SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Final Program Environmental Assessment for:

Proposed Rule 2702 – Greenhouse Gas Reduction Program

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PREFACE

The Draft Program Environmental Assessment (PEA) for the Proposed Rule 2702 – *Greenhouse Gas Reduction Program*, was circulated for a 30-day public review and comment period from November 4, 2008 to December 3, 2008. Three public comment letters were received and minor modifications were made to the Draft PEA so it is now a Final PEA. The comment letters and responses to the comments can be found in Appendix C of this Final PEA. Deletions and additions to the text of the PEA are denoted using ~~strikethrough~~ and underlined, respectively. Changes to the proposed project were made since the release of the Draft PEA based on public input. These changes have been evaluated by SCAQMD staff and it has been concluded that they would not change any conclusions made in the Draft PEA or substantially worsen environmental impacts analyzed in the Draft PEA. Therefore, pursuant to CEQA Guidelines §15073.5, recirculation is not necessary since the information provided does not result in new avoidable significant effects.

CHAPTER 1 - PROJECT DESCRIPTION

Introduction

California Environmental Quality Act

Project Location

Project Background

Project Objectives

Project Description

Affected Facilities and Protocols

INTRODUCTION

At the February 2008 South Coast Air Quality Management District (SCAQMD) Governing Board meeting, the SCAQMD Governing Board approved the development of the SoCal Climate Solutions Exchange, one of Chairman Burke's initiatives for 2008. The Board directed staff to implement the program in a two-step process. The first step was the preparation of a White Paper to discuss initial recommendations. The White Paper was presented at the June 2008 Board meeting. At that meeting, SCAQMD staff was provided further direction to proceed with rule development, which is the second step of the process.

Proposed rules were developed including Rule 2700 - Definitions, Rule 2701 - SoCal Climate Solutions Exchange, and Rule 2702 Greenhouse Gas (GHG) Reduction Program. Proposed Rule (PR) 2700 establishes definitions used in discussing climate change, global warming and proposed GHG programs. PR 2701 establishes the SoCal Climate Solutions Exchange, which is a voluntary program that quantifies and certifies real GHG emission reductions taking place in the jurisdiction of the SCAQMD (district) and includes a table of the global warming potential (GWP) of each GHG included in the Exchange. PR 2701 provides a mechanism for the SCAQMD to verify GHG emission reductions from voluntary GHG reduction projects. Once reductions are verified, PR 2701 allows the Executive Officer to issue certified GHG emission reductions using protocols identified in PR 2701. Both PRs 2700 and 2701 are administrative in nature. The SCAQMD is not involved with funding or generating GHG emission reductions. Because the GHG emission reductions under PRs 2700 and 2701 are not generated by the SCAQMD, funded by the SCAQMD, nor do they require any approvals by the SCAQMD, SCAQMD staff has concluded that PRs 2700 and 2701 are exempt from California Environmental Quality Act (CEQA) and will be brought before the SCAQMD Governing Board for consideration on November 7, 2008. Neither PR 2700 nor PR 2701 rely, in any way, on PR 2702. Therefore, PRs 2700 and 2701 can be considered by the Governing Board separately from PR 2702.

The current proposed project is the GHG Reduction Program (PR 2702). PR 2702 would enable the SCAQMD staff to collect funds from participants who need certified GHG emission reductions, pool those funds, and use them to finance GHG reduction projects. GHG reduction projects must follow pre-approved protocols, require verification, and be subject to contractual agreements. Participants in the GHG Reduction Program would also file information related to the request. GHG emission reductions in excess of the amount requested to be reduced may be deposited into a Reserve and sold to parties interested in available GHG emission reductions. Other uses of extra reductions in the Reserve could be approved by the Governing Board.

This Final ~~Draft~~ Program Environmental Assessment (PEA), prepared pursuant to CEQA, identifies potentially significant environmental impacts to air quality, energy, hazards, hydrology, noise, public services, solid waste and transportation/traffic impacts from implementing PR 2702, but determines, after evaluation and analysis, that the potential impacts to all environmental topic areas are not significant. Regardless, all environmental impacts were evaluated in the Draft PEA. Throughout this document, references to the proposed project or PR 2702 are used interchangeably.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

PR 2702 is considered a "project" as defined by CEQA Guidelines §15378. 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.

This CEQA document has been prepared pursuant to CEQA Guidelines §15252 and is a substitute document for a Negative Declaration. Therefore, pursuant to CEQA Guidelines §15252 (a)(2)(B), alternatives to the proposed project are not required because review of the proposed project showed that the proposed project would not have any significant adverse effects on the environment and, therefore, no alternatives are proposed or required to avoid or reduce any significant effects on the environment. This conclusion is supported by the environmental checklist in Chapter 2 showing the possible effects examined in reaching this conclusion.

The CEQA Guidelines include 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 as distinguished from those prepared for specific types of projects (e.g., land use projects) (CEQA Guidelines §15168). The EA for the proposed project is a PEA because it examines the environmental effects of PR 2702 and reasonably foreseeable amendments in which new GHG reduction protocols are added, which are considered to be part of a continuing ongoing regulatory program.

A PEA 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 PEA 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 PEA and incorporating the information contained therein by reference into subsequent EAs for specific projects is known as "tiering" (CEQA Guidelines §15152). A PEA 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 PEA 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 the 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 also recognizes that the identification of potential environmental impact for proposed projects recognizes a degree of forecasting. CEQA Guidelines §15144 states "while foreseeing the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that is reasonably can." If, after thorough investigation, a lead agency finds that a particular impact is too speculative for evaluation, the lead agency should note this conclusion and terminate the discussion (CEQA Guidelines §15145).

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 PR 2702. This Final ~~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.

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.

PROJECT LOCATION

PR 2702 currently applies to the SCAQMD's entire jurisdiction. 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 1-1).

PROJECT BACKGROUND

Climate Change and Global Warming

Climate change refers to any significant change in measures of climate, such as average temperature, precipitation, or wind patterns over a period of time. Climate change may result from natural factors, natural processes, and human activities that change the composition of the atmosphere and alter the surface and features of the land. Significant changes in global climate patterns have recently been associated with global warming, an average increase in the temperature of the atmosphere near the Earth's surface, attributed to accumulation of GHG emissions in the atmosphere. GHGs trap heat in the atmosphere, which in turn heats the surface of the Earth. Some GHGs occur naturally and are emitted to the atmosphere through natural processes, while others are created and emitted solely through human activities. The emission of GHGs through the combustion of fossil fuels (i.e., fuels containing carbon) in conjunction with other human activities, appears to be closely associated with global warming.

State law defines GHG to include the following: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6) (Health and Safety Code §38505(g)). The most common GHG that results from human activity is CO_2, followed by CH_4 and N_2O.

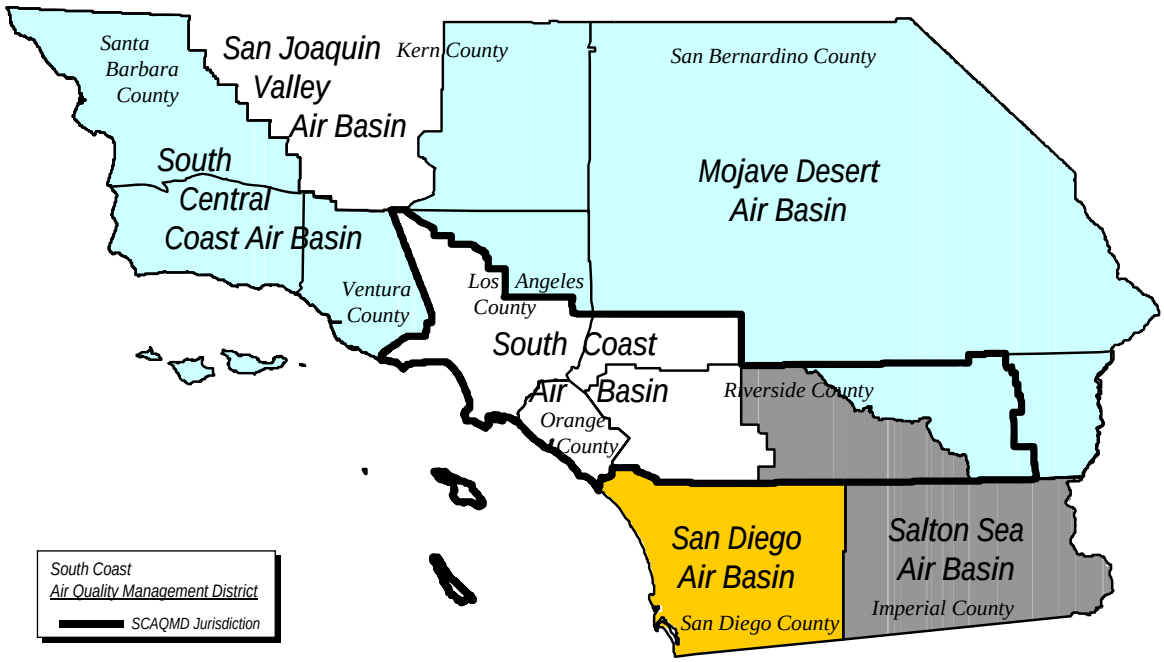

FIGURE 1-1

South Coast Air Quality Management District

Legislative Action

Assembly Bill (AB) 1493 (June 2002)

