emissions reductions will occur. As a result, an expedited compliance schedule under Alternative C will result in equivalent NOx emission reductions delayed for each compliance year as the proposed project.

In summary, if Alternative C were implemented, equivalent NOx reductions would be achieved and equivalent health benefits from reducing NOx overall will be realized when compared to the proposed project. Table 5-1 summarizes the NOx emission reduction benefits per day for Alternative C.

CONCLUSION

By not adopting the proposed project, Alternative A will achieve the 3.5 tons per day of NOx emission reductions by 2014 and 3.8 tons per day of NOx emission reductions by 2023 as would occur under the current version of Rule 1147. Implementing the NOx emission reductions according to the current schedule in Rule 1147 would achieve the NOx reduction goals and compliance objectives in accordance with the following compliance dates: 2014 to achieve the federal PM 2.5 standard; and, 2023 to achieve the federal 8-hour ozone standard. However, Alternative A does not achieve all of the goals of the proposed project because it does not acknowledge that for some equipment categories, the retrofit technology was not available to meet some of compliance dates in 2010 for and may not be available in time to meet the compliance dates in 2011. Implementing Alternative A means that there will be no delay in obtaining NOx emission reductions and the corresponding health benefits that result from the NOx emission reductions. Thus, Alternative A is the environmentally superior alternative. However, if the “no project” alternative is determined to be the environmentally superior alternative, then the CEQA document shall identify an environmentally superior alternative among the other alternatives (CEQA Guidelines §15126.6 (e)(2)). Lastly, because non-compliant equipment may need to be shut down, Alternative A is determined to be the least toxic alternative.

If Alternative B were implemented, less NOx reductions would be achieved and less health benefits from reducing NOx overall will be realized between compliance years 2015 and 2023. Alternative B does not minimize the delay in NOx emission reductions as compared to the proposed project. When compared to the proposed project, Alternative B provides fewer benefits to air quality and public health. Of the adverse environmental impacts that would be generated under Alternative B, the impacts would be more than the proposed project and more than significant for air quality beginning in compliance year 2015 and for any year thereafter.

Alternative C achieves equivalent NOx emission reductions delayed over the same compliance schedule when compared to the proposed project. Alternative C will achieve the 3.5 tons per day of NOx emission reductions by 2014 and 3.8 tons per day of NOx emission reductions by 2023 as would occur under the current version of Rule 1147. Implementing the NOx emission reductions according to the schedule in Alternative C would achieve the NOx reduction goals and compliance objectives in accordance with the following compliance dates: 2014 to achieve the federal PM 2.5

standard; and, 2023 to achieve the federal 8-hour ozone standard. Overall, Alternative C has equivalent environmental impacts and expected health benefits as the proposed project. For these aforementioned reasons, aside from Alternative A, Alternative C is concluded to be the environmentally superior alternative.

APPENDIX A of the Final Draft SEA

DRAFT PROPOSED AMENDED RULE 1147

In order to save space and avoid repetition, please refer to the latest version of proposed amended Rule 1147 located elsewhere in the Governing Board Package. The version of Proposed Amended Rule 1147 that was circulated with the Draft SEA and released on April 6, 2011 for a 45-day public review and comment period ending May 20, 2011 was dated January 19, 2011.

Original hard copies of the Draft SEA, which include the draft version of the proposed amended rule listed above, can be obtained through the SCAQMD Public Information Center at the Diamond Bar headquarters or by calling (909) 396-2039.

APPENDIX B

NOTICE OF PREPARATION/INITIAL STUDY (Environmental Checklist)



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

SUBJECT: NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL ASSESSMENT

PROJECT TITLE: PROPOSED AMENDED RULE 1147 - NOX REDUCTIONS FROM MISCELLANEOUS SOURCES

In accordance with the California Environmental Quality Act (CEQA), the South Coast Air Quality Management District (SCAQMD), as the Lead Agency, has prepared this Notice of Preparation (NOP) and Initial Study (IS). This NOP serves two purposes: 1) to solicit information on the scope of the environmental analysis for the proposed project, and 2) to notify the public that the SCAQMD will prepare a Draft Environmental Assessment (EA) to further assess potential environmental impacts that may result from implementing the proposed project.

This letter, NOP and the attached IS are not SCAQMD applications or forms requiring a response from you. Their purpose is simply to provide information to you on the above project. If the proposed project has no bearing on you or your organization, no action on your part is necessary.

Comments focusing on your area of expertise, your agency's area of jurisdiction, or issues relative to the environmental analysis should be addressed to Ms. Barbara Radlein (c/o CEQA) at the address shown above, or sent by FAX to (909) 396-3324 or by email to bradlein@aqmd.gov. Comments must be received no later than 5:00 PM on Wednesday, March 2, 2011. Please include the name and phone number of the contact person for your agency. Questions relative to the proposed amended rule should be directed to Mr. Wayne Barcikowski at (909) 396-3077 or wbarcikowski@aqmd.gov.

The Public Hearing for the proposed amended rule is scheduled for May 6, 2011. (Note: Public meeting dates are subject to change).

Date: February 1, 2011

Signature: _____

Steve Smith

Steve Smith, Ph.D.
Program Supervisor
Planning, Rules, and Area Sources

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 Copley Drive, Diamond Bar, CA 91765-4178

NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL ASSESSMENT

Project Title:

Draft Environmental Assessment for Proposed Amended Rule 1147 – NO_x Reductions From Miscellaneous Sources

Project Location:

South Coast Air Quality Management District (SCAQMD) area of jurisdiction consisting of the four-county South Coast Air Basin (Orange County and the non-desert portions of Los Angeles, Riverside and San Bernardino counties), and the Riverside County portions of the Salton Sea Air Basin and the Mojave Desert Air Basin

Description of Nature, Purpose, and Beneficiaries of Project:

To respond to compliance challenges currently being experienced by certain affected sources, SCAQMD staff is proposing amendments to Rule 1147 – NO_x Reductions From Miscellaneous Sources, that would: 1) remove the requirements for installation of time meters; 2) remove the requirements for installation of non-resettable totalizing fuel meters if the operator intends to comply with the Rule 1147 NO_x emission limits in terms of parts per million (ppm); and; 3) extend deadlines for demonstrating compliance with the early phases (2010/2011) for NO_x emission limits by up to two years. Other minor changes are proposed for clarity and consistency throughout the rule. The Initial Study identifies the topic of “air quality and greenhouse gas emissions” as an area that may be adversely affected by the proposed project. Impacts to this environmental area will be further analyzed in the Draft EA.

Lead Agency:

South Coast Air Quality Management District

Division:

Planning, Rule Development and Area Sources

Initial Study and all supporting documentation are available at:

SCAQMD Headquarters
21865 Copley Drive
Diamond Bar, CA 91765

or by calling:

(909) 396-2039

or by accessing the SCAQMD’s website at:

<http://www.aqmd.gov/ceqa/aqmd.html>

The Public Notice of Preparation is provided through the following:

Los Angeles Times (February 1, 2011) AQMD Website AQMD Mailing List

Initial Study 30-day Review Period:

February 1, 2011 – March 2, 2011

Scheduled Public Meeting Dates (subject to change):

Public Workshop/CEQA Scoping Meeting: January 26, 2011, 1:30pm; SCAQMD Headquarters
SCAQMD Governing Board Hearing: May 6, 2011, 9:00 a.m.; SCAQMD Headquarters

The proposed project may have statewide, regional or areawide significance; therefore, a CEQA scoping meeting is required (pursuant to Public Resources Code §21083.9(a)(2)).

Send CEQA Comments to:

Ms. Barbara Radlein

Phone:

(909) 396-2716

Email:

bradlein@aqmd.gov

Fax:

(909) 396-3324

Direct Questions on Proposed Amendments:

Mr. Wayne Barcikowski

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SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Initial Study for Proposed Amended Rule 1147 – NOx Reductions From Miscellaneous Sources

February 2011

SCAQMD No. 02012011BAR
State Clearinghouse No: To Be Determined

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**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
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CHAPTER 1 - PROJECT DESCRIPTION

Introduction

California Environmental Quality Act

Project Location

Project Background

Project Objective

Project Description

Alternatives

INTRODUCTION

The California Legislature created the South Coast Air Quality Management District (SCAQMD) in 1977⁸ as the agency responsible for developing and enforcing air pollution control rules and regulations in the South Coast Air Basin (Basin) and portions of the Salton Sea Air Basin and Mojave Desert Air Basin referred to herein as the district. By statute, the SCAQMD is required to adopt an air quality management plan (AQMP) demonstrating compliance with all federal and state ambient air quality standards for the district⁹. Furthermore, the SCAQMD must adopt rules and regulations that carry out the AQMP¹⁰. The 2007 AQMP concluded that major reductions in emissions of volatile organic compounds (VOCs), oxides of sulfur (SOx) and oxides of nitrogen (NOx) are necessary to attain the air quality standards for ozone (the key ingredient of smog) and particulate matter (PM10 and PM2.5). Ozone, a criteria pollutant, is formed when VOCs react with NOx in the atmosphere and has been shown to adversely affect human health and to contribute to the formation of PM10 and PM2.5.

As part of the NOx reduction goals in the AQMP, SCAQMD adopted Rule 1147 - NOx Reductions From Miscellaneous Sources, in December 2008, to control NOx emissions from miscellaneous gas and liquid fuel fired combustion equipment, including, but not limited to: ovens, dryers, dehydrators, heaters, kilns, calciners, furnaces, heated pots, cookers, roasters, fryers, closed and open heated tanks and evaporators, distillation units, degassing units, incinerators, and soil remediation units. Rule 1147 requires new, modified, relocated and in-use combustion equipment to comply with equipment-specific NOx emission limits. For in-use equipment, compliance dates for emission limits are based on the date of equipment manufacture, and emission limits are applicable to older equipment first. Owners of equipment are provided at least 15 years before they must modify or replace existing equipment to meet emission limits. Rule 1147 also contains test methods and provides alternate compliance options including a process for certification of equipment NOx emissions through an approved testing program. Other requirements include equipment maintenance, meters and recordkeeping.

SCAQMD staff's recent evaluation of the state of compliance with Rule 1147 as well as feedback from industry revealed that some equipment owners/operators are experiencing compliance challenges, in particular, with certain effective dates in the rule. The aforementioned evaluation by SCAQMD staff combined with industry feedback also revealed that the installation of time meters, while helpful, is not essential for compliance determination. Similarly, installation of fuel meters is essential for compliance determination depending on the compliance option chosen by the equipment operator. To address these compliance challenges and ensure that equipment owners/operators are not unnecessarily burdened with additional costs, SCAQMD staff is proposing to amend Rule 1147 to delay implementation of the NOx emission limit compliance dates for existing (in-use) permitted equipment, to eliminate the requirement for the installation of time meters, and to modify the requirement for the installation of fuel meters. In the meantime, so that facilities do not incur unnecessary expenses associated with complying with the current requirements in Rule 1147 that are the focus of the amendments considered as part of this proposed project, the Executive Officer intends to exercise enforcement discretion with regard to Rule 1147 until the proposed rule amendments are presented to the

⁸ The Lewis-Presley Air Quality Management Act, 1976 Cal. Stats., ch 324 (codified at Health & Safety Code, §§40400-40540).

⁹ Health & Safety Code, §40460 (a).

¹⁰ Health & Safety Code, §40440 (a).

SCAQMD's Governing Board¹¹. Enforcement discretion means that the SCAQMD will not issue any new Notices of Violations (NOVs) or Notices to Comply (NTCs) and will cancel any previously issued NOVs and NTCs specifically related to the items that are subject of the proposed rule amendments, until the proposed rule amendments have been acted on by the Governing Board. Proposed Amended Rule (PAR) 1147 will result in a delay of: 1) 0.70 tons/day of NOx emission reductions in compliance years 2010 and 2011; and, 2) 0.06 tons/day of NOx emission reductions in compliance years 2015 and 2016. However, the 0.70 tons/day of NOx delayed emission reductions will be recaptured in compliance years 2012 and 2013 and the 0.06 tons/day of delayed NOx emission reductions will be recaptured in compliance years 2017 and 2018, respectively. Thus, despite the delay in implementation of some of the compliance dates, the same amount of overall NOx emission reductions as estimated in the current rule will be achieved by PAR 1147 (e.g. 3.5 tons per day of NOx emission reductions by 2014 and 3.8 tons per day of NOx emission reductions by 2023).

This Initial Study, prepared pursuant to the California Environmental Quality Act (CEQA), identifies the environmental topic "air quality and greenhouse gas (GHG) emissions" as an area that may be adversely affected by the proposed project. A Draft Environmental Assessment (EA) will be prepared to analyze further whether the potential impacts to this environmental topic are significant. Any other potentially significant environmental impacts identified through this Notice of Preparation/Initial Study process will also be analyzed in the Draft EA.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

The proposed amendments to Rule 1147 are considered a "project" as defined by CEQA. CEQA requires that the potential adverse environmental impacts of proposed projects be evaluated and that methods to reduce or avoid identified significant adverse environmental impacts of these projects be implemented if feasible. The purpose of the CEQA process is to inform the SCAQMD's Governing Board, public agencies, and interested parties of potential adverse environmental impacts that could result from implementing the proposed project and to identify feasible mitigation measures or alternatives, when an impact is significant.

