

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Final Subsequent Environmental Assessment to the December 2008 Final Environmental Assessment for Proposed Rule 1147 – NOx Reductions from Miscellaneous Sources, and to the September 2011 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 (PAR) 1147 - NO_x Reductions From Miscellaneous Sources. SCAQMD prepared a Notice of Preparation/Initial Study (NOP/IS) which identified environmental topics to be analyzed in a Draft Environmental Assessment (EA). Since PAR 1147 was identified in the NOP/IS as potentially having statewide, regional or areawide significance, a CEQA scoping meeting was held at the SCAQMD's Headquarters in conjunction with the Public Workshop on February 15, 2017. The NOP/IS was distributed to responsible agencies and interested parties for a 30-day review and comment period from February 1, 2017, to March 3, 2017. SCAQMD received two comment letters relative to the NOP/IS. The comments made at the CEQA scoping meeting and the responses to these comments are included in Appendix D of this Final SEA. The comment letters received relative to the NOP/IS and the responses to the comments are included in Appendix E of this Final SEA.

Following the release of the NOP/IS, further analysis of the proposed project indicated that the type of CEQA document appropriate for the proposed project is a SEA. A Draft SEA was prepared and was then released for a 46-day public review and comment period from March 24, 2017 to May 9, 2017. Analysis of PAR 1147 in the Draft SEA identified the topic of operational air quality as the only area that may be significantly adversely affected by the proposed project. Further analysis of this environmental area in the Draft SEA has confirmed that operational air quality emissions associated with implementing PAR 1147 will exceed the SCAQMD's significance operational threshold for NO_x. PAR 1147 did not result in the identification of any other environmental topic areas that would be significantly adversely affected. Four alternatives to the proposed project were analyzed in the Draft SEA. When comparing the environmental effects of the project alternatives with the proposed project and evaluating the effectiveness of achieving the project objectives of the proposed project versus the project alternatives, the proposed project provides the best balance in achieving the project objectives while minimizing the significant adverse environmental impacts to operational air quality. Two comment letters were received from the public regarding the analysis in the Draft SEA. The comment letters received relative to the Draft SEA and responses to individual comments are included in Appendix F of this document.

In addition, subsequent to release of the Draft EA, modifications were made to PAR 1147 and some of the revisions were made in response to verbal and written comments received. To facilitate identification, modifications to the document are included as underlined text and text removed from the document is indicated by ~~strikethrough~~. To avoid confusion, minor formatting changes are not shown in underline or strikethrough mode.

Staff has reviewed the modifications to PAR 1147 and concluded that none of the revisions constitute: 1) significant new information; 2) a substantial increase in the severity of an environmental impact; or, 3) provide new information of substantial importance relative to the draft document. In addition, revisions to the proposed project in response to verbal or written comments would not create new, avoidable significant effects. As a result, these revisions do not require recirculation of the document pursuant to CEQA Guidelines § 15088.5. Therefore, this document now constitutes the Final SEA for PAR 1147.

TABLE OF CONTENTS

Chapter 1 – Executive Summary	
Introduction.....	1-1
California Environmental Quality Act (CEQA)	1-2
Previous CEQA Documentation for Rule 1147.....	1-5
Intended Uses of this Document.....	1-7
Areas of Controversy	1-7
Executive Summary	1-8
Chapter 2 - Project Description	
Project Location.....	2-1
Project Background.....	2-2
Project Objective.....	2-2
Project Description.....	2-3
Technology Assessment.....	2-4
Summary of Affected Equipment	2-5
Chapter 3 – Existing Setting	
Introduction.....	3-1
Existing Setting.....	3-1
Air Quality	3-3
Chapter 4 – Environmental Impacts	
Introduction.....	4-1
Potential Significant Environmental Impacts and Mitigation Measures	4-1
Cumulative Environmental Impacts	4-8
Potential Environmental Impacts Found Not to be Significant	4-8
Significant Environmental Effects Which Cannot Be Avoided	4-9
Significant Irreversible Environmental Changes	4-10
Potential Growth-Inducing Impacts.....	4-10
Relationship Between Short-Term Uses and Long-Term Productivity.....	4-10
Chapter 5 – Alternatives	
Introduction.....	5-1
Alternatives Rejected as Infeasible.....	5-4
Description of Alternatives	5-4
Comparison of Alternatives	5-5
Conclusion	5-5

APPENDICES

Appendix A: Proposed Amended Rule 1147

Appendix B: Notice of Preparation/Initial Study (NOP/IS)

Appendix C: References

Appendix D: CEQA Scoping Comments and Responses to Comments

Appendix E: Comment Letters on the NOP/IS and Responses to Comments

Appendix F: Comment Letters Received on the Draft SEA and Responses to Comments

LIST OF TABLES

Table 1-1: Areas of Controversy.....	1-8
Table 1-2: Summary of the Proposed Project and Alternatives.....	1-13
Table 1-3: Comparison of Significant Adverse Operational Air Quality Impacts of the Proposed Project and Alternatives.....	1-14
Table 3-1: NOx Baseline Emission Inventory for Rule 1147 Equipment From December 2008 Rule Adoption.....	3-2
Table 3-2: State and Federal Ambient Air Quality Standards	3-4
Table 3-3: 2015 Air Quality Data – South Coast Air Quality Management District	3-6
Table 4-1: SCAQMD Air Quality Significance Thresholds.....	4-3
Table 4-2: Estimated NOx Emissions Reductions Foregone.....	4-5
<u>Table 4-3: Estimated Permanent NOx Emission Reductions Foregone</u>	<u>4-6</u>
Table 4-34: Estimated NOx Emission Reductions Foregone Per Compliance Year.	4-7
Table 5-1: Summary of the Proposed Project and Alternatives.....	5-2
Table 5-2: Comparison of Adverse Environmental Impacts of the Proposed Project and Alternatives	5-3
Table 5-3: Estimated Permanent NOx Emission Reductions Foregone in Alternative C (as compared to Proposed Project)	5-5

LIST OF FIGURES

Figure 2-1: Southern California Air Basins	2-1
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CHAPTER 1

EXECUTIVE SUMMARY

Introduction

California Environmental Quality Act (CEQA)

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. In 1977, amendments to the federal Clean Air Act (CAA) included requirements for submitting State Implementation Plans (SIPs) for nonattainment areas that fail to meet all federal ambient air quality standards (CAA § 172) and similar requirements exist in state law (Health and Safety Code § 40462). The federal CAA was amended in 1990 to specify attainment dates and SIP requirements for ozone, carbon monoxide (CO), nitrogen dioxide (NO₂) and particulate matter with an aerodynamic diameter of less than 10 microns (PM₁₀). In 1997, the United States Environmental Protection Agency (U.S. EPA) promulgated ambient air quality standards for particulate matter with an aerodynamic diameter less than 2.5 microns (PM_{2.5}). The California Clean Air Act (CCAA), adopted in 1988, requires the SCAQMD to achieve and maintain state ambient air quality standards for ozone, CO, sulfur dioxide (SO₂), and NO₂ by the earliest practicable date (Health and Safety Code § 40910). The CCAA also requires a three-year plan review, and, if necessary, an update to the SIP. The U.S. EPA is required to periodically update the national ambient air quality standards (NAAQS).

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 areas within SCAQMD jurisdiction². Furthermore, the SCAQMD must adopt rules and regulations that carry out the AQMP³. The AQMP is a regional blueprint for how the SCAQMD will achieve air quality standards and healthful air and the Draft Final 2016 AQMP⁴ contains multiple goals promoting reductions of criteria air pollutants, greenhouse gases, and toxics. The 2016 AQMP was adopted by the SCAQMD Governing Board on March 3, 2017.

The Basin, which includes all of Orange County and the non-desert portions of Los Angeles, San Bernardino and Riverside counties, has one of the worst air quality problems in the nation. Though there have been significant improvements in air quality in the Basin over the last two decades, some ambient air quality standards are still exceeded relatively frequently and by a wide margin. The 2012 AQMP, submitted to the California Air Resources Board (CARB) for SIP inclusion in December 2012, concluded that further reductions in PM_{2.5} and oxides of nitrogen (NO_x) emissions would be necessary to attain the air quality standards for 24-hour PM_{2.5} and 8-hour ozone by the dates mandated by federal law. Less emphasis was placed on achieving emission reductions of volatile organic compounds (VOCs) because NO_x emission reductions have a greater co-benefit of also reducing ozone, and PM_{2.5} formation. Ozone, a criteria pollutant that has been

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

² Health and Safety Code § 40460(a).

³ Health and Safety Code § 40440(a).

⁴ SCAQMD, Draft Final 2016 Air Quality Management Plan. [http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/draft-final-aqmp/clean/2016finaldraftaqmpdec2016\(clean\).pdf](http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/draft-final-aqmp/clean/2016finaldraftaqmpdec2016(clean).pdf)

shown to adversely affect human health, is formed when VOCs react with NO_x in the atmosphere. NO_x is a precursor to the formation of ozone and PM_{2.5}.

Rule 1147 - NO_x Reductions From Miscellaneous Sources, was adopted on December 5, 2008 to control 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. Rule 1147 required new, modified, relocated and in-use combustion equipment to comply with equipment-specific NO_x emission limits. For in-use equipment, compliance dates for emission limits were based on the date of equipment manufacture, and emission limits went into effect for older equipment first. Owners of equipment were provided at least 15 years before existing equipment would need to be modified or replaced in order to meet the emission limits. Rule 1147 also contained test methods and provided alternate compliance options, including a process for certifying NO_x emissions through an approved testing program. Other requirements included equipment maintenance, fuel and time meters and recordkeeping.

Rule 1147 was later amended on September 9, 2011 to: 1) delay implementation dates by up to two years; 2) remove a requirement for fuel or time meters; and 3) provide compliance flexibility for small and large sources. In addition, the amendments included a requirement for a technology assessment to be conducted on the availability of low NO_x burner systems for processes with NO_x emissions of one pound per day or less that are not typically subject to a BACT requirement as new sources. The technology assessment was completed and included an evaluation of cost and cost effectiveness for small and low emission sources. The technology assessment was reviewed by a third party consultant. As a result, Proposed Amended Rule (PAR) 1147 has been developed to address the recommendations provided by the third party consultant. In addition, PAR 1147 also contains elements to address recommendations proposed by staff (that were separate from the consultant's review) in order to resolve certain stakeholders' compliance issues.

Businesses have expressed concern regarding the cost effectiveness of complying with the rule requirements for small and low emission sources (less than 1 pound per day of NO_x). In addition, a technology assessment conducted by staff for these small sources indicates that emission limits should be changed for certain specific applications based on technical feasibility and burner availability. SCAQMD staff estimates that 4,900 to 5,650 out of 6,400 units and up to 3,900 facilities would benefit from delayed compliance requirements and the exemptions proposed in PAR 1147. As many as 3,400 spray booths used in manufacturing, equipment repair and maintenance, and auto body repair will benefit from the proposed amendments.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

The California Environmental Quality Act (CEQA), Public Resources Code Section 21000 *et seq.*, requires environmental impacts of proposed projects to be evaluated and feasible methods to reduce, avoid or eliminate significant adverse impacts of these projects to be identified and implemented. The lead agency is the “public agency that has the principal responsibility for carrying out or approving a project that may have a significant effect upon the environment”

(Public Resources Code § 21067). Since the SCAQMD has the primary responsibility for supervising or approving the entire project as a whole, which is a proposed SCAQMD rule, it is the most appropriate public agency to act as lead agency (CEQA Guidelines⁵ § 15051(b)).

PAR 1147 is considered a “project” as defined by CEQA. CEQA requires that all 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 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.

Public Resources Code Section 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 has been adopted as SCAQMD Rule 110 – Rule Adoption Procedures to Assure Protection and Enhancement of the Environment. Pursuant to Rule 110 (the rule which implements the SCAQMD's certified regulatory program), SCAQMD prepared a Notice of Preparation/Initial Study (NOP/IS) which identified environmental topics to be analyzed in a Draft Environmental Assessment (EA). Since PAR 1147 was identified in the NOP/IS as potentially having statewide, regional or areawide significance, a CEQA scoping meeting is required (pursuant to Public Resources Code Section 21083.9(a)(2)) and was held at the SCAQMD's Headquarters in conjunction with the Public Workshop on February 15, 2017.

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, 2017, to March 3, 2017. The initial evaluation in the NOP/IS identified the topic of operational air quality as potentially having potentially significant adverse impacts requiring further review. During the public comment period, the SCAQMD received two comment letters relative to the NOP/IS.

Following the release of the NOP/IS, further analysis of the proposed project indicated that the type of CEQA document appropriate for the proposed project is a Subsequent Environmental Assessment (SEA), in lieu of an EA. The SEA is a substitute CEQA document, prepared in lieu of a Subsequent EIR (CEQA Guidelines § 15162(b)), pursuant to the SCAQMD's Certified Regulatory Program (CEQA Guidelines § 15251(l); codified in SCAQMD Rule 110). Therefore, a SEA is appropriate 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 in December 2008 (referred to herein at the December 2008 Final EA) and the Final Subsequent EA that was certified for the amendments to Rule 1147 in September 2011 (referred

⁵ The CEQA Guidelines are codified at Title 14 California Code of Regulations § 15000 *et seq.*

to herein as the September 2011 Final SEA), became available (CEQA Guidelines § 15162(a)(3)). Further, PAR 1147 is expected to have significant effects that were not discussed in the previous December 2008 Final EA or September 2011 Final SEA (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 Environmental Impact Report (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.

The SEA is also a public disclosure document intended to: 1) provide the lead agency, responsible agencies, decision makers and the general public with information on the environmental impacts of the proposed project; and 2) be used as a tool by decision makers to facilitate decision making on the proposed project.

Thus, the SCAQMD, as lead agency for the proposed project, has prepared the Draft SEA pursuant to its Certified Regulatory Program. The Draft SEA identified and analyzed the topic of operational air quality as the only area that may have significant adverse impacts if the proposed project is implemented. The Draft SEA concluded that only the topic of operational air quality emission impacts would have significant adverse impacts. Because PAR 1147 may have statewide, regional or areawide significance, a CEQA scoping meeting was required for the proposed project pursuant to Public Resources Code § 21083.9(a)(2) and was held at the SCAQMD's Headquarters in conjunction with the Public Workshop on February 15, 2017. Further, pursuant to CEQA Guidelines § 15252, since significant adverse impacts were identified, an alternatives analysis and mitigation measures are required.

The Draft SEA ~~is being~~ was released for a 46-day public review and comment period from March 24, 2017 to May 9, 2017. The comments made at the CEQA scoping meeting and the responses to these comments are included in Appendix D of this Final SEA. The comment letters received relative to the NOP/IS and the responses to the comments are included in Appendix E of this Final SEA. In addition, all comments received during the public comment period on the analysis presented in the Draft SEA ~~have will been~~ responded to and included in ~~an~~ Appendix F ~~to~~ of the Final SEA.

Subsequent to release of the Draft SEA, modifications were made to PAR 1147 and some of the revisions were made in response to verbal and written comments on the project's effects. At the time the Draft SEA was released for public review and comment, the estimate of total NOx emission reductions foregone of 0.9 ton per day included the portion of emission reductions foregone attributable to the original proposal to increase the NOx compliance limit for low temperature ovens and other units with a heat rating less than 325,000 BTU per hour until 2044. However, subsequent to the release of the Draft SEA, the proposed project was modified to fully exempt all units, not just low temperature units, in this category. The effect of exempting these units is now expected to have permanent, instead of temporary, NOx emission reductions foregone of approximately 49 pounds per day, which is less than the NOx significance threshold of 55 pounds per day. Staff has reviewed the modifications to PAR 1147 and concluded that none of the modifications constitute significant new information or a substantial increase in the severity of an environmental impact, nor provide new information of substantial importance relative to the

draft document. In addition, revisions to PAR 1147 in response to verbal or written comments would not create new, avoidable significant effects. As a result, these revisions do not require recirculation of the Draft SEA pursuant to CEQA Guidelines § 15088.5.

Prior to making a decision on the adoption of PAR 1147, the SCAQMD Governing Board must review and certify the Final SEA, including responses to comments, as providing adequate information on the potential adverse environmental impacts that may occur as a result of adopting PAR 1147.

PREVIOUS CEQA DOCUMENTATION FOR RULE 1147

This Final SEA is a comprehensive environmental document that analyzes potential environmental impacts from PAR 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 amended in September 2011. An environmental analysis was prepared for each of these regulatory actions. In addition, as part of the currently proposed amendments to Rule 1147, the SCAQMD prepared a NOP/IS and the initial evaluation identified the topic of operational air quality as potentially having potentially significant adverse impacts requiring further review. The conclusion in the NOP/IS is consistent with the conclusions reached in the previously certified documents (also described in this section) that aside from the topic of operational air quality, there would be no other significant adverse effects from implementing PAR 1147.

The following summarizes the previously prepared CEQA documents for Rule 1147 in reverse chronological order and is included for informational purposes. These documents are available for downloading from the SCAQMD's website via the links immediately following the summaries. In addition, hardcopies of these CEQA documents can be obtained by contacting Fabian Wesson, Public Advisor at the SCAQMD's Public Information Center by phone at (909) 396-2688 or by email at PICrequests@aqmd.gov.

Notice of Preparation/Initial Study for Proposed Amended Rule 1147 (February 2017)

NOP/IS for Proposed Amended Rule 1147 – NO_x Reductions from Miscellaneous Sources, February 2017 (SCAQMD No. 01312016SW; State Clearinghouse No. 2009061088), SCAQMD staff is proposing to amend Rule 1147 in order to resolve Rule 1147 compliance issues that have been raised by stakeholders. If adopted, PAR 1147 would: 1) change the NO_x emission limit for low temperature (<1,200 degrees Fahrenheit, °F) ovens and other units with a heat input rating of less than 325,000 BTU/hour from 30 parts per million (ppm) to 60 ppm; 2) change the NO_x emission limit for low temperature afterburners, burn-off ovens, incinerators, and related equipment from 30 ppm to 60 ppm; 3) change the compliance date for small in-use units (with NO_x emissions of one pound per day or less) from a schedule based on a 20 year lifetime to a 35 year lifetime or until the units are replaced, retrofit or relocated; 4) change the compliance date for heated process tanks from a schedule based on a 15 year to 20 year lifetime to when the units are replaced, retrofit or relocated; 5) add a testing exemption for ultra-low NO_x infrared burners; 6) clarify an exemption for food ovens; and 7) clarify an exemption for flare type systems. Some facilities that may be affected by PAR 1147 are identified on lists compiled by the California

Department of Toxic Substances Control per California Government Code § 65962.5. SCAQMD as Lead Agency prepared this NOP/IS for the proposed project. The initial evaluation in the NOP/IS identified the topic of air quality as potentially being adversely affected by the proposed project: If implemented, PAR 1147 is expected to result in NO_x emission reductions foregone of up to 0.9 ton per day in 2017. However, the emission reductions foregone will be eventually recaptured because the existing units will be regularly replaced and upgraded over time.

The NOP/IS for PAR 1147 was released for a 30-day public review and comment period from February 1, 2017 to March 3, 2017. Two comment letters were received during this comment period. Also, because PAR 1147 may have statewide, regional or areawide significance, a CEQA scoping meeting was required for the proposed project pursuant to Public Resources Code § 21083.9(a)(2) and was held at the SCAQMD's Headquarters in conjunction with the Public Workshop on February 15, 2017. Of the comments received on the NOP/IS and at the CEQA scoping meetings, none of the comments changed the conclusions. This document can be obtained by visiting the following website at:

http://www.aqmd.gov/docs/default-source/ceqa/documents/aqmd-projects/2016/par1147_nopis.pdf

Final Subsequent Environmental Assessment for Proposed Amended Rule 1147 (September 2011)

Final SEA for Proposed Amended Rule 1147 – NO_x Reductions from Miscellaneous Sources; September 2011 (SCAQMD No. 02012011BAR; State Clearinghouse No. 2011011088): PAR 1147 was adopted to respond to compliance challenges experienced by certain affected 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 were proposed for clarity and consistency throughout the rule. The September 2011 Final SEA concluded that the adoption of PAR 1147 would only generate significant adverse impacts for the topic of air quality. The September 2011 Final SEA was certified by the SCAQMD Governing Board on September 9, 2011. This document can be obtained by visiting the following website at:

<http://www.aqmd.gov/docs/default-source/ceqa/documents/aqmd-projects/2011/final-subsequent-environmental-assessment-for-proposed-amended-rule-1147.pdf>

Final Environmental Assessment (EA) for Proposed Rule 1147 (December 2008)

Final EA for Proposed Rule 1147 – NO_x Reductions from Miscellaneous Sources; December 2008 (SCAQMD No. 081015JJI; State Clearinghouse No. 2008101082): 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 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 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 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 PAR 1147. Moreover, PAR 1147 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 PAR 1147, 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**

Areas of Controversy	Topics Raised by the Public	SCAQMD Evaluation
Lack of availability of the burners, ovens, incinerators, related equipment, and small existing in-use units (with NOx emissions of one pound per day or less)	Suppliers cannot consistently provide an equipment that meets the emission limit for a particular application.	A technology assessment has been performed for the equipment subject to the requirements in Rule 1147. The conclusion in the technology assessment recommended providing additional time for achieving compliance; and changing the emissions limits for certain existing equipment as described in the PAR 1147.

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 that may be caused PAR 1147 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 PAR 1147.

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 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; and various appendices. The following subsections briefly summarize the contents of each chapter.

Summary of Chapter 1 – Executive Summary

Chapter 1 includes an introduction of the proposed project and 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 four chapters that comprise this SEA.

Summary of Chapter 2 - Project Description

PAR 1147 reflects the recommendations made in the technology assessment and contains additional changes necessary to resolve compliance issues that have been raised by stakeholders. If adopted, PAR 1147 would:

- ~~change~~ remove the requirement to comply with the NO_x emission limit for low temperature (<1,200 degrees Fahrenheit (°F)) ovens and other units with a heat input rating of less than 325,000 British Thermal Units per hour (BTU/hour). These units would still be subject to maintenance and recordkeeping requirements from 30 parts per million (ppm) to 60 ppm;
- change the NO_x emission limit for low temperature afterburners, burn-off ovens, incinerators, and related equipment from 30 ppm to 60 ppm;
- change the compliance date for small in-use units (with NO_x emissions of one pound per day or less) from a schedule based on a 20 year lifetime to a 30 year lifetime or until the units are replaced, or retrofit or relocated;
- change the compliance date for existing in-use heated process tanks and pressure washers from a schedule based on a 15 year to 20 year lifetime to when the units are replaced or retrofit or relocated. These units would not be required to comply with an emission limit at any specific age and may be relocated with a facility move;
- add a testing exemption for ultra-low NO_x infrared burners;
- provide compliance flexibility for low emission units by clarifying options for demonstrating emissions less than one pound per day;
- add an exemption for units with emission less than one pound per day when a company relocates a facility and remains under the same ownership;
- add an exemption for units that become subject to the rule upon amendment of Rule 219 on or after May 5, 2017, until the unit is replaced;
- add flexibility for demonstrating compliance with emission limits including an alternative compliance demonstration option based on a manufacturer's performance guarantee;
- clarify an exemption for food ovens; and
- clarify an exemption for flare type systems.

If adopted, PAR 1147 is expected to result in NO_x emission reductions foregone of up to 0.9 ton per day in 2017. However, while most of the estimated NO_x emission reductions foregone will be eventually recaptured because the existing units will be regularly replaced and upgraded over time, approximately 0.03 ton per day of the NO_x emission reductions foregone will be permanent (see Table 4-3).

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 SEA.

Summary of Chapter 3 - Existing Setting

Pursuant to the CEQA Guidelines § 15125, Chapter 3 – Existing Setting, includes a description of the environmental area (e.g., air quality) that was identified in the NOP/IS (see Appendix B of this SEA) as being potentially adversely affected by PAR 1147. The following discussion briefly highlights the existing setting for the topic of air quality.

Air Quality

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 NAAQS established for seven criteria pollutants (ozone, lead, SO₂, NO₂, CO, PM₁₀ and PM_{2.5}), the area within the SCAQMD's jurisdiction is only in attainment with the NAAQS for CO, SO₂, and NO₂. 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.

Summary of Chapter 4 - Environmental Impacts

CEQA Guidelines § 15126(a) requires a CEQA document to 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. In addition, CEQA Guidelines § 15126(b) requires a CEQA document to identify the significant environmental effects which cannot be avoided if the proposed project is implemented. CEQA Guidelines § 15126(c) also requires a CEQA document to consider and discuss the significant irreversible environmental changes which would be involved if the proposed project is implemented. Further, CEQA Guidelines § 15126(e) requires a CEQA document to consider and discuss mitigation measures proposed to minimize the significant effects. Finally, CEQA Guidelines § 15130 requires a CEQA document to discuss whether the proposed project has cumulative impacts. Chapter 4 considers and discusses each of these requirements.

A NOP/IS was prepared for the proposed project that includes an environmental checklist of approximately 17 environmental topics to be evaluated for potentially significant adverse impacts from a proposed project. Review of the proposed project at the NOP/IS stage identified only one environmental topic area, operational air quality, as having potentially significant adverse impacts requiring further review in this SEA. Further review of this environmental topic area is contained in this chapter.

In addition, where the NOP/IS concluded that the project would have no significant or less than significant direct or indirect adverse effects on the remaining environmental topics areas, the conclusions for these environmental topic areas are consistent with the conclusions reached in the previously certified documents (e.g., the December 2008 Final EA and the September 2011 Final SEA) that aside from the topic of operational air quality, there would be no other significant adverse effects from implementing PAR 1147. Further, of the comments received on the NOP/IS or at the CEQA scoping meetings, none of the comments changed this conclusion. The screening

analysis in the NOP/IS concluded that the following environmental areas would not be significantly adversely affected by the proposed project:

- aesthetics
- air quality during construction and greenhouse gas emissions during construction and 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 and hazardous waste
- transportation and traffic

Other CEQA Topics

CEQA documents are also required to consider and discuss the potential for growth-inducing impacts (CEQA Guidelines § 15126(d) and to explain and make findings about the relationship between short-term uses and long-term productivity (CEQA Guidelines § 15065(a)(2)). 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. Further, implementing the proposed project is not expected to achieve short-term goals at the expense of long-term environmental productivity or goal achievement.

Summary Chapter 5 - Alternatives

Four alternatives to the proposed project are summarized in Table 1-2: Alternative A (No Project), Alternative B (More Stringent), Alternative C (Less Stringent), and Alternative D (Least Stringent). 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 the remaining emission reductions that other components of Rule 1147 may continue to achieve and the adverse environmental impacts due to operation activities (from emission reductions foregone) while meeting the objectives of the project. Therefore, the proposed project is preferred over the project alternatives.

**Table 1-2
Summary of the Proposed Project and Alternatives**

Category		Proposed Project	Alternative A: No Project	Alternative B: More Stringent	Alternative C: Less Stringent	Alternative D: Least Stringent
Equipment with NOx emissions < 1 lb/day	Require compliance with emission limit at specific age	30 years, (less stringent than current rule)	20 years (same as current rule but more stringent than proposed project)	25 years (less stringent than current rule but more stringent than proposed project)	No age requirement (less stringent than current rule and proposed project)	No age requirement (less stringent than current rule and proposed project)
	Demonstration of compliance with NOx emission limit	Applicable to new, replacement and rebuilt units but not to relocation of units by the same company and owner	Applicable to new, replacement and rebuilt units (current rule)	Applicable to new, replacement and rebuilt units (same as current rule)	Applicable to new, replacement and rebuilt units but not to relocation of units by the same company and owners	Compliance with limit is not required if provided that records demonstrate emissions < 1 lb/day. However, if records do not demonstrate < 1 lb/day NOx or records are not kept, then the owner/operator shall demonstrate compliance with unit specific NOx limit.
	Other requirements or exemptions	N/A <u>Further relax limits for units < 325,000 BTU/hour by exempting from any limit</u>	N/A	Require compliance with emission (ppm) limits when multiple similar process units at a facility have combined emissions ≥ 1 lb/day NOx (more stringent than proposed project).	Exempt all pressure washers (less stringent than proposed project) and units < 800 °F and < 325,000 BTU/hour from any limit.	Exempt all pressure washers (less stringent than proposed project)- and units < 325,000 BTU/hour from any limit.

**Table 1-3
Comparison of Significant Adverse Operational Air Quality Impacts of the Proposed Project and Alternatives**

Environmental Topic Area	Proposed Project	Alternative A: No Project	Alternative B: More Stringent	Alternative C: Less Stringent	Alternative D: Least Stringent
Air Quality During Operation	NOx emission reductions foregone up to 0.9 ton per day. <u>The Most</u> emissions reductions will be recovered over time. <u>Permanent NOx emission reductions foregone up to 0.03 ton per day (see Table 4-3).</u>	No new NOx emission reductions foregone.	NOx emission reductions foregone up to 0.9 ton per day. The emissions reductions foregone will be recovered, but over a shorter time frame than the proposed project.	NOx emission reductions foregone up to 0.9 ton per day. The emissions reductions foregone will be recovered, but over a longer time frame than the proposed project.	Permanent NOx emission reductions foregone up to 0.9 ton per day.
Significance of Air Quality Operational Impacts?	Significant because the amount of NOx emission reductions foregone exceeds the NOx significance threshold of 55 pounds per day.	Not significant, however, compliance may be difficult to achieve for categories of equipment where the proposed project changes emission limits.	Significant because the amount of NOx emission reductions foregone exceeds the NOx significance threshold of 55 pounds per day. (less significant than the proposed project for years 2018 and beyond).	Significant because the amount of NOx emission reductions foregone exceeds the NOx significance threshold of 55 pounds per day. (more significant than the proposed project for years 2018 and beyond).	Significant because the amount of NOx emission reductions foregone exceeds the NOx significance threshold of 55 pounds per day. (more significant than the proposed project for years 2018 and beyond).

CHAPTER 2

PROJECT DESCRIPTION

Project Location

Project Background

Project Objective

Project Description

Technology Assessment

Summary of Affected Equipment

PROJECT LOCATION

PAR 1147 would affect up to 3,900 facilities which are located within SCAQMD's jurisdiction. The SCAQMD has jurisdiction over an area of approximately 10,743 square miles, 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 (SSAB) and Mojave Desert Air Basin (MDAB). The Basin, which is a subarea of 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 non-desert 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. A 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 (see Figure 2-1).

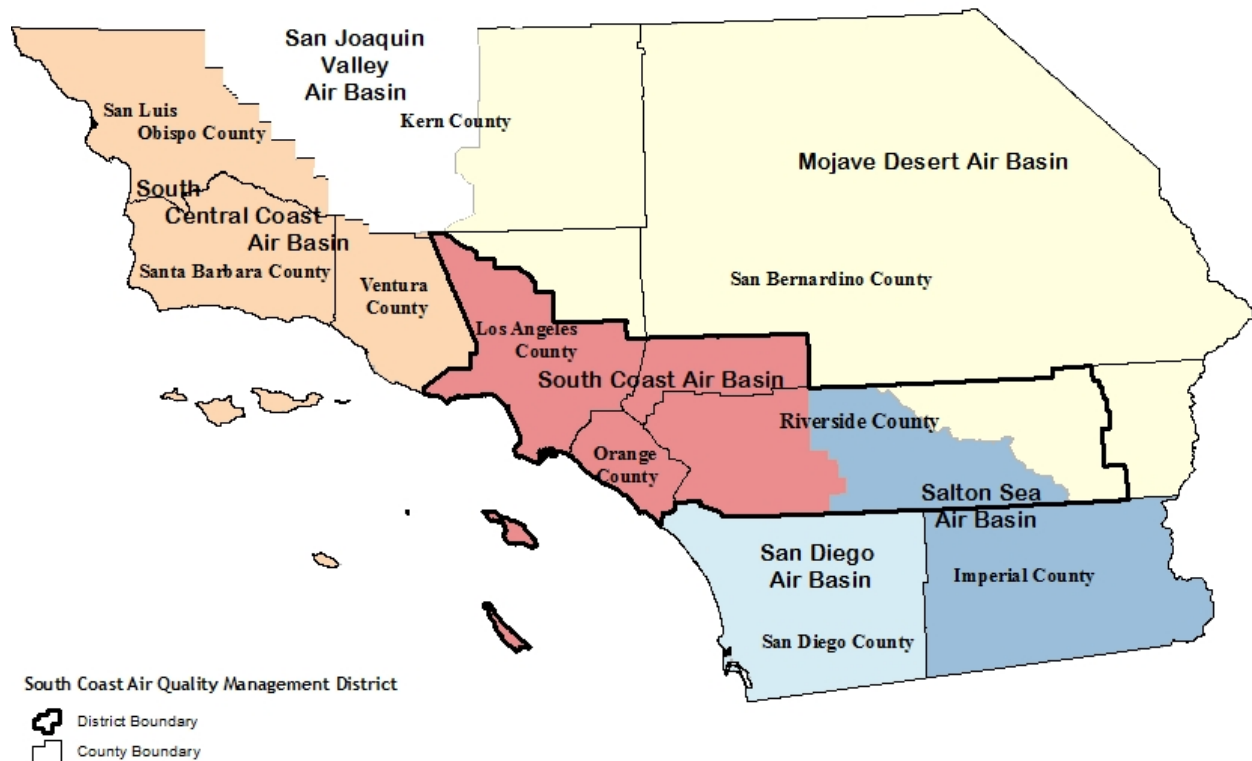


Figure 2-1
Southern California Air Basins

PROJECT BACKGROUND

When Rule 1147 was originally adopted by the SCAQMD Governing Board on December 5, 2008, it established NO_x emission limits for a variety of combustion equipment and affected new and existing combustion equipment requiring permits that are not regulated by other SCAQMD rules limiting emissions of NO_x. Rule 1147 incorporated two control measures of the 2007 AQMP: CMB-01 – NO_x Reductions from Non-RECLAIM Ovens, Dryers and Furnaces, and MCS-01 – Facility Modernization. Control Measure MCS-01 proposed that existing in-use equipment over time meet best available control technology (BACT) emission limits in place at the time the 2007 AQMP was adopted. Control Measure CMB-01 proposed emission NO_x limits in the range of 20 to 60 parts per million (ppm) for ovens, dryers, kilns, furnaces and other combustion equipment.

Under Rule 1147, regulated gaseous fuel-fired equipment must meet an emission limit of 30 or 60 ppm of NO_x based on the type of equipment and process temperature. All regulated liquid fuel-fired equipment must meet an emission limit of 40 or 60 ppm for NO_x based on its process temperature. 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 established NO_x emissions test methods and provided alternate compliance options including a process for certification of equipment through an approved testing program. Other requirements included equipment maintenance, time and fuel meter installation and record keeping.

Rule 1147 was subsequently amended on September 9, 2011 to: 1) delay implementation dates by up to two years; 2) remove a requirement for fuel or time meters; and 3) provide compliance flexibility for small and large sources. In addition, the amendments included a requirement for a technology assessment to be conducted on the availability of low NO_x burner systems for processes with NO_x emissions of one pound per day or less that are not typically subject to a BACT requirement as new sources. The technology assessment was completed and included an evaluation of cost and cost effectiveness for small and low emission sources. The technology assessment was reviewed by a third party consultant. As a result, PAR 1147 was crafted to be consistent with the recommendations provided by the third party consultant. In addition, PAR 1147 also contains elements to address recommendations proposed by staff (that were separate from the consultant's review) in order to resolve certain stakeholders' compliance issues.

PROJECT OBJECTIVE

The primary objective of the proposed project is to address issues of technical feasibility and cost effectiveness that were the basis of recommendations in the SCAQMD "Technology Assessment for Rule 1147 Small and Low Emission Sources." In particular, PAR 1147 was crafted to address recommendations from the Rule 1147 technology assessment which include and address technical and cost effectiveness issues raised by stakeholders. These changes make Rule 1147 more consistent with SCAQMD's new source review (NSR) and best available control technology

(BACT) requirements for small and low emission sources with NOx emissions less than one pound per day.