On July 22, 2002, Governor Gray Davis of California signed into law Assembly Bill (AB) 1493, a statute directing the California Air Resources Board (CARB) to "develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." The statute required CARB to develop and adopt the regulations no later than January 1, 2005. AB 1493 allows credits for reductions in GHG emissions occurring before CARB's regulations become final (i.e., an early reduction credit). AB 1493 also required that no later than July 1, 2003, the California Climate Action Registry, in consultation with the CARB, shall adopt procedures for the reporting of reductions in GHG emissions from mobile sources.

Executive Order S-3-05 (June 2005)

On June 1, 2005, Governor Arnold Schwarzenegger announced GHG emission reduction targets for California. The governor signed Executive Order S-3-05 which established GHG emission reduction targets and charged the secretary of the California Environmental Protection Agency (CalEPA) with the coordination of the oversight of efforts to achieve them. The Executive Order establishes three targets for reducing global warming pollution:

- Reduce GHG emissions to 2000 emission levels by 2010;
- Reduce GHG emissions to 1990 emission levels by 2020; and,
- Reduce GHG emissions to 80 percent below 1990 levels by 2050.

"Global Warming Solutions Act of 2006" (AB 32)

The Global Warming Solutions Act of 2006 (AB32) was signed into law on September 27, 2006. AB32 does not "limit or expand" existing authority of districts. Specifically, AB32 requires CARB to:

- Establish a statewide greenhouse gas emissions cap for 2020, based on 1990 emissions by January 1, 2008;
- Adopt mandatory reporting rules for significant sources of greenhouse gases by January 1, 2009;
- Adopt a plan by January 1, 2009, that indicates how emission reductions will be achieved from significant greenhouse gas sources via regulations, market mechanisms and other actions;
- Adopt regulations by January 1, 2011, that will achieve the maximum technologically feasible and cost-effective reductions in greenhouse gases, including provisions for using both market mechanisms and alternative compliance mechanisms;
- Convene an Environmental Justice Advisory Committee and an Economic and Technology Advancement Advisory Committee to advise CARB;
- Ensure public notice and opportunity for comment for all CARB actions;
- Adopt rules for "sources" of greenhouse gases, including non-vehicular sources; and
- Prior to imposing any mandates or authorizing market mechanisms, evaluate several factors, including but not limited to impacts on California's economy, the environment and public health, equity between regulated entities; electricity reliability, and conformance with other environmental laws, and ensure that the rules do not disproportionately impact low-income communities.

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

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

Senate Bill (SB) 97 (August 2007)

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

identifies a limited number of types of projects that would be exempt under CEQA from analyzing GHG emissions. Finally, SB 97 will be repealed on January 1, 2010.

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

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

U.S. EPA Advance Notice of Proposed Rulemaking in the Clean Air Act (July 30, 2008)

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

- Reviews the various CAA provisions that may be applicable to regulate GHGs;
- Examines the issues that regulating GHGs under those provisions may raise;
- Provides information regarding potential regulatory approaches and technologies for reducing GHG emissions; and
- Raises issues relevant to possible legislation and the potential for overlap between legislation and CAA regulation.

Greenhouse Gas Impacts and CEQA

General scientific consensus and increasing public awareness regarding global warming and climate change have placed new focus on the CEQA review process as a means to address the effects of GHG emissions from proposed projects on climate

change. Public agencies are striving to determine the appropriate means by which to evaluate and mitigate the impacts of proposed projects on climate change.

Subsequent to the adoption of AB 32, the California Attorney General's Office determined that GHG emissions contributing to global climate change contribute to potential adverse environmental impacts that should be evaluated pursuant to the CEQA. The Attorney General's Office has submitted numerous comment letters to lead agencies on their CEQA documents for failure to analyze GHG emissions, failure to make a significance determination, and failure to implement feasible mitigation measures to reduce GHG emissions to the maximum extent feasible.

In response to numerous requests from a variety of stakeholders for guidance in determining whether or not GHG emissions from projects evaluated pursuant to CEQA are significant, SCAQMD staff has established a GHG Significance Threshold Stakeholder Working Group (Working Group). The Working Group is comprised of a wide variety of stakeholders including: state agencies, OPR, CARB, and the Attorney General's Office; local agencies, city and county planning departments, utilities such as sanitation and power, etc.; regulated stakeholders, industry and industry groups; and organizations, both environmental and professional. The SCAQMD supports a statewide CEQA GHG threshold but, in the absence of one, established the Working Group is to develop an interim GHG significance threshold until such time as statewide guidance is provided. At the recent GHG Working Group meeting on October 22, 2008, the SCAQMD released the latest significance threshold proposal and a draft guidance document[1].

On October 24, 2008, CARB released a "Preliminary Draft Staff Proposal for Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act."[2] The proposal is the first step by CARB toward developing recommended statewide interim thresholds of significance for GHGs that may be adopted by local agencies for their own use. CARB intends to make its final recommendations on thresholds in early 2009, in order to harmonize with OPR's timeline for issuing draft CEQA guidelines addressing GHG emissions.

While no GHG significance threshold has been finalized yet, the Working Group continues to meet and discuss the current tiered threshold proposal with the intent to reach a consensus and obtain approval from the SCAQMD Governing Board.

1 http://www.aqmd.gov/ceqa/handbook/GHG/oct22mtg/oct22.html

2 http://www.opr.ca.gov/ceqa/pdfs/Prelim_Draft_Staff_Proposal_10-24-08.pdf

SCAQMD Climate Change Policy

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

1. Work cooperatively with other agencies/entities to develop quantification protocols, rules, and programs related to greenhouse gases;

2. Share experiences and lessons learned relative to the Regional Clean Air Incentives Market (RECLAIM) to help inform state, multi-state, and federal development of effective, enforceable cap-and-trade programs. To the extent practicable, staff will actively engage in current and future regulatory development to ensure that early actions taken by local businesses to reduce greenhouse gases will be treated fairly and equitably. Staff will seek to streamline administrative procedures to the extent feasible to facilitate the implementation of AB 32 measures;

3. Review and comment on proposed legislation related to climate change and greenhouse gases, pursuant to the 'Guiding Principles for SCAQMD Staff Comments on Legislation Relating to Climate Change' approved at the Board Special Meeting in April 2008;

4. Provide higher priority to funding Technology Advancement Office (TAO) projects or contracts that also reduce greenhouse gas emissions;

5. Develop recommendations through a public process for an interim greenhouse gas CEQA significance threshold, until such time that an applicable and appropriate statewide greenhouse gas significance level is established. Provide guidance on analyzing greenhouse gas emissions and identify mitigation measures. Continue to consider GHG impacts and mitigation in SCAQMD lead agency documents and in comments when SCAQMD is a responsible agency;

6. Revise the SCAQMD's Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning to include information on greenhouse gas strategies as a resource for local governments. The Guidance Document will be consistent with state guidance, including CARB's Scoping Plan;

7. Update the Basin's greenhouse gas inventory in conjunction with each Air Quality Management Plan. Information and data used will be determined in consultation with CARB, to ensure consistency with state programs. Staff will also assist local governments in developing greenhouse gas inventories;

