SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Final Program Environmental Assessment for:

Proposed Amended Rule 1309.1 - Priority Reserve and
Re-Adoption of Rule 1315 – Federal New Source Review Tracking System

July 10, 2007

SCAQMD No. 070516MK

Author:	Michael A. Krause	Air Quality Specialist
Technical Assistance:	Shams Hasan	Air Quality Specialist
	James Koizumi	Air Quality Specialist
Reviewed by:	Steve Smith, Ph.D.	Program Supervisor
	Larry Bowen	Planning and Rules Manager
	Robert Pease	Air Quality Analysis and Compliance Supervisor
	Barbara Baird	Principal Deputy District Counsel
	William Wong	Senior Deputy District Counsel

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

GOVERNING BOARD

Chairman: WILLIAM A. BURKE, Ed.D.
Speaker of the Assembly Appointee

Vice Chairman: S. ROY WILSON, Ed.D.
Supervisor, Fourth District
Riverside County Representative

MEMBERS:

MICHAEL D. ANTONOVICH
Supervisor, Fifth District
Los Angeles County Representative

BILL CAMPBELL
Supervisor, Third District
Orange County Representative

JANE CARNEY
Senate Rules Committee Appointee

RONALD O. LOVERIDGE
Mayor, City of Riverside
Cities Representative, Riverside County

GARY OVITT
Supervisor, Fourth District
San Bernardino County Representative

JAN PERRY
Councilmember, Ninth District
Cities Representative, Los Angeles County, Western Region

MIGUEL A. PULIDO
Mayor, City of Santa Ana
Cities Representative, Orange County

TONIA REYES-URANGA
Councilmember, City of Long Beach
Cities Representative, Los Angeles County, Eastern Region

DENNIS YATES
Mayor, City of Chino
Cities Representative, San Bernardino County

VACANT
Governor's Appointee

EXECUTIVE OFFICER:

BARRY R. WALLERSTEIN, D.Env.

PREFACE

The Draft Program Environmental Assessment (PEA) for the Proposed Amended Rule 1309.1 - Priority Reserve and the proposed Re-adoption of Rule 1315 – Federal New Source Review Tracking System, was circulated for a 45-day public review and comment period from May 16, 2007 to June 29, 2007. Eight public comment letters were received and responses to the comments are included in Appendix E of the Final PEA. Minor modifications were made to the Draft PEA based on comments received on the proposed project and the Draft PEA, so it is now a Final PEA. Deletions and additions to the text of the PEA are denoted using ~~strikethrough~~ and underlined, respectively. Changes to the project description are minor, with no affect on impacts analyzed in the document or considered within the scope of the proposed project analysis or one of the alternatives analyzed, and do not change any conclusions made in the Draft PEA or substantially worsen any environmental impacts analyzed in the Draft PEA. Therefore, pursuant to CEQA Guidelines §15088.5, recirculation is not necessary since the information provided does not constitute significant new information that will result in new avoidable significant effects or make existing significant impacts worse.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

EXECUTIVE SUMMARY

INTRODUCTION

As part of the strategy to achieve all ambient air quality standards, federal and state laws require the development and implementation of air quality permitting programs, commonly known as New Source Review (NSR) programs. Local NSR programs must, at a minimum, comply with the following general requirements: (1) pre-construction review; (2) the installation of best available control technology (BACT); and, (3) the offsetting of emission increases by providing emission reductions or purchasing emission reductions credits (ERCs). To help implement the third NSR requirement, the South Coast Air Quality Management District (SCAQMD) Governing Board approved amendments to Rule 1309.1 on September 8, 2006, allowing electric generating facilities (EGF) temporary access to the Priority Reserve providing EGFs ERCs that were in short supply. The intent of these amendments was to enable the EGFs to provide electricity to minimize the possibility of rolling blackouts, thus, reducing the use of diesel-fired electric power generation. These amendments were approved relying upon a statutory exemption from CEQA pertaining to actions relating to thermal power plants. After adoption by the Board, a number of environmental groups and communities filed a lawsuit challenging the use of the exemption. The SCAQMD moved to dismiss that portion of the lawsuit challenging the use of the exemption. The Superior Court ruled against the SCAQMD on the dismissal request, but has not provided a final ruling with regards to the use of the CEQA exemption. Depending on the final outcome, the September 2006 Rule 1309.1 amendments could be overturned. To minimize potential delays in accessing the Priority Reserve by EGF operators, this program environmental assessment is being prepared to address the concerns previously raised by analyzing the currently proposed amendments, which replace the previously adopted amendments, as well as consider other potential future amendments to add eligible projects and conditions for eligibility not considered by the Board in September 2006.

As stated to the Governing Board in September, the primary reason for the proposed amendments is to address future projected shortages of electric generating capacity in the district that could begin as early as the summer of 2007. To address future projected shortfalls in electric energy generating capacity, it is necessary to build additional EGFs. To build new EGFs operators are subject to NSR offset requirements. However, there is a limited supply of particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM10) and sulfur oxides (SOx) ERC offsets available in the open market at this time. Because electric power is critical for residences, businesses, maintaining essential public services and for the operation of clean air technologies, the SCAQMD is proposing to make ERCs available to EGF operators by allowing them access to available ERCs in the Rule 1309.1 Priority Reserve accounts.

To address potential shortfalls in the availability of ERCs on the open market, the SCAQMD is proposing a program of current and future amendments to Rule 1309.1 that would allow limited access to the SCAQMD's Rule 1309.1 Priority Reserve accounts. The currently proposed amendments to Rule 1309.1 would re-evaluate the amendments to Rule 1309.1 that were adopted in September 2006, as modified to address concerns raised by the Governing Board at that time. The currently proposed amendments to Rule 1309.1 will provide access to the SCAQMD's Priority Reserve PM10, SOx and carbon monoxide (CO)[1] accounts for new EGFs for applications deemed complete between 2005 and 2008, provided they have met all other requirements and paid the appropriate mitigation fees as stipulated in the proposed amendments.

Pursuant to the currently proposed amendments, the district would be subdivided into three zones based on average PM2.5 concentration observed for years 2003 through 2005, which would be used to define the criteria or requirements for eligibility to access the Priority Reserve and to determine the amount of the mitigation fee for the Priority Reserve credits. The location of the EGF and amount of megawatt (MW) power generation will determine the stringency of the requirements, including level of allowable NOx and PM10 emissions, cancer risk, non-cancer risk and cancer burden, as well as the amount of mitigation fee. EGF operators seeking access to the Priority Reserve would also be subject to environmental justice criteria that would affect siting in those areas already disproportionately impacted by existing pollution sources. Maps of the zones and the "environmental justice areas" (EJA) in the district can be found in PAR 1309.1 in Appendix A. All eligible EGFs will be required to investigate and document the availability of renewable energy plans as an alternative to the project.

Proposed amended Rule (PAR) 1309.1 would also allow EGF projects downwind to the district in non-attainment areas to access SCAQMD's Priority Reserve volatile organic compound (VOC) account provided the ERCs withdrawn do not cumulatively exceed 5,000 pounds per day, an appropriate mitigation fee is paid, and the request is received before January 1, 2009.

The program currently under consideration would allow access to the Rule 1309.1 for certain projects and includes the following components to be considered as future amendments to Rule 1309.1. Energy projects of regional significance (EPRS) to enhance the import of natural gas or crude oil may also be given access to the SCAQMD's Priority Reserve PM10, SOx and CO accounts provided they have met all other requirements and paid the appropriate mitigation fees. Also considered part

[1] On May 11, 2007, U.S. EPA published in the Federal Register its final decision to approve the SCAQMD's request to re-designate the South Coast district from non-attainment to attainment as of June 11, 2007. This means that after June 11, 2007, CO ERC offsets ~~will~~ may no longer be required. Until such time as the CO ERC requirement is specifically removed from PAR 1309.1, this PEA will continue to include an analysis of potential adverse impacts from their use.

of the program under consideration is a future amendment to add publicly owned biosolids treatment/processing facilities to the existing definition of an essential public service, thus, allowing permanent access to the Priority Reserve without payment of a mitigation fee. However, only the amendments related to EGFs are included in the current rule amendment proposal. The remainder of the projects covered by this PEA will be brought forth at a later date.

The proposed project also includes the proposed re-adoption of Rule (PRR) 1315 whose purpose is to specify procedures to be followed by the Executive Officer to make annual demonstrations of equivalency to verify that specific provisions in the SCAQMD's NSR program related to sources that are either exempt from offsets or which obtain their offsets from the SCAQMD's offset accounts and meet in aggregate the federal nonattainment NSR offset requirements. The procedures specified in this rule are used by the Executive Officer to demonstrate that the sources which are subject to the federal NSR emission offset requirem—ents and which obtain emission credits through allocations from Rule 1309.1 – Priority Reserve, Rule 1309.2 – Offset Budget. or which utilize the emission offset exemptions contained in Rule 1304 –Exemptions, are fully offset by valid emission reduction credits.

Pursuant to the California Environmental Quality Act (CEQA) (California Public Resources Code §21000 et seq.), this document includes an analysis of the potential adverse environmental impacts from implementing PAR 1309.1 and PRR 1315. Based upon a preliminary evaluation in the Initial Study prepared for the proposed amendments, air quality has been identified as the only environmental topic having the potential to be directly adversely affected by the proposed amendments. The direct potential adverse air quality impacts from the proposed amendments could be significant because credits that would not otherwise be used will now be used to meet a facility's offset requirements pursuant to Rules 1303 and 2005. Due to the lack of certainty that the mitigation fee will fully replenish credit accounts, credits are expected to be used in amounts that exceed the SCAQMD's PM10, SOx, CO and VOC daily operational significance thresholds. Further, publicly owned biosolids processing facilities that were not currently allowed acces to the Priority Reserve, would qualify for permanent access to the Priority Reserve and would not be subject to mitigation fee requirements.

Opponents to PAR 1309.1 have argued that allowing access to the Priority Reserve is a critical step in obtaining an approval to site a project. There are potential adverse environmental impacts from siting a project, such as construction and operational impacts, so operators of affected facilities expected to take advantage of accessing the Priority Reserve would more likely receive approval to be sited and, thus, could potentially generate these impacts. These environmental impacts will be fully evaluated and disclosed in a separate CEQA document by the lead agency in charge

of siting the project (i.e., California Energy Commission, etc.). The SCAQMD has conducted a survey of available information on potential construction and operational impacts from facilities included in PAR 1309.1, such as EGFs, and facilities that could be included in future amendments to Rules 1309.1 and/or 1302, such as EPRSs and publicly owned biosolids treatment facilities. To the extent information was available on affected facilities, potential adverse indirect impacts from siting, constructing and operating these facilities have been identified as indirect impacts in this Draft PEA for all environmental topic areas where potential significant adverse indirect impacts have been identified in publicly available documents or sources. This indirect impacts analysis can be found in Chapter 5.

LEGISLATIVE AUTHORITY

The California Legislature created the SCAQMD in 1977[2] as the agency responsible for developing and enforcing air pollution control rules and regulations in the South Coast Air Basin (Basin) and portions of the Salton Sea Air Basin and Mojave Desert Air Basin, referred hereafter as the district. By statute, the SCAQMD is required to adopt an air quality management plan (AQMP) demonstrating compliance with all federal and state ambient air quality standards for the district[3]. Furthermore, the SCAQMD must adopt rules and regulations that carry out the AQMP[4]. The 2003 and 2007 AQMPs concluded that major reductions in emissions of VOC and oxides of nitrogen (NOx) are necessary to attain the air quality standards for ozone and PM10. As part of the strategy to achieve ambient air quality standards, federal and state laws require the development and implementation of air quality permitting programs, commonly known as NSR programs. Local NSR programs must, at a minimum, comply with the requirements established pursuant to federal and state law. The general requirements of NSR programs include: (1) pre-construction review; (2) installing best available control technology (BACT); and (3) mitigating emission increases by providing emission offsets.

PAR 1309.1 will assist facility operators of EGFs and essential energy projects to comply with the NSR emissions offset requirement. PAR 1309.1 is expected to facilitate permitting of EGFs which will avoid rolling blackouts and also avoid increased use of diesel generators, which could hinder the district's progress in attaining the state and national ambient air quality standards mandated under state and federal law. PRR 1315 would establish a reliable tracking system to ensure that ERCs used as emission offsets are valid emission credits.

[2] The Lewis-Presley Air Quality Management Act, 1976 Cal. Stats., ch 324 (codified at Health & Safety Code, §§40400-40540).
[3] Health & Safety Code, §40460 (a).
[4] Health & Safety Code, §40440 (a).

CALIFORNIA ENVIRONMENTAL QUALITY ACT

The proposed amendments to Rule 1309.1 and readoption of Rule 1315 are a "project" as defined by CEQA (Cal. Public Resources Code §21000, et.seq.). SCAQMD is the lead agency for the proposed project and has prepared appropriate environmental analysis pursuant to its certified regulatory program (SCAQMD Rule 110). California Public Resources Code §21080.5 allows public agencies with regulatory programs to prepare a plan or other written document in lieu of an environmental impact report once the Secretary of the Resources Agency has certified the regulatory program. The SCAQMD's regulatory program was certified by the Secretary of the Resources Agency on March 1, 1989, and is codified as SCAQMD Rule 110.

CEQA includes provisions for program CEQA documents in connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, including adoptions of broad policy programs (CEQA Guidelines §15168) as distinguished from those prepared for specific types of projects (e.g., land use projects). The environmental assessment (EA) for the proposed project is a Program EA (PEA) because it examines the environmental effects of current and future proposed rule amendments intended to be promulgated as part of a continuing ongoing regulatory program.

A program CEQA document allows consideration of broad policy alternatives and program-wide mitigation measures at a time when an agency has greater flexibility to deal with basic problems of cumulative impacts. A program CEQA document also plays an important role in establishing a structure within which CEQA reviews of future related actions can effectively be conducted. This concept of covering broad policies in a program CEQA document and incorporating the information contained therein by reference into subsequent CEQA documents for specific projects is known as "tiering" (CEQA Guidelines §15152). A program CEQA document will provide the basis for future environmental analyses and will allow future project-specific CEQA documents, if necessary, to focus solely on the new effects or detailed environmental issues not previously considered. If an agency finds that no new effects could occur, or no new mitigation measures would be required, the agency can approve the activity as being within the scope of the project covered by the program CEQA document and no new environmental document would be required (CEQA Guidelines §15168(c)[2]).

The degree of specificity required in a CEQA document corresponds to the degree of specificity involved in the underlying activity described in the CEQA document (CEQA Guidelines §15146). A CEQA document on a construction project will necessarily be more detailed in specific effects of the project than will be a CEQA document on the adoption of a local general plan…because the effect of a

construction project can be predicted with greater accuracy (CEQA Guidelines §15146(a)). Because the level of information regarding some potential impacts related to the siting and consideration of future projects is relatively general at this time, the environmental impact forecasts of cumulative impacts from these projects are also general or qualitative in nature. In certain instances, such as future construction and operation of affected facilities, impacts are quantified or modeled to the degree feasible.

CEQA requires that the potential environmental impacts of proposed projects be evaluated and that feasible methods to reduce or avoid significant adverse environmental impacts of these projects be identified. To fulfill the purpose and intent of CEQA, the SCAQMD has prepared this PEA to address the potential environmental impacts associated a broad policy program that includes PAR 1309.1 and PRR 1315, as well as potential future amendments to Rule 1309.1. This Draft PEA is intended to: (a) provide the lead agency, responsible agencies, decision makers and the general public with detailed information on the environmental effects of the proposed project; and, (b) to be used as a tool by decision makers to facilitate decision making on the proposed project.

Appendix B includes a Notice of Preparation/Initial Study (NOP/IS) which identifies environmental topics to be analyzed in this document. The NOP/IS was distributed to responsible agencies and interested parties for a 30-day review and comment period from March 23, 2007 to April 24, 2007. The NOP/IS indicated that significant adverse direct air quality impacts may be generated by implementing PAR 1309.1 and PRR 1315. During that public comment period the SCAQMD received seven comment letters regarding the proposed rule amendments. Responses to the comment letters on the NOP/IS can be found in Appendix C of this Draft PEA.

All comments received during the public comment period on the analysis presented in the Draft PEA will be responded to and included in the Final PEA. Prior to making a decision on the proposed amendments, the SCAQMD Governing Board must review and certify the PEA as providing adequate information on the potential adverse environmental impacts of the amended rule.

CEQA DOCUMENTATION FOR PAR 1309.1 - PRIORITY RESERVE AND PRR 1315 - FEDERAL NEW SOURCE REVIEW TRACKING SYSTEM

This PEA is a comprehensive environmental document that analyzes the environmental impacts from the currently proposed and potential future amendments to Rule 1309.1 and PRR 1315. 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, lack of progress in advancing the effectiveness of control technologies to comply with requirements in technology forcing rules,

etc.). The other document which comprises the CEQA record for the currently proposed amendments to Rule 1309.1, includes the Notice of Preparation/Initial Study (March 23, 2007) in Appendix B. A summary of the contents of this document is given in the following paragraph.

Notice of Preparation/Initial Study of a Program Environmental Assessment for the Proposed Amendments to Rule 1309.1, March 23, 2007 (SCAQMD No. 070323MK): The NOP/IS of a PEA for the PAR 1309.1 was released for a 30-day public review period from March 23, 2007 to April 24, 2007. The NOP was released with an Initial Study, which contained a brief project description and the environmental checklist, as required by state CEQA Guidelines. The environmental checklist contained a preliminary analysis of potential adverse environmental effects that may result from implementing the proposed amendments. Seven comment letters on the NOP/IS were received. The seven comment letters received on the NOP/IS and the responses to the comments are included in Appendix C of this Draft PEA.

Other CEQA Documents for Rule 1309.1

Several previous environmental analyses have been prepared to analyze past amendments to Rule 1309.1 to temporarily expand access to the Priority Reserve and are listed in the following paragraphs. The following summaries of previous CEQA documents are included for informational purposes only. The current EA focuses on the currently proposed amendments to Rule 1309.1 and does not rely on these previously prepared CEQA documents. Pursuant to CEQA Guidelines §15130, potential cumulative impacts from these earlier projects are considered if the incremental effect is cumulatively considerable. These documents can still be obtained by contacting the SCAQMD's Public Information Center at (909) 396-2039.

Notice of Exemption for Proposed Amended Rule 1309.1, September 2006: The proposed amendments to Rule 1309.1 provided temporary access to the SCAQMD's Priority Reserve PM10, SOx and CO accounts for new thermal EGFs, subject to the California Energy Commission (CEC) environmental review process, with applications deemed complete between 2005 and 2008, provided they pay the appropriate mitigation fee and meet all the other rule requirements. Further, the same type of EGF projects, subject to the CEC environmental review process, downwind to the district in non-attainment areas would be able to access SCAQMD's Priority Reserve VOC account. Under §21080(b)(6), the State Legislature directed that actions undertaken by a public agency relating to any thermal power plant facility that will be the subject of an environmental impact report, negative declaration, or other document prepared pursuant to Public Resources Code §21080.5, by either the State Energy Resources Conservation and Development Commission, the CEC, the Public Utilities Commission or by the city or county in which the power plant and

related facility would be located are not subject to CEQA if the CEQA document includes the environmental impacts, if any, of the actions described in §21080(b)(6). The proposed project, which will allow thermal power plant facilities subject to environmental review by the CEC, to purchase otherwise unavailable emission offsets, was, therefore, deemed exempt.

Addendum to the November 2001 Final Environmental Assessment for Rule 1309.1– Priority Reserve, April 17, 2002 (SCAQMD No. 020417MK): The Addendum analyzed the environmental impacts associated with adding an additional category to those projects approved to draw emission credits from the Priority Reserve. A specific applicant requested inclusion in the rule's definition of an EGF. The project applicant planned to install and operate a 48 megawatt gas turbine to provide electricity for its oil production and subsidence control activities in the Wilmington Oil Field located under the City of Long Beach. The analysis showed that no additional adverse environmental impacts were anticipated due to the inclusion of this category of facility into the definition of an EGF because this applicant was already assumed to be a facility that would access credits from the Priority Reserve as part of the prior CEQA analysis for this rule and, therefore, no additional credits were funded into the Priority Reserve. The addendum was certified at the May 3, 2002, Governing Board public hearing.

Final Environmental Assessment (EA) for Proposed Rule 1309.1 - Priority Reserve, October 4, 2001 (SCAQMD No. 010809MK): The Draft EA was released for a 45-day public review and comment period from August 9, 2001, to September 24, 2001. The Draft EA analyzed potential adverse environmental impacts from providing temporary access to the SCAQMD's Rule 1309.1 Priority Reserve SOx and CO accounts for new EGFs with applications deemed complete between 2000 and 2003, provided they met all other relevant SCAQMD requirements and paid the appropriate mitigation fee. PAR 1309.1 provided increased funding of SOx and CO credits into the Priority Reserve for use exclusively by EGFs and expanded the definition of an EGF to include any facility that generates electricity for its own use and is less than 10 megawatts. The use of SOx and CO credits by EGFs was limited to the amount transferred and exclusively reserved for EGFs. In addition, the PAR 1309.1 gave the SCAQMD Executive Officer discretion to fund the PM10 Priority Reserve account up to an additional 1500 pounds per day if the PM10 account balance fell below 500 pounds per day. Due to this increased funding of criteria pollutant credits into the Priority Reserve resulting in the use of credits that would not otherwise be used and the lack of certainty that the mitigation fee will fully replenish the credit accounts, the analysis concluded that adverse air quality impacts would be significant. No comment letters on the Draft EA were received and the Final EA was completed and available to the public prior to the November 9, 2001 public hearing.

Final Environmental Assessment (EA) for Proposed Rules 1303 - Requirements, 2005 - NSR for RECLAIM and 1309.1 - Priority Reserve, April 9, 2001 (SCAQMD No. 010214MK): The Draft EA was released for a 30-day public review and comment period from February 14, 2001 to March 15, 2001. The Draft EA analyzed potential adverse environmental impacts from providing temporary access to the SCAQMD's Priority Reserve PM10 account for new EGFs with applications deemed complete between 2000 and 2003, provided they met all other requirements and paid the appropriate mitigation fee. These credits are valid for the life of the equipment. Because the Priority Reserve account was derived from past PM10 emission reductions and the required mitigation fee was intended to fund identified emission reduction programs, the adverse air quality impact was not significant. The Final EA contained five comment letters received from the public on the Draft EA and responses to those comments. The Final EA for the proposed amendments to Rule 1309.1 was completed and available to the public prior to the April 20, 2001 public hearing for proposed amended Rule 1309.1.

Final Subsequent Environmental Assessment for Proposed Amended Regulation XIII - New Source Review and Rule 212 - Standards for Approving Permits, November 1, 1995 (SCAQMD No. 950823JN): The amendments eliminated the Community Bank from Rule 1309.1 and replaced it with an offset exemption for new or modified facilities with emissions less than four tons per year. The emission offset requirement would be provided from SCAQMD ERC accounts. The Draft SEA was circulated for a 45-day public comment and review period from August 23, 1995 to October 11, 1995. Three comment letters on the Draft SEA were received, responded to and included in the Final SEA. The Final SEA for the proposed amendments to Rule 1309.1 was completed and available to the public prior to the December 7, 1995 public hearing for proposed amended Regulation XIII.

Environmental Assessment for Proposed Rule 1309.1 - Priority Reserve, May 3, 1991: These amendments provided quarterly allocations into the Priority Reserve and provided conditions for usage of the Priority Reserve, such as first requiring the use of any emission reduction credits (ERCs) held by a subject facility before accessing the Priority Reserve. The evaluation of the proposed project concluded that potential environmental impacts were within the scope of the environmental analysis in the Final EA for Proposed Amendments to Regulation XIII - New Source Review (SCAQMD No. 900502SS), originally certified June 28, 1990. Therefore, pursuant to CEQA Guidelines §15153 the SCAQMD used the previously prepared Final EA as the CEQA document for the May 3, 1991 amendments to Rule 1309.1.

Final Environmental Assessment for Proposed Amendments to Regulation XIII - New Source Review, June 1990 (SCAQMD No. 900502SS): The amendments included establishing a Community Bank and Priority Reserve to provide ERCs for low-emission sources, such as small businesses and essential public services,

respectively. The analysis concluded that the environmental impacts from the creation of a Priority Reserve, as well as the amendments to other parts of Regulation XIII, were either not significant or could be mitigated to an insignificant level. The Draft EA was circulated for public review and comment from May 9, 1990 to June 15, 1990. The Final EA for the proposed amendments to Rule 1309.1 was completed and available to the public prior to the June 28, 1990 public hearing for proposed amendments to Regulation XIII - New Source Review.

Other CEQA Document for Rule 1315

Notice of Exemption for Proposed Rule 1315, September 2006: The purpose of the rule is to memorialize and formalize the accounting procedures used by SCAQMD for federal NSR offset tracking. Rule 1315 did not, directly or indirectly, result in any adverse effect on the environment. It does not in itself result in any more credits becoming available for use by projects, which may themselves have an effect on the environment. In addition to formalizing the federal NSR offsets tracking, Rule 1315 makes the NSR offsets program more stringent by providing backstop measures, as requested by EPA, in case there are any shortfalls in SCAQMD's federal NSR offset accounts. Rule 1315 may actually provide a benefit to the environment, although that effect is not foreseeable because it is unknown how many credits will be used and because the District has never experienced a shortfall in credits, so a future shortfall is not foreseeable. Thus, it can be seen with certainty that there would be no adverse environmental impacts from Rule 1315.

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 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 PEA 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 EA in their decision-making;
2. A list of permits and other approvals required to implement the project; and

3. A list of related environmental review and consultation requirements required by federal, state, or local laws, regulations, or policies.

To the extent that local public agencies, such as cities, county planning commissions, etc., are responsible for making land use and planning decisions related to projects that must comply with the PAR 1309.1, they could possibly rely on this PEA during their decision-making process. Similarly, other single purpose public agencies approving projects at facilities complying with PAR 1309.1 may rely on this PEA.

AREAS OF CONTROVERSY

In accordance with CEQA Guidelines §15123(b)(2), the areas of controversy known to the lead agency including issues raised by agencies and the public shall be identified in the CEQA docuement. Table 1-1 highlights the areas of controversy raised by the public during the rule development process either in public meetings or in written comments.

TABLE 1-1

Areas of Controversy

	Area of Controversy	Topics Raised by Public	SCAQMD Evaluation
1.	Restricting access to the Priority Reserve to EGFs above a certain MW power generation	Restriction would jeopardize some projects or could cause installation of simple-cycle turbines which are less efficient (lbs/MW).	PAR 1309.1 has been revised to address the concern regarding the restriction of access to the Priority Reserve based on MW power generation. The currently proposed amendments do not limit access because of the level of MW power generation, but does impose more stringent requirements depending upon MW capacity.
2.	Potential environmental impacts from PRR 1315	Minor orphan shutdown credits and difference in offset ratios from PRR 1315 will generate potential environmental impacts.	As discussed in detail in the "Introduction" of Chapter 4, the SCAQMD believes there are no significant adverse environmental impacts generated by the implementation of PRR 1315 because it merely formalizes an accounting procedure used by SCAQMD for federal NSR offset tracking that does not directly or indirectly, result in any adverse effect on the environment. It does not in itself result in any more credits becoming available for use by projects, which may themselves have an effect on the environment. The potential impacts from minor orphan shutdown credits and difference in offset ratios are addressed in the air quality impacts section of Chapter 4.
3.	Extending the time to access the Priority Reserve	Allow EGFs more years to access the Priority Reserve	There are a limited number of Priority Reserve credits available. The proposed amendments allowing affected facilities access to the Priority Reserve and the time limitation on the permit submittal are to promote their construction and operation as quickly as possible in order to mitigate potential anticipated energy shortages in the near future.

TABLE 1-1 (CONCLUDED)

Areas of Controversy

	Area of Controversy	Topics Raised by Public	SCAQMD Evaluation
4.	Due diligence requirements	Eliminate burdensome due diligence requirements	Affected facilities are required to demonstrate that they have conducted a due diligence by the earliest date practicable. This is necessary to ensure the priority reserve is a "bank of last resort." This does not preclude facilities from continuing to seek out a more cost-effective source of offsets up until the time the offsets for the project must be in place; however, due to the potentially limited supply of offsets from the Priority Reserve and to maintain equity, the offsets are made available on a first come first serve basis. It is staff's understanding that the California Energy Commission (CEC) which licenses all power projects greater than 50 megawatts and requires that the anticipated source of credits be identified but that there is no requirement to have the credits on hand at the time an application is filed.
5.	Construction deadline	Extend deadline to complete construction from current three-year requirement to five years	There are a limited number of Priority Reserve offset credits available. The goal of the proposed amendments allowing affected facilities access to the Priority Reserve for offsets is to expedite the construction and operation of new power generation projects as quickly as possible in order to mitigate potential shortages of power in the near future. The three-year term in PAR 1309.1 is intended to promote new generation to come on line at the soonest possible date. The three-year term does not commence by the initial permit application date but rather from the issuance of a Permit to Construct or an initial CEC certification, whichever is later. Furthermore, the applicant can seek an extension from the Executive Officer beyond the initial three-year period, subject to Rule 205.
6.	Penalty fee	Limit the penalty to one million dollars.	The non-refundable fee is necessary to provide an incentive for legitimate power projects and to recover the administrative costs incurred by the SCAQMD, including recovering funding for clean air projects approved and funded with mitigation fees. The suggested limit amount may not be sufficient to recover a significant portion of the clean air project cost for a typical EGF project.
7.	Returning offsets	Allow the return and refund of offsets if source tests later determine the actual emissions are less than originally estimated.	Potential commitment of mitigation fees to projects would not make a sell back of surplus credits feasible. Furthermore, permits are issued for the potential to emit as opposed to actual equipment/facility emissions. It is always anticipated that there is a compliance margin between permitted and actual emissions.

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. This Draft PEA 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 – Potential Indirect Environmental Impacts; Chapter 6 - Project Alternatives and various appendices. The following subsections briefly summarize the contents of each chapter.

Summary of Chapter 1 – Executive Summary

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

Summary of Chapter 2 - Project Description

PAR 1309.1

An EGF is a facility that generates electricity for its own use and is less than 10 MW; or is a facility less than 50 MW that generates not less than 30 percent of its electricity to pump water to maintain the integrity of the surface elevation of a municipality or significant portion thereof; or is a thermal power plant less than 50 MW that generates electricity during peak demand periods and operates less than 3000 hours per year; or is a thermal power plant facility that generates 50 MW or greater electricity for distribution in the state or municipality owned grid system (net generator).

PAR 1309.1 that would allow EGFs temporary access to the SCAQMD's Priority Reserve PM10, SOx and CO accounts provided they meet specific criteria, such as new applications must be deemed complete between 2005 through 2008, and applicants must pay the appropriate mitigation fees (either Option 1 or Option 2, depending on the proposal adopted by the Governing Board)[5]. These fees will be used to fund future clean air projects and PM10 emission reduction programs, such as installing particulate matter traps on diesel engines to create surplus PM10 emission reductions.

PAR 1309.1 includes a provision that would subdivide the district into three zones based on average PM2.5 concentration observed for years 2003 through 2005. These

[5] Throughout the remainder of this document, the reference to mitigation fees refers to either Option 1 or Option 2, as the SCAQMD Governing Board will make the final decision on which option it will adopt at the Public Hearing currently scheduled for July 13, 2007.

zones correspond to health-based exposure levels classifying Zone 1 as an area with PM2.5 concentration of less than 18 micrograms per cubic meter ($\mu g/m^3$), Zone 2 with a PM2.5 concentration of 18 to 20 $\mu g/m^3$, and Zone 3 with a PM2.5 concentration greater than 20 $\mu g/m^3$. The zones are used to define the criteria for eligibility to access the Priority Reserve and/or to determine the amount of the mitigation fee for the Priority Reserve credits. EGFs will also be subject to environmental justice area (EJA) criteria to determine those areas already disproportionately impacted by existing pollution sources.

The zone/EJA location of the EGF and amount of MW power generation will determine the stringency of the requirements, including level of allowable NOx and PM10 emissions, cancer risk, non-cancer risk and cancer burden, as well as the amount of mitigation fee.

PAR 1309.1 also includes a provision that would allow EGFs in areas outside and downwind of the district, e.g., the Mojave and Antelope Valleys, to request access to the VOC account of the Priority Reserve as long as withdrawal requests are received by January 1, 2009. The total request cannot exceed 5,000 pounds of VOC per day and a mitigation fee will be charged. A detailed version of PAR 1309.1 can be found in Appendix A of this document.

PRR 1315

PRR 1315 specifies procedures to be followed by the Executive Officer to make annual demonstrations of equivalency to verify that specific provisions in the SCAQMD's NSR program related to sources that are either exempt from offsets or which obtain their offsets from the SCAQMD's offset accounts meet in aggregate the federal nonattainment NSR offset requirements. The procedures specified in this rule are used by the Executive Officer to demonstrate that the sources which are subject to the federal NSR emission offset requirements and which obtain emission credits through allocations from Rule 1309.1 – Priority Reserve, Rule 1309.2 – Offset Budget, or which utilize the emission offset exemptions contained in Rule 1304 – Exemptions, are fully offset by valid emission credits. A detailed version of PRR 1315 can be found in Appendix A of this document.