California Public Resources Code §21080.5 allows public agencies with regulatory programs to prepare a plan or other written documents 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 Resources Agency on March 1, 1989, and is codified as SCAQMD Rule 110. Pursuant to Rule 110 (the rule which implements the SCAQMD's certified regulatory program), SCAQMD is preparing a Draft Environmental Assessment (EA) to evaluate potential adverse impacts from the proposed project.

The SCAQMD, as Lead Agency for the proposed project, has prepared this Initial Study (which includes an Environmental Checklist and project description). The Environmental Checklist provides a standard evaluation tool to identify a project's adverse environmental impacts. The Initial Study is also intended to provide information about the proposed project to other public agencies and interested parties prior to the release of the Draft EA. Written comments on the scope of the environmental analysis will be considered (if received by the SCAQMD during the 30-day review period) when preparing the Draft EA.

¹¹ Agenda No. 21 - Notification of Executive Officer Enforcement Discretion Regarding Rule 1147, SCAQMD, January 7, 2011. <http://www.aqmd.gov/hb/attachments/2011-2015/2011Jan/2011-Jan7-021.pdf>

PROJECT LOCATION

PAR 1147 would apply to existing (in-use) permitted equipment, spanning multiple categories of gaseous and liquid fuel-fired combustion equipment, operated at facilities located in industrial and commercial areas throughout the entire SCAQMD jurisdiction. The SCAQMD has jurisdiction over an area of approximately 10,743 square miles, consisting of the four-county South Coast Air Basin (Basin) (Orange County and the non-desert portions of Los Angeles, Riverside and San Bernardino counties), and the Riverside County portions of the Salton Sea Air Basin (SSAB) and Mojave Desert Air Basin (MDAB). The Basin, which is a subarea 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. It includes all of Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino counties. The Riverside County portion of the SSAB is bounded by the San Jacinto Mountains in 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 that is bounded by the San Jacinto Mountains to the west and the eastern boundary of the Coachella Valley to the east (Figure 1-1).



Figure 1-1
South Coast Air Quality Management District

PROJECT BACKGROUND

Adopted in December 2008, Rule 1147 controls NO_x emissions from miscellaneous gas and liquid fuel fired combustion equipment, including, but not limited to: ovens, dryers, dehydrators, heaters, kilns, calciners, furnaces, heated pots, cookers, roasters, fryers, closed and open heated tanks and evaporators, distillation units, degassing units, incinerators, and soil remediation units. Under Rule 1147, regulated equipment must meet an emission limit of 30 parts per million (ppm) to 60 ppm of NO_x based on the type of equipment. Alternatively, equipment may meet a NO_x limit between 0.036 pounds per million British Thermal Units (lb/MMBTU) and 0.080 lb/MMBTU based on the type of equipment.

Compliance is phased in for equipment based on age. Effective January 1, 2010, new, relocated, or modified equipment (except for tar pots) must comply with the emission limits in Rule 1147. For in-use equipment, compliance dates for emission limits are based on the date of equipment manufacture, and emission limits are applicable to older equipment first. Owners of equipment are provided at least 15 years before they must modify or replace existing equipment to meet emission limits. Rule 1147 also contains test methods and provides alternate compliance options including a process for certification of equipment NO_x emissions through an approved testing program. Other requirements include equipment maintenance, meters and recordkeeping.

Rule 1147 contains a phased-in approach for imposing NO_x emission limits on equipment based on age. For example, as of July 1, 2010, equipment aged 25 years or older was required to meet a specified NO_x emission limit. One year later, equipment aged between 20 and 25 years old will also be required to meet a specified NO_x emission limit. Lastly, equipment aged 15 years old will be required to meet another NO_x emission limit. Exceptions to the basic schedule include soil remediation equipment that must comply on or after January 1, 2011, when a combustion modification or change of location occurs or when a new unit begins operating. Rule 1147 provides additional time for specific categories of equipment that have recently replaced burners or have a permit limit of less than one pound per day NO_x at the time of Rule 1147 was adopted. The compliance objectives of Rule 1143 are tied to the following compliance dates: 1) 2014 to achieve the federal PM 2.5 standard; and, 2) 2023 to achieve the federal 8-hour ozone standard.

Since the adoption of Rule 1147, some equipment owners/operators are experiencing compliance challenges with certain components of the rule due to the economic downturn, specifically, the cost impacts associated with installing fuel and time meters for each affected unit by January 1, 2011. SCAQMD staff conducted more research and found that installation of time meters is not essential for determining compliance with Rule 1147. Further, SCAQMD staff determined that the need to install fuel meters is essential for determining compliance only for certain circumstances that depend on the compliance option chosen by the equipment operator.

In response to these compliance challenges, SCAQMD staff is proposing to amend Rule 1147 to delay implementation of the NO_x emission limit compliance dates for existing (in-use) permitted equipment, to eliminate the requirement for the installation of time meters, and to remove the requirement for the installation of non-resettable totalizing fuel meters if the operator intends to comply with the Rule 1147 NO_x emission limits in terms of ppm.

So that facilities do not incur unnecessary expenses associated with complying with the current requirements in Rule 1147 that are the focus of the amendments considered as part of this proposed project, the Executive Officer is exercising enforcement discretion with regard to Rule 1147 until PAR 1147 is presented to the SCAQMD's Governing Board. Enforcement discretion means that the SCAQMD will not issue any new Notices of Violations (NOVs) or Notices to Comply (NTCs) and will cancel any previously issued NOVs and NTCs specifically related to the items that are subject of PAR 1147, until PAR 1147 is acted on by the Governing Board.

At the time of adoption, Rule 1147 was estimated to reduce annual average emissions of NO_x by 3.5 tons per day by 2014 and 3.8 tons per day by 2023. Delaying the compliance dates in PAR 1147 means that there will be adjustments to the annual NO_x emission reductions during varying compliance years as summarized in Table 1-1:

**Table 1-1
Annual Adjustments to NOx Emission Reductions**

Compliance Year	Current NOx Emission Reductions in Rule 1147 (tons/day)	Proposed NOx Emission Reductions in PAR 1147 (tons/day)
2010	0.70	0
2011	0.70	0
2012	0.70	1.40
2013	0.70	1.40
2014	0.70	0.70
2015	0.06	0
2016	0.06	0
2017	0.06	0.12
2018	0.06	0.12
2019	0.06	0.06

Specifically, implementing PAR 1147 will result in a delay of: 1) 0.70 tons/day of NOx emission reductions in compliance years 2010 and 2011; and, 2) 0.06 tons/day of NOx emission reductions in compliance years 2015 and 2016. However, the 0.70 tons/day of NOx delayed emission reductions will be recaptured in compliance years 2012 and 2013 and the 0.06 tons/day of delayed NOx emission reductions will be recaptured in compliance years 2017 and 2018, respectively. Thus, despite the delay in implementation of some of the compliance dates, the same amount of overall NOx emission reductions as estimated in the current rule will be achieved by PAR 1147 (e.g. 3.5 tons per day of NOx emission reductions by 2014 and 3.8 tons per day of NOx emission reductions by 2023).

PROJECT OBJECTIVE

The primary focus of the proposed project is to amend Rule 1147 in order to bring compliance relief to owners/operators of affected combustion equipment by: 1) delaying implementation of certain NOx emission limit compliance dates for existing (in-use) permitted equipment; 2) removing the requirement for the installation of gas fuel meters for equipment that currently comply with the NOx emission level in terms of the ppm compliance option; and, 3) removing the requirement for time meters. Other minor changes are proposed for clarity and consistency throughout the proposed amended rule. While PAR 1147 will delay the implementation of some of the compliance dates, the objective is to achieve the same amount of overall NOx emission reductions in PAR 1147 as estimated in the current rule (e.g. 3.5 tons per day of NOx emission reductions by 2014 and 3.8 tons per day of NOx emission reductions by 2023).

PROJECT DESCRIPTION

The proposed amendments to Rule 1147 would apply to the following categories of gaseous and liquid fuel-fired combustion equipment: 1) remediation units; 2) tar pots; 3) other units manufactured prior to 1986; 4) other units manufactured prior to 1992; and 5) other units manufactured prior to 1998. Specifically, the following amendments would:

- remove the requirements for installation of time meters;

- remove the requirements for installation of non-resettable totalizing fuel meters if the operator intends to comply with the Rule 1147 NOx emission limits in terms of ppm; and,
- extend NOx emission limit compliance dates in Table 2 – Compliance Schedule for In-Use Units for certain equipment categories by up to two years.

The following is a summary of the key proposed amendments to Rule 1147. Other minor changes are proposed for clarity and consistency throughout the proposed amended rules. A copy of the proposed amended rule can be found in Appendix A.

Subdivision (c) – Requirements

The compliance dates in paragraph (c)(1), Table 2 for certain equipment categories have been extended as follows: 1) from January 1, 2011 to January 1, 2012 for remediation units; 2) from January 1, 2012 to January 1, 2013 for tar pots; 3) from January 1, 2010 to January 1, 2012 for other units manufactured prior to 1986; 4) from January 1, 2011 to January 1, 2012 for other units manufactured prior to 1992; and, 5) from January 1, 2012 to January 1, 2013 for other units manufactured prior to 1998. Lastly, paragraph (c)(8) has been modified to remove the requirement for time meters and to remove the requirements for installation of non-resettable totalizing fuel meters if the operator intends to comply with the Rule 1147 NOx emission limits in terms of ppm.

ALTERNATIVES

The Draft EA will discuss and compare alternatives to the proposed project as required by CEQA and by SCAQMD Rule 110. Alternatives must include realistic measures for attaining the basic objectives of the proposed project and provide a means for evaluating the comparative merits of each alternative. In addition, the range of alternatives must be sufficient to permit a reasoned choice and it need not include every conceivable project alternative. The key issue is whether the selection and discussion of alternatives fosters informed decision making and 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 does not impose any greater requirements for a discussion of project alternatives in an environmental assessment than is required for an Environmental Impact Report under CEQA. Alternatives will be developed based in part on the major components of the proposed rule. The rationale for selecting alternatives rests on CEQA's requirement to present "realistic" alternatives; that is alternatives that can actually be implemented. CEQA also requires an evaluation of a "No Project Alternative."

SCAQMD's policy document Environmental Justice Program Enhancements for fiscal year (FY) 2002-03, Enhancement II-1 recommends that all SCAQMD CEQA assessments include a feasible project alternative with the lowest air toxics emissions. In other words, for any major equipment or process type under the scope of the proposed project that creates a significant environmental impact, at least one alternative, where feasible, shall be considered from a "least harmful" perspective with regard to hazardous air emissions.

The Governing Board may choose to adopt any portion or all of any alternative presented in the EA. The Governing Board is able to adopt any portion or all of any of the alternatives presented because the impacts of each alternative will be fully disclosed to the public and the public will have the opportunity to comment on the alternatives and impacts generated by each alternative.

Written suggestions on potential project alternatives received during the comment period for the Initial Study will be considered when preparing the Draft EA.