8. Bring recommendations to the Board on how the agency can reduce its own carbon footprint, including drafting a Green Building Policy with recommendations regarding SCAQMD purchases, building maintenance, and other areas of products and services. Assess employee travel as well as other activities that are not part of a GHG inventory and determine what greenhouse gas emissions these activities represent, how they could be reduced, and what it would cost to offset the emissions;

9. Provide educational materials concerning climate change and available actions to reduce greenhouse gas emissions on the SCAQMD website, in brochures, and other venues to help cities and counties, businesses, households, schools, and others learn about ways to reduce their electricity and water use through conservation or other efforts, improve energy efficiency, reduce vehicle miles traveled, access alternative mobility resources, utilize low emission vehicles and implement other climate friendly strategies; and

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

Voluntary Carbon Markets

Voluntary carbon markets have been established such as the Chicago Climate Exchange (CCX) and others. The CCX has several project protocols for generation and quantification of offsets. Since being launched, the CCX has issued credits for soil carbon, coal mine methane, landfill methane and renewable sources. Voluntary carbon markets have also been, or are being developed in response to efforts to assist individuals, businesses, and organizations to offset their carbon footprint through a variety of projects world wide. In 2007, the overall voluntary carbon offset market was dominated by four types of projects: renewable energy (31 percent) generating power with clean, renewable sources (such as wind or solar) instead of dirtier fossil fuels; energy efficiency (18 percent), methane destruction (16 percent), and forestry

projects (15 percent) i.e. the avoidance of deforestation or the planting of new forests[3].

The California Climate Action Registry (CCAR) was formed in 2001 when a group of company executives, who were investing in energy efficiency projects to reduce their organizations' GHG emissions, requested the state of California to create a place to accurately report their GHG emissions history. Thus, the state formed CCAR as a private non-profit organization that serves as a voluntary GHG registry to protect and promote early actions to reduce GHG emissions by organizations and have a credible and accurate record of their profiles and baselines.

In April 2008, CCAR launched the national Climate Action Reserve to track and register voluntary GHG reductions. The CCAR also develops emission inventory and emissions reduction project protocols. These protocols have been approved by CARB and are listed in PR 2702. The protocols are developed in a consensus-building process with stakeholder workgroups representing the business, government, science and environmental sectors; followed by a public review and comment process; and published on the CCAR website.

SoCal Climate Solutions Exchange

The objectives of PR 2700 and the SoCal Climate Solutions Exchange (Rule 2701) are to provide reliable GHG emission reductions that support the local economy and capture co-benefits for southern California as businesses achieve voluntary reductions of GHGs. The proposed rules would provide mechanisms to recognize and quantify voluntary reductions in accordance with protocols that would be pre-approved by the SCAQMD Governing Board. The protocols would provide the GHG quantification methodology from specific sectors. Current protocols include urban forestry, manure management and landfills. Project protocols for lawn and garden equipment, boilers, truck stop electrification, and refrigerants are under development.

Unlike PR 2702, the SCAQMD is not involved in the funding of GHG reduction projects under Rule 2701. After a GHG reduction project has been constructed and possibly operating, participants of Rule 2701 request the SCAQMD to verify and certify the GHG emission reductions. Under PR 2702, the SCAQMD will be funding the project as well as verifying and certifying the GHG emission reductions

The SCAQMD will ensure that reductions are real, additional (surplus), quantifiable, verifiable, permanent for a specific time, and enforceable. The program will assist facilities that need to mitigate environmental impacts pursuant to the CEQA or

[3] "Forging a Frontier: State of the Voluntary Carbon Markets 2008";
http://www.ecosystemmarketplace.com/documents/cms_documents/2008_StateofVoluntaryCarbonMarket2.pdf

parties that wish to offset their carbon footprint. Many GHG reduction strategies also have co-benefits of reducing toxic and criteria pollutants, which will assist in achieving air quality standards in southern California. There is also a localized societal benefit when strategies are implemented in environmental justice areas.

The SoCal Climate Solutions Exchange would be a voluntary program where parties in the district could undertake projects to reduce GHG emissions in advance of or in the absence of, any regulatory requirement. This program does not involve the SCAQMD in funding GHG reductions. All protocols to be used for the SoCal Climate Solutions Exchange would be subject to Governing Board approval and a list of these protocols is included in Rules 2701 and 2702. These protocols may have been developed by CARB, CCAR, SCAQMD staff or other air districts. Project proponents would be required to submit a plan with specific information on the planned project, including the identification of the initial owner of the certified reductions. PR 2702, GHG Reduction Program, provides a mechanism under which parties can fund GHG reduction projects to be implemented under contract to the SCAQMD.

PROJECT OBJECTIVES

The objectives of PR 2702 are to:

1. Create a program to allow the funding of GHG emission reduction projects;

2. Provide a mechanism to assist individuals, businesses or organizations to achieve a reduction of GHG emissions or compensate for their own GHG emissions;

3. Provide reliable GHG emission reductions that support the local economy;

4. Capture co-benefits as southern California businesses and others achieve voluntary reductions of GHGs; and

5. Comply with any local, state, federal, or international GHG requirements that would allow use of such certified GHG emission reductions.

PROJECT DESCRIPTION

Proposed Rule 2702

Purpose (subdivision a)

The purpose of this rule is to create a GHG Reduction Program that will fund GHG emission reduction projects to provide GHG emission reductions for CEQA mitigation and early compliance of future AB 32 requirements in the district. All reduction projects will follow approved protocols. Funding from parties seeking GHG emission reductions and will be submitted to the SCAQMD, which will fund projects through contractual agreements. Projects funded through this program may also provide co-benefits of reducing criteria or toxic pollutants that can benefit local and regional air quality.

Applicability (subdivision b)

Participation in funding for projects is not limited by the SCAQMD. In addition, uses of certified GHG reductions may include, but are not limited to, CEQA or other mitigation, retirement to benefit the environment, reducing or eliminating a carbon footprint by an individual, household, facility, corporation, community, city, or other group, or any other use authorized by a local, state, federal or international program.

Requests to Use the GHG Reduction Program (subdivision c)

- A GHG Reduction Program Request needs to be filed and applicable fees paid to participate in the GHG Reduction Program [paragraph (c)(1)].
- The Request will include contact information, the amount of GHG emission reductions requested, and anticipated use of the reductions [paragraph (c)(2)].
- The participation fee is non-refundable unless the Executive Office determines that there will not be sufficient projects available within a five-year period [paragraph (c)(3)].
- The Executive Officer will accept or decline the Request within 30 days of submittal and issue final approval upon receipt of all applicable fees due within 30 days after acceptance of the Request [paragraph (c)(4)].

Greenhouse Gas Reduction Program (subdivision d)

- Funding can be accepted after the request is approved [paragraph (d)(1)].

- Up to five percent of fees collected may be used for administrative costs [paragraph (d)(2)].

- Funding of the GHG reduction project should take place within two years of receiving funds unless an extension is approved by the Governing Board [paragraph (d)(3)].

- GHG reductions in excess of the amount required to meet the GHG emission reduction requests may be deposited in the GHG Reduction Program Reserve and used for any purpose approved by the Governing Board [paragraph (d)(4)].

- Available emission reductions in the Reserve may be sold based on availability. Priority will be based on the use of the reductions to be located in the district and then on a first-come, first-served basis [paragraph (d)(5)].

- GHG reductions purchased from the Reserve are not transferable unless transfer is within common ownership [paragraph (d)(6)].

Program Review (subdivision e)

The Executive Officer will submit an annual report to the Governing Board that will include the following:

- how much revenue has been collected and directed towards greenhouse gas reduction projects [paragraph (e)(1)];
- description of the types of emission reduction projects that have been or are being implemented [paragraph (e)(2)];
- the amount of greenhouse gas reduced [paragraph (e)(3)];
- the amount of criteria and toxic pollutants that have been reduced [paragraph (e)(4)];
- location of the emission reduction projects [paragraph (e)(5)];
- benefits of projects in Environmental Justice areas [paragraph (e)(6)];
- the number and types of facilities and parties, including locations, that have participated in the Greenhouse Gas Reduction Program [paragraph (e)(7)];
- the balances of reductions in the Reserve and recommendations regarding their use [paragraph (e)(8)]; and
- evaluation of the adequacy of fees [paragraph (e)(9)].