Summary of Chapter 3 - Existing Setting

Pursuant to the CEQA Guidelines §15125, Chapter 3 – Existing Setting, includes descriptions of those environmental areas that could be adversely affected by PAR 1309.1 as identified in the initial study (Appendix A). The following subsection briefly highlights the existing setting for air quality, which was the only environmental area identified that could potentially be adversely directly affected by implementing PAR 1309.1.

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 National Ambient Air Quality Standards (NAAQS) established for six criteria pollutants (ozone, lead, sulfur dioxide, nitrogen dioxide, carbon monoxide and PM10), the area within the SCAQMD's jurisdiction is only in attainment with sulfur dioxide, nitrogen dioxide and lead standards. However, on May 11, 2007, U.S. EPA published in the Federal Registrar its final decision to approve the SCAQMD's request for re-designation from non-attainment to attainment for CO, effective June 11, 2007. 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 and Mitigation Measures

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

The following subsection briefly summarizes the analysis of potential direct adverse environmental impacts from the adoption and implementation of PAR 1309.1.

Air Quality

The potential adverse air quality impact from the proposed amendments could be significant because credits that would not otherwise be used will now be used to meet a facility's offset requirements pursuant to Rules 1303 and 2005. Due to the lack of certainty that the mitigation fee will fully replenish credit accounts, credits are expected to be used in amounts that exceed the SCAQMD's PM10, SOx, CO and VOC daily operational significance thresholds. Further, biosolids processing facilities would qualify for permanent access to the Priority Reserve which they were not previously allowed to access and would not be subject to mitigation fee requirements.

TABLE 1-2

Environmental Impacts from Proposed Project and Mitigation

ENVIRONMENTAL TOPIC	PROPOSED PROJECT	MITIGATION
Air Quality Criteria Pollutants	Significant due to use of credits that would not otherwise be used and in amounts exceeding SCAQMD significance thresholds, and lack of certainty to equally replenish the account for the amount withdrawn	Pay appropriate mitigation fee for each pound per day obtained from Priority Reserve

Since there is an increased amount of available credits in the Priority Reserve, above the allocations originally established by the rule, and there lacks certainty to equally replenish the account for the amount withdrawn or replenish below the air quality significance thresholds, the proposed project may result in significant adverse air quality impacts.

Potential Direct Environmental Impacts Found Not To Be Significant

The Initial Study for PAR 1309.1 includes an environmental checklist of approximately 17 environmental topics to be evaluated for potential adverse impacts from a proposed project. Review of the proposed project at the NOP/IS stage identified one topic, air quality, for further review in the Draft PEA. Where the Initial Study concluded that the project would have no significant direct adverse effects on the remaining environmental topics, no comments were received on the NOP/IS or at the public meetings that changed this conclusion. The screening analysis concluded that the following environmental areas would not be significantly adversely directly affected by PAR 1309.1:

- aesthetics
- agriculture resources
- biological resources
- cultural resources
- energy
- geology/soils
- hazards and hazardous materials
- hydrology and water quality
- land use and planning
- mineral resources
- noise

- population and housing
- public services
- recreation
- solid/hazardous waste
- transportation/traffic

Other CEQA Topics

CEQA requires EAs to address the potential for irreversible environmental changes, growth-inducing impacts and inconsistencies with regional plans. Due to the significant adverse air quality impacts, the proposed project would result in irreversible environmental changes but because of the current energy crisis, which is the reason for the proposed rule amendments, the proposed project will not be growth-inducing.

Summary of Chapter 5 – Potential Indirect Environmental Impacts

Chapter 5 addresses comments previously receive by opponents of amending Rule 1309.1 that the SCAQMD should evaluate the indirect effects of operating and constructing facilities seeking access to credits in the Priority Reserve. To respond to these comments, the SCAQMD has performed a literature search for the CEQA documents for the known EGFs that are the subject of the currently proposed amendments and for EPRS and publicly-owned biosolids treatment facilities projects that may be the subject of future proposed amendments. SCAQMD staff has summarized the impacts, mitigation measures and conclusions from these projects (see also Appendix D). In addition, because of the increasing attention directed towards global climate change and GHGs, Chapter 5 also includes an analysis of GHG emissions primarily from EGFs because the environmental documents being relied upon for the analysis of indirect impacts summarized in this chapter and Appendix D, either do not evaluate GHG emissions or qualitatively address them. Finally, Chapter 5 includes and evaluation of indirect health effects.

The following subsections briefly summarize the available information on potential indirect environmental impacts from the facilities or types of facilities expected to seek credits from the Priority Reserve as part of the currently proposed amendments or as part of potential future amendments to Rule 1309.1.

Aesthetics (Visual Resources)

With the exception of the Cabrillo Port Project, construction impacts that could affect aesthetics resources were concluded to be less than significant or could be mitigated

to less than significant. Construction impacts to aesthetics resources were concluded to be significant for the Cabrillo Port Project, but were not evaluated for the Riverside Energy Project.

With the exception of the Cabrillo Port Project, operation impacts that could affect aesthetics resources were concluded to be less than significant or could be mitigated to less than significant. Operation impacts to aesthetics resources were concluded to be significant for the Cabrillo Port Project, but were not evaluated for the Riverside Energy Project.

Agricultural Resources

Construction impacts to agricultural resources were not analyzed for the following projects: Cabrillo Port; El Segundo Repower; Riverside Energy; SES Long Beach; Sun Valley; or Walnut Creek. For the remaining projects, construction impacts to agricultural resources were concluded to be less than significant or could be mitigated to less than significant.

Operation impacts to agricultural resources were not analyzed for the following projects: Cabrillo Port; Riverside Energy; SES Long Beach; or Sun Valley. For the remaining projects, operation impacts to agricultural resources were concluded to be less than significant or could be mitigated to less than significant.

Air Quality

With the exception of the Cabrillo Port Project; El Segundo Repower; and SES Long Beach, construction impacts that could affect adversely affect air quality were concluded to be less than significant or could be mitigated to less than significant. Construction air quality impacts were concluded to be significant for the Cabrillo Port Project; El Segundo; and SES Long Beach.

With the exception of the Cabrillo Port Project; El Segundo Repower; Nursery Products; and SES Long Beach, operation air quality impacts were concluded to be less than significant or could be mitigated to less than significant. Operation air quality impacts were concluded to be significant for the Cabrillo Port Project.

Biological Resources

With the exception of the Cabrillo Port Project, construction impacts that could affect biological resources were concluded to be less than significant or could be mitigated to less than significant. Construction impacts to biological resources were concluded to be significant for the Cabrillo Port Project.

With the exception of the Cabrillo Port and El Segundo Projects, operation impacts that could affect biological resources were concluded to be less than significant or could be mitigated to less than significant. Operation impacts to biological resources were concluded to be significant for the Cabrillo Port Project, but were not evaluated for the Riverside Energy Project.

Cultural Resources

Construction impacts that could affect cultural resources were concluded to be less than significant or could be mitigated to less than significant for all projects.

Operational impacts to cultural resources were not evaluated for AES Highgrove; El Segundo Repower; or Riverside Energy. Operation impacts that could affect cultural resources were concluded to be less than significant or could be mitigated to less than significant for all remaining projects.

Energy

Energy impacts were concluded to be less than significant for the Cabrillo Port Project. None of the remaining projects evaluated construction or operation energy impacts.

Geology

Construction impacts that could affect geological resources were concluded to be less than significant or could be mitigated to less than significant for all projects.

Operational impacts to geological resources were not evaluated for AES Highgrove or Riverside Energy. Operation impacts that could affect geological resources were concluded to be less than significant or could be mitigated to less than significant for all remaining projects.

Hazards and Hazardous Materials

With the exception of the Riverside Energy Project, construction impacts that could create hazards and hazardous materials impacts were concluded to be less than significant or could be mitigated to less than significant for all projects. Construction impacts that could create hazards and hazardous materials impacts were not evaluated in the Riverside Energy Project.

Operation impacts that could create hazards and hazardous materials impacts were concluded to be less than significant or could be mitigated to less than significant for all projects.

Hydrology and Water Quality

With the exception of Cabrillo Port and Riverside Energy, construction impacts that could create hydrology and water quality impacts were concluded to be less than significant or could be mitigated to less than significant for all projects. Construction impacts that could create hydrology and water quality impacts were concluded to be significant for the Cabrillo Port Project, but were not evaluated for the Riverside Energy Project.

Operation impacts that could create hydrology and water quality impacts were concluded to be less than significant or could be mitigated to less than significant for all projects, except the Cabrillo Port Project, which concluded that hydrology and water quality impacts from the project would be significant.

Land Use and Planning

Construction impacts to land use and planning were not evaluated for AES Highgrove; Riverside Energy; Sun Valley; or Walnut Creek. For all remaining projects construction land use and planning impacts were concluded to be less than significant.

Operational land use and planning impacts were concluded to be less than significant or could be mitigated to less than significant for all remaining projects.

Mineral Resources

With the exception of Cabrillo Port, neither construction nor operation mineral resources impacts were evaluated for any of the projects. Mineral resources impacts were concluded to be less than significant for the Cabrillo Port Project.

Noise

With the exception of Cabrillo Port, construction noise impacts were concluded to be less than significant or could be mitigated to less than significant for all projects. Construction noise impacts were concluded to be significant for the Cabrillo Port Project.

With the exception of Cabrillo Port, operation noise impacts were concluded to be less than significant or could be mitigated to less than significant for all projects. Operation noise impacts were concluded to be significant for the Cabrillo Port Project.

Population/Housing

Neither construction nor operation population/housing impacts were evaluated for the following projects: AES Highgrove; Cabrillo Port; El Segundo Repower; Riverside Energy; Sun Valley; City of Vernon; or Walnut Creek. Population/housing impacts were concluded to be less than significant for all remaining projects.

Public Services

Construction impacts to public services were not evaluated for the following projects: AES Highgrove; Cabrillo Port; Riverside Energy; Sun Valley; City of Vernon; or Walnut Creek. Construction impacts to public services were concluded to be less than significant for all remaining projects.

Operation impacts to public services were not evaluated for the following projects: AES Highgrove; Cabrillo Port; Riverside Energy; Sun Valley; City of Vernon; or Walnut Creek. Operation impacts to public services were concluded to be less than significant for all remaining projects.

Recreation

Construction impacts to recreation services were not evaluated for all projects except Cabrillo Port and Nursery Products. Construction impacts to recreation services were concluded to be less than significant for the Cabrillo Port and Nursery Products.

Operation impacts to recreation services were not evaluated for all projects except Cabrillo Port and Nursery Products. Construction impacts to recreation services were concluded to be significant for Cabrillo Port and less than significant for Nursery Products.

Solid/Hazardous Waste

With the exception of Cabrillo Port and Nursery Products, construction solid/hazardous waste impacts were concluded to be less than significant or could be mitigated to less than significant for all projects. Construction solid/hazardous waste impacts were not evaluated for the Cabrillo Port or Nursery Products Projects.

With the exception of Cabrillo Port and Nursery Products, operation solid/hazardous waste impacts were concluded to be less than significant or could be mitigated to less than significant for all projects. Operation solid/hazardous waste impacts were not evaluated for the Cabrillo Port or Nursery Products Projects.

Traffic

Construction traffic impacts were concluded to be less than significant or could be mitigated to less than significant for all projects.

Operation traffic impacts were concluded to be less than significant or could be mitigated to less than significant for all projects.

Summary of Chapter 6 – Alternatives

The Draft PEA will discuss and compare relative merits of alternatives to the proposed project, as required by CEQA and by SCAQMD Rule 110, when there are significant adverse impacts.

Possible feasible project alternatives are listed in Table 1-3 along with aspects of the alternatives that differ from the proposed project. Unless otherwise stated, all other components, including biosolids, of the project alternatives are the same as the proposed project. Affected facilities are EGFs for the current proposed project and EPRSs for future proposed amendments.

TABLE 1-3
Project Alternatives

Project Alternative	APPLICABILITY			Exceptions
	Three PM2.5 Zones	Environmental Justice Area	Cancer Risk Area	
Alternative A: No Project Alternative	No	No	No	No
Alternative B: PM2.5 Zones Only	Yes • Tiered Mitigation Fees	No	No	No
Alternative C: PM2.5 Zones; EJA and CRA Applicability	Yes • Tiered Mitigation Fees	Yes • Affected facility in EJA subject to fee = Zone 3 fee	Yes • Affected facility in CRA subject to fee = Zone 3 fee	No
Alternative D: Limited Access to Priority Reserve with Exceptions	Yes • Tiered Mitigation Fees • No access if affected facility in Zone 3	Yes • No access if affected facility in EJA	Yes • No access if affected facility in CRA	• Municipal EGFs and/or "Peaker" (<100 MW) subject to fee = Zone 3 fee
Alternative E: Most Limited Access to Priority Reserve	Yes • Tiered Mitigation Fees • No access if affected facility in Zone 3	Yes • No access if affected facility in EJA	Yes • No access if affected facility in CRA	No

CHAPTER 2

PROJECT DESCRIPTION

Project Location
Background
Project Objectives
Project Description

PROJECT LOCATION

The SCAQMD has jurisdiction over an area of 10,473 square miles (referred to hereafter as the district), consisting of the four-county South Coast Air Basin (Basin) and the Riverside County portions of the Salton Sea Air Basin (SSAB) and the Mojave Desert Air Basin (MDAB). The Basin, which is a subarea of the SCAQMD's jurisdiction, is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The 6,745 square-mile Basin includes all of Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino counties. The Riverside County portion of the SSAB and MDAB is bounded by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley. The federal nonattainment area (known as the Coachella Valley Planning Area) is a subregion of both Riverside County and the SSAB and is bounded by the San Jacinto Mountains to the west and the eastern boundary of the Coachella Valley to the east (Figure 2-1).

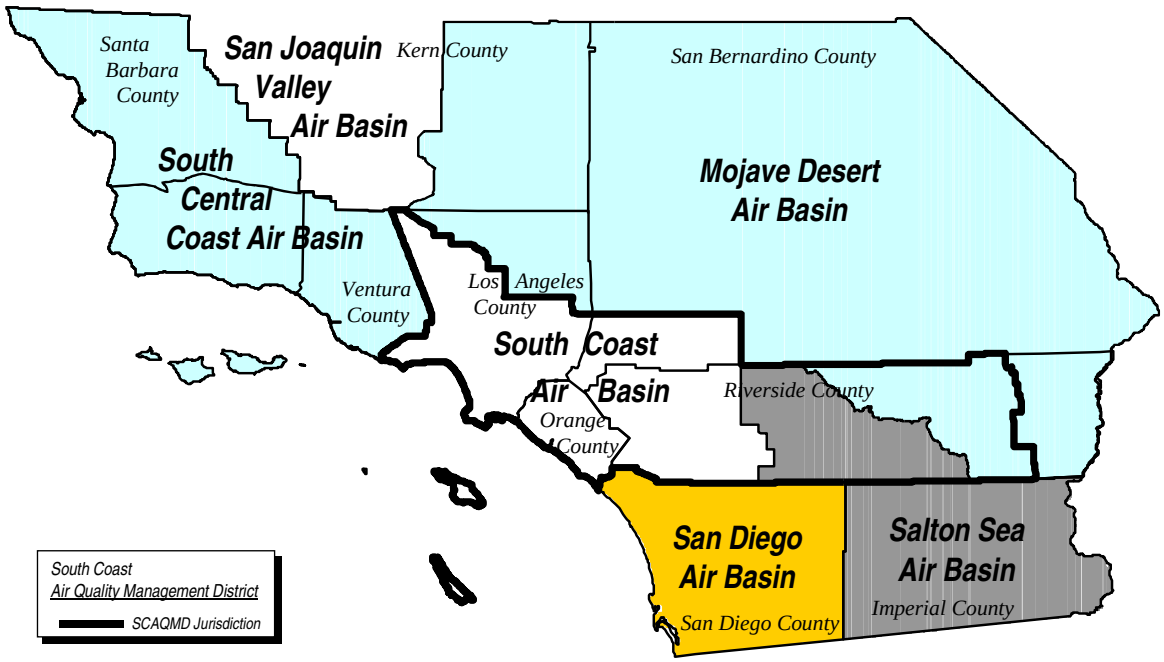

FIGURE 2-1

South Coast Air Quality Management District

BACKGROUND

New Source Review

Federal and state laws require the development and implementation of NSR programs to ensure that the operation of new, modified, or relocated stationary emission sources in nonattainment areas does not interfere with the attainment and maintenance of California and national ambient air quality standards (CAAQS and NAAQS). Local NSR programs must, at a minimum, comply with the requirements established pursuant to federal and state law, which include: (1) pre-construction review; (2) the installation of BACT; and, (3) the offsetting of emission increases by providing emission reductions or purchasing ERCs. The SCAQMD originally adopted its NSR program in 1976. U.S. EPA initially approved the SCAQMD's NSR program into the California State Implementation Plan (SIP) initially on January 21, 1981, approved the revised NSR program in 1996, and adopted subsequent amendments to the NSR program into the SIP on several occasions.

NSR Tracking

The SCAQMD's NSR tracking system provides an accounting system that identifies the sources of ERCs including orphan shutdowns, surplus reductions and previous NSR balances; the accounts that these ERCs are allocated to include Rule 1304 exemptions and the Priority Reserve. The Rule 1309.1 Priority Reserve was established to provide ERCs for specific priority sources, including essential public services, innovative technology and research operations.

Essential public services include sewage treatment facilities, prisons, police facilities, fire fighting facilities, schools, hospitals, landfills, water operations and public transit. To qualify to draw from the Priority Reserve bank of credits, an essential public service must provide all required offsets available by modifying sources at the same facility to best available retrofit control technology (BARCT) levels or demonstrate that no sources within the facility could be modified to BARCT levels to provide offsets.

According to the current Rule 1309.1, the Priority Reserve is funded quarterly on March 31, June 30, September 30 and December 31. The amounts of this funding do not exceed the amounts listed in Table 2-1.

TABLE 2-1

Priority Reserve Allocations

Air Contaminant	Quarterly Allocation (pounds per day)
Volatile Organic Compounds	500
Nitrogen Oxides (NO_x)	250
Sulfur Dioxide (SOx)	60
Particulate Matter (PM10)	125
Carbon Monoxide (CO)	250

The SCAQMD prepares an annual report which focuses on the supply and demand for creditable emission reductions and required offsets for sources that the SCAQMD has taken responsibility to provide offsets (i.e., priority reserve, etc.). The information in that report is derived from the SCAQMD's NSR tracking system, with the most recent report presented to the SCAQMD's Governing Board on February 2, 2007. The balance of creditable emission reductions available for future compliance with Federal offset requirements is listed in Table 2-2.

TABLE 2-2

NSR Balance (for activity between August 2002 – Projected December 2007)

Source	VOC (lbs/day)	NO_x (lbs/day)	SOx (lbs/day)	CO (lbs/day)	PM10 (lbs/day)
Previous NSR Balance	137,400	57,680	21,440	15,680	15,360
Credits Received (from orphan shutdowns, surplus reductions and other discounts of ERCs)	68,870	23,280	5,598	26,663	15,279
Offsets Used (by Rule 1304 exemptions/adjustments[6] and priority reserve)	- 5,743	-7,516	-178	-17,765	-2,616
Surplus Adjustment	-20,580	-14,960	-6,300	0	-200
Unused Initial Balances	-43,040	-9,040	-14,840	0	0
NSR Balance (previous balance + creditable reductions – increases)	**136,907**	**49,444**	**5,720**	**24,578**	**27,823**

Source: NSR Status Report, Table 1, 2 and 3 – Final Determinations of Equivalency for SCAQMD's Federal Offset Accounts (SCAQMD, February 2, 2007 Governing Board Public Hearing Agenda No. 37)

[6] Several offset exemptions are provided in Rule 1304 and are either beneficial to the environment or driven by severe economic needs.

Background on Projects Affected by the Proposed Amendments

California's growth in demand for natural gas as fuel for electricity generation is the reason California consumes a significant share of the world's natural gas supplies. In the future, natural gas prices can be expected to continue increasing unless demand is lowered or imports increase to boost available supplies.

The California Energy Commission (CEC) staff report, "California Natural Gas Assessment Update" (CEC-600-2005-003, February 2005) made the following key observations and conclusions regarding natural gas usage:

- About 85 percent of natural gas used in California is imported.
- Natural gas used for electricity generation is the largest contributor to the state's growing demand at a rate of one percent per year.
- California's population continues to grow and most new homes and buildings have air conditioning and natural gas heating. Natural gas is burned by electricity generating equipment in summer to meet peak electrical demand for air conditioning and in space heating equipment in winter.
- Natural gas prices in 2004 were double what they were in 2002 and earlier years.
- Fast-growing western states such as Nevada, Arizona and New Mexico are competing with California for natural gas supplies.
- Existing sources of natural gas supply are located in resource basins that are maturing and remaining resources are now in smaller natural gas fields that deplete more quickly resulting in the need to drill more wells more frequently.
- Options to increase supply include increased drilling of more expensive natural gas resources, including unconventional resources and those in Arctic North America. These resources, however, do not represent near-term solutions, because they will require technological drilling advances and the construction of major new interstate pipelines, respectively.
- State energy policy puts an emphasis upon reducing natural gas demand and dependence upon natural gas-fired electricity generation through natural gas energy efficiency and distributed generation programs. In addition, the state has committed to increase the proportion of electricity sold in the state that is produced by renewable energy technologies.

Further, new generation capacity is needed to meet increasing electricity demand for the following additional reasons[7]:

- Electricity demand on July 24, 2006 was 4,800 MW higher statewide than 2005's all-time high.
- According to the California Independent System Operator (CAISO), peak demand was 38 percent higher than peak demand during the 2001 power crisis, and generation capacity increases since 2001 have been 23 percent. CAISO believes a minimum of 9,000 MW must be located within the Los Angeles local reliability area to assure system stability.
- The CEC believes many power plants are currently 40 to 60 years old and are at high risk of retirement.

Electric Generating Facilities (EGFs)

In order to avoid the type of energy crisis California experienced during years 2000 and 2001, it is critical to increase future energy production to meet the increasing demand and provide supply reliability. Large thermal power plants built recently in California are fueled by natural gas because natural gas is considered BACT for all pollutants and is more cost effective compared to other fossil-fueled generation technology.

In-District EGFs

Power plants, including "peaker" plants, are currently being proposed to be constructed in southern California totaling a maximum additional production of approximately 5,000 megawatts (MW) of electricity. In order to process the permits for the equipment needed to operate these projects, emission offsets will be necessary in accordance with the requirements of SCAQMD's Rule 1303 or Rule 2005 (NSR for RECLAIM sources).

Table 2-3 shows the currently proposed in-district EGFs based on information currently available to the SCAQMD staff that may take advantage of accessing the Priority Reserve, their proposed locations, project capacities and estimated PM10, SOx, and CO emissions if operating at permitted capacity. Table 2-3 also shows the projected amount of emissions from 5,000 MW that would need to be offset to comply with NSR offset requirements before permits could be approved. It should be noted that the amount of offset is based on the maximum daily emissions allowed by the air quality permit. The annual average operating capacity is much lower (i.e., 35 pecent), especially for "peaker" plants.

[7] Edison Mission Energy (Thomas McCabe Jr, April 2007)

TABLE 2-3

Proposed Known In-District EGFs Estimated to be Potentially Eligible to Access the Priority Reserve

Proposed In-District EGFs	Proposed Location	Project Capacity	PM10 (lbs/day)	SOx (lbs/day)	CO (lbs/day)	Zone[1]
AES Highgrove[2]	12700 Taylor St, Grand Terrace	300 MW	294	30	726	3
Carson Hydrogen Power Project[3]	1801 E Sepulveda Blvd, Carson	500 MW	603	9	365	1
Competative Power Ventures LLC, Ocotillo[3, 4]	17000 Diablo Rd, North Palm Springs	850 MW	741	74	0 (attainment)	1
El Segundo Repower-Dynegy/NRG[2]	301 Vista del Mar, El Segundo	630 MW	353	0	0	1
Reliant Energy LLC[3, 5]	8996 Etiwanda Ave, Etiwanda	656 MW	545	58	458	3 / EJA
Riverside Energy Resource – City of Riverside[3]	5950 Acorn Avenue, Riverside	96 MW	100	10	248	3
Sun Valley[2]	29500 Rouse Rd, Romoland	500 MW	463	46	1240	1
Vernon Power Plant - City of Vernon[2]	3200 Fruitland Ave, Vernon	943 MW	857	91	720	2 / EJA
Walnut Creek[2]	911 Bixby Dr, City of Industry	500 MW	463	46	1240	2
	TOTAL	**4,975 MW**	**4,419**	**364**	**4,997**	

1. A map of proposed zones can be found in PAR 1309.1 Appendix A.
2. Permit application submitted to the SCAQMD.
3. No permit application submitted yet to the SCAQMD.
4. After the release of the Draft PEA, this project was renamed CPV Sentinel Energy.
5. After the release of the Draft PEA, this project was renamed San Gabriel Generating Station.

Figure 2-2 shows the location of the known in-district EGFs as well as the boundaries of PM2.5 zones and EJAs (shaded).

Notwithstanding Rule 1303 (b)(4), PAR 1309.1 (c)(6) would require EGFs using ERCs from the Priority Reserve to purchase offset emissions at a ratio of one to 1.2. This offset ratio is based on 30-day average emissions from power plant equipment (turbines and boilers with selective catalytic reduction (SCR) air pollution control equipment, standby generators and emergency fire engine pumps) for permits currently being processed by the SCAQMD. Using the projected emissions generated by 5,000 MW, Table 2-4 shows the estimated

amount of ERCs that would be needed by EGFs to satisfy the offset ratio required by Rule 1309.1 (c)(6).

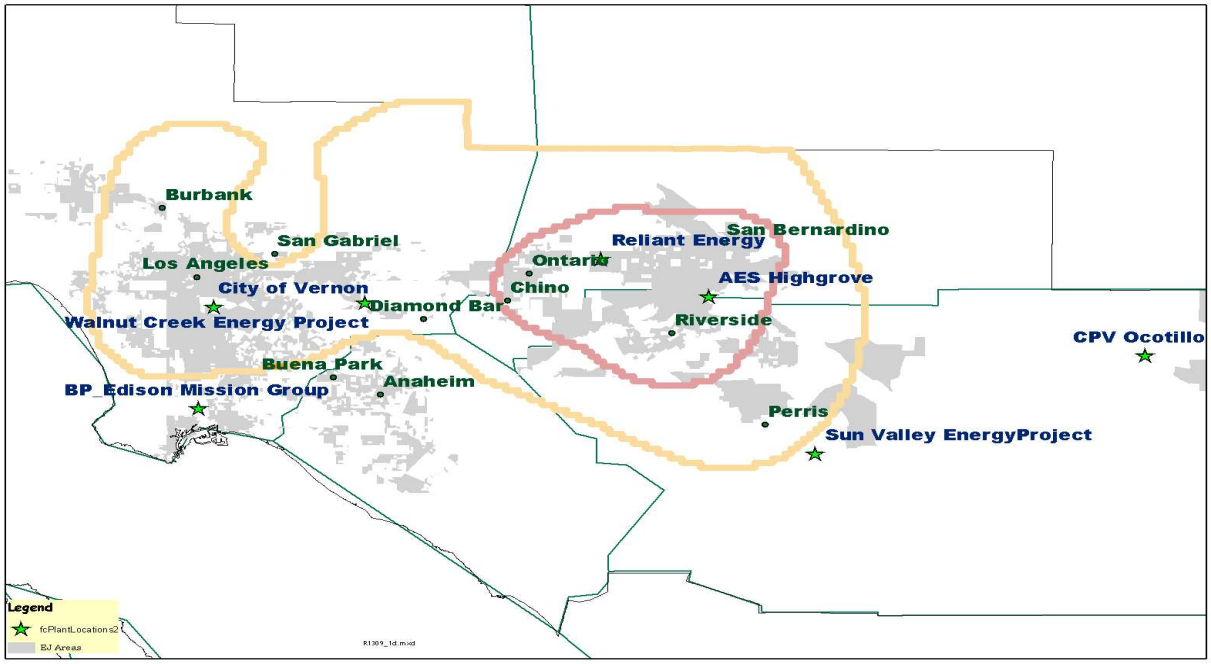

FIGURE 2-2

Location of the Known In-District EGFs

TABLE 2-4

Estimated Emissions Offset Requirements for Emissions From Power Plant Projects Totaling 5,000 MW*

Criteria Pollutant	**Emissions Needing to be Offset** (pounds per day)	**ERC Offset Ratio Needs (1.0 to 1.2)** (pounds per day)
CO	4,997	5,996
PM10	4,419	5,303
SOx	364	437

* Assuming the 30-day average emissions are the same as the daily permitted levels for the purpose of Rule 1303(b)(4) requirements.

EGF Projects Located In Downwind Air Basin

For the same reasons noted above, new power plants are expected to be constructed in other areas of California to avoid the energy crisis California experienced during years 2000 and 2001. Air basins located downwind of the district are having difficulties siting EGFs because, as air agency representatives have indicated, they have a chronic shortage of NOx ERCs that would be needed for offsets pursuant to local NSR requirements. In the currently proposed amendments, EGFs in downwind basins would be provided an opportunity to purchase VOC credits from the Priority Reserve which, subject to certain conditions, may be utilized to offset other criteria pollutant emissions, such as NOx, by use of the inter-pollutant credit trading mechanism. Existing state law provides for the transfer and use of inter-basin credits. Table 2-5 lists the currently proposed downwind air basin EGFs eligible to access the Priority Reserve in accordance with the proposed amendments.

TABLE 2-5

Proposed Known Downwind Air Basin EGFs Estimated to be Potentially Eligible to Access the Priority Reserve

Downwind EGFs	Location	Project Capacity	VOC (lbs/day)
City of Palmdale	SE intersection Sierra Highway and Ave M, Palmdale	550 MW	< 5,000
City of Victorville	NE intersection Colusa Rd & Helendale Rd, Victorville	550 MW	

< is "less than."

Energy Projects of Regional Significance (EPRS)

The following projects are described herein because they are under consideration for access to the Priority Reserve ERCs as part of future amendments to Rule 1309.1.

Liquefied Natural Gas

Importing liquefied natural gas (LNG) is one means of satisfying California's future projected growth in demand for natural gas. LNG is natural gas cooled and condensed into a liquid. It is mostly methane with small amounts of ethane, propane and other liquefied petroleum gases and is generally handled at slightly above atmospheric pressure, which requires a very low temperature. In order to keep natural gas in a liquid state, LNG must be refrigerated to minus 260 degrees Fahrenheit. LNG supplies come primarily from locations where large gas discoveries have been made, such as Algeria, Trinidad, Venezuela, Nigeria, Norway, Qatar, Oman and Australia. Some LNG is produced in Alaska as well. Today there are 113 active LNG facilities spread across the United States, with a higher

concentration of them in the northeastern states. There are currently three LNG import terminals under consideration off the coast of southern California that would supply LNG to the district (Table 2-6). One proposed LNG project in the region is the SES project which, based on publicly available information, was abandoned by the Harbor Commission on January 22, 2007, prior to completion of the environmental review process. The SES project proponents subsequently filed a writ of mandate with the Los Angeles Superior Court to direct the Port of Long Beach to complete the environmental review process. Therefore, the future status of this project is unknown.

Crude Oil

After crude oil is extracted from the earth's subsurface, it is transported, stored and distributed to local refineries which, in turn, process the crude into usable products such as gasoline and diesel fuel to power combustion equipment and produce plastics and asphalt paving material. As production from the main sources of crude oil for the southern California region, namely California and Alaska, has declined, marine-delivered crude oil imports from overseas have increased over the past few years and currently represent more than 40 percent of the total crude oil refined in southern California. Currently, crude oil is imported from a variety of worldwide sources, including the Middle East and Latin America[8]. Both California and Alaska crude oil production are expected to continue to decline and, as a result, crude oil imports are expected to keep increasing.

Locally, various companies transport the crude oil via marine vessels into the ports and then to refineries through pipeline, tanker trucks and/or rail. Currently, the storage of crude oil arriving at the ports is considered inadequate to accommodate the anticipated volume so there is a proposal to construct a new crude oil import/offloading facility at the Port of Los Angeles. The new equipment at the site will be subject to NSR requirements and will likely require emission offsets. The project is considered critical in enhancing the import capacity of crude oil into southern California. New storage capabilities and pumping equipment will allow quick and efficient oil offloading, which will reduce the time a vessel remains in port, thereby minimizing emissions from the transporting vessel. Once offloading is completed, the vessel will leave the berth. New underground pipelines connected to local refineries and other existing pipeline distribution systems will carry the product away from the terminal site.

Table 2-6 lists currently proposed energy projects of regional significance (EPRS) that would likely be eligible to access the Priority Reserve in accordance with future amendments. Projects listed in Table 2-6 are currently in various stages of siting permits so, it is not certain that all projects would be constructed. Future projects

[8] "Outlook for Crude Oil in California" (Baker & O'Brien Inc., May 2005)

could be eligible to access the Priority Reserve if meeting the proposed rule requirements. For the purpose of the CEQA analysis of indirect impacts, all known projects are included.