PROJECT DESCRIPTION

SCAQMD staff is proposing to amend Rule 1147 to reflect the recommendations made in the technology assessment and to resolve compliance issues that have been raised by stakeholders. If adopted, PAR 1147 would:

- ~~Change~~ Remove the requirement to comply with the NOx emission limit for low temperature (<1,200 °F) ovens and other units with a heat input rating of less than 325,000 BTU/hour from 30 ppm to 60 ppm [see Table 1, paragraph (c)(1)]. These units would still be subject to maintenance and recordkeeping requirements;
- Change the NOx emission limit for low temperature afterburners, burn-off ovens, incinerators, and related equipment from 30 ppm to 60 ppm [see Table 1, paragraph (c)(1)];
- Change the compliance date for small in-use units (with NOx emissions of less than one pound per day) from a schedule based on a 20 year lifetime to a 30 year lifetime or when the units are replaced or; retrofit ~~or relocated~~ [see paragraph (c)(6)];
- Change the compliance date for existing in-use heated process tanks and pressure washers from a schedule based on a 15 year to 20 year lifetime to when the units are replaced or retrofit ~~or relocated~~. These units would not be required to comply with an emission limit at any specific age and may be relocated with a facility move [see paragraphs (g)(8) and (g)(11)];
- Add a testing exemption for ultra-low NOx infrared burners [see paragraphs (g)(9), (g)(10), and (g)(11)];
- Provide compliance flexibility for low emission units to small emitters (less than one pound per day) by clarifying options for demonstrating emissions less than one pound per day recordkeeping [see paragraph (c)(6)];
- Add an exemption for units with emission less than one pound per day when a company relocates a facility and remains under the same ownership [see paragraph (g)(11)];
- Add an exemption for units that become subject to the rule upon amendment of Rule 219 on or after May 5, 2017, until the unit is replaced [see paragraph (g)(10)];
- Add flexibility for demonstrating compliance with emission limits including an alternative compliance demonstration option based on a manufacturer's performance guarantee [see paragraphs (d)(1) - (d)(11)];
- Clarify an exemption for food ovens [see subdivision (a), and paragraphs (g)(1) and (g)(2)]; and

- Clarify an exemption for flare type systems [see subparagraph (g)(3)(E)].

If adopted, PAR 1147 is expected to result in NO_x emission reductions foregone of up to 0.9 ton per day in 2017. However, while most of the NO_x emission reductions foregone will be eventually recaptured because the existing units will be regularly replaced and upgraded over time, approximately 0.03 ton per day of NO_x emission reductions will be permanently foregone (see Table 4-3). A copy of PAR 1147 can be found in Appendix A of this Draft SEA.

TECHNOLOGY ASSESSMENT

The first phase of the SCAQMD technology assessment targeted sources in which burner technology was either not available or the retrofit cost was comparable to the cost of replacing the unit. Several categories of equipment were identified and removed from Rule 1147. Further, the requirement for a permit for these equipment categories was removed during the May 2013 amendments to SCAQMD Rule 219 – Equipment Not Requiring a Written Permit Pursuant to Regulation II, and SCAQMD Rule 222 – Filing Requirements For Specific Emission Sources Not Requiring a Written Permit Pursuant to Regulation II. SCAQMD staff continued conducting a technical evaluation and developed Rule 1153.1 – Emissions of Oxides of Nitrogen from Commercial Food Ovens, to move existing in-use food ovens, roasters and smokehouses from Rule 1147 into their own rule. Rule 1153.1 was adopted on November 7, 2014 and provided more appropriate temperature ranges for defining emission limits, food oven specific emission limits, later compliance dates and an exemption for small units. Both SCAQMD Rules 1147 and 1153.1 have been approved by U.S. EPA and are included in the SIP.

The last phase of the technology assessment focused on the remaining categories of small and low emission equipment that were not addressed in SCAQMD Rules 219, 222 and 1153.1. While the technology assessment report focused on equipment with NO_x emissions of one pound per day or less, the report also included information and analysis applicable to larger units in response to businesses' concerns regarding the availability of technology for larger equipment.

The technology assessment utilizes information about affected equipment from the SCAQMD's permitting system, SCAQMD Regulation XIII - New Source Review, Rule 1147 emissions testing programs, manufacturers of equipment and burners, affected businesses, consulting engineers, and industry representatives. The technology assessment provides information on the types and number of equipment affected by Rule 1147, emissions characteristics of the affected equipment, and estimates of the cost and cost-effectiveness of replacing existing older combustion systems. Overall, the technology assessment provides insight into compliance and affordability challenges faced by businesses affected by Rule 1147.

With the exception of a few categories of equipment, the technology review demonstrates that low NO_x burner systems are available for every category of equipment subject to Rule 1147 and have been since the late 1990s. However, SCAQMD staff has identified the following three types of equipment for which burners are not readily available or cannot be retrofitted: 1) low temperature ovens and dryers with heat inputs of less than 325,000 BTU/hour (0.325 MMBTU/hour); 2)

existing heated process tanks, evaporators and parts washers; and 3) low temperature burn-off ovens and incinerators.

As a result of the technology assessment, the following five recommendations were proposed for consideration in future rule amendments to Rule 1147:

1. Exempt sources with total rated heat input less than 325,000 BTU/hour from the Rule 1147 NOx emission limit or alternatively change the emission limit for low temperature units with these small burners from 30 ppm to 60 ppm for NOx;
2. Change the NOx emission limit from 30 ppm to 60 ppm NOx for the primary chamber of all multi-chamber burn-off ovens, burn-out furnaces and incinerators for all process temperature;
3. Delay compliance for existing in-use heated process tanks, evaporators and parts washers from the NOx emission limit until such time the combustion system or tank is modified, replaced or relocated;
4. Delay compliance with the NOx emission limit for existing in-use spray booths until the heating system is modified or replaced or the unit is relocated; and
5. Delay compliance with the NOx emission limit for existing in-use units with actual NOx emissions of one pound per day or less until the combustion system is modified or replaced or the unit is relocated.

SUMMARY OF AFFECTED EQUIPMENT

A wide variety of processes use equipment that is regulated by Rule 1147. These processes include, but are not limited to, printing, textile processing, product coating; and material processing. A large fraction of the equipment subject to Rule 1147 heats air that is then directed to a process chamber and transfers heat to process materials. Other processes heat materials directly and include equipment such as kilns, process tanks and metallurgical furnaces.

Rule 1147 affects manufacturers (NAICS 31-33), distributors and wholesalers (NAICS 42) of combustion equipment, as well as owners and operators of ovens, dryers, furnaces, and other equipment in the District (NAICS 21, 23, 31-33, 42, 44, 45, 48, 49, 51-56, 61, 62, 71, 72, 81, and 92). The units affected by the rule are used in industrial, commercial and institutional settings for a wide variety of processes. Some examples of the processes regulated by the rule include metal casting and forging, coating and curing operations, asphalt manufacturing, baking and printing.

Based on active permitted equipment in the SCAQMD, staff has estimated the number of equipment potentially subject to Rule 1147. Staff estimates that as many as 6,400 pieces of equipment are potentially subject to Rule 1147 requirements. More than half of the units (\approx 3,400) are spray booths and prep-stations. Excluding spray booths and prep-stations, staff estimates that at least one quarter of the units in each category will meet Rule 1147 emission limits without retrofitting burners.

The second largest category of equipment is ovens and dryers with approximately 1,100 units subject to the rule. Staff estimates that at least one-third of the permitted ovens will meet Rule 1147 emission limits based on a sample of the burners used in the ovens. There are also approximately 500 additional ovens and dryers with SCAQMD permits that are not subject to Rule 1147 because they are heated electrically, with infrared lamps, or using a boiler or thermal fluid heater. Electric, infrared lamp, and boiler and thermal fluid heated ovens and dryers are not included in the counts of equipment subject to rule requirements.

The third largest group of equipment is air pollution control units that capture and incinerate VOCs, CO, PM and toxics. There are approximately 900 afterburners, degassing units and remediation units. The remaining categories of equipment have significantly fewer units with high temperature processes (metal melting, heat treating, burn off ovens, kilns and crematories) being the next largest group with approximately 700 units in these five categories. Although these categories have fewer equipment, many units have significantly higher emissions than spray booths and small ovens.

CHAPTER 3

EXISTING SETTING

Introduction

Existing Setting

Air Quality

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 environmental analysis is commenced. 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 environmental analysis is commenced, 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).

SCAQMD prepared a NOP/IS which identified environmental topics to be analyzed in a Draft EA. The initial evaluation in the NOP/IS identified the topic of operational air quality as potentially having potentially significant adverse impacts requiring further review. Following the release of the NOP/IS, further analysis of the proposed project indicated that the preparation of a SEA, in lieu of an EA, would be the appropriate document to analyze the potentially significant operational air quality 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 December 2008 Final EA and September Final SEA were certified, became available (CEQA Guidelines § 15162(a)(3)). Further, PAR 1147 is expected to have significant adverse effects to the topic of operational air quality that were not discussed in the previous December 2008 Final EA or September 2011 Final SEA (CEQA Guidelines § 15162(a)(3)(A)). The following section summarizes the existing setting for operational air quality which was the only environmental topic identified that may be adversely affected by the proposed project. The Final Program EIR for the 2016 AQMP also contains comprehensive information on existing and projected environmental settings for the topic of air quality. Copies of the referenced document are available from the SCAQMD's Public Information Center by calling (909) 396-2432.

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 a NO_x emission limit of 30 ppm to 60 ppm based on the type of equipment. Alternately, equipment may meet a NO_x emission 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, was estimated to be 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
NO_x Baseline Emission Inventory for Rule 1147 Equipment
From December 2008 Rule Adoption**

Fuel	Equipment Category	Typical Uncontrolled NO_x Emissions	Rule 1147 NO_x Emission Limit	No. of Units	NO_x 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

Table 3-1 (Concluded)
NOx Baseline Emission Inventory for Rule 1147 Equipment From December 2008 Rule Adoption

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

It is the responsibility of 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, CO, NO₂, PM₁₀, PM_{2.5}, 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. SCAQMD monitors levels of various criteria pollutants at 38 monitoring stations. The 2015 air quality data (the latest data available) from SCAQMD's monitoring stations are presented in Table 3-3.

**Table 3-2
State and Federal Ambient Air Quality Standards**

Pollutant	Averaging Time	State Standard^a	Federal Primary Standard^b	Most Relevant Effects
Ozone (O₃)	1-hour	0.09 ppm (180 µg/m ³)	No Federal Standard	(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.
	8-hour	0.070 ppm (137 µg/m ³)	0.075 ppm (147 µg/m ³)	
Suspended Particulate Matter (PM₁₀)	24-hour	50 µg/m ³	150 µg/m ³	(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.
	Annual Arithmetic Mean	20 µg/m ³	No Federal Standard	
Suspended Particulate Matter (PM_{2.5})	24-hour	No State Standard	35 µg/m ³	(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.
	Annual Arithmetic Mean	12 µg/m ³	12.0 µg/m ³	
Carbon Monoxide (CO)	1-Hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	(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.
	8-Hour	9 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)	

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

Pollutant	Averaging Time	State Standard^a	Federal Primary Standard^b	Most Relevant Effects
Nitrogen Dioxide (NO₂)	1-Hour	0.18 ppm (339 µg/m ³)	0.100 ppm (188 µg/m ³)	(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.
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	0.053 ppm (100 µg/m ³)	
Sulfur Dioxide (SO₂)	1-Hour	0.25 ppm (655 µg/m ³)	75 ppb (196 µg/m ³)–	Broncho-constriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma.
	24-Hour	0.04 ppm (105 µg/m ³)	No Federal Standard	
Sulfates	24-Hour	25 µg/m ³	No Federal Standard	(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
Hydrogen Sulfide (H₂S)	1-Hour	0.03 ppm (42 µg/m ³)	No Federal Standard	Odor annoyance.
Lead (Pb)	30-Day Average	1.5 µg/m ³	No Federal Standard	(a) Increased body burden; and (b) Impairment of blood formation and nerve conduction.
	Calendar Quarter	No State Standard	1.5 µg/m ³	
	Rolling 3-Month Average	No State Standard	0.15 µg/m ³	
Visibility Reducing Particles	8-Hour	Extinction coefficient of 0.23 per kilometer - visibility of ten miles or more due to particles when relative humidity is less than 70 percent.	No Federal Standard	The statewide standard is intended to limit the frequency and severity of visibility impairment due to regional haze. This is a visibility based standard not a health based standard. Nephelometry and AISI Tape Sampler; instrumental measurement on days when relative humidity is less than 70 percent.
Vinyl Chloride	24-Hour	0.01 ppm (26 µg/m ³)	No Federal Standard	Highly toxic and a known carcinogen that causes a rare cancer of the liver.

a. The California ambient air quality standards for O₃, CO, SO₂ (1-hour and 24-hour), NO₂, PM₁₀, and PM_{2.5} are values not to be exceeded. All other California standards shown are values not to be equaled or exceeded.

b. The national ambient air quality standards, other than O₃ and those based on annual averages are not to be exceeded more than once a year. The O₃ standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standards is equal to or less than one.

KEY: ppb = parts per billion parts of air, by volume ppm = parts per million parts of air, by volume µg/m³ = micrograms per cubic meter mg/ m³ = milligrams per cubic meter

Table 3-3
2015 Air Quality Data – South Coast Air Quality Management District

CARBON MONOXIDE (CO)^a				
Source Receptor Area No.	Location of Air Monitoring Station	No. Days of Data	Max. Conc. ppm, 1-hour	Max. Conc. 8ppm, 8-hour
LOS ANGELES COUNTY				
1	Central Los Angeles	365	3.2	1.8
2	Northwest Coastal Los Angeles County	365	1.6	1.4
3	Southwest Coastal Los Angeles County	357	1.7	1.4
4	South Coastal Los Angeles County 1	--	--	--
4	South Coastal Los Angeles County 2	--	--	--
4	South Coastal Los Angeles County 3	364	3.3	2.2
6	West San Fernando Valley	365	3.0	2.5
8	West San Gabriel Valley	365	2.6	1.6
9	East San Gabriel Valley 1	352	2.1	1.3
9	East San Gabriel Valley 2	363	1.2	1.0
10	Pomona/Walnut Valley	346	1.8	1.6
11	South San Gabriel Valley	365	2.8	1.7
12	South Central Los Angeles County	363	4.4	3.3
13	Santa Clarita Valley	359	1.2	0.9
ORANGE COUNTY				
16	North Orange County	365	3.0	1.6
17	Central Orange County	365	3.1	2.2
18	North Coastal Orange County	365	3.0	2.2
19	Saddleback Valley	364	1.4	0.7
RIVERSIDE COUNTY				
22	Norco/Corona	--	--	--
23	Metropolitan Riverside County 1	364	2.5	1.7
23	Mira Loma	362	2.3	1.6
24	Perris Valley	--	--	--
25	Lake Elsinore	364	0.8	0.6
26	Temecula	--	--	--
29	Banning Airport	--	--	--
30	Coachella Valley 1**	365	2.0	0.7
30	Coachella Valley 2**	--	--	--
SAN BERNARDINO COUNTY				
32	Northwest San Bernardino Valley	364	2.1	1.3
34	Central San Bernardino Valley 1	358	2.8	1.2
34	Central San Bernardino Valley 2	362	2.3	1.8
35	East San Bernardino Valley	--	--	--
37	Central San Bernardino Mountains	--	--	--
38	East San Bernardino Mountains	--	--	--
SCAQMD MAXIMUM			4.4	3.3
SOUTH COAST AIR BASIN			4.4	3.3

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)
2015 Air Quality Data – South Coast Air Quality Management District

OZONE (O3)										
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				
						Federal			State	
						Old > 0.124 ppm 1-hr	1997 > 0.084 ppm 8-hr	Current > 0.075 ppm 8-hr*	Current > 0.09 ppm 1-hr	Current > 0.070 ppm 8-hr
LOS ANGELES COUNTY										
1	Central Los Angeles	365	0.104	0.074	0.072	0	6	0	2	6
2	Northwest Coastal Los Angeles County	353	0.102	0.072	0.069	0	2	0	2	3
3	Southwest Coastal Los Angeles County	365	0.096	0.077	0.069	0	3	1	1	3
4	South Coastal Los Angeles County 1	--	--	--	--	--	--	--	--	--
4	South Coastal Los Angeles County 2	--	--	--	--	--	--	--	--	--
4	South Coastal Los Angeles County 3	364	0.087	0.066	0.056	0	0	0	0	0
6	West San Fernando Valley	365	0.119	0.094	0.087	0	32	15	11	34
8	West San Gabriel Valley	361	0.111	0.084	0.082	0	18	7	12	18
9	East San Gabriel Valley 1	352	0.122	0.096	0.088	0	27	17	21	28
9	East San Gabriel Valley 2	362	0.127	0.102	0.095	2	48	34	37	51
10	Pomona/Walnut Valley	347	0.136	0.098	0.094	2	53	36	30	55
11	South San Gabriel Valley	346	0.107	0.081	0.075	0	11	2	6	11
12	South Central Los Angeles County	361	0.091	0.072	0.065	0	1	0	0	1
13	Santa Clarita Valley	358	0.126	0.108	0.091	1	52	37	23	55
ORANGE COUNTY										
16	North Orange County	365	0.103	0.082	0.073	0	7	2	4	8
17	Central Orange County	365	0.100	0.080	0.065	0	1	1	1	1
18	North Coastal Orange County	364	0.099	0.079	0.068	0	2	1	1	2
19	Saddleback Valley	358	0.099	0.088	0.075	0	8	3	2	8
RIVERSIDE COUNTY										
22	Norco/Corona	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	361	0.132	0.105	0.096	1	55	39	31	59
23	Mira Loma	356	0.127	0.104	0.093	1	51	36	29	51
24	Perris Valley	365	0.124	0.102	0.094	0	49	31	25	50
25	Lake Elsinore	362	0.131	0.098	0.093	1	31	19	18	35
26	Temecula	365	0.100	0.087	0.079	0	20	6	1	23
29	Banning Airport	359	0.124	0.097	0.091	0	46	25	16	49
30	Coachella Valley 1**	365	0.102	0.092	0.086	0	47	26	3	51
30	Coachella Valley 2**	287	0.093	0.085	0.079	0	11	4	0	12
SAN BERNARDINO COUNTY										
32	Northwest San Bernardino Valley	364	0.136	0.106	0.101	2	66	53	49	69
34	Central San Bernardino Valley 1	358	0.133	0.111	0.100	3	57	39	36	59
34	Central San Bernardino Valley 2	356	0.134	0.117	0.105	6	78	57	52	79
35	East San Bernardino Valley	329	0.137	0.115	0.102	2	76	54	44	77
37	Central San Bernardino Mountains	365	0.144	0.127	0.107	3	86	61	46	86
38	East San Bernardino Mountains	--	--	--	--	--	--	--	--	--
SCAQMD MAXIMUM			0.144	0.127	0.107	6	86	61	52	86
SOUTH COAST AIR BASIN			0.144	0.127	0.107	10	113	81	71	115

KEY:

ppm = parts per million

-- = Pollutant not monitored

** Salton Sea Air Basin

• = Incomplete data

Table 3-3 (Continued)
2015 Air Quality Data – South Coast Air Quality Management District

NITROGEN DIOXIDE (NO₂)^b					
Source Receptor Area No.	Location of Air Monitoring Station	No. Days of Data	1-hour Max. Conc. ppb, 1,	1-hour 98 th Percentile Conc. ppb,	Annual Average AAM Conc. ppb
LOS ANGELES COUNTY					
1	Central Los Angeles	365	79.1	62.4	22.2
2	Northwest Coastal Los Angeles County	365	67.6	49.4	11.7
3	Southwest Coastal Los Angeles County	365	87.0	58.1	10.9
4	South Coastal Los Angeles County 1	--	--	--	--
4	South Coastal Los Angeles County 2	--	--	--	--
4	South Coastal Los Angeles County 3	353	101.8	64.4	19.8
6	West San Fernando Valley	354	72.5	51.7	13.5
8	West San Gabriel Valley	365	74.9	55.9	15.3
9	East San Gabriel Valley 1	351	71.0	58.5	15.4
9	East San Gabriel Valley 2	365	66.2	52.6	11.2
10	Pomona/Walnut Valley	346	72.3	60.3	21.2
11	South San Gabriel Valley	345	70.4	61.6	20.5
12	South Central Los Angeles County	363	73.6	58.7	16.9
13	Santa Clarita Valley	360	64.6	43.5	11.8
ORANGE COUNTY					
16	North Orange County	334	58.0	50.8	15.0
17	Central Orange County	365	59.1	54.6	14.6
18	North Coastal Orange County	357	52.4	47.9	11.6
19	Saddleback Valley	--	--	--	--
RIVERSIDE COUNTY					
22	Norco/Corona	--	--	--	--
23	Metropolitan Riverside County 1	361	57.4	52.3	14.4
23	Mira Loma	362	68.1	49.2	13.4
24	Perris Valley	--	--	--	--
25	Lake Elsinore	357	47.2	38.8	8.7
26	Temecula	--	--	--	--
29	Banning Airport	365	49.6	44.3	8.4
30	Coachella Valley 1**	365	41.5	37.7	6.2
30	Coachella Valley 2**	--	--	--	--
SAN BERNARDINO COUNTY					
32	Northwest San Bernardino Valley	359	71.6	55.7	15.9
34	Central San Bernardino Valley 1	358	89.1	66.1	18.7
34	Central San Bernardino Valley 2	362	71.4	52.7	15.2
35	East San Bernardino Valley	--	--	--	--
37	Central San Bernardino Mountains	--	--	--	--
38	East San Bernardino Mountains	--	--	--	--
SCAQMD MAXIMUM			101.8	66.1	22.2
SOUTH COAST AIR BASIN			101.8	66.1	22.2

KEY:

ppb = parts per billion AAM = Annual Arithmetic Mean -- = Pollutant not monitored ** Salton Sea Air Basin

^b The NO₂ federal 1-hour standard is 100 ppb and the annual standard is annual arithmetic mean NO₂ > 0.0534 ppm (53.4 ppb). The state 1-hour and annual standards are 0.18 ppm (180 ppb) and 0.030 ppm (30 ppb).

Table 3-3 (Continued)
2015 Air Quality Data – South Coast Air Quality Management District

SULFUR DIOXIDE (SO₂)^c				
Source Receptor Area No.	Location of Air Monitoring Station	No. Days of Data	Maximum Conc. ppb, 1-hour	99 th Percentile Conc. ppb, 1-hour
LOS ANGELES COUNTY				
1	Central Los Angeles	364	12.6	6.3
2	Northwest Coastal Los Angeles County	--	--	--
3	Southwest Coastal Los Angeles County	358	14.9	6.8
4	South Coastal Los Angeles County 1	--	--	--
4	South Coastal Los Angeles County 2	--	--	--
4	South Coastal Los Angeles County 3	296	37.5	11.8
6	West 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	--	--	--
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	352	4.5	3.1
19	Saddleback Valley	--	--	--
RIVERSIDE COUNTY				
22	Norco/Corona	--	--	--
23	Metropolitan Riverside County 1	363	1.9	1.6
23	Mira Loma	--	--	--
24	Perris Valley	--	--	--
25	Lake Elsinore	--	--	--
26	Temecula	--	--	--
29	Banning Airport	--	--	--
30	Coachella Valley 1**	--	--	--
30	Coachella Valley 2**	--	--	--
SAN BERNARDINO COUNTY				
32	Northwest San Bernardino Valley	--	--	--
34	Central San Bernardino Valley 1	352	4.0	3.1
34	Central San Bernardino Valley 2	--	--	--
35	East San Bernardino Valley	--	--	--
37	Central San Bernardino Mountains	--	--	--
38	East San Bernardino Mountains	--	--	--
SCAQMD MAXIMUM		364	37.5	11.8
SOUTH COAST AIR BASIN		364	37.5	11.8

KEY:

ppb = parts per billion

-- = Pollutant not monitored

** Salton Sea Air Basin

^c The federal SO₂ 1-hour standard is 75 ppb (0.075 ppm). The state standards are 1-hour average SO₂ > 0.25 ppm (250 ppb) and 24-hour average SO₂ > 0.04 ppm (40 ppb).

Table 3-3 (Continued)
2015 Air Quality Data – South Coast Air Quality Management District

SUSPENDED PARTICULATE MATTER PM10 ^d						
Source Receptor Area No.	Location of Air Monitoring Station	No. Days of Data	Max. Conc. $\mu\text{g}/\text{m}^3$, 24-hour	No. (%) Samples Exceeding Standard		Annual Average AAM Conc. ^e $\mu\text{g}/\text{m}^3$
				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	58	73	0	2	27.3
2	Northwest Coastal Los Angeles County	-	-	-	-	-
3	Southwest Coastal Los Angeles County	57	42	0	0	21.2
4	South Coastal Los Angeles County 1	-	-	-	-	-
4	South Coastal Los Angeles County 2	58	62	0	2	26.5
4	South Coastal Los Angeles County 3	59	80	0	6	31.5
6	West San Fernando Valley	-	-	-	-	-
8	West San Gabriel Valley	-	-	-	-	-
9	East San Gabriel Valley 1	59	101	0	12	37.1
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	52	41	0	0	18.4
ORANGE COUNTY						
16	North Orange County	-	-	-	-	-
17	Central Orange County	56	59	0	2	25.4
18	North Coastal Orange County	-	-	-	-	-
19	Saddleback Valley	51	49	0	0	19.0
RIVERSIDE COUNTY						
22	Norco/Corona	44	87	0	3	29.6
23	Metropolitan Riverside County 1	114	69	0	9	31.7
23	Mira Loma	102	110	0	38	43.3
24	Perris Valley	57	74	0	3	30.3
25	Lake Elsinore	-	-	-	-	-
26	Temecula	-	-	-	-	-
29	Banning Airport	59	139	0	2	22.2
30	Coachella Valley 1**	55	33	0	0	16.7
30	Coachella Valley 2**	91	145	0	18	38.6
SAN BERNARDINO COUNTY						
32	Northwest San Bernardino Valley	-	-	-	-	-
34	Central San Bernardino Valley 1	55	96	0	13	37.8
34	Central San Bernardino Valley 2	57	78	0	3	29.9
35	East San Bernardino Valley	59	95	0	2	24.7
37	Central San Bernardino Mountains	58	41	0	0	16.1
38	East San Bernardino Mountains	-	-	-	-	-
SCAQMD MAXIMUM			145+	0+	38+	43.3+
SOUTH COAST AIR BASIN			139+	0+	49+	43.3+

KEY:

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

+ = High FRM and FEM PM10 data samples recorded at locations in Coachella Valley and the Basin are excluded due to the high wind in accordance with the U.S. EPA Exceptional Event Regulation.

^d - Federal Reference Method (FRM) PM10 samples were collected every 6 days at all sites except for Stations 4144 and 4157, where samples were collected every 3 days. PM10 statistics listed above are for the FRM data only. Federal Equivalent Method (FEM) PM10 continuous monitoring instruments were operated at some of the above locations. Max 24-hour average PM10 at sites with FEM monitoring was 152 $\mu\text{g}/\text{m}^3$, at Indio.

^e - State standard is annual average (AAM) $> 20 \mu\text{g}/\text{m}^3$. Federal annual PM10 standard (AAM $> 50 \mu\text{g}/\text{m}^3$) was revoked in 2006.

Table 3-3 (Continued)
2015 Air Quality Data – South Coast Air Quality Management District

SUSPENDED PARTICULATE MATTER PM _{2.5} ^f						
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 AAM Conc. ^{g)} $\mu\text{g}/\text{m}^3$
LOS ANGELES COUNTY						
1	Central Los Angeles	342	56.4	38.0	7	12.38
2	Northwest Coastal Los Angeles County	-	-	-	-	-
3	Southwest Coastal Los Angeles County	-	-	-	-	-
4	South Coastal Los Angeles County 1	338	54.6	32.1	3	10.81
4	South Coastal Los Angeles County 2	347	48.3	31.2	4	10.26
4	South Coastal Los Angeles County 3	-	-	-	-	-
6	West San Fernando Valley	113	36.8	28.4	1	8.84
8	West San Gabriel Valley	119	48.5	32.4	2	9.85
9	East San Gabriel Valley 1	120	70.3	30.0	2	9.88
9	East San Gabriel Valley 2	-	-	-	-	-
10	Pomona/Walnut Valley	-	-	-	-	-
11	South San Gabriel Valley	118	52.7	41.8	3	11.52
12	South Central Los Angeles County	111	41.3	37.2	3	11.78
13	Santa Clarita Valley	-	-	-	-	-
ORANGE COUNTY						
16	North Orange County	-	-	-	-	-
17	Central Orange County	295	45.8	29.8	3	9.38
18	North Coastal Orange County	-	-	-	-	-
19	Saddleback Valley	115	31.5	15.1	0	7.05
RIVERSIDE COUNTY						
22	Norco/Corona	-	-	-	-	-
23	Metropolitan Riverside County 1	341	54.7	38.1	9	11.89
23	Mira Loma	343	56.6	43.2	17	13.34
24	Perris Valley	-	-	-	-	-
25	Lake Elsinore	-	-	-	-	-
26	Temecula	-	-	-	-	-
29	Banning Airport	-	-	-	-	-
30	Coachella Valley 1**	108	22.7	17.1	0	5.76
30	Coachella Valley 2**	94	24.6	19.7	0	7.54
SAN BERNARDINO COUNTY						
32	Northwest San Bernardino Valley	-	-	-	-	-
34	Central San Bernardino Valley 1	114	50.5	37.7	3	11.05
34	Central San Bernardino Valley 2	110	53.5	33.6	2	10.74
35	East San Bernardino Valley	-	-	-	-	-
37	Central San Bernardino Mountains	-	-	-	-	-
38	East San Bernardino Mountains	58	39.4	35.3	1	7.59
SCAQMD MAXIMUM			70.3	43.2	17	13.34
SOUTH COAST AIR BASIN			70.3	43.2	25**	13.34

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 PM_{2.5} samples were collected every 3 days at all sites except for station numbers 072, 077, 087, 3176, 4144 and 4165, where samples were taken daily, and station number 5818 where samples were taken every 6 days. PM_{2.5} statistics listed above are for the FRM data only. FEM PM_{2.5} continuous monitoring instruments were operated at some of the above locations for special purposes studies. .
- ^g Both federal and state standards are annual average (AAM) $> 12.0 \mu\text{g}/\text{m}^3$.

Table 3-3 (Concluded)
2015 Air Quality Data – South Coast Air Quality Management District

Source Receptor Area No.	Location of Air Monitoring Station	LEAD ^h		SULFATES (SOx) ⁱ	
		Max. Monthly Average Conc. ^{m)} µg/m ³	Max. 3-Month Rolling Average ^{m)} µg/m ³	No. Days of Data	Max. Conc. µg/m ³ , 24-hour
LOS ANGELES COUNTY					
1	Central Los Angeles	0.013	0.01	--	--
2	Northwest Coastal Los Angeles County	--	--	--	--
3	Southwest Coastal Los Angeles County	0.008	0.01	--	--
4	South Coastal Los Angeles County 1	--	--	--	--
4	South Coastal Los Angeles County 2	0.010	0.01	--	--
4	South Coastal Los Angeles County 3	--	--	--	--
6	West 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	0.014	0.01	--	--
12	South Central Los Angeles County	0.014	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	0.008	0.01	--	--
23	Mira Loma	--	--	--	--
24	Perris Valley	--	--	--	--
25	Lake Elsinore	--	--	--	--
26	Temecula	--	--	--	--
29	Banning Airport	--	--	--	--
30	Coachella Valley 1**	--	--	--	--
30	Coachella Valley 2**	--	--	--	--
SAN BERNARDINO COUNTY					
32	Northwest San Bernardino Valley	0.010	0.01	--	--
34	Central San Bernardino Valley 1	--	--	--	--
34	Central San Bernardino Valley 2	0.012	0.01	--	--
35	East San Bernardino Valley	--	--	--	--
37	Central San Bernardino Mountains	--	--	--	--
38	East San Bernardino Mountains	--	--	--	--
SCAQMD MAXIMUM		0.014	0.010	--	--
SOUTH COAST AIR BASIN		0.014	0.010	--	--

KEY:

µg/m³ = micrograms per cubic meter of air -- = Pollutant not monitored

** Salton Sea Air Basin

h Federal lead standard is 3-months rolling average > 0.15 µg/m³; state standard is monthly average ≥ 1.5 µg/m³. Lead standards were not exceeded.

i Sulfate data is not available at this time. State sulfate standard is 24-hour

for Sulfates. There is no federal standard

Carbon Monoxide

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, 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 preterm births and heart abnormalities.

CO concentrations were measured at 23 locations in the Basin and neighboring Salton Sea Air Basin areas in 2014. CO concentrations did not exceed the standards in 2014. The highest 1-hour average CO concentration recorded (4.4 ppm in the South Central Los Angeles County area) was 22 percent of the federal 1-hour CO standard of 20 ppm. The highest 8-hour average CO concentration recorded (3.3 ppm in the South Central Los Angeles County area) was 37 percent of the federal 8-hour CO standard of 9.0 ppm. The state 1-hour standard is also 9.0 ppm. The highest 8-hour average CO concentration is 17 percent of the state 8-hour CO standard of 20 ppm.

In 2004, SCAQMD formally requested the U.S. EPA to re-designate the Basin from nonattainment to attainment with the CO NAAQS. On February 24, 2007, U.S. EPA published in the Federal Register its proposed decision to re-designate the Basin from nonattainment to attainment for CO. The comment period on the re-designation proposal closed on March 16, 2007 with no comments received by the U.S. EPA. On May 11, 2007, U.S. EPA published in the Federal Register its final decision to approve SCAQMD's request for re-designation from non-attainment to attainment for CO, effective June 11, 2007.

On August 12, 2011 U.S. EPA issued a decision to retain the existing NAAQS for CO, determining that those standards provided the required level of public health protection. However, U.S. EPA added a monitoring requirement for near-road CO monitors in urban areas with population of one million or more, utilizing stations that would be implemented to meet the 2010 NO₂ near-road

monitoring requirements. The two new CO monitors are at the I-5 near-road site, located in Orange County near Anaheim, and the I-10 near-road site, located near Etiwanda Avenue in San Bernardino County near Ontario, Rancho Cucamonga and Fontana.

The near-road CO measurements began at these two locations in late December 2014. From that time to the end of 2015, the preliminary data shows that while the near-road measurements were often higher than the nearest ambient monitors, as would be expected in the near-road environment, they did not exceed the levels of the 1-hour or 8-hour CO NAAQS. The preliminary 2015 near-road peak 1-hour CO concentration measured was 2.6 ppm, measured at the I-10 near-road site, while the peak 8-hour CO concentration was 3.1 ppm at the I-5 near-road site, both well below the respective NAAQS levels (35 ppm and 9 ppm, respectively). Based on this limited period of data, it appears that the near-road CO design values will be unlikely to affect the Basin's attainment status for the state and federal CO standards.

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).

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 above mentioned 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 2015, SCAQMD regularly monitored ozone concentrations at 29 locations in the Basin and the Coachella Valley portion of the Salton Sea Air Basin. Maximum ozone concentrations for all areas monitored were below the stage 1 episode level (0.20 ppm) and below the health advisory level (0.15 ppm) (see Table 3-3). All counties in the Basin, as well as the Coachella Valley, exceeded the level of the new 2015 (0.070 ppm), the former 2008 (0.075 ppm), and/or the 1997 (0.08 ppm) 8-hour ozone NAAQS in 2015. While not all stations had days exceeding the previous 8-hour standards, all monitoring stations had at least one day over the 2015 federal standard.

In 2015, the maximum ozone concentrations in the Basin continued to exceed federal standards by wide margins. Maximum 1-hour and 8-hour average ozone concentrations were 0.144 ppm and 0.107 ppm, respectively (the maximum 1-hour and 8-hour average was recorded in the Central San Bernardino Mountain area). The maximum 8-hour concentration of 0.127 ppm was 181 percent of the new federal standard. The maximum 1-hour concentration was 160 percent of the 1-hour state ozone standard of 0.09 ppm. The 8-hour average concentration was 160 percent of the 8-hour state ozone standard of 0.070 ppm.

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 subgroups. 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 2015, nitrogen dioxide concentrations were monitored at 24 locations. No area of the Basin or Salton Sea Air Basin exceeded the federal or state standards for NO₂. The Basin has not exceeded the federal standard for NO₂ (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. The

current 1-hour average NO₂ NAAQS (100 ppb) was last exceeded on two days in 2014 in the South Coastal Los Angeles County area at the Long Beach-Hudson air monitoring station. However, the 98th percentile form of the standard was not exceeded and the 2013-2015 design value is not in violation of the NAAQS. The higher relative concentrations in the Los Angeles area are indicative of the concentrated emission sources, especially heavy-duty vehicles. NO_x emission reductions continue to be necessary because it is a precursor to both ozone and PM (PM_{2.5} and PM₁₀) concentrations.