Remedies (subdivision f)

- Shortfalls in the amount of expected GHG emission reductions within the agreed time period will not be considered a violation of the rule, however the project proponent is required to make up any shortfall, plus ten percent.

Implementation Guidelines (subdivision g)

- Implementation Guidelines will be prepared to detail the procedures to be followed to administer this rule [paragraph (g)(1)].

- The Implementation Guidelines will be subject to approval by the Governing Board [paragraph (g)(2)]

Please refer to Appendix A for the text of PR 2702.

AFFECTED FACILITIES AND PROTOCOLS

PR 2702 is a voluntary program so precise information on future participation is unknown and unknowable. As a lead agency pursuant to CEQA, the SCAQMD will be receiving a $1.5 to $1.8 million dollar mitigation fee from a private entity to comply with a mitigation measure that would secure GHG emission reductions to compensate for the GHG emission increase from their recent project. In addition, staff may request in the near future that the Governing Board, on a one-time basis, pre-fund the program. The one-time funding from the Governing Board is not expected to be repeated in the future and there is no guarantee projects subject to CEQA will seek assistance from the GHG Reduction Program; therefore, for the purpose of this analysis, it is assumed that up to $2.8 million dollars may be used toward GHG reduction projects that could also generate potential environmental impacts. GHG reduction projects would only include projects implementing applicable and foreseeable protocols to generate GHG emission reductions. Again, the future voluntary participation, funding amount received, projects implemented and resultant environmental impacts from implementing such projects are unknown at this time. It is assumed for the analysis in Chapter 2 that future annual funding will not exceed the anticipated initial funding of $2.8 million so potential environmental impacts would not be worse in future years than what is analyzed in this Final ~~Draft~~ PEA for the initial funding year.

As required by PR 2702, funds collected by the SCAQMD would be used to finance GHG reduction projects in accordance with the approved protocols. SCAQMD staff is also preparing a number of additional protocols not yet listed in Rule 2702 but that in the future are anticipated to be approved and included in Rule 2702. These

additional protocols evaluate emission reduction measures likely to be implemented locally and, thus, provide local and regional co-benefits such as criteria pollutant reductions. Since these protocols are considered to be "foreseeable" they are analyzed using the currently available information available. However, some of these protocols are considered to be concepts without enough detailed information to be properly evaluated in the context of the proposed project. Further, the SCAQMD will have discretion in dispensing the funds and will have to consider any potential adverse trade-offs to decide what future protocols will be reasonable and what projects are likely to be financed in the future.

Protocols

Protocols generally fall into two types – project protocols where specific actions can result in "additional" quantified reductions, and entity protocols which deal with how to quantify greenhouse gas emissions at a facility (or other broader application). For the purpose of Regulation XXVII – Climate Change, protocols refer to a project protocol, rather than a facility or entity. Currently, there are three project protocols that have been developed by CCAR and approved by the CARB Board. These include forest and urban forest projects and manure management, which currently includes installation of digesters for dairies. CAPCOA members, SCAQMD staff and other entities are developing additional protocols which can be brought to the Board as rule amendments. At this time, SCAQMD staff is working on protocols for the following project categories, and will develop each protocol in collaboration with CARB. Before using these protocols, they will need to be approved by the Governing Board:

- boiler efficiency;
- lawn mowers;
- leaf blowers;
- truck stop electrification; and
- replacement of High Global Warming Potential (GWP) refrigerants.

Each protocol will identify what actions can be taken to reduce GHGs, how those reductions will be quantified, and how long the project will be considered additional (i.e., how many years the project may qualify for certified GHG reductions). The following sections describe what could occur under each protocol, assuming $2.8 million funding for each protocol. For this PDEA, each protocol is analyzed at this funding level. The tables that show potential impacts (in Chapter 2) are conservative because it not likely that only one type of project would be funded.

It is assumed that GHG emission reduction projects following the protocols are being conducted beyond established government requirements or programs. For example, an urban forest project would not expect to get certified emission reductions if the

project is participating in the "Million Trees LA" program or a boiler would not quantify if it must be retrofit to comply with the requirements in SCAQMD's Rule 1146 - Emissions of Oxides of Nitrogen from Industrial, Institutional and Commercial Boilers, Steam Generators, and Process Heaters or Rule 1146.1 - Emissions of Oxides of Nitrogen from Small Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters.

Forests and Urban Forestry

Forests have the capacity to both emit and sequester (seize and store) CO_2 emissions. Trees, through the process of photosynthesis, naturally absorb CO_2 from the atmosphere and store the gas as carbon in their biomass (i.e., trunk, leaves, branches and roots). Carbon is also stored in the soils that support the forest, as well as the plants and litter on the forest floor. When trees are disturbed, through events such as fire, disease or harvest, they emit their stored carbon as CO_2 into the atmosphere. The quantity of CO_2 that is emitted over time may vary, depending on the particular circumstances of the disturbance. Depending on how forests are treated, they may be a new source or a net reservoir of CO_2. Currently, forests are the second largest source of global anthropogenic CO_2 emissions largely due to deforestation. However, through proper management, additional tree growth and protection, forests can help store CO_2 emissions, thus, reducing CO_2 in the atmosphere.

The Forest Project Protocol was established to concentrate on forest carbon stocks and biological CO_2 emissions. A forest project is a planned set of activities to remove, reduce or prevent CO_2 emissions in the atmosphere by conserving and/or increasing on-site forest carbon stocks in a geographic area. Projects may either represent a geographic subset of a forest entity's total forestland area or occupy all the entity forest area.

The Urban Forest Protocol provides guidance to account for real, additional, and credible GHG reductions from urban tree planting projects. GHG reductions from urban forests are based on the amount of carbon sequestered and stored in urban trees, taking into account GHG emissions associated with the planting, care and maintenance of those trees. As noted above in the forest discussion, growing trees remove CO_2 from the atmosphere by transforming CO_2 into carbon and using it to build living matter—leaves, stems, trunk, roots. This process is known as carbon sequestration. Urban Forest Projects that yield surplus GHG reductions, which are additional to what might otherwise have occurred, are considered eligible. The Urban Forest Protocol is accompanied by further guidance on how to quantify other indirect GHG benefits of urban forests (e.g. reduced heating and air conditioning use and providing biomass energy feedstocks). However, these benefits are not considered in GHG reduction estimates.

In order to reasonably consider the implementation of the either the forest or urban forest protocol using the current known funding for the program, only the cost of planting a "15-gallon" tree was considered to establish the potential affected universe. However, the environmental impacts from both planting the tree as well as maintaining the tree were evaluated in the DPEA so the analysis is considered to be conservative. According to the U.S. Department of Agriculture, the cost of planting a "15-gallon" tree (in 2008 dollars) is approximately $149, thus for $2.8 million, approximately 18,790 trees could be purchased for planting. These trees could be planted in either a forest setting or urban setting.

Manure Management

Livestock, such as dairy cattle, beef cattle and swine, generates manure that, as it decomposes, produces methane and, if uncontrolled, is emitted to the atmosphere. Methane is defined as a GHG under state law and has 21 times the GWP than CO_2. Decomposition of manure typically occurs when livestock operations treat waste in lagoons, ponds, tanks, pits or some other liquid-type system. Methane generation is primarily based on the amount of manure produced, the fraction of solids that decompose, temperature, and retention time of manure during treatment and storage. Biogas control systems can capture and destroy methane gas from manure treatment and/or storage facilities at livestock operations. The installation of a biogas system could also generate two other GHGs, CO_2 and N_20 emissions, associated with manure collection, transport, storage, treatment and disposal. Captured biogas could be destroyed on-site, treated and transported for off-site use (e.g., gas distribution or transmission pipeline), or used to power vehicles.

The Livestock Project Reporting Protocol provides guidance to account for and report GHG emission reductions associated with installing a manure biogas control system and focuses on quantifying the change in methane emissions. Specifically, the protocol provides eligibility rules, methods to calculate reductions, performance-monitoring instructions, and procedures for reporting project information.