TABLE 2-6

Proposed Known EPRSs Estimated to be Potentially Eligible to Access the Priority Reserve

Proposed EPRSs*	**Proposed Location**	**Project Capacity**	**PM10** (lbs/day)	**SOx** (lbs/day)	**CO** (lbs/day)
Esperanza LNG Receiving Terminal	Potential sites up to 12 miles offshore of Long Beach area	500 - 1000 Mcf/d	61	322	122
Pacific LA Marine Terminal LLC Crude Oil Receiving Facility	Pier 400; tanks on Terminal Island; pipeline between berth, tanks and existing pipeline system.	250,000 barrels/day	15	155	107
SES Long Beach LNG Import Terminal	Pier T, Berth 126, Terminal Island, Port of Long Beach	700 - 1000 Mcf/d	61	322	122
Woodside/Ocean Way LNG Terminal Project	Pacific Ocean; 22 miles south of Malibu	800 - 1200 Mcf/d	61	322	122
		TOTAL	**198**	**1,121**	**473**

Biosolids Treatment Facilities

Similar to EPRS, biosolids treatment facilities are included herein because they are under consideration to be allowed access to the Priority Reserve as part of future amendments to Rule 1309.1 or 1302 (Definitions).

Final disposal options have become narrower for sewage treatment facilities as agricultural land spreading is becoming more limited; past legislation has restricted ocean disposal; landfills are reaching capacity; and new technologies, such as deep well injection and gasification, are in developmental stages and considered risky options. Land-based treatment options, such as composting and drying/pelletizing, remain feasible choices.

Biosolids are carefully treated and monitored and must be used in accordance with regulatory requirements. Pre-treatment regulations require that industrial facilities pre-treat their wastewater to remove hazardous contaminants before it is sent to a wastewater treatment plant. Wastewater treatment facilities monitor incoming wastewater streams to ensure their recyclability and compatibility with the treatment plant process. Once the wastewater reaches the plant, the sewage goes through physical, chemical and biological processes which clean the wastewater and remove

the solids. The wastewater treatment processes sanitize wastewater solids to control pathogens (disease-causing organisms, such as certain bacteria, viruses and parasites) and other organisms capable of transporting disease.

A biosolids processing facility is an operation that further treats solids generated from wastewater treatment occurring exclusively in the district. To ensure that wastewater treatment solids will not be imported from other regions for processing, there will be conditions limiting the operation to the use of only those wastewater solids generated from waste water treatment in the district. Biosolids processing facilities may be publicly owned and operated, private or a public/private partnership. However, it is currently anticipated that future rule amendments will have different requirements for the publicly owned and operated operations.

Once sewage treatment is complete, the resulting biosolids are the nutrient-rich organic materials resulting from the treatment of domestic commercial and industrial wastewater. When treated and processed, sewage sludge becomes biosolids which can be safely recycled and applied as fertilizer or soil amendment to sustainably improve and maintain productive soils and stimulate plant growth.

The application of biosolids reduces the need for chemical fertilizers as biosolids may be composted and sold, or distributed for use on lawns and home gardens. Most biosolids composts are highly desirable products that are easy to store, transport and use. Further, biosolids have been found to promote rapid timber growth, allowing quicker and more efficient harvesting of wood.

Based on historical information, local sanitation districts have provided estimates of the amount of ERCs needed in the future to offset composting and dry pelletizing biosolids projects, although there are only a few permit applications currently submitted for these types of facilities. These emission estimates are listed in Table 4-2 in Chapter 4 along with other estimated ERCs expected to be needed by EGFs and EPRS that would also be eligible to withdraw from the Priority Reserve in the future under PAR 1309.1.

PROJECT DESCRIPTION

The following project description includes the entire program of rule amendments, including the currently proposed amendments to Rules 1309.1 and 1315, and potential future proposed amendments anticipated to Rule 1309.1. As discussed above, only the EGF amendments are part of the current proposal. In order to construct and operate new EGFs, owner/operators will need to obtain permits for air polluting and control equipment. The permits will not be issued until the applicant appropriately offsets the new emissions in accordance with Regulation XIII - New Source Review. However, based on future increased demand for electricity the supply of PM10, SOx and CO ERCs available in the open market at this time may be

limited and could restrict construction of new power generating facilities. To increase the availability of ERCs for EGFs in the district, the SCAQMD is proposing amendments to Rule 1309.1 and add additional conditions for EGFs to access the Priority Reserve as summarized in the following sections. A copy of PAR 1309.1 and PRR 1315 can be found in Appendix A.

PAR 1309.1

In-District Electrical Generating Facilities

The SCAQMD is proposing amendments to Rule 1309.1 that would allow EGFs temporary access to the SCAQMD's Priority Reserve PM10, SOx and CO accounts provided they meet specific criteria, such as new applications must be deemed complete between 2005 through 2008 and applicants must pay the appropriate mitigation fees. These fees will be used to fund future clean air projects and PM10 emission reduction programs, such as installing particulate matter traps on diesel engines to create surplus PM10 emission reductions.

To address the concerns raised by the Governing Board at the September 2006 public hearing, PAR 1309.1 includes a provision that would subdivide the district into three zones based on average PM2.5 concentrations observed for years 2003 through 2005. These zones correspond to health-based exposure levels classifying Zone 1 as an area with annual average PM2.5 concentration of less than 18 micrograms per cubic meter ($\mu g/m^3$), Zone 2 with a PM2.5 concentration of 18 to 20 $\mu g/m^3$, and Zone 3 with a PM2.5 concentration greater than 20 $\mu g/m^3$. The zones are used to define the criteria and requirements for eligibility to access the Priority Reserve and to determine the amount of the mitigation fee for the Priority Reserve credits. A map of those zones can be found in PAR 1309.1 in Appendix A.

EGFs will also be subject to environmental justice criteria to determine those areas already disproportionately impacted by existing pollution sources. The environmental justice area (EJA) is defined as the area of grid cells where at least ten percent of the population is living in poverty (based on year 2000 Federal census data); and either 1) the cancer risk is greater than one-in-one thousand (as determined by the SCAQMD MATES II study); or 2) the PM10 exposure is greater than 46 $\mu g/m^3$ (as determined by the SCAQMD monitoring data). A map of the environmental justice areas in the district can be found in PAR 1309.1 in Appendix A. [9]

The zone/EJA location of the EGF and amount of MW power generation will determine the stringency of the requirements, including level of allowable NOx and PM10 emissions, cancer risk, non-cancer risk and cancer burden, as well as the

[9] Found in the SCAQMD Annual Air Quality Data Sheets

amount of mitigation fee (see Table 2-9). The proposed zone restrictions to access the Priority Reserve are outlined in Table 2-7.

TABLE 2-7

PAR 1309.1 Proposed Zone Restrictions for Accessing the Priority Reserve

	Zone 1	**Zone 2; EJA or Zone 3 <= 500 MW**	**EJA or Zone 3 > 500 MW**
TOXICS REQUIREMENTS			
Cancer Risk	< 10 in-a-million	< 1 in-a-million	< 0.5 in-a-million
Hazard Index	< 1	< 0.5	< 0.1
Cancer Burden	< 0.5	< 0.1	< 0.05
CRITERIA POLLUTANT REQUIREMENTS			
PM10 Emission Controls	NG Only & < 0.06 lb/MW-hr ~~NSR BACT (Natural Gas Only)~~	NG Only & ≤ 0.06 lb/MW-hr	NG Only & < 0.03 lb/MW-hr
NOx Emission Controls	≤ 0.08 lb/MW-hr ~~NSR BACT~~	≤ 0.08 lb/MW-hr	≤ 0.05 lb/MW-hr
Total Combined Gas Turbine PM10 Hourly Emissions	NSR BACT	NSR BACT	≤ 30 lbs/hr
Gas Turbine PM10 24-hr Impact	NSR Limit of 2.5 ug/m3 per Gas Turbine	≤ 5 ug/m3 for Total Combined Gas Turbines	≤ 2.5 ug/m3 for Total Combined Gas Turbines
Gas Turbine PM10 Annual Impact	NSR Limit of 1.0 ug/m3 per Gas Turbine	≤ 0.75 ug/m3 for Total Combined Gas Turbines	≤ 0.5 ug/m3 for Total Combined Gas Turbines
Annual Hours of Operation Limit	None	≤ ~~3,000~~ 4,000 hrs/yr, if Simple Cycle	≤ ~~2,500~~ 3,000 hrs/yr, if Simple Cycle

According to PAR 1309.1(c)(3), EGF permit applicants will be required to conduct a due diligence effort to secure available ERCs from the open market before requesting ERCs from the Priority Reserve. Table 2-8 lists the current active ERCs as of April 2007[10] held by companies, emissions credit brokers, organizations, or individuals. While these ERCs are valid and active, not all are available for sale. Some companies will hold onto their ERCs for future business growth and/or to modernize their facility. Therefore, the total ERC holdings, as listed in Table 2-8, are not necessarily representative of the total ERCs available for sale because there is a portion of ERCs that are least likely to be traded[11]. It is considered to be speculative to project the number of ERCs for a particular pollutant that a facility would hold and

[10] SCAQMD Website (http://www.aqmd.gov/permit/spreadsheets/CurrentActiveERCList.xls)
[11] "White Paper on Modernization of Emission Reduction Credit System" (SCAQMD, May 2002); May 2002 Governing Board Meeting Agenda No. 30

for what reasons. Moreover, as shown in Table 2-4, if all proposed EGF projects are built, then offset needs for PM10, SOx and CO would exceed the total amount of active ERCs as shown in Table 2-8.

TABLE 2-8

Non-SCAQMD Active ERCs (as of April 2007)

Source	VOC (lbs/day)	NO_x (lbs/day)	SOx (lbs/day)	CO (lbs/day)	PM10 (lbs/day)
Non-SCAQMD Active ERCs	12,832	1,235	784	2,290	781

Mitigation Fees

In order to access the ERCs in the Priority Reserve, Par 1309.1 would require a mitigation fee for facilities other than Essential Public Services based on the pollutant and each pound per day of that pollutant obtained from the Priority Reserve. The current fee proposals would establish fees comprised of a weighted average based on the price of ERCs sold on the open market in the past, plus a percentage of ERCs surrendered to benefit air quality and to offset administrative costs. ~~For EGFs applying in 2005 to 2008, a refund of mitigation fees, less 20 percent, may be provided if the project is cancelled prior to the certification of the CEQA document by the lead agency, the issuance of the SCAQMD's Permit to Construct, or if the Executive Officer determines the cancellation was due to circumstances beyond the applicant's reasonable control. For EGFs that applied in 2001 to 2003, if excess ERCs were purchased, a refund of the mitigation fee, less 20 percent, may be provided prior to the issuance of the Permit to Operate, within 12 months of the purchase of the ERCs provided the quantity of excess ERCs is verified through source testing or other pre-approved methods.~~

According to PAR 1309.1(h)(1), mitigation fee refund less 20% or $2,000,000, whichever is less, shall be allowed only for In-District EGFs that filed complete applications for which credits are sought in years 2005 through 2008 provided the applicant submits a written request to the District Executive Officer stating the reasons and provided:

(1) The project requiring credits was cancelled within twelve months of purchase of the Priority Reserve credits due to circumstances that the Executive Officer determines is beyond the reasonable control of the applicant; and

(2) A written request to the Executive Officer justifying the refund is received no more than 30 days after the project cancellation.

For complete applications filed during years 2001 through 2003, a refund of mitigation fees shall be allowed for In-District EGFs provided they comply with the

conditions specified in PAR 1309.1(h)(2), including the condition that the written request for a refund must be submitted within 3 months after the source testing. The amount of the refund calculated is the difference between the original and revised Permit to Construct mass emission limits and shall be reduced by:

(1) Any legal costs incurred by the District in defending the issuance of the original or revised permits for the project; and

(2) Any administrative costs incurred by the District in administering the mitigation fees; and

(3) Any mitigation fees encumbered or expended for air quality improvement projects.

Mitigation Fee – Option 1

Staff has prepared two mitigation fee proposals for Board's consideration. EGFs located in Zone2, Zone 3, or the EJA will be subject to higher mitigation fee rates and more stringent criteria than Zone 1. The mitigation fees in Zone 2 are 50 percent greater than Zone 1 and the mitigation fees in Zone 3 or the EJA are 100 percent higher than Zone 1.Table 2-9 lists the tiered mitigation fee schedule for Option 1 by pollutant, depending upon the zone or EJA in which the affected facility is located.

TABLE 2-9

Priority Reserve ~~Tiered~~ Mitigation Fee ~~Schedule Required Per Zone/EJA~~ for Options 1 and 2

	TIERED MITIGATION FEE - OPTION 1		
Zones/EJA	**PM10** ($/lbs)	**SOx** ($/lbs)	**CO** ($/lbs)
1	$50,417	$15,083	$12,000
2	$75,626	$22,625	$18,000
3	$100,834	$30,166	$24,000
Environmental Justice Area	$100,834	$30,166	$24,000
	UNIFORM MITIGATION FEE - OPTION 2		
	PM10 ($/lbs)	**SOx** ($/lbs)	**CO** ($/lbs)
	$92,000	$34,000	No Fee Proposed[1]

[1] No fee prosed because U.S. EPA designated the Basin as attainment with the federal CO standard as of June 12, 2007, so offsets are no longer required for this pollutant.

Mitigation Fee – Option 2

During the rulemaking process, arguments were made that the tiered mitigation fee structure leaves EGFs proposing to locate in the more polluted areas due to the available infrastructure and the public residing in those areas at an economic disadvantage, which was characterized as unfair since much of the pollution in those areas is due to emissions released and transported from upwind areas. In response, staff has developed an alternative proposal included here as Option 2 that establishes a uniform mitigation fee structure across the Basin (Table 2-9).

EGF Projects Downwind to District in Non-Attainment Areas

PAR 1309.1 also includes a provision that would allow EGFs in areas outside and downwind of the district, e.g., the Mojave and Antelope Valleys, to request access to the VOC account of the Priority Reserve as long as withdrawal requests are received by January 1, 2009. The total request cannot exceed 5,000 pounds of VOC per day and a mitigation fee will be charged. A detailed version of PAR 1309.1 can be found in Appendix A of this document. An overview of the types of affected sources and requirements can be found in Table 2-10.

TABLE 2-10

Newly Eligible Sources to Access Priority Reserve

Eligible Source	Requirements/Conditions
Currently Proposed in PAR 1309.1	
EGFs (In-District)	• Mitigation fee • Applicable to 2005-2008 applications • PM10, SOx and CO ERCs only • Due diligence conducted • Comply with specific zone and EJA requirements
EGFs (Downwind Air Basin)	• Downwind to District in non-attainment areas (Antelope Valley, Mojave APCD) • VOC ERCs only • Cumulative cap of 5,000 lbs of VOC per day • Mitigation fee • Withdraw requests received before 1/1/09
Potential Future Amendments to Rule 1309.1	
Energy Projects of Regional Significance (EPRS)	• Mitigation fee • Limited applicable applications (i.e., 2005 to 2009) • PM10, SOx and CO ERCs only • Due diligence conducted

TABLE 2-10 (Concluded)

Newly Eligible Sources to Access Priority Reserve

Eligible Source	Requirements/Conditions
Biosolids Processing Facilities (to treat sewage outside sewage treatment facility)	• Publicly owned • Biosolids generated within the district • No mitigation fee • No sunset date • Considered an Essential Public Service

Definitions

To accommodate current and future proposed amendments to Rule 1309.1, definitions for the following types of facilities have been generated: EGFs, EPRS, and biosolids treatment facility. The currently proposed amendments to Rule 1309.1 include definitions for EGFs. Future amendments to Rule 1309.1 to add EPRS and biosolids treatment facilities will include adding definitions for these facilities to either Rule 1309.1 or Rule 1302 – Definitions.

Electrical Generating Facility (EGF)

A definition for EGFs has been added to PAR 1309.1 to specifically define the type of facilities eligible to access the Priority Reserve in accordance with proposed amended Rule 1309.1. If an EGF facility does not satisfy the characteristics listed in the definition of an EGF, the facility will not qualify for access to the Priority Reserve as specified in PAR 1309.1. Providing this definition will assist in the enforcement of PAR 1309.1 and provide specific guidance for the EGF operator. An EGF is a facility that generates electricity for its own use and is less than 10 MW; or is a facility less than 50 MW that generates not less than 30 percent of its electricity to pump water to maintain the integrity of the surface elevation of a municipality or significant portion thereof; or is a thermal power plant less than 50 MW that generates electricity during peak demand periods and operates less than 3000 hours per year; or is a thermal power plant facility that generates 50 MW or greater electricity for distribution in the state or municipality owned grid system (net generator).

Energy Project of Regional Significance (EPRS)

To qualify as an EPRS and be allowed access to the PM10, SOx and CO accounts in the Priority Reserve, a project of regional impact to enhance the import supply for use in the district needs to be no less than 100,000 barrels per day of crude oil or 250 million cubic feet per day of natural gas with a Wobbe Index of no more than 1360.

Similar to the EGFs, future regional "energy projects" intended to enhance the import/storage of LNG (no less than 250 million cubic feet per day) and crude oil (no less than 100,000 barrels per day) into southern California would be allowed access to the PM10, SOx and CO accounts of the Priority Reserve as part of future amendments to Rule 1309.1. These projects will be subject to the same due diligence criteria and a mitigation fees as the EGFs.

Biosolids Treatment Facilities

Currently, Rule 1302 lists types of facilities defined as essential public services. These include sewage treatment facilities, prisons, police facilities, fire fighting facilities, schools, hospitals, landfills, water operations and public transit. Biosolids treatment facilities are not listed as an essential public service, however, it is anticipated that future amendments to Rule 1302 would add publicly owned biosolids treatment facilities processing raw materials generated in the district to the list of essential public services or Rule 1309.1 may be amended to include access for these facilities. Biosolids treatment processes taking place at publicly owned sewage treatment facilities are currently considered an essential public service so they are already allowed to draw ERCs from the Priority Reserve.

Further, it is expected that a definition for biosolids will need to be added in the future to assist in clarifying the type of material used at a biosolids treatment facility that would be added to the definition of essential public service in the future and, thus, would be allowed access to the Priority Reserve as long as the biosolids processing facility is publicly owned and meets all other requirements in Rule 1309.1. Biosolids are defined as the nutrient-rich organic material resulting from the physical, chemical, and biological treatment of wastewater which can be safely recycled and applied as fertilizer to sustainably improve and maintain soil and stimulate plant growth.

Renewable Energy

Renewable energy is defined as energy derived from natural processes that do not involve the consumption of exhaustible resources such as fossil fuels and uranium. Renewable energy includes, but is not limited to, hydropower, wind and wave power, solar and geothermal energy, and fossil-fuel-based energy provided the emissions are no more than those from a fuel cell.

PRR 1315

PRR 1315 specifies procedures to be followed by the Executive Officer to make annual demonstrations of equivalency to verify that specific provisions in the SCAQMD's NSR program related to sources that are either exempt from offsets or which obtain their offsets from the SCAQMD's offset accounts and meet in

aggregate the federal nonattainment NSR offset requirements. The procedures specified in this rule are used by the Executive Officer to demonstrate that the sources which are subject to the federal NSR emission offset requirements and which obtain emission credits through allocations from Rule 1309.1 – Priority Reserve, Rule 1309.2 – Offset Budget, or which utilize the emission offset exemptions contained in Rule 1304 –Exemptions, are fully offset by valid emission credits.

PROJECT OBJECTIVES

The objectives of the proposed amendments to Rule 1309.1 include the following.

- since there is no consistent source of ERCs that could assist the power plants' permitting requirements, the proposed project would allow eligible facilities access to the Priority Reserve in order to increase the likelihood that the facilities will be able to comply with Rule 1303 offset requirements;

- expand the eligibility currently and in the future to allow more power generating and EPRS projects to access the Priority Reserve, to facilitate permit processing for new power generation in California, which will contribute to easing potential future power crises in California;

- add power generation capacity in California to reduce the likelihood of blackouts and/or the need to run old high-polluting standby diesel generators, which avoids an increase in criteria pollutant and toxic emissions; and

- require a mitigation fee to fund emission reduction projects that will reduce emissions of the pollutant for which the fee is paid.

The objectives of PRR 1315 include the following:

- memorialize and formalize the accounting procedures used by SCAQMD for federal NSR offset tracking;

- taking credit for all surplus reductions available under Federal law; and

- provide a potential beneficial effect on the environment by assuring that credits are available in the bank before a source is permitted, thus, assuring that increases in emissions resulting from such sources are fully offset

CHAPTER 3

EXISTING SETTING

INTRODUCTION

In order to determine the significance of the impacts associated with a proposed project, it is necessary to evaluate the project's impacts against the backdrop of the environment as it exists at the time the NOP/IS is published. The CEQA Guidelines defines "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 notice of preparation is published, from both a local and regional perspective (CEQA Guidelines §15125). Therefore, the "environment" or "existing setting" against which a project's impacts are compared consists of the immediate, contemporaneous physical conditions at and around the project site (Remy, et al; 1996).

The following sections summarize the existing setting for air quality, which is the only environmental area that may be adversely affected by proposed amended Rule 1309.1. An overview of air quality in the district is given below. An overview of current credit availability is also provided after the Air Quality discussion.

AIR QUALITY

It is the responsibility of the SCAQMD to ensure that state and federal ambient air quality standards are achieved and maintained in its geographical jurisdiction. Health-based air quality standards have been established by California and the federal government for the following criteria air pollutants: ozone, carbon monoxide (CO), nitrogen dioxide (NO2), particulate matter less than 10 microns (PM10), particulate matter less than 2.5 microns (PM2.5) sulfur dioxide (SO2) and lead. These standards were established to protect sensitive receptors with a margin of safety from adverse health impacts due to exposure to air pollution. The California standards are more stringent than the federal standards and in the case of PM10 and SO2, far more stringent. California has also established standards for sulfate, visibility, hydrogen sulfide, and vinyl chloride. The state and national ambient air quality standards for each of these pollutants and their effects on health are summarized in Table 3-1. The SCAQMD monitors levels of various criteria pollutants at 34 monitoring stations. The 2004 air quality data from SCAQMD's monitoring stations are presented in Table 3-2.

TABLE 3-1

State and Federal Ambient Air Quality Standards

AIR POLLUTANT	STATE STANDARD Concentration/ Averaging Time	FEDERAL PRIMARY STANDARD Concentration/ Averaging Time (>)	MOST RELEVANT EFFECTS
Ozone	0.09 ppm, 1-hour average > 0.07 ppm, 8-hr avg.>	0.08 ppm, 8-hour average	(a) Pulmonary function decrements and localized lung edema in humans and animals; (b) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) Increased mortality risk; (d) 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; (e) Vegetation damage; (f) Property damage
Carbon Monoxide	9.0 ppm, 8-hour average> 20 ppm, 1-hour average>	9 ppm, 8-hour average 35 ppm, 1-hour average	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; (d) Possible increased risk to fetuses
Nitrogen Dioxide	0.25 ppm, 1-hour average>	0.053 ppm, annual average	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) Contribution to atmospheric discoloration
Sulfur Dioxide	0.04 ppm, 24-hour average> 0.25 ppm, 1-hour average>	0.03 ppm, annual average 0.14 ppm, 24-hour average	(a) Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in person with asthma

TABLE 3-1 (CONCLUDED)

State and Federal Ambient Air Quality Standards

AIR POLLUTANT	STATE STANDARD Concentration/ Averaging Time	FEDERAL PRIMARY STANDARD Concentration/ Averaging Time (>)	MOST RELEVANT EFFECTS
Suspended Particulate Matter (PM10)	30 µg/m^3, annual geometric mean > 50 µg/m^3, 24-hour average>	50 µg/m^3, annual arithmetic mean 150 µg/m^3, 24-hour average	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; (c) Increased risk of premature death from heart or lung diseases in the elderly
Suspended Particulate Matter (PM2.5)	12 µg/m3, ann. arithmetic mean >	15 µg/m^3, annual arithmetic mean 35 µg/m^3, 24-hour average(1)	
Sulfates	25 µg/m^3, 24-hour average>=	--(2)	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) Property damage
Lead	1.5 µg/m^3, 30-day average>=	1.5 µg/m^3, calendar quarter	(a) Increased body burden; (b) Impairment of blood formation and nerve conduction
Visibility-Reducing Particles	In sufficient amount to give an extinction coefficient >0.23 km^{-1} (visual range less than 10 miles), with relative humidity <70%, 8-hour average (10am – 6pm, PST)	--(2)	Visibility impairment on days when relative humidity is less than 70 percent

ppm = parts per million

(1) The U.S. EPA lowered the PM2.5 24-hour average standard from 65µg/m^3 to 35µg/m^3 in September 2006. The 65µg/m^3 standard will be in effect until 2010.

(2) No federal standard established.

TABLE 3-2

2005 Air Quality Data – South Coast Air Quality Management District

Carbon Monoxide							
Source/ Receptor Area No.	Location of Air Monitoring Station	Station No.	No. Days of Data	Max. Conc. in ppm 1-hour	Max. Conc. in ppm 8-hour	No. Days Standard Exceeded(1)	
						Federal	State
						≥ 9.5 ppm 8-hour	> 9 ppm 8-hour
LOS ANGELES COUNTY							
1	Central LA	087	365	4	3.1	0	0
2	Northwest Coastal LA County	091	365	3	2.1	0	0
3	Southwest Coastal LA County	094	365	3	2.1	0	0
4	South Coastal LA County 1	072	365	4	3.5	0	0
4	South Coastal LA County 2	077	--	--	--	--	--
6	West San Fernando Valley	074	350	5	3.5	0	0
7	East San Fernando Valley	069	363	4	3.4	0	0
8	West San Gabriel Valley	088	363	4	2.8	0	0
9	East San Gabriel Valley 1	060	365	3	1.7	0	0
9	East San Gabriel Valley 2	591	358	2	1.9	0	0
10	Pomona/Walnut Valley	075	365	4	2.5	0	0
11	South San Gabriel Valley	085	113*	3*	2.4*	0*	0*
12	South Central LA County	084	365	7	5.9	0	0
13	Santa Clarita Valley	090	365	2	1.3	0	0
ORANGE COUNTY							
16	North Orange County	3177	365	7	3.1	0	0
17	Central Orange County	3176	365	4	3.3	0	0
18	North Coastal Orange County	3195	364	5	3.2	0	0
19	Saddleback Valley	3812	365	2	1.6	0	0
RIVERSIDE COUNTY							
22	Norco/Corona	4155	--	--	--	--	--
23	Metropolitan Riverside County 1	4144	363	3	2.5	0	0
23	Metropolitan Riverside County 2	4146	365	4	2.4	0	0
23	Mira Loma	5212	362	3	2.1	0	0
24	Perris Valley	4149	--	--	--	--	--
25	Lake Elsinore	4158	365	2	1	0	0
29	Banning Airport	4164	--	--	--	--	--
30	Coachella Valley 1**	4137	364	2	0.8	0	0
30	Coachella Valley 2**	4157	--	--	--	--	--
SAN BERNARDINO COUNTY							
32	Northwest San Bernardino Valley	5175	364	3	1.8	0	0
33	Southwest San Bernardino Valley	5817	--	--	--	--	--
34	Central San Bernardino Valley 1	5197	365	3	2.1	0	0
34	Central San Bernardino Valley 2	5203	356	4	2.4	0	0
35	East San Bernardino Valley	5204	--	--	--	--	--
37	Central San Bernardino Mountains	5181	--	--	--	--	--
38	East San Bernardino Mountains	5818	--	--	--	--	--
	DISTRICT MAXIMUM			7	5.9	0	0

ppm = parts per million of air by volume; -- = pollutant not monitored;
* = less than 12 full months of data and may not be representative; ** = Salton Sea Air Basin
(1) The federal and state one-hour standards (one-hour avg. CO > 35 ppm and > 20 ppm, respectively) were not exceeded.

TABLE 3-2 (CONTINUED)

2005 Air Quality Data – South Coast Air Quality Management District

Ozone											
							No. Days Standard Exceeded				
Source/ Receptor Area No.	Location of Air Monitoring Station	Station No.	No. Days of Data	Max. Conc. in ppm 1-hour	Max. Conc. in ppm 8-hour	4th High Conc. ppm 8-hour	Health Advisory	Federal(2)		State(3)	
							≥ 0.15 ppm 1-hour	> 0.12 ppm 1-hour	> 0.08 ppm 8-hour	> 0.09 ppm 1-hour	> 0.07 ppm 1-hour
LOS ANGELES COUNTY											
1	Central LA	087	365	0.121	0.098	0.072	0	0	1	2	2
8	Northwest Coastal LA County	091	361	0.114	0.09	0.077	0	0	1	7	5
3	Southwest Coastal LA County	094	365	0.086	0.076	0.068	0	0	0	0	1
4	South Coastal LA County 1	072	365	0.091	0.068	0.059	0	0	0	0	0
4	South Coastal LA County 2	077	--	--	--	--	--	--	--	--	--
6	West San Fernando Valley	074	365	0.138	0.113	0.098	0	2	12	30	29
7	East San Fernando Valley	069	365	0.142	0.108	0.081	0	2	2	13	12
8	West San Gabriel Valley	088	363	0.145	0.114	0.086	1	2	5	13	12
9	East San Gabriel Valley 1	060	365	0.145	0.122	0.087	1	4	6	20	14
9	East San Gabriel Valley 2	591	363	0.16	0.13	0.099	2	8	13	31	29
10	Pomona/Walnut Valley	075	361	0.14	0.112	0.096	0	4	11	26	18
11	South San Gabriel Valley	085	116*	0.077*	0.065*	0.051*	0*	0*	0*	0*	0*
12	South Central LA County	084	365	0.111	0.081	0.063	0	0	0	1	1
13	Santa Clarita Valley	090	364	0.173	0.141	0.118	5	11	47	65	69
ORANGE COUNTY											
16	North Orange County	3177	365	0.094	0.075	0.067	0	0	0	0	1
17	Central Orange County	3176	365	0.095	0.077	0.075	0	0	0	1	4
18	North Coastal Orange County	3195	338	0.085	0.073	0.068	0	0	0	0	0
19	Saddleback Valley	3812	365	0.125	0.085	0.078	0	1	1	3	6
RIVERSIDE COUNTY											
22	Norco/Corona	4155	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	4144	358	0.144	0.129	0.105	0	3	33	46	62
23	Metropolitan Riverside County 2	4146	--	--	--	--	--	--	--	--	--
23	Mira Loma	5212	358	0.135	0.116	0.105	0	3	25	34	51
24	Perris Valley	4149	365	0.126	0.103	0.082	0	1	3	11	18
25	Lake Elsinore	4158	365	0.149	0.119	0.097	1	4	15	37	46
29	Banning Airport	4164	359	0.144	0.132	0.119	0	10	39	47	66
30	Coachella Valley 1**	4137	363	0.139	0.116	0.108	0	4	35	41	63
30	Coachella Valley 2**	4157	365	0.114	0.095	0.092	0	0	18	18	36
SAN BERNARDINO COUNTY											
32	Northwest San Bernardino Valley	5175	365	0.149	0.121	0.101	1	8	15	34	34
33	Southwest San Bernardino Valley	5817	--	--	--	--	--	--	--	--	--
34	Central San Bernardino Valley 1	5197	355	0.15	0.128	0.113	2	9	23	49	47
34	Central San Bernardino Valley 2	5203	361	0.163	0.129	0.114	4	9	31	54	58
35	East San Bernardino Valley	5204	364	0.146	0.123	0.113	1	6	24	36	45
37	Central San Bernardino Mountains	5181	354	0.182	0.145	0.13	7	18	69	80	102
38	East San Bernardino Mountains	5818	--	--	--	--	--	--	--	--	--
	DISTRICT MAXIMUM			0.182	0.145	0.13	7	18	69	80	102

ppm = parts per million of air by volume; -- = pollutant not monitored;

* = less than 12 full months of data and may not be representative; ** = Salton Sea Air Basin

(2) The federal one-hour ozone standard was revoked and replaced by the eight-hour average ozone standard effective June 15, 2004.

(3) Air Resources Board has established a new eight-hour average California ozone standard of 0.07 ppm effective May 17, 2005.

TABLE 3-2 (CONTINUED)

2005 Air Quality Data – South Coast Air Quality Management District

Nitrogen Dioxide					
Source/ Receptor Area No.	**Location of Air Monitoring Station**	**Station No.**	**No. Days of Data**	**Max. Conc. in ppm 1-hour(4)**	**Annual Average(4) AAM Conc. ppm**
LOS ANGELES COUNTY					
1	Central LA	087	364	0.13	0.0278
2	Northwest Coastal LA County	091	365	0.08	0.0178
3	Southwest Coastal LA County	094	365	0.09	0.0134
4	South Coastal LA County 1	072	365	0.14	0.0241
4	South Coastal LA County 2	077	--	--	--
6	West San Fernando Valley	074	365	0.09	0.0202
7	East San Fernando Valley	069	365	0.09	0.0294
8	West San Gabriel Valley	088	363	0.1	0.0241
9	East San Gabriel Valley 1	060	365	0.09	0.0251
9	East San Gabriel Valley 2	591	360	0.09	0.0224
10	Pomona/Walnut Valley	075	365	0.08	0.0312
11	South San Gabriel Valley	085	116*	0.09*	0.0308*
12	South Central LA County	084	360	0.11	0.0312
13	Santa Clarita Valley	090	347	0.087	0.0190
ORANGE COUNTY					
16	North Orange County	3177	361	0.09	0.0249
17	Central Orange County	3176	365	0.09	0.0211
18	North Coastal Orange County	3195	355	0.09	0.0131
19	Saddleback Valley	3812	--	--	--
RIVERSIDE COUNTY					
22	Norco/Corona	4155	--	--	--
23	Metropolitan Riverside County 1	4144	365	0.08	0.0222
23	Metropolitan Riverside County 2	4146	--	--	--
23	Mira Loma	5212	346	0.08	0.016
24	Perris Valley	4149	--	--	--
25	Lake Elsinore	4158	365	0.07	0.0142
29	Banning Airport	4164	329	0.07	0.0148
30	Coachella Valley 1**	4137	352	0.1	0.012
30	Coachella Valley 2**	4157	--	--	--
SAN BERNARDINO COUNTY					
32	Northwest San Bernardino Valley	5175	364	0.1	0.0313
33	Southwest San Bernardino Valley	5817	--	--	--
34	Central San Bernardino Valley 1	5197	361	0.1	0.031
34	Central San Bernardino Valley 2	5203	361	0.08	0.0259
35	East San Bernardino Valley	5204	--	--	--
37	Central San Bernardino Mountains	5181	--	--	--
38	East San Bernardino Mountains	5818	--	--	--
	DISTRICT MAXIMUM			0.14	0.0313

ppm = parts per million of air by volume; -- = pollutant not monitored; AAM = annual arithmetic mean

* = less than 12 full months of data and may not be representative; ** = Salton Sea Air Basin

(4) The state standard is one-hour avg. > 0.25 ppm and the federal standard is annual arithmetic mean > 0.0534 ppm.