With the revised NO₂ federal standard in 2010, near-road NO₂ measurements were required to be phased in for larger cities. The four near-road monitoring stations are: (1) I-5 near-road, located in Orange County near Anaheim; (2) I-710 near-road, located at Long Beach Blvd. in Los Angeles County near Compton and Long Beach; (3) SR-60 near-road, located west of Vineyard Avenue near the San Bernardino/Riverside County border near Ontario, Mira Loma and Upland; and (4) I-10 near-road, located near Etiwanda Avenue in San Bernardino County near Ontario, Rancho Cucamonga and Fontana.

The longest operating near-road station in the Basin, adjacent to I-5 in Orange County, has not exceeded the level of the 1-hour NO₂ NAAQS (100 ppb) since the measurements began on January 1, 2014. The peak 1-hour NO₂ concentration at that site in 2014 was 78.8 ppb and the peak concentration for 2015 was 70.2 ppb. This can be compared to the annual peak values measured at the nearest ambient monitoring station in Central Orange County (Anaheim station), where the 2014 and 2015 peaks were 75.8 and 59.1, respectively. In terms of the design value form of the NAAQS, the 98th percentile daily maximum 1-hour concentrations at the Anaheim near-road site were 66.0 ppb and 61.4 ppb, respectively, for 2014 and 2015, compared to 59.8 ppb and 54.6 ppb from the Anaheim ambient monitoring station. The annual average NO₂ NAAQS (0.053 ppm, or 53 ppb) was also not exceeded. Thus, while the Anaheim near-road NO₂ measurements are higher than the ambient Orange County measurements, as would be expected close to traffic emissions sources, it does not appear that NO₂ design values will violate the NAAQS or CAAQS at this location. Likewise, the shorter period of data available from the remaining three near-road stations indicates that these locations will also likely measure higher NO₂ than the nearest ambient stations, but they have not exceeded the level of the 1-hour or annual NO₂ NAAQS or CAAQS through the end of 2015. Based on this limited period of data, it appears that the near-road NO₂ measurements will be unlikely to affect the Basin's attainment status for the state and federal NO₂ standards.

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 2015 at any of the six locations monitored the Basin. The maximum 1-hour SO₂ concentration was 37.5 ppb, as recorded in the South Coastal Los Angeles County area. The maximum 24-hour SO₂ concentration was 11.8 ppb, as recorded in South Coastal Los Angeles County area. Though SO₂ concentrations remain well below the standards, SO₂ is a precursor to sulfate, which is a component of fine particulate matter, PM₁₀, and PM_{2.5}. 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 (PM₁₀)) 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 PM_{2.5}.

A consistent correlation between elevated ambient fine particulate matter (PM_{2.5}) 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 PM_{2.5} 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 preexisting respiratory and/or cardiovascular disease appear to be more susceptible to the effects of PM₁₀ and PM_{2.5}.

SCAQMD monitored PM₁₀ concentrations at 19 locations in 2015. The federal 24-hour PM₁₀ standard (150 µg/m³) was not exceeded in 2015. The Basin has remained in attainment of the PM₁₀ NAAQS since 2006. The maximum three-year average 24-hour PM₁₀ concentration of 145 µg/m³ was recorded in the Coachella Valley area and was 97 percent of the federal standard and 290 percent of the much more stringent state 24-hour PM₁₀ standard (50 µg/m³). The state 24-

hour PM10 standard was exceeded at several of the monitoring stations. The maximum annual average PM10 concentration of 43.3 $\mu\text{g}/\text{m}^3$ was recorded in the Mira Loma area. The latest three-year annual average PM10 concentration of 44.1 $\mu\text{g}/\text{m}^3$ was recorded in the San Gabriel Valley (based on 2012 through 2014 monitoring data). The federal annual PM10 standard has been revoked. The much more stringent state annual PM10 standard (20 $\mu\text{g}/\text{m}^3$) was exceeded in most stations in each county in the Basin and in the Coachella Valley.

In 2015, PM2.5 concentrations were monitored at 17 locations throughout the Basin. U.S. EPA 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 2015, the maximum PM2.5 concentrations in the Basin exceeded the new federal 24-hour PM2.5 standard in all but three locations. The maximum 24-hour PM2.5 concentration of 70.3 $\mu\text{g}/\text{m}^3$ was recorded in the East San Gabriel Valley area. The 98th percentile 24-hour PM2.5 concentration of 43.2 $\mu\text{g}/\text{m}^3$ was recorded in the Mira Loma area, which exceeds the federal standard of 35 $\mu\text{g}/\text{m}^3$. The maximum annual average concentration of 13.34 $\mu\text{g}/\text{m}^3$ was recorded in Mira Loma, which represents 89 percent of the 2006 federal standard of 15 $\mu\text{g}/\text{m}^3$. The 3-year high state annual average PM2.5 concentration of 19 $\mu\text{g}/\text{m}^3$ was recorded in Metropolitan Riverside County (based on 2013 through 2015 monitoring), which represents 158 percent of the state standard of 12 $\mu\text{g}/\text{m}^3$.

On December 14, 2012, U.S. EPA strengthened the annual NAAQS for PM2.5 to 12 $\mu\text{g}/\text{m}^3$ and, as part of the revisions, a requirement was added to monitor near the most heavily trafficked roadways in large urban areas. Particle pollution is expected to be higher along these roadways as a result of direct emissions from cars and heavy-duty diesel trucks and buses. SCAQMD has installed the two required PM2.5 monitors by January 1, 2015, at locations selected based upon the existing near-roadway NO2 sites that were ranked higher for heavy-duty diesel traffic. The locations are: (1) I-710, located at Long Beach Blvd. in Los Angeles County near Compton and Long Beach; and (2) SR-60, located west of Vineyard Avenue near the San Bernardino/Riverside County border near Ontario, Mira Loma and Upland. These near-road sites measure PM2.5 daily with FRM filter-based measurements.

The preliminary 2015 PM2.5 annual averages from the I-710 and SR-60 Near-road sites were 12.89 and 14.48 $\mu\text{g}/\text{m}^3$, respectively. The nearby ambient stations in South Coastal Los Angeles County (North Long Beach Station) and in Metropolitan Riverside County (Mira Loma station) measured 12.81 and 13.34 $\mu\text{g}/\text{m}^3$, respectively, for the preliminary 2015 annual average. Thus, the preliminary PM2.5 measurements from these sites for 2015 indicate that the near-road sites do indeed measure higher than the nearby ambient stations, on average. If this pattern holds for the long term, the SR-60 near-road station could potentially become the three-year design value site for the Basin for the PM2.5 annual average NAAQS, once sufficient data is collected.

While it reasonably could be expected that the highest near-road site would also become the Basin-maximum design value site for the 24-hour PM2.5 NAAQS, this may not be the case for the Basin. The 2015 98th percentile 24-hour PM2.5 concentration is higher at the I-710 near-road than at the nearby North Long Beach station. However, the 98th percentile 24-hour concentration remains higher at Mira Loma (43.2 $\mu\text{g}/\text{m}^3$) than at the SR-60 Near-road site (39.9 $\mu\text{g}/\text{m}^3$). The number of days over the 24-hour PM2.5 NAAQS was also significantly higher at the Mira Loma station, with

17 days over the 24-hour NAAQS compared to 10 days at the SR-60 near-road site. PM_{2.5} 24-hour concentrations at the Mira Loma station are likely higher than the near-road site on the highest days, due to the influence of enhanced secondary particle formation at Mira Loma.

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 three decades.

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 bone tissue). Fetuses and breast-fed babies can be exposed to higher levels of lead because of previous environmental lead exposure of their mothers.

The state standards for lead were not exceeded in any area of the SCAQMD in 2015. There have been no violations of these standards at SCAQMD's regular air monitoring stations since 1982, as a result of removal of lead from gasoline. However, monitoring at two stations immediately adjacent to stationary sources of lead recorded exceedances of the standard in Los Angeles County over the 2007-2009 time period. These data were used for designations under the revised standard that also included new requirements for near-source monitoring. As a result, a nonattainment designation was finalized for much of the Los Angeles County portion of the Basin when the current standard was implemented.

The current lead concentrations in Los Angeles County are now below the NAAQS. The maximum quarterly average lead concentration (0.01 µg/m³ at several monitoring) was seven percent of the federal quarterly average lead standard (0.15 µg/m³). The maximum monthly average lead concentration (0.014 µg/m³ in South San Gabriel and South Central Los Angeles County) was one percent of the state monthly average lead standard. As a result of the 2012-2014 design value below the NAAQS, SCAQMD will be requesting that U.S. EPA re-designate the nonattainment area as attaining the federal lead standard. Stringent SCAQMD rules governing lead-producing sources will help to ensure that there are no future violations of the federal standard. Furthermore, one business that had been responsible for the highest measured lead concentrations in Los Angeles County has closed and is in the process of demolition and site clean-up.

Sulfates

Sulfates 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 sulfates. Thus, both mortality and morbidity effects have been observed with an increase in ambient sulfate concentrations. However, efforts to separate the effects of sulfates 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 nonacidic particles like ammonium sulfate. Whether the effects are attributable to acidity or to particles remains unresolved.

The most current data available for sulfates is for 2014. In 2014, the state 24-hour sulfate standard (25 µg/m³) was not exceeded in any of the 20 monitoring locations in the Basin. The maximum 24-hour sulfate concentration was 14.3 ppb, as recorded in the Central Los Angeles County area. There are no federal sulfate standards.

Vinyl Chloride

Vinyl chloride is a colorless, flammable gas at ambient temperature and pressure. It is also highly toxic and is classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as A1 (confirmed carcinogen in humans) and by the International Agency for Research on Cancer (IARC) as 1 (known to be a human carcinogen) (Air Gas, 2010). 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.

In the past, vinyl chloride emissions have been associated primarily with sources such as landfills. Risks from exposure to vinyl chloride are considered to be a localized impacts rather than regional impacts. Because landfills in the SCAQMD are subject to Rule 1150.1 – Control of Gaseous Emissions from Municipal Solid Waste Landfills, which contains stringent requirements for landfill gas collection and control, potential vinyl chloride emissions are expected to be below the

level of detection. Therefore, SCAQMD does not monitor for vinyl chloride at its 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 SCAQMD's primary mandate is attaining the state and NAAQS for criteria pollutants within the Basin, SCAQMD also has a general responsibility pursuant to Health and Safety Code § 41700 to control emissions of air contaminants and prevent endangerment to public health. Additionally, state law requires SCAQMD to implement airborne toxic control measures (ATCM) adopted by CARB and to implement the Air Toxics "Hot Spots" Act. As a result, SCAQMD has regulated pollutants other than criteria pollutants such as TACs, greenhouse gases and stratospheric ozone depleting compounds. SCAQMD has developed a number of rules to control non-criteria pollutants from both new and existing sources. These rules originated through state directives, CAA requirements, or SCAQMD rulemaking process.

In addition to promulgating non-criteria pollutant rules, 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 subsections summarize the existing setting for the two major categories of non-criteria pollutants: compounds that contribute to TACs, global climate change, and stratospheric ozone depletion.

Air Quality – Toxic Air Contaminants

Federal

Under Section 112 of the CAA, U.S. EPA is required to regulate sources that emit one or more of the 187 federally listed hazardous air pollutants (HAPs). HAPs are air toxic pollutants identified in the CAA, which are known or suspected of causing cancer or other serious health effects. The federal HAPs are listed on the U.S. EPA website at <http://www.epa.gov/ttn/atw/orig189.html>. In order to implement the CAA, approximately 100 National Emission Standards for Hazardous Air Pollutants (NESHAPs) have been promulgated by U.S. EPA for major sources (sources emitting greater than 10 tpy of a single HAP or greater than 25 tpy of multiple HAPs). SCAQMD can either directly implement NESHAPs or adopt rules that contain requirements at least as stringent as the NESHAP requirements. However, since NESHAPs often apply to sources in the Basin that are controlled, many of the sources that would have been subject to federal requirements already comply or are exempt.

In addition to the major source NESHAPs, U.S. EPA has also controlled HAPs from urban areas by developing Area Source NESHAPs under their Urban Air Toxics Strategy. U.S. EPA defines an area source as a source that emits less than 10 tons annually of any single hazardous air pollutant or less than 25 tons annually of a combination of hazardous air pollutants. The CAA requires the U.S. EPA to identify a list of at least 30 air toxics that pose the greatest potential health threat in urban areas. U.S. EPA is further required to identify and establish a list of area source categories that represent 90 percent of the emissions of the 30 urban air toxics associated with area sources, for which Area Source NESHAPs are to be developed under the CAA. U.S. EPA has identified a total of 70 area source categories with regulations promulgated for more than 30 categories so far.

The federal toxics program recognizes diesel engine exhaust (diesel particulate matter or DPM) as a health hazard, however, DPM itself is not one of their listed toxic air contaminants. Rather, each toxic compound in the speciated list of compounds in exhaust is considered separately. Although there are no specific NESHAP regulations for DPM, DPM reductions are realized through federal regulations including diesel fuel standards and emission standards for stationary, marine, and locomotive engines; and idling controls for locomotives.

State

The California air toxics program was based on the CAA and the original federal list of hazardous air pollutants. The state program was established in 1983 under the Toxic Air Contaminant Identification and Control Act, Assembly Bill (AB) 1807, Tanner. Under the state program, toxic air contaminants are identified through a two-step process of risk identification and risk management. This two-step process was designed to protect residents from the health effects of toxic substances in the air.

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 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 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 statewide program to inventory and assess the risks from facilities that emit TACs and to notify the public about significant health risks associated with the emissions. Facilities are phased into the AB 2588 program based on their emissions of criteria pollutants or their occurrence on lists of toxic emitters compiled by SCAQMD. Phase I consists of facilities that emit over 25 tons per year of any criteria pollutant and facilities present on SCAQMD's toxics list. Phase I facilities entered the program by reporting their TAC emissions for calendar year 1989. Phase II consists of facilities that emit between 10 and 25 tpy 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.

Air Toxics Control Measures: As part of its risk management efforts, CARB has passed state ATCMs to address air toxics from mobile and stationary sources. Some key ATCMs for stationary sources include reductions of benzene emissions from service stations, hexavalent chromium emissions from chrome plating, perchloroethylene emissions from dry cleaning, ethylene oxide emissions from sterilizers, and multiple air toxics from the automotive painting and repair industries.

Many of CARB's recent ATCMs are part of the CARB Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (Diesel Risk Reduction Plan) which was adopted in September 2000 (<http://www.arb.ca.gov/diesel/documents/rrpapp.htm>) with the goal of reducing DPM emissions from compression ignition engines and associated health risk by 75 percent by 2010 and 85 percent by 2020. The Diesel Risk Reduction Plan includes strategies to reduce emissions from new and existing engines through the use of ultra-low sulfur diesel fuel, add-on controls, and engine replacement. In addition to stationary source engines, the plan addresses DPM emissions from mobile sources such as trucks, buses, construction equipment, locomotives, and ships.

OEHHA Health Risk Assessment Guidelines: In 2003, OEHHA developed and approved its Health Risk Assessment Guidance document (2003 OEHHA Guidelines) and prepared a series of Technical Support Documents, reviewed and approved by the Scientific Review Panel (SRP), that provided new scientific information showing that early-life exposures to air toxics contribute to an increased estimated lifetime risk of developing cancer and other adverse health effects, compared to exposures that occur in adulthood. As a result, OEHHA developed the Revised OEHHA Guidelines in March 2015 which incorporated this new scientific information. The new method utilizes higher estimates of cancer potency during early life exposures. There are also differences in the assumptions on breathing rates and length of residential exposures.

SCAQMD

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 emissions 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 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.

Rules and Regulations: Under SCAQMD's toxic regulatory program there are 23 source-specific rules that target toxic emission reductions that regulate over 10,000 sources such as metal finishing, spraying operations, dry cleaners, film cleaning, gasoline dispensing, and diesel-fueled stationary engines to name a few. In addition, other source-specific rules targeting criteria pollutant reductions also reduce toxic emissions, such as Rule 461 – Gasoline Transfer and Dispensing which reduces benzene emissions from gasoline dispensing and Rule 1124 – Aerospace Assembly and Component Manufacturing Operations which reduces perchloroethylene, trichloroethylene, and methylene chloride emissions from aerospace operations.

New and modified sources of toxic air contaminants in the SCAQMD are subject to Rule 1401 - New Source Review of Toxic Air Contaminants and Rule 212 - Standards for Approving Permits. Rule 212 requires notification of 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 a maximum individual cancer risk of one in one million (1×10^6) or greater, or a new or modified facility with criteria pollutant emissions exceeding specified daily maximums. Distribution of notice is required to all addresses within a quarter mile radius, or other area deemed appropriate by 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. The rule lists nearly 300 TACs that are evaluated during SCAQMD's permitting process for new, modified or relocated sources. During the past decade, more than ten compounds have been added or had risk values amended. The addition of DPM from diesel-fueled internal combustion engines as a TAC in March 2008 was the most significant of recent amendments to the rule. Rule 1401.1 –

Requirements for New and Relocated Facilities Near Schools sets risk thresholds for new and relocated facilities near schools. The requirements are more stringent than those for other air toxics rules in order to provide additional protection to school children.

Air Toxics Control Plan: On March 17, 2000, the SCAQMD Governing Board approved the Air Toxics Control Plan (2000 ATCP) which was the first comprehensive plan in the nation to guide future toxic rulemaking and programs. The ATCP was developed to lay out SCAQMD's air toxics control program which built upon existing federal, state, and local toxic control programs as well as co-benefits from implementation of SIP measures. The concept for the plan was an outgrowth of the Environmental Justice principles and the Environmental Justice Initiatives adopted by SCAQMD Governing Board on October 10, 1997. Monitoring studies and air toxics regulations that were created from these initiatives emphasized the need for a more systematic approach to reducing toxic air contaminants. The intent of the plan was to reduce exposure to air toxics in an equitable and cost-effective manner that promotes clean, healthful air in the SCAQMD. The plan proposed control strategies to reduce TACs in the SCAQMD implemented between years 2000 and 2010 through cooperative efforts of SCAQMD, local governments, CARB and U.S. EPA.

Cumulative Impact Reduction Strategies (CIRS): The CIRS was presented to the SCAQMD Governing Board on September 5, 2003 as part of the White Paper on Regulatory Options for Addressing Cumulative Impacts from Air Pollution Emissions. The resulting 25 cumulative impacts strategies were a key element of the Addendum to March 2000 Final Draft Air Toxics Control Plan for Next Ten Years (2004 Addendum). The strategies included rules, policies, funding, education, and cooperation with other agencies. Some of the key SCAQMD accomplishments related to the cumulative impacts reduction strategies were:

- Rule 1401.1 which set more stringent health risk requirements for new and relocated facilities near schools
- Rule 1470 – Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines which established DPM emission limits and other requirements for diesel-fueled engines
- Rule 1469.1 – Spraying Operations Using Coatings Containing Chromium which regulated chrome spraying operations
- Rule 410 – Odor from Transfer Stations and Material Recovery Facilities which addresses odors from transfer stations and material recovery facilities
- Intergovernmental Review comment letters for CEQA documents
- SCAQMD's land use guidance document
- Additional protection in toxics rules for sensitive receptors, such as more stringent requirements for chrome plating operations and diesel engines located near schools

2004 Addendum: The 2004 Addendum was adopted by the SCAQMD Governing Board on April 2, 2004 and served as a status report regarding implementation of the various mobile and stationary source strategies in the 2000 ATCP and introduced new measures to further address air toxics. The main elements of the 2004 Addendum were to address the progress made in the implementation of the 2000 ATCP control strategies provide a historical perspective of air toxic

emissions and current air toxic levels; incorporate the CIRS approved in 2003 and additional measures identified in the 2003 AQMP; project future air toxic levels to the extent feasible; and summarize future efforts to develop the next ATCP. Significant progress had been made in implementing most of SCAQMD strategies from the 2000 ATCP and the 2004 Addendum. CARB has also made notable progress in mobile source measures via its Diesel Risk Reduction Plan, especially for goods movement related sources, while the U.S. EPA continued to implement their air toxic programs applicable to stationary sources.

Clean Communities Plan: On November 5, 2010, the SCAQMD Governing Board approved the 2010 Clean Communities Plan (CCP). The CCP was an update to the 2000 ATCP and the 2004 Addendum. The objective of the 2010 CCP was to reduce the exposure to air toxics and air-related nuisances throughout the SCAQMD, with emphasis on cumulative impacts. The elements of the 2010 CCP are community exposure reduction, community participation, communication and outreach, agency coordination, monitoring and compliance, source-specific programs, and nuisance. The centerpiece of the 2010 CCP is a pilot study through which SCAQMD staff works with community stakeholders to identify and develop solutions community-specific to air quality issues in two communities: (1) the City of San Bernardino; and (2) Boyle Heights and surrounding areas.

Control of TACs under the Air Toxics "Hot Spots" Act: On October 2, 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 one 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 AB 2588 Toxics "Hot Spots" Program is implemented through Rule 1402 - Control of Toxic Air Contaminants from Existing Sources. SCAQMD continues to review health risk assessments submitted. Notification is 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.

There are currently about 361 facilities in SCAQMD's AB 2588 program. Since 1992 when the state Health and Safety Code incorporated a risk reduction requirement in the program, SCAQMD has reviewed and approved over 335 HRAs; 50 facilities were required to do a public notice and 24 facilities were subject to risk reduction. Currently, over 96 percent of the facilities in the program have cancer risks below ten in a million and over 97 percent have acute and chronic hazard indices of less than one (SCAQMD, 2015a).

CEQA Intergovernmental Review Program: SCAQMD staff, through its Intergovernmental Review (IGR) provides comments to lead agencies on air quality analyses and mitigation measures in CEQA documents. The following are some key programs and tools that have been developed more recently to strengthen air quality analyses, specifically as they relate to exposure of mobile source air toxics:

- SCAQMD’s Mobile Source Committee approved the “Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions” (August 2002). This document provides guidance for analyzing cancer risks from DPM from truck idling and movement (e.g., truck stops, warehouse and distribution centers, or transit centers), ship hoteling at ports, and train idling.
- CalEPA and CARB’s “Air Quality and Land Use Handbook: A Community Health Perspective” (April 2005), provides recommended siting distances for incompatible land uses.
- Western Riverside Council of Governments’ Regional Air Quality Task Force developed a policy document titled, “Good Neighbor Guidelines for Siting New and/or Modified Warehouse/Distribution Facilities” (September 2005). This document provides guidance to local government on preventive measures to reduce neighborhood exposure to toxic air contaminants from warehousing facilities.

Environmental Justice (EJ): Environmental justice has long been a focus of SCAQMD. In 1990, SCAQMD formed an Ethnic Community Advisory Group that was restructured as the Environmental Justice Advisory Group (EJAG) in 2008. EJAG’s mission is to advise and assist SCAQMD in protecting and improving public health in SCAQMD’s most impacted communities through the reduction and prevention of air pollution.

In 1997, the SCAQMD Governing Board adopted four guiding principles and ten initiatives (<http://www.aqmd.gov/ej/history.htm>) to ensure environmental equity. Also in 1997, the SCAQMD Governing Board expanded the initiatives to include the “Children’s Air Quality Agenda” focusing on the disproportionate impacts of poor air quality on children. Some key initiatives that have been implemented were the Multiple Air Toxics Exposure Studies (MATES, MATES II, MATES III, and MATES IV); the Clean Fleet Rules; CIRS; funding for lower emitting technologies under the Carl Moyer Program; the Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning; a guidance document on Air Quality Issues in School Site Selection; and the 2000 ATCP and its 2004 Addendum. Key initiatives focusing on communities and residents include the Clean Air Congress; the Clean School Bus Program; Asthma and Air Quality Consortium; Brain and Lung Tumor and Air Pollution Foundation; air quality presentations to schools and community and civic groups; and Town Hall meetings. Technological and scientific projects and programs have been a large part of SCAQMD’s EJ program since its inception. Over time, the EJ program’s focus on public education, outreach, and opportunities for public participation have greatly increased. Public education materials and other resources for the public are available on SCAQMD’s website (www.aqmd.gov)

AB 2766 Subvention Funds: AB 2766 subvention funds, money collected by the state as part of vehicle registration and passed through to SCAQMD, is used to fund projects in local cities that reduce motor vehicle air pollutants. The Clean Fuels Program, funded by a surcharge on motor

vehicle registrations in SCAQMD, reduces TAC emissions through co-funding projects that develop and demonstrate low-emission clean fuels and advanced technologies, and to promote commercialization and deployment of promising or proven technologies in Southern California.

Carl Moyer Program: Another program that targets diesel emission reductions is the Carl Moyer Program which provides grants for projects that achieve early or extra emission reductions beyond what is required by regulations. Examples of eligible projects include cleaner on-road, off-road, marine, locomotive, and stationary agricultural pump engines. Other endeavors of SCAQMD's Technology Advancement Office help to reduce DPM emissions through co-funding research and demonstration projects of clean technologies, such as low-emitting locomotives.

Control of TACs with Risk Reduction Audits and Plans: Senate Bill (SB) 1731, enacted in 1992 and codified in Health and Safety Code § 44390 et seq., amended AB 2588 to include a requirement for facilities with significant risks to prepare and implement a risk reduction plan which will reduce the risk below a defined significant risk level within specified time limits. SCAQMD Rule 1402 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, 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.

Multiple Air Toxics Exposure Studies

Multiple Air Toxics Exposure Study (MATES): In 1986, SCAQMD conducted the first MATES report to determine the Basin-wide risks associated with major airborne carcinogens. At the time, the state of technology was such that only 20 known air toxic compounds could be analyzed and diesel exhaust particulate did not have an agency accepted carcinogenic health risk value. TACs are determined by U.S. EPA, and by CalEPA, including OEHHA and CARB. For purposes of MATES, the California carcinogenic health risk factors were used. The maximum combined individual health risk for simultaneous exposure to pollutants under the study was estimated to be 600 to 5,000 in one million.

Multiple Air Toxics Exposure Study II (MATES II): At its October 10, 1997 meeting, the SCAQMD Governing Board directed staff to conduct a follow up to the MATES report to quantify the magnitude of population exposure risk from existing sources of selected air toxic contaminants at that time. MATES II included a monitoring program of 40 known air toxic compounds, an updated emissions inventory of toxic air contaminants (including microinventories around each of the 14 microscale sites), and a modeling effort to characterize health risks from hazardous air pollutants. The estimated Basin-wide carcinogenic health risk from ambient measurements was 1,400 per million people. About 70 percent of the Basin-wide health risk was attributed to DPM emissions; about 20 percent to other toxics associated with mobile sources (including benzene, butadiene, and formaldehyde); about 10 percent of Basin-wide health risk was attributed to stationary sources (which include industrial sources and other certain specifically identified commercial businesses such as dry cleaners and print shops.)

Multiple Air Toxics Exposure Study III (MATES III): MATES III was part of the SCAQMD Governing Board's 2003-04 Environmental Justice Workplan approved on September 5, 2003. The MATES III report consisted of several elements including a monitoring program, an updated emissions inventory of toxic air contaminants, and a modeling effort to characterize carcinogenic health risk across the Basin. Besides toxics, additional measurements included organic carbon, elemental carbon, and total carbon, as well as, Particulate Matter (PM), including PM_{2.5}. It did not estimate mortality or other health effects from particulate exposures. MATES III revealed a general downward trend in air toxic pollutant concentrations with an estimated Basin-wide lifetime carcinogenic health risk of 1,200 in one million. Mobile sources accounted for 94 percent of the basin-wide lifetime carcinogenic health risk with diesel exhaust particulate contributing to 84 percent of the mobile source Basin-wide lifetime carcinogenic health risk. Non-diesel carcinogenic health risk declined by 50 percent from the MATES II values.

Multiple Air Toxics Exposure Study IV (MATES IV): MATES IV, the current version, includes a monitoring program, an updated emissions inventory of toxic air contaminants, and a modeling effort to characterize risk across the Basin. The study focuses on the carcinogenic risk from exposure to air toxics but does not estimate mortality or other health effects from particulate exposures. An additional focus of MATES IV is the inclusion of measurements of ultrafine particle concentrations. MATES IV incorporates the updated health risk assessment methodology from OEHHA. Compared to previous studies of air toxics in the Basin, this study found decreasing air toxics exposure, with the estimated Basin-wide population-weighted risk down by about 57 percent from the analysis done for the MATES III time period. The ambient air toxics data from the ten fixed monitoring locations also demonstrated a similar reduction in air toxic levels and risks. On average, diesel particulate contributes about 68 percent of the total air toxics risk. This is a lower portion of the overall risk compared to the MATES III estimates of about 84 percent.

Health Effects

Carcinogenic Health Risks from TACs: 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. The proportion of cancer deaths attributable to air pollution has not been estimated using epidemiological methods.

Non-Cancer Health Risks from TACs: Unlike carcinogens, for most 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 OEHHA develops Reference Exposure Levels (RELs) for TACs which are health-conservative estimates of the levels of exposure at or below which health effects are not expected. The 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 Significant Environmental Impacts and Mitigation Measures

Cumulative Environmental Impacts

Potential Environmental Impacts Found Not to be Significant

Significant Environmental Effects Which Cannot Be Avoided

Significant Irreversible Environmental Changes

Potential Growth-Inducing Impacts

Relationship Between Short-Term Uses and Long-Term Productivity

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).

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 codified in Title 14 California Code of Regulations § 15000 *et seq.* Under the CEQA Guidelines, there are approximately 17 environmental categories in which potential adverse impacts from a project are evaluated. The Initial Study is designed to evaluate the project and identify those environmental categories that may be adversely affected by a project and to be further analyzed in a subsequent CEQA document.

The CEQA Guidelines also 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. As explained in Chapter 1, the analysis of PAR 1147 indicated that the type of CEQA document appropriate for the proposed project is a SEA. Due to the large number and wide variety of affected sources (e.g., up to 5,650) at 3,900 existing facilities, this SEA analyzes the environmental impacts by equipment category.

POTENTIAL SIGNIFICANT ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Pursuant to CEQA, a NOP/IS, including an environmental checklist, was prepared for this project (see Appendix B). Of the 17 potential environmental impact categories contained in the environmental checklist, only the topic of operational air quality was identified as having potentially significant adverse impacts requiring further review. Following the release of the NOP/IS, further analysis of the proposed project indicated that the preparation of a SEA, in lieu of an EA, would be the appropriate document to analyze the potentially significant operational air quality 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 December 2008 Final EA and September 2011 Final SEA were certified, became available (CEQA Guidelines § 15162(a)(3)). Further, PAR 1147 is expected to have same significant adverse effects to the topic of operational air quality that were identified in the NOP/IS, but that were not discussed in the previous December 2008 Final EA or September 2011 Final SEA (CEQA Guidelines §

15162(a)(3)(A)). Thus, the topic of operational air quality is further evaluated in this SEA. The environmental impact analysis for this environmental topic area 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 operational air quality impacts associated with the implementation of the proposed project.

AIR QUALITY

PAR 1147 will resolve current Rule 1147 NO_x emissions compliance issues that have been raised by businesses. Up to 3,900 existing facilities (4,900 to 5,650 out of 6,400 existing units) within SCAB will be affected by PAR 1147. PAR 1147 proposes to extend the compliance dates for small and low use equipment based on a longer equipment lifetime, change the emission limits for certain specific equipment to address technical feasibility of meeting a 30 ppm NO_x limit, add a testing exemption, and clarify exemptions for certain equipment. Therefore, initial analysis of PAR 1147 is expected to result in NO_x emission reductions foregone of up to 0.9 ton per day starting in 2017. However, while most of the NO_x emission reductions foregone will be eventually recaptured because the existing affected units will be regularly replaced and upgraded over time, approximately 0.03 ton per day of NO_x emission reductions will be permanently foregone. Nonetheless, the amount of NO_x emission reductions foregone is expected to exceed the SCAQMD's significance operational air quality threshold for NO_x (e.g., 55 pounds per day); thus, implementation of PAR 1147 would be expected to have significant adverse operational air quality impacts. No other environmental topic area was identified as having potentially significant adverse impacts if PAR 1147 is implemented.

For this reason, the proposed changes contained in PAR 1147 are considered to contain new information of substantial importance, which was not known and could not have been known at the time the previously CEQA documents for Rule 1147 (e.g., the December 2008 Final EA and the September 2011 Final SEA) were certified. Specifically, because the quantity of NO_x emission reductions foregone would exceed the SCAQMD's significance operational air quality threshold for NO_x (e.g., 55 pounds per day) and that these effects were not discussed in the previously certified CEQA documents, PAR 1147 will create a new significant effects to operational air quality that need to be further evaluated in this SEA per CEQA Guidelines § 15162(a)(3)(A). Thus, only the topic of operational air quality has been analyzed in this 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. PAR 1147 will be considered to have significant adverse air quality impacts if any one of the thresholds in Table 4-1 are equaled or exceeded.

Table 4-1
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 ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic & Acute Hazard Index ≥ 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	1.5 $\mu\text{g}/\text{m}^3$ (state) 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 $>$ = greater than

Revision: March 2015

In general, 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. However, as explained previously, no construction activities are associated with implementing PAR 1147, so the construction significance thresholds do not apply to this project. 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

PAR 1147 will provide relief to businesses by extending the compliance dates for small and low use equipment. Compliance dates will be extended for the expected life of these units (35 years) or when the equipment is replaced, rebuilt or moved to a different facility. This change will reduce compliance cost for affected businesses. The amendment will also change the emission limit for specific categories of equipment (e.g., incinerator section of burn off ovens and small units less than 325,000 BTU/hour) to address technical feasibility of meeting a 30 ppm NO_x limit. Therefore, it is not expected that the affected facilities will need to change their current operations in order to comply with PAR 1147. However, most NO_x emission reductions for PAR 1147 will be delayed and will result in NO_x emissions foregone of up to 0.9 ton per day starting in 2017 as a result of an increase in the allowable NO_x ppm limit, exempt some units, and extending the compliance date. However, while most of the NO_x emission reductions foregone will be eventually recaptured because the existing units will be regularly replaced and upgraded over time, approximately 0.03 ton per day of the NO_x emission reductions foregone will be permanent.

NO_x emission reductions foregone from equipment subject to Rule 1147 is estimated using information on typical use provided by operators visited by SCAQMD staff and potential to emit (PTE) for affected units in SCAQMD records. Based on natural gas consumptions, business owners and equipment vendors indicate typical automotive booths and other booth operations at maintenance facilities, businesses that repair non-automotive equipment, and other specialty shops have emissions of less than one third pound (0.3 pound) NO_x each day they operate. However, many booths have greater emissions because they are used for manufacturing operations with one or more shifts per day. Up to 200 booths used in manufacturing and other large coating applications may have emissions of a pound per day or more. In addition, while many auto body shops do not paint cars every day during the week, larger operations can operate two shifts per day.

Based on this information, the 3,400 permitted booths and spray stations have emissions of about 0.5 ton NO_x per day (= [3,400 units X approximately 0.3 pound NO_x/day per all booth types]/[2000 pounds/ton]). About 1,500 other types of combustion equipment including, but not limited to, ovens, dryers, and furnaces have PTE of less than one pound of NO_x per day. Because there is a wide distribution of PTE estimated for these other types of equipment, average emissions from each of these units is assumed to be 0.5 pound of NO_x per day for a total of 0.4 ton NO_x per day (= [1,500 units X 0.5 pound NO_x/day]/[2,000 pounds/ton]). An additional 750 units with a PTE of one pound of NO_x per day or greater per unit may have actual emissions less than one pound of NO_x per day. The estimated emissions from these 750 units is about 0.3 ton NO_x per day (= [750 units X 0.8 pound NO_x/day]/[2,000 pounds/ton]).