CHAPTER 2 - ENVIRONMENTAL CHECKLIST

Introduction

General Information

Potentially Significant Impact Areas

Determination

Environmental Checklist and Discussion

INTRODUCTION

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

GENERAL INFORMATION

Project Title:	Proposed Amended Rule 1147 – NOx Reductions From Miscellaneous Sources
Lead Agency Name:	South Coast Air Quality Management District
Lead Agency Address:	21865 Copley Drive, Diamond Bar, CA 91765
CEQA Contact Person:	Barbara Radlein, (909) 396-2716
Rule Contact Person:	Wayne Barcikowski, (909) 396-3077
Project Sponsor's Name:	South Coast Air Quality Management District
Project Sponsor's Address:	21865 Copley Drive, Diamond Bar, CA 91765
General Plan Designation:	Not applicable
Zoning:	Not applicable
Description of Project:	To respond to compliance challenges currently being experienced by certain affected sources, SCAQMD staff is proposing amendments to Rule 1147 – NOx Reductions From Miscellaneous Sources, that would: 1) remove the requirements for installation of time meters; 2) remove the requirements for installation of non-resettable totalizing fuel meters if the operator intends to comply with the Rule 1147 NOx emission limits in terms of ppm; and; 3) extend deadlines for demonstrating compliance with the early phases (2010/2011) for NOx emission limits by up to two years. Other minor changes are proposed for clarity and consistency throughout the rule.
Surrounding Land Uses and Setting:	Industrial and commercial
Other Public Agencies Whose Approval is Required:	Not applicable

POTENTIALLY SIGNIFICANT IMPACT AREAS

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

- | | | |
|--|--|--|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Geology and Soils | <input type="checkbox"/> Population and Housing |
| <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Hazards and Hazardous Materials | <input type="checkbox"/> Public Services |
| <input checked="" type="checkbox"/> Air Quality and Greenhouse Gas Emissions | <input type="checkbox"/> Hydrology and Water Quality | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Land Use and Planning | <input type="checkbox"/> Solid/Hazardous Waste |
| <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Transportation/Traffic |
| <input type="checkbox"/> Energy | <input type="checkbox"/> Noise | <input checked="" type="checkbox"/> Mandatory Findings |

DETERMINATION

On the basis of this initial evaluation:

- I find the proposed project, in accordance with those findings made pursuant to CEQA Guidelines §15252, COULD NOT have a significant effect on the environment, and that an ENVIRONMENTAL ASSESSMENT with no significant impacts has been prepared.
- I find that although the proposed project could have a significant effect on the environment, there will NOT be significant effects in this case because revisions in the project have been made by or agreed to by the project proponent. An ENVIRONMENTAL ASSESSMENT with no significant impacts will be prepared.
- I find that the proposed project MAY have a significant effect(s) on the environment, and an ENVIRONMENTAL ASSESSMENT will be prepared.
- I find that the proposed project MAY have a "potentially significant impact" on the environment, but at least one effect: 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL ASSESSMENT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects: (a) have been analyzed adequately in an earlier ENVIRONMENTAL ASSESSMENT pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL ASSESSMENT, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Date: February 1, 2011

Signature:

Steve Smith

Steve Smith, Ph.D.
Program Supervisor, CEQA Section
Planning, Rules, and Area Sources

ENVIRONMENTAL CHECKLIST AND DISCUSSION

Implementation of PAR 1147 means that the compliance dates for meeting the NO_x emission limits for existing (in-use) permitted equipment will be delayed by up to two years and the requirement for the installation of time meters will be eliminated. Lastly, PAR 1147 will remove the requirements for installation of non-resettable totalizing fuel meters if the operator intends to comply with the Rule 1147 NO_x emission limits in terms of ppm. (This means that the installation of fuel meters will only be required if the operator intends to comply with the NO_x emission limits in terms of lb/MMBTU.) Because PAR 1147 is mainly a delay in implementation, no new physical changes requiring construction are involved with the proposed project. Instead, the same construction activities and the same environmental impacts associated with installing ultra-low NO_x burners at the time Rule 1147 was adopted will continue to occur under PAR 1147 but on a delayed schedule. Thus, each affected owner/operator will be expected to comply with the lowered NO_x emission limits by installing ultra-low NO_x burners or installing new, compliant equipment, but on a delayed implementation schedule.

The original analysis of the construction activities is contained in the CEQA document for Rule 1147, the Final Environmental Assessment for Proposed Rule 1147 – NO_x Reductions from Miscellaneous Sources, certified by the SCAQMD Governing Board on December 5, 2008 (SCAQMD No. 081015JJI, State Clearinghouse No: 2008101082)¹². This CEQA document will be referred to herein as the December 2008 Final EA. For the aforementioned reasons, the following analysis will focus on the effect of PAR 1147 in terms of NO_x emissions reductions delayed (i.e., emissions reductions that would have occurred according to the original compliance schedule if the original requirements in Rule 1147 were implemented) as a result of delaying the compliance dates and not the environmental effects of the construction activities since there will be no new physical changes associated with PAR 1147.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
I. AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

¹² <http://www.aqmd.gov/ceqa/documents/2008/aqmd/finalEA/FEA1147.pdf>

Significance Criteria

The proposed project impacts on aesthetics will be considered significant if:

- The project will block views from a scenic highway or corridor.
- The project will adversely affect the visual continuity of the surrounding area.
- The impacts on light and glare will be considered significant if the project adds lighting which would add glare to residential areas or sensitive receptors.

Discussion

I. a), b), c) & d) Implementation of PAR 1147 means that the NOx emission limit compliance dates for existing (in-use) permitted equipment will be delayed by up to two years and the requirement for the installation of time meters will be eliminated. Lastly, PAR 1147 will remove the requirements for installation of non-resettable totalizing fuel meters if the operator intends to comply with the Rule 1147 NOx emission limits in terms of ppm. (This means that the installation of fuel meters will only be required if the operator intends to comply with the NOx emission limits in terms of lb/MMBTU.)

The analysis in the December 2008 Final EA considered the installation of new compliant units or retrofitting existing units by replacing existing burners with ultra-low NOx burner technology, generally at existing facilities. The footprint of a compliant new replacement unit versus the footprint of an existing, retrofitted unit that meets the ultra-low NOx standards was determined to be similar to each other such that owners/operators who replaced their existing units with new compliant units or retrofit their existing units with ultra-low NOx burners, implementation of Rule 1147 would not require the construction of new buildings or other structures that would obstruct scenic resources or degrade the existing visual character of a site, including but not limited to, trees, rock outcroppings, or historic buildings. Further, implementation of Rule 1147 was not determined to involve the demolition of any existing buildings or facilities, to require any subsurface activities, or to require the acquisition of any new land or the surrendering of existing land, or the modification of any existing land use designations or zoning ordinances. Thus, any compliance relief provided by PAR 1147 will only delay the installation or retrofit of ultra-low NOx burners and reduce the number time meters and fuel meters that would have otherwise been installed under Rule 1147.

For these reasons, PAR 1147 is not expected to degrade the visual character of any site where a facility is located and that operates an affected unit or its surroundings, affect any scenic vista, damage scenic resources. Further, since PAR 1147 does not require existing facilities to operate at night, no new sources of substantial light or glare are expected.

Based upon these considerations, no significant aesthetics impacts are expected from the implementation of PAR 1147 and as such, the topic of aesthetics will not be further analyzed in the Draft EA. Since no significant aesthetics impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FOREST RESOURCES. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland mapping and Monitoring Program of the California Resources Agency, to non- agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code §12220(g)), timberland (as defined by Public Resources Code §4526), or timberland zoned Timberland Production (as defined by Government Code §51104 (g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance Criteria

Project-related impacts on agriculture and forest resources will be considered significant if any of the following conditions are met:

- The proposed project conflicts with existing zoning or agricultural use or Williamson Act contracts.
- The proposed project will convert prime farmland, unique farmland or farmland of statewide importance as shown on the maps prepared pursuant to the farmland mapping and monitoring program of the California Resources Agency, to non-agricultural use.
- The proposed project conflicts with existing zoning for, or causes rezoning of, forest land (as defined in Public Resources Code §12220(g)), timberland (as defined in Public Resources Code §4526), or timberland zoned Timberland Production (as defined by Government Code § 51104 (g)).
- The proposed project would involve changes in the existing environment, which due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use.

Discussion

II. a), b), c) & d) Implementation of PAR 1147 means that the NOx emission limit compliance dates for existing (in-use) permitted equipment will be delayed by up to two years and the requirement for the installation of time meters will be eliminated. Lastly, PAR 1147 will remove the requirements for installation of non-resettable totalizing fuel meters if the operator intends to comply with the Rule 1147 NOx emission limits in terms of ppm. (This means that the installation of fuel meters will only be required if the operator intends to comply with the NOx emission limits in terms of lb/MMBTU.) Compliance with PAR 1147 means the delayed installation of new compliant units or retrofitting existing units with ultra-low NOx burner technology and the reduced installation of time meters and fuel meters that would have otherwise been installed under Rule 1147.

Any construction and operational activities that would occur as a result of implementing PAR 1147 are expected to occur within the confines of the existing affected facilities. The proposed project would be consistent with the industrial or commercial zoning requirements for the various facilities and there are no agricultural or forest resources or operations on or near the affected facilities. No agricultural resources including Williamson Act contracts are located within or would be impacted by construction activities at the affected facilities. Therefore, any delays of installing new equipment units or retrofitting existing units to comply with revised compliance timelines in PAR 1147 would not result in any new construction of buildings or other structures that would convert any classification of farmland to non-agricultural use or conflict with zoning for agricultural use or a Williamson Act contract.

PAR 1147 would also not result in any new construction of buildings or other structures that would cause the loss of forest land or conversion of forest land to non-forest use. Because there are no forestry resources or operations on or near the affected facilities, PAR 1147 would not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code §12220(g)), timberland (as defined by Public Resources Code §4526), or timberland zoned Timberland Production (as defined by Government Code §51104 (g)).

Lastly, since PAR 1147 would not substantially change the facility or process for which the NOx control equipment are utilized, there are no provisions in PAR 1147 that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments and no land use or planning requirements relative to agriculture and forest resources will be altered by PAR 1147.

Based upon these considerations, no significant agriculture and forest resources impacts are expected from the proposed project and as such, the topic of agriculture and forest resources will not be further analyzed in the Draft EA. Since no significant agriculture and forest resources impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
III. AIR QUALITY AND GREENHOUSE GAS EMISSIONS.				
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute to an existing or projected air quality violation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Diminish an existing air quality rule or future compliance requirement resulting in a significant increase in air pollutant(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Significance Criteria

To determine whether or not air quality impacts from the proposed project may be significant, impacts will be evaluated and compared to the criteria in Table 2-1. If impacts exceed any of the criteria in Table 2-1, they will be considered further in the Draft EA. As necessary, all feasible mitigation measures will be identified in the Draft EA and implemented to reduce significant impacts to the maximum extent feasible.

To determine whether or not greenhouse gas emissions from the proposed project may be significant, impacts will be evaluated and compared to the 10,000 MT CO₂/year threshold for industrial sources.

Table 2-1
SCAQMD Air Quality Significance Thresholds

Mass Daily Thresholds ^a		
Pollutant	Construction ^b	Operation ^c
NO_x	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM₁₀	150 lbs/day	150 lbs/day
PM_{2.5}	55 lbs/day	55 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 (TACs), Odor, and GHG Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk \geq 10 in 1 million Cancer Burden $>$ 0.5 excess cancer cases (in areas \geq 1 in 1 million) Hazard Index \geq 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
GHG	10,000 MT/yr CO ₂ eq for industrial facilities	
Ambient Air Quality Standards for Criteria Pollutants ^d		
NO₂ 1-hour average annual arithmetic mean	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.18 ppm (state) 0.03 ppm (state)	
PM₁₀ 24-hour average annual average	10.4 $\mu\text{g}/\text{m}^3$ (construction) ^e & 2.5 $\mu\text{g}/\text{m}^3$ (operation) 1.0 $\mu\text{g}/\text{m}^3$	
PM_{2.5} 24-hour average	10.4 $\mu\text{g}/\text{m}^3$ (construction) ^e & 2.5 $\mu\text{g}/\text{m}^3$ (operation)	
Sulfate 1-hour average	0.075 ppm (federal – 98 th percentile)	
CO 1-hour average 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) 9.0 ppm (state/federal)	
Lead Rolling 3-month average	0.15 $\mu\text{g}/\text{m}^3$ (federal)	

^a Source: SCAQMD CEQA Handbook (SCAQMD, 1993)

^b Construction thresholds apply to both the South Coast Air Basin and Coachella Valley (Salton Sea and Mojave Desert Air Basins).

^c For Coachella Valley, the mass daily thresholds for operation are the same as the construction thresholds.

^d Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.

^e Ambient air quality threshold based on SCAQMD Rule 403.

KEY: lbs/day = pounds per day ppm = parts per million $\mu\text{g}/\text{m}^3$ = microgram per cubic meter \geq = greater than or equal to
MT/yr CO₂eq = metric tons per year of CO₂ equivalents

Discussion

III. a) The SCAQMD is required by law to prepare a comprehensive district-wide AQMP which includes strategies (e.g., control measures) to reduce emission levels to achieve and maintain state and federal ambient air quality standards, to ensure that new sources of emissions are planned and operated to be consistent with the SCAQMD's air quality goals, and to protect sensitive receptors and the public in general from the adverse effects of criteria pollutants which are known to have adverse human health effects. The AQMP's air pollution reduction strategies include control measures which target stationary, mobile and indirect sources. These control measures are based on feasible methods of attaining ambient air quality standards. Pursuant to the provisions of both the state and federal Clean Air Acts, the SCAQMD is required to attain the state and federal ambient air quality standards for all criteria pollutants. Rule 1147 was adopted to implement 2007 AQMP control measures CMB-01 (NO_x Reductions from Non-RECLAIM Ovens, Dryers, and Furnaces) and MCS-01 (Facility Modernization) to achieve NO_x reductions.

Although the lowered future NO_x emission limits in Rule 1147 are proposed to be delayed in PAR 1147 for certain equipment categories, when fully implemented, the NO_x reductions to be achieved will contribute to carrying out the goals of the 2007 AQMP. Further, implementation of all other SCAQMD NO_x rules along with AQMP control measures, when considered together, is expected to reduce NO_x emissions throughout the region overall by 2020. For these reasons, reducing NO_x emissions, even if PAR 1147 is on a delayed implementation schedule for the short term, will help contribute towards attaining and maintaining the state and federal ambient air quality standards over the long term. Thus, PAR 1147 would not conflict or obstruct implementation of the applicable AQMP goals.