Known manure digester projects and waste-to-energy projects have very high capital costs. Inland Empire Utility Agency's (IEUA) "centralized" manure digester, servicing up to 14 dairies and 6,250 cows, had capital expenditures over eight million dollars. Liberty Energy Renewable Energy Power Plant in the City of Banning is estimated to have a capital cost of $180 million. While the annual GHG emission reductions from the IEUA and Liberty Energy projects are substantial, 15,183 metric tons (MT) CO_2E /year and 139,177 MT CO_2E /year respectively, such funding would have to occur when a large pool of funds is compiled or in cooperation with a utility agency that can ensure participation and generate enough manure or waste to provide ongoing GHG emission reduction. In addition, securing the land upon which the digester is located will require additional funds and siting obstacles. Therefore, it is

highly unlikely the initial $2.8 million in funding of the PR 2702 program will be used to finance a manure management project due to the high capital cost, siting considerations, and return on investment. Although the SCAQMD may contribute partial funding to digestion projects in the future, this is considered to be speculative because of the uncertainties associated with future funding, as well as the high capital cost. Thus, potential environmental impacts from siting, constructing and operating a manure digester or waste-to-energy project are not considered "foreseeable" for the purposes of the environmental impact analysis in this DPEA and will not be evaluated further.

Boiler Efficiency

Industrial boilers typically have a 30- to 50-year equipment life. Commercial boilers have a range of life depending on the type (e.g., copper finned tube types last approximately ten years). Smaller commercial boilers (less than 40 MMBtu/hr) are typically firetube boilers and larger commercial boiler (40-84 MMBtu/hr) are typically watertube boilers. Firetube boilers have a heating efficiency of 82 to 84 percent while watertube boilers have heating efficiency of 80 percent. New boilers would improve heating efficiency up to 86 percent. According to a major boiler manufacturer, small boilers (two MMBtu/hr) cost around $73,000, medium boilers (20 MMBtu/hr) can cost around $550,000 and large boilers (50 MMBtu/hr) can cost up to $1.4 million. With the initial program funding at $2.8 million, 38 small boilers, or five medium boilers, or two large boilers could be purchased. A single new large boiler would provide a six percent increase in combustion efficiency but it would be more cost effective to finance 38 smaller boilers each generating a three percent increase in combustion efficiency. In addition, the secondary impacts from installing 38 small boilers would produce a more conservative environmental impact analysis than installing two large boilers or five medium boilers. The current trend when purchasing a new boiler has been to purchase the higher efficient type so financing the incremental difference of a higher efficient replacement for those already intending to purchase a new boiler might not be generating new reductions that would have occurred already. Therefore, the analysis of boilers will evaluate the environmental impacts of financing 38 new small boilers.

Control equipment for new and existing boilers may include an economizer or oxygen (O_2) trim system, which provide additional combustion efficiency. An economizer is a heat exchanger installed in flue gas ductwork between the boiler outlet and the stack. It normally is used to preheat the boiler feedwater, thus, capturing more heat from the flue gas, lowering the flue gas exit temperature, and improving heating efficiency. The heating efficiency improvement depends on the flue gas temperature at the boiler outlet and the temperature to which the economizer cools the flue gas. Economizers have traditionally been non-condensing, i.e., designed to cool the flue gas to a temperature that is still above its dew point. The

dew point of a moisture-containing gas, such as boiler flue gas, is the temperature at which, as the gas is cooled, moisture in the flue gas begins to condense into water droplets.

Economizers were traditionally designed to be non-condensing to avoid the need for a drainage system and problems associated with liquid condensate in the stack and ductwork (deposits, corrosion, steam plume and moisture fallout). In recent years, the most popular control option is to install condensing economizers along with systems to handle the condensate and control the effects of condensate in the stack and ductwork. In addition to the heat recovered by cooling the flue gas, the major advantage of a condensing economizer is that the latent heat of condensation of the flue gas moisture is also recovered.

Boilers operate with excess combustion air to avoid smoke conditions, high levels of unburned hydrocarbons in the flue gas, or possibly unsafe flame circumstances. In virtually all boilers there is some mechanism to relate the amount of air admitted to the burner to the amount of fuel being burned. In older boilers this is accomplished by mechanical linkage of an air damper to a fuel valve. High excess air represents an efficiency penalty since the extra air increases the mass of hot gas leaving the boiler system. The O_2 content of the flue gas is an indicator of the amount of excess air that is passing through the boiler system. Boilers with older mechanical linkage systems generally operate with four to five percent O_2 in the flue gas whereas complete combustion can generally be achieved with two to three percent O_2. An O_2 trim system reduces the amount of excess air by replacing the mechanical linkage system with a more precise air control system based on a fuel flow sensor, electronic controller and servo-based damper positioner. In larger boilers, an O_2 measurement system and O_2 feedback control may be justified.

As discussed in more detail in Chapter 2, "Air Quality" Section, the $2.8 million annual funding could finance 68 non-condensing economizers for small/medium boilers and four non-condensing economizers for large boilers.

Lawn Mowers

The SCAQMD has established a lawn mower exchange program that offers cordless electric lawn mowers to consumers at a subsidized price in exchange for their old operable gasoline powered lawn mowers. Individuals exchanging their lawn mowers paid the participating retailer $100, including sales tax. SCAQMD funds cover the difference minus the rebate offered by the manufacturer. Considering the costs to advertise the events and to dispose of the old lawn mowers, including fuel removal, the SCAQMD pays approximately $195 for each lawn mower.

The SCAQMD Project Protocol of "Retirement of Gasoline Powered Lawn Mowers and Replacement with Cordless Electric Lawn Mowers" is being prepared and will

establish a standard methodology to determine GHG emission reductions from this early retirement. The protocol applies to any gasoline powered lawn mower equipment for which emission standards have been adopted by CARB. If the SCAQMD chooses to spend the initial program funding of $2.8 million on this protocol, approximately 14,358 new lawn mowers could be financed. While historically 4,000 units have been sold annually, the SCAQMD placed that limit on the manufacturer as to how many can be sold since the program is conducted through contractual means. The events have been extremely popular and all available units have been sold. Therefore, it is feasible to finance a subsidy, advertise and dispose of a larger number of lawn mowers than in the past.

Leaf blowers

Similar to lawn mowers, the SCAQMD also conducts a leaf blower exchange program through which professional gardeners and/or landscapers can trade in their old (but operational) backpack two-stroke engine leaf blower to get a new 4-stroke engine leaf blower for only $200. This is the powerful low-noise [65 dBA], low-emissions model. Up to ten blowers per business can be exchanged. The program is only available to professional gardeners and landscapers who live and work within the SCAQMD four-county jurisdiction. The exchange events in the past year took place in ten locations throughout the SCAQMD jurisdiction.

By utilizing this program, existing leaf blowers are exchanged, resulting in reductions in both emissions and noise. The SCAQMD project protocol would establish the methodology for determining the GHG reductions generated from early retirement of older leaf blowers and replaced with a new lower-emitting, quieter leaf blower.

Taking account the cost of advertising the exchange events, destroying and disposing of the old models, and the subsidy paid by the SCAQMD, one new leaf blower costs approximately $178. Thus, 15,730 new leaf blowers could be financed using the initial program funding of $2.8 million. As noted by the rules of the exchange program, up to ten blowers per business can be exchanged and historically that limit has been reached.

Truck Stop Electrification

Historically, truck drivers idle their engines about eight hours per day while resting or as much as 2,100 hours per year. Under federal law, truckers must rest ten hours for every 11 hours of driving. During this rest period, truck drivers often idle their engines to operate air conditioning or heat in their sleeper cabs or on-board appliances, such as a television, microwave or laptop computer. Idling also keeps engines and fuel warm in cold weather. Current requirements limit the amount of time a truck may idle the main engine but there are exemptions for running an

auxiliary engine if primarily for cooling and heating purposes. In general, idling results in air pollution, fuel consumption while no product is being transported, reduction in engine life, potential additional engine maintenance, and poor rest for the driver.

Truck stops are facilities that provide overnight or long-term parking spaces for heavy-duty trucks, such as long haul tractor-trailers or eighteen wheelers. To reduce idling times and thereby emissions at these stops, truck stop electrification was developed and is now located in 131 truck stop locations in 34 states. Today, the technology can be installed in a variety of locations, not just truck stops. Truck stop electrification is the practice of employing an external source of heating, ventilating, and air conditioning (HVAC) to heat or cool the interior space of a truck cab and/or provide electric power to operate in-cab appliances, etc., in lieu of idling the truck auxiliary engine.