TABLE 3-2 (CONTINUED)

2005 Air Quality Data – South Coast Air Quality Management District

Sulfur Dioxide					
Source/ Receptor Area No.	**Location of Air Monitoring Station**	**Station No.**	**No. Days of Data**	**Max. Conc. in ppm 1-hour(5)**	**Max. Conc. in ppm 24-hour(5)**
LOS ANGELES COUNTY					
1	Central LA	087	357	0.07	0.01
2	Northwest Coastal LA County	091	--	--	--
3	Southwest Coastal LA County	094	365	0.04	0.012
4	South Coastal LA County1	072	365	0.04	0.01
4	South Coastal LA County 2	077	--	--	--
6	West San Fernando Valley	074	--	--	--
7	East San Fernando Valley	069	361	0.01	0.006
8	West San Gabriel Valley	088	--	--	--
9	East San Gabriel Valley 1	060	--	--	--
9	East San Gabriel Valley 2	591	--	--	--
10	Pomona/Walnut Valley	075	--	--	--
11	South San Gabriel Valley	085	--	--	--
12	South Central LA County	084	--	--	--
13	Santa Clarita Valley	090	--	--	--
ORANGE COUNTY					
16	North Orange County	3177	--	--	--
17	Central Orange County	3176	--	--	--
18	North Coastal Orange County	3195	359	0.01	0.008
19	Saddleback Valley	3812	--	--	--
RIVERSIDE COUNTY					
22	Norco/Corona	4155	--	--	--
23	Metropolitan Riverside County 1	4144	365	0.02	0.011
23	Metropolitan Riverside County 2	4146	--	--	--
23	Mira Loma	5212			
24	Perris Valley	4149	--	--	--
25	Lake Elsinore	4158	--	--	--
29	Banning Airport	4164	--	--	--
30	Coachella Valley 1**	4137	--	--	--
30	Coachella Valley 2**	4157	--	--	--
SAN BERNARDINO COUNTY					
32	Northwest San Bernardino Valley	5175	--	--	--
33	Southwest San Bernardino Valley	5817	--	--	--
34	Central San Bernardino Valley 1	5197	365	0.01*=	0.004
34	Central San Bernardino Valley 2	5203	--	--	--
35	East San Bernardino Valley	5204	--	--	--
37	Central San Bernardino Mountains	5181	--	--	--
38	East San Bernardino Mountains	5818	--	--	--
	DISTRICT MAXIMUM			0.07	0.012

ppm = parts per million of air by volume; -- = pollutant not monitored;

* = less than 12 full months of data and may not be representative; ** = Salton Sea Air Basin

(5) The state standards are one-hour avg. > 0.25 ppm and 24-hour avg. > 0.045 ppm. The federal standards are annual arithmetic mean SO2) > 0.03 ppm, three-hourr avg. > 0.50 ppm, 24-hour avg. > 0.14 ppm.

TABLE 3-2 (CONTINUED)

2005 Air Quality Data – South Coast Air Quality Management District

Suspended Particulates PM10[6]							
Source/ Receptor Area No.	Location of Air Monitoring Station	Station No.	No. Days of Data	Max. Conc. in µg/m³ 24-hour	No. (%) Samples Exceeding Standard		Annual Averages[7]
					Federal > 150 µg/m³ 24-hour	State > 50 µg/m³ 24-hour	AAM Conc. µg/m³
LOS ANGELES COUNTY							
1	Central LA	087	61	70	0	4(6.6)	29.6
8	Northwest Coastal LA County	091	--	--	--	--	--
3	Southwest Coastal LA County	094	54	44	0	0	22.9
4	South Coastal LA County 1	072	59	66	0	5(8.5)	29.6
4	South Coastal LA County 2	077	59	131	0	18(30.5)	43.4
6	West San Fernando Valley	074	--	--	--	--	--
7	East San Fernando Valley	069	61	92	0	5(8.2)	34.3
8	West San Gabriel Valley	088	--	--	--	--	--
9	East San Gabriel Valley 1	060	55	76	0	12(21.8)	35.1
9	East San Gabriel Valley 2	591	--	--	--	--	--
10	Pomona/Walnut Valley	075	--	--	--	--	--
11	South San Gabriel Valley	085	--	--	--	--	--
12	South Central LA County	084	--	--	--	--	--
13	Santa Clarita Valley	090	60	55	0	1(1.7)	25.8
ORANGE COUNTY							
16	North Orange County	3177	--	--	--	--	--
17	Central Orange County	3176	61	65	0	3(4.9)	28.2
18	North Coastal Orange County	3195	--	--	--	--	--
19	Saddleback Valley	3812	55	41	0	0	19
RIVERSIDE COUNTY							
22	Norco/Corona	4155	58	79	0	5(8.61	31.6
23	Metropolitan Riverside County 1	4144	123	123	0	69(56.1)	52
23	Metropolitan Riverside County 2	4146	--	--	--	--	--
23	Mira Loma	5212	--	--	--	--	--
24	Perris Valley	4149	60	80	0	19(31.7)	39.2
25	Lake Elsinore	4158	--	--	--	--	--
29	Banning Airport	4164	58	76	0	2(3.4)	26.6
30	Coachella Valley 1**	4137	59	66	0	2(3.4)	25.9
30	Coachella Valley 2**	4157	115	106	0	39(34.2)	45.7
SAN BERNARDINO COUNTY							
32	NW San Bernardino Valley	5175	--	--	--	--	--
33	SW San Bernardino Valley	5817	60	74	0	19(31.7)	40.8
34	Central San Bernardino Valley 1	5197	60	108	0	29(48.3)	50
34	Central San Bernardino Valley 2	5203	60	72	0	23(38.3)	42.3
35	East San Bernardino Valley	5204	58	61	0	12(20.7)	33.2
37	Central San Bernardino Mtns.	5181	56	49	0	0	25.8
38	East San Bernardino Mountains	5818	--	--	--	--	--
	DISTRICT MAXIMUM			131	0	89	52.0

ppm = parts per million of air by volume; -- = pollutant not monitored; AAM = Annual arithmetic mean; AGM = Annual geometric mean
* = less than 12 full months of data and may not be representative; ** = Salton Sea Air Basin

(6) PM10 samples were collected every sic days (every three days at Stn. Nos. 4144 & 4157).

(7) Federal and state PM10 standards are AAM >50 µg/m³ and AAM > 20 µg/m³, respectively.

TABLE 3-2 (CONTINUED)

2005 Air Quality Data – South Coast Air Quality Management District

Suspended Particulates PM2.5[8]							
Source/ Receptor Area No.	Location of Air Monitoring Station	Station No.	No. Days of Data	Max. Conc. in µg/m³ 24-hour	98th Percentile Conc. in µg/m³ 24-hour	No. (%) Samples Exceeding Standard Federal > 65 µg/m³ 24-hour	Annual Average[9] AAM Conc. µg/m³
LOS ANGELES COUNTY							
1	Central LA	087	334	73.7	53.2	2(0.6)	18.1
2	Northwest Coastal LA County	091	--	--	--	--	--
3	Southwest Coastal LA County	094	--	--	--	--	--
4	South Coastal LA County 1	072	324	53.9	41.4	0	16
4	South Coastal LA County 2	077	344	50.8	37.8	0	14.7
6	West San Fernando Valley	074	104	39.6	35.8	0	13.9
7	East San Fernando Valley	069	106	63.2	50.6	0	17.9
8	West San Gabriel Valley	088	113	62.9	43.1	0	15.1
9	East San Gabriel Valley 1	060	292*	132.7*	53.2*	1(0.3)*	17.0*
9	East San Gabriel Valley 2	591	--	--	--	--	--
10	Pomona/Walnut Valley	075	--	--	--	--	--
11	South San Gabriel Valley	085	76*	58.2*	54.0*	0*	17.0*
12	South Central LA County	084	114	54.6	48.5	0	17.5
13	Santa Clarita Valley	090	--	--	--	--	--
ORANGE COUNTY							
16	North Orange County	3177	--	--	--	--	--
17	Central Orange County	3176	333	54.7	41.9	0	14.7
18	North Coastal Orange County	3195	-	-	-	-	-
19	Saddleback Valley	3812	113	35.4	31.4	0	10.7
RIVERSIDE COUNTY							
22	Norco/Corona	4155	--	--	--	--	--
23	Metropolitan Riverside County 1	4144	334	98.7	58.4	4(1.2)	21
23	Metropolitan Riverside County 2	4146	110	95	41	1(0.9)	18
23	Mira Loma	5212	--	--	--	--	--
24	Perris Valley	4149	--	--	--	--	--
25	Lake Elsinore	4158	--	--	--	--	--
29	Banning Airport	4164	--	--	--	--	--
30	Coachella Valley 1**	4137	83*	26.2*	25.0*	0*	8.4*
30	Coachella Valley 2**	4157	104	44.4	25	0	10.5
SAN BERNARDINO COUNTY							
32	Northwest San Bernardino Valley	5175	--	--	--	--	--
33	Southwest San Bernardino Valley	5817	110	87.8	49.6	1(0.9)	18.8
34	Central San Bernardino Valley 1	5197	109	96.8	48.2	1(0.9)	18.9
34	Central San Bernardino Valley 2	5203	109	106.3	43.4	1(0.9)	17.4
35	East San Bernardino Valley	5204	--	--	--	--	--
37	Central San Bernardino Mountains	5181	--	--	--	--	--
38	East San Bernardino Mountains	5818	51	38.8	38.8	0	12.1
	DISTRICT MAXIMUM			132.7	58.4	4	21.0

ppm = parts per million of air by volume; -- = pollutant not monitored; AAM = Annual arithmetic mean

* = less than 12 full months of data and may not be representative; ** = Salton Sea Air Basin

(8) PM2.5 samples were collected every three days at all sites except for Station. Nos. 060, 072, 077, 087, 3176, and 4144, where samples were taken every day, and Station. No. 5818, where samples were collected every six days.

(9) Federal PM2.5 standard is AAM > 15 µg/m³. State standard is AAM > 12 µg/m³ (state standard was established on July 5, 2003.

TABLE 3-2 (CONTINUED)

2005 Air Quality Data – South Coast Air Quality Management District

Particulates TSP(10)					
Source/ Receptor Area No.	Location of Air Monitoring Station	Station No.	No. Days of Data	Max. Conc. in µg/m³ 24-hour	Annual Average AAM Conc. µg/m³
LOS ANGELES COUNTY					
1	Central LA	087	66	141	66.7
2	Northwest Coastal LA County	091	59	89	41.6
3	Southwest Coastal LA County	094	--	--	--
4	South Coastal LA County 1	072	61	112	55.5
4	South Coastal LA County 2	077	--	--	--
6	West San Fernando Valley	074	--	--	--
7	East San Fernando Valley	069	--	--	--
8	West San Gabriel Valley	088	58	89	44.6
9	East San Gabriel Valley 1	060	58	142	70.9
9	East San Gabriel Valley 2	591	--	--	--
10	Pomona/Walnut Valley	075	--	--	--
11	South San Gabriel Valley	085	39*	104*	66.4*
12	South Central LA County	084	57	118	67.4
13	Santa Clarita Valley	090	--	--	--
ORANGE COUNTY					
16	North Orange County	3177	--	--	--
17	Central Orange County	3176	--	--	--
18	North Coastal Orange County	3195	--	--	--
19	Saddleback Valley	3812	--	--	--
RIVERSIDE COUNTY					
22	Norco/Corona	4155	--	--	--
23	Metropolitan Riverside County 1	4144	59	173	96.7
23	Metropolitan Riverside County 2	4146	60	125	75.8
23	Mira Loma	5212			
24	Perris Valley	4149	--	--	--
25	Lake Elsinore	4158	--	--	--
29	Banning Airport	4164	--	--	--
30	Coachella Valley 1**	4137	--	--	--
30	Coachella Valley 2**	4157	--	--	--
SAN BERNARDINO COUNTY					
32	Northwest San Bernardino Valley	5175	57	94	53.4
33	Southwest San Bernardino Valley	5817	--	--	--
34	Central San Bernardino Valley 1	5197	61	295	100.2
34	Central San Bernardino Valley 2	5203	60	175	87.1
35	East San Bernardino Valley	5204	--	--	--
37	Central San Bernardino Mountains	5181	--	--	--
38	East San Bernardino Mountains	5818			
	DISTRICT MAXIMUM			295	100.2

ppm = parts per million of air by volume; -- = pollutant not monitored; AAM = Annual arithmetic mean

* = less than 12 full months of data and may not be representative; ** = Salton Sea Air Basin

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

TABLE 3-2 (CONTINUED)

2005 Air Quality Data – South Coast Air Quality Management District

Lead[11]				
Source/ Receptor Area No.	**Location of Air Monitoring Station**	**Station No.**	**Max. Monthly Average Conc.[12] µg/m³**	**Max. Quarterly Average Conc.[12] µg/m³**
LOS ANGELES COUNTY				
1	Central LA	087	0.02	0.02
2	Northwest Coastal LA County	091	--	--
3	Southwest Coastal LA County	094	--	--
4	South Coastal LA County 1	072	0.01	0.01
4	South Coastal LA County 2	077	--	--
6	West San Fernando Valley	074	--	--
7	East San Fernando Valley	069	--	--
8	West San Gabriel Valley	088	--	--
9	East San Gabriel Valley 1	060	--	--
9	East San Gabriel Valley 2	591	--	--
10	Pomona/Walnut Valley	075	--	--
11	South San Gabriel Valley	085	0.03	0.03
12	South Central LA County	084	0.03	0.02
13	Santa Clarita Valley	090	--	--
ORANGE COUNTY				
16	North Orange County	3177	--	--
17	Central Orange County	3176	--	--
18	North Coastal Orange County	3195	--	--
19	Saddleback Valley	3812	--	--
RIVERSIDE COUNTY				
22	Norco/Corona	4155	--	--
23	Metropolitan Riverside County 1	4144	0.02	0.02
23	Metropolitan Riverside County 2	4146	0.01	0.01
23	Mira Loma	5212	--	--
24	Perris Valley	4149	--	--
25	Lake Elsinore	4158	--	--
29	Banning Airport	4164	--	--
30	Coachella Valley 1**	4137	--	--
30	Coachella Valley 2**	4157	--	--
SAN BERNARDINO COUNTY				
32	Northwest San Bernardino Valley	5175	0.02	0.02
33	Southwest San Bernardino Valley	5817	--	--
34	Central San Bernardino Valley 1	5197	--	--
34	Central San Bernardino Valley 2	5203	0.02	0.01
35	East San Bernardino Valley	5204	--	--
37	Central San Bernardino Mountains	5181	--	--
38	East San Bernardino Mountains	5818		
	DISTRICT MAXIMUM		0.03	0.03

ppm = parts per million of air by volume; -- = pollutant not monitored;
* = less than 12 full months of data and may not be representative; ** = Salton Sea Air Basin

(11) Lead was determined from samples collected every six days by high volume sampler method, on glass fiber filter media.

(12) Federal and state standards (qtrly. avg. > 1.5 µg/m³ and monthly avg. > 1.5 µg/m³, respectively) were not exceeded.

TABLE 3-2 (CONCLUDED)

2005 Air Quality Data – South Coast Air Quality Management District

Sulfates[13]				
Source/ Receptor Area No.	Location of Air Monitoring Station	Station No.	Max. Conc. in µg/m³ 24-hour	No. (%) Samples Exceeding Standard State ≥ 25 µg/m³ 24-hour
LOS ANGELES COUNTY				
1	Central LA	087	14.2	0
2	Northwest Coastal LA County	091	11.7	0
3	Southwest Coastal LA County	094	--	0
4	South Coastal LA County 1	072	16.8	0
4	South Coastal LA County 2	077	--	--
6	West San Fernando Valley	074	--	--
7	East San Fernando Valley	069	--	--
8	West San Gabriel Valley	088	11.2	0
9	East San Gabriel Valley 1	060	10.2	0
9	East San Gabriel Valley 2	591	--	--
10	Pomona/Walnut Valley	075	--	--
11	South San Gabriel Valley	085	9.9	0
12	South Central LA County	084	17.3	0
13	Santa Clarita Valley	090	--	--
ORANGE COUNTY				
16	North Orange County	3177	--	--
17	Central Orange County	3176	--	--
18	North Coastal Orange County	3195	--	--
19	Saddleback Valley	3812	--	--
RIVERSIDE COUNTY				
22	Norco/Corona	4155	--	--
23	Metropolitan Riverside County 1	4144	10.3	0
23	Metropolitan Riverside County 2	4146	10.3	0
23	Mira Loma	5212	--	--
24	Perris Valley	4149	--	--
25	Lake Elsinore	4158	--	--
29	Banning Airport	4164	--	--
30	Coachella Valley 1**	4137	--	--
30	Coachella Valley 2**	4157	--	--
SAN BERNARDINO COUNTY				
32	NW San Bernardino Valley	5175	8.4	0
33	SW San Bernardino Valley	5817	--	--
34	Central San Bernardino Valley 1	5197	10.4	0
34	Central San Bernardino Valley 2	5203	10.9	0
35	East San Bernardino Valley	5204	--	--
37	Central San Bernardino Mtns.	5181	--	--
38	East San Bernardino Mountains	5818		--
	DISTRICT MAXIMUM		17.3	0

ppm = parts per million of air by volume; -- = pollutant not monitored;

* = less than 12 full months of data and may not be representative; ** = Salton Sea Air Basin

(13) Sulfate was determined from samples collected every six days by high volume sampler method, on glass fiber filter media.

Criteria Pollutants

Carbon Monoxide

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

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

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

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

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

Carbon monoxide concentrations were measured at 25 locations in the Basin and neighboring SSAB areas in 2005. Carbon monoxide concentrations did not exceed the standards in 2005. The highest eight-hour average carbon monoxide concentration recorded (5.9 ppm in the South Central Los Angeles County area) was 62 percent of the federal carbon monoxide standard. The maximum annual average nitrogen dioxide concentration (0.0313 ppm recorded in the Northwest San Bernardino Valley area) was 59 percent of the federal standard. Concentrations of the remaining pollutants remained well below the federal standards.

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

Ozone

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

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

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

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

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

In 2005, the SCAQMD regularly monitored ozone concentrations at 29 locations in the Basin and SSAB. All areas monitored were below the stage 1 episode level (0.20 ppm), but the maximum concentrations in the Basin exceeded the health advisory level (0.15 ppm). Maximum ozone concentrations in the SSAB areas monitored by the SCAQMD were lower than in the Basin and were below the health advisory level.

In 2005, the maximum ozone, PM10 and PM2.5 concentrations in the Basin continued to exceed federal standards by wide margins. Maximum one-hour and eight-hour average ozone concentrations (0.182 ppm and 0.145 ppm, both recorded in Central San Bernardino Mountains areas) were 146 and 171 percent of the federal standards, respectively. Maximum 24-hour average and annual average PM10 concentrations (131 $\mu g/m^3$ recorded in South Coastal Los Angeles County area and 52.0 $\mu g/m^3$ recorded in the Metropolitan Riverside County area) were 87 and 103 percent of the federal 24-hour and annual average standards, respectively. Maximum 24-hour average and annual average PM2.5 concentrations (132.7 $\mu g/m^3$ recorded in East San Gabriel Valley area and 21.0 $\mu g/m^3$ recorded in Metropolitan Riverside County area) were 203 and 139 percent of the federal 24-hour (65 $\mu g/m^3$) and annual average standards, respectively.

In 1997, the USEPA promulgated a new 8-hour national ambient air quality standard for ozone. Soon thereafter, a court decision ordered that the USEPA could not enforce the new standard until adequate justification for the new standard was provided. The USEPA appealed the decision to the Supreme Court. On February

27, 2001, the Supreme Court upheld USEPA's authority and methods to establish clean air standards. The Supreme Court, however, ordered USEPA to revise its implementation plan for the new ozone standard. The EPA has since adopted the new 8-hour standard. Meanwhile, the California Air Resources Board (CARB) and local air districts continue to collect technical information in order to prepare for an eventual State Implementation Plan (SIP) to reduce unhealthful levels of ozone in areas violating the new federal standard. California has previously developed a SIP for the one-hour ozone standard, which has been approved by USEPA for the South Coast Air Basin.

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

Nitrogen Dioxide

NO2 is a reddish-brown gas with a bleach-like odor. Nitric oxide (NO) is a colorless gas, formed from the nitrogen (N2) and oxygen (O2) in air under conditions of high temperature and pressure which are generally present during combustion of fuels; NO reacts rapidly with the oxygen in air to form NO2. NO2 is responsible for the brownish tinge of polluted air. The two gases, NO and NO2, are referred to collectively as NOx. 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 PM2.5 and PM10.

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

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

In 2005, nitrogen dioxide concentrations were monitored at 24 locations. No area of the Basin or SSAB exceeded the federal or state standards for nitrogen dioxide. The Basin has not exceeded the federal standard for nitrogen dioxide (0.0534 ppm) since 1991, when the Los Angeles County portion of the Basin recorded the last exceedance of the standard in any U.S. county. The nitrogen dioxide state standard was not exceeded at any SCAQMD monitoring location in 2005. The highest one-hour average concentration recorded (0.13 ppm in Central Los Angeles) was 50 percent of the state standard. NOx emission reductions continue to be necessary because it is a precursor to both ozone and PM (PM2.5 and PM10) concentrations.

Sulfur Dioxide

SO2 is a colorless gas with a sharp odor. It reacts in the air to form sulfuric acid (H2SO4), which contributes to acid precipitation, and sulfates, which are components of PM10 and PM2.5. 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 2005 at any of the seven SCAQMD locations monitored. Though sulfur dioxide

concentrations remain well below the standards, sulfur dioxide is a precursor to sulfate, which is a component of fine particulate matter, PM10, and PM2.5. Standards for PM10 and PM2.5 were both exceeded in 2005. Sulfur dioxide was not measured at SSAB sites in 2005. Historical measurements showed concentrations to be well below standards and monitoring has been discontinued.

Particulate Matter (PM10 and PM2.5)

Of great concern to public health are the particles small enough to be inhaled into the deepest parts of the lung. Respirable particles (particulate matter less than about 10 micrometers in diameter) can accumulate in the respiratory system and aggravate health problems such as asthma, bronchitis and other lung diseases. Children, the elderly, exercising adults, and those suffering from asthma are especially vulnerable to adverse health effects of PM10 and PM2.5.

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

Daily fluctuations in fine particulate matter concentration levels have also been related to hospital admissions for acute respiratory conditions, to school and kindergarten absences, to a decrease in respiratory function in normal children and to increased medication use in children and adults with asthma. Studies have also shown lung function growth in children is reduced with long-term exposure to particulate matter.

The elderly, people with pre-existing respiratory and/or cardiovascular disease and children appear to be more susceptible to the effects of PM10 and PM2.5.

The SCAQMD monitored PM10 concentrations at 20 locations in 2005. The federal annual PM10 standard was exceeded at only one location in the SCAQMD in 2005. Highest PM10 concentrations were recorded in Riverside and San Bernardino counties in and around the Metropolitan Riverside County area and further inland in San Bernardino Valley areas. The federal 24-hour standard was not exceeded at any of the locations monitored in 2005. The much more stringent state standards were exceeded in most areas.

The SCAQMD began regular monitoring of PM2.5 in 1999 following the U.S. EPA's adoption of the national PM2.5 standards in 1997. In 2005, PM2.5 concentrations were monitored at 19 locations throughout the district. Maximum 24-hour average concentration has increased at some locations compared to 2001, the basis of the 2003 AQMP air quality data. The PM2.5 annual average concentrations and the highest 98th percentile PM2.5 concentrations (which the federal 24-hour PM2.5 standard is based on), however, are lower than 2001 levels at all locations monitored.

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

Lead

Lead in the atmosphere is present as a mixture of a number of lead compounds. Leaded gasoline and lead smelters have been the main sources of lead emitted into the air. Due to the phasing out of leaded gasoline, there was a dramatic reduction in atmospheric lead in the Basin over the past two 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 bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of lead because of previous environmental lead exposure of their mothers.

The federal and state standards for lead were not exceeded in any area of the SCAQMD in 2005. There have been no violations of the standards at the SCAQMD's regular air monitoring stations since 1982, as a result of removal of lead from gasoline. The maximum quarterly average lead concentration (0.03 μg/m3) was two percent of the federal standard. Additionally, special monitoring stations immediately adjacent to stationary sources of lead (e.g., lead smelting facilities) have

not recorded exceedances of the standards in localized areas of the Basin since 1991 and 1994 for the federal and state standards, respectively. The maximum monthly and quarterly average lead concentration (0.44 μg/m3 and 0.34 μg/m3 in Central Los Angeles), measured at special monitoring sites immediately adjacent to stationary sources of lead were 29 and 23 percent of the state and federal standards, respectively. No lead data were obtained at SSAB and Orange County stations in 2005, and because historical lead data showed concentrations in SSAB and Orange County areas to be well below the standard, measurements have been discontinued.

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 sulfur dioxide. 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 PM2.5.

Most of the health effects associated with fine particles and sulfur dioxide 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 non-acidic particles like ammonium sulfate. Whether the effects are attributable to acidity or to particles remains unresolved.

In 2005, the state sulfate standard was not exceeded anywhere in the Basin. No sulfate data were obtained at SSAB and Orange County stations in 2005. Historical sulfate data showed concentrations in the SSAB and Orange County areas to be well below the standard, and measurements have been discontinued.

Visibility Reducing Particles

Since deterioration of visibility is one of the most obvious manifestations of air pollution and plays a major role in the public's perception of air quality, the state of California has adopted a standard for visibility or visual range. Until 1989, the standard was based on visibility estimates made by human observers. The standard

was changed to require measurement of visual range using instruments that measure light scattering and absorption by suspended particles.

Volatile Organic Compounds

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

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

Greenhouse Gases

The SCAQMD adopted a "Policy on Global Warming and Stratospheric Ozone Depletion" on April 6, 1990. The policy commits the SCAQMD to consider global impacts in rulemaking and in drafting revisions to the AQMP. In March 1992, the SCAQMD Governing Board reaffirmed this policy and adopted amendments to the policy to include the following directives:

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

Gases that trap heat in the atmosphere are often called greenhouse gases (GHGs), comparable to a greenhouse. GHGs are emitted by natural processes and human activities. The accumulation of greenhouse gases in the atmosphere regulates the earth's temperature. Global warming is the observed increase in average temperature of the earth's surface and atmosphere. The primary cause of global warming is an increase of GHGs in the atmosphere. The six major GHGs are carbon dioxide

(CO2), methane (CH4), nitrous oxide (N2O), sulfur hexafluoride (SF6), hydrofluorocarbons (HFCs), and perfluorocarbon (PFCs). The GHGs absorb longwave radiant energy emitted by the Earth, which warms the atmosphere. The GHGs also emit longwave radiation both upward to space and back down toward the surface of the Earth. The downward part of this longwave radiation emitted by the atmosphere is known as the "greenhouse effect." Emissions from human activities such as electricity production and vehicles have elevated the concentration of these gases in the atmosphere.

CO2 is an odorless, colorless natural greenhouse gas. Natural sources include the following: decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic (human caused) sources of CO2 are from burning coal, oil, natural gas, and wood. CH_4 is a flammable gas and is the main component of natural gas. N_2O, also known as laughing gas, is a colorless greenhouse gas. Some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. HFCs are synthetic man-made chemicals that are used as a substitute for chlorofluorocarbons (whose production was stopped as required by the Montreal Protocol) for automobile air conditioners and refrigerants. The two main sources of PFCs are primary aluminum production and semiconductor manufacture. SF_6 is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF_6 is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

Scientific consensus, as reflected in recent reports issued by the United Nations Intergovernmental Panel on Climate Change, is that the majority of the observed warming over the last 50 years can be attributable to increased concentration of GHGs in the atmosphere due to human activities. Industrial activities, particularly increased consumption of fossil fuels (e.g., gasoline, diesel, wood, coal, etc.), have heavily contributed to the increase in atmospheric levels of GHGs. As reported by the California Energy Commission (CEC), California contributes 1.4 percent of the global and 6.2 percent of the national GHGs emissions (CEC,2004). The GHG inventory for California is presented in Table 3-3 (CEC, 2005). Approximately 80 percent of GHGs in California are from fossil fuel combustion (see Table 3-3).

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

- By 2010, Reduce to 2000 Emission Levels,
- By 2020, Reduce to 1990 Emission Levels, and
- By 2050, Reduce to 80 percent below 1990 Levels.

TABLE 3-3

California GHG Emissions and Sinks Summary
(Million metric tons of CO_2 equivalence)

Gas/Source	1990	2004
Carbon Dioxide (Gross)	**317.4**	**355.9**
Fossil Fuel Combustion	306.4	342.4
Residential	29.0	27.9
Commercial	12.6	12.2
Industrial	66.1	67.1
Transportation	161.1	188.0
Electricity Generation (In State)	36.5	47.1
No End Use Specified	1.1	0.2
Cement Production	4.6	6.5
Lime Production	0.2	0.1
Limestone & Dolomite Consumption	0.2	0.3
Soda Ash Consumption	0.2	0.2
Carbon Dioxide Consumption	0.1	0.1
Waste Combustion	0.1	0.1
Land Use Change & Forestry Emissions	5.5	6.1
Land Use Change & Forestry Sinks	(22.7)	(21.0)
Carbon Dioxide (Net)	**294.7**	**334.9**
Methane (CH4)	**26.0**	**27.9**
Petroleum & Natural Gas Supply System	1.0	0.5
Natural Gas Supply System	1.6	1.4
Landfills	8.1	8.4
Enteric Fermentation	7.5	7.2
Manure Management	3.3	6.0
Flooded Rice Fields	0.4	0.6
Burning Ag & Other Residues	0.1	0.1
Wastewater Treatment	1.4	1.7
Mobile Source Combustion	1.2	0.6
Stationary Source Combustion	1.3	1.3
Nitrous Oxide (N2O)	**32.7**	**33.3**
Nitric Acid Production	0.4	0.2
Waste Combustion	0.0	0.0
Agricultural Soil Management	14.7	19.2
Manure Management	0.8	0.9
Burning Ag Residues	0.1	0.1
Wastewater	0.9	1.1
Mobile Source Combustion	15.6	11.8
Stationary Source Combustion	0.2	0.2
High Global Warming Potential Gases (HFCs, PFCs & SF6)	**7.1**	**14.2**
Substitution of Ozone-Depleting Substances	4.5	12.6
Semiconductor Manufacture	0.4	0.6
Electricity Transmission & Distribution (SF6)	2.3	1.0
Gross California Emissions (w/o Electric Imports)	**383.3**	**431.3**
Land Use Change & Forestry Sinks	**(22.7)**	**(21.0)**
Net Emissions (w/o Electric Imports)	**360.6**	**410.3**
Electricity Imports	**43.3**	**60.8**
Gross California Emissions with Electricity Imports	**426.6**	**492.1**
Net California Emissions with Electricity Imports	**403.9**	**471.1**

Source: CEC, 2005

On September 27, 2006, Assembly Bill (AB) 32, the California Global Warming Solutions Act, of 2006 was enacted by the State of California and signed by Governor Schwarzenegger. AB32 expanded on Executive Order #S-3-05. The legislature stated that "global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California." AB32 represents the first enforceable state-wide program in the U.S. to cap all GHG emissions from major industries that includes penalties for non-compliance. While acknowledging that national and international actions will be necessary to fully address the issue of global warming, AB32 lays out a program to inventory and reduce greenhouse gas emissions in California and from power generation facilities located outside the state that serve California residents and businesses.

AB32 will require CARB to:

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

The combination of Executive Order #S-3-05 and AB32 will require significant development and implementation of energy efficient technologies and shifting of energy production to renewable sources.

Climate Change

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

The United Nations Intergovernmental Panel on Climate Change constructed several emission trajectories of greenhouse gases needed to stabilize global temperatures and climate change impacts. It concluded that a stabilization of greenhouse gases at 400-450 ppm carbon dioxide-equivalent concentration is required to keep global mean warming below 2° Celsius, which is assumed to be necessary to avoid dangerous climate change.