Based on this approach, the approximately 4,900 to 5,650 units that may be affected by PAR 1147 and that have a PTE of less than one pound of NOx per day per unit is estimated to emit about 0.9 to 1.2 tons of NOx per day. The majority of equipment with emissions less than one pound of NOx per day are subject to a 30 ppm NOx emission limit which would reduce emissions by about 71 percent. However, a much smaller number of equipment that would be subject to a 60 ppm NOx limit and the emission reductions would be about 41 percent. Assuming a 66 percent reduction for the combination of equipment emission reductions of 41 percent to 71 percent, for the 4,900 to 5,650 units, the overall NOx emission reductions foregone is expected to range between approximately 0.6 (excluding the 750 other units that may have emissions less than 1 pound per day) to 0.9 ton per day. Table 4-2 contains a summary of the estimated emissions reduction foregone for each source category and the overall total. Of the emission reductions foregone as presented in Table 4-2, while most will eventually be recovered over time, a small portion will be permanently foregone. Thus, Table 4-3 presents a summary of the estimated portion of emission reductions for each source category that will be permanently foregone. NOx is the only pollutant that is affected by the PAR 1147 because the focus of Rule 1147 is to reduce NOx emissions. As shown in Table 4-2, the quantity of peak daily operational NOx emission reductions delayed exceeds the SCAQMD's CEQA significance threshold for operation. Thus, PAR 1147 will result in significant adverse operational air quality impacts for NOx.

Table 4-2
Estimated NOx Emission Reductions Foregone

Source Category	Estimated NOx emissions per unit (lb/day)	Estimated number of units	Total estimated NOx emissions (ton/day)	66% of NOx emission reductions foregone per 60 ppm NOx limit (ton/day)	71% of NOx emission reductions foregone per 30 ppm NOx limit (ton/day)
Booths and spray stations	0.3	3,400	0.5	0.3	0.4
Ovens, dryers, furnaces, etc.) with emissions less than 1 pound per day	0.5	1,500	0.4	0.3	0.3
Other units that may have emissions less than 1 pound per day	0.8	750	0.3	0.2	0.2
TOTAL	N/A	5,650	1.2	0.8	0.9
SIGNIFICANCE THRESHOLD*	N/A	N/A	N/A	0.0275	0.0275
SIGNIFICANT?	N/A	N/A	N/A	YES	YES

Notes:

N/A: Not Applicable

* The NOx significance threshold for operation is 55 pounds per day which is equivalent to 0.0275 ton per day.

Table 4-3
Estimated Permanent NO_x Emission Reductions Foregone

<u>Equipment Category</u>	<u>Estimated Number of Units Requiring Permits</u>	<u>Estimated Number of Additional (New) Units Requiring Permits</u>	<u>Estimated NO_x Emission Reductions Permanently Foregone as Compared to Baseline (pounds/day)</u>
<u>Low Temp Afterburners</u>	<u>25</u>	<u>5</u>	<u>12</u>
<u>Units < 325,000 BTU/hour</u>	<u>165</u>	<u>82</u>	<u>49</u>
TOTAL			<u>61</u>

Note: At the time of the release of the Draft SEA, the estimate of 0.9 tons per day of NO_x emission reductions foregone included a portion of emissions attributed to the low temperature afterburners that would be permanently foregone. However, the analysis in the Draft SEA for low temperature afterburners did not specifically identify the quantity of permanent NO_x emission reductions foregone that would be attributed to this equipment category (e.g., 12 pounds per day). Therefore, it is added here for clarification purposes. In addition, at the time of the release of the Draft SEA, the project contained a proposal to increase the NO_x compliance limit for low temperature ovens and other units with a heat rating less than 325,000 BTU per hour and the NO_x emission reductions foregone for these equipment categories were also included in the total estimate of 0.9 tons per day of NO_x emission reductions foregone. However, subsequent to the release of the Draft SEA, the proposed project was modified to instead exempt all units with heat rating of less than 325,000 BTU per hour. This revision resulted in an additional 49 pounds per day of permanent NO_x emission reductions foregone from units with a heat rating less than 325,000 BTU per hour and are considered new impacts since the release of the Draft SEA.

Table 4-34
Estimated NOx Emission Reductions Foregone Per Compliance Year

Compliance Year	NOx Emission Reductions Foregone due to PAR 1147 (ton/day)
2017	0.90
2018	0.87
2019	0.84 0.83
2020	0.80 0.80
2021	0.77 0.77
2022	0.74 0.73
2023	0.71 0.70
2024	0.67 0.67
2025	0.64 0.63
2026	0.61 0.60
2027	0.58 0.57
2028	0.55 0.53
2029	0.51 0.50
2030	0.48 0.47
2031	0.45 0.43
2032	0.42 0.40
2033	0.38 0.37
2034	0.35 0.33
2035	0.32 0.30
2036	0.29 0.27
2037	0.26 0.23
2038	0.22 0.20
2039	0.19 0.17
2040	0.16 0.13
2041	0.13 0.10
2042	0.10 0.07
2043	0.06 0.03
2044 and beyond	0.030

The baseline emissions inventory for PAR 1147 is the inventory that was used for the 2008 rule adoption. By proposing to delay some of the compliance dates and to exempt some units in PAR 1147, there will be adjustments to the annual operational NOx emission reductions during varying compliance years. Table 4-3 presents the estimated amount of NOx emission reductions that will be permanently foregone, which is a subset of the total NOx emission reductions presented in Table 4-2. Table 4-3-4 summarizes the estimated amount of potential NOx emission reductions foregone between 2017 and 2044 and beyond, as a result of the delayed compliance dates and the exemption of certain units contained in PAR 1147.

As shown in Table 4-34, the air quality analysis for PAR 1147 indicates that NO_x emission reductions delayed during operation will continue to exceed the NO_x operational significance threshold for each compliance year in 2017 and beyond. Thus, the operational air quality impacts from implementing PAR 1147 are considered to be significant. If significant adverse environmental impacts are identified in a CEQA document, the CEQA document shall describe feasible measures that could minimize the impacts of the proposed project. However, since PAR 1147 contains adjustments to compliance dates for certain types of equipment and alternatives to the project that are either the ‘no project’ alternative, or different adjustments to the compliance dates than what is proposed in PAR 1147 (see Chapter 5), there are no feasible mitigation measures that would eliminate or reduce the significant adverse operational air quality impacts for NO_x emissions to less than significant levels.

It is important to note that because PAR 1147 focuses on reducing NO_x emissions, emissions of other criteria pollutants (e.g., CO, VOC, SO_x, PM₁₀, and PM_{2.5}) and toxic air contaminants are not expected to change as a result of PAR 1147 compared with the current requirements for the affected sources under Rule 1147. Thus, PAR 1147 will not result in significant adverse operational air quality impacts for CO, VOC, SO_x, PM₁₀, PM_{2.5} and toxic air contaminants.

CUMULATIVE ENVIRONMENTAL IMPACTS

The cumulative secondary impacts associated with the extended compliance dates and equipment replacement schedules and changes in emission limits of NO_x as contained in PAR 1147 will have the potential for creating significant adverse operational air quality impacts for NO_x that is evaluated in the previous subchapters and presented in Table 4-2, 4-3, and 4-3-4 in the Final SEA. Therefore, adopting PAR 1147 will result in a cumulatively considerable net increase of NO_x for which the project region is non-attainment of ozone under NAAQS.

POTENTIAL ENVIRONMENTAL IMPACTS FOUND NOT TO BE SIGNIFICANT

A NOP/IS was initially prepared for the proposed project which included an environmental checklist comprised of approximately 17 environmental topic areas that identified the potential significant adverse impacts from implementing PAR 1147. The NOP/IS concluded that only the topic of operational air quality would have potential significant adverse impacts that would require further review and these impacts were evaluated and discussed in the previous section. In addition, where the NOP/IS concluded that the project would have no significant or less than significant direct or indirect adverse effects on the remaining environmental topics areas, the conclusions for these environmental topic areas are consistent with the conclusions reached in the previously certified documents (e.g., the December 2008 Final EA and the September 2011 Final SEA) that aside from the topic of operational air quality, there would be no other significant adverse effects from implementing PAR 1147. The screening analysis in the NOP/IS concluded that the following environmental areas would not be significantly adversely affected by the proposed project:

- aesthetics
- air quality during construction and GHGs during construction and 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 and hazardous waste
- transportation and traffic

The detailed evaluation of the above environmental topic areas is contained in the NOP/IS and is not repeated here (see Appendix B). It is important to note that the SCAQMD received two comment letters relative to the NOP/IS during the 30-day review and comment period from February 1, 2017, to March 3, 2017. SCAQMD staff evaluated these comments and prepared responses. The comment letters received relative to the NOP/IS and the responses to the comments are included in Appendix E of this SEA. In addition, oral comments were presented at the CEQA scoping meeting held on February 21, 2017. Again, SCAQMD staff evaluated these comments and prepared responses. The comments made at the CEQA scoping meeting and the responses to these comments are included in Appendix D of this SEA. None of the comments changed the conclusion of no significant adverse impacts in the NOP/IS for the above environmental topic areas.

SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

CEQA Guidelines § 15126(b) requires an environmental analysis to consider "any significant environmental effects which cannot be avoided if the proposed project is implemented." This Final SEA identified the topics of air quality impact during operation as the environmental topic area potentially adversely affected by the proposed project. The air quality effects from the operation could not be feasibly mitigated and would result in a significant and unavoidable impact with implementation of the proposed project. This conclusion is also consistent with the finding in the NOP/IS.

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 Final SEA identified the topic of air quality during operation as the only environmental area potentially adversely affected by the proposed project. Facility operators that replace existing units with compliance equipment according to the compliance schedule in PAR 1147 are likely to operate these units for the lifetime of the equipment.

The proposed changes to PAR 1147 would delay up to 0.90 ton per day (2,000 lbs/day X 0.9 ton = 1,800 lbs) of NOx emission reductions starting in compliance years 2017. These delayed NOx emission reductions will not increase existing emissions, but prevent emission reductions from occurring in the specified years. However, while most of the 0.90 ton per day of NOx delayed emission reductions will be eventually recaptured starting in compliance years 2018 because the existing units will be regularly replaced and upgraded over time, approximately 0.03 ton per day of the NOx emission reductions foregone will be permanent (see Table 4-3). Thus, despite the delay in implementation of some of the compliance dates, ~~the same amount~~ most of the overall NOx emission reductions as estimated in the current rule will be eventually achieved by PAR 1147. Further, even though the projected NOx emission reductions foregone are estimated to be 0.9 ton per day in 2017 and the permanent emission reductions foregone are estimated to be 0.03 ton per day, the 2012 AQMP allocated one ton per day of NOx emissions in the SIP set aside account for every year starting in year 2013 to year 2030 in the event that NOx emission reductions were not achieved via rule adoptions or amendments. This NOx set aside account was re-evaluated and revised in the Final 2016 AQMP based on expected growth and the number of projects expected to take place in near future years to 2.0 tons per day for every year starting in year 2017 to year 2025 and 1.0 ton per day for every year starting in year 2026 to year 2031. As a result, even PAR 1147 would delay NOx emission reductions and exempt some units, implementation of other control measures in the 2016 AQMP will provide human health benefits by reducing population exposures to existing NOx emissions. 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.

RELATIONSHIP BETWEEN SHORT-TERM USES AND LONG-TERM PRODUCTIVITY

CEQA documents are required to explain and make findings about the relationship between short-term uses and long-term productivity (CEQA Guidelines § 15065(a)(2)). An important consideration when analyzing the effects of a proposed project is whether it will result in short-term environmental benefits to the detriment of achieving long-term goals or maximizing

productivity of these resources. Implementing the proposed project is not expected to achieve short-term goals at the expense of long-term environmental productivity or goal achievement. The purpose of the proposed project is to provide compliance relief for a limited group of emission sources. Because PAR 1147 will not eliminate all NO_x emission reductions originally contemplated by the adoption of Rule 1147 in December 2008, by continuing to achieve some emission reductions of NO_x, which is a precursor to the formation of ozone and PM_{2.5}, even if the proposed project is implemented and there will be some temporary NO_x emission reductions foregone between compliance years 2017 and 2031, the NO_x emission reductions that will continue to be achieved by other aspects of the rule will continue to help attain federal and state air quality standards which are expected to enhance short and long-term environmental productivity in the region. Implementing the proposed project does not narrow the range of beneficial uses of the environment. Of the potential environmental impacts discussed in Chapter 4, only those related to operational air quality are considered potentially significant.

CHAPTER 5

ALTERNATIVES

Introduction

Alternatives Rejected as Infeasible

Description of Alternatives

Comparison of Alternatives

Conclusion

INTRODUCTION

This Final 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 Section 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 a SEA than is required for an EIR under CEQA.

Four alternatives to the proposed project are summarized in Table 5-1: Alternative A (No Project), Alternative B (More Stringent), Alternative C (Less Stringent), and Alternative D (Least Stringent). Pursuant to the requirements in CEQA Guidelines Section 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 environmental topic area, 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 to operation activities while meeting the objectives of the project. Therefore, the proposed project is preferred over the project alternatives.

The Governing Board may choose to adopt any portion or all of any alternative presented in the Final SEA with appropriate findings as required by CEQA. 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 Draft SEA ~~will be~~ will be considered when preparing ~~the~~ is Final SEA and included in the Appendix F of this Final SEA.

**Table 5-1
Summary of the Proposed Project and Alternatives**

Category		Proposed Project	Alternative A: No Project	Alternative B: More Stringent	Alternative C: Less Stringent	Alternative D: Least Stringent
Equipment with NOx emissions < 1 lb/day	Require compliance with emission limit at specific age	30 years, (less stringent than current rule)	20 years (same as current rule but more stringent than proposed project)	25 years (less stringent than current rule but more stringent than proposed project)	No age requirement (less stringent than current rule and proposed project)	No age requirement (less stringent than current rule and proposed project)
	Demonstration of compliance with NOx emission limit	Applicable to new, replacement and rebuilt units but not to relocation of units by the same company and owner	Applicable to new, replacement and rebuilt units (current rule)	Applicable to new, replacement and rebuilt units (same as current rule)	Applicable to new, replacement and rebuilt units but not to relocation of units by the same company and owners	Compliance with limit is not required if provided that records demonstrate emissions < 1 lb/day. However, if records do not demonstrate < 1 lb/day NOx or records are not kept, then the owner/operator shall demonstrate compliance with unit specific NOx limit.
	Other requirements or exemptions	N/A Further relax limits for units < 325,000 BTU/hour by exempting from any limit	N/A	Require compliance with emission (ppm) limits when multiple similar process units at a facility have combined emissions ≥ 1 lb/day NOx (more stringent than proposed project).	Exempt all pressure washers (less stringent than proposed project) and units ≤ 800 °F and 325,000 BTU/hour from any limit.	Exempt all pressure washers (less stringent than proposed project)- and units < 325,000 BTU/hour from any limit.

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

Category	Proposed Project	Alternative A: No Project	Alternative B: More Stringent	Alternative C: Less Stringent	Alternative D: Least Stringent
Air Quality (during operation)	NOx emission reductions foregone up to 0.9 ton per day. <u>The Most</u> emissions reductions will be recovered over time. <u>Permanent NOx emission reductions foregone up to 0.03 ton per day (see Table 4-3).</u>	No new NOx emission reductions foregone.	NOx emission reductions foregone up to 0.9 ton per day. The emissions reductions foregone will be recovered, but over a shorter time frame than the proposed project.	NOx emission reductions foregone up to 0.9 ton per day. The emissions reductions foregone will be recovered, but over a longer time frame than the proposed project.	Permanent NOx emission reductions foregone up to 0.9 ton per day.
Significance of Air Quality Operational Impacts?	Significant because the amount of NOx emission reductions foregone exceeds the NOx significance threshold of 55 pounds per day.	Not significant, however, compliance may be difficult to achieve for categories of equipment where the proposed project changes emission limits.	Significant because the amount of NOx emission reductions foregone exceeds the NOx significance threshold of 55 pounds per day. (less significant than the proposed project for years 2018 and beyond).	Significant because the amount of NOx emission reductions foregone exceeds the NOx significance threshold of 55 pounds per day. (more significant than the proposed project for years 2018 and beyond).	Significant because the amount of NOx emission reductions foregone exceeds the NOx significance threshold of 55 pounds per day. (more significant than the proposed project for years 2018 and beyond).

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.

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 determined that, of the amendments proposed, only the components that pertain to the delayed compliance schedule to meet certain NOx emission limits and the exempted units could have potential adverse significant impacts during operation. As such, the following four alternatives were developed by identifying and modifying major components of the proposed project. The alternatives, summarized in Table 5-1 and described in the following subsections, include the following: Alternative A (No Project), Alternative B (More Stringent), Alternative C (Less Stringent), and Alternative D (Least Stringent). 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.

Proposed Project (30 Years Age Requirement, All Units Except the Ones Subject to Emission Limits, Exempt Less Than 325,000 BTU/hour Units):

The proposed project intended to resolve the compliance issues by changing the emission limits, and compliance dates for certain equipment and exempt some units. Spray booths and small fryers, heated process tanks, evaporators, ovens, dryers, furnaces, afterburners and related devices with emissions less than one pound per day are expected to comply with the applicable NOx emission limits when the equipment reaches 30 years of age. Recovery of the NOx emission reductions foregone are expected to occur starting in 2017 as older equipment gets replaced or retrofitted over time. While most of the NOx emission reductions foregone are expected to be recovered each year based on approximately 0.9 ton/day from compliance year 2017 to 2044, approximately 0.03 ton per day of the NOx emission reductions foregone will be permanent (see Table 4-3).

Alternative A: No Project (Current Rule)

Alternative A, the no project alternative, means that the current version of Rule 1147 that was amended in September 2011 would remain in effect. Under the current version of Rule 1147, spray booths and small fryers, heated process tanks, evaporators, ovens, dryers, furnaces, afterburners and related devices with emissions less than one pound per day would have to comply with the applicable NOx emission limits from 2017 to 2034. Compliance with these NOx limits would result in NOx emission reductions occurring from 2017 through 2034. Under this alternative, however, suppliers cannot provide equipment that meets the applicable NOx emission limits for source small number of equipment and process types, creating potential compliance

issues for some affected facilities, and likely resulting in the originally projected NOx emission reductions not being achieved.

Alternative B: More Stringent Alternative (25 Years Age Requirement):

Under Alternative B, the age requirement of 25 years is more stringent than the 30 years in the proposed project, PAR 1147. Spray booths and small fryers, heated process tanks, evaporators, ovens, dryers, furnaces, afterburners and related devices with emissions less than one pound per day would have to comply with emission limit starting in 2017. Recovery of the NOx emission reductions foregone are expected to occur starting in 2017 as older equipment gets replaced or retrofitted over time. The NOx emission reductions foregone are expected to be recovered each year based on approximately 0.9 ton/day from compliance year 2017 to 2039.

Alternative C: Less Stringent Alternative (No Age Requirement, Exempt Pressure Washers And Low Temperature (Less Than And Equal To 800 °F) And Less Than 325,000 BTU/hour Units):

Under Alternative C, there is no age requirement. However, the expected equipment life is 35 years which is less stringent than the 30 years age requirement in the proposed project, PAR 1147. Spray booths and small fryers, heated process tanks, evaporators, ovens, dryers, furnaces, afterburners and related devices with emissions less than one pound per day are expected to comply with applicable NOx emission limits over the time period of 35 years starting in 2017. Recovery of the NOx emission reductions foregone are expected to occur starting in 2017 as older equipment gets replaced or retrofitted over time. ~~The Most~~ NOx emission reductions foregone are expected to be recovered each year based on approximately 0.9 ton/day from compliance year 2017 to 2049.

In addition, the total additional permanent NOx emission reductions foregone is estimated to be ~~27-36~~ pounds per day from exempting a small number of pressure washers (estimated to be about 10 new units) and plus 49 pounds per day from exempting all units regardless of low-temperature (less than and equal to 800 °F) ovens with burners less than or equal to 325,000 BTU/hour (estimated to be less than 50 82 new units) when compared to the proposed project. Table 5-3 summarizes the estimated amount of the permanent NOx emission reductions foregone in Alternative C as compared to the proposed project.

**Table 5-3
Estimated Permanent NOx Emission Reductions Foregone in Alternative C
(as Compared to Proposed Project)**

Equipment Category	Estimated Number of Units Requiring Permits	Estimated Number of Additional (New) Units Requiring Permit	Estimated NOx Emission Reductions Foregone Compared to Proposed Project (pounds/day)
Spray Pressure Washers	35	10	836
Ovens ≤ All Units < 325,000 BTU/hour	50 165	25 82	1549
Other Heated Tanks ≤ 325,000 BTU/hour	40	20	4
		Total	<u>2785</u>

Alternative D: Least Stringent Alternative (Up To 0.9 ton/day Emission Reductions Foregone, No Age Requirement, Exempt Pressure Washers And Less Than 325,000 BTU/hour Units):

Under Alternative D, there is no age requirement and no emission limit requirement. Spray booths and small fryers, heated process tanks, evaporators, ovens, dryers, furnaces, afterburners and related devices with emissions less than one pound per day would not have to comply with any of the applicable NO_x emission limits. Under Alternative D, the NO_x emission reductions foregone are not expected to be recovered unless the affected equipment units are replaced or retrofitted due to a failure to demonstrate that the affected unit can achieve NO_x emissions at the level less than one pound per day. All of the 0.9 ton per day of NO_x emission reductions foregone will be permanently foregone under Alternative D.

COMPARISON OF ALTERNATIVES

The following sections describe the potentially significant adverse operational air quality impacts that may occur for each project alternative. Potentially significant adverse operational air quality impacts 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.

CONCLUSION

By not adopting PAR 1147, Alternative A would not delay any of the requirements in the current version of Rule 1147 to comply with the applicable NO_x emission limits. Further, implementation of Alternative A will require the same amount of NO_x emission reductions to occur as currently required by Rule 1147. However, Alternative A would not achieve the project objectives for the proposed project because some equipment may not be able to comply with the current NO_x emission limits by the applicable compliance dates that start in 2017 because compliant equipment is not currently available for certain small low temperature processes. The non-compliant equipment would need to be shut down. Implementing Alternative A means that there will be no delay in obtaining NO_x emission reductions and the corresponding health benefits that result from the NO_x 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, the same NO_x emission limits as the proposed project would apply to the affected sources, but a more stringent compliance schedule will be required when compared to the proposed project. Some small units would not be exempted compare to the proposed project. However under Alternative B, some small low temperature equipment may not be able to comply with the NO_x emission limits in accordance with the 25 year compliance schedule. If Alternative B is implemented, equivalent—the environmental impacts (as NO_x emission reductions foregone) and health benefits will be equivalent to as the proposed project beginning in compliance years 2017 but will have less environmental impacts and more health benefits than the proposed project beginning in compliance year 2018 and for any year thereafter.

For these aforementioned reasons, aside from Alternative A, Alternative B is concluded to be the environmentally superior alternative.

If Alternative C is implemented, less NOx emission reductions would be achieved and less health benefits from reducing NOx emissions overall will be reached between compliance years 2018 and any year thereafter. Alternative C extends the delay in NOx emission reductions as compared to the proposed project. For this reason, when compared to the proposed project, Alternative C provides fewer benefits to air quality and public health. Of the significant adverse operational air quality impacts that would be generated under Alternative C, the impacts would be more than the proposed project and more significant beginning in compliance year 2018 and for any year thereafter.

If Alternative D were implemented, less NOx emission reductions would be achieved and less health benefits from reducing NOx emissions overall will be reached beginning in compliance year 2018 and any year thereafter. Under Alternative D, the NOx emission reductions foregone are not expected to be recovered unless the affected equipment units are replaced or retrofitted due to a failure to demonstrate that the affected equipment can achieve NOx emissions at the level less than one pound per day per equipment unit. Thus, under these conditions, the impacts from the Alternative D would be more than the proposed project and more than significant for air quality beginning in compliance year 2018 and for any year thereafter.

Thus, when comparing the environmental effects of the project alternatives with the proposed project and evaluating the effectiveness of achieving the project objectives of the proposed project versus the project alternatives, the proposed project provides the best balance in achieving the project objectives while minimizing the significant adverse environmental impacts to operational air quality.

APPENDIX A

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 March 24, 2017 for a 46-day public review and comment period ending on May 9, 2017 was identified as “PAR 1147 March 22, 2017.” Original hard copies of the Draft SEA, which include the draft version of the proposed rule listed above, can be obtained through the SCAQMD Public Information Center at the Diamond Bar headquarters or by contacting the SCAQMD’s Public Information Center by phone at (909) 396-2688 or by email at PICrequests@aqmd.gov.

APPENDIX B

NOTICE OF PREPARATION/INITIAL STUDY



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 (PAR) 1147 – NO_x
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, must address the potential adverse impacts of the proposed project on the environment and as such, has prepared this Notice of Preparation (NOP) of the Draft Environmental Assessment (EA) and Initial Study (IS). The NOP/IS serves two purposes: 1) to solicit information on the scope of the environmental analysis for the proposed project, and 2) to notify public agencies and the public that the SCAQMD will prepare a Draft EA to further assess potential adverse environmental impacts that may result from implementing the proposed project.

This letter, the attached NOP, and IS are not SCAQMD applications or forms requiring a response from you. Their purpose is simply to provide information to allow public agencies and the public the opportunity to obtain, review and comment on the environmental analysis for the above project. If the proposed project has no bearing on you or your organization, no action on your part is necessary. If you wish to receive the IS for the proposed project, the document is available from the SCAQMD's CEQA website at <http://www.aqmd.gov/home/library/documents-support-material/lead-agency-scaqmd-projects> or by contacting Fabian Wesson, Public Advisor at the SCAQMD's Public Information Center by phone at (909) 396-2688 or by email at PICrequests@aqmd.gov. Comments focusing on your area of expertise, your agency's area of jurisdiction, if applicable, or issues relative to the environmental analysis should be sent to Mr. Sam Wang (c/o Planning - CEQA) at the above address, by fax to (909) 396-3324, or by email to swang1@aqmd.gov. Comments must be received no later than 5:00 p.m. on Friday, March 3, 2017. Please include the name, phone number, and email address of the contact person. Questions regarding the proposed amended rule should be directed to Mr. Wayne Barcikowski at (909) 396-3077 or by email to wbarcikowski@aqmd.gov.

The Public Workshop and CEQA Scoping Meeting for PAR 1147 is scheduled for February 15, 2017. The Public Hearing for PAR 1147 is scheduled for June 2, 2017. (Note: Public Meeting dates are subject to change).

Date: January 31, 2017

Signature:

Barbara Radlein
Program Supervisor, CEQA
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:

Proposed Amended Rule (PAR) 1147 – NO_x Reductions from Miscellaneous Sources

Project Location:

The proposed project may affect facilities located throughout the South Coast Air Quality Management District's (SCAQMD) jurisdiction, which covers all of Orange County, the urban portions of Los Angeles and San Bernardino counties southwest of the San Bernardino and San Gabriel mountains, and nearly all of Riverside County, with the exception of communities near the state border.

Description of Nature, Purpose, and Beneficiaries of Project:

SCAQMD staff is proposing to amend Rule 1147 – NO_x Reductions from Miscellaneous Sources, in order to resolve Rule 1147 compliance issues that have been raised by stakeholders. If adopted, PAR 1147 would: 1) change the NO_x emission limit for low temperature (<1,200 degrees Fahrenheit, °F) ovens and other units with a heat input rating of less than 325,000 Btu/hour from 30 parts per million (ppm) to 60 ppm; 2) change the NO_x emission limit for low temperature afterburners, burn-off ovens, incinerators, and related equipment from 30 ppm to 60 ppm; 3) change the compliance date for small in-use units (with NO_x emissions of one pound per day or less) from a schedule based on a 20 year lifetime to a 35 year lifetime or until the units are replaced, retrofit or relocated; 4) change the compliance date for heated process tanks from a schedule based on a 15 year to 20 year lifetime to when the units are replaced, retrofit or relocated; 5) add a testing exemption for ultra-low NO_x infrared burners; 6) clarify an exemption for food ovens; and 7) clarify an exemption for flare type systems. Some facilities that may be affected by PAR 1147 are identified on lists compiled by the California Department of Toxic Substances Control per California Government Code §65962.5. If implemented, PAR 1147 is expected to result in NO_x emission reductions foregone of up to 0.9 tons per day in 2017. However, the emission reductions foregone will be eventually recaptured because the existing units will be regularly replaced and upgraded over time.

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) 396-2649

or by accessing the SCAQMD's website at:

<http://www.aqmd.gov/home/library/documents-support-material/lead-agency-scaqmd-projects>

The Public Notice of Preparation is provided to the public through the following:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Los Angeles Times (February 1, 2017) | <input checked="" type="checkbox"/> SCAQMD Mailing List & Interested Parties |
| <input checked="" type="checkbox"/> SCAQMD Public Information Center | <input checked="" type="checkbox"/> SCAQMD Website |
-

Initial Study 30-day Review Period:

February 1, 2017 – March 3, 2017

Scheduled Public Meeting Date(s) (subject to change):

Public Workshop & CEQA Scoping Meeting: February 15, 2017, 1:30 p.m.; SCAQMD Headquarters - Auditorium

SCAQMD Governing Board Hearing: June 2, 2017, 9:00 a.m.; SCAQMD Headquarters – Auditorium

The proposed project may have areawide significance; therefore, a CEQA scoping meeting is required to be held pursuant to Public Resources Code §21083.9 (a)(2). The CEQA Scoping Meeting will be held in conjunction with the Public Workshop (see Scheduled Public Meeting Date(s) above).

Send CEQA Comments to:

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Email:

swang1@aqmd.gov

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Direct Questions on PAR 1147:

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SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Initial Study for Proposed Amended Rule 1147 – NO_x Reductions from Miscellaneous Sources

January 2017

SCAQMD No. 01312017SW
State Clearinghouse No: To Be Determined

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**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
GOVERNING BOARD**

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Speaker of the Assembly Appointee

Vice Chairman: BEN BENOIT
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County of Orange

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DWIGHT ROBINSON
Councilmember, Lake Forest
Cities of Orange County

JANICE RUTHERFORD
Supervisor, Second District
County of San Bernardino

EXECUTIVE OFFICER:

WAYNE NASTRI

TABLE OF CONTENTS

CHAPTER 1 – PROJECT DESCRIPTION

Introduction..... 1-1
California Environmental Quality Act..... 1-2
Project Location..... 1-3
Project Background 1-4
Technology Assessment 1-5
Project Description 1-6
Alternatives..... 1-7

CHAPTER 2 – ENVIRONMENTAL CHECKLIST

Introduction..... 2-1
General Information..... 2-1
Environmental Factors Potentially Affected 2-2
Determination 2-3
Environmental Checklist and Discussion 2-4

FIGURES

Figure 1-1 –Southern California Air Basins..... 1-4

TABLES

Table 2-1 – SCAQMD Air Quality Significance Thresholds..... 2-10

APPENDICES

APPENDIX A: Proposed Amended Rule 1147 – NO_x Reductions from
Miscellaneous Sources

APPENDIX B: References

CHAPTER 1

PROJECT DESCRIPTION

Introduction

California Environmental Quality Act

Project Location

Project Background

Technology Assessment

Project Description

Alternatives

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. In 1977, amendments to the federal Clean Air Act (CAA) included requirements for submitting State Implementation Plans (SIPs) for nonattainment areas that fail to meet all federal ambient air quality standards (CAA § 172) and similar requirements exist in state law (Health and Safety Code § 40462). The federal CAA was amended in 1990 to specify attainment dates and SIP requirements for ozone, carbon monoxide (CO), nitrogen dioxide (NO₂) and particulate matter with an aerodynamic diameter of less than 10 microns (PM₁₀). In 1997, the United States Environmental Protection Agency (U.S. EPA) promulgated ambient air quality standards for particulate matter with an aerodynamic diameter less than 2.5 microns (PM_{2.5}). The California Clean Air Act (CCAA), adopted in 1988, requires the SCAQMD to achieve and maintain state ambient air quality standards for ozone, CO, sulfur dioxide (SO₂), and NO₂ by the earliest practicable date (Health & Safety Code § 40910). The CCAA also requires a three-year plan review, and, if necessary, an update to the SIP. The U.S. EPA is required to periodically update the national ambient air quality standards (NAAQS).

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 areas within SCAQMD jurisdiction². Furthermore, the SCAQMD must adopt rules and regulations that carry out the AQMP³. The AQMP is a regional blueprint for how the SCAQMD will achieve air quality standards and healthful air and the Draft Final 2016 AQMP⁴ contains multiple goals promoting reductions of criteria air pollutants, greenhouse gases, and toxics.

The Basin, which includes all of Orange County and the non-desert portions of Los Angeles, San Bernardino and Riverside counties, has one of the worst air quality problems in the nation. Though there have been significant improvements in air quality in the Basin over the last two decades, some ambient air quality standards are still exceeded relatively frequently and by a wide margin. The 2012 AQMP, submitted to the California Air Resources Board (CARB) for SIP inclusion in December 2012, concluded that further reductions in PM_{2.5} and oxides of nitrogen (NO_x) emissions would be necessary to attain the air quality standards for 24-hour PM_{2.5} and 8-hour ozone by the dates mandated by federal law. Less emphasis was placed on achieving emission reductions of volatile organic compounds (VOCs) because NO_x emission reductions have a greater co-benefit of also reducing ozone, and PM_{2.5} formation. Ozone, a criteria pollutant that has been shown to adversely affect human health, is formed when VOCs react with NO_x in the atmosphere. NO_x is a precursor to the formation of ozone and PM_{2.5}.

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

² Health and Safety Code §40460(a).

³ Health and Safety Code §40440(a).

⁴ SCAQMD, Draft Final 2016 Air Quality Management Plan. [http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/draft-final-aqmp/clean/2016finaldraftaqmpdec2016\(clean\).pdf](http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/draft-final-aqmp/clean/2016finaldraftaqmpdec2016(clean).pdf)

SCAQMD adopted Rule 1147 - NO_x Reductions From Miscellaneous Sources, in December 2008, to control 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. Rule 1147 required new, modified, relocated and in-use combustion equipment to comply with equipment-specific NO_x emission limits. For in-use equipment, compliance dates for emission limits were based on the date of equipment manufacture, and emission limits went into effect for older equipment first. Owners of equipment were provided at least 15 years before existing equipment would need to be modified or replaced in order to meet the emission limits. Rule 1147 also contained test methods and provided alternate compliance options, including a process for certifying NO_x emissions through an approved testing program. Other requirements included equipment maintenance, meters and recordkeeping.

Businesses have expressed concern regarding the cost effectiveness of complying with the rule requirements for small and low emission sources (less than 1 pound per day of NO_x). In addition, a technology assessment conducted by staff for these small sources indicates that emission limits should be changed for certain specific applications based on technical feasibility and burner availability. SCAQMD staff estimates that 4,900 to 5,650 out of 6,400 units and up to 3,900 facilities would benefit from delayed compliance requirements proposed in Proposed Amended Rule (PAR) 1147. As many as 3,400 spray booths used in manufacturing, equipment repair and maintenance, and auto body repair will benefit from the proposed amendments.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

The California Environmental Quality Act (CEQA), Public Resources Code Section 21000 *et seq.*, requires environmental impacts of proposed projects to be evaluated and feasible methods to reduce, avoid or eliminate significant adverse impacts of these projects to be identified and implemented. The lead agency is the “public agency that has the principal responsibility for carrying out or approving a project that may have a significant effect upon the environment” (Public Resources Code § 21067). Since the SCAQMD has the primary responsibility for supervising or approving the entire project as a whole, which is a proposed SCAQMD rule, it is the most appropriate public agency to act as lead agency (CEQA Guidelines⁵ § 15051(b)).

PAR 1147 is considered a “project” as defined by CEQA. CEQA requires that all 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 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.

Public Resources Code Section 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

⁵ The CEQA Guidelines are codified at Title 14 California Code of Regulations § 15000 *et seq.*

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 has been adopted as SCAQMD Rule 110 – Rule Adoption Procedures to Assure Protection and Enhancement of the Environment. 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 proposed amendments to Rule 1147 are considered a “project” as defined by CEQA. SCAQMD’s review of the proposed project shows that implementation of PAR 1147 may have a significant adverse effect on the environment. Since PAR 1147 may have statewide, regional or areawide significance, a CEQA scoping meeting is required to be held for the proposed project pursuant to Public Resources Code Section 21083.9 (a)(2). Information regarding the CEQA scoping meeting can be found on the NOP.