There has been successful development and installation of truck stop electrification units around the country to provide HVAC and electric power to operate in-cab appliances and other on-board electric systems. These units are typically attached into the side window of the truck cab at locations where trucks stop and are powered from a fixed electrification structure or trusses supported by pylons, under which the truck parks.

A Truck Stop Electrification Project Protocol would establish a standard methodology for determining GHG emission reduction from the use of electric power in lieu of operating a diesel-powered engine on a truck for idling purposes at truck stops, distribution centers, rest areas or other locations.

According to a leading designer and installer of truck stop electrification units, it costs approximately $16,000 to install one truck stop electrification unit in an existing truck stop parking space. The operation and maintenance of the unit is typically covered by the amount paid by the owner of the truck using the electrification unit. Therefore, the current known initial funding of $2.8 million could finance the installation of 175 truck stop electrification units.

Replacement of High Global Warming Potential (GWP) refrigerants

High GWP gases are substances can have a substantial effect on global warming as a few pounds of some high GWP material equates to thousands of pounds of CO2. High GWP chemicals are very common and are used in many different applications such as refrigerants, in air conditioning systems, in fire suppression systems, and in the production of insulating foam. Because these gases have been in use for years, old refrigerators, air conditioners and foam insulation pose a large potential impact if released. Due to the typically enclosed system where high GWP gases are utilized, the two potential routes for release are through leaking and during the disposal

process. Similar to other GHGs, high GWP materials have the potential to persist in the atmosphere for hundreds of years.

CARB has identified four "Discrete Early Action" measures to reduce GHG emissions from refrigerants used in car air conditioners, semiconductor manufacturing and consumer products. Potential reduction opportunities have been identified based on specifications for future commercial and industrial refrigeration, changing the refrigerants used in auto air conditioning systems and ensuring that existing car air conditioning systems do not leak.

SCAQMD's Rule 1415 - Reduction of Refrigerant Emissions from Stationary Refrigeration and Air Conditioning Systems, was adopted in 1991 and amended in 1994. Rule 1415 specifically regulates ozone depleting compounds (ODCs) although some ODCs have high GWPs. The purpose of this rule is to reduce emissions of refrigerants from stationary refrigeration and air conditioning systems by requiring persons subject to this rule to reclaim, recover, or recycle refrigerant and to minimize refrigerant leakage. Rule 1415 requires any person who owns or operates a refrigeration system that has a refrigerant leak to ensure that the leak is repaired no later than 14 calendar days after the leak has been discovered or should have been discovered. If a facility using high GWP refrigerant switches to a low GWP refrigerant any leaks from the equipment would result in a reduction of GHG emissions compared to previous leaks of higher GWP refrigerants. The challenge is determining how to quantify GHG emission reductions to not encourage the facility to avoid fixing leaks. The SCAQMD protocol establishing the method to quantify the voluntary early reduction of high GWP GHG emissions from any station refrigeration and air conditioning systems is too early in its development for the SCAQMD to consider funding at this time. Therefore, potential environmental impacts from financing low GWP refrigerants to replace high GWP materials will not be considered in the analysis in this DPEA.

CHAPTER 2 - ENVIRONMENTAL CHECKLIST

Introduction

General Information

Environmental Factors Potentially Affected

Determination

Environmental Checklist and Discussion

INTRODUCTION

The environmental checklist provides a standard evaluation tool to identify a project's adverse environmental impacts. This checklist identifies and evaluates potential adverse environmental impacts that may be created by the PR 2702.

GENERAL INFORMATION

Project Title:	Proposed Rule 2702 – Greenhouse Gas Reduction Program
Lead Agency Name:	South Coast Air Quality Management District
Lead Agency Address:	21865 Copley Drive Diamond Bar, CA 91765
CEQA Contact Person:	Michael A. Krause (909) 396-2706
Rule Contact Person:	Jill Whynot (909) 396-3104
Project Sponsor's Name:	South Coast Air Quality Management District
Project Sponsor's Address:	21865 Copley Drive Diamond Bar, CA 91765
General Plan Designation:	Not applicable
Zoning:	Not applicable
Description of Project:	The proposed project will establish a GHG Reduction Program to allow the funding of GHG reduction projects and provide GHG certified emission reductions. The SCAQMD will fund projects to reduce emissions using money from program participants who need certified GHG reductions. The Draft PEA concluded that the proposed projects could potentially generate adverse air quality, energy, hazards, hydrology, noise, public services, solid waste and transportation/traffic impacts during implementation of projects likely under different protocols protocols, but the impacts would not be significant.
Surrounding Land Uses and Setting:	Not applicable
Other Public Agencies Whose Approval is Required:	Not applicable

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The following environmental impact areas have been assessed to determine their potential to be affected by the proposed project. None of the environmental topics are expected to be adversely affected by the proposed project. An explanation relative to the determination of impacts can be found following the checklist for each area.

☐	Aesthetics	☐	Geology and Soils	☐	Population/ Housing
☐	Agricultural Resources	☑	Hazards and Hazardous Materials	☑	Public Services
☑	Air Quality	☑	Hydrology and Water Resources	☐	Recreation
☐	Biological Resources	☐	Land Use and Planning	☑	Solid/Hazardous Waste
☐	Cultural Resources	☐	Mineral Resources	☑	Transportation/Circulation.
☑	Energy	☑	Noise	☐	Mandatory Findings

DETERMINATION

On the basis of this initial evaluation:

☑ I find the proposed project, in accordance with those findings made pursuant to CEQA Guideline §15252, COULD NOT have a significant effect on the environment, and that an ENVIRONMENTAL ASSESSMENT with no significant impacts will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will NOT be significant effects in this case because revisions in the project have been made by or agreed to by the project proponent. An ENVIRONMENTAL ASSESSMENT with no significant impacts will be prepared.

☐ I find that the proposed project MAY have a significant effect(s) on the environment, and an ENVIRONMENTAL ASSESSMENT will be prepared.

☐ I find that the proposed project MAY have a "potentially significant

impact" on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL ASSESSMENT is required, but it must analyze only the effects that remain to be addressed.

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

Date November 4, 2008 **Signature:** Steve Smith

Steve Smith, Ph.D.
Program Supervisor
Planning, Rule Development & Area Sources

ENVIRONMENTAL CHECKLIST AND DISCUSSION

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

Significance Criteria

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

The project will block views from a scenic highway or corridor.

The project will adversely affect the visual continuity of the surrounding area.

The impacts on light and glare will be considered significant if the project adds lighting which would add glare to residential areas or sensitive receptors.

Table 2-1 outlines the potential aesthetic impacts from applicable protocols.

TABLE 2-1

Potential Aesthetic Impacts from Applicable Protocols

GHG Reduction Protocol	GHG Reduction Action	Aesthetic Impact
Forests	Conserve and/or increase on-site forest carbon stocks	Benefit

TABLE 2-1 (CONCLUDED)

Potential Aesthetic Impacts from Applicable Protocols

GHG Reduction Protocol	GHG Reduction Action	Aesthetic Impact
Urban Forestry	Urban tree planting	Benefit
Lawn Mowers	Purchase of electric lawn mower and early retirement of older, gasoline-polluting lawn mower	No change
Leaf Blowers	Purchase of lower-emitting, quieter leaf blower and early retirement of older, louder leaf blower	No change
Boiler Replacement/Retrofit	Early retirement of older, less efficient boilers or retrofit with economizer to improve efficiency	No change
Truck Stop Electrification	Use of electric power in lieu of diesel power to operate on-board HVAC system while the truck is at rest but occupied.	No change

Discussion

I. a), b) & c): The planting of trees in urban areas and increased number of trees in forest settings are generally considered as an aesthetic benefit. New trees will improve scenic vistas and would not damage scenic resources. New trees are not expected to block views of scenic highways or corridor because the required spacing of trees would limit the tree planting from blocking any views.