The potential health effects from global climate change may arise from temperature increases, climate-sensitive diseases, extreme events, and air quality. There may be direct temperature effects through increases in average temperature leading to more extreme heat waves and less extreme cold spells. Those living in warmer climates are likely to experience more stress and heat-related problems (i.e., heat rash and heat stroke). In addition, climate sensitive diseases may increase, such as those spread by mosquitoes and other disease carrying insects. Those diseases include malaria, dengue fever, yellow fever, and encephalitis. Extreme events such as flooding and hurricanes can displace people and agriculture, which would have negative consequences. Drought in some areas may increase, which would decrease water and food availability. Global warming may also contribute to air quality problems from increased frequency of smog and particulate air pollution.

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

EXISTING EMISSIONS AND CREDIT AVAILABILITY

New Source Review

Federal and state laws require the development and implementation of NSR programs to ensure that the operation of new, modified, or relocated stationary emission sources in nonattainment areas does not interfere with the attainment and maintenance of California and national ambient air quality standards (CAAQS and NAAQS). Local NSR programs must, at a minimum, comply with the requirements established pursuant to federal and state law, which include: (1) pre-construction review; (2) the installation of BACT; and, (3) the offsetting of emission increases by providing emission reductions or purchasing ERCs. The SCAQMD originally adopted its NSR program in 1976. U.S. EPA initially approved the SCAQMD's NSR program into the California State Implementation Plan (SIP) initially on January 21, 1981, approved the revised NSR program in 1996, and adopted subsequent amendments to the NSR program into the SIP on several occasions.

NSR Tracking

The SCAQMD's NSR tracking system provides an accounting system that identifies the sources of ERCs including orphan shutdowns, surplus reductions and previous NSR balances, and the accounts that ERCs are allocated to include Rule 1304 exemptions/adjustments and the Priority Reserve. Upon adoption, Rule 1309.1 established a Priority Reserve account to provide ERCs for specific priority sources, including essential public services, innovative technology and research operations.

An essential public service includes sewage treatment facilities, prisons, police facilities, fire fighting facilities, schools, hospitals, landfills, water operations and public transit. To qualify to draw from the Priority Reserve bank of credits, an essential public service must provide all required offsets available by modifying sources to best available retrofit control technology (BARCT) levels at the same facility or demonstrate that no sources within the facility could be modified to BARCT levels to provide offsets.

According to the current Rule 1309.1, the Priority Reserve is funded quarterly on March 31, June 30, September 30 and December 31, and the amount of this allocation does not exceed the amounts listed in Table 3-4.

TABLE 3-4

Priority Reserve Allocations

Air Contaminant	**Quarterly Allocation** (pounds per day)
Volatile Organic Compounds	500
Nitrogen Oxides (NO_x)	250
Sulfur Dioxide (SOx)	60
Particulate Matter (PM10)	125
Carbon Monoxide (CO)	250

An annual report is released which focuses on the supply and demand for creditable emission reductions and required offsets for sources which the SCAQMD has taken responsibility to provide offsets (i.e., Priority Reserve, etc.). The information in that report is derived from the SCAQMD's NSR tracking system, with the most recent report presented to the SCAQMD's Governing Board on February 2, 2007. The balance of creditable emission reductions available for future compliance with the federal offset requirement is listed in Table 3-5.

TABLE 3-5

NSR Balance (for activity between August 2002 – Projected December 2007)

Source	VOC (lbs/day)	NO_x (lbs/day)	SOx (lbs/day)	CO (lbs/day)	PM10 (lbs/day)
Previous NSR Balance	137,400	57,680	21,440	15,680	15,360
Credits Received (from orphan shutdowns, surplus reductions and other discounts of ERCs)	68,870	23,280	5,598	26,663	15,279
Offsets Used (by Rule 1304 exemptions/adjustments[12] and Priority Reserve)	- 5,743	-7,516	-178	-17,765	-2,616
Surplus Adjustment	-20,580	-14,960	-6,300	0	-200
Unused Initial Balances	-43,040	-9,040	-14,840	0	0
NSR Balance (previous balance + creditable reductions – increases)	**136,907**	**49,444**	**5,720**	**24,578**	**27,823**

Source: NSR Status Report, Table 1, 2 and 3 – Final Determinations of Equivalency for SCAQMD's Federal Offset Accounts (SCAQMD, February 2, 2007 Governing Board Public Hearing Agenda No. 37)

Table 3-6 lists the current active ERCs as of April 2007[13] held by companies, emissions credit brokers, organizations, or individuals. While these ERCs are valid and active, not all are available for sale. Some companies will hold onto their ERCs for future business growth and/or to modernize their facility. Therefore, the total ERC holdings, as listed in Table 3-6, are not necessarily representative of the total ERCs available for sale because there is a portion of ERCs that are least likely to be traded[14].

TABLE 3-6

Non-SCAQMD Active ERCs (as of April 2007)

Source	VOC (lbs/day)	NO_x (lbs/day)	SOx (lbs/day)	CO (lbs/day)	PM10 (lbs/day)
Non-SCAQMD Active ERCs	12,832	1,235	784	2,290	781

[12] Several offset exemptions are provided in Rule 1304 and are either beneficial to the environment or driven by severe economic needs.
[13] SCAQMD Website (http://www.aqmd.gov/permit/spreadsheets/CurrentActiveERCList.xls)
[14] "White Paper on Modernization of Emission Reduction Credit System" (SCAQMD, May 2002); May 2002 Governing Board Meeting Agenda No. 30

CHAPTER 4

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

INTRODUCTION

The CEQA Guidelines require environmental documents to identify significant environmental effects that may result from a proposed project [CEQA Guidelines §15126.2(a)]. 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].

Rule 1309.1

As indicated in Chapter 1, the SCAQMD is readopting amendments to Rule 1309.1 to minimize delays in accessing Rule 1309.1's Priority Reserve if the Court rules against the SCAQMD in the current lawsuit. Amendments to Rule 1309.1 are again being proposed because of the need for new power plant construction to meet future anticipated electricity demand. In order to avoid the energy crisis experienced in the state of California during years 2000 and 2001, new power generating facility projects are necessary for a number of reasons including maintaining public safety, assuring operation of health-related equipment, avoiding potential air traffic control, traffic light and congestion problems, and reducing emissions from standby diesel generators in the event of rolling blackouts. The proposed amendments to Rule 1309.1 do not require construction of new power plants. Power plants are typically long-term, high-capital projects that require sufficient time to design and construct prior to operation and, preferentially, tend to be located near the communities they will serve. The proposed amendments were developed due to the future anticipated increased demand for electricity and the possibility that the supply of PM10, SOx and CO ERCs in the open market may be limited. Clean and efficient new power plants are desirable not only because they will help meet increasing electricity demand, but also would minimize the use of emergency standby diesel generators that would be used as an alternative power source in the event of future blackouts. Nevertheless, each new power plant would be considered a "project" and subject to the requirements of CEQA. A CEQA review and analysis would be required by the public agency with primary approval authority over the project, which may include: the local land use agency, California Energy Commission (CEC), or the California Public Utilities Commission (CPUC). The same is true for future energy projects of regional significance, which include LNG and crude oil projects.

It is assumed that new energy projects that require an air quality permit for an emission source (as opposed to the installation or modification of an emission source at an

existing facility) would be reviewed for CEQA applicability by the appropriate lead agency. As a responsible agency for typical energy projects, SCAQMD permits rely on the CEQA document prepared by the lead agency. Therefore, for the majority of energy projects, potential impacts associated with the siting of a new facility would be analyzed and mitigated as necessary pursuant to CEQA by the appropriate lead agency. In the event that other public agencies do not assume the lead agency role under CEQA, SCAQMD permit process procedures would ensure these projects would be analyzed for CEQA applicability[15].

The evaluation of the environmental checklist in the NOP/IS and the impacts analyzed in this chapter reflect the direct effect of adopting PAR 1309.1. The direct effect of adopting PAR 1309.1 is allowing specified facilities limited access to Rule 1309.1's Priority Reserve ERCs and the use of those ERCs by the specified facilities that would not otherwise occur without the proposed amendments.

Opponents of allowing EGFs access to PAR 1309.1's Priority Reserve have argued that the proposed project will assist in the approval of an air quality permit, which is a critical step in obtaining an approval to site a project. As a result, opponents have argued that PAR 1309.1 indirectly creates environmental impacts in the future from siting, constructing and operating the facility. Since there are potential adverse environmental impacts from siting a project, such as construction and operational impacts, facilities expected to take advantage of accessing the Priority Reserve would increase the likelihood of being sited, thus, potentially generating these impacts. It is expected these potential environmental impacts will be fully evaluated and disclosed in a separate CEQA document by the lead agency in charge of siting the project (e.g., California Energy Commission, etc.). Although potential indirect impacts from the constructing and operating possible affected facilities are evaluated in Chapter 5 of this Draft PEA, the SCAQMD does not have siting authority and for most environmental topic areas other than air quality has limited control over the implementation and mitigation of such impacts.

Finally, evaluations of potential adverse environmental impacts from unknown future projects that may receive air quality permits under the current and potential future proposed amendments to Rule 1309.l would be speculative and, except for publicly owned biosolids treatment facilities[16], are not included herein. CEQA Guidelines §15145 states, "If after thorough investigation, a lead agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact."

[15] The SCAQMD's permit processing procedures include the requirement that an applicant complete and submit a 400-CEQA form. This form is used to determine CEQA applicability for the proposed project.

[16] Publicly owned biosolids treatment facilities are evaluated herein because representatives of these types of facilities have provided estimates of future biosolids treatment demand.

The actual amount of mitigation fees and identity of emission reduction projects funded by the proposed mitigation fees are not known with certainty at this time and, therefore, the potential impacts from these projects are also speculative.

Rule 1315

The PRR 1315 is intended to memorialize and formalize the accounting procedures used by SCAQMD for federal NSR offset tracking. The SCAQMD has been maintaining a tracking system for federal NSR offsets since 1990 and using the procedure in PRR 1315 since 2002. The purpose of PRR 1315 is not to govern availability of credits, but to incorporate the federal NSR offsets accounting procedures into a rule. U.S. EPA has requested that SCAQMD incorporate the accounting procedures into a rule to formalize the tracking system. In addition to formalizing the federal NSR offsets tracking system, PRR 1315 makes the NSR offsets program more stringent by providing backstop measures, as requested by U.S. EPA, in case there are any shortfalls in SCAQMD's federal NSR offset accounts. However, the occurrence of any shortfall is speculative, as SCAQMD has never experienced such an event. Therefore, PRR 1315 does not have any significant adverse environmental impacts as explained further in the following paragraphs.

PRR 1315 does not, directly or indirectly, result in any adverse effect on the environment. Rule 1315 does take credit for all reductions which have been determined to be "surplus" under the Federal law. However, it does not in itself result in any more credits becoming available for use by projects, which may themselves have an effect on the environment. Access to credits is provided through other SCAQMD rules, such as 1309.1 (Priority Reserve), and 1304 (Exemptions).

PRR 1315 is strictly for federal NSR offset tracking, as a result, SCAQMD is not reducing the stringency of state minor source NSR regulations. In addition, CARB has reviewed the PRR 1315 and has not raised any issues in relation to the stringency of state minor source NSR regulations. Therefore, there is no backsliding in relation to state requirements.

Use of emission credits resulting from minor source orphan shutdowns is neither less stringent than current EPA regulations nor a violation of federal law. Orphan shutdowns have always been creditable to SCAQMD's offset accounts; SCAQMD has not quantified minor source orphan shutdowns historically because the balances in the SCAQMD's offset accounts were sufficient for foreseeable needs so it was not necessary for staff to devote the resources to quantify and account for this source of credits. Furthermore, minor sources do (and always have) generate ERCs pursuant to SCAQMD Rule 1309. ERCs generated by minor sources can be and are used by major sources as emissions offsets pursuant to SCAQMD Rule 1303. U.S. EPA approved Rules 1302 and 1309 into the SIP in 1996, and has also agreed that minor source orphan shutdowns are creditable and has not considered this to be contrary to any EPA regulations.

Furthermore, the opinion expressed by opponents of PAR 1309.1 that "the CAA's state authority retention clause…grants state power to make federal standards more stringent, but not less stringent" is not correct, as states have no authority to affect federal standards. While it is true that 42U.S.C § 7416 precludes a state from adopting or enforcing emission standards less stringent that those set forth under §§ 7411 or 7412, neither of those sections apply to emission credits.

One of the purposes of PRR 1315 is in fact to identify offsets that are surplus to federal NSR requirements. PRR 1315 does not affect state offsets which are separately accounted for relative to state NSR purposes. In evaluating the federal NSR offset tracking system, U.S. EPA has agreed that the only credits used by SCAQMD are those that are surplus to federal NSR requirements. All the credits allowed under PR 1315 have been carefully reviewed to assure that they are surplus to federal requirements.

Retroactive adjustments to SCAQMD's offset account tracking and accounting have no impact on the contemporaneousness of the offsets in SCAQMD's offset accounts. The notion of emissions credits being contemporaneous with the increases they are used to offset refers to the timing of the emission reductions underlying the credits and the timing of the emission increases that are being offset; it does not refer to the timing of the accounting. That is, the emission reduction satisfies the contemporaneous test if it exists on or before the time of the emission increase. SCAQMD only uses credits after such reductions have taken place. All credits referred to in PRR 1315 are in existence – i.e., the emission reductions had already occurred – prior to the time they are used and, therefore are considered to be contemporaneous with the emissions increase.

For federal accounting purposes only, SCAQMD is taking the difference of SCAQMD's NSR offset ratio of 1.2 to 1.0 and the required federal offset ratio of 1.0 to 1.0 as a credit when an ERC is used at a major source for SOx, CO or PM10. The additional 0.2 portion is not "relied' on as federal requirements for major source permitting since only a 1.0 to 1.0 offset ratio is required to meet federal NSR requirements. The 0.2 portion would be considered surplus for federal NSR accounting purposes which makes it available as a credit. Therefore it is not considered double counting. Under PRR 1315, SCAQMD is not using the same credit to meet federal equivalency requirements for two different sources. Instead, the 0.2 credit provided by certain sources is above and beyond (surplus to) federal requirements, and can be used to establish that the program as a whole is equivalent to federal requirements.

PRR 1315 may actually provide a benefit to the environment, although that effect is not foreseeable because it is unknown how many credits will be used and because the SCAQMD has never experienced a shortfall in credits, so a future shortfall is not foreseeable. Under the system in effect before the adoption of Rule 1315, sources may access credits through Rules 1309.1 and 1304 without regard to whether the SCAQMD will be able to show equivalency with federal requirements, i.e., without regard to whether there are credits "in the bank." Under Rule 1309.2, credits may not be accessed

until U.S. EPA approves the rule into the SIP. In contrast, under Rule 1315, backstop provisions, the SCAQMD will each year project whether credits will be available for future use, and if not, cease funding the Priority Reserve. If the final determination of equivalency does not demonstrate equivalency, the SCAQMD must implement backstop measures to return to equivalency. Therefore, PRR 1315 may provide a beneficial effect on the environment by assuring that credits are available in the bank before a source is permitted, thus, assuring that increases in emissions resulting from such sources are fully offset. Based on the above information, it can be seen with certainty that there will be no adverse environmental impacts from PRR 1315, which, therefore, warrants no further environmental analysis.

POTENTIAL ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

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

Pursuant to CEQA, an Initial Study, including an environmental checklist, was prepared for this project (see Appendix A). Of the 17 potential environmental impact categories, only one (air quality) was identified as being potentially adversely affected by the proposed project. Seven comment letters were received on the Initial Study and responses to the comment letters can be found in Appendix C.

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

Air Quality

Significance Criteria

The project will be considered to have significant adverse air quality impacts if any one of the thresholds in Table 4-1 are equaled or exceeded. In source receptor areas that are in attainment for both the state and national ambient air quality standard for the pollutant, instead of using the change in concentration thresholds shown in Table 4-1, air quality impacts for that pollutant will be considered significant if emissions cause or contribute to an exceedance of any applicable standard.

TABLE 4-1

Air Quality Significance Thresholds

Mass Daily Thresholds[a]		
Pollutant	**Construction[b]**	**Operation[c]**
NOx	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM10	150 lbs/day	150 lbs/day
PM2.5	55 lbs/day	55 lbs/day
SOx	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Toxic Air Contaminants (TACs) and Odor Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Hazard Index ≥ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Ambient Air Quality for Criteria Pollutants[d]		
NO2 1-hour average annual average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.25 ppm (state) 0.053 ppm (federal)	
PM10 24-hour average annual geometric average annual arithmetic mean	10.4 $\mu g/m^3$ (recommended for construction) [e] 2.5 $\mu g/m^3$ (operation) 1.0 $\mu g/m^3$ 20 $\mu g/m^3$	
PM2.5 24-hour average	10.4 $\mu g/m^3$ (recommended for construction) [e] 2.5 $\mu g/m^3$ (operation)	

TABLE 4-1 (CONCLUDED)

Air Quality Significance Thresholds

Ambient Air Quality for Criteria Pollutants[d]	
Sulfate 24-hour average	 1 ug/m^3
CO 1-hour average 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) 9.0 ppm (state/federal)

[a] Source: SCAQMD CEQA Webpage ~~Handbook~~ (~~SCAQMD, 1993~~ http://www.aqmd.gov/ceqa/handbook/signthres.doc)
[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. Significance thresholds for CO are not affected by the reclassification of the Basin as attain for the CO NAAQS.
[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 ug/m^3 = microgram per cubic meter ≥ greater than or equal to

Construction Emissions

PROJECT-SPECIFIC IMPACT: The proposed amendments do not require the construction of eligible facilities and are not expected to be the sole incentive to construct a new eligible facility. In the case of a new power plant, the project is very expensive and technically complex, so there are a number of factors controlling why a power producing business would be constructed besides an allowance to access the Priority Reserve to comply with PM10, SOx or CO offset requirements. Some of these factors include obtaining sufficient financial support, planning commission approval, CEQA compliance, air quality regulation compliance and approval from other responsible agencies. Potential indirect environmental impacts from constructing an EGF, EPRS and a biosolids facility can be found in Chapter 5.

PROJECT-SPECIFIC MITIGATION: No mitigation required.

Operational Emissions

PROJECT-SPECIFIC IMPACT: The proposed amendments would not cause or contribute to the violation of any air quality standard. As already noted, projects affected by the PAR 1309.1 would have been required to already undergo a CEQA analysis before the air quality permit application is approved by the SCAQMD. The primary effect is that the proposed project would require affected facilities to comply with Rules 1303 and 2005 offset requirements. However, SCAQMD policy is to equate use of ERCs that would not otherwise be used to offset emission increases with an actual increase in emissions, even though affected projects would be consistent with Regulation XIII's purpose of achieving no net emission increases from new or modified permitted

sources. From a regional perspective, if the amount of ERCs exceeds the SCAQMD's daily significance thresholds for any pollutant, as is the case for the currently proposed project, the air quality impacts are considered to be significant.

Such impacts are likely to be mitigated by the payment of mitigation fees, which will be used to reduce emissions of the pollutant for which the fee is paid. However, it is not possible at this point to be certain that such impacts will be fully mitigated by use of mitigation fees. As a result, for purposes of CEQA since emission reductions from mitigation fee projects are not certain, air quality impacts are considered potentially significant.

To avoid a shortage of electrical power in the state of California, more EGFs will need to be constructed. EGFs will be constructed both within the district and downwind to the district and, in order to allow operators to obtain permits for their equipment, the new facility operators will have to comply with SCAQMD's Regulation XIII - New Source Review offset requirements. PAR 1309.1 will allow EGFs limited access to the Priority Reserve to offset the emissions from operating these projects. Currently, the supply of ERCs in the open market that are likely to be available for trading may not be sufficient with regard to what is needed for EGFs and certain energy projects to obtain permits. Further, it is unknown whether ERC holders would release ERCs to the market even if ERCs were sold at a higher price. These are the primary reasons for allowing these projects to use ERCs from the SCAQMD's Priority Reserve.

During the California energy crises in 2000 and 2001, there was a noticeable increase in the operation of high polluting standby emergency diesel-fired electric-powered standby generators during the rolling blackouts, primarily so businesses could continue operating. On a per unit basis, diesel-fired standby generators are substantially higher polluting than natural gas fired gas turbines. Further, diesel particulate matter (DPM) has been classified as a carcinogen by CARB. Increasing the number of natural gas fired EGFs in the future will help to minimize the occurance and/or duration of future blackouts, thereby, minimizing the use of, and emissions from highly polluting diesel-fired electric-powered standby generators. ~~SCAQMD staff concluded that during a typical rolling blackout, daily emissions from diesel internal combustion engines increased by the following amounts: 10.6 pounds of PM10 emissions; 514 pounds of NOx emissions; 111 pounds of CO emissions; 7.7 pounds of SOx emissions; and 41 pounds of VOC emissions (Final EA for PAR 1470; February 17, 2005, SCAQMD NO. 050118MK). However, the SCAQMD is not taking credit for this beneficial air quality effect from reduced diesel emissions in this air quality analysis.~~

Any delays in obtaining air quality permits by EGFs could contribute to electricity shortages, rolling blackouts and increased use of diesel fired generators. Thus, there could be an increase of diesel emissions in the event that rolling blackouts occur before EGF projects go online. For example, SCAQMD staff concluded that during a typical rolling blackout, daily emissions from diesel internal combustion engines increased by

the following amounts: 10.6 pounds of PM10 emissions; 514 pounds of NOx emissions; 111 pounds of CO emissions; 7.7 pounds of SOx emissions; and 41 pounds of VOC emissions (Final EA for PAR 1470; February 17, 2005, SCAQMD NO. 050118MK). However, the SCAQMD is not taking credit for this beneficial air quality effect from reduced diesel emissions in this air quality analysis.

Future amendments to Rule 1309.1 would allow operators of other specified energy projects, such as LNG and crude oil storage and import projects, the opportunity to access the Priority Reserve to offset emission from the operation of their facilities. Examples of these types of projects are currently in various stages of the permitting and CEQA processes in the district. Inclusion of these projects in the analysis herein does not necessarily reflect the outcome of their regulatory process. As noted in Chapter 2, operators of all of these projects will be required to pay a mitigation fee (see Table 2-9 for amount of fee which varies depending on the location of the project). While the mitigation fee will be used to fund appropriate clean air projects, these projects may not necessarily provide emission reductions equal to the number of ERCs withdrawn from the Priority Reserve. Since the amount of emission reductions will not be known until the specific clean air project is chosen, the amount of emissions not reduced could exceed the SCAQMD's significance thresholds and, therefore, the air quality impact would remain significant.

Future amendments to Rule 1302 would define publicly owned biosolids treatment facilities as an essential public service allowing them permanent access to all pollutant ERCs in the Priority Reserve. Operators of biosolid treatment facilities will not be required to pay a mitigation fee and, therefore, access to Priority Reserve will be provided to facility operators who otherwise would not have been provided access. The amount of ERCs withdrawn in the future will dictate whether the amount of ERCs withdrawn could exceed the SCAQMD's significance thresholds generating significant adverse air quality impacts.

Although there are currently no permit applications submitted for these types of facilities, local sanitation districts have provided estimates of the amount of ERCs needed in the future to offset composting and dry pelletizing biosolids projects. Emission estimates for publicly owned biosolids treatment facilities are listed in Table 4-2 along with estimated ERCs expected to be needed by EGFs and EPRS that would also be eligible to withdraw from the Priority Reserve in the future under PAR 1309.1. Table 4-2 outlines the current "worst-case" scenario since some of the demand could be satisfied by ERC holdings obtained through the required due diligence effort. The estimates in Table 4-2 may change in the PEA as the analysis is refined, but it is unlikely that air quality impacts will be less than significant.

TABLE 4-2

Estimated Emission Credits to be Withdrawn from Priority Reserve

	PM10 (lbs/day)	**SOx** (lbs/day)	**VOC** (lbs/day)	**CO** (lbs/day)	**NOx** (lbs/day)
In-District EGFs (5,000 MW projects)	4,419	364	--	4,997	---
Downwind EGFs	--	--	<5,000	--	---
EPRS	198	1,121	--	473	---
Biosolids projects (present to 2010)	43 ~~40~~	--	980 ~~904~~	224 ~~207~~	44 ~~41~~
Biosolids projects (2010 to 2020)	24 ~~22~~	--	532 ~~491~~	122 ~~113~~	24 ~~22~~
TOTAL (before 2010)	4,660 ~~4,657~~	1,485	5,980 ~~5,904~~	5,694 ~~5,677~~	44 ~~41~~
TOTAL (after 2010)	24 ~~22~~	--	532 ~~491~~	122 ~~113~~	24 ~~22~~
CEQA Operational Significance Thresholds (lbs/day)	150	550	55	550	55
Significant?	Yes	Yes	Yes	Yes	No

The proposed amendments would not conflict with or obstruct implementation of the applicable air quality plan, as the plan forecasts growth from new sources relying on either the open market or the Priority Reserve for the required offsets. Rule 1303 (b)(2) requires all emission increases from new or modified permit units to be offset by either ERCs approved pursuant to Rule 1309, or by allocations from the Priority Reserve in accordance with the provisions of Rule 1309.1. PAR 1309.1 will require EGFs and eligible energy projects to comply with an offset ratio of 1.2-to-1.0 for allocations from the Priority Reserve while the remaining newly eligible sources will remain subject to offset ratios in Rule 1303 at 1.2-to-1.0 for ERCs and 1.0-to-1.0 for allocations from the Priority Reserve, except for facilities located within the SCAQMD jurisdiction, but not in the South Coast Air Basin, where the offset ratio for ERCs only shall be 1.2-to-1.0 for VOC, NOx, SOx and PM10 and 1.0-to-1.0 for CO.

The proposed amendments would require affected facilities to comply with emission offset requirements in Rules 1303 and 2005 by providing a source of ERCs that would not otherwise be available. Since operators of affected facilities would be offsetting emission increases as required under Rules 1303 and 2005, the proposed amendments are consistent with existing purpose of Regulation XIII to ensure that there are no net emission increases from new or modified permitted sources. As a result, the proposal is not expected to conflict with or obstruct implementation of the Air Quality Management Plan (AQMP). Appendix III of the 2007 AQMP discusses how the estimate of future

increased emissions from new and modified sources takes into account the net demand of ERCs from the open market and net demand from the SCAQMD's NSR account[17]. The NSR account includes those sources exempt from offset requirements under Rule 1304 and estimates the annual average amount of debits and credits from the account. Further, the 2007 AQMP includes a set-aside account of one ton per day for each criteria pollutant for the Rule 1309.2 - Offset Budget, which is funded by expired permit source shutdown credits, and other methods approved by the Executive Officer, CARB and U.S.EPA[18].

Toxic Air Contaminants

The proposed amendments would not expose sensitive receptors to substantial pollutant concentrations. Air quality modeling required for each project under Rule 1303(b)(1) will assure that each project does not have a significant localized impact. Rule 1401 - New Source Review for Toxic Air Contaminants, still applies to all new, modified or relocated sources. Rule 1401 protects nearby receptors from toxic air contaminants by limiting both cancer and non-cancer exposure from new toxic sources. For new or modified power plant projects, the requirements of Rule 1401 would have to be satisfied before any permit is issued. In addition, the proposed amendments are expected to reduce the use of high-polluting standby emergency diesel fired electric power generators for electrical power generation by minimizing the probability of power outages in the future and, thus, reduce potential to further expose sensitive receptors to substantial pollutant concentrations.

New or relocated facilities are also subject to SCAQMD Rule 1401.1 which provides additional health protection for children at schools or schools under construction from new or relocated facilities emitting toxic air contaminants. Rule 1401.1 imposes requirements, such as cancer and noncancer risk limits, on affected facilities.

PAR 1309.1 also has several proposed provisions that would serve to reduce exposure to air toxics from EGFs. First, operators of EGFs proposing to locate their facilities in Zone 3 or EJA at greater than 500 MW must demonstrate that the facility's cancer risk is less than one-half in one-million (0.5×10^{-6}), the noncancer risk, both acute and chronic, hazard index is less than 0.1, and cancer burden is less than 0.05. Secondly, operators of EGFs proposing to locate their facilities in Zone 2, or Zone 3/EJA at less than 500 MW must demonstrate that the facility's cancer risk is less than one in one-million (1×10^{-6}), the noncancer risk, both acute and chronic, hazard index is less than 0.5, and cancer burden is less than 0.1. These risk levels are substantially more health protective than Rule 1401.

[17] Table 2-10 in Appendix III of the Proposed Modifications to the Draft 2007 AQMP (February 2007)
[18] Table 2-14 in Appendix III of the Proposed Modifications to the Draft 2007 AQMP (February 2007)

Odors

The act of allowing use of the Priority Reserve has no provisions that directly generate adverse odors affecting a substantial number of people. New EPRS or biosolid processing facilites that require an air quality permit for emission sources located in the new facility and would be reviewed for CEQA applicability by the local land use agency. Potential adverse odor impacts associated with the operation of a new facility would be analyzed and mitigated as necessary pursuant to CEQA by the appropriate lead agency. In the event that other public agencies do not assume CEQA responsibility, SCAQMD permit process procedures would ensure such projects would be analyzed for CEQA applicability. SCAQMD is typically a responsible agency and before action can be taken on the air quality permits for EPRS or biosolids projects, the SCAQMD has to have a certified CEQA document from the appropriate lead agency, which is usually the CEC, CPUC or other appropriate agencies with primary discretionary approval authority over the project. SCAQMD permits must address odor nuisances so the SCAQMD permit process will reduce potential odor impacts to less than significant.

Installing BACT would typically contribute to a reduction in potential odor impacts and affected facilities would still be subject to Rule 402 – Nuisance. Finally, permit conditions may be required to protect against an odor nuisance.

Mitigation Fee

Eligible facilities are expected to pay mitigation fees which will be used to fund appropriate emission reduction projects. The type of pollutant ERCs withdrawn for the Priority Reserve will determine which clean air projects will be funded. Previous mitigation fees collected from allowing access to the Priority Reserve were used to fund the following types of projects. Similar types of projects may also be funded with fees collected from PAR 1309.1:

- Promotion of renewable energy such as solar collectors, wind turbines, biogas generators, geothermal energy generation, biosolids energy production (all pollutants);
- Construct anaerobic digesters (VOC, PM, NH3);
- Development of better energy storage capacity (all pollutants);
- Capturing energy losses during transmissions (all pollutants);
- Retrofit diesel powered school buses with particulate traps or oxidation catalysts (NOx, VOC, PM10);
- Replace existing diesel school buses with new alternative-fueled school buses (i.e., CNG engines) (NOx, PM10);

- Repower off-road heavy-duty diesel equipment with new lower-emission diesel engines and equip with particulate traps (PM, NOx);
- Replace portable diesel generators with microturbines (PM, NOx);
- Provide low-sulfur diesel fuel to local passenger locomotives (SOx, PM10); and
- Expand liquefied natural gas refueling infrastructure (NOx, PM10, SOx).

Other programs and projects designed to reduce emissions may include:

- Install fuel cells (e.g., phosphoric acid fuel cell, molten carbonate fuel cell[19]) in any mobile or stationary application (all pollutants);
- Purchase of fuel cells and electrification usage with ships at the dock (all pollutants);
- Retrofit other diesel mobile sources with particulate traps or oxidation catalysts (PM10, NOx);
- Conversion of other diesel engines to alternative fuels (PM10, NOx, SOx);
- Conversion of lawn and garden equipment to battery and electric (NOx, PM, VOC, CO);
- Regional emission reduction programs (i.e., interpollutant – ammonia, NOx, etc);
- Demonstration or deployments of new emission reducing technology (all pollutants); and
- Promotion of energy efficiency and energy conservation measures (all pollutants).

As outlined in Table 2-1, there are quarterly allocations of emissions funded to the Priority Reserve. Depending on the actual number of ERCs available to the open market (Table 2-8) for new EGF and energy projects in addition to those indicated in Table 4-2, it is unclear whether or not there will be an adequate amount of ERCs to offset the emission increases from all newly eligible sources.

While the mitigation fee will be used to fund appropriate clean air projects, the emission reduction from these projects may not necessarily provide emission reductions equal to the number of ERCs withdrawn from the Priority Reserve. Since the amount of emission reduction will not be known until the specific clean air project is chosen, the amount of emission not reduced could exceed the SCAQMD's significance thresholds and, therefore, the air quality impact would remain significant.

[19] Fuel Cell Energy (www.fce.com)

Health Effects

The proposed project results in potential significant adverse PM10, VOC, SOx and CO emissions from the uncertainty that the emission reduction from the appropriate clean air projects funded by the mitigation fee may not necessarily provide emission reductions equal to the number of ERCs withdrawn from the Priority Reserve. In the future, biosolids facilities would not be required to pay a mitigation fee so depending upon the amount of PM10, VOC, CO and SOx ERCs withdrawn will dictate whether the amount of ERCs withdrawn could exceed the SCAQMD's significance thresholds generating significant adverse air quality impacts. Thus, the proposed project potentially contributes to the adverse health effects from PM10, VOC, SOx and CO as noted in Chapter 3 such as an increase in mortality rates, respiratory infections, number and severity of asthma attacks, number of hospital admissions, airway constriction in some asthmatics, reductions in birth weight and impaired neurobehavioral development. Indirect impacts from the construction and operation of eligible facilities, including health effects, can be found in Chapter 5 of this PEA.