III. b), c), f), & g) For a discussion of these items, refer to the following analysis.

Construction Activities

Compliance with PAR 1147 means the delayed installation of new compliant units or retrofitting existing units with ultra-low NO_x burner technology and the reduced installation of time meters and fuel meters that would have otherwise been installed under Rule 1147. Any operator who chooses to install new equipment or retrofit an existing unit to comply with the delayed compliance limits in PAR 1147 is not expected to construct any new buildings or other structures as part of the equipment replacement or retrofit process. However, as was previously analyzed in the December 2008 Final EA, some physical modifications would be necessary depending on whether the operator chooses to replace the existing equipment with a new unit or to retrofit the existing unit with ultra-low NO_x burner. For example, for completely replacing existing equipment with new compliant equipment, the existing equipment would need to be shut down and allowed to cool, disconnected from fuel and electric utilities, dismantled and removed. For the purpose of this discussion, the new equipment is assumed to be installed at or near the location of the existing equipment.

The physical modifications that are typically involved with retrofitting existing equipment would be removing the old burners, installing new burners, and installing new or reworking existing flue gas ductwork. Specifically, owners/operators of affected facilities who choose to replace existing burners with ultra-low NO_x burners will first need to pre-order and purchase the appropriate size, style and number of burners, shut down the combustion unit to let it cool, and change out the burners. The burner change-out may involve a contractor or vendor to remove

the bolts, possibly cut and re-weld metal seals and re-fire the burners for equipment start-up. Additional work may be necessary such as upgrading the operation control system or installing a fuel injection system with electronic controls. Once the ultra-low NOx burners are in place, the combustion equipment can be fired up and can operate with lower NOx emissions.

Due to the relatively straightforward nature and ease of retrofitting existing equipment with ultra low-NOx burners, no heavy duty construction activities or equipment are anticipated. Further, the potential adverse construction air quality and GHG impacts were previously analyzed in the December 2008 Final EA and the proposed delay in the compliance dates contained in PAR 1147 will not alter the assumptions or alter the analysis for construction emissions (e.g., criteria pollutants and GHGs). Thus, no new secondary construction impacts are anticipated from the delayed retrofit of equipment with ultra low-NOx burners. Based upon these considerations, no significant air quality and GHG impacts are expected from the proposed project during construction and as such, the topic of construction air quality and GHG impacts will not be further analyzed in the Draft EA. Since no significant construction air quality and GHG impacts were identified, no mitigation measures are necessary or required for construction activities.

Operation Activities

Once the ultra-low NOx burners are operational, NOx emissions are expected to be reduced. However, since the compliance dates for reducing NOx emissions are proposed to be delayed, the NOx reductions will occur later than originally planned. Further, the amount of NOx emission reductions delayed is expected to exceed the operational air quality NOx significance threshold of 55 pounds per day. For these reasons, operational air quality impacts associated with implementation of PAR 1147 are potentially significant and will be evaluated further in the Draft EA.

Based on the type and size of equipment affected by PAR 1147, CO2 emissions (e.g., GHGs) from the operation of the retrofitted or replaced equipment are likely to decrease from current levels due to improved burner efficiency. Further, there is no fuel penalty associated with operating equipment with ultra-low NOx burners. Thus, even with the delay in compliance dates, operation of ultra-low NOx burners are expected to result in a similar slight, less than significant decrease in GHG emissions as was previously analyzed in the December 2008 Final EA. However, the delay in compliance dates means the any reductions in GHG emissions will also be delayed.

Based upon these considerations, no significant GHG impacts are expected from the proposed project during operation and as such, the topic of operational GHG impacts will not be further analyzed in the Draft EA. Since no significant operational GHG impacts were identified, no mitigation measures are necessary or required.

Lastly, implementation of PAR 1147, even with delayed compliance dates, in connection with other 2007 AQMP control measures is not considered to be cumulatively considerable and, therefore, is not considered to be a significant cumulative GHG impact.

III. d) Affected facilities are not expected to increase exposure by sensitive receptors to substantial pollutant concentrations from the implementation of PAR 1147 for the following reasons: 1) the affected facilities are existing facilities located in industrial or commercial areas; 2) the limited construction emission increases associated with the proposed changes (equipment

replacement or retrofitting existing equipment) are concluded to be less than significant and the delay in compliance dates will not substantially alter the construction emission increases that were previously analyzed at the time Rule 1147 was adopted; and, 3) even with the delay in compliance dates, installation of any new, or retrofits of any existing equipment subject to PAR 1147 is expected to reduce NOx emissions from affected equipment. Therefore, no significant adverse air quality and GHG impacts to sensitive receptors are expected from implementing PAR 1147.

III. e) Historically, the SCAQMD has enforced odor nuisance complaints through SCAQMD Rule 402 - Nuisance. Affected facilities are not expected to create objectionable odors affecting a substantial number of people for the following reasons: 1) the affected facilities are existing facilities located in industrial or commercial areas with appropriate controls in place; 2) no heavy-duty construction equipment with associated diesel exhaust odors are necessary to install ultra-low NOx burners and the proposed delay in compliance will not affect the type of construction equipment used; 3) typically no odors are associated with combustion equipment operating in accordance with Rule 1147; and, 4) installation of any new or retrofits of any existing equipment subject to PAR 1147 is expected to reduce NOx emissions from affected equipment. Therefore, no significant odor impacts are expected to result from implementing the PAR 1147.

III. h) PAR 1147 is part of a comprehensive ongoing regulatory program that includes implementing related SCAQMD 2007 AQMP control measures as amended or new rules to attain and maintain within a margin of safety all state and national ambient air quality standards for all areas within its jurisdiction. The 2007 AQMP estimates a CO2 reduction of 427,849 metric tons per year by 2014, and a CO2 reduction of 1,523,445 metric tons per year by 2020. The analysis in the December 2008 Final EA demonstrated that there would be an increase in construction-related GHGs by approximately 424.13 metric tons of CO2 between compliance years 2010 and 2014 and 433.59 metric tons of CO2 between compliance years 2015 and 2023. Both of these projected increases were less than the GHG significance threshold for industrial sources (e.g., 10,000 MT/yr CO2eq). Further, this small increase from PAR 1147 construction activities represented 0.000002 percent of GHG emissions as compared to the total projected statewide GHG emissions inventory. The delayed compliance dates proposed in PAR 1147 will not alter the previously analyzed GHG emissions estimates associated with construction in the December 2008 Final EA. While delayed compliance means delayed NOx reductions, it also means delayed construction schedules overall and delayed GHG emissions that would be generated from construction activities.

Lastly, PAR 1147 is not subject to a GHG reduction plan. Thus, implementation of PAR 1147, even with delayed compliance dates, would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions.

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

Significance Criteria

Impacts on biological resources will be considered significant if any of the following criteria apply:

- The project results in a loss of plant communities or animal habitat considered to be rare, threatened or endangered by federal, state or local agencies.
- The project interferes substantially with the movement of any resident or migratory wildlife species.
- The project adversely affects aquatic communities through construction or operation of the project.

Discussion

IV. a), b), c), & d) PAR 1147 would only affect combustion equipment located at existing facilities located in industrial or commercial areas, which have already been greatly disturbed. Implementation of PAR 1147 means that the NOx emission limit compliance dates for existing (in-use) permitted equipment will be delayed by up to two years and the requirement for the installation of time meters will be eliminated. Lastly, PAR 1147 will remove the requirements for installation of non-resettable totalizing fuel meters if the operator intends to comply with the Rule 1147 NOx emission limits in terms of ppm. (This means that the installation of fuel meters will only be required if the operator intends to comply with the NOx emission limits in terms of lb/MMBTU.) Compliance with PAR 1147 means the delayed installation of new compliant units or retrofitting existing units with ultra-low NOx burner technology and the reduced installation of time meters and fuel meters that would have otherwise been installed under Rule 1147. Thus, the delayed installation of new equipment units or retrofit of existing units to comply with PAR 1147 would not result in any new construction of buildings or other structures. In general, the areas where affected equipment is located currently do not typically support riparian habitat, federally protected wetlands, or migratory corridors. Additionally, special status plants, animals, or natural communities are not expected to be found in close proximity to the affected facilities.

IV. e) & f) PAR 1147 is not envisioned to conflict with local policies or ordinances protecting biological resources nor local, regional, or state conservation plans because it will only affect combustion equipment primarily located at existing facilities in industrial or commercial areas. Additionally, PAR 1147 will not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or any other relevant habitat conservation plan for the same reason.

The SCAQMD, as the Lead Agency for the proposed project, has found that, when considering the record as a whole, there is no evidence that PAR 1147 will have potential for any new adverse effects on wildlife resources or the habitat upon which wildlife depends. Accordingly, based upon the preceding information, the SCAQMD has, on the basis of substantial evidence, rebutted the presumption of adverse effect contained in §753.5 (d), Title 14 of the California Code of Regulations.

Based upon these considerations, no significant biological resources impacts are anticipated and as such, the topic of biological resources will not be further analyzed in the Draft EA. Since no significant adverse biological resources impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource, site, or feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance Criteria

Impacts to cultural resources will be considered significant if:

- The project results in the disturbance of a significant prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group.
- Unique paleontological resources are present that could be disturbed by construction of the proposed project.
- The project would disturb human remains.

Discussion

V. a), b), c), & d) Compliance with PAR 1147 means the delayed installation of new compliant units or retrofitting existing units with ultra-low NOx burner technology and the reduced installation of time meters and fuel meters that would have otherwise been installed under Rule 1147. As was previously analyzed in the December 2008 Final EA, only minor construction-related activities associated with installing compliant equipment or retrofitting existing equipment with ultra-low NOx burners at affected facilities are expected to occur as a result of PAR 1147 and these construction activities are expected to be confined within the existing footprint of the affected facilities. Thus, no impacts to historical resources are expected to occur as a result of implementing PAR 1147.

Installing add-on controls and any other associated equipment to comply with PAR 1147 may require disturbance of previously disturbed areas, i.e., existing industrial or commercial facilities. However, since construction-related activities are expected to be confined within the existing footprint of the affected facilities, PAR 1147 is not expected to require physical changes to the environment, which may disturb paleontological or archaeological resources. Furthermore, it is envisioned that these areas are already either devoid of significant cultural resources or whose

cultural resources have been previously disturbed. Therefore, the proposed project has no potential to cause a substantial adverse change to a historical or archaeological resource, directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, or disturb any human remains, including those interred outside a formal cemeteries. PAR 1147 is, therefore, not anticipated to result in any activities or promote any programs that could have a significant adverse impact on cultural resources in the District. PAR 1147 is, therefore, not anticipated to result in any activities or promote any programs that could have a significant adverse impact on cultural resources in the District.

Based upon these considerations, no significant adverse cultural resources impacts are expected from the implementing PAR 1147 and as such, the topic of cultural resources will not be further assessed in the Draft EA. Since no significant cultural resources impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
VI. ENERGY. Would the project:				
a) Conflict with adopted energy conservation plans?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the need for new or substantially altered power or natural gas utility systems?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Create any significant effects on local or regional energy supplies and on requirements for additional energy?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create any significant effects on peak and base period demands for electricity and other forms of energy?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Comply with existing energy standards?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance Criteria

Impacts to energy and mineral resources will be considered significant if any of the following criteria are met:

- The project conflicts with adopted energy conservation plans or standards.
- The project results in substantial depletion of existing energy resource supplies.
- An increase in demand for utilities impacts the current capacities of the electric and natural gas utilities.
- The project uses non-renewable resources in a wasteful and/or inefficient manner.

Discussion

VI. a) & e) Compliance with PAR 1147 means the delayed installation of new compliant units or retrofitting existing units with ultra-low NOx burner technology and the reduced installation

of time meters and fuel meters that would have otherwise been installed under Rule 1147. Once new ultra-low NOx burners are installed or existing equipment is replaced with new compliant equipment, there will be a slight reduction in demand for natural gas, as new burners are expected to be more efficient than existing affected equipment. As a result, PAR 1147 would not conflict with energy conservation plans, use non-renewable resources in a wasteful manner, or result in the need for new or substantially altered power or natural gas systems. Since PAR 1147 would primarily affect existing equipment operating at existing facilities and because compliant equipment, if installed, will be more efficient than existing equipment, the proposed project will not conflict with adopted energy conservation plans because existing facilities would be expected to continue implementing any existing energy conservation plans. Additionally, operators of affected facilities are expected to comply with existing energy conservation plans and standards to minimize operating costs, while still complying with the requirements of PAR 1147. Accordingly these impact issues will not be further analyzed in the Draft EA.

VI. b), c), & d) PAR 1147 would not create any significant effects on peak and base period demands for electricity and other forms of energy since no construction of buildings or other structures are anticipated as a result of the affected facilities operating equipment that is either manufactured or retrofitted with ultra-low NOx burner technology.