For urban locations, which are primarily paved and developed, the increased number of trees should improve the existing visual character or quality of the tree planting site and its surroundings. The replacement of existing lawn mowers and leaf blowers to more efficient equipment will have no adverse impact on aesthetics. Boiler replacements and retrofits will require minor construction activity at existing facilities, but because the boiler construction, as well as operation, occurs within the confines of an existing location, scenic vistas and visual character or quality of the site is not expected to change. Truck stop electrification equipment will be installed at existing facilities typically located in remote, industrial, institutional or commercial areas. Construction activities associated with the installation of these electrification stations could include the use of construction barriers, the presence of construction equipment and material, and the stockpiling of construction materials. However, views of these construction activities would be comparable to views of other industrial, institutional or commercial construction activities and would be short-term. Construction of turck stop electrification units at existing facilities is not expected to obstruct any existing scenic vistas, damage scenic resources or degrade the existing visual character of an affected site. Operation of the simple structured units would be visually comparable, possibly dwarfed, by the long haul tractor-trailers and eighteen wheelers being served by the electrification units. Thus, no

scenic resources will be damaged, scenic vistas will not be obstructed and the existing visual character of any site in the vicinity of affected facilities will not be degraded during the operation of the electrification units.

I. d). Trees, lawn mower and leaf blowers are not a new source of substantial light or glare which would adversely affect day or nighttime views in the area because tree planting, lawn mowing and leaf blowing are existing activities that typically take place during daylight hours. Minor construction activities from boiler replacement/retrofit and new truck stop electrification are not expected to take place at night. Regardless, boiler replacement and retrofits would occur within the confines of existing facilities and truck stop electrification equipment is installed at existing parking lots that are currently lighted at night. No additional lighting is anticipated to be required. Similarly, the boilers and truck stop electrification equipment would not require additional lighting to operate the equipment at night. Therefore, the proposed project is not expected to create a new source of substantial light or glare at an affected facility that would adversely affect day or nighttime views in the area. Therefore, the proposed project is not expected to create significant adverse aesthetic impacts.

Based on the above considerations, significant adverse impacts to aesthetics are not expected from implementing PR 2702. Since there are no significant adverse impacts, no mitigation measures are required.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
II.	**AGRICULTURE RESOURCES.** Would the project:			
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland mapping and Monitoring Program of the California Resources Agency, to non- agricultural use?	☐	☐	☑
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☑
c)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☑

Significance Criteria

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

The proposed project conflicts with existing zoning or agricultural use or Williamson Act contracts.

The proposed project will convert prime farmland, unique farmland or farmland of statewide importance as shown on the maps prepared pursuant to the farmland mapping and monitoring program of the California Resources Agency, to non-agricultural use.

The proposed project would involve changes in the existing environment, which due to their location or nature, could result in conversion of farmland to non-agricultural uses.

Table 2-2 outlines the potential agriculture impacts from applicable protocols.

TABLE 2-2

Potential Agriculture Resources Impacts from Applicable Protocols

GHG Reduction Protocol	GHG Reduction Action	Agriculture Resources Impact
Forests	Conserve and/or increase on-site forest carbon stocks	No change
Urban Forestry	Urban tree planting	No change
Lawn Mowers	Purchase of electric lawn mower and early retirement of older, gasoline-polluting lawn mower	No change
Leaf Blowers	Purchase of lower-emitting, quieter leaf blower and early retirement of older, louder leaf blower	No change
Boiler Replacement/Retrofit	Early retirement of older, less efficient boilers or retrofit with economizer to improve efficiency	No change
Truck Stop Electrification	Use of electric power in lieu of diesel power to operate on-board HVAC system while the truck is at rest but occupied.	No change

Discussion

II. a) - c): While is unknown at this time where a developer may wish to undertake a forest project, agricultural land is not expected to be such a location because the action would require a change in zoning of the land and compliance with CEQA

requirements. If such zoning would take place, it would not likely be the result of the available forestry protocol but for other business reasons. Urban forestry, lawn mowers, leaf blowers, boilers and truck stop electrification will not require converting farmland to non-agricultural use or conflict with zoning for agricultural use or a Williamson Act contract because commercial agricultural activities do no typically occur in urban settings due to zoning restrictions. Further, there are no provisions in the protocols that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments and no land use or planning requirements relative to agricultural resources will be altered by the proposed project.

Based on the above considerations, significant adverse impacts to agriculture resources are not expected from implementing PR 2702. Since there are no significant adverse impacts, no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant Impact	No Impact
III. AIR QUALITY. Would the project:			
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☑
b) Violate any air quality standard or contribute to an existing or projected air quality violation?	☐	☑	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☑	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☑
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☑
f) Diminish an existing air quality rule or future	☐	☐	☑

compliance requirement resulting in a significant increase in air pollutant(s)?

Significance Criteria

Impacts will be evaluated and compared to the significance criteria in Table 2-3. If impacts equal or exceed any of the following criteria, they will be considered significant.

TABLE 2-3

Air Quality Significance Thresholds

Mass Daily Thresholds		
Pollutant	*Construction*	*Operation*
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
TAC, AHM, and Odor Thresholds		
Toxic Air Contaminants (TACs, including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk $\geq$ 10 in 1 million Hazard Index $\geq$ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Ambient Air Quality for Criteria Pollutants [(a)]		
NO2 1-hour average annual average	In attainment; significant if project causes or contributes to an exceedance of any standard: 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) [(b)] 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) [(b)] 2.5 $\mu g/m^3$ (operation)	
Sulfate 24-hour average	1 $\mu g/m^3$	

TABLE 2-3 (CONCLUDED)

Air Quality Significance Thresholds

Ambient Air Quality for Criteria Pollutants [(a)]	
CO 1-hour average 8-hour average	In attainment; significant if project causes or contributes to an exceedance of any standard: 20 ppm (state) 9.0 ppm (state/federal)

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

(b) Ambient air quality threshold based on SCAQMD Rule 403.

PM10 = particulate matter less than 10 microns in size, ug/m3 = microgram per cubic meter; pphm = parts per hundred million; mg/m3 = milligram per cubic meter; ppm = parts per million; TAC = toxic air contaminant; AHM = Acutely Hazardous Material. NO_2 = Nitrogen Oxide, CO = Carbon Monoxide, VOC = Volatile Organic Compounds, SOx = Sulfur Oxide.

Table 2-4 outlines the potential air quality impacts from applicable protocols.

TABLE 2-4

Potential Air Quality Impacts from Applicable Protocols

GHG Reduction Protocol	GHG Reduction Action	Air Quality – Construction Impact	Air Quality – Operation Impact
Forests	Conserve and/or increase on-site forest carbon stocks	Impact from tree planting activity	Impact from periodic tree maintenance
Urban Forestry	Urban tree planting	Impact from tree planting activity	Impact from periodic tree maintenance
Lawn Mowers	Purchase of electric lawn mower and early retirement of older, gasoline-polluting lawn mower	Temporarily impact during equipment exchange	Benefit from phasing out gasoline-powered lawn mowers
Leaf Blowers	Purchase of lower-emitting, quieter leaf blower and early retirement of older, louder leaf blower	Temporarily impact during equipment exchange	Benefit from more efficient leaf blowers
Boiler Replacement/Retrofit	Early retirement of older, less efficient boilers or retrofit with economizer or O_2 sensor to improve efficiency	Impact from boiler installation or modification	Benefit from more efficient boilers
Truck Stop Electrification	Use of electric power in lieu of diesel power to operate on-board HVAC system while the truck is at rest but occupied.	Impact from electrification unit installation	Benefit from the auxiliary engines not idling

Discussion

III. a): PR 2702 would not conflict with or obstruct the applicable air quality plan implementation. The primary purpose of the SCAQMD's Air Quality Management Plan (AQMP) is to reduce emissions to attain and maintain all federal and state ambient air quality standards for the district. The 2007 AQMP concluded that major reductions in emissions of VOC, NOx and PM are necessary to attain the air quality standards for ozone and PM2.5. PR 2702 is not a control measure in the 2007 AQMP, but instead is a voluntary program to reduce GHG emissions, which may also have co-benefit reductions of criteria pollutants. Criteria pollutants reductions will contribute to the SCAQMD's progress in attaining the ambient air quality standards for ozone and PM2.5. Secondary adverse impacts from the implementation of the protocols, as analyzed in this DPEA, will be temporary and not significant (see discussion under III.b). As a result, implementing PR 2702 will not conflict or obstruct AQMP implementation.