Greenhouse Gas Emissions

The proposed project results in potential significant adverse PM10, SOx and CO emissions from the uncertainty that the emission reduction from the appropriate clean air projects funded by the mitigation fee may not necessarily provide emission reductions equal to the number of ERCs withdrawn from the Priority Reserve. The potential withdraw inequity will not have an impact on the greenhouse gas emissions since the emissions that make up greenhouse gases (i.e., CO, methane, nitrous oxide (N_20), etc.) are not being offset by the Priority Reserve. Potential greenhouse gas emissions from the operation of EGFs are included in the indirect impacts discussion found in Chapter 5.

PRR 1315

In their lawsuit challenging Rule 1315 as adopted on September 8, 2006, plaintiff environmental groups have argued that credits from additional methods of obtaining credits that were not used prior to the September 8 amendments, such as minor source orphan shutdowns, amount to increases in available credits for the period 1990-2004. They assert that the increased available credits are as follows: VOC 52.03 tpd; NOx 17.92 tpd, SOx 4.29 tpd, CO 22.2 tpd, and PM10 14.63 tpd, for a total of 111.07 tpd. The SCAQMD disagrees with this argument, because the additional sources of credits that have contributed to the SCAQMD's offset bank as recalculated under Rule 1315 have always been surplus and available for use by the SCAQMD; they were not tracked, however, because the SCAQMD had an ample supply of credits in its accounts for all pollutants. (Rule 1315 Staff Report, p. 3)

Moreover, the plaintiffs have ignored that under Rule 1315 as adopted on September 8, there were also a large number of previously-available credits that were removed from

the SCAQMD's offset balances. Table 5 on Page 15 of the September 2006 staff report depicts the change in available running balances as of 2002, comparing the balance available before the rule adoption with the balance available after the rule adoption. This table shows net reductions for all pollutants except NOx, and for the total pounds of pollutants. Thus, Rule 1315 resulted in a 36 percent decrease in available VOC, a 43 percent decrease in available SOx, a 68 percent decrease in available CO, and an 81 percent decrease in available PM10, which is the pollutant most involved in Rule 1309.1's power plant amendments. This table also shows a 39 percent increase in available NOx; however, NOx is not even available to power plants under Rule 1309.1. Contrary to plaintiffs' claims, the credits removed from the SCAQMD's pre-1990 balances were not "invalid", as generally all credits had been assessed at the time they were deposited in the account. The SCAQMD has always used a robust and sophisticated NSR tracking system, which tracked both emission increases and emission decreases since the adoption of NSR rules in 1976. These credits were simply removed because the SCAQMD no longer retained records relating to the generation of the credits.

Moreover, total 2002 offset balances for all pollutants—including the increase in NOx—were reduced by 42 percent. Thus, even if Rule 1315 were considered a "project" under CEQA, its net effect for the years through and including 2002 was a large decrease in available offsets.

Finally, even using the plaintiffs' approach, and considering only the increases in credits and not the decreases resulting from the rule, this would not change most of the conclusions in this PEA, which already concludes that the impacts are significant for all pollutants except NOx. Using plaintiffs' approach, impacts of VOC, SOx, CO, and PM10 would be substantially more significant, and impacts of NOx would change from insignificant to significant.

Plaintiffs also argue that for the years following the adoption of Rule 1315, there would be an unknown amount of increase in the credits generated in each year. Plaintiffs again ignore the fact that Rule 1315 also required ceasing the use of any credits generated prior to 1990 for all years after 2005, and stopped the use and retroactively removed any use of BACT discount of ERCs as sources of credits even though use of these credits was specifically approved by EPA (Technical Support Document for EPA's Notice of Final Rulemaking for the California State Implementation Plan South Coast Air Quality Management District New Source Review, October 24, 1996), thus again reducing the available balance of credits for some or all pollutants. To test plaintiffs' theory, the SCAQMD calculated the difference between net activity (credits minus debits) that would have been generated under pre-Rule 1315 procedures compared with the net activity under post-Rule 1315 procedures for the years 1997 through 2002. The results of this calculation showed that for some years, there would be an increase in net

activity for a given pollutant, and for some years, there would be a decrease in net activity for a given pollutant (see Table 4-3).

Thus, it is not possible to predict accurately whether there would be an increase or a decrease of net activity for each year. However, even taking the most conservative approach, and assuming the maximum calculated increase in net activity for any year would result each year, does not change the results of this PEA, which has already concluded that impacts are significant for all pollutants, including NOx under the plaintiffs' approach discussed above. Furthermore, as discussed above, Table 5 on Page 15 of the September 2006 staff report clearly shows that the availability of offsets from SCAQMD's offset accounts was reduced for all pollutants in 1990 (seven percent for NOx and 56 percent to 92 percent for the other four pollutants) and for all pollutants except NOx in 2002 as a result of implementation of Rule 1315. That is, with the exception of NOx, the increases in annual net activity shown in Table 4-3 do not translate into higher offset account balances in any year through 2002 and are unlikely to do so for the foreseeable future. Also, as indicated earlier, NOx is not even a pollutant that is available to power plants under existing or proposed Rule 1309.1. Finally, because historically the availability of offsets in SCAQMD's offset accounts has always been greater than the demand for those offsets, an increase in the supply for NOx, and even hypothetically for other pollutants, does not imply that there will be an increase in use of such offsets.

TABLE 4-3

Net Difference Between Net Activity Reported to Board in
Indicated Year and Net Activity Reported to Board February 2, 2007

	VOC (~~lbs~~tons/day)	**NOx** (~~lbs~~tons/day)	**SOx** (~~lbs~~tons/day)	**CO** (~~lbs~~tons/day)	**PM10** (~~lbs~~tons/day)
1997-1998	-3.92	0.92	0.24	-0.58	-2.05
1998-1999	1.49	1.12	0.06	1.61	-1.63
1999-2000	0.96	1.11	0.13	1.53	1.54
2000-2001	1.77	0.70	0.76	0.38	1.25
2001-2002	0.29	0.44	0.16	1.17	0.58

The SCAQMD continues to believe that Rule 1315 is not in itself a "project", because it does not cause either a direct change in the environment or a reasonably foreseeable indirect change in the environment. (Pub. Res. C. §21065) According to a leading treatise, "Agency action that merely establishes its ability to take a later action that will affect the environment but does not commit the agency to a definite course of action is not a project subject to CEQA." 1 Kosta & Zischke, Practice Under the California Environmental Quality Act, §4.20 (p. 171.) Where a city's Memorandum of

Understanding with an Indian Tribe established a source of funds for future development of a casino, but did not obligate the City to undertake development, the MOU was not a "project." (Citizens to Enforce CEQA v. City of Rohnert Park, 131 Cal. App. 4th 1594(2005) Where a school district established a community facilities district to raise funds for school development, this was not a "project." Kaufman & Broad South Bay, Inc., v. Morgan Hill Unified School Dist. (1992) 9 Cal. App. 4th 464. Even if PR 1315 may increase the number of credits that will be available in the future, this is analogous to the financing mechanisms discussed in the above cases, and the Rule is not a "project" under CEQA because any impacts are not "reasonably foreseeable."

Moreover, PRR 1315 actually may provide a beneficial impact on the environment in another way. Prior to Rule 1315, sources eligible for credits under SCAQMD rules could access credits without regard to whether the SCAQMD would be able to show equivalency with federal NSR requirements, i.e. without regard to whether there are credits "in the bank." Under Rule 1315, the SCAQMD will each year project whether there will be credits available for future use, and if not, will cease funding the Priority Reserve. If the final determination of equivalency does not demonstrate equivalency, the SCAQMD must implement measures to return to equivalency. Thus, PRR 1315 provides a safeguard which benefits the environment and did not exist before.

Despite the foregoing, the SCAQMD has determined to take the most conservative approach, assuming plaintiffs are correct, and to determine that the project will have a significant impact on all the following pollutants: VOC, NOx, SOx, CO, and PM10. All feasible mitigation measures have been required to reduce these impacts, yet the impacts remain significant after mitigation. As stated in Attachment III to the Rule 1315 Staff Report, p. III-6, SCAQMD has determined that providing offset exemptions and the Priority Reserve (as well as the previously administered Community Bank) is important to the NSR program and the local economy while encouraging the installation of control equipment. Therefore, SCAQMD has assumed the responsibility of providing the necessary offsets for exempt sources, the Priority Reserve, and the Community Bank. Therefore, PRR 1315 is not only intended to debit SCAQMD's offset accounts for any sources which do not provide their own ERCs, and yet are subject to offset requirements under federal NSR, however, the project objectives for Rule 1315 also include taking credit for all surplus reductions available under Federal law. (Rule 1315 Staff Report, p.2)

PROJECT-SPECIFIC MITIGATION: No feasible mitigation measures beyond the required mitigation fee under PAR 1309.1 and the renewable energy due diligence requirements were identified. The SCAQMD continues to believe that Rule 1315 is not in itself a "project", because it does not cause either a direct change in the environment or a reasonably foreseeable indirect change in the environment. However, the SCAQMD has determined to take the most conservative approach and to determine that the project will have a significant impact on all the following pollutants: VOC, NOx,

SOx, CO, and PM10. Because no feasible mitigation measures have been identified to reduce this impact to less than significant, this impact remains significant. ~~Because PRR 1315 was determined to not generate a significant adverse air quality impact, no mitigation measures are warranted or necessary.~~

REMAINING AIR QUALITY IMPACTS: The air quality analysis concluded that significant adverse air quality impacts could be created by the proposed amendments. Because there is no guarantee that future mitigation fee projects will receive enough credits to fully replenish the SCAQMD's general credit account, air quality impacts remain significant.

CUMULATIVE AIR QUALITY IMPACTS: The implementation of the proposed amendments may result in significant adverse direct air quality effects and, therefore, the project's incremental contribution to a cumulative effect may be cumulatively considerable. Further, indirect impacts from the construction and operation of EGFs, EPRS and biosolid facilities have been found to be significant (see Chapter 5). Therefore, cumulative air quality impacts are considered to be significant.

CUMULATIVE MITIGATION: No mitigation measures beyond those identified to mitigate project-specific impacts were identified.

POTENTIAL ENVIRONMENTAL IMPACTS FOUND NOT TO BE SIGNIFICANT

While all the environmental topics required to be analyzed under CEQA were reviewed to determine if the proposed amendments would create significant impacts, the screening analysis concluded that the following environmental areas would not be significantly adversely affected by PAR 1309.1: aesthetics, agriculture resources, biological resources, cultural resources, energy, geology/soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, solid/hazardous waste and transportation/traffic. These topics were not analyzed in further detail in this environmental assessment, however, a brief discussion of each is provided below.

The primary purpose of this EA is to only evaluate impacts resulting from the proposed amendments. The eligible EGF, EPRS and biosolid facilities are currently undergoing, or will be required to undergo a CEQA analysis by a lead agency. The public agency with primary approval authority over a project, such as the local city, will be lead agency for these types of projects. However, while the SCAQMD is not the lead agency for facilities affected by the proposed amendments, known potential environmental impacts can be found in Chapter 5 as indirect impacts of the proposed project.

As noted in the "Introduction" to this chapter, PRR 1315 may provide a beneficial effect on the environment by assuring that credits are available in the bank before a source is permitted, thus assuring that increases in emissions resulting from such sources are fully offset. Thus, it can be seen with certainty that there will be no adverse environmental impacts from PRR 1315.

Aesthetics

The act of allowing use of Priority Reserve offsets for certain projects as proposed in the current and future amendments to Rule 1309.1 would have no direct impact on a scenic vista, substantially damage scenic resources, or substantially degrade the existing visual character or quality of the site and its surroundings. Each new power plant would be required to undergo an appropriate CEQA analysis by the appropriate lead agency. Therefore, potential aesthetics impacts associated with the siting of a new facility (e.g., obstructing scenic resources, adverse light and glare, etc.) would be analyzed and mitigated as necessary pursuant to CEQA by the appropriate lead agency. In the event that other public agencies do not assume CEQA responsibility, SCAQMD permit process procedures would ensure such projects would be analyzed for CEQA applicability. SCAQMD is typically a responsible agency and before action can be taken on the air quality permits for EPRS or biosolids projects, the SCAQMD has to have a certified CEQA document from the appropriate lead agency, which is usually the CEC, CPUC or other appropriate agencies with primary discretionary approval authority over the project. So, environmental impacts would typically already have been analyzed and disclosed in accordance with CEQA requirements. As a result, the CEQA analysis prepared by CEC or CPUC may or may not identify significant adverse impacts to an environmental topic area but PAR 1309.1 will not increase or add to the impact that has already been identified. There are no components in PAR 1309.1 that would alter existing work practices, or require activities at night. Therefore, PAR 1309.1 is not expected to create a new source of substantial light or glare that would adversely affect day or nighttime views in an area. Thus, significant adverse project-specific impacts to aesthetics are not expected from PAR 1309.1 and PRR 1315. Since there are no significant adverse project-specific impacts, no mitigation measures are required. Potential indirect aesthetics impacts from siting, constructing and operating eligible facilities are identified in Chapter 5.

Agriculture Resources

The act of allowing use of Priority Reserve offsets for certain projects as proposed in the current and future amendments to Rule 1309.1 would not directly result in any construction of new buildings or other structures that would convert farmland to non-agricultural use or conflict with zoning for agricultural use or a Williamson Act contract. There are no provisions in the proposed amended rule that would convert farmland to

non-agricultural uses, thus, affecting land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments and no land use or planning requirements will be altered by the proposed project.

The impacts to agricultural resources from the construction and operation of the new power plant, EPRS or biosolids processing facility will be analyzed in the appropriate CEQA document prepared by the appropriate lead agency. In the event that other public agencies do not assume CEQA responsibility, SCAQMD permit process procedures would ensure such projects would be analyzed for CEQA applicability. SCAQMD is typically a responsible agency and before action can be taken on the air quality permits for energy or biosolids projects, the SCAQMD has to have a certified CEQA document from the appropriate lead agency, which is usually the CEC, CPUC or other appropriate agencies with primary discretionary approval authority over the project. So, environmental impacts would typically already have been analyzed and disclosed in accordance with CEQA requirements. Thus, significant adverse project-specific impacts to agriculture resources are not expected from PAR 1309.1 and PRR 1315. Since there are no significant adverse project-specific impacts, no mitigation measures are required. Potential indirect agricultural impacts from siting, constructing and operating eligible facilities are identified in Chapter 5.

Biological Resources

Implementation of the proposed amendments will not cause project-specific impacts to sensitive habitats of plants or animals because they do not specifically require acquisition of or construction on open space areas. The overall intent of the proposed program including potential future amendments to allow access into an ERC program to offset emissions from new EGFs, EPRSs and biosolids processing. In some cases a mitigation fee will be required which will be used to fund emission reduction programs in an attempt to mitigate the potential adverse impact on air quality. While PAR 1309.1 will have no direct impacts that could adversely affect plant or animal species or the habitats on which they rely in the SCAQMD's jurisdiction, any proposed projects that require an air quality permit for an emission source located in a new facility would be reviewed for CEQA applicability by the appropriate lead agency. Therefore, potential adverse impacts to biological resources associated with the construction of a new facility would be analyzed and mitigated as necessary pursuant to CEQA by the appropriate lead agency. In the event that other public agencies do not assume CEQA responsibility, SCAQMD permit process procedures would ensure such projects would be analyzed for CEQA applicability. SCAQMD is typically a responsible agency and before action can be taken on the air quality permits for EPRS or biosolids projects, the SCAQMD has to have a certified CEQA document from the appropriate lead agency, which is usually the CEC, CPUC or other appropriate agencies with primary discretionary approval authority over the project. So, environmental impacts would typically already have been analyzed and disclosed in accordance with CEQA requirements. PAR 1309.1 does not require

acquisition of additional land or further conversions of riparian habitats or sensitive natural communities where endangered or sensitive species may be found.

Potential adverse project-specific impacts to protected wetlands associated with the construction of a new facility would be analyzed and mitigated as necessary pursuant to CEQA by the appropriate lead agency. Further, the act of accessing the Priority Reserve will not require or compel eligible facilities to directly remove, fill or interrupt any hydrological system or have an adverse effect on federally protected wetlands. Similarly, the potential for disposal or accidental releases of materials that could occur in areas that harbor federally protected wetlands as defined by §404 of the Clean Water Act are expected to have been analyzed by the appropriate lead agency. The proposed project is not expected to create new or make substantially worse biological resources impacts already evaluated for affected projects.

There are no provisions in the proposed amended rule that would adversely affect land use plans, local policies or ordinances, or regulations. Land use and other planning considerations are determined by local governments and no land use or planning requirements will be altered by the proposed project. Projects eligible under the Rule 1309.1 amendments would continue to comply with local land use requirements. Proposed amended Rule 1309.1 would not affect in any way habitat conservation or natural community conservation plans, agricultural resources or operations, and would not create divisions in any existing communities.

Thus, PAR 1309.1 and PRR 1315 will have no project-specific effects on biological resources. Since there is no effect on biological resources, there will be no significant adverse project-specific impacts and, thus, no mitigation measures are required. Potential indirect biological impacts from siting, constructing and operating eligible facilities are identified in Chapter 5.

Cultural Resources

There are existing laws in place that are designed to protect and mitigate potential impacts to cultural resources. Any proposed projects that require an air quality permit for an emission source located in a new facility would be reviewed for CEQA applicability by the appropriate lead agency. Therefore, potential adverse project-specific impacts to cultural resources associated with the construction of a new facility would be analyzed and mitigated as necessary pursuant to CEQA by the appropriate lead agency. In the event that other public agencies do not assume CEQA responsibility, SCAQMD permit process procedures would ensure such projects would be analyzed for CEQA applicability. SCAQMD is typically a responsible agency and before action can be taken on the air quality permits for EPRS or biosolids projects, the SCAQMD has to have a certified CEQA document from the appropriate lead agency, which is usually the CEC, CPUC or other appropriate agencies with primary discretionary approval authority

over the project. So, environmental impacts would typically already have been analyzed and disclosed in accordance with CEQA requirements.

The proposed revisions to Rule 1309.1 are, therefore, not anticipated to result in any activities, or promote any programs that could create new or make substantially worse significant adverse project-specific impact on cultural resources in the district. As a result, the proposed project has no potential to cause a substantial adverse project-specific changes to historical or archaeological resources, directly destroy a unique paleontological resource or site or unique geologic feature, or disturb any human remains, including those interred outside formal cemeteries.

Thus, significant adverse project-specific impacts to cultural resources are not expected from PAR 1309.1 and PRR 1315. Since there are no significant adverse project-specific impacts, no mitigation measures are required. Potential indirect cultural impacts from siting, constructing and operating eligible facilities are identified in Chapter 5.

Energy

The proposed amendments are not expected to 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. On the contrary, the result of the PAR 1309.1 will assist in providing new sources of energy to the local region. Allowing the use of Priority Reserve ERCs for eligible projects, as proposed in the amendments to Rule 1309.1, would result in a direct benefit to the new energy resources by providing access to ERCs that would not otherwise be available, thus, allowing proposed new affected facilities to comply with NSR offset requirements.

It is expected that potential adverse impacts to energy resources associated with the construction and operation of a new facility would be analyzed and mitigated as necessary pursuant to CEQA by the appropriate lead agency. Nevertheless, in the event that other public agencies do not assume CEQA responsibility, SCAQMD permit process procedures would ensure such projects would be analyzed for CEQA applicability. SCAQMD is typically a responsible agency and before action can be taken on the air quality permits for energy or biosolids projects, the SCAQMD has to have a certified CEQA document from the appropriate lead agency, which is usually the CEC, CPUC or other appropriate agencies with primary discretionary approval authority over the project. So, environmental impacts would typically already have been analyzed and disclosed in accordance with CEQA requirements.

Thus, significant adverse project-specific impacts to energy are not expected from PAR 1309.1 and PRR 1315. Since there are no significant adverse project-specific impacts, no mitigation measures are required. Potential indirect energy impacts from siting, constructing and operating eligible facilities are identified in Chapter 5.

Geology and Soils

Allowing the use of Priority Reserve ERCs for eligible projects, as proposed in the current and future amendments to Rule 1309.1, would have no direct project-specific impact on geological resources. Each new power plant or EPRS would be required to undergo an appropriate CEQA analysis by the appropriate lead agency. Therefore, it is expected that potential geological impacts associated with the siting of a new facility (e.g. physical change to the environment, disruption or overcovering of soil, changes in topography or surface relief features, the erosion of beach sand, or a change in existing siltation rates) would be analyzed and mitigated as necessary pursuant to CEQA by the appropriate lead agency. In addition, the proposed project is not expected to expose people or property to geological hazards such as earthquakes, landslides, mudslides, ground failure, or other natural hazards.

In the event that other public agencies do not assume CEQA responsibility, SCAQMD permit process procedures would ensure such projects would be analyzed for CEQA applicability. SCAQMD is typically a responsible agency and before action can be taken on the air quality permits for energy or biosolids projects, the SCAQMD has to have a certified CEQA document from the appropriate lead agency, which is usually the CEC, CPUC or other appropriate agencies with primary discretionary approval authority over the project. So, environmental impacts would typically already have been analyzed and disclosed in accordance with CEQA requirements.

Thus, significant adverse project-specific impacts to geology and soils are not expected from PAR 1309.1 and PRR 1315. Since there are no significant adverse project-specific impacts, no mitigation measures are required. Potential indirect geological impacts from siting, constructing and operating eligible facilities are identified in Chapter 5.

Hazards and Hazardous Materials

Allowing the use of Priority Reserve ERCs for EGF, EPRS and biosolids projects, as proposed in the current and future amendments to Rule 1309.1, does not require an increased transport, storage, or use of hazardous materials and, therefore, would have no direct project-specific hazards or hazardous materials impacts. It is expected that potential hazards impacts associated with the operation of a new facility (e.g. routine transport, use, disposal of hazardous materials; emit hazardous emissions; handle hazardous or acutely hazardous materials; effects of the project on local public and private airports; and effects on business emergency or emergency evacuation plans) would already have been analyzed and mitigated as necessary pursuant to CEQA by the appropriate lead agency.

Additionally, the Uniform Fire Code and Uniform Building Code set standards intended to minimize risks from flammable or otherwise hazardous materials. Local jurisdictions

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

Thus, significant adverse project-specific impacts to hazards and hazardous materials are not expected from PAR 1309.1 and PRR 1315. Since there are no significant adverse project-specific impacts, no mitigation measures are required. Potential indirect hazard impacts from siting, constructing and operating eligible facilities are identified in Chapter 5.

Hydrology and Water Quality

Allowing the use of Priority Reserve ERCs for EGF, EPRS and biosolids projects, as proposed in the current and future amendments to Rule 1309.1, would have no direct project-specific impact on hydrology. It is expected that potential adverse hydrology and water quality impacts associated with the construction and operation of the new power plant, energy project or biosolids processing facility (e.g. increased demand for water or cause a degradation of water quality) would be analyzed and mitigated as necessary pursuant to CEQA by the appropriate lead agency. In the event that other public agencies do not assume CEQA responsibility, SCAQMD permit process procedures would ensure such projects would be analyzed for CEQA applicability. SCAQMD is typically a responsible agency and before action can be taken on the air quality permits for energy or biosolids projects, the SCAQMD has to have a certified CEQA document from the appropriate lead agency, which is usually the CEC, CPUC or other appropriate agencies with primary discretionary approval authority over the project. So, environmental impacts would typically already have been analyzed and disclosed in accordance with CEQA requirements.

Thus, significant adverse project-specific impacts to hydrology and water quality are not expected to occur from implementing PAR 1309.1 and PRR 1315. Since there are no significant adverse project-specific impacts, no mitigation measures are required. Potential indirect hydrology and water quality impacts from siting, constructing and operating eligible facilities are identified in Chapter 5.

Land Use and Planning

There are no provisions in the proposed amendments that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments and no land use or planning requirements will be altered by allowing sources to use Priority Reserve offset ERCs. Present or planned land uses in the region will not be affected as a result of the proposed amendments. Permitted facilities will still be required to comply with local land use requirements.

Allowing the use of Priority Reserve ERCs for EGF, EPRS and biosolids projects, as proposed in the current and future amendments to Rule 1309.1, would have no direct project-specific impact on land use and planning. The impacts to land use and planning from the construction and operation of the new power plant, EPRS or biosolids processing facility will be analyzed in the appropriate CEQA document prepared by the appropriate lead agency.

Based on the above consideration, significant adverse project-specific impacts to land use and planning are not expected from PAR 1309.1 and PRR 1315. Since there are no significant adverse project-specific impacts, no mitigation measures are required. Potential indirect land use and planning impacts from siting, constructing and operating eligible facilities are identified in Chapter 5.

Mineral Resources

There are no provisions in the proposed amendments that would directly 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.

Allowing the use of Priority Reserve ERCs for EGF, EPRS and biosolids projects, as proposed in the current and future amendments to Rule 1309.1, would have no direct project-specific impact on mineral resources. The impacts to mineral resources from the construction and operation of the new power plant, EPRS or biosolids processing facility will be analyzed in the appropriate CEQA document prepared by the appropriate lead agency.

Based on the above consideration, significant adverse project-specific impacts to mineral resources are not expected from PAR 1309.1 and PRR 1315. Since there are no significant adverse project-specific impacts, no mitigation measures are required. Potential indirect mineral resources impacts from siting, constructing and operating eligible facilities are identified in Chapter 5.

Noise

Allowing the use of Priority Reserve ERCs for newly eligible projects, as proposed in the current and future amendments to Rule 1309.1, would have no direct project-specific noise impacts since the proposed project has no provisions that directly require noise-producing equipment or otherwise generate noise. It is expected that noise impacts from the construction and operation of the new power plant, EPRS or biosolids processing facility will be analyzed in the appropriate CEQA document prepared by the appropriate lead agency.

SCAQMD is typically a responsible agency and before action can be taken on the air quality permits for EPRS or biosolids projects, the SCAQMD has to have a certified CEQA document from the appropriate lead agency, which is usually the CEC, CPUC or other appropriate agencies with primary discretionary approval authority over the project. So, environmental impacts would typically already have been analyzed and disclosed in accordance with CEQA requirements.

Based on the above considerations and the fact that facilities must comply with local noise ordinances and OSHA regulations, significant adverse project-specific noise impacts are not expected from PAR 1309.1 and PRR 1315. Since there are no significant adverse project-specific impacts, no mitigation measures are required. Potential indirect noise impacts from siting, constructing and operating eligible facilities are identified in Chapter 5.

Population and Housing

There are no provisions in the proposed amendments that alter land use decisions or would directly result in the creation of new industries that would affect population growth or induce the construction of single- or multiple-family units. The proposed amendments are not expected to appreciably affect employment opportunities, so no population relocation or growth inducement is expected from the proposed project's implementation. It is expected that population and housing impacts from the siting of the new power plant, EPRS or biosolids processing facility will be analyzed in the appropriate CEQA document prepared by the appropriate lead agency.

Nevertheless, in the event that other public agencies do not assume CEQA responsibility, SCAQMD permit process procedures would ensure such projects would be analyzed for CEQA applicability. Therefore, potential adverse population and housing impacts associated with a new facility would be analyzed and mitigated as necessary pursuant to CEQA by the appropriate lead agency. SCAQMD is typically a responsible agency and before action can be taken on the air quality permits for energy projects, the SCAQMD has to have a certified CEQA document from the appropriate lead agency, which is usually the CEC, CPUC or other appropriate agencies with primary discretionary

approval authority over the project. So, environmental impacts would typically already have been analyzed and disclosed in accordance with CEQA requirements.

Based on the above considerations, significant adverse project-specific impacts to population and housing are not expected from PAR 1309.1 and PRR 1315. Since there are no significant adverse project-specific impacts, no mitigation measures are required. Potential indirect population and housing impacts from siting, constructing and operating eligible facilities are identified in Chapter 5.

Public Services

As shown by the responses to the other checklist topics, the proposed project does not have any requirements that would directly result in adverse effects to public services. The proposal would not result in the need for new or physically altered government facilities in order to maintain acceptable service ratios, response times or other performance objectives. It is expected that potential adverse public service impacts associated with the construction and operation of a new power plant, EPRS or biosolids processing facility would be analyzed and mitigated as necessary pursuant to CEQA by the appropriate lead agency.

Nevertheless, in the event that other public agencies do not assume CEQA responsibility, SCAQMD permit process procedures would ensure such projects would be analyzed for CEQA applicability. Therefore, in the event that other public agencies do not assume CEQA responsibility, SCAQMD permit process procedures would ensure such projects would be analyzed for CEQA applicability. SCAQMD is typically a responsible agency and before action can be taken on the air quality permits for energy projects, the SCAQMD has to have a certified CEQA document from the appropriate lead agency, which is usually the CEC, CPUC or other appropriate agencies with primary discretionary approval authority over the project. So, environmental impacts would typically already have been analyzed and disclosed in accordance with CEQA requirements.

Based on the above considerations, significant adverse project-specific impacts to public services are not expected from PAR 1309.1 and PRR 1315. Since there are no significant adverse project-specific impacts, no mitigation measures are required. Potential indirect public services impacts from siting, constructing and operating eligible facilities are identified in Chapter 5.

Recreation

Allowing the use of Priority Reserve ERCs for newly eligible projects, as proposed in the amendments to Rule 1309.1, would have no provisions that would directly increase

the use of existing neighborhood and regional parks or other recreational facilities or include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse project-specific physical effect on the environment. It is expected that potential recreation impacts from the construction and operation of the new power plant, EPRS or biosolids processing facility will be analyzed in the appropriate CEQA document prepared by the appropriate lead agency. In the event that other public agencies do not assume CEQA responsibility, SCAQMD permit process procedures would ensure such projects would be analyzed for CEQA applicability. SCAQMD is typically a responsible agency and before action can be taken on the air quality permits for energy or biosolids projects, the SCAQMD has to have a certified CEQA document from the appropriate lead agency, which is usually the CEC, CPUC or other appropriate agencies with primary discretionary approval authority over the project. So, environmental impacts would typically already have been analyzed and disclosed in accordance with CEQA requirements.

Thus, significant adverse project-specific impacts to recreation are not expected from PAR 1309.1 and PRR 1315. Since there are no significant adverse project-specific impacts, no mitigation measures are required. Potential indirect recreation impacts from siting, constructing and operating eligible facilities are identified in Chapter 5.

Solid /Hazardous Waste

Allowing the use of Priority Reserve ERCs for EGF, EPRS and biosolids projects, as proposed in the current and future amendments to Rule 1309.1, would have no provisions in the proposed amendments that would directly increase the volume of solid or hazardous waste generation, require additional waste disposal capacity, or generate waste that does not meet applicable local, state, or federal regulations. It is expected that the project-specific solid/hazardous waste impacts from the construction and operation of the new EGFs, EPRS or biosolids processing facilities will be analyzed in the appropriate CEQA document prepared by the appropriate lead agency.

In the event that other public agencies do not assume CEQA responsibility, SCAQMD permit process procedures would ensure such projects would be analyzed for CEQA applicability. SCAQMD is typically a responsible agency and before action can be taken on the air quality permits for EPRS or biosolids projects, the SCAQMD has to have a certified CEQA document from the appropriate lead agency, which is usually the CEC, CPUC or other appropriate agencies with primary discretionary approval authority over the project. So, environmental impacts would typically already have been analyzed and disclosed in accordance with CEQA requirements.

Based on the above considerations, significant adverse project-specific impacts to solid/hazardous waste are not expected from PAR 1309.1 and PRR 1315. Since there are no significant adverse project-specific impacts, no mitigation measures are required.

Potential indirect solid and hazardous waste impacts from siting, constructing and operating eligible facilities are identified in Chapter 5.

Transportation/Traffic

Allowing the use of Priority Reserve ERCs for eligible projects, as proposed in the amendments to Rule 1309.1, would have no provisions in the proposed amendments that would directly increase worker commute trips, raw material or finished product transport trips, adversely affect parking, or conflict with adopted policies associated with alternative transportation. It is expected that the impacts on transportation from the construction and operation of the new EGF, EPRS and biosolids projects will be analyzed in the appropriate CEQA document prepared by the appropriate lead agency. In the event that other public agencies do not assume CEQA responsibility, SCAQMD permit process procedures would ensure such projects would be analyzed for CEQA applicability. SCAQMD is typically a responsible agency and before action can be taken on the air quality permits for energy or biosolids projects, the SCAQMD has to have a certified CEQA document from the appropriate lead agency, which is usually the CEC, CPUC or other appropriate agencies with primary discretionary approval authority over the project. So, environmental impacts would typically already have been analyzed and disclosed in accordance with CEQA requirements.

Based on the above considerations, significant adverse project-specific impacts to transportation/circulation are not expected from PAR 1309.1 and PRR 1315. Since there are no significant adverse project-specific impacts, no mitigation measures are required. Potential indirect transportation and traffic impacts from siting, constructing and operating eligible facilities are identified in Chapter 5.

CONSISTENCY

The Southern California Association of Governments (SCAG) and the SCAQMD have developed, with input from representatives of local government, the industry community, public health agencies, the U.S.EPA - Region IX and the California ARB, guidance on how to assess consistency within the existing general development planning process in the Basin. Pursuant to the development and adoption of its Regional Comprehensive Plan Guide (RCPG), SCAG has developed an Intergovernmental Review Procedures Handbook (June 1, 1995). The SCAQMD also adopted criteria for assessing consistency with regional plans and the AQMP in its CEQA Air Quality Handbook. The following sections address consistency between PAR 1309.1 and PRR 1315 and relevant regional plans pursuant to the SCAG Handbook and SCAQMD Handbook.