The majority of the universe of sources that are regulated by PAR 1147 is fired with natural gas. As discussed in the air quality section regarding GHG emissions, due to ultra-low NOx burner retrofits that will occur on a delayed implementation schedule, PAR 1147 is expected to result in a slight decrease in the demand for natural gas, though when this decrease will occur will vary and will be dependent upon the proposed delayed compliance dates. Nevertheless, based upon these considerations, PAR 1147 is not expected to use energy in a wasteful manner, and will not exceed SCAQMD energy significance thresholds. There will be no substantial depletion of energy resources nor will significant amounts of fuel be needed when compared to existing supplies.

In light of the preceding discussion, PAR 1147 would not create any significant effects on peak and base period demands for electricity and other forms of energy and it is expected to comply with existing energy standards. Therefore, PAR 1147 is not expected to generate significant adverse energy resources impacts and as such, the topic of energy will not be discussed further in the Draft EA. Since no significant energy impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
VII. GEOLOGY AND SOILS. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance Criteria

Impacts on the geological environment will be considered significant if any of the following criteria apply:

- Topographic alterations would result in significant changes, disruptions, displacement, excavation, compaction or over covering of large amounts of soil.
- Unique geological resources (paleontological resources or unique outcrops) are present that could be disturbed by the construction of the proposed project.
- Exposure of people or structures to major geologic hazards such as earthquake surface rupture, ground shaking, liquefaction or landslides.
- Secondary seismic effects could occur which could damage facility structures, e.g., liquefaction.
- Other geological hazards exist which could adversely affect the facility, e.g., landslides, mudslides.

Discussion

VII. a) Southern California is an area of known seismic activity. Structures must be designed to comply with the Uniform Building Code Zone 4 requirements if they are located in a seismically active area. The local city or county is responsible for assuring that a proposed project complies with the Uniform Building Code as part of the issuance of the building permits and can conduct inspections to ensure compliance. The Uniform Building Code is considered to be a standard safeguard against major structural failures and loss of life. The goal of the code is to provide structures that will: 1) resist minor earthquakes without damage; 2) resist moderate earthquakes without structural damage but with some non-structural damage; and 3) resist major earthquakes without collapse but with some structural and non-structural damage.

The Uniform Building Code bases seismic design on minimum lateral seismic forces (“ground shaking”). The Uniform Building Code requirements operate on the principle that providing appropriate foundations, among other aspects, helps to protect buildings from failure during earthquakes. The basic formulas used for the Uniform Building Code seismic design require determination of the seismic zone and site coefficient, which represent the foundation conditions at the site. Accordingly, buildings and equipment at existing affected facilities are likely to conform to the Uniform Building Code and all other applicable state codes in effect at the time they were constructed.

Compliance with PAR 1147 means the delayed installation of new compliant units or retrofitting existing units with ultra-low NOx burner technology and the reduced installation of time meters and fuel meters that would have otherwise been installed under Rule 1147. PAR 1147 would only affect combustion equipment located primarily at existing facilities in industrial or commercial areas. Since implementing PAR 1147 is expected to involve the delayed installation of new compliant equipment or the retrofitting of existing units with ultra-low NOx burners at existing facilities, no new buildings or structures are expected to be constructed in response to the proposed project. As a result, substantial exposure of people or structure to the risk of loss, injury, or death involving seismic-related activities is not anticipated and will not be further analyzed in the Draft EA.

VII. b) Since implementing PAR 1147 is expected to involve the delayed installation of new compliant equipment or the retrofitting of existing units with ultra-low NOx burners at existing

facilities, no soil disruption from excavation, grading, or filling activities; changes in topography or surface relief features; erosion of beach sand; or changes in existing siltation rates are anticipated in response to the proposed project.

VII. c) Since implementing PAR 1147 is expected to involve the delayed installation of new compliant equipment or the retrofitting of existing units with ultra-low NOx burners at existing facilities, it is expected that the soil types present at the affected facilities will not be further susceptible to expansion or liquefaction. Subsidence is not anticipated to be a problem since no excavation, grading, or filling activities will occur at affected facilities. Further, PAR 1147 would not involve drilling or removal of underground products (e.g., water, crude oil, et cetera) that could produce new, or make worse existing subsidence effects. Additionally, the affected areas are not envisioned to be prone to new risks from landslides or have unique geologic features since the affected facilities are located in industrial or commercial areas where such features have already been altered or removed. Finally, since affected equipment are located at existing facilities, PAR 1147 is not expected to alter or make worse any existing potential for subsidence, liquefaction, et cetera.

VII. d) & e) Since PAR 1147 will affect operations at primarily existing facilities, it is expected that people or property will not be exposed to new impacts relative to expansive soils or soils incapable of supporting water disposal, nor will any existing impacts be made worse. Further, PAR 1147 would not require installation of septic tanks or other alternative waste water systems. The main effect of PAR 1147 will be the delayed installation of new compliant equipment or the retrofitting of existing units with ultra-low NOx burners at the affected facilities.

Based upon these considerations, no geology and soils impacts are expected from the implementation of PAR 1147 and as such, the topic of geology and soils will not be further analyzed in the Draft EA. Since no significant geology and soils impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
VIII. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, and disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
c) Emit hazardous emissions, or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public use airport or a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Significantly increased fire hazard in areas with flammable materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance Criteria

Impacts associated with hazards will be considered significant if any of the following occur:

- Non-compliance with any applicable design code or regulation.
- Non-conformance to National Fire Protection Association standards.
- Non-conformance to regulations or generally accepted industry practices related to operating policy and procedures concerning the design, construction, security, leak detection, spill containment or fire protection.
- Exposure to hazardous chemicals in concentrations equal to or greater than the Emergency Response Planning Guideline (ERPG) 2 levels.

Discussion

VIII. a) There are no provisions in PAR 1147 that would increase the amount of hazardous materials used or generated by facility owners/operators. Further, because implementation of PAR 1147 will be the delayed installation of new compliant equipment or the retrofitting of existing units with ultra-low NOx burners at the affected facilities, no raw material deliveries or waste disposal truck trips that handle hazardous materials will be associated with the proposed project after the applicable compliance dates.

As indicated in the discussion under energy, PAR 1147 applies to combustion equipment operations that are mainly fired with natural gas, though a small percentage are fired with liquid fuel; both are flammable substances. Because the ultra-low NOx burner technology is more efficient than existing burner technologies, upon installation, implementation of PAR 1147 is expected to slightly reduce the demand for fuel compared to what is currently used at existing affected facilities. As a result, implementation of PAR 1147 is not expected to noticeably change or may slightly reduce any existing flammability hazard that may be associated with operating these combustion devices. In summary, implementation of PAR 1147 is not expected to increase any existing flammability hazard associated with firing ultra-low NOx burners.

VIII. b) & h) Since PAR 1147 would primarily affect existing combustion equipment that is primarily located at existing facilities, existing emergency planning is anticipated to adequately minimize the risk associated installing new compliant equipment or retrofitting existing equipment with ultra-low NOx burners. Businesses are required to report increases in the storage or use of flammable and otherwise hazardous materials to local fire departments. As noted in item VIII. a), PAR 1147 is not expected to increase the amount of materials used or generated at affected facilities that would contain hazardous materials nor is it expected to significantly increase the demand of fuels (natural gas and liquid fuel) or other flammable substances.

In addition, local fire departments ensure that adequate permit conditions are in place to protect against potential risk of upset. The Uniform Fire Code and Uniform Building Code are set standards intended to minimize risks from flammable or otherwise hazardous materials. Local jurisdictions are required to adopt the uniform codes or comparable regulations. Local fire agencies require permits for the use or storage of hazardous materials and permit modifications for proposed increases in their use. Permit conditions depend on the type and quantity of the hazardous materials at the facility. Permit conditions may include, but are not limited to, specifications for sprinkler systems, electrical systems, ventilation, and containment. The fire departments make annual business inspections to ensure compliance with permit conditions and other appropriate regulations.

Further, all hazardous materials are expected to be used in compliance with established Occupational Safety and Health Administration (OSHA) or California Occupational Safety and Health Administration (CalOSHA) regulations and procedures, including providing adequate ventilation, using recommended personal protective equipment and clothing, posting appropriate signs and warnings, and providing adequate worker health and safety training. When taken together, the aforementioned regulations provide comprehensive measures to reduce hazards of explosive or otherwise hazardous materials. Compliance with these and other federal, state and

local regulations and proper operation and maintenance of equipment should ensure the potential for explosions or accidental releases of hazardous materials is not significant.

VIII. c), e), & f) In general, the purpose of PAR 1147 is to bring compliance relief to owners/operators of affected combustion equipment by: 1) delaying implementation of certain NOx emission limit compliance dates for existing (in-use) permitted equipment; 2) removing the requirement for the installation of gas fuel meters for equipment that currently comply with the NOx emission level in terms of ppm; and, 3) removing the requirement for time meters. While delaying implementation will delay some NOx emission reductions originally projected during the adoption of Rule 1147, eventually the overall NOx emission reductions will be achieved from a large variety of combustion equipment at existing facilities, which will ultimately improve air quality and reduce adverse human health impact related to poor air quality. Since operations of these equipment categories occur primarily at existing facilities located in industrial or commercial areas, implementation of PAR 1147 is not expected to increase existing, or create any new hazardous emissions which would adversely affect existing/proposed schools or public/private airports located in close proximity to the affected facilities. Accordingly, these impact issues will not be further evaluated in the Draft EA.

VIII. d) Even if some affected facilities are designated pursuant to Government Code §65962.5 as a large quantity generator of hazardous waste, it is not anticipated that complying with PAR 1147 will alter in any way how operators of affected facilities manage their hazardous wastes and that they will continue to be managed in accordance with all applicable federal, state, and local rules and regulations.

VIII. f) Aside from the use of natural gas and liquid fuel needed to fuel the equipment, it should again be noted that PAR 1147 has no provisions that dictate the use of, or generate any new hazardous material. Under PAR 1147, owners or operators of the affected facilities will still have the flexibility and more time to choose the type of compliant combustion equipment (i.e. to install new equipment or retrofit existing equipment with ultra-low NOx burners) for their operations. Either way, the installation of new compliant equipment or the retrofit of existing equipment will not pose a substantial safety hazard. Therefore, it is not anticipated that PAR 1147 would require changes to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

In addition, Health and Safety Code §25506 specifically requires all businesses handling hazardous materials to submit a business emergency response plan to assist local administering agencies in the emergency release or threatened release of a hazardous material. Business emergency response plans generally require the following:

- Identification of individuals who are responsible for various actions, including reporting, assisting emergency response personnel and establishing an emergency response team;
- Procedures to notify the administering agency, the appropriate local emergency rescue personnel, and the California Office of Emergency Services;
- Procedures to mitigate a release or threatened release to minimize any potential harm or damage to persons, property or the environment;

- Procedures to notify the necessary persons who can respond to an emergency within the facility;
- Details of evacuation plans and procedures;
- Descriptions of the emergency equipment available in the facility;
- Identification of local emergency medical assistance; and
- Training (initial and refresher) programs for employees in:
 1. The safe handling of hazardous materials used by the business;
 2. Methods of working with the local public emergency response agencies;
 3. The use of emergency response resources under control of the handler;
 4. Other procedures and resources that will increase public safety and prevent or mitigate a release of hazardous materials.

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

VIII. g) Since the facilities that operate equipment subject to the requirements in PAR 1147 are located at existing industrial or commercial sites in urban areas where wildlands are not prevalent, risk of loss or injury associated with wildland fires is not expected. Accordingly, this impact issue will not be further evaluated in the Draft EA.

Based upon these considerations, no significant adverse hazards and hazardous materials impacts are expected from the implementation of PAR 1147 and as such, the topic of hazards and hazardous materials impacts will not be further analyzed in the Draft EA. Since no significant hazards and hazardous materials impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
IX. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards, waste discharge requirements, exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board, or otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in substantial erosion or siltation on- or off-site or flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Place housing or other structures within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
f) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, or inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Require or result in the construction of new water or wastewater treatment facilities or new storm water drainage facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance Criteria

Potential impacts on water resources will be considered significant if any of the following criteria apply:

Water Demand:

- The existing water supply does not have the capacity to meet the increased demands of the project, or the project would use more than 262,820 gallons per day of potable water.
- The project increases demand for total water by more than five million gallons per day.

Water Quality:

- The project will cause degradation or depletion of ground water resources substantially affecting current or future uses.
- The project will cause the degradation of surface water substantially affecting current or future uses.
- The project will result in a violation of National Pollutant Discharge Elimination System (NPDES) permit requirements.

- The capacities of existing or proposed wastewater treatment facilities and the sanitary sewer system are not sufficient to meet the needs of the project.
- The project results in substantial increases in the area of impervious surfaces, such that interference with groundwater recharge efforts occurs.
- The project results in alterations to the course or flow of floodwaters.