Because PAR 1147 is expected cause potentially significant adverse impacts, the appropriate type of CEQA document to be prepared for the proposed project will be an Environmental Assessment (EA). The EA is a substitute CEQA document, prepared in lieu of a program environmental impact report (EIR) (CEQA Guidelines §15252), pursuant to the SCAQMD’s Certified Regulatory Program (CEQA Guidelines §15251 (l); codified in SCAQMD Rule 110). The EA is also a public disclosure document intended to: 1) provide the lead agency, responsible agencies, decision makers and the general public with information on the environmental impacts of the proposed project; and, 2) be used as a tool by decision makers to facilitate decision making on the proposed project.

The first step of preparing an EA is to prepare a Notice of Preparation (NOP) with an Initial Study (IS) that includes an Environmental Checklist and project description. The Environmental Checklist provides a standard evaluation tool to identify a project's adverse environmental impacts. The NOP/IS 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.

Thus, the SCAQMD as Lead Agency has prepared this NOP/IS for the proposed project. The initial evaluation in the NOP/IS identified the topic of air quality as potentially being adversely affected by the proposed project: Written comments received on the scope of the environmental analysis will be considered when preparing the Draft EA. Responses to comments on the NOP/IS will be included in the Draft EA.

PROJECT LOCATION

PAR 1147 would affect up to 3,900 facilities which are located within SCAQMD’s jurisdiction. The SCAQMD has jurisdiction over an area of approximately 10,743 square miles, 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 (SSAB) and Mojave Desert Air Basin (MDAB). The Basin, which is a subarea of 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 non-desert 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. A 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 (see Figure 1-1).

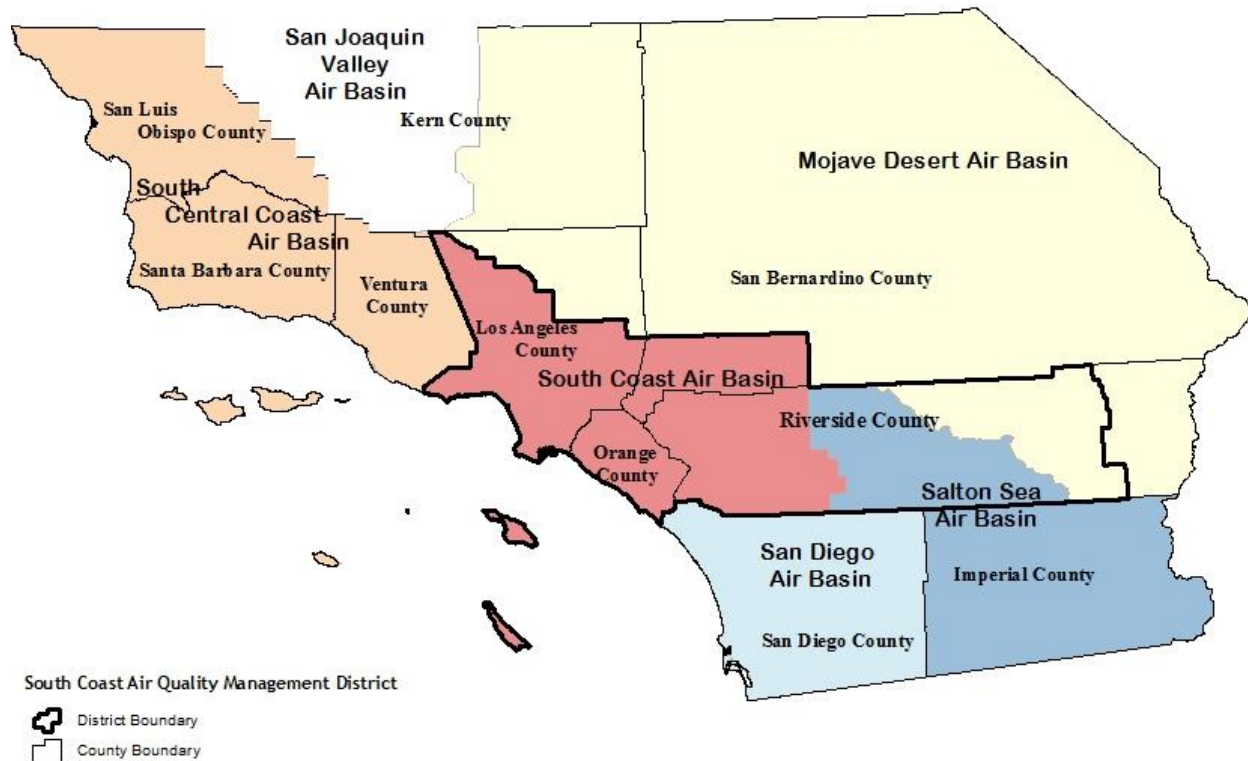


Figure 1-1
Southern California Air Basins

PROJECT BACKGROUND

Rule 1147 – NO_x Reductions from Miscellaneous Sources, was adopted by the SCAQMD Governing Board on December 5, 2008. Rule 1147 established NO_x emission limits for a variety of combustion equipment and affected new and existing combustion equipment requiring permits that are not regulated by other SCAQMD rules limiting emissions of NO_x. Rule 1147 incorporated two control measures of the 2007 AQMP: CMB-01 – NO_x Reductions from Non-RECLAIM Ovens, Dryers and Furnaces, and MCS-01 – Facility Modernization. Control Measure MCS-01 proposed that existing in-use equipment over time meet best available control technology (BACT) emission limits in place at the time the 2007 AQMP was adopted. Control Measure CMB-01 proposed emission NO_x limits in the range of 20 to 60 parts per million (ppm) for ovens, dryers, kilns, furnaces and other combustion equipment.

Under Rule 1147, regulated gaseous fuel-fired equipment must meet an emission limit of 30 or 60 ppm of NO_x based on the type of equipment and process temperature. All regulated liquid fuel-fired equipment must meet an emission limit of 40 or 60 ppm for NO_x based on its process temperature. 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 established NO_x emissions test methods and provided alternate compliance options including a process for certification of equipment through an approved testing program. Other requirements included equipment maintenance, time and fuel meter installation and record keeping.

Rule 1147 was amended on September 9, 2011 to: 1) delay implementation dates by up to two years; 2) remove a requirement for fuel or time meters; and 3) provide compliance flexibility for small and large sources. In addition, the amendments included a requirement for a technology assessment to be conducted on the availability of low NO_x burner systems for processes with NO_x emissions of one pound per day or less that are not typically subject to a BACT requirement as new sources. The technology assessment was completed by SCAQMD staff and included an evaluation of cost and cost effectiveness for small and low emission sources. The technology assessment was also reviewed by a third party consultant. Subsequently, PAR 1147 was crafted to be consistent with the recommendations provided by the third party consultant. In addition, PAR 1147 also contains elements to address recommendations proposed by staff (that were separate from the consultant's review) in order to resolve certain stakeholders' compliance issues.

TECHNOLOGY ASSESSMENT

The first phase of the SCAQMD technology assessment targeted sources in which burner technology was either not available or the retrofit cost was comparable to the cost of replacing the unit. Several categories of equipment were identified and removed from Rule 1147. Further, the requirement for a permit for these equipment categories was removed during the May 2013 amendments to SCAQMD Rule 219 – Equipment Not Requiring a Written Permit Pursuant to Regulation II, and Rule 222 – Filing Requirements For Specific Emission Sources Not Requiring a Written Permit Pursuant to Regulation II. SCAQMD staff continued conducting a technical evaluation and developed Rule 1153.1 – Emissions of Oxides of Nitrogen from Commercial Food Ovens, to move existing in-use food ovens, roasters and smokehouses from Rule 1147 into their own rule. Rule 1153.1 was adopted on November 7, 2014 and provided more appropriate temperature ranges for defining emission limits, food oven specific emission limits, later compliance dates and an exemption for small units. Both Rule 1147 and R 1153.1 have been approved by EPA and are included in the SIP.

The last phase of the technology assessment focused on the remaining categories of small and low emission equipment that were not addressed in SCAQMD Rules 219, 222 and 1153.1. While the technology assessment report focused on equipment with NO_x emissions of one pound per day or less, the report also included information and analysis applicable to larger units in response to businesses' concerns regarding the availability of technology for larger equipment.

The technology assessment utilizes information on affected equipment from the SCAQMD's permitting system, SCAQMD Regulation XIII - New Source Review, Rule 1147 emissions testing programs, manufacturers of equipment and burners, affected businesses, consulting engineers, and industry representatives. The technology assessment provides information on the types and number of equipment affected by Rule 1147, emissions characteristics of the affected equipment, and estimates of the cost and cost-effectiveness of replacing existing older combustion systems. Overall, the technology assessment provides insight into compliance and affordability challenges faced by businesses affected by Rule 1147.

With the exception of a few categories of equipment, the technology review demonstrates that low NO_x burner systems are available for every category of equipment subject to Rule 1147 and have been since the late 1990's. However, SCAQMD staff has identified the following three types of equipment for which burners are not readily available or cannot be retrofitted: 1) low temperature ovens and dryers with heat inputs of less than 325,000 Btu per hour (0.325 mmBtu/hour); 2) existing heated process tanks, evaporators and parts washers; and 3) low temperature burn-off ovens and incinerators.

As a result of the technology assessment, the following five recommendations were proposed for consideration in future rule amendments to Rule 1147:

1. Exempt sources with total rated heat input less than 325,000 Btu per hour from the Rule 1147 NO_x emission limit;
2. Change the NO_x emission limit from 30 ppm to 60 ppm NO_x for the primary chamber of all multi-chamber burn-off ovens, burn-out furnaces and incinerators for all process temperature;
3. Delay compliance for existing in-use heated process tanks, evaporators and parts washers from the NO_x emission limit until such time the combustion system or tank is modified, replaced or relocated;
4. Delay compliance with the NO_x emission limit for existing in-use spray booths until the heating system is modified or replaced or the unit is relocated; and
5. Delay compliance with the NO_x emission limit for existing in-use units with actual NO_x emissions of one pound per day or less until the combustion system is modified or replaced or the unit is relocated.

PROJECT DESCRIPTION

SCAQMD staff is proposing to amend Rule 1147 to reflect the recommendations made in the technology assessment and to resolve compliance issues that have been raised by stakeholders. If adopted, PAR 1147 would:

- change the NO_x emission limit for low temperature (<1,200 °F) ovens and other units with a heat input rating of less than 325,000 Btu/hour from 30 parts per million (ppm) to 60 ppm;
- change the NO_x emission limit for low temperature afterburners, burn-off ovens, incinerators, and related equipment from 30 ppm to 60 ppm;

- change the compliance date for small in-use units (with NO_x emissions of one pound per day or less) from a schedule based on a 20 year lifetime to a 35 year lifetime or until the units are replaced, retrofit or relocated;
- change the compliance date for heated process tanks from a schedule based on a 15 year to 20 year lifetime to when the units are replaced, retrofit or relocated;
- add a testing exemption for ultra-low NO_x infrared burners;
- clarify an exemption for food ovens; and
- clarify an exemption for flare type systems.

If implemented, PAR 1147 is expected to result in NO_x emission reductions foregone of up to 0.9 tons per day in 2017. However, the emission reductions foregone will be eventually recaptured because the existing units will be regularly replaced and upgraded over time. A copy of PAR 1147 can be found in Appendix A of this NOP/IS.

ALTERNATIVES

The Draft EA will discuss and compare a reasonable range of alternatives to the proposed project as required by CEQA Guidelines Section 15126.6 and by SCAQMD Rule 110 where there are potential significant adverse environmental impacts. 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 EA than what would be required for an Environmental Impact Report under CEQA. Alternatives will be developed based in part on the major components of the proposed amended 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 with appropriate findings as required by CEQA. 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 IS will be considered when preparing the Draft EA.

CHAPTER 2

ENVIRONMENTAL CHECKLIST

Introduction

General Information

Environmental Factors Potentially Affected

Determination

Environmental Checklist and Discussion

INTRODUCTION

The environmental checklist provides a standard evaluation tool to identify a project's potential adverse environmental impacts. This checklist identifies and evaluates potential adverse environmental impacts that may be created by PAR 1147.

GENERAL INFORMATION

Project Title:	Proposed Amended Rule (PAR) 1147 – NO _x 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:	Mr. Sam Wang (909) 396-2649
PAR 1147 Contact Person	Mr. 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:	PAR 1147 would: 1) change the NO _x emission limit for low temperature (<1,200 degrees Fahrenheit, °F) ovens and other units with a heat input rating of less than 325,000 Btu/hour from 30 parts per million (ppm) to 60 ppm; 2) change the NO _x emission limit for low temperature afterburners, burn-off ovens, incinerators, and related equipment from 30 ppm to 60 ppm; 3) change the compliance date for small in-use units (with NO _x emissions of one pound per day or less) from a schedule based on a 20 year lifetime to a 35 year lifetime or until the units are replaced, retrofit or relocated; 4) change the compliance date for heated process tanks from a schedule based on a 15 year to 20 year lifetime to when the units are replaced, retrofit or relocated; 5) add a testing exemption for ultra-low NO _x infrared burners; 6) clarify an exemption for food ovens; and 7) clarify an exemption for flare type systems.
Surrounding Land Uses and Setting:	Not applicable
Other Public Agencies Whose Approval is Required:	Not applicable

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The following environmental impact areas have been assessed to determine their potential to be affected by PAR 1147. As indicated by the checklist on the following pages, environmental topics marked with an "✓" involve at least one impact that is a "Potentially Significant Impact". 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 and Hazardous Waste |
| <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Transportation and Traffic |
| <input type="checkbox"/> Energy | <input type="checkbox"/> Noise | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION

On the basis of this initial evaluation:

- I find PAR 1147, in accordance with those findings made pursuant to CEQA Guideline §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 PAR 1147 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 PAR 1147 MAY have a significant effect(s) on the environment, and an ENVIRONMENTAL ASSESSMENT will be prepared.
- I find that PAR 1147 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 PAR 1147 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 PAR 1147, nothing further is required.

Date: January 31, 2017

Signature: 
Barbara Radlein
Program Supervisor, CEQA
Planning, Rules, and Area Sources

ENVIRONMENTAL CHECKLIST AND DISCUSSION

As discussed in Chapter 1, the main focus of PAR 1147 is to resolve Rule 1147 compliance issues that have been raised by businesses. SCAQMD staff estimates 4,900 to 5,650 out of 6,400 units or up to 3,900 facilities would benefit from delayed compliance requirements in PAR 1147. In particular, as many as 3,400 spray booths used in manufacturing, equipment repair and maintenance, and auto body repair will benefit from the proposed amendments.

If adopted, PAR 1147 would: 1) change the NO_x emission limit for low temperature (<1,200 °F) ovens and other units with a heat input rating of less than 325,000 Btu/hour from 30 ppm to 60 ppm; 2) change the NO_x emission limit for low temperature afterburners, burn-off ovens, incinerators, and related equipment from 30 ppm to 60 ppm; 3) change the compliance date for small in-use units (with NO_x emissions of one pound per day or less) from a schedule based on a 20 year lifetime to a 35 year lifetime or until the units are replaced, retrofit or relocated; 4) change the compliance date for heated process tanks from a schedule based on a 15 year to 20 year lifetime to when the units are replaced, retrofit or relocated; 5) add a testing exemption for ultra-low NO_x infrared burners; 6) clarify an exemption for food ovens; and 7) clarify an exemption for flare type systems. If implemented, PAR 1147 is expected to result in NO_x emission reductions foregone of up to 0.9 tons per day in 2017 a result of an increase in the allowable NO_x ppm limit and extending the compliance dates. However, the emission reductions foregone will be eventually recaptured because the existing units will be regularly replaced and upgraded over time.

The effects of implementing the proposed changes outlined above have been evaluated relative to the environmental topics identified in the following environmental checklist (e.g., aesthetics, agricultural and forestry resources, biological resources, etc.). PAR 1147 proposes to extend the compliance dates for small and low use equipment based on a longer equipment lifetime and change the emission limits, which would result in NO_x emission reductions foregone. Therefore, PAR 1147 would be expected to cause secondary adverse environmental effects only for the topic of air quality and greenhouse gas emissions. While there are other procedural changes proposed to PAR 1147 for clarity and consistency throughout the rule, these procedural changes are administrative in nature and are not expected to have a direct or indirect effect on emissions or cause other physical effects to other environmental topic areas and thus, will not be addressed in further in this Initial Study. Therefore, the effects of implementing the aforementioned changes to the emission standards, compliance dates, and equipment replacement schedule etc. will be the main focus of the analysis in this IS.

	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"/>

Significance Criteria

PAR 1147 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

PAR 1147 will resolve current Rule 1147 NO_x emissions compliance issues that have been raised by businesses. It is estimated that up to 3,900 existing facilities (4,900 to 5,650 out of 6,400 existing units) within SCAB will be affected by PAR 1147. PAR 1147 proposes to extend the compliance dates for small and low use equipment based on a longer equipment lifetime, change the emission limits for certain specific equipment to address technical feasibility of meeting a 30 ppm NO_x limit, add a testing exemption, and clarify exemptions for certain equipment. Therefore, PAR 1147 is expected to result in NO_x emission reductions foregone of up to 0.9 tons per day starting in 2017. However, the emission reductions foregone will be eventually recaptured because the existing units will be regularly replaced and upgraded over time. PAR 1147 does not require construction of new buildings, new add-on controls, or relocation of existing facilities. Therefore, construction activities or physical changes to the existing facilities are not expected to occur.

I. a), b), c) & d) No Impact. As discussed above, PAR 1147 is expected to affect existing facilities at their current locations. Therefore, adoption of PAR 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, PAR 1147 would not involve the demolition of any existing buildings or facilities, require any subsurface activities, 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, PAR 1147 is not expected to degrade the visual character of any site where a

facility is located or its surroundings, affect any scenic vista or damage scenic resources. Since PAR 1147 does not require existing facilities to operate at night, it is not expected to create any new source of substantial light or glare.

Conclusion

Based upon these considerations, significant adverse aesthetics impacts are not expected from implementing PAR 1147. 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 FORESTRY 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 forestry resources will be considered significant if any of the following conditions are met:

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

PAR 1147 will resolve current Rule 1147 NO_x emissions compliance issues that have been raised by businesses. It is estimated that up to 3,900 existing facilities (4,900 to 5,650 out of 6,400 existing units) within SCAB will be affected by PAR 1147. PAR 1147 proposes to extend the compliance dates for small and low use equipment based on a longer equipment lifetime, change the emission limits for certain specific equipment to address technical feasibility of meeting a 30 ppm NO_x limit, add a testing exemption, and clarify exemptions for certain equipment. Therefore, PAR 1147 is expected to result in NO_x emission reductions foregone of up to 0.9 tons per day starting in 2017. However, the emission reductions foregone will be eventually recaptured because the existing units will be regularly replaced and upgraded over time. PAR 1147 does not require construction of new buildings, new add-on controls, or relocation of existing facilities. Therefore, construction activities or physical changes to the existing facilities are not expected to occur.

II. a), b), c) & d) No Impact. The existing industrial or commercial businesses that may be affected by the adoption of PAR 1147 are primarily located within urbanized areas that are typically designated as industrial or commercial areas. PAR 1147 would not result in or require the relocation of existing facilities or any new construction of buildings or other structures that would convert farmland to non-agricultural use or conflict with zoning for agricultural use or a Williamson Act contract. PAR 1147 would not require conversion of farmland to non-agricultural uses because the affected equipment is expected to be located completely within the confines of existing affected commercial and industrial facilities. For the same reasons, PAR 1147 would not result in the loss of forest land or conversion of forest land to non-forest use.

Conclusion

Based upon these considerations, significant adverse agricultural and forest resources impacts are not expected from implementing PAR 1147. Since no significant agricultural 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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>

Air Quality Significance Criteria

To determine whether or not air quality impacts from adopting and implementing PAR 1147 are significant, impacts will be evaluated and compared to the criteria in Table 2-1. PAR 1147 will be considered to have significant adverse air quality impacts if any one of the thresholds in Table 2-1 are equaled or exceeded.

**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) 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	1.5 $\mu\text{g}/\text{m}^3$ (state) 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 $>$ = greater than

Revision: March 2015

Discussion

PAR 1147 will resolve current Rule 1147 NO_x emissions compliance issues that have been raised by businesses. It is estimated that up to 3,900 existing facilities (4,900 to 5,650 out of 6,400 existing units) within SCAB will be affected by PAR 1147. PAR 1147 proposes to extend the compliance dates for small and low use equipment based on a longer equipment lifetime, change the emission limits for certain specific equipment to address technical feasibility of meeting a 30 ppm NO_x limit, add a testing exemption, and clarify exemptions for certain equipment. Therefore, PAR 1147 is expected to result in NO_x emission reductions foregone of up to 0.9 tons per day starting in 2017. However, the emission reductions foregone will be eventually recaptured because the existing units will be regularly replaced and upgraded over time. PAR 1147 does not require construction of new buildings, new add-on controls, or relocation of existing facilities. Therefore, construction activities or physical changes to the existing facilities are not expected to occur.

III. a) Less than Significant Impact. The equipment affected by PAR 1147 are regulated under current SCAQMD Rule 1147. Development of Rule 1147 was based on two control measures from the SCAQMD 2007 AQMP: Control Measure MCS-01 – Facility Modernization and Control Measure CMB-01 – NO_x Reductions from Non-RECLAIM Ovens, Dryers, and Furnaces.

Control Measure MCS-01 was a new control measure developed for the 2007 AQMP that proposed companies upgrade their current technology to BACT – the cleanest technology available. The facility modernization control measure proposed that equipment operators meet BACT emission limits at the end of the equipment’s useful life. For equipment currently regulated by Rule 1147, modernization requires burner upgrades, replacement of burner systems or replacement of equipment when the equipment reaches 15 to 20 years of age. However, PAR 1147 would implement higher NO_x emission limits for applicable units (e.g., low temperature afterburners, burn-off ovens and incinerators) and provide an exemption for several categories of units (e.g., in-use heated process tanks, spray booths and food ovens) in order to resolve Rule 1147 businesses compliance issues. NO_x emission reductions will be delayed by PAR 1147 and will result in NO_x emissions foregone of up to 0.9 tons per day starting in 2017 as a result of an increase in the allowable NO_x ppm limit and changing the compliance date. This is considered a significant air quality impact and will be further evaluated in the Draft EA. However, the emission reductions foregone will be eventually recaptured because the existing units will be regularly replaced and upgraded over time.

Even with emission reductions foregone, implementing PAR 1147 is not expected to significantly conflict with or obstruct implementation of the applicable air quality control plan because the 2012 AQMP demonstrated that the effects of all existing rules, in combination with implementing all AQMP control measures (including “black box” measures not specifically described in the 2012 AQMP) would bring the District into attainment with all applicable national and state ambient air quality standards. In addition, the most recent regional blueprint for how the SCAQMD will achieve air quality standards and healthful air is outlined in the 2016 AQMP¹, which contains multiple goals promoting reductions of criteria air pollutants (especially NO_x and PM emissions), greenhouse gases, and toxics. The 2016 AQMP also includes a set aside account of 3 tons per day of SIP reserve to account for any potential backsliding in forecasted rule emission reductions. Any backsliding that may occur will be reflected in future inventories and will be used for future

¹ SCAQMD, Draft Final 2016 Air Quality Management Plan, [http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/draft-final-aqmp/clean/2016finaldraftaqmpdec2016\(clean\).pdf](http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/draft-final-aqmp/clean/2016finaldraftaqmpdec2016(clean).pdf).

attainment demonstrations, at which time an appropriate control strategy would need to be developed to account for changes in inventory, future emissions, and attainment demonstrations. At the time of this publication, the 2016 AQMP is scheduled for consideration by the SCAQMD Governing Board on February 3, 2017.

Thus, while PAR 1147 will allow a higher NO_x limit than under current Rule 1147, the foregone emission reductions are expected to be achieved through other control measures in the 2016 AQMP and if needed, to be offset by the 3 tons per day of SIP reserve.

For these reasons, PAR 1147 would not obstruct or conflict with the implementation of the previous 2012 AQMP or the 2016 AQMP. Additionally, PAR 1147 does not include any provisions which would conflict with the attainment of ozone and PM standards in either the 2012 AQMP or the 2016 AQMP. Therefore, PAR 1147 is not expected to conflict or obstruct implementation of the applicable air quality plan.

III. b) Potentially Significant Impact.

Facility Applicability

The main objective of PAR 1147 is to provide relief for Rule 1147 businesses who are encountering compliance issues and are unable to meet the NO_x requirements currently established in Rule 1147. SCAQMD staff estimates 4,900 to 5,650 out of 6,400 units and up to 3,900 facilities would benefit from delayed compliance requirements proposed by the amendments considered for Rule 1147. As many as 3,400 spray booths used in manufacturing, equipment repair and maintenance, and auto body repair will benefit from the proposed amendments.

Construction Impacts

As discussed above, PAR 1147 is expected to affect the existing facilities at current locations. Any potential equipment replacement (e.g. at the end of its useful life) would require minimum construction that was already included in baseline of implementing Rule 1147, as burners are pre-manufactured items that typically drop into place. Therefore, adoption of PAR 1147 would not require the construction of new buildings or other structures that would generate construction emissions. Although there could be a delivery truck if a facility chooses to install a new burner or replace a piece of equipment, the related emissions are already included in the baseline. Because no additional vehicle trips would be generated by PAR 1147, there would be no increase of emissions and no adverse impacts are anticipated.

As a result, according to the above analysis of potential construction impacts, there would be no significant adverse construction air quality impacts resulting from PAR 1147 for criteria pollutants. Therefore, air quality impacts from construction are less than significant and will not be further analyzed in the Draft EA.

Operational Impacts- Criteria Pollutants

PAR 1147 will provide relief to businesses by extending the compliance dates for small and low use equipment. Compliance dates will be extended for the expected life of these units (35 years) or when the equipment is replaced, rebuilt or moved to a different facility. This change will reduce compliance cost for affected businesses. The amendment will also change the emission limit for specific categories of equipment (e.g., incinerator section of burn off ovens and small units less than 325,000 Btu/hour) to address technical feasibility of meeting a 30 ppm NO_x limit. Therefore, it is not expected that the affected facilities will need to change their current operations in order to comply with PAR 1147. However, NO_x emission reductions for PAR 1147 will be delayed and will result in NO_x emissions foregone of up to 0.9 tons per day starting in 2017 as a result of an increase in the allowable NO_x ppm limit and extending the compliance date. However, the emission reductions foregone will be eventually recaptured because the existing units will be regularly replaced and upgraded over time. Detailed analysis of the NO_x emissions foregone as a result of PAR 1147 will be included in the Draft EA.

Because PAR 1147 focuses on NO_x emissions, emissions of CO, VOC and PM are not expected to change as a result of PAR 1147 compared with the current requirements for the affected sources under Rule 1147.

Operational Impacts- Toxic Air Contaminants

In assessing potential impacts from the adoption of PAR 1147, SCAQMD staff not only evaluates the potential air quality benefits, but also determines potential health risks associated with implementation of PAR 1147.

PAR 1147 will provide relief to businesses by extending the compliance dates for small and low use equipment. Compliance dates will be extended for the expected life of these units (35 years) or when the equipment is replaced, rebuilt or moved to a different facility. This change will reduce compliance cost for affected businesses. The amendment will also change the emission limit for specific categories of equipment (e.g., incinerator section of burn off ovens and small units less than 325,000 Btu/hour) to address technical feasibility of meeting a 30 ppm NO_x limit. Therefore, it is not expected that the affected facilities will need to change their current operations in order to comply with PAR 1147 and no changes in toxic operational emissions from the existing affected facilities are expected from implementing PAR 1147 when compared to current Rule 1147. As a result, there will be no increase in toxic air contaminant emissions from the affected facilities due to PAR 1147.

III. c) Potentially Significant Impact. The cumulative secondary impacts associated with the delayed compliance dates, changes in emission limits, and extended equipment replacement schedules as contained in PAR 1147 will have the potential for creating significant adverse air quality impacts that will be evaluated in the Draft EA.

III. d) No Impact. PAR 1147 will provide relief to businesses by extending the compliance dates for small and low use equipment. Compliance dates will be extended for the expected life of these units (35 years) or when the equipment is replaced, rebuilt or moved to a different facility. This change will reduce compliance cost for affected businesses. The amendment will also change the emission limit for specific categories of equipment (e.g., incinerator section of burn off ovens and small units less than 325,000 Btu/hour) to address technical feasibility of meeting a 30 ppm NO_x limit. Therefore, it is not expected that the affected facilities will need to change their current

operations in order to comply with PAR 1147 and there would be no change in operational emissions from the existing affected facilities and receptors would not be exposed to increased amounts of pollutants.

III. e) No Impact. Odor problems depend on individual circumstances, materials involved, and individual odor sensitivities. For example, individuals can differ quite markedly from the population average in their sensitivity to odor due to any variety of innate, chronic or acute physiological conditions. This includes olfactory adaptation or smell fatigue (i.e., continuing exposure to an odor usually results in a gradual diminution or even disappearance of the smell sensation).

PAR 1147 will provide relief to businesses by extending the compliance dates for small and low use equipment. Compliance dates will be extended for the expected life of these units (35 years) or when the equipment is replaced, rebuilt or moved to a different facility. This change will reduce compliance cost for affected businesses. The amendment will also change the emission limit for specific categories of equipment (e.g., incinerator section of burn off ovens and small units less than 325,000 Btu/hour) to address technical feasibility of meeting a 30 ppm NO_x limit. Therefore, it is not expected that the affected facilities will need to change their current operations in order to comply with PAR 1147 and there would be no change in the existing odor profile of the affected facilities. Further, PAR 1147 would not require construction activities that would require the use of construction equipment. As a result, no odor impacts associated with diesel exhaust from either on-road or off-road mobile sources are expected to occur. Additionally, no change in operation at the affected facilities is expected to occur as a result of the adoption of PAR 1147. Therefore, PAR 1147 is not expected to create new significant adverse objectionable odors.

III. f) Potentially Significant Impact. PAR 1147 will provide relief to businesses by extending the compliance dates for small and low use equipment. Compliance dates will be extended for the expected life of these units (35 years) or when the equipment is replaced, rebuilt or moved to a different facility. This change will reduce compliance cost for affected businesses. The amendment will also change the emission limit for specific categories of equipment (e.g., incinerator section of burn off ovens and small units less than 325,000 Btu/hour) to address technical feasibility of meeting a 30 ppm NO_x limit. Therefore, it is not expected that the affected facilities will need to change their current operations in order to comply with PAR 1147 and no change in operational emissions from the existing affected facilities are expected. However, NO_x emission reductions for PAR 1147 are delayed compared with Rule 1147 and will result in NO_x emissions foregone of up to 0.9 tons per day starting in 2017 as a result of an increase in the allowable NO_x ppm limit and changing the compliance date. However, the emission reductions foregone will be eventually recaptured because the existing units will be regularly replaced and upgraded over time. Detailed analysis of the NO_x emissions foregone as a result of PAR 1147 will be included in the Draft EA.

III. g) & h) No Impact. Changes in global climate patterns have been associated with global warming, an average increase in the temperature of the atmosphere near the Earth's surface, recently attributed to accumulation of GHG emissions in the atmosphere. GHGs trap heat in the atmosphere, which in turn heats the surface of the Earth. Some GHGs occur naturally and are emitted to the atmosphere through natural processes, while others are created and emitted solely through human activities. The emission of GHGs through the combustion of fossil fuels (i.e., fuels containing carbon) in conjunction with other human activities, appears to be closely associated

with global warming.² State law defines GHG to include the following: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆) (HSC §38505(g)). The most common GHG that results from human activity is CO₂, followed by CH₄ and N₂O.

GHGs and other global warming pollutants are often perceived as solely global in their impacts and that increasing emissions anywhere in the world contributes to climate change anywhere in the world. However, a study conducted on the health impacts of CO₂ “domes” that form over urban areas cause increases in local temperatures and local criteria pollutants, which have adverse health effects³.

The analysis of GHGs is a much different analysis than the analysis of criteria pollutants for the following reasons. For criteria pollutants, the significance thresholds are based on daily emissions because attainment or non-attainment is primarily based on daily exceedances of applicable ambient air quality standards. Further, several ambient air quality standards are based on relatively short-term exposure effects on human health (e.g., one-hour and eight-hour standards). Since the half-life of CO₂ is approximately 100 years, for example, the effects of GHGs occur over a longer term which means they affect the global climate over a relatively long time frame. As a result, the SCAQMD’s current position is to evaluate the effects of GHGs over a longer timeframe than a single day (e.g., annual emissions). GHG emissions are typically considered to be cumulative impacts because they contribute to global climate effects.

On December 5, 2008, the SCAQMD adopted an interim CEQA GHG Significance Threshold for projects where SCAQMD is the lead agency (SCAQMD, 2008). This interim threshold is set at 10,000 metric tons of CO₂ equivalent emissions (MTCO₂eq) per year. Projects with incremental increases below this threshold will not be cumulatively considerable.

PAR 1147 will provide relief to businesses by extending the compliance dates for small and low use equipment. Compliance dates will be extended for the expected life of these units (35 years) or when the equipment is replaced, rebuilt or moved to a different facility. This change will reduce compliance cost for affected businesses. The amendment will also change the emission limit for specific categories of equipment (e.g., incinerator section of burn off ovens and small units less than 325,000 Btu/hour) to address technical feasibility of meeting a 30 ppm NO_x limit. Therefore, it is not expected that the affected facilities will need to change their current operations in order to comply with PAR 1147 and there would be no change in operational emissions of other criteria pollutants and GHG emissions, from the existing affected facilities and PAR 1147 is not expected to create significant cumulative adverse GHG emission impacts or conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

² Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.). 2007. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, 2007. Cambridge University Press.
http://www.ipcc.ch/publications_and_data/ar4/wg1/en/contents.html

³ Jacobsen, Mark Z. “Enhancement of Local Air Pollution by Urban CO₂ Domes,” Environmental Science and Technology, as describe in Stanford University press release on March 16, 2010 available at:
<http://news.stanford.edu/news/2010/march/urban-carbon-domes-031610.html>.

Conclusion

As previously discussed, PAR 1147 is expected to result in potentially significant impacts on air quality. Potentially significant adverse air quality impacts from the adoption and implementation of PAR 1147 will be further evaluated in the Draft EA.

	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) Conflict 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

PAR 1147 will resolve current Rule 1147 NO_x emissions compliance issues that have been raised by businesses. It is estimated that up to 3,900 existing facilities (4,900 to 5,650 out of 6,400 existing units) within SCAB will be affected by PAR 1147. PAR 1147 proposes to extend the compliance dates for small and low use equipment based on a longer equipment lifetime, change the emission limits for certain specific equipment to address technical feasibility of meeting a 30 ppm NO_x limit, add a testing exemption, and clarify exemptions for certain equipment. Therefore, PAR 1147 is expected to result in NO_x emission reductions foregone of up to 0.9 tons per day starting in 2017. However, the emission reductions foregone will be eventually recaptured because the existing units will be regularly replaced and upgraded over time. PAR 1147 does not require construction of new buildings, new add-on controls, or relocation of existing facilities. Therefore, construction activities or physical changes to the existing facilities are not expected to occur.

IV. a), b), c), & d) No Impact. PAR 1147 would not require any relocation of existing facilities, new development, or require major modifications to buildings or other structures to comply with the new requirements for the affected equipment beyond what is currently required in Rule 1147. The equipment affected is expected to be located at existing facilities that are already paved. As a result, PAR 1147 would not directly or indirectly affect any species identified as a candidate, sensitive or special status species, riparian habitat, federally protected wetlands, or migratory corridors. For this same reason, PAR 1147 is not expected to adversely affect special status plants, animals, or natural communities.

IV. e) & f) No Impact. PAR 1147 would not require any relocation of existing facilities, new development, or require major modifications to buildings or other structures to comply with the new requirements for the affected equipment beyond what is currently required in Rule 1147. The equipment affected is expected to be located at existing facilities. Therefore, PAR 1147 would not conflict with local policies or ordinances protecting biological resources or local, regional, or state conservation plans because it would not cause new development. Additionally, PAR 1147 would not conflict with any Habitat Conservation Plan, Natural Community Conservation Plan, or any other relevant habitat conservation plan for the same reason identified in Section IV. a), b), c), and d) above. Likewise, PAR 1147 would not in any way impact wildlife or wildlife habitat.