Consistency with Regional Comprehensive Plan and Guide (RCPG) Policies

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

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

The Growth Management goals are to develop urban forms that enable individuals to spend less income on housing cost, that minimize public and private development costs, and that enable firms to be more competitive, strengthen the regional strategic goal to stimulate the regional economy. PAR 1309.1 and PRR 1315 in relation to the GMC would not interfere with the achievement of such goals, nor would it interfere with any powers exercised by local land use agencies. PAR 1309.1, in particular, would contribute to the GMC's goal of improving the regional standard of living by potentially adding increased electric generating capacity in the future, thus, reducing the possibility of future shortages of electricity and rolling blackouts. PAR 1309.1 and PRR 1315 will not interfere with efforts to minimize red tape and expedite the permitting process to maintain economic vitality and competitiveness.

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

The Growth Management goals to develop urban forms that avoid economic and social polarization promotes the regional strategic goals of minimizing social and geographic disparities and of reaching equity among all segments of society. Consistent with the Growth Management goals, local jurisdictions, employers and service agencies should provide adequate training and retraining of workers, and prepare the labor force to meet the challenges of the regional economy. Growth Management goals also include encouraging employment development in job-poor localities through support of labor force retraining programs and other economic development measures. Local jurisdictions and other service providers are responsible for developing sustainable communities and provide, equally to all members of society, accessible and effective services such as: public education, housing, health care, social services, recreational facilities, law enforcement, and fire protection. Implementing PAR 1309.1 and PRR

1315 is not expected to interfere with the goals of providing social, political and cultural equity.

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

The Growth Management goals also include attaining mobility and clean air goals and developing urban forms that enhance quality of life, accommodate a diversity of life styles, preserve open space and natural resources, are aesthetically pleasing, preserve the character of communities, and enhance the regional strategic goal of maintaining the regional quality of life. The RCPG encourages planned development in locations least likely to cause environmental impacts, as well as supports the protection of vital resources such as wetlands, groundwater recharge areas, woodlands, production lands, and land containing unique and endangered plants and animals. While encouraging the implementation of measures aimed at the preservation and protection of recorded and unrecorded cultural resources and archaeological sites, the plan discourages development in areas with steep slopes, high fire, flood and seismic hazards, unless complying with special design requirements. Finally, the plan encourages mitigation measures that reduce noise in certain locations, measures aimed at preservation of biological and ecological resources, measures that would reduce exposure to seismic hazards, minimize earthquake damage, and develop emergency response and recovery plans. PAR 1309.1 and PRR 1315 in relation to the GMC is not expected to interfere with attaining these goals. PAR 1309.1, in particular, would contribute to the regional qualities of life because it would allow operators of EGFs to comply with Rules 1303 and 2005 offset requirements, which may allow EGFs to be built close to the areas they will serve.

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

PAR 1309.1 and PRR 1315 is consistent with the RMP and CMP since no significant adverse impact to transportation/circulation will result from allowing access to the PM10, SOx, CO and VOC Priority Reserve accounts. PAR 1309.1 and PRR 1315 will simply provide greater options for facilities that require credits to comply with NSR requirements. PAR 1309.1 and PRR 1315 do not cause transportation impacts but rather the eligible facilities may implement projects that could increase traffic, worker commute trips, raw material or finished product transport trips or result in inadequate parking capacity. If the facility is new, the project would likely be required to undergo a siting review with CEC, or zone/ordinance changes with the local cities or counties, and thus subject to a CEQA analysis by the public agency with general land use authority. If the facility is existing, the power generating equipment would either be located in an existing established facility or evaluated for CEQA applicability.

OTHER CEQA TOPICS

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." The Initial Study identified air quality as a potential impact area.

The access to the PM10, SOx, CO and VOC Priority Reserve is temporary until 2008. The credits removed from the Priority Reserve have already been generated through shutdowns, etc., in the past, and the facilities accessing those accounts will have to pay a mitigation fee for each pound of pollutant obtained from the Priority Reserve. The intent of the mitigation fee is to fund future clean air projects and emission reduction programs. Also, by allowing EGFs access to the Priority Reserve accounts to construct and operate new power plants, the region would be able to avoid using high-polluting standby emergency diesel fired electric power generators for electrical power generation.

As can be seen by the information presented in this Draft PEA, the proposed project would result in significant air quality impacts due to the transfer of credits to the Priority Reserve for use by eligible facilities which will create irreversible environmental changes or irretrievable commitment of resources. Although the rule will require a mitigation fee to recover the credits, there is no guarantee that they will be fully recovered. No other significant adverse environmental impacts were identified.

Potential Growth-Inducing Impacts

CEQA Guidelines §15126(d) requires an environmental analysis to consider the "growth-inducing impact of the proposed action." Implementing PAR 1309.1 and PRR 1315 will not have direct or indirect growth-inducing impacts because potential future energy crises in California would be expected to occur as a result of future growth unrelated to the proposed project, resulting in demand for electricity that exceeds the supply. The proposed project is a means of increasing supplies to match increasing demand and avoid or minimize rolling blackouts. Since the access to the Priority Reserve is short-term, until December 31, 2008, the eligible facilities will not contribute additional electricity supplies until year 2007, at the earliest, and beyond when the power plant projects go online. Until then, the electricity demand is expected to exceed the supply. After 2008, the proposed project will assist in narrowing the gap between electricity supply and demand.

CHAPTER 5

POTENTIAL INDIRECT ENVIRONMENTAL IMPACTS

INTRODUCTION

Prior to adoption of Rule 1309.1 in September 2006, opponents of the rule asserted that amending Rule 1309.1 to allow EGFs access to the Priority Reserve will allow construction and operation of these facilities, which might not otherwise occur in the absence of the amendments. As a result, opponents claimed that the SCAQMD should evaluate the indirect effects of operating and constructing these facilities, even though the SCAQMD has no approval authority over these projects and is not the lead agency relative to preparing the CEQA document analyzing environmental impacts of affected facilities.

To respond to this comment, the SCAQMD has performed a literature search for the CEQA documents for the known EGFs that are the subject of the currently proposed amendments and for EPRS and publicly-owned biosolids treatment facilities projects that may be the subject of future proposed amendments. SCAQMD staff has summarized the impacts, mitigation measures and conclusions from these projects (see Appendix D), which serve as an analysis of potential indirect impacts of projects that are part of the currently proposed amendments (EGFs) and projects that may be subject to future proposed amendments (EPRS and biosolids treatment facilities).

CEQA Guidelines §15064(d)(2) state that an indirect physical change in the environment is a physical change which is not immediately related to the project, but which is caused indirectly by the project. If a direct physical change in the environment in turn causes another change in the environment, then the other change is an indirect change in the environment. CEQA Guidelines §15358(a)(2) adds that indirect or secondary effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems.

POTENTIAL INDIRECT IMPACTS AND MITIGATION MEASURES

This chapter briefly summarizes the known environmental impact information from previously prepared CEQA analyses of potential indirect adverse environmental impacts from the siting, construction and operation of EGFs, EPRS and biosolid treatment facilities that may be allowed access to the Priority Reserve as part of the currently proposed project and potential future proposed amendments. The detailed information on the potential impacts identified can be found Appendix D. Table 5-1 provides a list of eligible facilities or types of facilities that may potentially be allowed access to Rule 1309.1's Priority reserve and whose environmental impacts, etc., have been summarized in this chapter.

Table 5-2 provides a brief summary of the significance conclusions relative to each environmental topic[20] analyzed in the CEQA document for each project identified in Table 5-1.

Due to the large volume of information, the specific mitigation measures are not included in this chapter but, can be found in Appendix D. Appendix D has been organized into 10 sections, with each section devoted to a single affected facility project.

TABLE 5-1

Eligible Facilities Previously Evaluated for Environmental Impacts

Eligible Facility	Appendix D Section #
AES Highgrove	D1
Cabrillo Port	D2
El Segundo Repower	D3
Nursery Products	D4
Riverside Energy	D5
SES Long Beach	D6
Sun Valley	D7
City of Vernon Power Plant	D8
City of Victorville Power Plant	D9
Walnut Creek	D10

The individual CEQA documents for each project address cumulative impacts as required by CEQA and as indicated in the tables in Appendix D. For the EGF projects in particular, the CEC identifies a cumulative impacts area for each project with a radius ranging typically from approximately six to eight miles from the project site. Because of the distance between facilities, as shown in Figure 2-2, with the exception of regional air quality impacts, it is not likely that the cumulative impact regions for the individual facilities would overlap. In any event, for the purposes of this indirect impacts analysis relative to cumulative impacts, the SCAQMD is relying on the cumulative impacts conclusions reached for each project that are stated in the individual CEQA documents.

[20] The environmental topics evaluated in the CEQA documents for each project are not always consistent between the different projects. For example, in the Sun Valley Project CEQA document soil impacts analysis is addressed under the "Agricultural Resources" topic, whereas in the Walnut Creek Project CEQA document the soils impacts analysis is addressed under the "Water Resources and Hydrology" topic. Although SCAQMD staff has attempted to standardize environmental topic areas, the tables typically summarize impacts as they are presented in the CEQA documents.

TABLE 5-2

Indirect Environmental Impacts from Known Eligible Facilities

Environmental Impact Area	AES Highgrove	Cabrillo Port	El Segundo Repower	Nursery Products	Riverside Energy	SES Long Beach	Sun Valley	City of Vernon	City of Victorville	Walnut Creek
Aesthetics (Visual Resources) - Construction	Less than significant	Significant	Mitigated to less than significant	Less than significant	Not evaluated in document	Less than significant	Less than significant	Less than significant	Less than significant	Mitigated to less than significant
Aesthetics (Visual Resources) - Operation	Less than significant	Significant	Mitigated to less than significant	Less than significant	Not evaluated in document	Less than significant	Less than significant	Less than significant	Less than significant	Mitigated to less than significant
Agricultural (and Soil) Resources - Construction	Mitigated to less than significant	Not evaluated in document	Not evaluated in document	Less than significant	Not evaluated in document	Not evaluated in document	Not identified in document	Mitigated to less than significant	Mitigated to less than significant	Not identified in document
Agricultural (and Soil) Resources - Operation	Less than significant	Not evaluated in document	Less than significant	Less than significant	Not evaluated in document	Not evaluated in document	Not identified in document	Less than significant	Mitigated to less than significant	Less than significant
Air Quality - Construction	Mitigated to less than significant	Significant	Significant	Less than significant	Mitigated to less than significant	Significant	Mitigated to less than significant	Mitigated to less than significant	Mitigated to less than significant	Mitigated to less than significant
Air Quality - Operation	Mitigated to less than significant	Significant	Significant	Significant	Mitigated to less than significant	Significant	Mitigated to less than significant	Mitigated to less than significant	Mitigated to less than significant	Mitigated to less than significant
Biological Resources – Construction	Mitigated to less than significant	Significant	Less than significant	Less than significant	Mitigated to less than significant	Less than significant	Mitigated to less than significant	Less than significant	Mitigated to less than significant	Less than significant
Biological Resources - Operation	Less than significant	Significant	Significant	Less than significant	Not identified in document	Less than significant	Mitigated to less than significant	Less than significant	Mitigated to less than significant	Less than significant

TABLE 5-2 (CONTINUED)

Indirect Environmental Impacts from Known Eligible Facilities

Environmental Impact Area	AES Highgrove	Cabrillo Port	El Segundo Repower	Nursery Products	Riverside Energy	SES Long Beach	Sun Valley	City of Vernon	City of Victorville	Walnut Creek
Cultural Resources and Paleontology - Construction	Mitigated to less than significant	Less than significant	Less than significant	Less than significant	Mitigated to less than significant	Less than significant	Mitigated to less than significant	Less than significant	Less than significant	Mitigated to less than significant
Cultural Resources and Paleontology - Operation	Not identified in document	Less than significant	Not identified in document	Less than significant	Not identified in document	Less than significant	Less than significant	Less than significant	Less than significant	Mitigated to less than significant
Energy	Not evaluated in document	Less than significant	Not evaluated in document	Not evaluated in document	Not evaluated in document	Not evaluated in document	Not evaluated in document	Not evaluated in document	Not evaluated in document	Not evaluated in document
Geology - Construction	Mitigated to less than significant	Less than significant	Less than significant	Less than significant	Less than significant	Less than significant	Less than significant	Less than significant	Less than significant	Mitigated to less than significant
Geology - Operation	Not evaluated in document	Less than significant	Less than significant	Less than significant	Not identified in document	Less than significant	Mitigated to less than significant	Less than significant	Less than significant	Mitigated to less than significant
Hazards and Hazardous Materials - Construction	Mitigated to less than significant	Less than significant (Significant public safety)	Less than significant	Less than significant	Not identified in document	Mitigated to less than significant	Mitigated to less than significant	Mitigated to less than significant	Mitigated to less than significant	Less than significant
Hazards and Hazardous Materials – Operation	Mitigated to less than significant	Less than significant (Significant public safety)	Mitigated to less than significant	Less than significant	Mitigated to less than significant	Mitigated to less than significant	Mitigated to less than significant	Mitigated to less than significant	Mitigated to less than significant	Mitigated to less than significant
Hydrology and Water Quality - Construction	Mitigated to less than significant	Significant	Mitigated to less than significant	Less than significant	Not identified in document	Mitigated to less than significant	Mitigated to less than significant	Mitigated to less than significant	Mitigated to less than significant	Mitigated to less than significant

TABLE 5-2 (CONTINUED)

Indirect Environmental Impacts from Known Eligible Facilities

Environmental Impact Area	AES Highgrove	Cabrillo Port	El Segundo Repower	Nursery Products	Riverside Energy	SES Long Beach	Sun Valley	City of Vernon	City of Victorville	Walnut Creek
Hydrology and Water Quality - Operation	Mitigated to less than significant	Significant	Mitigated to less than significant	Less than significant	Less than significant	Mitigated to less than significant	Mitigated to less than significant	Mitigated to less than significant	Mitigated to less than significant	Mitigated to less than significant
Land Use and Planning - Construction	Not identified in document	Less than significant	Less than significant	Less than significant	Not identified in document	Less than significant	Not identified in document	No impact	Less than significant	Not identified in document
Land Use and Planning - Operation	No impact	Less than significant	Less than significant	Less than significant	No impact	Less than significant	Less than significant	No impact	Less than significant	Mitigated to less than significant
Mineral Resources	Not evaluated in document	Less than significant	Not evaluated in document	Not evaluated in document	Not evaluated in document	Not evaluated in document	Not evaluated in document	Not evaluated in document	Not evaluated in document	Not evaluated in document
Noise - Construction	Mitigated to less than significant	Significant	Mitigated to less than significant	Less than significant	Mitigated to less than significant	Less than significant	Mitigated to less than significant	Mitigated to less than significant	Less than significant	Mitigated to less than significant
Noise - Operation	Mitigated to less than significant	Significant	Mitigated to less than significant	Less than significant	Mitigated to less than significant	Less than significant	Mitigated to less than significant	Mitigated to less than significant	Less than significant	Mitigated to less than significant
Population/ Housing	Not evaluated in document	Not evaluated in document	Not evaluated in document	Less than significant	Not evaluated in document	Less than significant	Not evaluated in document	Not evaluated in document	Less than significant	Not evaluated in document
Public Services – Construction	Not evaluated in document	Not evaluated in document	Less than significant	Less than significant	Not evaluated in document	Less than significant	Not evaluated in document	Not evaluated in document	Less than significant	Not evaluated in document
Public Services - Operation	Not evaluated in document	Not evaluated in document	Less than significant	Less than significant	Not evaluated in document	Less than significant	Not evaluated in document	Not evaluated in document	Less than significant	Not evaluated in document
Recreation - Construction	Not evaluated in document	Less than significant	Not evaluated in document	Less than significant	Not evaluated in document	Not evaluated in document	Not evaluated in document	Not evaluated in document	Not evaluated in document	Not evaluated in document

TABLE 5-2 (CONCLUDED)

Indirect Environmental Impacts from Known Eligible Facilities

Environmental Impact Area	AES Highgrove	Cabrillo Port	El Segundo Repower	Nursery Products	Riverside Energy	SES Long Beach	Sun Valley	City of Vernon	City of Victorville	Walnut Creek
Recreation - Operational	Not evaluated in document	Significant	Not evaluated in document	Less than significant	Not evaluated in document	Not evaluated in document	Not evaluated in document	Not evaluated in document	Not evaluated in document	Not evaluated in document
Solid/ Hazardous Waste – Construction	Mitigated to less than significant	Not evaluated in document	Mitigated to less than significant	Not evaluated in document	Mitigated to less than significant	Less than significant	Mitigated to less than significant	Less than significant	Mitigated to less than significant	Mitigated to less than significant
Solid/ Hazardous Waste - Operation	Mitigated to less than significant	Not evaluated in document	Mitigated to less than significant	Not evaluated in document	Mitigated to less than significant	Less than significant	Mitigated to less than significant	Less than significant	Mitigated to less than significant	Mitigated to less than significant
Traffic Impacts - Construction	Mitigated to less than significant	Less than significant	Mitigated to less than significant	Less than significant	Mitigated to less than significant	Mitigated to less than significant	Mitigated to less than significant	Mitigated to less than significant	Less than significant	Mitigated to less than significant
Traffic Impacts - Operation	Less than significant	Less than significant	Mitigated to less than significant	Less than significant	Less than significant	Less than significant	Less than significant	Less than significant	Less than significant	Less than significant

Greenhouse Gases and Climate Change:

With the passage of AB 32, attention is increasingly focusing on global climate change (GCC) and GHG emissions, not only from existing mobile and stationary sources, but from new sources as well. Some environmental groups are now requesting that environmental analyses for large regional projects also include an analysis of GCC and GHG impacts. This section focuses on calculating GHG emissions primarily from EGFs because the environmental documents being relied upon for the analysis of indirect impacts summarized in this chapter and Appendix D, either do not evaluate GHG emissions or qualitatively address them.

This section also provides background information on GCC and GHG legislative history and the state of the science regarding these topics. The overarching theme of the discussion in this section is that the legislative process in California relative to GHGs is in the early stages and that the scientific tools to evaluate GCC and GHG impacts from individual projects are limited. Nevertheless, SCAQMD staff has evaluated GHG impacts from most of the projects listed in Table 5-3 to the extent information about the projects is available and methodologies and emission factors have been established.

While GHG can be estimated, the impacts on global warming and climate change are indirect, not direct, and the emissions cannot be precisely correlated with specific impacts based on currently available science. Climate change is a worldwide event, making it difficult to develop the scientific tools and policy needed to select a CEQA significance threshold for climate change or greenhouse gas emissions. EGF, EPRS and biosolid projects will be subject to any regulations developed under AB 32 as determined by the CARB. As there are currently no emission significance thresholds or other tools available to assess GHG and climate change impacts, the SCAQMD does not currently have a "significance threshold" to determine whether a project will have a significant impact on global warming or climate change. In the absence of regulatory guidance, and before the resolution of various legal challenges for global climate change analysis and the selection of a significance threshold, SCAQMD CEQA documents can only address GHG emissions on a base-by-case basis using methods and individual judgment based on existing CEQA guidance.

Because there are known CO_2 emissions from the operation of EGFs and a reliable emission factor to calculate CO_2 emissions from EGFs, this analysis estimated the CO2 emissions projected by the known facilities eligible to access the Priority Reserve as a result of the proposed project. If sited, constructed and operated at the projected operating levels, the CO_2 emissions from each facility's turbines can be calculated. Total annual CO_2 emissions are 35.4 billion pounds from all the known

TABLE 5-3

PAR 1309.1 Indirect GHG Impacts from the Operation of Eligible EGFs

Facility	Unit No	Turbine Type	MW/hr	Turbine Efficiency (percent)	Cycle	Hours/Year	CO2 Emissions (lbs/year)	Lb CO2/MW	Total MW/yr
EME Walnut Creek	1	LMS100PA	100	45.1	Simple	3,468	374,290,244	1,079	346,800
EME Walnut Creek	2	LMS100PA	100	45.1	Simple	3,468	374,290,244	1,079	346,800
EME Walnut Creek	3	LMS100PA	100	45.1	Simple	3,468	374,290,244	1,079	346,800
EME Walnut Creek	4	LMS100PA	100	45.1	Simple	3,468	374,290,244	1,079	346,800
EME Walnut Creek	5	LMS100PA	100	45.1	Simple	3,468	374,290,244	1,079	346,800
EME Sun Valley	1	LMS100PA	100	45.1	Simple	3,468	374,290,244	1,079	346,800
EME Sun Valley	2	LMS100PA	100	45.1	Simple	3,468	374,290,244	1,079	346,800
EME Sun Valley	3	LMS100PA	100	45.1	Simple	3,468	374,290,244	1,079	346,800
EME Sun Valley	4	LMS100PA	100	45.1	Simple	3,468	374,290,244	1,079	346,800
EME Sun Valley	5	LMS100PA	100	45.1	Simple	3,468	374,290,244	1,079	346,800
AES Highgrove	1	LMS100PA	100	45.1	Simple	5,475	590,899,390	1,079	547,500
AES Highgrove	2	LMS100PA	100	45.1	Simple	5,475	590,899,390	1,079	547,500
AES Highgrove	3	LMS100PA	100	45.1	Simple	5,475	590,899,390	1,079	547,500
CPV Ocotillo	1	LMS100PA	100	45.1	Simple	5,000	539,634,146	1,079	500,000
CPV Ocotillo	2	LMS100PA	100	45.1	Simple	5,000	539,634,146	1,079	500,000
CPV Ocotillo	3	LMS100PA	100	45.1	Simple	5,000	539,634,146	1,079	500,000
CPV Ocotillo	4	LMS100PA	100	45.1	Simple	5,000	539,634,146	1,079	500,000
CPV Ocotillo	5	LMS100PA	100	45.1	Simple	5,000	539,634,146	1,079	500,000
CPV Ocotillo	6	LMS100PA	100	45.1	Simple	5,000	539,634,146	1,079	500,000
CPV Ocotillo	7	LMS100PA	100	45.1	Simple	5,000	539,634,146	1,079	500,000
CPV Ocotillo	8	LMS100PA	100	45.1	Simple	5,000	539,634,146	1,079	500,000
Riverside Energy	1	LM6000	48	42.2	Simple	3,000	166,094,787	1,153	144,000
Riverside Energy	2	LM6000	48	42.2	Simple	3,000	166,094,787	1,153	144,000
NRG El Segundo	5,7	F7A2-on1	630	56.5	Combined	8,760	4,754,470,619	862	5,518,800
Vernon VPP	1, 2, 3	SW3-on-1	943	57	Combined	6,935	5,584,563,875	854	6,539,705
BP Carson	1	7FB	500	57.5	Combined	8,000	3,386,086,957	847	4,000,000
Reliant SG Power	1,2	SW2-on1	656	56.5	Combined	7,792	4,403,624,665	862	5,111,552
Palmdale	1	2on1	500	55	Combined	8,000	3,540,000,000	885	4,000,000
Victorville	1	2on1	500	55	Combined	8,000	3,540,000,000	885	4,000,000
		Total MW	**5,925**		***Total Annual CO2 Emissions***		**35,373,609,470**	**1,040**	**38,568,557**

Formula: Lbs CO2/MW = 486.75/turbine efficiency

affected EGFs. The California GHG inventory (see Table 3-3 in Chapter 3) lists the total CO_2 emissions as 335 million metric tons (737 billion pounds). Thus, CO_2 emissions from all the projects amount to approximately five percent of California's current CO_2 inventory. The affected facilities and the individual turbine emissions are summarized in Table 5-3.

While the SCAQMD has not determined whether the proposed projects individually will have a significant impact on global warming or climate change, the proposed projects taken together overall will contribute to greenhouse gas emissions in California as well as related potential adverse health effects. Given the position of the legislature on AB 32, which states that global warming poses serious threats to health and the environment, and the requirements of CEQA for the lead agency to determine whether a project will have a significant impact, the overall effect of 35.4 billion pounds of projected annual CO_2 emissions is considered sizeable. Thus, the indirect greenhouse gas impact from the proposed project is considered significant. This determination is based on the lack of clear scientific or other criteria for determining the level of significance of all the projects' contribution to the already degraded air quality in state of California and the world at large.

On January 25, 2007, the California Public Utilities Commission (CPUC) adopted an interim GHG Emissions Performance Standard, which is a facility-based emissions standard requiring that all new long-term commitments for baseload generation to serve California consumers be with power plants that have emissions no greater than a combined cycle gas turbine plant. That level is established at 1,100 pounds of CO2 per megawatt-hour (MW-hr). Further, on May 23, 2007, the California Energy Commission (CEC) adopted regulations that establish and implement a 1,100 pounds per MW-hr Emissions Performance Standard (EPS) (see CEC order No. 07-523-7) [Docket No. 06- OIR-1]). As noted in Table 5-1, all but two turbines at the affected EGFs individually meet the CPUC's and CEC's emissions performance standard. Although two turbine units at one facility exceed the standard, the overall average CO_2 per MW-hr from the whole project does not exceed the emissions performance standard. In spite of this, because total annual CO_2 is considered to be sizeable, the SCAQMD has concluded that GHG emissions from all known EGF projects are significant.

It is likely that EPRS and publicly-owned biosolids treatment projects will also emit GHGs, thus, contributing to global climate change. Calculating GHG emissions for EGFs is possible because the type of fuel (natural gas) is known and the combustion equipment and processes are relatively similar for both the simple and combined cycle gas turbines. Actual combustion sources, equipment, and fuels expected for

EPRS and biosolids treatment facilities are less well known, so quantification of GHG emissions from these sources is problematic. Because of these uncertainties, the SCAQMD qualitatively assumes that GHG emissions from EPRSs and biosolids treatment facilities could be substantial, thus, making the significant GHG emission impacts substantially worse.

The proposed projects have been evaluated to determine whether the emissions of greenhouse gases have been minimized and mitigated to the extent feasible with current technology. The proposed projects have been carefully designed to minimize emissions by installing BACT and complying with the requirements of PAR 1309.1 to investigate and document the availability of renewable energy plans as an alternative to the project. In turn, total GHG emissions are reduced. Thus, the SCAQMD has required all feasible mitigation measures for the GHG indirect impacts of Rule 1309.1. However, after mitigation, SCAQMD qualitatively assumes impacts will remain significant.

In addition, to reduce California's greenhouse gas emissions to the levels proposed in Executive Order S-3-05, the California EPA Climate Action Team developed a report that outlines strategies for meeting the Governor's targets. Use of the strategies in the report to determine project consistency are the most appropriate to use at this time because the report "proposes a path to achieve the Governor's targets that will build on voluntary actions of California businesses, local government and community actions, and State incentive and regulatory programs"(CA, 2006). AB 32 requires that a list of emission reduction strategies be published to achieve the goals set out in AB 32. However, until those reduction strategies are published, emission reduction strategies to meet Executive Order S-3-05 will be relied upon.

The GHG emission reduction strategies that CARB is to implement over the next two years are summarized in Table 5-4. Strategies to be implemented by other agencies are also available and Table 5-5 summarizes GHG emission reduction strategies implemented by the CEC and the CPUC.

TABLE 5-4

California Air Resources Board Greenhouse Gas Emission Reduction Strategies

Strategy	Description of Strategy
Vehicle Climate Change Standards	AB 1493 (Pavley) required the state to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of climate change emissions emitted by passenger vehicles and light duty trucks. Regulations were adopted by the ARB in September 2004.
Diesel Anti-Idling	In July 2004, the CARB adopted a measure to limit diesel-fueled commercial motor vehicle idling.
Other Light Duty Vehicle Technology	New standards would be adopted to phase in beginning in the 2017 model year
Hydrofluorocarbon Reduction	1) Ban retail sale of HFC in small cans; 2) Require that only low global warming potential (GWP) refrigerants be used in new vehicular systems; 3) Adopt specifications for new commercial refrigeration; 4) Add refrigerant leak-tightness to the pass criteria for vehicular Inspection and Maintenance programs; 5) Enforce federal ban on releasing HFCs.
Transportation Refrigeration Units, Off-Road Electrification, Port Electrification	Strategies to reduce emissions from TRUs, increase off-road electrification, and increase use of shore-side/port electrification.
Manure Management	San Joaquin Valley Rule 4570 (adopted 6/15/06) reduces volatile organic compounds from confined animal facilities through implementation of control options.
Alternative Fuels: Biodiesel Blends	CARB would develop regulations to require the use of 1 to 4 percent biodiesel displacement of California diesel fuel.
Alternative Fuels: Ethanol	Increased use of ethanol fuel.
Heavy-Duty Vehicle Emission Reduction Measures	Increased efficiency in the design of heavy duty vehicles and an education program for the heavy duty vehicle sector.
Reduced Venting and Leaks in Oil and Gas Systems	Rule considered for adoption by the Air Pollution Control Districts for improved management practices.
Hydrogen Highway	The California Hydrogen Highway Network (CA H2 Net) is a State initiative to promote the use of hydrogen as a means of diversifying the sources of transportation energy.
Achieve 50% Statewide Recycling Goal	Achieving the State's 50 percent waste diversion mandate as established by the Integrated Waste Management Act of 1989, (AB 939, Sher, Chapter 1095, Statutes of 1989), will reduce climate change emissions associated with energy intensive material extraction and production as well as methane emission from landfills. According to the California Integrated Waste Management Board, in 2005 the statewide waste diversion rate was 52 percent.[21]
Landfill Methane Capture	Install direct gas use or electricity projects at landfills to capture and use emitted methane.
Zero Waste - High Recycling	Additional recycling beyond the State's 50% recycling goal.

TABLE 5-5

Greenhouse Gas Emission Reduction Strategies Implemented by CEC and CPUC

Strategy	Description of Strategy
ENERGY COMMISSION (CEC)	
Building Energy Efficiency Standards in Place and in Progress	Public Resources Code 25402 authorizes the CEC to adopt and periodically update its building energy efficiency standards (that apply to newly constructed buildings and additions to and alterations to existing buildings).
Appliance Energy Efficiency Standards in Place and in Progress	Public Resources Code 25402 authorizes the Energy Commission to adopt and periodically update its appliance energy efficiency standards (that apply to devices and equipment using energy that are sold or offered for sale in California).
Cement Manufacturing	Cost-effective reductions to reduce energy consumption and to lower carbon dioxide emissions in the cement industry.
Municipal Utility Strategies	Includes energy efficiency programs, renewable portfolio standard, combined heat and power, and transitioning away from carbon intensive generation.
Alternative Fuels: non-Petroleum Fuels	Increasing the use of non-petroleum fuels in California's transportation sector, as recommended in the CEC's 2003 and 2005 Integrated Energy Policy Reports.
PUBLIC UTILITIES COMMISSION (PUC)	
Accelerated Renewable Portfolio Standard (33 percent by 2020)	The Governor has set a goal of achieving 33 percent renewables in the State's resource mix by 2020. The joint PUC/Energy Commission September 2005 Energy Action Plan II (EAP II) adopts the 33 percent goal.
California Solar Initiative	The solar initiative includes installation of 1 million solar roofs or an equivalent 3,000 MW by 2017 on homes and businesses, increased use of solar thermal systems to offset the increasing demand for natural gas, use of advanced metering in solar applications, and creation of a funding source that can provide rebates over 10 years through a declining incentive schedule.
Investor-Owned Utility	This strategy includes energy efficiency programs, combined heat and power initiative, and electricity sector carbon policy for investor owned utility.

The strategies relevant to reducing or limiting the GHG emissions from power generation which are to be implemented by CEC and CPUC are within the responsibility and jurisdiction of these agencies and not the SCAQMD. These agencies can and should adopt these measures. With the passage of AB 32, the issue of climate change has moved from the scientific debate into law and policymaking. It is anticipated that other states, and eventually the federal government, will pass legislation similar to AB 32. AB 32 is essentially a roadmap and timeline of how climate change will be addressed in California. Consequently, it does not issue any new explicit regulations or guidelines for environmental review of new projects. However, AB 32 and supporting documents (i.e. Executive Order S-3-05, and the California Climate Action Team's Report to the Governor) give great credence to the argument that climate change should be addressed during the CEQA review process.

[21] CIWMB, 2007; http://www.ciwmb.ca.gov/LGCentral/Rates/Diversion/2005/Default.htm

Prior to the explicit issuance of new CEQA guidance by the Resources Agency, it is anticipated that the courts may issue rulings on the need for global climate change impact analysis in evaluating specific cases under CEQA. In the interim, prior to development of a significance threshold for GHGs, the SCAQMD will make significance determinations on a case-by-case basis.

Health Effects:

The proposed project has the potential to generate indirect emissions of PM10, SOx, NOx and CO. The NOx emissions will contribute to the formation of ozone as well as PM2.5 and PM10. SOx emissions are also a precursor to PM10/PM2.5 formation. The potential adverse health effects from PM10, SOx, NOx, and CO emissions are described in Chapter 3 (pages 3-2 and 3-3) and include increases in mortality rates, respiratory infections, number and severity of asthma attacks, number of hospital admissions, and airway constriction in some asthmatics. Emissions of NOx and VOCs also contribute to ozone formation. Ozone health effects are also described in Chapter 3 (page 3-2), and include increased mortality and decreases in pulmonary function. A detailed discussion on health effects for all criteria pollutants is also provided in Appendix I to the SCAQMD's 2007 AQMP.