Discussion

The expected options for compliance with the proposed delayed future NO_x emission limits will either involve the installation of new compliant equipment or the retrofitting of existing units with ultra-low NO_x burners at existing facilities. No additional water demand or wastewater generation is expected to result from the operation of the units equipped with ultra-low NO_x burners at the affected facilities because this type of control technology does not entail the use of water in the NO_x control process. Further, PAR 1147 has no provision that would require the construction of additional water resource facilities, increase the need for new or expanded water entitlements, or alter existing drainage patterns. The proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. PAR 1147 would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Further, since compliance with PAR 1147 does not involve wastewater processes, there would be no change in the composition or volume of existing wastewater streams from the affected facilities. In addition, PAR 1147 is not expected to require additional wastewater disposal capacity, violate any water quality standard or wastewater discharge requirements, or otherwise substantially degrade water quality.

IX. a), g), & i) Complying with PAR 1147 will not change existing operations at affected facilities, nor would it result in an increased water demand that would cause a generation of increased volumes of wastewater because the ultra-low NO_x burners do not require water as part of the NO_x control process. As a result, there are no potential changes in water demand or wastewater volume or composition expected from facilities complying with the requirements in PAR 1147. Further, PAR 1147 is not expected to cause affected facilities to violate any water quality standard or wastewater discharge requirements since there would be no water needed and no wastewater volumes generated as a result of implementing with PAR 1147. PAR 1147 is not expected to have any water demand or water quality impacts for the following reasons:

- The proposed project does not increase demand on the existing water supply.
- The proposed project does not increase demand for total water by more than 5,000,000 gallons per day.
- The proposed project does not increase demand for potable water by more than 262,820 gallons per day.
- The proposed project does not require construction of new water conveyance infrastructure.
- The proposed project does not create a substantial increase in mass inflow of effluents to public wastewater treatment facilities.

- The proposed project does not result in a substantial degradation of surface water or groundwater quality.
- The proposed project does not result in substantial increases in the area of impervious surfaces, such that interference with groundwater recharge efforts occurs.
- The proposed project does not result in alterations to the course or flow of floodwaters.

Lastly, PAR 1147 will not increase storm water discharge, since no major construction activities are expected at affected facilities. Further, no new areas at existing affected facilities are expected to be paved, so PAR 1147 will not increase storm water runoff during operation. Therefore, no new storm water discharge treatment facilities or modifications to existing facilities will be required due to the implementation of PAR 1147. Accordingly, PAR 1147 is not expected to generate any impacts relative to construction of new storm water drainage facilities.

IX. b) & h) Because the NO_x control process of the burners in the equipment affected by PAR 1147 does not rely on water, no increase to any affected facilities' existing water demand is expected. Because ultra-low NO_x burner technology does not utilize water, implementation of PAR 1147 will not increase demand for, or otherwise affect groundwater supplies or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. In addition, implementation of PAR 1147 will not increase demand for water from existing entitlements and resources, and will not require new or expanded entitlements. Since equipment affected by PAR 1147 generally occur in existing structures at existing facilities, no paving is required that might interfere with groundwater recharge. Therefore, no water demand impacts are expected as the result of implementing PAR 1147.

IX. c) & d) Implementation of PAR 1147 will occur at existing facilities that are typically located in industrial or commercial areas that are paved and already have drainage infrastructures in place. Since PAR 1147 does not involve major construction activities that would include activities such as site preparation, grading, et cetera, no changes to storm water runoff, drainage patterns, groundwater characteristics, or flow are expected. Therefore, these impact areas are not expected to be affected by PAR 1147.

IX. e) & f) The proposed project will not require construction of new housing, contribute to the construction of new building structures, or require modifications or changes to existing structures. Further, PAR 1147 is not expected to require additional workers at affected facilities. Therefore, PAR 1147 is not expected to generate construction of any new structures in 100-year flood areas as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood delineation map. As a result, PAR 1147 is not expected to expose people or structures to any new flooding risks, or make worse any existing flooding risks. Finally, PAR 1147 will not affect any potential flood hazards inundation by seiche, tsunami, or mud flow that may already exist relative to existing facilities or create new hazards at existing facilities.

Based upon these considerations, no hydrology and water quality impacts are expected from the implementation of PAR 1147 and as such, the topic of hydrology and water quality will not be

further analyzed in the Draft EA. Since no significant hydrology and water quality impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
X. LAND USE AND PLANNING.				
Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance Criteria

Land use and planning impacts will be considered significant if the project conflicts with the land use and zoning designations established by local jurisdictions.

Discussion

X. a) Implementation of PAR 1147 is expected to involve the delayed installation of new compliant equipment or the retrofitting of existing units with ultra-low NOx burners at existing facilities. Since PAR 1147 affects equipment operating at existing facilities, it does not include any components that would require physically dividing an established community.

X. b) There are no provisions in PAR 1147 that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments and no land use or planning requirements will be altered by regulating NOx emissions from affected natural gas-fired or liquid fuel fired combustion equipment. Any delay in replacing one type of combustion equipment with another similar type of combustion equipment or replacing old burners with new ultra-low NOx burners is not considered a change in operations at affected facilities that would require changes to an existing conditional use permit. Further, since PAR 1147 would delay compliance with the lower NOx emission limits for these combustion devices, PAR 1147 would not affect in any way habitat conservation or natural community conservation plans, agricultural resources or operations, and would not create divisions in any existing communities. Therefore, present or planned land uses in the region will not be significantly adversely affected as a result of PAR 1147.

Based upon these considerations, no land use and planning impacts are expected from the implementation of PAR 1147 and as such, the topic of land use and planning will not be further

analyzed in the Draft EA. Since no significant land use and planning impacts were identified, no mitigation measures are necessary or required.

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

Significance Criteria

Project-related impacts on mineral resources will be considered significant if any of the following conditions are met:

- The project would result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.
- The proposed project results in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

Discussion

XI. a) & b) There are no provisions in PAR 1147 that would 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.

Based upon these aforementioned considerations, no significant mineral resources impacts are expected from the implementation of PAR 1147 and as such, the topic of mineral resources will not be further analyzed in the Draft EA. Since no significant mineral resources impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XII. NOISE. Would the project result in:				
a) Exposure of persons to or generation of permanent noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public use airport or private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance Criteria

Impacts on noise will be considered significant if:

- Construction noise levels exceed the local noise ordinances or, if the noise threshold is currently exceeded, project noise sources increase ambient noise levels by more than three decibels (dBA) at the site boundary. Construction noise levels will be considered significant if they exceed federal Occupational Safety and Health Administration (OSHA) noise standards for workers.
- The proposed project operational noise levels exceed any of the local noise ordinances at the site boundary or, if the noise threshold is currently exceeded, project noise sources increase ambient noise levels by more than three dBA at the site boundary.

Discussion

XII. a) Implementation of PAR 1147 is expected to involve the delayed installation of new compliant equipment or retrofitting of existing units with ultra-low NOx burners at existing facilities. PAR 1147 would only affect combustion equipment at existing facilities. Since installation of new equipment or retrofitting existing equipment does not require heavy-duty construction equipment, no significant adverse noise impacts are anticipated during the construction phase.

No other physical modifications or changes associated with the implementation of PAR 1147 are expected. Thus, PAR 1147 is not expected to expose persons to the generation of excessive noise levels above current facility levels because the proposed project will result in affected facilities operating the same type of equipment at equivalent or similar noise levels and ultra-low NOx combustion technology is not typically a noise intensive technology. It is expected that any facility affected by PAR 1147 will comply with all existing noise control laws or ordinances. Further, OSHA and CalOSHA have established noise standards to protect worker health. It is expected that all workers at affected facilities will continue complying with applicable noise standards.

XII. b) PAR 1147 is not anticipated to expose people to or generate excessive groundborne vibration or groundborne noise levels since no major construction activities are expected to occur at the existing facilities and the affected equipment are not inherently noisy or create excessive vibrations.

XII. c) A permanent increase in ambient noise levels at the affected facilities above existing levels as a result of implementing the proposed project is unlikely to occur because any new equipment that would be installed as part of implementing PAR 1147 will be replacing existing equipment with the same or similar noise profiles and retrofitting existing equipment with ultra-low NOx burners will not change the noise profile of the existing equipment. Therefore, the existing noise levels are unlikely to change and raise ambient noise levels in the vicinities of the existing facilities to above a level of significance in response to implementing PAR 1147.

XII. d) Implementation of PAR 1147 would not consist of improvements within the existing facilities that would require major construction activities. Even if an affected facility is located near a public/private airport, there are no new noise impacts expected from any of the existing facilities as a result of complying with the proposed project. Thus, PAR 1147 is not expected to expose people residing or working in the project vicinities to excessive noise levels. See also the response to item XII. a).

Based upon these considerations, no significant noise impacts are expected from the implementation of PAR 1147 and as such, the topic of noise is not further evaluated in the Draft EA. Since no significant noise impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XIII. POPULATION AND HOUSING.				
Would the project:				
a) Induce substantial growth in an area either directly (for example, by proposing new homes and businesses) or indirectly (e.g. through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance Criteria

Impacts of the proposed project on population and housing will be considered significant if the following criteria are exceeded:

- The demand for temporary or permanent housing exceeds the existing supply.
- The proposed project produces additional population, housing or employment inconsistent with adopted plans either in terms of overall amount or location.

Discussion

XIII. a) PAR 1147 would only affect combustion equipment at existing facilities. Implementation of PAR 1147 is expected to involve the delayed installation of new compliant equipment or retrofitting of existing units with ultra-low NOx burners at existing facilities. Under PAR 1147, the installation of new equipment or retrofitting of existing equipment will likely require the same number of construction workers as previously analyzed at the time of adoption of Rule 1147. That is, only two construction workers at most (one to deliver materials and one to install it) would be needed to either install new compliant equipment or retrofit existing units with ultra-low NOx burners. Nonetheless, it is expected that construction workers needed to implement PAR 1147 can be drawn from the existing labor pool in southern California. Further, PAR 1147 is not anticipated to generate any significant effects, either direct or indirect, on the district's population or population distribution as no additional workers for equipment operation are anticipated to be required at facilities subject to the proposed amendments. Human population within the jurisdiction of the SCAQMD is anticipated to grow regardless of implementing PAR 1147. As such, PAR 1147 will not result in changes in population densities or induce significant growth in population.

XIII. b) Because PAR 1147 primarily affects existing facilities located mostly in industrial and commercial areas, PAR 1147 is not expected to result in the creation of any industry that would affect population growth, directly or indirectly induce the construction of single- or multiple-family units, or require the displacement of people elsewhere.

Based upon these considerations, significant population and housing impacts are not expected from the implementation of PAR 1147 and as such, the topic of population and housing will not be further evaluated in the Draft EA. Since no significant population and housing impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XIV. PUBLIC SERVICES. Would the proposal result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:				
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance Criteria

Impacts on public services will be considered significant if the project results in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time or other performance objectives.

Discussion

XIV. a) & b) Compliance with PAR 1147 means the delayed installation of new compliant units or retrofitting existing units with ultra-low NOx burner technology and the reduced installation of time meters and fuel meters that would have otherwise been installed under Rule 1147. No other physical modifications or changes associated with the implementation of PAR 1147 are expected. The overall amount of natural gas and liquid fuel usage at any one facility over their current levels is not expected to change substantially or increase the chances for fires or explosions that could affect local fire departments. Finally, PAR 1147 is not expected to increase the need for security at affected facilities, which could adversely affect local police departments.

XIV. c) & d) The local labor pool (e.g., workforce) of particular affected facility areas is expected to remain the same since PAR 1147 would not trigger any changes to current facility operations. Therefore, with no increase in local population anticipated, no significant adverse impacts are expected to local schools.

PAR 1147 will result in the delayed replacement of existing equipment with functionally identical new equipment or retrofit of existing equipment with ultra-low NOx burners at existing facilities. Besides permitting the equipment or altering permit conditions, there is no other need for government services. Further, implementation of PAR 1147 would not result in the need for new or physically altered public facilities in order to maintain acceptable service ratios, response times, or other performance objectives. There will be no increase in population and, therefore, no need for physically altered public facilities.

Based upon these considerations, no significant public services impacts are expected from implementing PAR 1147 and as such, the topic of public services will not be further evaluated in the Draft EA. Since no significant public services impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XV. RECREATION.				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment or recreational services?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance Criteria

Impacts to recreation will be considered significant if:

- The project results in an increased demand for neighborhood or regional parks or other recreational facilities.
- The project adversely affects existing recreational opportunities.

Discussion

XV. a) & b) As previously discussed under the topic of “Land Use and Planning,” there are no provisions in PAR 1147 that would affect land use plans, policies, or regulations. Land use and

other planning considerations are determined by local governments and no land use or planning requirements will be altered by the changes proposed in PAR 1147. Further, PAR 1147 would not increase the demand for or use of existing neighborhood and regional parks or other recreational facilities or require the construction of new or expansion of existing recreational facilities that might have an adverse physical effect on the environment because it will not directly or indirectly increase or redistribute population.