Conclusion

Based upon these considerations, significant adverse biological resources impacts are not expected from implementing PAR 1147. Since no significant 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"/>
e) Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code §21074?	<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, or tribal cultural significance to a community or ethnic or social group or a California Native American tribe.
- Unique paleontological resources or objects with cultural value to a California Native American tribe are present that could be disturbed by construction of the proposed project.
- The project would disturb human remains.

Discussion

PAR 1147 will resolve current Rule 1147 NO_x emissions compliance issues that have been raised by businesses. It is estimated that up to 3,900 existing facilities (4,900 to 5,650 out of 6,400 existing units) within SCAB will be affected by PAR 1147. PAR 1147 proposes to extend the compliance dates for small and low use equipment based on a longer equipment lifetime, change the emission limits for certain specific equipment to address technical feasibility of meeting a 30 ppm NO_x limit, add a testing exemption, and clarify exemptions for certain equipment. Therefore, PAR 1147 is expected to result in NO_x emission reductions foregone of up to 0.9 tons per day starting in 2017. However, the emission reductions foregone will be eventually recaptured because the existing units will be regularly replaced and upgraded over time. PAR 1147 does not require construction of new buildings, new add-on controls, or relocation of existing facilities. Therefore, construction activities or physical changes to the existing facilities are not expected to occur.

V. a), b), c), & d) No Impact. PAR 1147 does not require construction of new facilities, increasing the floor space of existing facilities, or any other construction activities that would require disturbing soil that may contain cultural resources beyond what is currently required in Rule 1147. The equipment affected is expected to be located at existing facilities that are already paved. Since no construction-related activities requiring soil disturbance would be associated with the implementation of PAR 1147, no adverse impacts to historical or cultural resources are anticipated to occur. Further, PAR 1147 is not expected to require any physical changes to the environment, which may disturb paleontological or archaeological resources or disturb human remains interred outside of formal cemeteries.

V. e) No Impact. PAR 1147 is not expected to require physical changes, feature, place, cultural landscape, sacred place or object with cultural value to a California Native American Tribe. Furthermore, PAR 1147 is not expected to result in a physical change to a resource determined to be eligible for inclusion or listed in the California Register of Historical Resources or included in a local register of historical resources. For these reasons, PAR 1147 is not expected to cause any substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code §21074.

As part of releasing this CEQA document for public review and comment, the SCAQMD also provided a formal notice of the proposed project to all California Native American Tribes (Tribes) that requested to be on the Native American Heritage Commission's (NAHC) notification list per Public Resources Code §21080.3.1(b)(1). The NAHC notification list provides a 30-day period during which a Tribe may respond to the formal notice, in writing, requesting consultation on the proposed project.

In the event that a Tribe submits a written request for consultation during this 30-day period, the SCAQMD will initiate a consultation with the Tribe within 30 days of receiving the request in accordance with Public Resources Code §21080.3.1(b). Consultation ends when either: 1) both parties agree to measures to avoid or mitigate a significant effect on a Tribal Cultural Resource and agreed upon mitigation measures shall be recommended for inclusion in the environmental document [see Public Resources Code §21082.3(a)]; or, 2) either party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached [see Public Resources Code §21080.3.2(b)(1)-(2) and §21080.3.1(b)(1)].

Conclusion

Based upon these considerations, significant adverse cultural resources impacts are not expected from implementing PAR 1147. 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 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

PAR 1147 will resolve current Rule 1147 NO_x emissions compliance issues that have been raised by businesses. It is estimated that up to 3,900 existing facilities (4,900 to 5,650 out of 6,400 existing units) within SCAB will be affected by PAR 1147. PAR 1147 proposes to extend the compliance dates for small and low use equipment based on a longer equipment lifetime, change the emission limits for certain specific equipment to address technical feasibility of meeting a 30 ppm NO_x limit, add a testing exemption, and clarify exemptions for certain equipment. Therefore, PAR 1147 is expected to result in NO_x emission reductions foregone of up to 0.9 tons per day starting in 2017. However, the emission reductions foregone will be eventually recaptured because the existing units will be regularly replaced and upgraded over time. PAR 1147 does not require construction of new buildings, new add-on controls, or relocation of existing facilities. Therefore, construction activities or physical changes to the existing facilities are not expected to occur.

VI. a) & e) No Impact. As discussed above, PAR 1147 is not expected to create any additional demand for energy at any of the affected facilities beyond what is currently required in Rule 1147. In fact, PAR 1147 relaxes the need for add-on controls which consume energy. Since it is unlikely that the affected facilities would require new equipment or modifications, it is unlikely that energy demand requirements would change. 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 affect existing facilities, it 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 implement existing energy conservation plans or comply with energy standards to minimize operating costs.

VI. b), c) & d) No Impact. PAR 1147 will provide relief to businesses by extending the compliance dates for small and low use equipment. Compliance dates will be extended for the expected life of these units (35 years) or when the equipment is replaced, rebuilt or moved to a different facility. This change will reduce compliance cost for affected businesses. The amendment will also change the emission limit for specific categories of equipment (e.g., incinerator section of burn off ovens and small units less than 325,000 Btu/hour) to address technical feasibility of meeting a 30 ppm NO_x limit. Therefore, it is not expected that the affected facilities will need to change their current operations in order to comply with PAR 1147. PAR 1147 is not expected to increase any electricity or natural gas demand in any way and would not create any significant effects on peak and base period demands for electricity and other forms of energy.

Conclusion

Based upon these considerations, significant adverse energy impacts are not expected from implementing PAR 1147. 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

PAR 1147 will resolve current Rule 1147 NO_x emissions compliance issues that have been raised by businesses. It is estimated that up to 3,900 existing facilities (4,900 to 5,650 out of 6,400 existing units) within SCAB will be affected by PAR 1147. PAR 1147 proposes to extend the compliance dates for small and low use equipment based on a longer equipment lifetime, change the emission limits for certain specific equipment to address technical feasibility of meeting a 30 ppm NO_x limit, add a testing exemption, and clarify exemptions for certain equipment. Therefore, PAR 1147 is expected to result in NO_x emission reductions foregone of up to 0.9 tons per day starting in 2017. However, the emission reductions foregone will be eventually recaptured because the existing units will be regularly replaced and upgraded over time. PAR 1147 does not require construction of new buildings, new add-on controls, or relocation of existing facilities. Therefore, construction activities or physical changes to the existing facilities are not expected to occur.

VII. a) No Impact. 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 with the Uniform Building Code and all other applicable state codes in effect at the time they were constructed.

As discussed above, no new buildings or structures are expected to be constructed; therefore, PAR 1147 is not expected to affect a facility’s ability to continue to comply with any applicable Uniform Building Code requirements. Consequently, PAR 1147 is not expected to expose persons or property to geological hazards such as earthquakes, landslides, mudslides, ground failure, or other natural hazards. As a result, substantial exposure of people or structure to the risk of loss, injury, or death involving seismic-related activities is not anticipated.

VII. b), c), d) & e) No Impact. Since PAR 1147 would affect existing facilities, it is expected that the soil types present at the affected facilities that are susceptible to expansion or liquefaction would be considered part of the existing setting. New subsidence impacts are not anticipated since no excavation, grading, or fill activities will occur at affected facilities. Further, PAR 1147 does 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 adoption of PAR 1147 would be expected to affect operations at existing facilities, PAR 1147 is not expected to alter or make worse any existing potential for subsidence, liquefaction, etc.

Conclusion

Based upon these considerations, significant adverse geology and soil impacts are not expected from implementing PAR 1147. Since no significant geology and soil 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"/>
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

PAR 1147 will resolve current Rule 1147 NO_x emissions compliance issues that have been raised by businesses. It is estimated that up to 3,900 existing facilities (4,900 to 5,650 out of 6,400 existing units) within SCAB will be affected by PAR 1147. PAR 1147 proposes to extend the compliance dates for small and low use equipment based on a longer equipment lifetime, change the emission limits for certain specific equipment to address technical feasibility of meeting a 30 ppm NO_x limit, add a testing exemption, and clarify exemptions for certain equipment. Therefore, PAR 1147 is expected to result in NO_x emission reductions foregone of up to 0.9 tons per day starting in 2017. However, the emission reductions foregone will be eventually recaptured because the existing units will be regularly replaced and upgraded over time. PAR 1147 does not require construction of new buildings, new add-on controls, or relocation of existing facilities. Therefore, construction activities or physical changes to the existing facilities are not expected to occur.

VIII. a, b) & c) No Impact. PAR 1147 will provide relief to businesses by extending the compliance dates for small and low use equipment. Compliance dates will be extended for the expected life of these units (35 years) or when the equipment is replaced, rebuilt or moved to a different facility. This change will reduce compliance cost for affected businesses. The amendment will also change the emission limit for specific categories of equipment (e.g., incinerator section of burn off ovens and small units less than 325,000 Btu/hour) to address technical feasibility of meeting a 30 ppm NO_x limit. Therefore, it is not expected that the affected facilities will need to change their current operations in order to comply with PAR 1147. Since PAR 1147 does not require the transport, use, or disposal of hazardous materials, PAR 1147 will not create a significant hazard to the public or environment through a reasonably foreseeable release of these materials into the environment or cause hazardous emissions within one-quarter mile of an existing or proposed school.

VIII. d) No Impact. PAR 1147 will provide relief to businesses by extending the compliance dates for small and low use equipment. Compliance dates will be extended for the expected life of these units (35 years) or when the equipment is replaced, rebuilt or moved to a different facility. This change will reduce compliance cost for affected businesses. The amendment will also change the emission limit for specific categories of equipment (e.g., incinerator section of burn off ovens and small units less than 325,000 Btu/hour) to address technical feasibility of meeting a 30 ppm NO_x limit. Therefore, it is not expected that the affected facilities will need to change their current operations in order to comply with PAR 1147. Government Code §65962.5 typically refers to a list of facilities that may be subject to Resource Conservation and Recovery Act (RCRA) permits. For any facilities affected by PAR 1147 that are on the Government Code §65962.5 list, it is anticipated that they would continue to manage any and all hazardous materials and hazardous

waste, in accordance with federal, state and local regulations, and PAR 1147 would not affect how the affected facilities currently handle their hazardous materials and would not impose changes to their existing practices.

VIII. e) No Impact. PAR 1147 will provide relief to businesses by extending the compliance dates for small and low use equipment. Compliance dates will be extended for the expected life of these units (35 years) or when the equipment is replaced, rebuilt or moved to a different facility. This change will reduce compliance cost for affected businesses. The amendment will also change the emission limit for specific categories of equipment (e.g., incinerator section of burn off ovens and small units less than 325,000 Btu/hour) to address technical feasibility of meeting a 30 ppm NO_x limit. Therefore, it is not expected that the affected facilities will need to change their current operations in order to comply with PAR 1147. Based on the type of equipment affected, PAR 1147 is not expected to increase or create any new hazardous emissions in general, which could adversely affect public/private airports located in close proximity to the affected sites. Implementation of PAR 1147 is not expected to create any additional safety hazards for people residing or working in the project area.

VIII. f) No Impact. PAR 1147 will provide relief to businesses by extending the compliance dates for small and low use equipment. Compliance dates will be extended for the expected life of these units (35 years) or when the equipment is replaced, rebuilt or moved to a different facility. This change will reduce compliance cost for affected businesses. The amendment will also change the emission limit for specific categories of equipment (e.g., incinerator section of burn off ovens and small units less than 325,000 Btu/hour) to address technical feasibility of meeting a 30 ppm NO_x limit. Therefore, it is not expected that the affected facilities will need to change their current operations in order to comply with PAR 1147. PAR 1147 will not impair implementation of, or physically interfere with any adopted emergency response plan or emergency evacuation plan. Any existing commercial or light industrial facilities affected by PAR 1147 will typically have their own emergency response plans. Any new facilities will be required to prepare emergency response and evacuation plans as part of the land use permit review and approval process conducted by local jurisdictions for new development. Emergency response plans are typically prepared in coordination with the local city or county emergency plans to ensure the safety of not only the public (surrounding local communities), but the facility employees as well. Since PAR 1147 does not involve any change in current uses of any hazardous materials, or generate any new hazardous waste, no changes to emergency response plans are anticipated.

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:

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

5. Details of evacuation plans and procedures;
6. Descriptions of the emergency equipment available in the facility;
7. Identification of local emergency medical assistance; and
8. Training (initial and refresher) programs for employees in:
 - a. The safe handling of hazardous materials used by the business;
 - b. Methods of working with the local public emergency response agencies;
 - c. The use of emergency response resources under control of the handler; and
 - d. 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. Adopting PAR 1147 is not expected to hinder in any way with the above business emergency response plan requirements.

VIII. g) No Impact. Since the affected facilities are primarily located in industrial or commercial areas where wildlands are typically not prevalent, risk of loss or injury associated with wildland fires is not expected as a result of implementing PAR 1147.

VIII. h) No Impact. Facilities affected by PAR 1147 must already comply with all local and county requirements for fire prevention and safety. PAR 1147 does not require any activities which would be in conflict with any fire prevention and safety requirements, and thus would not create or increase fire hazards at these existing facilities. Pursuant to local and county fire prevention and safety requirements, facilities are required to maintain appropriate site management practices to prevent fire hazards. PAR 1147 will not interfere with fire prevention practices.

Conclusion

Based upon these considerations, significant adverse hazards and hazardous material impacts are not expected from implementing PAR 1147. Since no significant hazards and hazardous material 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

PAR 1147 will resolve current Rule 1147 NO_x emissions compliance issues that have been raised by businesses. It is estimated that up to 3,900 existing facilities (4,900 to 5,650 out of 6,400 existing units) within SCAB will be affected by PAR 1147. PAR 1147 proposes to extend the compliance dates for small and low use equipment based on a longer equipment lifetime, change the emission limits for certain specific equipment to address technical feasibility of meeting a 30 ppm NO_x limit, add a testing exemption, and clarify exemptions for certain equipment. Therefore, PAR 1147 is expected to result in NO_x emission reductions foregone of up to 0.9 tons per day starting in 2017. However, the emission reductions foregone will be eventually recaptured because the existing units will be regularly replaced and upgraded over time. PAR 1147 does not require construction of new buildings, new add-on controls, or relocation of existing facilities. Therefore, construction activities or physical changes to the existing facilities are not expected to occur.

IX. a), b), c), d) & g) No Impact. PAR 1147 will provide relief to businesses by extending the compliance dates for small and low use equipment. Compliance dates will be extended for the expected life of these units (35 years) or when the equipment is replaced, rebuilt or moved to a different facility. This change will reduce compliance cost for affected businesses. The amendment will also change the emission limit for specific categories of equipment (e.g., incinerator section of burn off ovens and small units less than 325,000 Btu/hour) to address technical feasibility of meeting a 30 ppm NO_x limit. Therefore, it is not expected that the affected facilities will need to change their current operations in order to comply with PAR 1147. . As discussed above, additional water usage will not result from operating the affected sources at higher NO_x emission levels, compared to existing Rule 1147.

No additional wastewater generation is expected to result from PAR 1147. 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. PAR 1147 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, the adoption of PAR 1147 would not create a change in the current 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.

Therefore, PAR 1147 is not expected to involve major construction activities including site preparation, grading, etc., so no changes to storm water runoff, drainage patterns, groundwater characteristics, or flow are expected. Additionally, PAR 1147 is not expected to have significant adverse water demand or water quality impacts.

IX. i) No Impact. PAR 1147 is not expected to change existing operations at affected facilities, nor would it result in the generation of increased volumes of wastewater, because the requirements

in PAR 1147 have no effects on water usage or water quality. As a result, there are no potential changes in wastewater volume expected from facilities as a result of the adoption of PAR 1147. It is expected that facilities and operations will continue to handle wastewater generated in a similar manner and with the same equipment as the wastewater that is currently generated. 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 additional wastewater volumes generated as a result of adopting PAR 1147.

IX. e), f) & h) No Impact. As discussed above, PAR 1147 would not require construction of new housing, contribute to the construction of new building structures, or require major modifications or changes to existing structures. Further, PAR 1147 is not expected to require additional workers at affected facilities because PAR 1147 does not affect how equipment is operated. 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 and PAR 1147 is not expected to expose people or structures to significant new flooding risks, or make worse any existing flooding risks. Because PAR 1147 would not require construction of new structures or the addition of new employees, PAR 1147 will not affect in any way 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. Additionally, since PAR 1147 does not require additional water usage or demand, sufficient water supplies are expected to be available to serve the project from existing entitlements and resources, and no new or expanded entitlements would be needed.

Conclusion

Based upon these considerations, significant adverse hydrology and water quality impacts are not expected from implementing PAR 1147. 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

PAR 1147 will resolve current Rule 1147 NO_x emissions compliance issues that have been raised by businesses. It is estimated that up to 3,900 existing facilities (4,900 to 5,650 out of 6,400 existing units) within SCAB will be affected by PAR 1147. PAR 1147 proposes to extend the compliance dates for small and low use equipment based on a longer equipment lifetime, change the emission limits for certain specific equipment to address technical feasibility of meeting a 30 ppm NO_x limit, add a testing exemption, and clarify exemptions for certain equipment. Therefore, PAR 1147 is expected to result in NO_x emission reductions foregone of up to 0.9 tons per day starting in 2017. However, the emission reductions foregone will be eventually recaptured because the existing units will be regularly replaced and upgraded over time. PAR 1147 does not require construction of new buildings, new add-on controls, or relocation of existing facilities. Therefore, construction activities or physical changes to the existing facilities are not expected to occur.

X. a) No Impact. PAR 1147 would not require any new development or require major modifications to buildings or other structures to comply with the new requirements for affected equipment at any of the currently existing facilities beyond what is currently required by Rule 1147. Therefore, PAR 1147 does not include any components that would require physically dividing an established community.

X. b) No Impact. 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 would be altered by the affected operations beyond what is currently required by Rule 1147. Therefore, as already noted in the discussion in Section IV - Biological Resources, PAR 1147 would not affect any habitat conservation or natural community conservation plans, agricultural resources or operations, and would not create divisions in any existing communities. Present or planned land uses in the region would not be significantly adversely affected as a result of implementing PAR 1147.

Conclusion

Based upon these considerations, significant adverse land use and planning impacts are not expected from implementing PAR 1147. 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.
- PAR 1147 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

PAR 1147 will resolve current Rule 1147 NO_x emissions compliance issues that have been raised by businesses. It is estimated that up to 3,900 existing facilities (4,900 to 5,650 out of 6,400 existing units) within SCAB will be affected by PAR 1147. PAR 1147 proposes to extend the compliance dates for small and low use equipment based on a longer equipment lifetime, change the emission limits for certain specific equipment to address technical feasibility of meeting a 30 ppm NO_x limit, add a testing exemption, and clarify exemptions for certain equipment. Therefore, PAR 1147 is expected to result in NO_x emission reductions foregone of up to 0.9 tons per day starting in 2017. However, the emission reductions foregone will be eventually recaptured because the existing units will be regularly replaced and upgraded over time. PAR 1147 does not require construction of new buildings, new add-on controls, or relocation of existing facilities. Therefore, construction activities or physical changes to the existing facilities are not expected to occur.

XI. a) & b) No Impact. 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. Some examples of mineral resources are gravel, asphalt, bauxite, and gypsum, which are commonly used for construction activities or industrial processes. Since PAR 1147 will only to affect existing operations that do not use or duplicate mineral resources, PAR 1147 does not require and would not have any effects on the use of important minerals, such as those described above. Therefore, no new demand for mineral resources is expected to occur.

Conclusion

Based upon these considerations, significant adverse mineral resources impacts are not expected from implementing PAR 1147. 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

Noise impact 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

PAR 1147 will resolve current Rule 1147 NO_x emissions compliance issues that have been raised by businesses. It is estimated that up to 3,900 existing facilities (4,900 to 5,650 out of 6,400 existing units) within SCAB will be affected by PAR 1147. PAR 1147 proposes to extend the compliance dates for small and low use equipment based on a longer equipment lifetime, change the emission limits for certain specific equipment to address technical feasibility of meeting a 30 ppm NO_x limit, add a testing exemption, and clarify exemptions for certain equipment. Therefore, PAR 1147 is expected to result in NO_x emission reductions foregone of up to 0.9 tons per day starting in 2017. However, the emission reductions foregone will be eventually recaptured because

the existing units will be regularly replaced and upgraded over time. PAR 1147 does not require construction of new buildings, new add-on controls, or relocation of existing facilities. Therefore, construction activities or physical changes to the existing facilities are not expected to occur.

XII. a) No Impact. As discussed above, PAR 1147 would not require any new development or require major modifications to buildings or other structures to comply with PAR 1147 at any of the currently existing facilities beyond what is currently required by Rule 1147. PAR 1147 will provide relief to businesses by extending the compliance dates for small and low use equipment. Compliance dates will be extended for the expected life of these units (35 years) or when the equipment is replaced, rebuilt or moved to a different facility. This change will reduce compliance cost for affected businesses. The amendment will also change the emission limit for specific categories of equipment (e.g., incinerator section of burn off ovens and small units less than 325,000 Btu/hour) to address technical feasibility of meeting a 30 ppm NO_x limit. Therefore, it is not expected that the affected facilities will need to change their current operations in order to comply with PAR 1147. Thus, PAR 1147 is not expected to expose persons to the generation of excessive noise levels above current facility levels. It is expected that any facility affected by PAR 1147 would continue complying with all existing local noise control laws or ordinances.

In commercial environments, Occupational Safety and Health Administration (OSHA) and California-OSHA have established noise standards to protect worker health. It is expected that operators at affected facilities will continue complying with applicable OSHA or Cal/OSHA noise standards, which would limit noise impacts to workers, patrons and neighbors.

XII. b) No Impact. PAR 1147 is not anticipated to expose people to, or generate excessive groundborne vibration or groundborne noise levels since complying with PAR 1147 is not expected to alter operations at affected facilities. Therefore, any existing noise or vibration levels at affected facilities are not expected to change as a result of implementing PAR 1147.

XII. c) No Impact. No increase in periodic or temporary ambient noise levels in the vicinity of affected facilities above levels existing prior to implementing PAR 1147 is anticipated because PAR 1147 would not require heavy-duty diesel-fueled construction-related activities nor would it change the existing activities currently performed by the affected operations. See also the response to items XII.a) and XII.b).

XII. d) No Impact. 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 PAR 1147. Similarly, any existing noise levels at affected facilities are not expected to increase appreciably. Thus, PAR 1147 is not expected to expose people residing or working in the vicinities of public airports to excessive noise levels.

Conclusion

Based upon these considerations, significant adverse noise impacts are not expected from implementing PAR 1147. 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 PAR 1147 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

PAR 1147 will resolve current Rule 1147 NO_x emissions compliance issues that have been raised by businesses. It is estimated that up to 3,900 existing facilities (4,900 to 5,650 out of 6,400 existing units) within SCAB will be affected by PAR 1147. PAR 1147 proposes to extend the compliance dates for small and low use equipment based on a longer equipment lifetime, change the emission limits for certain specific equipment to address technical feasibility of meeting a 30 ppm NO_x limit, add a testing exemption, and clarify exemptions for certain equipment. Therefore, PAR 1147 is expected to result in NO_x emission reductions foregone of up to 0.9 tons per day starting in 2017. However, the emission reductions foregone will be eventually recaptured because the existing units will be regularly replaced and upgraded over time. PAR 1147 does not require construction of new buildings, new add-on controls, or relocation of existing facilities. Therefore, construction activities or physical changes to the existing facilities are not expected to occur.

XIII. a) No Impact. PAR 1147 will provide relief to businesses by extending the compliance dates for small and low use equipment. Compliance dates will be extended for the expected life of these units (35 years) or when the equipment is replaced, rebuilt or moved to a different facility. This change will reduce compliance cost for affected businesses. The amendment will also change the emission limit for specific categories of equipment (e.g., incinerator section of burn off ovens and small units less than 325,000 Btu/hour) to address technical feasibility of meeting a 30 ppm NO_x limit. Therefore, it is not expected that the affected facilities will need to change their current operations in order to comply with PAR 1147. PAR 1147 is not anticipated to generate any significant adverse effects, either direct or indirect, on the population or population distribution within the SCAQMD’s boundaries as no additional workers are anticipated to be required for

affected facilities to comply with PAR 1147 which relaxes existing requirements. Human population within the jurisdiction of the SCAQMD is anticipated to grow regardless of implementing PAR 1147. As such, PAR 1147 would not result in changes in population densities or induce significant growth in population.

XIII. b) No Impact. Because PAR 1147 does not require additional employees, PAR 1147 is not expected to result in the creation of any new 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. Affected equipment is anticipated to be operated by the existing labor pool in southern California and would not warrant any new housing.

Conclusion

Based upon these considerations, significant adverse population and housing impacts are not expected from implementing PAR 1147. 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) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) 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

PAR 1147 will resolve current Rule 1147 NO_x emissions compliance issues that have been raised by businesses. It is estimated that up to 3,900 existing facilities (4,900 to 5,650 out of 6,400 existing units) within SCAB will be affected by PAR 1147. PAR 1147 proposes to extend the compliance dates for small and low use equipment based on a longer equipment lifetime, change the emission limits for certain specific equipment to address technical feasibility of meeting a 30 ppm NO_x limit, add a testing exemption, and clarify exemptions for certain equipment. Therefore, PAR 1147 is expected to result in NO_x emission reductions foregone of up to 0.9 tons per day starting in 2017. However, the emission reductions foregone will be eventually recaptured because the existing units will be regularly replaced and upgraded over time. PAR 1147 does not require construction of new buildings, new add-on controls, or relocation of existing facilities. Therefore, construction activities or physical changes to the existing facilities are not expected to occur.

XIV. a) & b) No Impact. PAR 1147 will provide relief to businesses by extending the compliance dates for small and low use equipment. Compliance dates will be extended for the expected life of these units (35 years) or when the equipment is replaced, rebuilt or moved to a different facility. This change will reduce compliance cost for affected businesses. The amendment will also change

the emission limit for specific categories of equipment (e.g., incinerator section of burn off ovens and small units less than 325,000 Btu/hour) to address technical feasibility of meeting a 30 ppm NO_x limit. Therefore, it is not expected that the affected facilities will need to change their current operations in order to comply with PAR 1147 and PAR 1147 will not require additional public services beyond what is currently required by Rule 1147. PAR 1147 does not require any action which would alter and, thereby, adversely affect existing public services, or require an increase in governmental facilities or services to support the affected existing facilities. PAR 1147 will not result in the need for new or physically altered government facilities in order to maintain acceptable service ratios, response times, or other performance objectives because no change in operations is expected to occur at affected facilities.

Because PAR 1147 does not require or involve the use of new hazardous materials or generate new hazardous waste, it will not generate an emergency situation that would require additional fire or police protection, or impact acceptable service ratios or response times.

XIV. c) & d) No Impact. As indicated in discussion under Section XIII - Population and Housing, implementing PAR 1147 would not induce population growth or dispersion because no additional workers are expected to be needed at the existing affected facilities. Therefore, with no increase in local population anticipated as a result of adopting and implementing PAR 1147, additional demand for new or expanded schools or parks is also not anticipated. As a result, no significant adverse impacts are expected to local schools or parks.

Conclusion

Based upon these considerations, significant adverse public service impacts are not expected from implementing PAR 1147. Since no significant public service 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

PAR 1147 will resolve current Rule 1147 NO_x emissions compliance issues that have been raised by businesses. It is estimated that up to 3,900 existing facilities (4,900 to 5,650 out of 6,400 existing units) within SCAB will be affected by PAR 1147. PAR 1147 proposes to extend the compliance dates for small and low use equipment based on a longer equipment lifetime, change the emission limits for certain specific equipment to address technical feasibility of meeting a 30 ppm NO_x limit, add a testing exemption, and clarify exemptions for certain equipment. Therefore, PAR 1147 is expected to result in NO_x emission reductions foregone of up to 0.9 tons per day starting in 2017. However, the emission reductions foregone will be eventually recaptured because the existing units will be regularly replaced and upgraded over time. PAR 1147 does not require construction of new buildings, new add-on controls, or relocation of existing facilities. Therefore, construction activities or physical changes to the existing facilities are not expected to occur.

XV. a) & b) No Impact. PAR 1147 will provide relief to businesses by extending the compliance dates for small and low use equipment. Compliance dates will be extended for the expected life of these units (35 years) or when the equipment is replaced, rebuilt or moved to a different facility. This change will reduce compliance cost for affected businesses. The amendment will also change the emission limit for specific categories of equipment (e.g., incinerator section of burn off ovens and small units less than 325,000 Btu/hour) to address technical feasibility of meeting a 30 ppm NO_x limit. Therefore, it is not expected that the affected facilities will need to change their current operations in order to comply with PAR 1147. As discussed in Section X - 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. No land use or

planning requirements would be altered by the adoption of PAR 1147, which only affect certain types of combustion equipment. Further, PAR 1147 would not affect population growth or distribution within the SCAQMD's jurisdiction (see Section XIII – Population and Housing), in ways that could 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 would not directly or indirectly increase or redistribute population.

Conclusion

Based upon these considerations, significant adverse recreation impacts are not expected from implementing PAR 1147. 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 AND 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 and 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

PAR 1147 will resolve current Rule 1147 NO_x emissions compliance issues that have been raised by businesses. It is estimated that up to 3,900 existing facilities (4,900 to 5,650 out of 6,400 existing units) within SCAB will be affected by PAR 1147. PAR 1147 proposes to extend the compliance dates for small and low use equipment based on a longer equipment lifetime, change the emission limits for certain specific equipment to address technical feasibility of meeting a 30 ppm NO_x limit, add a testing exemption, and clarify exemptions for certain equipment. Therefore, PAR 1147 is expected to result in NO_x emission reductions foregone of up to 0.9 tons per day starting in 2017. However, the emission reductions foregone will be eventually recaptured because the existing units will be regularly replaced and upgraded over time. PAR 1147 does not require construction of new buildings, new add-on controls, or relocation of existing facilities. Therefore, construction activities or physical changes to the existing facilities are not expected to occur.

XVI. a) & b) No Impact. PAR 1147 will provide relief to businesses by extending the compliance dates for small and low use equipment. Compliance dates will be extended for the expected life of these units (35 years) or when the equipment is replaced, rebuilt or moved to a different facility. This change will reduce compliance cost for affected businesses. The amendment will also change the emission limit for specific categories of equipment (e.g., incinerator section of burn off ovens and small units less than 325,000 Btu/hour) to address technical feasibility of meeting a 30 ppm NO_x limit. Therefore, it is not expected that the affected facilities will need to change their current operations in order to comply with PAR 1147. PAR 1147 may require the replacement of burner equipment at the end of its useful life that could generate waste, however, the impacts would not be beyond what is currently required in Rule 1147; therefore, no new solid or hazardous waste impacts specifically associated with PAR 1147 are expected. No substantial change in the amount of solid or hazardous waste streams is expected to occur at affected facilities. The character of solid or hazardous waste streams are not expected to change as a result of the adoption of PAR 1147. 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. Potential wastewater impacts are addressed in Section IX- Hydrology and Water Quality.

Conclusion

Based upon these considerations, significant adverse solid and hazardous waste impacts are not expected from implementing PAR 1147. Since no significant solid and 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 AND 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"/>
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

PAR 1147 will resolve current Rule 1147 NO_x emissions compliance issues that have been raised by businesses. It is estimated that up to 3,900 existing facilities (4,900 to 5,650 out of 6,400 existing units) within SCAB will be affected by PAR 1147. PAR 1147 proposes to extend the compliance dates for small and low use equipment based on a longer equipment lifetime, change the emission limits for certain specific equipment to address technical feasibility of meeting a 30 ppm NO_x limit, add a testing exemption, and clarify exemptions for certain equipment. Therefore, PAR 1147 is expected to result in NO_x emission reductions foregone of up to 0.9 tons per day starting in 2017. However, the emission reductions foregone will be eventually recaptured because the existing units will be regularly replaced and upgraded over time. PAR 1147 does not require construction of new buildings, new add-on controls, or relocation of existing facilities. Therefore, construction activities or physical changes to the existing facilities are not expected to occur.

XVII. a) & b) No Impact. PAR 1147 will provide relief to businesses by extending the compliance dates for small and low use equipment. Compliance dates will be extended for the expected life of these units (35 years) or when the equipment is replaced, rebuilt or moved to a different facility. This change will reduce compliance cost for affected businesses. The amendment will also change the emission limit for specific categories of equipment (e.g., incinerator section of burn off ovens and small units less than 325,000 Btu/hour) to address technical feasibility of meeting a 30 ppm NO_x limit. Therefore, it is not expected that the affected facilities will need to change their current operations in order to comply with PAR 1147. PAR 1147 would not change or cause additional transportation demands or services because no change in operations at affected facilities is expected to occur beyond what is currently required by Rule 1147. Therefore, PAR 1147 would not increase traffic or adversely impact the existing traffic load and capacity of the street system, as the amount of product to be delivered is not anticipated to change nor generate additional services to affect transportation demand. Because PAR 1147 does

not require the immediate replacement of equipment, no increase in material delivery trips is expected as a result of PAR 1147.

Since no construction-related trips and no additional operational-related trips per facility are anticipated (see Section III – Air Quality and Greenhouse Gases), the adoption 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. Since no construction is required, no significant construction traffic impacts are anticipated.

XVII. c) No Impact. PAR 1147 will not require operators of existing facilities to construct buildings or other structures or change the height and appearance of the existing structures, such that they could interfere with flight patterns. Therefore, adoption 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 PAR 1147 materials by air.

XVII. d) No Impact. No physical modifications are expected to occur by adopting PAR 1147 at the affected facilities. Additionally, no offsite modifications to roadways are anticipated for PAR 1147 that would result in an additional design hazard or incompatible uses.

XVII. e) No Impact. Equipment replacements or retrofits associated with adopting PAR 1147 are not expected to occur at the potentially affected existing facilities. Therefore, 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) No Impact. No changes to the parking capacity at or in the vicinity of the affected facilities are expected with adopting PAR 1147. Adoption of PAR 1147 does not change existing operations, so no new workers at affected facilities or area sources are expected. Since adoption of PAR 1147 is not expected to require additional workers, no traffic impacts are expected to occur and additional parking capacity will not be required. Therefore, PAR 1147 is not expected to adversely impact on- or off-site parking capacity. PAR 1147 has no provisions that would conflict with alternative transportation, such as bus turnouts, bicycle racks, et cetera.

Conclusion

Based upon these considerations, significant adverse transportation and traffic impacts are not expected from implementing PAR 1147. Since no significant transportation and 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"/>

XVIII. a) No Impact. As discussed in Section IV - Biological Resources, PAR 1147 is not expected to significantly adversely affect plant or animal species or the habitat on which they rely because PAR 1147 affects specific types of combustion equipment, which are primarily located at existing established facilities. The installation of new equipment is anticipated to occur at existing affected facilities, but not beyond what is currently required by Rule 1147. In addition, all of the currently affected facilities are located at sites that have already been greatly disturbed and that currently do not support such habitats. PAR 1147 is not expected to induce construction of any new land use projects that could affect biological resources.

XVIII. b) Potential Significant Impact. Based on the foregoing analyses, some project-specific significant adverse environmental impacts in the answers for air quality are marked significant for project-specific adverse impacts (see Section III). The cumulative effects of PAR 1147 for the topic of air quality have been identified as potentially significant because the impacts are not

known at this time and will be evaluated for project-specific and cumulative adverse effects in the Draft EA. Therefore, potentially significant air quality impacts identified for project-specific adverse impacts are also potentially significant for cumulative adverse impacts.

No environmental topics were identified as ‘Less Than Significant Impact’ or ‘Less Than Significant with Mitigation’. The environmental topics identified as having ‘No Impact’ include 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 and hazardous waste, and transportation and traffic (see Sections I., II., IV., V., VI., VII., VIII., IX., X., XI., XII., XIII., XIV., XV., XVI., and XVII.). SCAQMD significance thresholds are the same for project-specific impacts and cumulative impacts; therefore, environmental topic answers that are identified as ‘No Impact’ for project-specific impacts would not be expected to make any contribution to potential cumulative impacts whatsoever. Therefore, environmental topic identified as ‘No Impact’ for project-specific impacts are not expected to be significant for cumulative adverse impacts; therefore, no mitigation is necessary. Therefore, the topic areas identified as ‘No Impact’ will not be evaluated further in the Draft EA.