The U.S. EPA has promulgated AAQS for particulate matter, SO2, NO2, CO and ozone at levels that are designed to protect public health with an adequate margin of safety. The standards for CO, SOx and NO2 are met in the South Coast. The SCAQMD does not meet the standards for PM and ozone. The SCAQMD and CARB have developed clean-air plans designed to attain the standards for PM and ozone by the deadlines required by the Clean Air Act. These plans take into account the emissions from current and projected sources in the Basin, including the facilities that are proposed to be constructed utilizing the credits made available from this project. Thus, the emissions would not be expected to contribute to violations of the NAAQS. If electrical power-generating plants are constructed, however, those plants will increase emissions of PM10, SOx, NOx and CO, especially in areas near the plants.

Also, even though the air quality standards for PM are projected to be attained by 2015 for PM2.5 and 2024 for 8-hour ozone under the proposed 2007 AQMP, there may be health effects at exposures to levels below the standards. This is because there are no known thresholds for many of the described effects. The potential for such effects, as well as the health benefits of attaining the standards, are described in the Socioeconomic Report of the SCAQMD's 2007 AQMP.

At this time, it is not possible to quantify the specific health effects of this entire project. There are 11 power plants that are proposed to be constructed utilizing the credits made available by this project, and the SCAQMD only has modeling data for three of the 11 plants. Further, specific health effects can only be quantified for populations with a known size and age. At this time, it is not known what populations will be affected and what the magnitude of the effects will be. This is in part due to uncertainties regarding the construction of the power plants. Although it is likely that some of the plants will be constructed, it cannot be known with any certainty which particular plants in fact will be built, and accordingly, which populations will be affected by plant emissions. In addition, any site-specific exposures will depend on stack design, local meteorological condition, receptor location and distance, and any other final design specification and operating parameters for that facility. The final specifications and parameters for the plants are unknown at this time. Furthermore, with regards to NOx emissions as a precursor to ozone formation, it is technically impossible to estimate, on a project basis, the quantity and location of NOx contribution to ozone formation by the proposed project because of the complexity of VOC and NOx interactions throughout the air basin. However, the air quality modeling and Socioeconomic Assessment of 2007 AQMP provide an indication of the extent of NOx emissions and ozone formation in the basin as a whole.

Health studies used to estimate the reduction in mortality effects associated with attaining the PM2.5 standard in the AQMP can give a perspective on the potential health effects from the proposed plants. These health studies estimate the reduction in mortality effects associated with attaining the PM2.5 standard range from a six percent to a 17 percent change in mortality rates for a 10 ug/m3 change in annual PM2.5 concentrations. Extrapolating from this analysis, it can be concluded that a 10 ug/m3 increase in PM2.5 concentrations would be associated with a six percent to 17 percent increase in mortality.

In addition, the SCAQMD has prepared an estimation of the health effects from PM emissions from a plant proposed to be constructed in the City of Vernon, which is the currently the largest of the proposed facilities and thus most likely to have the largest emissions of PM as compared to the other proposed facilities. The health effects for the other two facilities for which the SCAQMD has emissions data would be expected to be no greater than those for the Vernon facility. These health effects have been calculated using emissions data for the plant that are likely to change before final construction in order to comply with proposed Rule 1309.1. In addition, while the methodology is the best reasonably available under the circumstances, it

has not been subject to peer review or approval, and thus may not be appropriate for analyzing future projects. Based on this methodology, the SCAQMD estimates that

there may be an increase in annual adult mortality from the Vernon plant of 3.82 persons in the area that would be typically modeled as part of the preparation of a health risk assessment. This figure represents a premature mortality estimate that is significantly less than 0.1 percent of the Basin-wide background mortality from PM 2.5 exposure. It should be noted that the PM2.5 attainment strategy of the 2007 AQMP is expected to reduce PM2.5 exposure-based premature mortality by approximately 1500 cases annually by 2015.

It should also be noted that the mortality value referenced above for the Vernon Plant is based on a study by Pope (Pope et al 2002), and other studies have found effects levels higher than that found by in the Pope study. A study by Jerrett (Jerrett et al., 2005) found a 17 percent change in mortality rate for a 10 ug/m3 change in PM2.5. This would increase by approximately a factor of three the annual adult mortality from PM2.5 emissions from the Vernon Plant. A study by Laden (Laden et al., 2006) found changes in mortality from a 10 ug/m3 increase in PM2.5 falling in between the values for the Pope and Jerrett studies which would result in an intermediate value for mortality. Regardless of which study is relied on, the health effects of this project are deemed significant.

In considering the PM health effects, it is necessary to carefully balance these effects against the potential and safety effects of rolling blackouts and brownouts in the region. As noted elsewhere in this PEA rolling blackouts and brownouts can create public safety effects such as interfering with the operation of health related equipment at hospitals, nursing homes, convalescent facilities, etc., interfering with public health and service providers by increasing the response times during emergencies; increasing the potential for roadway accidents in the event that traffic lights stop operating. Further, experience during the California energy crisis in 2000 and 2001, the region experienced a substantial increase in the use of emergency standby diesel powered electricity generators. These equipment are substantially more polluting than clean natural gas-fired gas turbines, especially with respect to diesel particulate matter emissions, which is classified as carcinogenic by CARB. For example, SCAQMD staff concluded that during a typical rolling blackout, daily emissions from diesel internal combustion engines increased by the following amounts: 10.6 pounds of PM10 emissions; 514 pounds of NOx emissions; 111 pounds of CO emissions; 7.7 pounds of SOx emissions; and 41 pounds of VOC emissions (Final EA for PAR 1470; February 17, 2005, SCAQMD NO. 050118MK).

The paragraphs below summarize the methodology used in this analysis.

To estimate the potential for air quality impacts of the proposed rule, the largest proposed facility emissions were used to estimate the maximal impact on particulate matter. The ISC (Industrial Source Complex) model output provided by the proposed Vernon Power Plant was used. The model output gives the levels of PM10 at a set of receptor points approximately 100 meters apart. The annual level of PM10 at the point of maximum impact from the model was 0.55 ug/m3.

To estimate the potential for health impacts, a calculation was performed on the modeled air quality impacts and changes in mortality. For this calculation, it was assumed that all the PM10 is all PM2.5, and the study by Pope (Pope at al., 2002) was used to estimate the change in mortality rate associated with a change in PM2.5. From the Pope study, a 10 ug/m3 change in PM2.5 is associated with a six percent change in mortality. This was applied in a concentration-response equation to determine the relative change in mortality associated with the estimated changes in annual PM levels.

The log-linear form of the concentration response equation is:

$$\Delta \text{ Mortality} = y_0 (e^{\beta \Delta PM} - 1) * \text{population}$$

where

y_0 = county level all cause annual death rate per person for ages 30 and older,

β = PM2.5 coefficient from health study,

ΔPM = change in annual mean PM2.5 concentration, and

Population = population of ages 30 and older.

The resulting change in cases of mortality in a population age group living in a specific location with a given change in PM can then be calculated. This was applied at the census tract level for all census tracts within the modeling domain, and the results summed over the census tracts to give an overall estimate in the change in mortality from PM emission of the facility.

The average annual PM2.5 level for each census tract was calculated from the modeling grid points using an Inverse Distance Weighted interpolation model in the GeoStatistical Analyst by ESRI.

CHAPTER 6

ALTERNATIVES

Introduction
Alternatives Rejected as Infeasible
Description of Alternatives
Comparison of Alternatives
Conclusion

INTRODUCTION

This Draft PEA provides a discussion of alternatives to the proposed project as required by state CEQA Guidelines. 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. State CEQA Guidelines §15126.6(c) specifically notes that the range of alternatives required in a CEQA document is governed by a "rule of reason" and only necessitates that the CEQA document set forth those alternatives necessary to permit a reasoned choice. The key issue is whether the selection and discussion of alternatives fosters informed decision making and meaningful public participation. A CEQA document need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative.

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

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). While the scope and goals of the proposed project are very specific, there is a wide variety of options to the proposed project that can be considered as alternatives to the proposed project. A number of alternatives are feasible and have been proposed in this chapter. Because of the wide variety of alternative options to the proposed project components, there is a wide range of alternatives that would be considered feasible. Only one alternative has been identified as infeasible.

During the previous Rule 1309.1 amendment promulgation process to allow EGFs access to the Priority Reserve, environmental groups suggested that the SCAQMD consider an alternative of requiring energy conservation instead of allowing access to the SCAQMD's Priority Reserve account. The SCAQMD is single purpose public agency that has jurisdictional authority over stationary emission sources and limited authority over mobile sources (Health and Safety Code §40400, et seq.).

The authority to impose energy conservation measures under state law is expressly within the jurisdiction of the California Energy Commission (CEC), the California Public Utilities Commission (CPUC) and other local utilities. For example, CEC's

Efficiency, Renewables and Demand Division[22] is committed to making California's businesses, homes, and appliances more energy efficient. This commitment is achieved by:

- Developing and implementing energy efficiency building standards that help ensure comfort and affordability;
- Identifying and developing ways to streamline energy use in agriculture, manufacturing, water systems, and processing functions;
- Letting Californians know that using energy wisely is a good investment in the economy and the environment;
- Analyzing demand and consumption trends to assist in policy decisions; and
- Assisting Schools (K-12), Public Colleges and Hospitals, Local Government, and others to identify and implement energy efficiency measures.

Similarly, the CPUC regulates privately owned telecommunications, electric, natural gas, water, railroad, rail transit, and passenger transportation companies, in addition to authorizing video franchises. The CPUC[23] is responsible for ensuring that customers have safe, reliable utility service at reasonable rates, protecting against fraud, and promoting the health of California's economy by:

- Establishing service standards and safety rules, and authorizing utility rate changes;
- Monitoring the safety of utility and transportation operations, and overseeing markets to inhibit anti-competitive activity;
- Prosecuting unlawful utility marketing and billing activities, govern business relationships between utilities and their affiliates, and resolving complaints by customers against utilities;
- Implementing energy efficiency and conservation programs and programs for the low-income and disabled (emphasis added);
- Work with other state and federal agencies in promoting water quality, environmental protection, and safety; etc.

Pursuant to CEQA Guidelines §15040 (b), "CEQA does not grant an agency new powers independent of the powers granted to the agency by other laws." Therefore,

[22] CEC's Efficiency, Renewables and Demand Division Mission Statement: http://www.energy.ca.gov/efficiency/
[23] CPUC Mission: http://www.cpuc.ca.gov/Static/aboutcpuc/pucmission.htm

since the SCAQMD has no authority to require or implement energy conservation measures and such measures are under the authority of the CEC, the CPUC and other local utilities, such an alternative is considered to be an infeasible alternative to PAR 1309.1.

DESCRIPTION OF ALTERNATIVES

The following proposed project alternatives were developed by modifying specific components of the proposed amendments. The rationale for selecting and modifying specific components of the proposed amendments 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 following five alternatives were developed by identifying and modifying major components of PAR 1309.1. Specifically, the primary components of the proposed alternatives that have been modified include: the type of facilities eligible to access the Priority Reserve, the dates during which permits must be submitted to be eligible to access the Priority Reserve and variable mitigation fees. The following alternatives are described below and summarized in Table 6-1: Alternative A (No Project); Alternative B (PM2.5 Zones Only), Alternative C (PM2.5 Zones, EJA and CRA Applicability), Alternative D (Limited Access to Priority Reserve with Exceptions) and Alternative E (Most Limited Access to Priority Reserve). Unless otherwise stated, all other components of the project alternatives are the same as the current proposed project, such as years of applicability, due diligence requirements and the type of criteria pollutant ERCs and the potential future amendments to Rule 1309.1 considered as part of this PEA.

It should be noted that when considering PAR 1309.1 and PRR 1315 during the public hearing, the Governing Board can adopt all or portions of any project alternatives because the analysis of the comparative merits of the project alternatives have been circulated for public review and comment along with the analysis of the proposed project.

Alternative A - No Project Alternative

Alternative A, the No Project Alternative, would mean no re-adoption of the amendments to Rule 1309.1 and, therefore, maintaining the existing SCAQMD Rule 1309.1 requirements. The outcome of the court ruling described in Chapter 1 would dictate what constitutes the no project alternative. Currently, Rule 1309.1 as amended in September 2006 is law and, thus, if the current PAR 1309.1 does not happen then the requirements of Rule 1309.1, as amended in September 2006, is the no project alternative. Rule 1309.1 was amended in September 2006 to allow EGFs

access to the Priority Reserve with no tiered mitigation fees or additional eligibility requirements, such as more stringent cancer risk evaluations, MW limitations and demonstrations of due diligence to make renewable or alternative energy available. If the court sets aside the September 2006 amendments, the no project would be the requirements of Rule 1309.1 before the September 2006 amendments which would not allow operators of new EGF to access the Priority Reserve.

TABLE 6-1

Proposed Project and Project Alternatives

Proposed Project and Project Alternatives	**APPLICABILITY**			**Exceptions**
	Three PM2.5 Zones	Environmental Justice Area	Cancer Risk Area	
Proposed Project	Yes • Tiered Mitigation Fees	Yes • Affected facility in EJA subject to fee = Zone 3 fee	No	No
Alternative A: No Project Alternative	No	No	No	No
Alternative B: PM2.5 Zones Only	Yes • Tiered Mitigation Fees	No	No	No
Alternative C: PM2.5 Zones; EJA and CRA Applicability	Yes • Tiered Mitigation Fees	Yes • Affected facility in EJA subject to fee = Zone 3 fee	Yes • Affected facility in CRA subject to fee = Zone 3 fee	No
Alternative D: Limited Access to Priority Reserve with Exceptions	Yes • Tiered Mitigation Fees • No access if affected facility in Zone 3	Yes • No access if affected facility in EJA	Yes • No access if affected facility in CRA	• Municipal EGFs and/or "Peaker" (<100 MW) subject to fee = Zone 3 fee
Alternative E: Most Limited Access to Priority Reserve	Yes • Tiered Mitigation Fees • No access if affected facility in Zone 3	Yes • No access if affected facility in EJA	Yes • No access if affected facility in CRA	No

Alternative B – PM 2.5 Zones Only

Alternative B would allow operators of eligible facilities access to the Priority Reserve and, like PAR 1309.1, would establish three PM2.5 zones which would

determine the amount of mitigation fee to be paid to access the Priority Reserve. The PM2.5 concentrations that define the PM2.5 zones and the amount of the tiered mitigation fee would be the same as the proposed project (see Table 2-9). Unlike the proposed project, Alternative B would not establish EJA or Cancer Risk Areas (CRA) and, thus, would not subject facilities located in such areas to more stringent eligibility requirements.

Alternative C – PM 2.5 Zones; EJA and CRA Applicability

Alternative C would establish the same PM2.5 and EJA zones and requirements, depending on a facility's location, as the proposed project. However, Alternative C places an additional requirement of determining if an eligible facility is located in a particular CRA. A CRA would be established using the results from the Multiple Air Toxics Exposure Study (MATES) II which identified areas in the SCAQMD jurisdication in the 95th percentile of cancer risk. Although power plants generally have low emissions of toxic air contaminants, recent health studies indicate a correlation of instances of PM2.5 exposure and lung cancer. Affected facilities located in a CRA zone would be subject to the same mitigation fee as those facilities located in PM2.5 Zone 3 (see Table 2-9).

Alternative D - Limited Access to Priority Reserve with Exceptions

Similar to Alternative C, Alternative D would establish the same PM2.5, EJA and CRA zones and similar zone requirements. However, under Alternative D, a facility would be denied access to the Priority Reserve if located in PM2.5 Zone 3, an EJA or CRA. An exception to this restriction, however, would be included to allow municipal EGFs or peakers (<100 MW) located in PM2.5 Zone 3, an EJA and/or CRA access to the Priority Reserve, but require these facilities to pay a mitigation fee equivalent to PM2.5 Zone 3 (see Table 2-9). By subjecting affected facilities to CRA requirements as well as restrictions depending on the location of the facility, Alternative D is more stringent than the proposed project.

Alternative E - Most Limited Access to Priority Reserve

Alternative E would be equivalent to Alternative D by denying access to the Priority Reserve if an affected facility is located in PM2.5 Zone 3, an EJA and/or CRA. However, unlike Alternative D, Alternative E would not include an exception to the restriction. Thus, even municipal EGFs or peakers (<100 MW) located in PM2.5 Zone 3, an EJA and/or CRA would be restricted access to the Priority Reserve. This restrictive applicability to the Priority Reserve would make Alternative E more stringent than the proposed project and be the most stringent alternative.

Least Toxic Alternative

In accordance with SCAQMD's policy document Environmental Justice Program Enhancements for FY 2002-03, Enhancement II-1 recommends that all SCAQMD CEQA assessments include a feasible project alternative with the lowest air toxics emissions. In other words, for any major equipment or process type under the scope of the proposed project that creates a significant environmental impact, at least one alternative, where feasible, shall be considered from a "least harmful" perspective with regard to hazardous air emissions. With respect to the proposed project, the access to Priority Reserve credits is intended to assist in the permitting and construction of eligible facilities. The affected facilities involve natural gas projects and potentially in the future, crude oil projects and biosolids treatment. The usage of natural gas is typically not a high toxic emitter aside from byproducts such as formaldehyde, which can be limited using catalyst technologies. However, the construction and operation of affected facilities is expected to reduce the usage of diesel-fired emergency standby engines which produces a known carcinogen of diesel particulate matter. Thus, in the short-term, there may be a potential toxic impact due to the increase use in natural gas but the eligible facilities are expected to be spread out throughout the district and the individual toxic levels are anticipated to be less than significant. In the long term, these natural gas, electricity and energy projects are expected to reduce the number and level of usage of high polluting diesel powered engines which will avoid a potentially significant cancer risk from the diesel PM10 emissions. Alternative A would allow affected facilities access to the Priority Reserve with the least stringent requirements and, thus, potentially allowing the most development and operation of natural gas projects. If the court rules against the amendments in September 2006, the no project could potentially result in higher usage of diesel engines and, thus, increasing exposures to air toxics emissions. Alternative B would allow the most facilities access to the Priority Reserve potentially increasing the natural gas usage in the short term, but reducing the usage of diesel engines in the long term. Alternative C might reduce access to the Priority Reserve by imposing higher mitigation fees, but maintains the same eligibility time and applicable facilities, thus, generating equivalent, but less than significant, short-term air toxics exposures as the proposed project. Alternatives D and E will restrict a number of potential applicable facilities from accessing the Priority Reserve, which will reduce the natural gas projects, however, in the long term, more diesel engines may be used which would generate a higher toxic impact than the proposed project. Therefore, Alternative C, which has air toxic impacts equivalent to the proposed project, is considered the least toxic alternative.

COMPARISON OF THE ALTERNATIVES

The Environmental Checklist (see Appendix A) identified those environmental topics where the proposed project could cause adverse impacts. Further evaluation of these topics in Chapter 4 of this Environmental Assessment revealed that significant project-specific adverse impacts would only be expected in one area after applicable mitigation measures are utilized. The area of concern is air quality and these impacts must be weighed against the benefits, including public health.

The following sections briefly describe potential adverse environmental impacts that may be generated by each project alternative. Each environmental topic summary contains a brief description of the environmental impacts for each project alternative compared to impacts resulting from implementing the proposed amendments. Potential adverse air quality impacts are quantified where sufficient data are available and the calculations are presented in Chapter 4. A comparison of the air quality impacts for the proposed project and each project alternative are summarized in Table 6-2.

TABLE 6-2

Comparison of Adverse Air Quality Impacts of the Alternatives

ENVIRON-MENTAL TOPIC	**PROPOSED PROJECT**	**ALTERNATIVE A** (No Project)	**ALTERNATIVE B** (PM2.5 Zone Only)	**ALTERNATIVE C** (PM2.5 Zones; EJA and CRA Applicability)	**ALTERNATIVE D** (Limited Access to Priority Reserve with Exceptions)	**ALTERNATIVE E** (More Limited Access to Priority Reserve)
Air Quality Criteria Pollutant	Significant	Significant, greater than PAR 1309.1	Significant, greater than PAR 1309.1	Significant, slightly less than PAR 1309.1	Significant, less than PAR 1309.1	Significant, less than PAR 1309.1
TACs	Less than Significant	Less than significant (based on Sept 2006 requirements); Greater than PAR 1309.1 (if pre-Sept 2006 requirements)	Less than significant; greater than PAR 1309.1 in short term; less than PAR 1309.1 in long term	Less than significant; equivalent to PAR 1309.1	Less than significant; less than PAR 1309.1 in short term; potentially greater than PAR 1309.1 in long term	Less than significant; less than PAR 1309.1 in short term; potentially greater than PAR 1309.1 in long term

Air Quality

Alternative A - No Project Alternative

Based on the September 2006 requirements of Rule 1309.1, the No Project Alternative would allow the most affected facilities access to the Priority Reserve due to the least restrictive requirements to access the Priority Reserve. Thus, the

mitigation fee collected will be less than under the proposed project and, thus, increases the potential significant air quality impact to fund emission reduction programs to replenish in an equal amount the emissions withdrawn from the Priority Reserve. However, if the No Project Alternative that is the currently adopted version of Rule 1309.1 in effect, is overturned by the court, the version of Rule 1309.1 previous to the September 2006 amendments to Rule 1309.1 becomes effective, so additional adverse air quality impacts could result because eligible facilities will have more difficulty obtaining Priority Reserve credits, which, in turn, could make it more challenging to comply with Regulation XIII offsetting requirements. To the extent that ERCs are more difficult to obtain, there could be delays in the air quality permit application process and the costs of ERCs could increase to a greater extent than would otherwise be the case. Any delays in obtaining air quality permits by EGFs could contribute to electricity shortages, rolling blackouts and increased use of diesel fired generators. Thus, there could be an increase of diesel emissions in the event that rolling blackouts occur before EGF projects go online. For example, SCAQMD staff concluded that during a typical rolling blackout, daily emissions from diesel internal combustion engines increased by the following amounts: 10.6 pounds of PM10 emissions; 514 pounds of NOx emissions; 111 pounds of CO emissions; 7.7 pounds of SOx emissions; and 41 pounds of VOC emissions (Final EA for PAR 1470; February 17, 2005, SCAQMD NO. 050118MK)

Alternative B – PM2.5 Zones Only

Alternative B allows more access to the Priority Reserve than the proposed project and, thus, is considered to be less stringent than the proposed project. While Alternative B would impose a tiered mitigation fee which would be more restrictive than the No Project, it would not subject affected facilities to additional requirements if located in an EJA. Similar to the proposed project, air quality impacts from accessing the Priority Reserve are likely to be mitigated by the payment of mitigation fees, which will be used to reduce emissions of the pollutant for which the fee is paid. However, it is not possible at this point to be certain that such impacts will be fully mitigated by use of mitigation fees. As a result, for purposes of CEQA since emission reductions from mitigation fee projects are not certain, air quality impacts are considered potentially significant. If Alternative B could potentially allow more facilities access by not establishing an EJA criteria, the air quality impacts could be slightly greater than the proposed project in the short term. However, in the long term, the potential air quality impacts would be less than the proposed project as cleaner, more efficient natural gas turbines would be operating as opposed to more polluting diesel-fired emergency standby engines.

Alternative C – PM2.5 Zones; EJA and CRA Applicability

Alternative C is slightly more stringent than the proposed project because it places an additional requirement on affected facilities located in a CRA. Thus, fewer facilities

could potentially access the Priority Reserve than the proposed project, No Project or Alternative B. Compared to the proposed project, Alternative C will result in slightly lower significant adverse impacts to air quality because fewer amounts of ERCs would be withdrawn and, thus, fewer amounts of emissions would need to be mitigated. The additional requirement in Alternative C, however, is less restrictive than Alternative D or E.

Alternative D - Limited Access to Priority Reserve with Exceptions

By placing restrictions on affected facilities located in PM2.5 Zone 3, an EJA or CRA, Alternative D imposes more restrictions than the proposed project, No Project Alternative and Alternatives B and C. By allowing some limited access to the Priority Reserve with a mitigation fee requirement, Alternative D could still have potential significant adverse air quality impacts for the same reasons as the proposed project, No Project and Alternatives B and C. As noted under Alternative C, Alternative D will result in lower significant adverse impacts to air quality because fewer amounts of ERCs would likely be withdrawn and, thus, fewer amounts of emissions would need to be mitigated. The potential significant adverse air quality impacts will be less than the proposed project. However, by imposing more restrictions, Alternative D, in the long term, generates a slightly greater adverse air toxic exposures from greater use of more diesel-fired emergency standby engines to produce power that would likely occur, which would be expected to generate more DPM pollution and create toxic risk exposures greater than the proposed project.

Alternative E – Most Limited Access to Priority Reserve

Similar to Alternative D, Alternative E would likely limit the number of affected facilities allowed access to ERCs in the Priority Reserve, but would be even more restrictive than Alternative D by removing the exception for municipal EGFs and peaker units (<100 MW). Similar to the proposed project and all the project alternatives, there would still be uncertainty that the mitigation fee paid to fund emission reduction programs will replenish in an equal amount the amount of credits withdrawn. The potential air quality impact from implementing Alternative E would be significant, but less than the air quality impact from the proposed project. Similar to Alternative D, however, Alternative E, in the long term, also could generate air toxic exposures from use of diesel fired emergency standby engines to produce power that would likely occur, which would be expected to generate more DPM pollution and create toxic risk exposures greater than the proposed project.

CONCLUSION

Current Rule 1309.1 requirements, as of September 2006, would result in the most significant adverse air quality impacts because it imposes no mitigation fee schedule

and, therefore, more ERCs would likely be withdrawn from the Priority Reserve. Potential long-term air toxic impacts, however, could be avoided by allowing more facilities access to the Priority Reserve, thus, minimizing the use of diesel-fired emergency standby engines in the future. Pre-September 2006 requirements would result in Alternative A avoiding the direct significant adverse air quality impacts of the proposed project, but indirectly increasing NO_x, CO, PM10, and SOx and toxic emissions from old, dirty backup diesel generators potentially used in lieu of operating cleaner power plants. Further, Alternative A does not achieve the objective of the proposed project to increase availability of Priority Reserve credits to other energy and biosolids facilities in the future.

Alternative B achieves the goal of the proposed project, while having less restrictive eligibility requirements for facilities accessing the Priority Reserve, however, significant adverse air quality impacts would be greater than the proposed project and Alternatives C, D and E since it is likely more ERCs would actually be used. Alternative C also achieves the goal of the proposed project, but is slightly more restrictive relative to access to the Priority Reserve. Those affected facilities will still be able to access the Priority Reservebut will be required to pay a higher mitigation fee. The mitigation fee is intended to fully mitigate significant adverse air quality impacts, however, there is no guarantee that mitigation fee increases would completely recover the same amount of credits used by affected facilities. Air quality impacts from this alternative, therefore, remain significant and are considered to be equivalent to the proposed project. Alternatives D and E have the potential of partially fulfilling the goals of the proposed project, but would likely limit access to the Priority Reserve accounts, thus, requiring affected facility operators to purchase credits on the open market, generate their own PM10, SOx, CO and VOC ERCs, or provide emission reduction funding incentives to other facilities not eligible to access the Priority Reserve to generate PM10, SOx, CO and VOC ERCs for them. Further, Alternative D and E could generate a greater air toxic exposures from the use of diesel fired emergency standby engines to produce power which would be expected to generate more DPM pollution and create toxic risk exposures greater than the proposed project

The proposed project achieves the primary project goal of allowing temporary access to the Priority Reserve accounts, without depleting them or limiting essential public services from obtaining allowable credits for required emission offsets. Although the proposed project will have significant short-term air quality impacts, it could produce future air quality benefits to the extent that new clean electric power generating facilities reduce or eliminate the need to operate high emitting emergency standby power generating equipment. Potential future amendments to Rule 1309.1 could also provide future solid waste handling benefits to the extent that new or modified publicly owned biosolids treatment facility operators obtain offsets for operation that would not otherwise be available to them.

In accordance with CEQA Guidelines §15126.6(e)(2), the environmentally superior alternative would be Alternative C because the air quality impacts are slightly less than the proposed project and air toxic exposures are equivalent to the PAR 1309.1 which was determined to be less than significant. Alternatives A and B have significant adverse air quality impacts greater than the proposed project and Alternatives D and E have potentially greater air toxic exposures in the long term than the proposed project. In addition, Alternative C fulfills the goals of the proposed project (i.e., access to the Priority Reserve) while being more health protective.

REFERENCES

AEP: "Recommendations by the Association of Environmental Professionals (AEP) on How to Analyze Greenhouse Gas Emissions and Global Climate Change in CEQA Documents" (Hendrix, Wilson, et al., March 5, 2007)

CEC (California Energy Commission), 2006. AES Highgrove. Application for Certification. (06-AFC-2)May 25, 2006. http://www.energy.ca.gov/sitingcases/highgrove/documents/applicant/AFC_CD-ROM/Volume_01_AES_Highgrove_Project_AFC/

CEC, 2002. El Segundo Power Redevelopment Project. Final Staff Assessment. Application for Certification (00-AFC-14). September, 2002. http://www.energy.ca.gov/sitingcases/elsegundo/documents/2002-09-12_FSA.PDF

CEC, 2004. Riverside Energy Resource Center. Mitigated Negative Delcaration. Application for Small Power Plant Exemption (04-SPPE-11). December, 2004. http://www.energy.ca.gov/sitingcases/riverside/documents/2004-12-23_SPPE_DECISION.PDF

CEC, 2006. SES Long Beach Liquified Natural Gas Import Terminal. Preliminary Staff Assessment. December, 2006. http://www.energy.ca.gov/lng/documents/long_beach/LongBeachImport/

CEC, 2005. Sun Valley Energy Project. Application for Certification-Volume 1. December 2005. http://www.energy.ca.gov/sitingcases/sunvalley/documents/applicants_files/

CEC, 2006. Vernon Power Plant. Application for Certification (06-AFC-4). June 30, 2006. http://www.energy.ca.gov/sitingcases/cityofvernon/documents/applicants_files/afc/Volume%201%20Vernon%20Power%20Plant%20AFC/

CEC, 2006. Walnut Creek Energy Park. Final Staff Assessment. Application for Certification. (05-AFC-2). December, 2006. http://www.energy.ca.gov/2006publications/CEC-700-2006-014/CEC-700-2006-014-FSA.PDF.

CEC, 2007. Victorville 2 Hybrid Power Plant Application for Certification http://www.energy.ca.gov/sitingcases/victorville2/documents/applicant/

CEC Energy Facility Status http://www.energy.ca.gov/sitingcases/all_projects.html

CIWMB, 2007; CALIFORNIA'S 2005 STATEWIDE DIVERSION RATE ESTIMATE HTTP://WWW.CIWMB.CA.GOV/LGCENTRAL/RATES/DIVERSION/2005/DEFAULT.HTM

County of San Bernardino, 2006. Final Environmental Assessment Report for Nursery Products Hawes Composting Facility http://www.co.san-bernardino.ca.us/landuseservices/Public%20Notices/EIRs/EIRs.htm

CSLC, 2004. Final Environmental Impact Report for the Cabrillo Port Liquefied Natural Gas Deepwater Port http://www.slc.ca.gov/Division_Pages/DEPM/DEPM_Programs_and_Reports/BHP_Deep_Water_Port/BHP_Final_EIR.html

EPA 2006a U.S. Environmental Protection Agency, Office of Atmospheric Programs. April 2006. The U.S. Inventory of Greenhouse Gas Emissions and Sinks: Fast Facts. http://epa.gov/climatechange/emissions/downloads06/06FastFacts.pdf

EPA 2006c, U.S. Environmental Protection Agency. 2006. Climate Change - Health and Environmental Effects. http://www.epa.gov/climatechange/effects/health.html

Federal Register: May 11, 2007 (Volume 72, No. 91) (Pages 26718-26721) http://www.epa.gov/fedrgstr/EPA-AIR/2007/May/Day-11/a8673.htm

IPCC 2001: Intergovernmental Panel on Climate Change. 2001. Climate Change 2001: The Scientific Basis. Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change [Houghton, J.T., Y. Ding, D.J. Griggs, M. Noguer, P.J. van der Linden, X. Dai, K. Maskell, and C.A. Johnson (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 881pp. http://www.ipcc.ch/pub/reports.htm

Pope CA 3rd, Burnett RT, Thun MJ, Calle EE, Krewski D, Ito K, Thurston GD. Lung cancer, cardiopulmonary mortality, and long-term exposure to fine particulate air pollution. JAMA. 2002 Mar 6;287(9):1132-41.

APPENDIX A

PROPOSED AMENDED RULE 1309.1 AND RE–ADOPTED RULE 1315

In order to save space and avoid repetition, please refer to the latest version of the PAR 1309.1 and PRR 1315 located elsewhere in the final rule package. The PAR 1309.1 and PRR 1315 versions of the proposed amended and re-adopted rules circulated with the Draft PEA released on May 16, 2007 for a 45-day public review and comment period ending June 29, 2007 have been updated but, as noted in the preface, the changes do not require the PEA to be recirculated.

Original hard copies of the Draft PEA, which include PAR 1309.1 and PRR 1315 versions of the proposed amended and re-adopted rules circulated with the Draft PEA, can be obtained through the SCAQMD Public Information Center at the Diamond Bar headquarters or by calling (909) 396-2039.