Based upon these considerations, no significant recreation impacts are expected from implementing PAR 1147 and as such, the topic of recreation will not be further evaluated in the Draft EA. Since no significant recreation impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XVI. SOLID/HAZARDOUS WASTE.				
Would the project:				
a) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Comply with federal, state, and local statutes and regulations related to solid and hazardous waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance Criteria

The proposed project impacts on solid/hazardous waste will be considered significant if the following occurs:

- The generation and disposal of hazardous and non-hazardous waste exceeds the capacity of designated landfills.

Discussion

XVI. a) & b) Compliance with PAR 1147 means the delayed installation of new compliant units or retrofitting existing units with ultra-low NOx burner technology and the reduced installation of time meters and fuel meters that would have otherwise been installed under Rule 1147. No other physical modifications or changes associated with the implementation of PAR 1147 are expected. Because affected equipment has a finite lifetime, it will ultimately have to be replaced at the end of its useful life. However, the delayed compliance dates for some equipment mean that PAR 1147 may delay replacement. However, affected equipment may also be refurbished and used elsewhere. In addition, any scrap metal from replaced units has economic value and is expected to be recycled, so any solid or hazardous waste impacts specifically associated with PAR 1147 are expected to be minor. As a result, no substantial change in the amount or character of solid or hazardous waste streams is expected to occur. For these reasons, PAR 1147 is not expected to increase the volume of solid or hazardous wastes from affected facilities,

require additional waste disposal capacity, or generate waste that does not meet applicable local, state, or federal regulations.

Based upon these considerations, PAR 1147 is not expected to increase the volume of solid or hazardous wastes that cannot be handled by existing municipal or hazardous waste disposal facilities, or require additional waste disposal capacity. Further, implementing PAR 1147 is not expected to interfere with any affected facility's ability to comply with applicable local, state, or federal waste disposal regulations.

Thus, no significant solid/hazardous waste impacts are expected from implementing PAR 1147 and as such, the topic of solid/hazardous waste will not be further evaluated in the Draft EA. Since no significant solid/hazardous waste impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XVII. TRANSPORTATION/TRAFFIC.				
Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
d) Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance Criteria

Impacts on transportation/traffic will be considered significant if any of the following criteria apply:

- Peak period levels on major arterials are disrupted to a point where level of service (LOS) is reduced to D, E or F for more than one month.
- An intersection's volume to capacity ratio increase by 0.02 (two percent) or more when the LOS is already D, E or F.
- A major roadway is closed to all through traffic, and no alternate route is available.
- The project conflicts with applicable policies, plans or programs establishing measures of effectiveness, thereby decreasing the performance or safety of any mode of transportation.
- There is an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system.
- The demand for parking facilities is substantially increased.
- Water borne, rail car or air traffic is substantially altered.
- Traffic hazards to motor vehicles, bicyclists or pedestrians are substantially increased.
- The need for more than 350 employees
- An increase in heavy-duty transport truck traffic to and/or from the facility by more than 350 truck round trips per day
- Increase customer traffic by more than 700 visits per day.

Discussion

XVII. a) & b) PAR 1147 affects a large variety of combustion equipment operating primarily at existing facilities and has no potential to adversely affect transportation. Compliance with PAR 1147 means the delayed installation of new compliant units or retrofitting existing units with ultra-low NOx burner technology and the reduced installation of time meters and fuel meters that would have otherwise been installed under Rule 1147. As discussed in the Population and Housing section, the physical modifications or changes associated with the implementation of PAR 1147 would only require two construction workers at most to deliver materials and to

install or retrofit equipment. PAR 1147 would have no effect on existing operations at the affected facilities that would change or cause additional transportation demands or services. Therefore, since only two additional construction-related trips per facility and no operational-related trips per facility are anticipated, the implementation of PAR 1147 is not expected to significantly adversely affect circulation patterns on local roadways or the level of service at intersections near affected facilities. Finally, affected facilities are dispersed throughout the District, so it is not expected that construction-related trips to affected facilities would overlap to an appreciable extent.

XVII. c) Compliance with PAR 1147 means the delayed installation of new compliant units or retrofitting existing units with ultra-low NOx burner technology and the reduced installation of time meters and fuel meters that would have otherwise been installed under Rule 1147. Thus, PAR 1147 will not require operators of existing facilities to construct buildings or other structures that could interfere with flight patterns so the height and appearance of the existing structures are not expected to change. Therefore, implementation of PAR 1147 is not expected to adversely affect air traffic patterns. Further, PAR 1147 will not affect in any way air traffic in the region because it will not require transport of any materials by air.

XVII. d) As the physical modifications that are expected to occur by implementing PAR 1147 are limited to the confines of existing facilities, no offsite modifications to roadways are anticipated for the proposed project that would result in an additional design hazard or incompatible uses.

XVII. e) Any equipment replacements or retrofits associated with implementing PAR 1147 will likely occur in or about the same location within the confines of each existing facility such that no changes to emergency access at or in the vicinity of the affected facilities would be expected. As a result, PAR 1147 is not expected to adversely impact emergency access.

XVII. f) Other than the equipment replacements or retrofits associated with implementing PAR 1147, no facility modifications or changes are expected that would conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Based upon these considerations, no significant adverse transportation/traffic impacts are expected from implementing PAR 1147 and as such, the topic of transportation/traffic will not be further evaluated in the Draft EA. Since no significant transportation/traffic impacts were identified, no mitigation measures are necessary or required.

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

Discussion

XVIII. a) As discussed in the "Biological Resources" section, PAR 1147 is not expected to significantly adversely affect plant or animal species or the habitat on which they rely because the affected equipment is located at primarily existing facilities in industrial or commercial areas which have already been greatly disturbed and that currently do not support such habitats. Additionally, special status plants, animals, or natural communities are not expected to be found within close proximity to the facilities affected by PAR 1147.

XVIII. b) & c) As discussed in items I through XVIII above, the proposed project is not expected to create significant adverse impacts to any environmental area except for criteria air pollutants under the topic of air quality and GHGs. Potentially significant adverse criteria air

pollutant impacts under the tops of air quality and GHG emissions will be analyzed in the Draft EA.

APPENDIX A of the Initial Study

PROPOSED AMENDED RULE 1147

In order to save space and avoid repetition, please refer to the latest version of proposed amended Rule 1147 located elsewhere in Appendix A of the Draft SEA. The version in this Draft SEA is same as the January 19, 2011 version of the proposed amended rule that was circulated with the Notice of Preparation/Initial Study (NOP/IS) that was released on February 1, 2011 for a 30-day public review and comment period ending March 2, 2011.

Original hard copies of the NOP/IS, which include the version of the proposed amended rule listed above, can be obtained through the SCAQMD Public Information Center at the Diamond Bar headquarters or by calling (909) 396-2039.

APPENDIX C OF THE FINAL SEA

COMMENT LETTER ON THE DRAFT SEA AND RESPONSES TO COMMENTS

Comment Letter #1



Furnace Dynamics, Inc.
 261 Euclid Ave.
 Long Beach, CA 90803
 562-433-3025

May 15, 2011

Ms. Barbara Radlein
 AQ Specialist
 South Coast Air Quality Management District
 7140 Bandini Blvd.
 Los Angeles, CA 90040

RE: Draft CEQA Document (SEA) Relating Rule 1147 Dated April 1, 2011.

Dear Ms. Radlein,

On behalf of many of the very small sources contained within the purview of Rule 1147 we issue the following comments for your consideration and acknowledgment. Of considerable concern to the regulated community are the inaccuracies that were present in the original document submitted to the Governing Board, ARB and EPA.

These primarily relate to the cost of the program to the regulated community and the issues around cost effectiveness. Originally the staff assessed the cost effectiveness at \$3,000 to \$17,000 per controlled ton of NOx. We have reviewed many of the smaller sources contained in Rule 1147 and have found that the values for cost effectiveness can be up to as much as \$4,000,000 per controlled ton of emissions reduction pursuant to Minor Source Best Available Control Technology Guidelines. The limit contained therein is \$19,100/controlled ton of NOx. We feel that since Rule 1147 is a SIP approved rule and the emissions values stated in the rule are according to many comments by staff are based on BACT and/or BARCT that these guidelines are in plan and should be followed. Staff has deviated from this standard in their evaluations of the cost effectiveness. We would like a legal explanation of why this deviation was made and the justification from this deviation. It should be noted for the record that the majority of the sources covered by the rule will probably fall into the acceptable Guidelines criteria.

1-1

Additionally for your consideration we are providing the following comments relating to the Draft Subsequent Environmental Assessment (SEA) dated April 1, 2011.

SEA page 1-5: Item #1

This rule comprises approximately 270 different basic categories (b-cats) of devices. Within those categories of equipment there are sub categories. Staff makes the assumption the there are burners from manufacturers for all categories and sub categories. This is not the case. Whereas there may be burners available for specific categories of equipment within a b-cat, others

1-2

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absolutely do not exist. Staff needs to reevaluate that statement. The burner manufactures are quite candid about their inability to provide burners that will meet the ppm requirements for specific equipment. The problem still exists that there are no burners available to meet emissions requirement. Further, whereas there are some manufacturers that state they have acceptable burners for a certain b-cat, upon closer consideration they admit that they cannot provide acceptable technology for specific types of equipment. This is true for many segments of industry. Further manufactures have made statements based on assumptions without being installed, source tested and operated successfully for one year as required pursuant to Minor Source BACT Guidelines Achieved in Practice criteria.

1-2
 Cont'd

SEA page 1-5: Item #2

Unfortunately this is a gross over simplification of issues relating to many of the b-cats contained in this rule. No acceptable analysis has been provided that shows a b-cat and the correlated technical analysis of the devices. The terms of "many" and "not necessarily" are not specific to lend themselves to technical credibility. Whereas there are boilers that have atmospheric burners very few of the devices within this rule would fall into that category of equipment.

Staff has correctly stated that a technique for lowering NOx is increasing the excess air thus diluting the hot mix temperature and lowering emission levels. Staff however indicates that adjustments can be made to compensate for decreased efficiency. This is not always true from a practical sense or from the physics of the combustion process. The efficiency of the combustion process is very accurately delineated in available heat curves available in the North American Combustion Handbook, Eclipse Engineering Guide and other references. These are used regularly by companies that design combustion equipment for industrial applications. An example is if the original burner is operated at 10% excess air and the process exhaust temperature is 1500F the available heat is about 52%. Correspondingly the available heat at the same temperature but operating at 70% excess air (for reduction of NOx) is only 35%. The available heat is the net energy left after combustion losses to do work in the furnace. Thus if the process relies on 52% to heat the process and only 35% is available, more gross energy is required for the process to operate commensurate with the original process. In this example there are circumstances where the NOx levels can actually go up in a pound per hour into the atmosphere depending on the starting and ending emissions values. The bottom line is that more BTU input is necessary to compensate for the lost combustion efficiency.

1-3

An additional statement indicates that with higher excess air more uniform temperatures are possible along with reduced stratification. Whereas this is a tool to improve convective heat transfer at lower temperature ranges and thus temperature uniformity within the operating envelop of the furnace the energy efficiency goes up dramatically. By operating in the excess air

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mode holding a given temperature and switching to an on ratio operation the fuel consumption can drop by over 50%. Thus the statement that fuel use is reduced in completely incorrect.

Therefore the statements by staff are again overly simplified and may only be relevant in certain specific applications and fundamentally incorrect in many processes. This is a fact of combustion physics. We believe this statement should be modified to reflect actual engineering evaluations and not be used as a general statement.

1-3
 Cont'd

Page 3-2 Table 3-1:

We are concerned that because the devices contained in Rule 1147 are of such a disparate nature and little or no source test data is available to substantiate the numbers contained within the chart, we feel that these numbers are overstated for a variety of the types of equipment delineated therein. Thus we would like staff to supply data from a representative grouping of b-cats to assure the regulated community of the accuracy of the assertions.

1-4

Page 3-5 through 3-12, Table 3-3 2009 Air Quality Data – SCAQMD:

We are concerned that whereas the data on air quality in the SCAB is delineated in the charts for criteria pollutants there is no reference to the overall contribution of those devices contained in Rule 1147. In other words, the percent of contribution of Rule 1147 vs. the total NOx emissions from all sources including RECLAIM sources, mobile (on and off road), ships at berth, trains, planes, cars and trucks. We are also concerned that the reduction of NOx and other criteria pollutants resulting from the significant number of businesses that have left the basin has not been accounted for in the emission reductions inventory. There is a high probability that the companies who have left the SCAB over the last five years would more than offset any emission reduction associated with Rule 1147 reductions. Further, due to the lack of the SCAQMD's legal jurisdiction over these other sources, any reductions from Rule 1147 could be mitigated by increased in any of the other non regulated sources. We would respectfully like the staff to address these concerns.

1-5

Sincerely,

Anthony W. Endres
 President

Innovative Consulting and Furnace Designs For Industry

Responses to Comment Letter #1
(Furnace Dynamics, Inc., May 15, 2011)

- 1-1 The commenter's first claim that most of the sources affected by PAR 1147 are minor sources and that PAR 1147 should not impose costs greater than \$19,100 per ton of emission reduction is incorrect because the current SCAQMD minor source BACT cost effectiveness guidelines for NO_x and VOC respectively are about \$25,000 and \$26,500 dollars per ton (adjusted to 2011 equipment costs pursuant to SCAQMD's BACT Guidelines). Further, the cost effectiveness for PAR 1147 is similar to the SCAQMD BACT cost-effectiveness guidelines for minor sources.