XVIII. c) Potential Significant Impact. Some air quality adverse impacts from implementing PAR 1147 were identified as potentially significant and will be evaluated in the Draft EA (see Section III.). The direct and indirect adverse effects upon human beings for these potentially significant adverse impacts will be evaluated in the Draft EA.

Conclusion

As previously discussed in Sections I through XVIII, the proposed project has no potential to cause significant adverse environmental effects for all areas except for air quality (see Section III). Potentially significant adverse air quality impacts from the adoption and implementation of PAR 1147 will be further evaluated in the Draft EA.

APPENDIX A

PROPOSED AMENDED RULE 1147

RULE 1147 NO_x REDUCTIONS FROM MISCELLANEOUS SOURCES

(a) Purpose and Applicability

The purpose of this rule is to reduce nitrogen oxide emissions from gaseous and liquid fuel fired combustion equipment as defined in this rule. This rule applies to ovens, dryers, dehydrators, heaters, kilns, calciners, furnaces, crematories, incinerators, heated pots, cookers, roasters, fryers, closed and open heated tanks and evaporators, distillation units, afterburners, degassing units, vapor incinerators, catalytic or thermal oxidizers, soil and water remediation units and other combustion equipment with nitrogen oxide emissions that require a District permit and are not specifically required to comply with a nitrogen oxide emission limit by other District Regulation XI rules. This rule does not apply to solid fuel-fired combustion equipment, internal combustion engines subject to District Rule 1110.2, turbines, food ovens, charbroilers, or boilers, water heaters, thermal fluid heaters and enclosed process heaters subject to District Rules 1109, 1146, 1146.1, or 1146.2 and equipment subject to District Rules 1111, 1112, 1117, 1118, 1121, ~~or 1135~~, or 1153.1.

(b) Definitions

- (1) ANNUAL CAPACITY FACTOR means the ratio of the ANNUAL HEAT INPUT of a unit in a calendar year to the amount of fuel it could have burned if it had operated at the rated heat input capacity for 100 percent of the time during the calendar year.
- (2) ANNUAL HEAT INPUT means the actual amount of heat released by fuels burned in a unit during a calendar year, based on the fuel's higher heating value.
- (3) BTU means British thermal unit or units.
- (4) COMBUSTION MODIFICATION means replacement of a burner(s) or any modification of the burner, fuel system or combustion air supply that changes the RATED HEAT INPUT CAPACITY of the burner(s).
- (5) FOOD OVEN means an oven, cooker, dryer, roaster, or other fuel-fired unit, excluding fryer, used to heat, ~~or cook, dry, roast, or prepare~~ food, food products, or products used for making beverages for human consumption.

- (6) HEATER means any combustion equipment that is fired with gaseous and/or liquid fuels and which transfers heat from combusted fuel to materials or air contained in the unit or in an adjoining cabinet, container or structure. Heater does not include any boiler or PROCESS HEATER designed to transfer heat to water or process streams that is subject to any NOx emission limits of District Rules 1109, 1146, 1146.1 or 1146.2, and does not include any internal combustion engine or turbine.
- (7) HEAT INPUT means the higher heating value of the fuel to the unit measured as BTU per hour.
- (8) HEAT OUTPUT means the enthalpy of the working fluid output of the unit.
- (9) INFRARED BURNER means a burner with:
- (A) Ceramic, metal fiber, sintered metal, or perforated metal flame-holding surface;
 - (B) More than 50% of the heat output as infrared radiation and that is operated in a manner where the zone including and above the flame-holding surface is red and does not produce observable blue or yellow flames in excess of ½ inch (13 mm) in length; and
 - (C) A RATED HEAT INPUT CAPACITY per square foot of flame holding surface of 100,000 BTU per hour or less.
- ~~(109)~~ IN-USE UNIT means any UNIT that is demonstrated to the Executive Officer that it was in operation at the current location prior to January 1, 2010.
- ~~(110)~~ MAKE-UP AIR HEATER means a UNIT used to heat incoming air in order to maintain the temperature of a spray booth, container, room or other enclosed space where a person is working including spray booths that are also used for drying coatings and auto body spray booths with an adjacent contiguous section for drying automobile coatings. A MAKE-UP AIR HEATER is not a burner used to heat an oven, dryer, heater or other unit where workers are not present during heating.
- ~~(124)~~ NOx EMISSIONS means the sum of nitrogen oxide and nitrogen dioxide in the flue gas, collectively expressed as nitrogen dioxide.
- ~~(132)~~ PROCESS HEATER means any equipment that is fired with gaseous and/or liquid fuels and which transfers heat from combusted fuel to water or process streams. PROCESS HEATER does not include any fryer or

any furnace, kiln or oven used for melting, heat treating, annealing, drying, curing, baking, cooking, calcining, or vitrifying; any heated tank; or any unfired waste heat recovery heater that is used to recover sensible heat from the exhaust of any combustion equipment.

- (143) PROTOCOL means a South Coast Air Quality Management District approved test protocol for determining compliance with emission limits for applicable equipment.
- (154) RATED HEAT INPUT CAPACITY means the gross HEAT INPUT of the combustion UNIT specified on a permanent rating plate attached by the manufacturer to the device. If the UNIT has been altered or modified such that its gross HEAT INPUT is higher or lower than the rated HEAT INPUT capacity specified on the original manufacturer's permanent rating plate, the new gross HEAT INPUT shall be considered as the rated HEAT INPUT capacity.
- (165) REMEDIATION UNIT means a device used to capture or incinerate air toxics, VOCs or other combustible vapors extracted from soil or water.
- (176) RESPONSIBLE OFFICIAL means:
- (A) For a corporation: a president or vice-president of the corporation in charge of a principal business function or a duly authorized person who performs similar policy-making functions for the corporation; or
 - (B) For a partnership or sole proprietorship: general partner or proprietor, respectively.
 - (C) For a government agency: a duly authorized person
- (187) TENTER FRAME DRYER is a cloth dryer that holds the edges of the material as it is dried in order to control shrinkage.
- (198) THERM means 100,000 BTU.
- (2019) UNIT means any oven, dryer, dehydrator, heater, kiln, calciner, furnace, crematory, incinerator, heated pot, cooker, roaster, fryer, heated tank and evaporator, distillation unit, afterburner, degassing unit, vapor incinerator, catalytic or thermal oxidizer, soil or water remediation units and other combustion equipment with nitrogen oxide emissions requiring a District permit and not specifically required to comply with a NOx emission limit by other District Regulation XI rules. UNIT does not mean any solid fuel fired combustion equipment, internal combustion engine subject to District

Rule 1110.2, turbine, charbroiler, or boiler, water heater, thermal fluid heaters or enclosed process heater subject to District Rules 1109, 1146, 1146.1, or 1146.2 or equipment subject to District Rules 1111, 1112, 1117, 1118, 1121, ~~or 1135~~, or 1153.1.

(219) VAPOR INCINERATOR means a furnace, afterburner, or other device for burning and destroying air toxics, VOCs or other combustible vapors in gas or aerosol form in gas streams.

(c) Requirements

(1) On or after January 1, 2010 any person owning or operating a unit subject to this rule shall not operate the unit in a manner that exceeds the applicable nitrogen oxide emission limit specified in Table 1 at the time a District permit is required for operation of a new, relocated or modified unit or, for in-use units, in accordance with the compliance schedule in Table 2, or at the time of a combustion modification.

Table 1 – NO_x Emission Limit

Equipment Category(ies)	NO _x Emission Limit		
	PPM @ 3% O ₂ , dry or Pound/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	360 ppm or 0.0736 lb/mmBtu	60 ppm or 0.073 lb/mmBtu	60 ppm or 0.073 lb/mmBtu
<u>Crematory or Incinerator</u>	<u>60 ppm or 0.073 lb/mmBtu</u>	<u>60 ppm or 0.073 lb/mmBtu</u>	<u>60 ppm or 0.073 lb/mmBtu</u>
<u>Dual Chamber Burn-off Furnace, Burnout Oven, Incinerator or Crematory with Integrated Afterburner</u>	<u>60 ppm or 0.073 lb/mmBtu</u>	<u>60 ppm or 0.073 lb/mmBtu</u>	<u>60 ppm or 0.073 lb/mmBtu</u>
Evaporator, Fryer, Heated Process Tank, or Parts Washer	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 <u>with unit heat rating ≥ 325,000 BTU/hour</u>	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		
Tenter Frame or Fabric or Carpet Dryer	30 ppm or 0.036 lb/mmBtu		
Other Unit or Process Temperature <u>with unit heat rating ≥ 325,000 BTU/hour</u>	30 ppm or 0.036 lb/mmBtu	30 ppm or 0.036 lb/mmBtu	60 ppm or 0.073 lb/mmBtu
<u>Oven, Dehydrator, Dryer, Heater, Kiln, Calciner, Cooker, Roaster, Furnace, Heated Storage Tank or Other Unit with unit heat rating < 325,000 BTU/hour</u>	<u>60 ppm or 0.073 lb/mmBtu</u>	<u>60 ppm or 0.073 lb/mmBtu</u>	<u>60 ppm or 0.073 lb/mmBtu</u>
Liquid Fuel-Fired Equipment	≤ 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% 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% 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.

Table 2 – Compliance Schedule for In-Use Units

Equipment Category(ies)	Submit Permit Application	Unit Shall Be in Compliance
Remediation UNIT manufactured prior to 1998	Seven months prior to combustion modification or change of location.	Upon combustion modification or change of location beginning March 1, 2012
Tar Pot		All new permit applications beginning January 1, 2013
Afterburner, degassing unit, catalytic oxidizer, thermal oxidizer, vapor incinerator, evaporator, food oven , fryer, heated process tank, parts washer or spray booth make-up air heater manufactured prior to 1998	December 1, 2013	July 1, 2014
Other UNIT manufactured prior to 1986	December 1, 2011	July 1, 2012
Other UNIT manufactured prior to 1992	December 1, 2011	July 1, 2012
Other UNIT manufactured prior to 1998	December 1, 2012	July 1, 2013
Any UNIT manufactured after 1997	December 1 of the year prior to the compliance date	July 1 of the year the unit is 15 years old

- (2) Unit age shall be based on:
- (A) The original date of manufacture as determined by:
- (i) Original manufacturer's identification or rating plate permanently fixed to the equipment. If not available, then;
 - (ii) Invoice from manufacturer for purchase of equipment. If not available, then;
 - (iii) Information submitted to ~~the District AQMD~~ with prior permit applications for the specific unit. If not available, then;
 - (iv) Unit is deemed by ~~the District AQMD~~ to be 20 years old as of July 1, 2012; or
- (B) The date that operations start for a tunnel kiln or crematory rebuilt prior to January 1, 2010 with new burner(s) as determined by:
- (i) Production or fuel usage records after burner installation, and
 - (ii) Invoice for burner(s) installation. If not available, then;
 - (iii) Invoice for burner(s) purchase, If not available, then;

- (iv) Manufacture date of burner(s) as identified by an attached manufacturers identification or rating plate or date stamp.
- (3) In accordance with the schedule in the permit, owners or operators of units shall determine compliance with the emission limit specified in Table 1 using a District approved test protocol. The test protocol shall be submitted to the District at least 90 days prior to the scheduled test and approved by the District Source Testing Division.
- (4) Notwithstanding the requirements of paragraph (c)(1), units with combustion modifications completed prior to December 5, 2008 and after January 1, 2000 that resulted in replacement of more than 75% of the rated heat input capacity shall comply with the applicable emission limit specified in Table 1 of paragraph (c)(1) ten years from the date the modification was performed.
- (5) The date a combustion modification, as specified in paragraphs (c)(1) and (c)(4), is performed; shall be determined according to subparagraph (c)(2)(B), if not available, then subparagraph (c)(2)(C).
- (6) Notwithstanding the requirements of paragraph (c)(1), an in-use unit with a District permit to construct or permit to operate prior to January 1, 2010, ~~or an afterburner, degassing unit, thermal oxidizer, catalytic oxidizer, vapor incinerator, or spray booth make-up air heater installed with a District permit prior to March 1, 2012~~ with emissions of less than one pound per day ~~or less~~ of nitrogen oxides, may defer compliance with the applicable emission limit specified in Table 1 of paragraph (c)(1) until a combustion modification; the unit is replaced, relocated, or rebuilt; or December 1 of the year the unit is 35 years old. A unit with NOx emissions less than one pound per day that becomes 35 years old before December 1, 2017, shall comply with the emission limit on and after December 1, 2018. The age of the unit shall be determined according to subparagraph (c)(2)(A) for up to five years from the applicable compliance date in Table 2 of (e)(1). NOx emissions of less than one pound per day ~~or less~~ shall be demonstrated by compliance with one of the following requirements:
- (A) ~~A unit has a rated heat input capacity of 400,000 Btu or less.~~
- (B) ~~The unit as of September 9, 2011 has a NOx permit emission limit of one pound per day or less, a permit condition with a process~~

~~limit that results in one pound per day or less of NOx emissions including but not limited to fuel use, material throughput or operating schedule, or actual operations that results in one pound per day or less of NOx emissions. Daily operating records of unit fuel use or process rate and daily operating hours demonstrating that starting January 1, 2012 until the date of compliance, the unit has a maximum emission rate of 1 pound of NOx per day.~~

- (A) A rated heat input capacity of less than 325,000 BTU per hour;
- (B) A permit condition that limits NOx emissions to less than 1 pound per day;
- (C) Monthly recordkeeping of unit use documenting average emissions of less than one pound per day with a unit-specific non-resettable time meter or a non-resettable unit fuel meter with fuel use corrected to standard temperature and pressure. Owners or operators of units with installed calibrated non-resettable totalizing time or fuel meters may elect to comply with the requirements of (c)(6) by ~~requesting, no later than January 1, 2012, unit permit conditions of limits on operating hours per calendar month and/or a fuel meter and a limit on the amount of fuel use per~~ demonstrating each calendar month ~~so that~~ monthly NOx emissions are less than 2230 pounds or less. Monthly emissions with a time meter shall be calculated using the unit's maximum hourly emission rate in pounds multiplied by the hours of operation each calendar month. The maximum hourly emission rate shall be equal to the rated heat input capacity of the unit multiplied by the unit's emissions at the rated heat input capacity in pound per million Btu. Monthly emissions calculated with a fuel meter shall be equal to the unit's emission rate per unit of fuel multiplied by the amount of fuel, corrected to standard temperature and pressure, used that calendar month.;

(D) Daily recordkeeping of unit operation and the following specified rated heat input capacities operating less than or equal to the specified number of hours per day:

Table 3 – Small and Low Use Unit Daily Operating Limits

<u>Unit Rating (Btu/hour)</u>	<u>Daily Hour Limit</u>
<u>325,000 to 400,000</u>	<u>16</u>
<u>400,001 to 500,000</u>	<u>14</u>
<u>500,001 to 800,000</u>	<u>8</u>
<u>800,001 to 1,000,000</u>	<u>6</u>
<u>1,000,001 to 1,200,000</u>	<u>5</u>

(E) Daily recordkeeping of unit operation and the following specified rated heat input capacities operating less than or equal to the specified number of hours per calendar month:

Table 4 – Small and Low Use Unit Monthly Operating Limits

<u>Unit Rating (Btu/hour)</u>	<u>Monthly Hour Limit</u>
<u>325,000 to 400,000</u>	<u>352</u>
<u>400,001 to 500,000</u>	<u>308</u>
<u>500,001 to 800,000</u>	<u>176</u>
<u>800,001 to 1,000,000</u>	<u>132</u>
<u>1,000,001 to 1,200,000</u>	<u>110</u>

(F) Daily unit natural gas use less than or equal to 7,692 cubic feet per day at standard temperature and pressure, documented by daily recordkeeping of gas consumption with a non-resettable fuel meter.

Owners or operators of units complying under this paragraph that fail to continuously demonstrate compliance with the applicable heat input rating, permit condition, or daily or monthly requirements of this paragraph shall comply with the applicable emission limit in Table 1 by the applicable compliance date in Table 2 or within 210 days from the date

the unit first fails to continuously comply with the daily or monthly emission limit whichever is later. A unit that must demonstrate compliance with an emission limit pursuant to this provision shall comply with the applicable emission limit for the life of the unit.

- (7) On or after January 1, 2010, any person owning or operating a unit subject to this rule shall perform combustion system maintenance in accordance with the manufacturer's schedule and specifications as identified in the manual and other written materials supplied by the manufacturer or distributor. The owner or operator shall maintain on site at the facility where the unit is being operated a copy of the manufacturer's, distributor's, installer's or maintenance company's written maintenance schedule and instructions and retain a record of the maintenance activity for a period of not less than three years. The owner or operator shall maintain on site at the facility where the unit is being operated a copy of the District certification or District approved source test reports, conducted by an independent third party, demonstrating the specific unit complies with the emission limit. The source test report(s) must identify that the source test was conducted pursuant to a District approved protocol. The model and serial numbers of the specified unit shall clearly be indicated on the source test report(s). The owner or operator shall maintain on the unit in an accessible location a permanent rating plate. The maintenance instructions, maintenance records and the source test report(s) or District certification shall be made available to the Executive Officer upon request.
- (8) Any person owning or operating a unit subject to this rule complying with Table 1 using pounds per million BTU, shall install and maintain in service non-resettable, totalizing, fuel meters for each unit's fuel(s) prior to the compliance determination specified in paragraph (c)(3). Owners or operators of a unit with a combustion system that operates at only one firing rate that comply with an emission limit using pounds per million BTU shall install a non-resettable, totalizing, time or fuel meter for each fuel.
- (9) Meters that require electric power to operate shall be provided a permanent supply of electric power that cannot be unplugged, switched off, or reset except by the main power supply circuit for the building and associated

equipment or the unit's safety shut-off switch. Any person operating a unit subject to this rule shall not shut off electric power to a unit meter unless the unit is not operating and is shut down for maintenance or safety.

- (10) On or before the compliance date, the owner or operator of a unit shall demonstrate compliance with the applicable emission limit in Table 1 pursuant to the provisions of subdivisions (d) or (e).

- (11) Compliance by Certification

For units that do not allow adjustment of the fuel and combustion air for the combustion system by the owner or operator, and upon approval by the Executive Officer, an owner or operator may demonstrate compliance with the emission limit and demonstration requirement of this subdivision by certification granted to the manufacturer for any model of equipment sold for use in the District. Any unit certified pursuant to subdivision (e) shall be deemed in compliance with the emission limit in Table 1 and demonstration requirement of this subdivision, unless a District source test shows non-compliance.

- (12) Identification of Units

- (A) New Manufactured Units

The manufacturer shall display the model number and the rated heat input capacity of the unit complying with subdivision (c) on a permanent rating plate. The manufacturer shall also display the District certification status on the unit when applicable.

- (B) Modified Units

The owner or operator of a unit with a modified combustion system (new or modified burners) shall display the new rated heat input capacity on a new permanent supplemental rating plate installed in an accessible location on the unit or burner. The gross heat input shall be based on the maximum fuel input corrected for fuel heat content, temperature and pressure. Gross heat input shall be demonstrated by a calculation based on fuel consumption recorded by an in-line fuel meter by the manufacturer or installer.

- (13) The owner or operator shall maintain on site a copy of all documents identifying the unit's rated heat input capacity for as long as the unit is retained on-site. The rated heat input capacity shall be identified by a manufacturer's or distributor's manual or invoice and a permanent rating

plate attached to the unit. If a unit is modified, the rated heat input capacity shall be calculated pursuant to subparagraph (c)(12)(B). The documentation of rated heat input capacity for modified units shall include the name of the company and person modifying the unit, a description of all modifications, the dates the unit was modified and calculation of rated heat input capacity. The documentation for modified units shall be signed by the highest ranking person modifying the unit.

~~(14) — Alternate Compliance Plans~~

~~(A) — Owners or operators of facilities with five or more in-use units with permit emissions greater than one pound per day NO_x that will require burner modifications may submit an alternate compliance plan by January 1, 2012 to phase in compliance of all units starting April 1, 2012 and ending before January 1, 2015. The alternate compliance plan shall identify the units included in the plan and a schedule identifying when each unit will comply with the emission limit and the compliance determination for each unit will be completed. At least one unit shall be modified to comply with the applicable emission limit of this rule by April 1, 2012. Each year thereafter, a minimum of 20 percent of additional units and no less than one unit shall be modified to comply with the applicable emission limit. All units must comply with the applicable emission limit of this rule before January 1, 2015.~~

~~(B) — Owners or operators of facilities with pollution control unit(s) in series with process unit(s) (e.g., an oven and afterburner) that have NO_x emissions greater than one pound per day and different compliance dates may elect to synchronize compliance of all units in the series on one date no later than December 1, 2013.~~

(d) Compliance Determination

- (1) All compliance determinations pursuant to paragraph (c)(6) shall be calculated:
 - (A) Using a District approved test protocol averaged over a period of at least 15 and no more than 60 consecutive minutes;
 - (B) After unit start up; and
 - (C) In the unit's as-found operating condition.

Each compliance determination shall be made in the maximum heat input range at which the unit normally operates. An additional compliance determination shall be made using a heat input of less than 35% of the rated heat input capacity for any of the following types of units with process temperature less than 1200 °F that operate with variable heat input that falls below 50% rated heat input capacity during normal operation: Make-Up Air Heater, other Air Heater located outside of process building, Oven, Dehydrator, Dryer, Tenter-Frame Dryer, Fabric Dryer, Carpet Dryer, Heater, Cooker, Roaster, non-metallurgical Furnace, or Heated Storage Tank.

For compliance determinations after the initial approved test, the operator is not required to resubmit a protocol for approval if: there is a previously approved protocol and the unit has not been altered in a manner that requires a permit alteration; and rule or permit emission limits have not ~~changed~~ become more stringent since the previous test.

- (2) All parts per million emission limits specified in subdivision (c) are referenced at 3 percent volume stack gas oxygen on a dry basis.
- (3) Compliance with the NO_x emission limits of subdivision (c) and determination of stack-gas oxygen and carbon dioxide concentrations for this rule shall be determined according to the following procedures:
 - (A) District Source Test Method 100.1 – Instrumental Analyzer Procedures for Continuous Gaseous Emission Sampling (March 1989); or
 - (B) ASTM Method D6522-00 – Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers; or
 - (C) United States Environmental Protection Agency Conditional Test Method CTM-030 – Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines, Boilers and Process Heaters Using Portable Analyzers; or
 - (D) District Source Test Method 7.1 – Determination of Nitrogen Oxide Emissions from Stationary Sources (March 1989); and

- (E) District Source Test Method 10.1 – Carbon Monoxide and Carbon Dioxide by Gas Chromatograph/Non-Dispersive Infrared Detector (GC/NDIR) – Oxygen by Gas Chromatograph-Thermal Conductivity (GC/TCD) (March 1989); or
- (F) Any alternative test method determined approved before the test in writing by the Executive Officers of the District, the California Air Resources Board and the United States Environmental Protection Agency.
- (4) For any operator who chooses to comply using pound per million Btu, NO_x emissions in pounds per million Btu of heat input shall be calculated using procedures in 40 CFR Part 60, Appendix A, Method 19, Sections 2 and 3.
- (5) Records of source tests shall be maintained for ten years and made available to District personnel upon request. Emissions determined to exceed any limits established by this rule through the use of any of the test methods specified in subparagraphs (d)(3)(A) through (d)(3)(F) shall constitute a violation of this rule.
- (6) All compliance determinations shall be made using an independent contractor to conduct testing, which is approved by the Executive Officer under the Laboratory Approval Program for the applicable test methods.
- (7) For equipment with two or more units in series or multiple units with a common exhaust or units with one dual purpose burner that both heats the process and incinerates VOC, toxics or PM, the owner or operator may demonstrate compliance with the emission limits in Table 1 by one of the following:
- (A) Test each unit separately and demonstrate each unit's compliance with the applicable limit, or
- (B) Test only after the last unit in the series and at the end of a common exhaust for multiple units ~~or dual purpose burner~~, when all units are operating, and demonstrate that the series of units either meet:
- (i) The lowest emission limit in Table 1 applicable to any of the units in series, or

- (ii) A heat input weighted average of all the applicable emission limits in Table 1 using the following calculation.

$$\text{Weighted Limit} = \frac{\Sigma [(EL_X) * (Q_X)]}{\Sigma [Q_X]}$$

Where:

EL_X = emission limit for unit X

Q_X = total heat input for unit X during test

(e) Certification

(1) Unit Certification

For units that do not allow adjustment of the fuel and combustion air for the combustion system by the owner or operator, any manufacturer or distributor that distributes for sale or sells units or burner systems for use in the District may elect to apply to the Executive Officer to certify such units or burner systems as compliant with subdivision (c).

(2) Manufacturer Confirmation of Emissions

Any manufacturer's application to the Executive Officer to certify a model of equipment as compliant with the emission limit and demonstration requirement of subdivision (c) shall obtain confirmation from an independent contractor that is approved by the Executive Officer under the Laboratory Approval Program for the necessary test methods prior to applying for certification that each unit model complies with the applicable requirements of subdivision (c). This confirmation shall be based upon District approved emission tests of standard model units and a District approved protocol shall be adhered to during the confirmation testing of all units subject to this rule. Emission testing shall comply with the requirements of paragraphs (d)(1) through (d)(5) except emission determinations shall be made at 100% rated heat input capacity and an additional emission determination shall be made using a heat input of less than 35% of the rated heat input capacity for any Afterburner, Degassing Unit, Remediation Unit, Thermal Oxidizer, Catalytic Oxidizer, Vapor Incinerator, Make-Up Air Heater, other Air Heater located outside of process building, Oven, Dehydrator, Dryer, Tenter-Frame Dryer, Fabric

Dryer, Carpet Dryer, Heater, Kiln, Crematory, Incinerator, Calciner, Cooker, Roaster, non-metallurgical Furnace, or Heated Storage Tank.

- (3) When applying for unit(s) certification, the manufacturer shall submit to the Executive Officer the following:
 - (A) A statement that the model is in compliance with subdivision (c). The statement shall be signed and dated by the manufacturer's responsible official and shall attest to the accuracy of all statements;
 - (B) General Information
 - (i) Name and address of manufacturer,
 - (ii) Brand name, if applicable,
 - (iii) Model number, as it appears on the unit rating plate; and
 - (iv) Rated Heat Input Capacity, gross output of burner(s) and number of burners;
 - (C) A description of each model being certified; and
 - (D) A source test report verifying compliance with the applicable emission limit in subdivision (c) for each model to be certified. The source test report shall be prepared by the confirming independent contractor and shall contain all of the elements identified in the District approved Protocol for each unit tested. The source test shall have been conducted no more than ninety (90) days prior to the date of submittal to the Executive Officer.
- (4) When applying for unit certification, the manufacturer shall submit the information identified in paragraph (e)(3) no more than ninety (90) days after the date of the source test identified in subparagraph (e)(3)(D) and at least 120 days prior to the date of the proposed sale and installation of any District certified unit.
- (5) The Executive Officer shall certify a unit model which complies with the provisions of subdivision (c) and of paragraphs (e)(2), (e)(3), and (e)(4).
- (6) Certification status shall be valid for five years from the date of approval by the Executive Officer. After the fifth year, recertification shall be required by the Executive Officer according to the requirements of paragraphs (e)(2), (e)(3), and (e)(4).

- (f) Enforcement

- (1) The Executive Officer may inspect certification records and unit installation, operation, maintenance, repair, combustion modification and test records of owners, operators, manufacturers, distributors, retailers, and installers of units located in the District, and conduct such tests as are deemed necessary to ensure compliance with this rule. Tests shall include emission determinations, as specified in paragraph (d)(1) to (d)(4), of a random sample of any category of units subject to this rule.
 - (2) An emission determination specified under paragraph (f)(1) that finds emissions in excess of those allowed by this rule or permit conditions shall constitute a violation of this rule.
- (g) Exemptions
- (1) The provisions of this rule shall not apply to units:
 - (A) subject to the nitrogen oxide limits of District Rules 1109, 1110.2, 1111, 1112, 1117, 1121, 1134, 1135, 1146, 1146.1, ~~or 1146.2, or~~ 1153.1; or
 - (B) located at RECLAIM facilities.
 - (2) The provisions of this rule shall not apply to charbroilers or food ovens.
 - (3) The provisions of this rule shall not apply to:
 - (A) Flares subject to District Rule 1118;
 - (B) Flares, afterburners, degassing units, thermal or catalytic oxidizers or vapor incinerators in which a fuel, including but not limited to natural gas, propane, butane or liquefied petroleum gas, is used only to maintain a pilot for vapor ignition or is used for five minutes or less to bring a unit up to operating temperature;
 - (C) Municipal solid waste incinerators with a District permit operating before December 5, 2008;
 - (D) An afterburner or vapor incinerator with a District permit operating before December 5, 2008 that has an integrated thermal fluid heat exchanger that captures heat from the afterburner or vapor incinerator and an oven or furnace exhaust in order to reduce fuel consumption by an oven or the afterburner or vapor incinerator; or
 - (E) A flare, afterburner, degassing unit, remediation unit, thermal oxidizer, catalytic oxidizer or vapor incinerator process in which ~~a fuel, including but not limited to natural gas, propane, butane or~~

~~liquefied petroleum gas, is mixed with particulate matter,~~ air toxics, VOCs, landfill gas, digester gas or other combustible vapors are mixed in the unit's burner with primary combustion air or fuel, including but not limited to natural gas, propane, butane or liquefied petroleum gas, prior to incineration in the unit, in order to maintain vapor concentration above the upper explosion limit or above a manufacturer specified limit in order to maintain combustion or temperature in the unit. This exemption does not apply to a regenerative thermal or catalytic oxidizer unit with a burner ~~with a separate fuel line~~ used to heat up or maintain temperature of ~~the~~ a unit that incinerates particulate matter, air toxics, VOCs or other combustible vapors in a gas stream moving past the burner flame.

- (4) ~~New a~~Afterburners, degassing units, thermal oxidizers, catalytic oxidizers, vapor incinerators, and spray booth make-up air heaters installed for use at a specific facility after December 5, 2008 and before March 1, 2012, are exempt from the emission limit in Table 1 until July 1 of the year the unit is 15 years old.
- (5) ~~New or relocated r~~Remediation units installed after December 5, 2008 and before March 1, 2012, are exempt from the emission limit in Table 1 until a combustion modification or change of location on or after January 1, 2012.
- (6) ~~New food ovens, f~~Fryers, ~~heated process tanks, parts washers, and evaporators~~ installed after December 5, 2008 and operating before January 1, 2014, are exempt from the emission limit in Table 1 until July 1 of the year the unit is 15 years old.
- (7) Remediation units are exempt from the applicable emission limit in Table 1 while fueled with propane, butane or liquefied petroleum gas in a location where natural gas is not available. Remediation units must comply with the emission limit when natural gas is available and while fueled with natural gas.
- (8) The provisions of paragraphs (c)(1) and (c)(3) of this rule shall not apply to any evaporator, heated process tank, or parts washer with a District permit issued and operating prior to January 1, 2014 until a combustion modification or the unit is replaced, relocated, or rebuilt.

(9) The provisions of paragraph (c)(3) of this rule shall not apply to units heated solely with infrared burners.

(10) The provisions of paragraphs (c)(1) and (c)(3) of this rule shall not apply to any unit that becomes subject to this rule subsequent to a revision of District Rule 219, on or after January 1, 2017, until a combustion modification or the unit is replaced, relocated, or rebuilt.

(h) Technology Assessment

(1) On or before December 7, 2015, the Executive Officer shall conduct a technology assessment and shall report to the Governing Board on the availability of burner systems and units for processes with NOx emissions of one pound per day or less.

(i) Mitigation Fee Compliance Option

(1) An owner or operator of a unit with emissions of ~~more than~~ 1 pound per day or more may elect to delay the applicable compliance date in Table 2 of paragraph (c)(1) or (c)(4) three years by submitting an alternate compliance plan and paying an emissions mitigation fee to the District in lieu of meeting the applicable NOx emission limit in Table 1.

(2) Compliance Demonstration

An owner or operator of a unit electing to comply with the mitigation fee compliance option shall:

(A) Submit an alternate compliance plan and pay the mitigation fee to the Executive Officer at least 150 days prior to the applicable compliance date in Table 2 of paragraph (c)(1) or (c)(4), and

(B) Maintain on-site a copy of verification of mitigation fee payment and ~~District AQMD~~ approval of the alternate compliance plan that shall be made available upon request to AQMD staff.

(3) Plan Submittal

The alternate compliance plan submitted pursuant to paragraphs (i)(1) and (i)(2) shall include:

(A) A completed ~~District AQMD~~ Form 400A with company name, ~~District AQMD~~ Facility ID, identification that application is for a compliance plan (section 7 of form), and identification that request is for the Rule 1147 mitigation fee compliance option (section 9 of form);

- (B) Attached documentation of unit fuel use for previous 5 years, description of weekly operating schedule, unit permit ID, unit heat rating (Btu/hour), and fee calculation;
- (C) Filing fee payment; and
- (D) Mitigation fee payment as calculated by Equation 1.

Equation 1:

$$MF = R \times (3 \text{ years}) \times (L_1 - L_0) \times (AF) \times (k)$$

Where,

MF = Mitigation fee, \$

R = Fee Rate = \$12.50 per pound (\$6.25 per pound for a small business with 10 or fewer employees and gross annual receipts of \$500,000 or less)

L_1 = Default NO_x emission factor, 0.136 lbs of NO_x/mmBtu for natural gas and LPG, and 0.160 lb/mmBtu for fuel oils

L_0 = Applicable NO_x emission limit specified in Table 1 in lbs/mmBtu

AF = Annual average fuel usage of unit for previous 5 years, mmscf/yr for natural gas or gallons for liquid fuel

k = unit conversion for cubic feet of natural gas to Btu = 1,050 Btu/scf, 95,500 Btu/gallon for LPG, and 138,700 Btu/gallon for fuel oil

APPENDIX B

REFERENCES

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APPENDIX C

REFERENCES

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APPENDIX D

CEQA SOPING COMMENTS AND RESPONSES TO COMMENTS

Introduction

A CEQA scoping meeting was required for the proposed project pursuant to Public Resources Code § 21083.9(a)(2) and was held at the SCAQMD’s Headquarters in conjunction with the Public Workshop on February 15, 2017. One CEQA related comment was received during the scoping meeting.

Comment #1

(From Anthony Endres / Furnace Dynamics, Inc.) The response to question III a) in Chapter 2 of the NOP/IS concludes that the proposed project would not conflict with or obstruct and applicable air quality plan and as such would have a less than significant air quality impact. However, the responses to question III f) says the quantity of NOx emission reductions foregone that may occur as a result of implementing PAR 1147 are potentially significant. These two statements seem contradict to each other.

Response to Comment #1

Question III. a) asks if the proposed project would “conflict with or obstruct implementation of the applicable air quality plan?”. While PAR 1147 will allow a higher NOx limit than what is currently allowed in Rule 1147, such that there will be NOx emission reductions foregone, PAR 1147 would not be expected to obstruct implementation of the 2012 AQMP Because one ton per day of NOx emissions were allocated in the SIP set aside account for every year starting in year 2013 to year 2030 in the event that NOx emission reductions were not achieved via rule adoptions or amendments, as is the case with PAR 1147. Further, this NOx set aside account was re-evaluated and revised in the 2016 AQMP based on expected growth and the number of projects expected to take place in near future years to two tons per day for every year starting in year 2017 to year 2025 and one ton per day for every year starting in year 2026 to year 2031. As a result, even though PAR 1147 would delay NOx emission reductions, the allocations in the set aside account combined with implementation of other control measures in the 2016 AQMP will achieve NOx emission reductions to offset the NOx emission reductions foregone from PAR 1147. Therefore, the conclusion of less than significant impacts for this question is appropriate.

Meanwhile, question III. f), asks if the proposed project would “diminish an existing air quality rule or future compliance requirement resulting in a significant increase in air pollutant(s)?”. Because the initial analysis of the potential effects of PAR 1147 indicated that the amount of NOx emission reductions foregone would exceed the SCAQMD’s air quality significance threshold for NOx during operation, the response to this question correctly indicated that PAR 1147 would create potentially significant adverse air quality impacts. These impacts were further analyzed in the Chapter 4 of this Final SEA. The air quality analysis confirmed that the amount of NOx emission reductions foregone during operation will exceed the SCAQMD’s operational air quality significance threshold for NOx starting in compliance year 2017 and beyond. Thus, the operational air quality impacts from implementing PAR 1147 are considered to be significant.