With regard to the commenter's claims that the cost effectiveness for PAR 1147 can be very high and the rule's cost effectiveness should not be higher than what would otherwise be allowed under the BACT Guidelines, air pollution districts in California, including the SCAQMD, have the authority to adopt rules for their own jurisdictions and each effort to adopt these rules is required to consider cost and cost effectiveness as part of the rule development process. In addition, rule development specifically applicable to existing sources is governed by different federal and state requirements, in addition to new source review, and is required to include "all feasible measures." For the majority of rule adoption and amendment activities and as was the case with PAR 1147, SCAQMD staff provides an analysis of the rule's cost effectiveness in the staff report. For PAR 1147, the cost effectiveness was determined from confidential information that was provided by vendors and represented a range of the average cost for the various types of equipment that would be subject to PAR 1147.

The cost effectiveness for Rule 1147 as adopted in December 2008 was determined to be an average of \$17,000 per ton and this value was determined to be within the acceptable range of cost effectiveness for other NO_x rules recently adopted or amended by the SCAQMD. For example, the cost effectiveness for the May 2006 amendment of SCAQMD Rule 1146.2 – Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters, for one category of small boilers with ratings between 300,000 Btu/hour and 400,000 Btu/hour, was approximately \$22,000 per ton. Similarly, the cost effectiveness for the September 2008 amendment of SCAQMD Rule 1146.1 - Emissions of Oxides of Nitrogen from Small Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters, for small boilers with ratings between two million Btu/hour and five million Btu/hour, ranged between \$14,400 per ton and \$33,500 per ton. Lastly, the cost effectiveness of the November 2010 amendments to the SCAQMD's SO_x RECLAIM program via Rule 2002 – Allocations for Oxides of Nitrogen (NO_x) and Oxides of Sulfur (SO_x) was as high as \$50,000 per ton. Lastly, other air pollution districts in California have adopted NO_x control rules with a cost effectiveness as high as \$60,000 per ton (e.g., San Joaquin Valley APCD).

The commenter has previously provided oral comments at public meetings suggesting that the cost effectiveness for some sources can be in the hundreds of thousands to millions of dollars per ton of NO_x reduced. SCAQMD staff has requested documentation and supporting calculations for these assertions but to date, the commenter has failed to provide evidence to substantiate these claims. The examples of high cost effectiveness cited by the commenter in these instances were for units with very small primary burners that required a permit from the SCAQMD because the units are connected to much larger afterburners that control VOC, particulate or toxic emissions (e.g., smokehouses and coffee roasters). The primary burners

cited for these applications are either circular cast iron burners or long pipes with holes in them (ribbon burners). While there are low cost radiant burners that meet the 30 ppm NO_x limit for these applications, SCAQMD staff has determined that it would be less costly to use electric heating elements in these units. In fact, BACT for a smokehouse smoke generator has been an electric burner since 1990. A third option for when there is a small primary burner used in a small unit that is connected to a much larger afterburner would be to use the new weighted emission test in PAR 1147. If the unit's total emissions are equivalent to those for the compliant burner and compliant afterburner, the owner would not have to replace the small primary burner.

- 1-2 Although the commenter asserts there are many applications where low NO_x burners that could comply with PAR 1147 are not available, he does not identify specific applications where compliant burners are not available nor does he provide data or other information supporting his assertions. SCAQMD staff has presented data at public meetings that confirm the wide availability of various low NO_x burners from many manufacturers for the diverse equipment categories that would be affected by PAR 1147. While not every manufacturer provides burners for every application, there are typically at least three manufacturers that provide compliant burners for most applications. In addition, SCAQMD staff has made available test results of permitted equipment operating in the district that currently meet the emission limits in PAR 1147.

Specifically, SCAQMD staff has previously provided the results from 53 source tests and corresponding BACT determinations (based on those source tests) to the Rule 1147 Task Force at public meetings. A summary of low NO_x burners available from six major suppliers of burners was also provided at these public meetings and was available in the PAR 1147 Draft Staff Report. All of the emission limits in PAR 1147 have been achieved in practice. The majority of the BACT decisions and tests used as the basis for rule emission limits were for permits issued approximately 10 years ago.

SCAQMD staff recognizes that retrofitting burners for some applications is a greater challenge than for other applications affected by PAR 1147. For this reason, PAR 1147 provides additional time to comply with their respective NO_x limits for categories with units that may have a more difficult time complying with PAR 1147. SCAQMD staff estimates that there are currently fewer than 250 units (e.g., evaporators, heated process tanks, parts washers, fryers, and food ovens) that require this additional time. Discussions with burner manufacturers indicate that burners meeting the rule limit will be available for processes with immersion tube heating (e.g., evaporators, process tanks, parts washers and fryers). Owners of some food ovens that initially find it difficult to comply with the proposed rule limits can choose the mitigation fee option in PAR 1147 in order to allow additional time for compliant technologies to develop. There may be specific types of equipment where retrofits with low NO_x burners can be more difficult, but SCAQMD staff has committed in the resolution to further address these issues as part of a technology assessment. Owners of these types of equipment could also choose the mitigation fee option to provide additional time to achieve compliance. SCAQMD staff has made a commitment to continue to work with affected industries on this issue as part of the technology assessment. The Final SEA for PAR 1147 analyzes potential adverse air quality impacts from the proposed mitigation fee option and, with mitigation, concluded that impacts would be less than significant. The analysis also concluded that no other environmental areas would be significantly adversely affected as a result of implementing the mitigation fee option.

- 1-3 The commenter is referring to the second of the two topics identified in “Areas of Controversy” section as summarized in Table 1-1 of the Draft SEA (labeled “Burner Fuel Penalty and Fuel Efficiency”). The commenter states that SCAQMD’s staff analysis is oversimplified and states that a detailed list of every specific type of process and an analysis for each process has not been provided in the summary of the areas of controversy. The commenter also states that there are few equipment categories subject to Rule 1147 that use “atmospheric” burners (e.g., burners that do not pre-mix most of the combustion air with fuel before combustion). In addition, the commenter presents a summary of how burners work in the form of an example for a high temperature application. Further, the commenter provides a summary of temperature uniformity and burner operation in high temperature applications such as metal furnaces. The commenter goes on to state that because of the way burners operate, the discussion of efficiency as it relates to comments received at the public workshop and task force meetings are oversimplified.

With regard to Table 1-1, the discussion is a summary compilation of specific comments made at the Public Workshop and task force meetings. Specifically, the concerns expressed by the public and the summary in Table 1-1 addresses the issue of system efficiency when retrofitting low temperature operations such as ovens and dryers. Statements made by industry representatives at those meetings claimed that low NO_x burners used in ovens and dryers are less efficient and use more fuel than the older burners because a burner manufacturer recommended a higher output burner than the original. However, installing a higher capacity burner does not mean the equipment uses more fuel. The following written comment from one of the attendees of the Public Workshop explains the flaw in this logic: *“if you are replacing a” ... “2.0 (mmBTU) burner with an(other manufacturers)” ... “burner you will possibly need to apply a 2.5 mmBTU unit because that is the closest size you can use without doing an actual oven capacity survey. The real point is that the burner will only use what the oven demands. If it ran on 1.65 mmBTU’s before the change out it will still run on 1.65 mmBTU’s. The “larger” burner is a result of supplier convenience, not the related efficiency of the burner process.”* Thus, the burner will still use the same amount of fuel.

SCAQMD staff acknowledges that burner replacements will also require adjustment of other components in a system to maintain efficiency, such as fans and intake and exhaust dampers that regulate the air flow through the system. System fans or dampers (intake and exhaust) that provide the air for drying and heating a product will need to be adjusted in order to compensate for any increased flow of air through a low NO_x burner. However, decreasing fan speeds to compensate for additional air through the burner also reduces electricity costs and damper adjustments are relatively simple and inexpensive changes.

The results of staff’s evaluation of equipment subject to Rule 1147 do not agree with the comment that “... very few of the devices within this rule would fall into that category of burner [atmospheric burner].” For example, many spray booths and coating ovens use a heat exchange unit with burners that operate similar to Bunsen burners, which are a type of atmospheric burner. The burners themselves are not efficient and these indirect heating units provide at most 80 percent of the fuel’s energy to the heated space. In addition, burners used in food ovens and roasters are atmospheric type burners.

With regard to the commenter’s discussion on how burners operate, regardless of the emissions of current burners, the same principles as discussed in the comment apply. However, system

efficiency is more than just a burner's characteristics. Any discussion of efficiency needs to be clear about what is meant by "efficiency." Efficiency can mean the percentage of available energy released from the fuel by that specific burner, the amount of heat transferred to the material being heated, or the total system efficiency.

The total efficiency of these processes are affected by many factors including the amount of primary air mixed with fuel, the amount of secondary air used by the burner during combustion, the nature of the material(s) being heated, and the amount of additional air drawn through the system for the heating or drying process or for maintaining temperature uniformity. When any burner is replaced, these systems need to be adjusted. This requirement is not unique to lower NOx burners. Burners wear out and need to be replaced. If the same burner is not available or the business owner chooses a different model or vender, the system will require adjustment of the new burner(s), fans, and dampers in order to maintain efficiency.

In order to put the issue of low NOx burners and efficiency in perspective, it is important to note that over the past decade California gas utilities have provided efficiency rebates to businesses that replace old burner systems with new more efficient low NOx premix burners. SCAQMD staff supports the utilities' contentions that modern low NOx burners are more efficient because they produce more energy from the same amount of fuel. Evidence of improved efficiency is best illustrated by the substantially lower emissions of carbon monoxide and unburned hydrocarbons in the exhaust of these burners.

With regard to the use of excess air to improve temperature uniformity, staff's summary is correct as acknowledged by the commenter. The commenter expands upon the subject, but agrees that the same technique used to improve uniformity in a furnace can also reduce NOx emissions.

- 1-4 The commenter states that the SCAQMD has not provided source test data and that the PAR 1147 limits have not been achieved in practice. SCAQMD staff has previously provided 53 source tests and BACT determinations (based on source tests) to the Rule 1147 Task Force at a public meeting. This information was also presented in the PAR 1147 Draft Staff Report and is available in the SCAQMD BACT Guidelines. PAR 1147 is based on the facility modernization control measure in the 2007 AQMP which requires equipment retrofit to meet BACT limits at the time the AQMP was adopted as opposed to meeting more stringent technology forcing limits. All of the emission limits in PAR 1147 have been achieved in practice. The majority of the BACT decisions and tests used as the basis for rule emission limits were for permits issued approximately 10 years ago. The Draft Staff Report also provides a summary of low NOx burners available from six major suppliers of burners for equipment regulated by Rule 1147 to illustrate the availability of burners.
- 1-5 It is unclear why the commenter needs to know what percentage of the overall inventory of Rule 1147 sources represent because NOx emission reductions from all sources are necessary to attain the ozone and PM standards. The air quality data contained in the referenced Table 3-3 does not represent an emission inventory, instead it represents the most recent verified data retrieved from various monitoring stations located throughout the district (e.g., during 2009). These data represent ambient criteria pollutant concentrations resulting from stationary source emissions and mobile source emissions. For this reason, the monitored air quality data are not meant to be an individual emissions inventory for a certain type of equipment or process, but

rather is a baseline that demonstrates the state of air quality in the district. For these reasons, the data in Table 3-3 does not reference specific equipment that would be subject to PAR 1147.

Table 4-4 shows the most current inventory of emissions from sources regulated by Rule 1147. To determine the percentage of total NOx emissions in the district, refer to Appendix III of the 2007 AQMP, Table A-5, which shows the total projected NOx emissions in the district in 2011 as 742.92 tons per day. Consequently, the inventory for Rule 1147, approximately 4.9 tons per day represents approximately 0.66 percent of the inventory. However, as already mentioned, NOx emission reductions from all sources are necessary to attain the ozone and PM standards regardless of their overall contribution to the total NOx emission inventory. Finally, it is inappropriate to trivialize the Rule 1147 NOx emission inventory or PAR 1147 NOx emissions by comparing them to the total district NOx inventory (see, for example, *Kings County Farm Bureau vs. City of Handford* (5th Dist. 1990) 221 Cal. App. 3d 692 [270 Cal Rptr. 650]).

The Rule 1147 emissions inventory reflects the most current inventory available based on SCAQMD data bases. As a result, it already takes into account business that no longer have active SCAQMD permits. NOx emission reductions anticipated for PAR 1147 are based on compliance limits applied to the current inventory. The commenter assumes that there would be more NOx emission reductions from affected facilities leaving the district than would occur from implementing PAR 1147, but provides no data or other information to support this assertion or that refutes SCAQMD staff's NOx emission inventory for Rule 1147 sources or the NOx emission reductions anticipated for PAR 1147.