APPENDIX E

COMMENT LETTERS ON THE NOP/IS AND RESPONSES TO COMMENTS

Comment Letter #1: Gayle Totton / Native American Heritage Commission

Comment Letter #2: Diana Watson / Department of Transportation

Responses to Comments

Response to Comment Letter #1

Thank you for your comment. SCAQMD is aware of the requirements of California Assembly Bill (AB 52) that went into effect on July 1, 2015. AB 52 is promulgated in Public Resources Code § 21080.3.1(d) and requires a formal notification to all California Native American Tribes about lead agency projects that would require the preparation of a CEQA document. In response to these requirements, SCAQMD revised its environmental checklist to contain significance criteria, and a discussion of Cultural Resources impacts in response to the requirements in AB 52 to specifically consider the proposed project's potential effects on Cultural Native American Tribe resources.

A discussion of impacts from PAR 1147 relative to tribal cultural resources was included in the NOP/IS (see pages 2-19 to 2-20). As explained in the NOP/IS, since PAR 1147 only applies to reducing NOx emissions by imposing NOx emission limits on existing gaseous or liquid fuel fired combustion equipment (ovens, dryers, dehydrators, heaters, kilns, calciners, furnaces, crematories, incinerators, heated pots, cookers, roasters, fryers, closed and open heated tanks and evaporators, distillation units, afterburners, degassing units, vapor incinerators, catalytic or thermal oxidizers, soil and water remediation units), no construction activities will be required and as such, no land will be disturbed. Therefore, no significant impacts on tribal cultural resources were identified.

The Native American Heritage Commission (NAHC) has previously provided guidance to SCAQMD staff recommending that notifications to California Native American Tribes should occur at the same time the SCAQMD releases a CEQA document for public review and comment. The SCAQMD currently follows the State Clearinghouse (SCH) procedures for distributing all CEQA documents to reviewing agencies and the NAHC was specifically designated as a reviewing agency at the time the NOP/IS was released for public review and comment. In addition to following the SCH procedures for soliciting agency review of CEQA documents, SCAQMD staff also sent a copy of the NOP/IS to an interested party contact list, which included over 100 contacts for Native American Tribes. No comment letters from any contacts on the Native American Tribes list were received relative to the NOP/IS.

Responses to Comment Letter #2

As explained in the NOP/IS, PAR 1147 will resolve current Rule 1147 NOx emissions compliance issues that have been raised by businesses. It is estimated that up to 3,900 existing facilities (4,900 to 5,650 out of 6,400 existing units) within SCAB will be affected by PAR 1147. PAR 1147 proposes to extend the compliance dates for small and low use equipment based on a longer equipment lifetime, change the emission limits for certain specific equipment to address technical feasibility of meeting a 30 ppm NOx limit, add a testing exemption, and clarify exemptions for certain equipment. Therefore, PAR 1147 is expected to result in NOx emission reductions foregone of up to 0.9 ton per day starting in 2017. However, while most of the NOx emission reductions foregone will be eventually recaptured because the existing units will be regularly replaced and upgraded over time, approximately 0.03 ton per day of the NOx emission reductions foregone will be permanent (see Table 4-3). PAR 1147 does not require construction of new buildings, new add-on controls, or relocation of existing facilities. Therefore, construction activities or physical changes to the existing facilities are not expected to occur.

Further, as explained in the traffic and transportation analysis in the NOP/IS (see pages 2-48 to 2-50), implementation of PAR 1147 would not have any impacts to transportation and traffic. Therefore, no traffic studies will be necessary if PAR 1147 is implemented and PAR 1147 is not expected to affect any State right of way.

APPENDIX F

COMMENT LETTERS RECEIVED ON THE DRAFT SEA AND RESPONSES TO COMMENTS

Comment Letter #1: Anthony Endres / Furnace Dynamics, Inc.

Comment Letter #2: Paul Engel

Comment Letter #1



FURNACE DYNAMICS, INC.

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

May 9, 2017

Ms. Barbara Radlein
Program Supervisor, CEQA Special Projects
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4178

Dear Ms. Radlein,

We have reviewed the PAR 1147 CEQA document presented March 23, 2017 and have provided our comments below for your consideration. I hope these comments will be helpful in finalizing your final Environmental Assessment.

Page 3-2 Table 3-1: “Typical Uncontrolled NOx Emissions”

The emission values are in most cases extremely flawed. We have seen no evidence that any of the values in the chart are accurate and directly applicable to Rule 1147 devices.

Since the mid-1990s we have pre-tested well over 500 devices of all types of equipment including a significant number of RECLAIM sources. This also included approximately 200 parallel testing of these same devices with source test companies. The chart states the “Metal Heat Treating” and “Metal Melting Furnace” categories have uncontrolled emissions from 150-210 ppm. This is only applicable to furnaces with recuperated air systems that preheats the combustion air typically from 600°F – 1200°F with the net effect of increasing flame temperature and thus NOx emissions. We know of only one preheated air system that fits this profile in the Rule 1147 realm. That furnace was used to reclaim sand which showed a pretest value of about 156 ppm. This facility is no longer in 1147. We feel the values of the other classifications on Table 3-1 are also vastly overstated.

In the last 3.5 years, we have conducted over 225 pretests on both high and low temperature devices. The temperature ranges go from ovens that run at 300°F – 800°F and high temperature devices that can operate up to 2200°F. The non-preheated air systems are typically less than 100 ppm for high temp furnaces in the above categories. For low temperature devices such as powder coat ovens and other low temperature devices that operate well less than 1200°F the values are usually significantly less than 100 ppm. The chart states these devices are 120 ppm NOx, which on average, is probably double the actuals.

1-1

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Thus, the concern is the values indicated in the baseline inventory are dramatically overstated for Rule 1147 devices. Therefore, the overall emission reductions are overstated pursuant to rule requirements. This concern has been stated in taskforce meetings. If staff has evidence to support these values stated in Table 3-1, we would like to have them presented to us and the regulated community. That information should include the number of devices tested, what temperatures, how the tests were conducted, by whom and what b-cat categories were included to substantiate the values presented in Table 3-1.

On page 4-6 it states that the emission inventory for PAR 1147 is the inventory used for the 2008 rule adoption. As indicated above, we feel the basis for the inventory is significantly overstated.

The issue regarding the impact of a less stringent rule profile is the accuracy of the 0.9 ton per day declaration. It should be understood that a significant number of small sources are not required to report emissions on the AER program due to the di minimus nature of the emissions profile.

Even at that, with the staff utilizing a default emission factor of 130#/MMcf (101.4 ppm), the actuals are overstated.

We believe, other less than 1#/day devices would also fall into the same category of minimal emissions profile. And, as stated above there is no records of emissions due to the established criteria for inclusion of NOx data in the AERs.

On a study of the auto body industry that included 35 companies and 56 booths, with a total of 844 months of invoices evaluated the average was 0.125 #/day. The maximum input in the group was 1.2 MMBTU/hr and average was 751,516 BTU/hr.

By using this average and using PTE, the daily NOx values would be:

$$751,516 \text{ BTU/hr} / 1050 = 715.73 \text{ cf/hr}$$

$$715.73 \times 24 = 17,177 \text{ cf/day} / 1,000,000 = 0.017 \text{ MMcf} \times 130 = 2.233 \text{ #/day}$$

Thus, by comparing the PTE of 2.233#/day to the actual average of .125#/day, the actual is only 5.6% of PTE.

The document states there are significant number of devices >1#/day. If the analysis conducted, was based on the default emission factor of 101.4 ppm and PTE, many of the devices originally thought to be >1#/day would probably fall well under 1 pound per day.

Please review the summary of multiple types of companies PTE vs. actual gas consumption included in this writeup.

1-1
cont.

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It is important to note that this information is available, in most cases, from the Districts AER (Annual Emission Report). We should compare the maximum input of each permitted device in the respective plants relative to PTE. In my evaluation “Percent of PTE – Multiple Facilities” the study included AERs for many clients. Some of these clients had Rule 219 equipment. I included the 219 equipment in the total maximum input calculations. Many others, emissions are so low that they are not required to report emissions. The values also include permitted and non-permitted equipment and were based on So. California Gas Company invoices.

1-1
 cont.

On page 4-10 ***Relationship Between Short Term Uses and Long Term Productivity***

A statement indicates that NOx is a precursor to ozone and PM2.5. Please refer to *Final PM2.5 Calculation Methodology, October 2006*, Table 3, page 5 which states (for external combustion sources) that 99% of PM10 is actually PM2.5. Therefore, the only way to reduce the amount of PM2.5 is to shutdown equipment or become significantly more efficient. Based on our review of the low NOx technology there are decreases in efficiency, due to the higher use of excess air to reduce the hot mix temperatures and thus lower NOx. There are some increases in efficiency due to improved control. We have seen no substantive evidence that there is an imbalance in loss vs. increase of efficiency in the application of low NOx burners to 1147 devices. Therefore, since the PM10 (PM2.5) is related to gas use not NOx emission profiles, rule 1147 emission reduction requirements’ will not have any substantive effect on PM2.5.

1-2

Evaluation of Alternatives:

Issues which are of the alternatives represent a balance of emissions reduction and have a major impact on the regulated community.

Issues of BACT

1. The current BACT requirements exempt the requirement for installing BACT equipment if the device emits less than 1 pound per day NOx. Thus, the extended compliance on alternative 4 maintains the requirements for BACT when the unit or burner is replaced. As long as the less than a pound per day is maintained; we believe this alternative would be the best solution.

1-3

Issues of Cost Effectiveness

1. The other item not discussed but eminently important is the issue of cost effectiveness. We have conducted many cost effectiveness analysis of devices using the Minor Source Cost Effectiveness formula. In the sources that are less than 1 pound per day the cost effectiveness values in many if not most cases far exceed \$100,000/controlled ton of reduction. A number of examples exceed \$1,000,000/ct. As an example, to put this in prospective, large RECLAIM

1-4

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power plant NOx reductions show cost effectiveness values of about \$3,000/ct. Aside from the BACT issue at less than 1 pound per day limitation, the small devices (small companies) have an economic burden that far exceeds the large utilities and refineries. These utilities have millions of customers and thus any costs are spread over these customers – making the incremental cost to them extremely small. Small companies have few customers by comparison and the cost effectiveness is a significant burden on their profitability and ability to stay in business as well as the ability to have their businesses in California.

1-4
 cont.

Table 5-2

Alternative Proposed Project, B, C and D all have the same forgone emissions of 0.9 tons/day – thus from an emission standpoint there are no differences. However, as we have previously stated the 0.9 t/d value may be overstated, thus the alternatives will have less impacts that the document defines.

1-5

Alternative B, C and D all have the same air quality impacts relating to the 0.9 tons per day, however, Alternative D indicates no recovery of emissions in the future. Since the proposed rule requires that if there is a replacement of the burner or device, compliance will be required. Thus, at some time the emissions will be reduced. However, these are mostly related to the <1#/day threshold, therefore, since they are not required to be BACT due to the limited emissions, the recovery is a moot point. As stated in the document, many of these are probably at 0.3#/day. Since the 0.3# value is based on the default emission factor of 101.4 ppm, it could be said, the actual emission reduction from retrofitting would be minimal at best. Bear in mind that if the requirement is 20 years or 25 years, since they are less than 1#/day, they are not and would not be required to retrofit the device.

1-6

BACT Issues:

Since **Alternative 4** exempts pressure washers due to the excessive cost and difficulty to retrofit (in some cases over \$200,000) and there are a very limited number of these in the SCAB, the impact of exemption is marginal at best.

Alternative 4 also requires adequate recordkeeping, this is completely acceptable as an alternative measure. If the 1#/day is exceeded, retrofit is required whenever it occurs.

1-7

Amalgamation of **Alternative C and D** appears to be the best solution with minimal impact to the environment.

Conclusion: Since we believe the forgone emissions of 0.9 t/d are significantly above the actual emissions on a wide variety of devices, Alternative C and D offer the best solution, without

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placing a significant economic burden on industry in the future years. An additional consideration, since the RECLAIM program is being phased out, the emission reductions accrued the reinstatement of command and control rules from the large emitters will more than offset the estimated forgone emission from the proposed rule and Alternatives.

1-7
 cont.

It is highly problematic that staff chooses to use PTE to determine the emissions profile of the grouping of 1147 devices. The net effect is to overstate the emissions as a group and thus overstate the forgone emissions – without conducting an in-depth analysis of the actual emissions of these facilities. Additionally, the staff chooses to use the default emission factor of 130#/MMcf natural gas (101.4 ppm) to quantify the emissions profile regardless of type of equipment

PAR Rule 1147: The following comments relate to the proposed PAR 1147 rule language. A revised version dated May 2, 2017. We will provide staff with comments relating to those revisions.

1-8

1147(b)(9) Infrared burners since these burners are exempted by 1153.1 (without qualification) they should be exempted from 1147

Page 1 – 1147(b)(4) Recommend the wording be changed to change of location something to the effect that “No modification is required to an existing unit, if the equipment is the same as was permitted and operated at a previous location, provided no modification to the equipment has been made that would change rated input BTU capacity or emissions profile.”

1-9

Page 4 – 1147(c)(1)(A) The word “relocated” should be removed. If a unit is less than 1 pound per day and maintains documentation substantiating the classification – a 30-year limitation should not be applied. The rule does require the permit holder to provide annual maintenance to the equipment.

1-10

Table 1:

Add *Multi chambered* to the dual chamber. For example, a heat set lithography press, three heat set presses exhaust all go into an afterburner, therefore the multi chamber definition would apply.

1-11

1147(c)(6) eliminate 35 years – since these less than 1#/day devices are not required to comply with BACT and keep records, they should not have to retrofit in the future. The rule requires annual maintenance records therefore, if properly maintained, they should remain less than 1 pound per day. Also, consider since many of these are well less than 0.5 pounds per day, the future cost would be astronomical in a cost per controlled ton basis.

1-12

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- 1147(c)(6)(C) Read timers once per month.] 1-13
- 1147(c)(6)(C) change "calibrated" to only the fuel meter not a non-resettable timer.] 1-14
- 1147(c)(6)(C) Remove the less than 22 pounds per month and reinstate the 30#/month.] 1-15
- 1147(c)(6)(C) Revise the timer to 50% of maximum input not maximum input. No devices in 1147 operate at 100% capacity. No device operates at PTE since all devices are controlled by a temperature controller with specific set points for a given process. See writeup on PTE and refer to the dialogue on the CEQA document relating to actual vs PTE.] 1-16
- Table 3 See the included chart relating to the emission factors calculated based on hour considerations for the specific input values.] 1-17
- Table 4 See chart to correct the hours per month that should be allowed for the specific input values.] 1-18
- (c)(6)(F) Note the value of 7,692 cf/day is based on the default emission factor of 130#/MMcf or 101.4 ppm. The Table 3 and 4 are not based on 101.4 ppm but higher values. This is inconsistent.] 1-19
- (d)(7) identifies units with one dual purpose burner that both heats and incinerates VOC, toxics or PM demonstrates compliance with the following.] 1-20
- (d)(7)(A) If there is only one burner the only place to test is the emission stream exiting the device, thus only one test is required.] 1-21
- (d)(7)(B) This is no longer valid due to the change in Table 1.] 1-22
- (f)(1) Remove repair, if a system is repaired to the same configuration as the original burner, no emission changes are present. Also, remove the change of location from the revision.] 1-23
- (f)(4) Remove the reference to 30 years. If the unit is <1#/day and is maintained per rule requirements, there is no need to replace it in 30 years since it will still be less than one pound per day.] 1-24

Should you have any questions feel free to call me any time.

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Sincerely,

Anthony W. Endres
President

Enc.

cc. Dr. Philip Fine
Mr. Tracy Goss
Mr. Gary Quinn
Mr. Wayne Barcikowski

This page is an attachment and referenced in Comment #1-1 of this letter.

Percent of PTE - Multiple Facilities Rule 1147 Companies

Type	Duration Years	Percent of PTE
Medium Forge	1	10.8%
Medium Forge	1	19.6%
Heat Treat	1	16.7%
Powder Coat	6	14.9%
Powder Coat	1	12.0%
Furniture Mfg	2	13.9%
Autobody Study	multiple	5.6%
	Average	13.4%

Notes:

1. The maximum of all devices were added for a total input
2. The input was converted to cubic feet x 24 x 365
3. The gas consumption was based on Gas Co invoices
4. The percentage is based on PTE vs. Actual Consumption
5. Autobody study included 56 booths, 844 months of Gas Co. invoices

This page is an attachment and referenced in Comment #1-16 of this letter.



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November 19, 2015

A discussion on Potential to Emit (PTE)

Potential to Emit is defined as the maximum amount of emissions that can be generated from a device operating at maximum capacity, 100% all of the time, twenty-four hours per day, seven days a week. On an annualized basis that number would be multiplied by 365 days per year. Whereas this is a relatively simplistic approach to determining emissions, it actually is impossible for devices to operate under these conditions. They can only operate under these conditions for relative short intervals when the equipment is first fired. The reason has to do with the fact that all of the devices in Rule 1147 are based on a defined operating temperature. This is true from forging, heat treating, metal melting, powder coating, crematories, cooking ovens, etc.

For example, I have designed combustion systems for over 120 furnaces in forging, heat treating and metal melting. Categorically, no device design is based on PTE. They are based on the objective for the process; the production throughput, operating temperatures, refractory losses, etc. It boils down to the net available heat to do work in the furnace or oven, after combustion losses balanced with the production of a given product.

On direct fired forge furnaces, the typical operating temperature range can be anywhere from 800F to as high as 2250°F and they can be in the same furnace. The theoretical flame temperature under optimal air fuel ratio conditions is between 3000°F and 3100°F. To put this into perspective, carbon steel in a molten state is cast at temperatures around 2900°F to 3050°F. Thus if operated in a typical high temperature furnace you could melt metal. Since the operating temperatures are dramatically less, the firing rate overall is consequently less. Since different alloys require tight control on operating temperatures, the heat input must be precisely maintained to not metallurgical destroy the parts contained in the furnaces. For instance, titanium is finish forged at 1750°F. If the temperature goes to 1825°F, the parts are scrap. It can thus be seen that it is impossible to operate at PTE without destroying parts. This goes for any operating range.

This is true regardless of the process albeit, in the metals industry, powder coating, burn off and a plethora of other processes covered in Rule 1147. They all provide heat input to match a specific set point temperature that are required to maintain the product quality necessary to satisfy customer needs. When looking at powder coating, the low NOx burners provide an operating temperature of between 300°F and 650°F, particular powder materials require tight temperature control. If that temperature is exceeded, the powder will be burnt, rendering the parts unusable. Due to the nature of oven burners and the necessity to achieve 30 ppm, the burners typically operate at higher amounts of excess air than high temperature operations. Even

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so, the actual flame temperatures can reach over 2000°F. Again, the PTE value would be incorrect to apply as a determinate consideration of emissions and thus pound per day emission profiles.

Actual Annual Use vs. PTE: To make the determination of actual vs. PTE, we acquired So. Cal Gas Company annual use in therms, converted them to millions of cubic feet, then got to total BTU/hr maximum input of each device in the plant and correlated the actual MMcf to the potential if operated at the maximum input, 24 hours per day on an annual basis. I conducted a study to determine the correlation of PTE to actual usage on two forge plants, one very large and a medium small shop. By the above method, the large forge facility was operating at a 25% of PTE. On the smaller facility there were gas consumption limits on all of their furnaces. The actuals were 19.6% of the permit limits which was well below the devices PTE. This facility was evaluated for actual annual vs. PTE and the results showed 10.82%. I have just completed an evaluation of a couple of powder coating companies. One had an actual annual, compared to PTE of 12%. Another powder coat facility showed a six-year average of 10.49%. during the six years the annual averages ranged from 9.16% to 11.99%. It is important to understand that these facilities were operating under normal production capabilities. Some companies are single shift, others are two shift and one is a three shift operation 5 days per week. I will be conducting additional analysis on a number of other facilities and forwarding those values to staff. However, I would believe the Actual compared to PTE is going to be in the 10% - 25% range.

Included Charts: I have included a series of charts that can provide a level of understanding of the relationship of daily emissions vs. BTU input vs. hours of operation at a variety of different average firing rates. The first charts are related to the SCAQMD default emission factor of 130#/MMcf natural gas or 101.4 ppm. The first chart shows the correlation of values assuming 100% of the capacity of the combustion system or PTE. The next three charts show the same correlations of firing rate to hours of operation at 50% of PTE and 20% of PTE. The fourth chart shows how high the BTU rating could be per hour of operation and still stay under 1#/day of NOx. The last three charts show the same data but based on a lower emission value of 60 ppm.

It can be seen the lower emission values reflect a substantially lower pound per day emission value. This is for illustrative value only. However, it should be understood that few devices operate anywhere near the default ppm values. In the last 3 years I have conducted approximately 175 pretests (mostly on 1147 devices) using a Testo 350 combustion analyzer. I have also parallel tested about 70 official source tests and my readings are typically less than 2 ppm deviation from the official source test results. I have yet to see any device that operated near the 101.4 ppm level. The lower temperature devices such as ovens are even lower relative to the default emission factor. Thus even with the values shown on the first 4 charts, the pound per day values are overstated.

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I believe a collaborative effort on behalf of District staff and industry representatives can arrive at a reasonable means of determining what constitutes one pound per day usage. Perhaps the simplest approach could be the use of non-resettable timers on devices, with a limit of X hours per day for a given BTU input. Obviously this would have to be backed up with logs of hours of operation that could be verified by an inspector. If, as was suggested in the 1147 Task Force Meeting, an exemption (or an extended compliance date) be given to devices operating at less than a pound per day, verification is essential. There could be other means of quantification of daily emissions – these need to be discussed in a meaningful way to determine what works for the District and industry.

As always, we appreciate the opportunity to work with staff to assist in developing a bridge of understanding of how industry actually operates. Should you have any questions regarding this subject, please feel free to engage me in a meaningful dialogue to assist in developing rules that relate to real-world conditions.

Sincerely,

Anthony Endres
President

This page is an attachment and referenced in Comments #1-17, 1-18 and 1-19 of this letter.

Review of PAR 1147 Table 3 and 4

Table 3 - Small and Low Use Unit Daily Operating Limits

Converting to Actual ppm NOx

BTU/hr	Hours/day	#/day	Actual ppm
325,000 - 400,000	16	0.792	127.97
400,001 - 500,000	14	0.867	117.00
501,000 - 800,000	8	0.792	127.97
800,001 - 1,000,000	6	0.743	136.50
1,000,001 - 1,200,000	5	0.743	136.50

Notes:

1. "#/day" is based on 101.4 ppm (130#/MMcf)
2. "Actual ppm" correlates #/day vs. hours converted back to ppm
3. The highest value was used for actual ppm

Table 4 - Small and Low Use Unit Monthly Operating Limits

Converting to Proper Monthly Hourly Limit

BTU/hr	PAR 1147 Hours/Month	#/month	Hr/mo = 29.96#/mo	#/mo
325,000 - 400,000	352	17.43	605	29.96
400,001 - 500,000	308	19.07	484	29.96
501,000 - 800,000	176	17.43	302	29.96
800,001 - 1,000,000	132	16.34	242	29.96
1,000,001 - 1,200,000	110	16.34	202	29.96

Notes:

1. Cubic feet per day natural gas = 7,682
2. Hr/mo = 29.96 #/mo is based on 1050 BTU/cf and 130#/MMcf
3. The highest value was used for actual ppm

Comment Letter #2

From: Paul Engel <paulkengel@gmail.com>
Sent: Thursday, May 11, 2017 12:10 PM
To: Barbara Radlein
Cc: Anthony Endres; Gerry Bonetto
Subject: Proposed Amendment Rule 1147

Barbara

I was in receipt of Mr Endres' comments to CEQA document and proposed Rule 1147. I have been involved with permitting and compliance consulting since 1988. I find that Mr. Endres' comments reflects more correctly actual operations of combustion equipment versus theoretical rated design values. I have worked and continue to work with printers with natural gas-fired dryers for heat-set web-fed printers within AQMD jurisdiction. PTE is an intellectual value with minimal reflection on actual operations. The rated heat input is only experienced for cold start-up to get the oven to operating conditions quickly. If the printers operated at the rated maximum heat inputs, the printed product would be unusable because the printed product would be damaged because of curdled or blistered substrate or in fact would likely cause press fires.

2-1

Thank you for considering the revisions to Rule 1147.

Paul Engel

714-473-8036

Responses to Comments

Responses to Comment Letter #1

Response 1-1

The baseline emissions shown in Table 3-1 of the Draft SEA are not based on the emission factors listed in the table. Table 3-1 originates from the Environmental Assessment (EA) for Rule 1147 adoption in December 2008 (referred to herein as the December 2008 Final EA). The information contained in the December 2008 Final EA, including Table 3-1, was relied upon and is necessary to complete the analysis in this SEA. The total emissions presented in Table 3-1 is originally from the 2007 Air Quality Management Plan and are based on information generated by local gas utilities which in turn were provided to the California Public Utilities Commission and Energy Commission. This information was then provided to the California Air Resources Board (ARB) who, along with SCAQMD inventory data, relied upon this information to prepare an emission inventory. The emission factors listed in Table 3-1 are from U.S. EPA and were presented in the table only to illustrate the range of emissions from these types of equipment. The emission estimates for the different categories were prorated based on the estimate of the number of equipment in each category. This information was previously communicated to the commenter and other stakeholders during rule development for the December 2008 adoption of Rule 1147 and later during the September 2011 amendments to Rule 1147.

The commenter states that there are only a few units with emissions greater than one pound per day. SCAQMD staff agree that most equipment affected by Rule 1147 would have emissions less than one pound per day. As described in the Staff Report for PAR 1147, at least 75 percent of the affected units have emissions less than one pound per day and that number could be as high as 90 percent. However, as a group, these units generate a significant amount of emissions. Consequently, emission reductions are needed to achieve compliance with the ambient air quality standards for ozone and NOx.

While it is true there are other sources information of emissions including the SCAQMD annual emission reporting, it is not always possible to use these other sources. As noted by the commenter, few businesses are required to report under the SCAQMD's Annual Emissions Reporting program. In addition, most of the information collected is aggregated and it is not possible to identify individual equipment fuel use and emissions. The analysis for any rule development project estimates average and range of emissions based on appropriate emission factors that represent average emissions from different categories of equipment as well as estimates of hours of operation and usage. Some equipment will have lower emissions but other equipment will have above average emissions. Both the Staff Report and SEA for PAR 1147 do not use potential to emit (PTE) to estimate emissions. However, this information can be adjusted to estimate actual emissions and is available for many equipment.

Because the fuel usage, emission factors or emission test results, and PTE as calculated for the SCAQMD permit were not provided by the commenter, it is not possible for SCAQMD staff to evaluate the table of emissions estimates that was provided in the attachment to this letter. In addition, the weekly, daily, and hourly operation schedules were not provided. Daily emission estimates from annual data can vary significantly depending upon the actual operating schedule

and other factors. For example, dividing annual emissions by 365 days per year when a unit operates 250 days per year or less can substantially underestimate the quantity of daily emissions. Staff has estimated that a typical spray automobile repair spray booth has NOx emissions less than 0.3 pound per day for an average one shift per day operation. However, some units process many more cars per day in one shift than others and some units are used for more than one shift per day. Emissions also vary depending upon the type of booth. In addition, new booths are more efficient, but there are many older booths in the SCAQMD which will have higher emissions.

The estimate of NOx emission reductions foregone for PAR 1147 is expected to range between 0.6 and 0.9 ton per day of NOx which will be made up over time as new units replace old units. For the impact analysis in this SEA, it is necessary to estimate the worst case impacts where there is uncertainty regarding the impacts of the proposed project and its alternatives. Thus, the worst case analysis for CEQA purposes relies on the 0.9 ton per day of NOx emission reductions foregone.

Response 1-2

PM2.5 is both directly emitted and chemically produced from its precursors which are nitrogen oxides, sulfuric oxides and volatile organic compounds. Research in atmospheric chemistry and EPA guidelines clearly define that NOx is a PM2.5 precursor. PM2.5 monitoring and modeling is required to be chemical specific (EPA, 2014) for demonstration of attainment in the AQMP and State Implementation Plan (SIP)⁶. The chemical components defined include nitrate, sulfate, organic carbon, elemental carbon, ammonia, crustal components, salt, and others. In the South Coast Air Basin, the majority of ambient PM2.5 are produced by chemical reactions from NOx, SOx and reactive organic materials. Reductions in NOx emissions from any source result in reductions of PM2.5 ambient concentrations.

Response 1-3

The commenter refers to Alternative 4 in the letter, but the Draft SEA identifies the alternatives as Alternative A, B, C and D. Alternative D is the alternative that would allow compliance with the NOx limit provided that records can demonstrate that emissions would be less than one pound per day. However, the option to allow for the demonstration that emissions would be less than one pound per day is only one component of Alternative D. When taking into account all of the other components that comprise Alternative D, the overall impacts when compared to the proposed project is that Alternative D would be the least stringent alternative and would not be equivalent to BACT.

Response 1-4

Cost-effectiveness is addressed in the Staff Report and Socioeconomic Analysis, but not in the Draft SEA. The analysis shows that PAR 1147 would be less costly than the existing rule. It should be noted that stakeholders agreed that the Technology Assessment's cost and cost-effectiveness analysis for small units (< 1 lb/day) should result in exemptions and compliance delays.

⁶ U.S. EPA, 2014, Draft Modeling Guidance for Demonstrating Attainment of Air Quality Goals for Ozone, PM2.5, and Regional Haze.

Stakeholder input on cost for larger units (> 1 lb/day) was at times consistent with staff's estimates when sufficient detail was provided by the stakeholder. However, comments with examples of cost-effectiveness that were significantly higher could not be verified by SCAQMD staff. In these instances, the basis and details of costs provided by stakeholders were not transparent and staff along with the independent reviewer of the Rule 1147 Technology Assessment were not able to complete evaluation of the information provided. The cost-effectiveness analyses provided by stakeholders were not always consistent with permitted equipment operating hours, permit requirements, and recommendations from the ABT review of the SCAQMD cost analyses (i.e., a 2014 third party review of SCAQMD cost analyses). In addition, rebates from utilities for rebuilt units were excluded from cost information provided by stakeholders.

Response 1-5

While it may appear that because the NO_x emission reductions foregone will be 0.9 ton per day for Alternatives B, C, and D, the quantity of emission reductions foregone is not the only metric that separates the alternative's characteristics from each other. These three alternatives vary by whether the NO_x emission reductions foregone will be all temporary, all permanent, or a combination thereof, and these effects are dependent upon the varying equipment category components. Further, the timing of when NO_x emission reductions foregone will occur, and when any of the emission reductions will be recovered also vary amongst these three alternatives.

For example, unlike the proposed project and Alternative C, Alternative B does not exempt any units less than 325,000 BTU/hour from any limit. Further, Alternative B has a 25-year compliance schedule which is shorter than the 30-year compliance schedule in the proposed project. Also, Alternative B does not have any permanent emission reductions foregone and the 0.9 ton per day of the emission reductions foregone are expected to be fully recovered. Both Alternative C and D have no age requirement and provide additional exemptions for all pressure washers, and therefore both Alternative C and D will have more permanent emission reductions foregone comparing to the proposed project.

Thus, contrary to the comment, these differences, while they may seem subtle, define the characteristics of Alternative B, C, and D and do not overstate the impacts that may occur if any are implemented.

Response 1-6

As explained in Response 1-5, Alternatives B, C and D do not have the same air quality impacts as demonstrated in Table 5-2 of this Final SEA. See Response 1-5.

Response 1-7

The overall impacts to the environment from implementing Alternatives C and D is explained in Response 1-5. It is important to note that of the total 0.9 ton per day of NO_x emission reductions foregone, the portion that can be attributed to pressure washers under Alternatives C and D is approximately 36 pounds per day of NO_x emission reductions foregone, which SCAQMD staff believes is not a "marginal" amount (see Table 5-3).

Response 1-8

Units fired solely with direct fired infrared burners are exempt from the emission testing requirement if certain operating parameters are met. This requirement was added to PAR 1147 to be consistent with SCAQMD Rule 1153.1 – Emissions of Oxides of Nitrogen From Commercial Food Ovens.

Response 1-9

SCAQMD staff believes that the current definition of relocation in PAR 1147 accurately describes the actions associated with relocating equipment and is consistent with other SCAQMD rules.

Response 1-10

An equipment life of 30 years provides sufficient time for most units to be replaced. If an owner chooses to modify a very old unit to comply with the rule emission limit, the owner has that option. Thirty years is beyond the time an owner would have loan payments for a unit and the time a unit can be depreciated for tax purposes. Compared with new equipment, after 10 years of use, most units require major maintenance in order to continue operation. If an owner chooses to buy used equipment, to install in a facility, then that old unit should meet the same emission limit as a new unit. This approach is consistent with federal, state, and SCAQMD's New Source Review requirements per Regulation XIII which is applicable to relocating units. In addition, units with emissions of one pound per day or more must comply with BACT upon relocation.

Response 1-11

Staff has modified Table 1 in PAR 1147 to address the concern raised in this comment.

Response 1-12

This issues raised in this comment repeat the sentiments expressed in Comments 1-4 and 1-10. Please see Responses 1-4 and 1-10.

Response 1-13

Business owners have that option in the both the current version of Rule 1147 and in PAR 1147 to read the timers monthly, but they may also choose to document the meter readings on a daily basis.

Response 1-14

PAR 1147 has been crafted to be consistent with other requirements contained in other SCAQMD rules, policies, and standard permit conditions. Please also see Response 1-13.

Response 1-15

PAR 1147 has been crafted to be consistent with other requirements contained in other SCAQMD rules, policies, and standard permit conditions. Please also see Response 1-13.

Response 1-16

The screening tables in PAR 1147 are one way to document NOx emissions of less than one pound per day. However, many other options are available. In addition, there are many units that operate at 100 percent because the burners turn on at 100 percent of the firing rate and then turn off when the temperature set point is reached. For these units, the screening tables are the simplest method to document emissions. The hours in Tables 3 and 4 of PAR 1147 are based on the emission

factors referenced by the commenter but are slightly less than the hours from those calculations. The emission factor referenced is an average and some equipment will have higher emissions. The tables also include a safety factor so that equipment owners know when they should consider using another more accurate method to document emissions of less than one pound per day.

Response 1-17

This issues raised in this comment are addressed in Response 1-16.

Response 1-18

This issues raised in this comment are addressed in Response 1-16.

Response 1-19

This issues raised in this comment are addressed in Response 1-16.

Response 1-20

The paragraph in PAR 1147 that is referenced by the commenter is incorrect. However, consistent with other changes in PAR 1147 for incineration type devices, PAR 1147 no longer identifies dual purpose burners as a two-function device with a different emission limit when performing emission testing. This change to PAR 1147 address the recommendations in Comments 1-20 through 1-22.

Response 1-21

The paragraph in PAR 1147 that is referenced by the commenter is incorrect. However, consistent with other changes in PAR 1147 for incineration type devices, PAR 1147 no longer identifies dual purpose burners as a two-function device with a different emission limit when performing emission testing. This change to PAR 1147 address the recommendations in Comments 1-20 through 1-22.

Response 1-22

The paragraph in PAR 1147 that is referenced by the commenter is incorrect. However, consistent with other changes in PAR 1147 for incineration type devices, PAR 1147 no longer identifies dual purpose burners as a two-function device with a different emission limit when performing emission testing. This change to PAR 1147 address the recommendations in Comments 1-20 through 1-22.

Response 1-23

Paragraph (f)(1) of PAR 1147 identifies documents that must be made available to the SCAQMD in order to determine if a modification is a repair, a change in burner output, or a burner replacement. Rule 1147 requires maintenance records to be kept by the owner at the facility location.

Response 1-24

Contrary to the comment, there is no age requirement in paragraph (f)(4) of PAR 1147. See Response 1-10 for a discussion on the age requirement that is contained in PAR 1147.

Response to Comment Letter #2

Response 2-1

Thank you for your comment. The issues raised in this comment letter repeat the sentiments expressed in Comment Letter #1. Please refer to Responses 1-1 through 1-24.