III. b): Participation in PR 2702 could result in secondary adverse impacts from the implementation of the following protocols using the known initial funding, which is assumed to be the maximum funding available in future years. Detailed emission calculations can be found in Appendix B.

Construction Impacts

Forests/ Urban Forestry

One acre of land could support 109 trees (a tree needs two to five times its height in surrounding space for healthy growth[4] so, one 15-gallon six to ten foot tree reasonably needs 400 square feet of space; 43,560 square feet/acre x tree/400 = 109 trees/acre). With 18,790 trees that could be purchased using the known initial funding into the program, 172 acres of land could be populated with forests. Forest planting stock usually is shipped in bundles of 500 to 1,000 trees. Thus, it would take 19 to 38 trucks to transport 18,790 trees to a 172-acre location. Daily peak construction emissions are based on 10 workers planting trees for an eight-hour workday and using a backhoe to assist in the tree planting process.

The urban tree planting would typically take place on median strips on major arterial roads, sidewalks along retail shops, and on residential streets. The same healthy growth distance of 20 feet would be used to allow the tree to mature and prevent the branches from intertwining with neighboring trees. Thus, for a one-mile stretch of roadway, 264 trees could line a median and, if including sidewalks on both sides, could total approximately 800 trees. One large truck would be necessary to bundle and transport an 800-tree installation project. The purchase of 18,790 trees using the known initial funding into the program could enhance 23 miles of major roads with tree planting or 23 different project locations. Similar to the analysis of forest tree

[4] http://warnell.forestry.uga.edu/warnell/service/library/b1047/index.html

planting, this analysis of urban tree planting projects assumes daily peak construction emissions are based on 10 workers planting trees for eight hours and using a backhoe to assist in the process. These same workers would install any water system hoses and hookups while planting the trees.

Table 2-5 provides the peak daily emissions resulting from one day of planting trees in both the forest setting and the urban setting, assuming $2.8 million is spent just on this protocol. Emission calculations, assumptions, etc., can be found in Appendix B. Each of these activities is compared to the SCAQMD's significance threshold for the construction phase of the project to determine the significance of the potential impact.

TABLE 2-5

Peak Daily Construction Emissions from Planting Trees

Source	VOC (lbs/day)	CO (lbs/day)	NOx (lbs/day)	SOx (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Daily Planting - Forest Setting	2.04	10.60	14.65	0.02	0.89	0.76
Daily Planting - Urban Forestry	1.71	9.32	10.47	0.02	0.69	0.61
SCAQMD Daily Significance Thresholds	75	550	100	150	150	55
Significant?	No	No	No	No	No	No

As presented in Table 2-5, peak daily construction emissions from planting trees in either a forest setting or urban setting would not generate significant adverse air quality impacts because none of the criteria pollutant emissions exceed the SCAQMD's CEQA significance thresholds for the construction phase of a project. Although tree planting would occur over more than one day, the results in Table 2-5 represent peak day construction emissions.

Lawn Mower/Leaf Blower

As noted in Chapter 1, there are lawn mower and leaf blower exchange events that currently take place in the district sponsored by the SCAQMD. With the projected funding into the GHG reduction program, the costs of 14,358 new lawn mowers or 15,730 new leaf blowers could be subsidized. Due to the time it takes to purchase the new unit, ensure the old unit was functioning, decommission the old unit and load onto a haul truck, there will be a limit as to how many of these exchanges could take place on any given day. Historically, the SCAQMD has exchanged 4,000 lawn mowers at four events per year (1,000 maximum exchanges on a given day). The SCAQMD would have to conduct 15 events to exchange all 14,358 lawn mowers. The program is limited to one lawn mower for each resident, thus a maximum of 1,000 participant vehicles could be traveling to the local event site for the exchange.

Two delivery trucks would be necessary to transport the new equipment to the exchange site and four haul trucks would be required to deliver the old units to the disposal facility where the old lawn mower is dismantled and parts sold. Minimal dismantling takes place at the exchange site in order to prepare the unit to be hauled away.

Unlike the lawn mower exchange program, old leaf blowers are exchanged at store locations that normally sell leaf blowers. Still, more leaf blowers would be expected to be delivered than normally so new delivery truck trips are expected. However, because store locations can only accommodate a minor increase in the number of leaf blowers due to space limitations, fewer leaf blowers are sold at each exchange resulting in the need for more exchanges each year. More exchanges result in less vehicle distance traveled as it is more likely that a participant would visit a local exchange than an exchange farther away. The program allows up to ten leaf blowers to be exchanged per purchaser, typically a professional gardener/landscaper or small/commercial business owner. On average, three to five leaf blowers have been exchanged per purchaser. Historically, 1,500 leaf blowers have been exchanged at six to ten events per year. Similar to the lawn mower exchanges, the leaf blower program is popular and all the available leaf blowers have been sold in the past. It is anticipated that a maximum of 500 leaf blowers could be exchanged on a given day. Thus, 32 events would need to be conducted to exchange all 15,730 leaf blowers financed by the initial program funding. If five leaf blowers are exchanged purchaser, 100 vehicles would be traveling to the local store location on a given day. Two haul trucks would be needed to transport the old leaf blower units to a scrap and destruction location.

Table 2-6 provides the peak daily emissions from conducting a lawn mower and leaf blower exchange assuming $2.8 million is spent just on this protocol on either a lawn mower exchange or a leaf blower exchange. Emission calculations, assumptions, etc., can be found in Appendix B. Two exchanges would not be anticipated to take place on the same day since the resources needed to support such an exchange are unavailable. Peak daily emissions are listed and each compared to the SCAQMD's significance threshold for the construction phase of the project.

TABLE 2-6

Peak Daily Emissions from Lawn Equipment Exchanges

Source	**VOC** (lbs/day)	**CO** (lbs/day)	**NOx** (lbs/day)	**SOx** (lbs/day)	**PM10** (lbs/day)	**PM2.5** (lbs/day)
Lawn Mower Exchange	10.96	104.84	16.96	0.12	1.12	0.76
Leaf Blower Exchange	1.63	14.49	5.56	0.02	0.25	0.20
SCAQMD Daily Significance Thresholds	75	550	100	150	150	55
Significant?	No	No	No	No	No	No

As presented in Table 2-6, peak daily construction emissions from conducting either a lawn mower or leaf blower exchange event would not generate significant adverse air quality impacts because none of the criteria pollutant emissions exceed the SCAQMD's CEQA significance thresholds for the construction phase of a project.

Boiler Replacement/Retrofit

As described in Chapter 1, boilers can increase efficiency and reduce emissions by either replacing with a newer boiler or install retrofit equipment such as an economizer or O_2 trim system. Installation costs for a new boiler varies depending on the size of the boiler. Small and medium sized boilers (less than 40 MMBtu/hr) constitute approximately 80 percent of the boilers sold and, thus, 20 percent are larger boilers (greater than 40 MMBtu/hr). As discussed in Chapter 1, if the program funding amount is spent on the least expensive equipment for maximum efficiency, 38 small new boiler replacements could be financed. All the 38 boilers would be installed over a period of one year (on average, one every 1.5 weeks). Therefore, it is highly unlikely the installation of more than one boiler would occur on the same day. It is assumed the new boiler will be installed in the same location as the old boiler so no new foundation is necessary.

Another boiler replacement scenario that could occur as a result of implementing the protocol is to subsidize additional control equipment on a new boiler that is already being purchased to replace an existing older boiler. Thus, the creditable GHG emission reduction would be the efficiency improvement from the control equipment, such as an O_2 trim system and non-condensing economizer, added to the new boiler as noted in Table 2-7. Also found on Table 2-7 is the cost of such add-on equipment to a new boiler, which ranges from $44,000 to $117,000. Thus, the initial year funding of $2.8 million could offset the costs for 24 to 64 control equipment units. Because it is more efficient and potentially less costly to incorporate control equipment into the boiler design during manufacturing, the control equipment is expected to be installed onto a new boiler at the manufacturer's facility before being delivered to the purchaser. Therefore, no additional construction impacts would occur beyond the construction activities already taking place when installing the new boiler. These construction impacts would not be considered new impacts created by PR 2702 because, in this scenario, the owner already intended to replace the boiler regardless of the protocol and the SCAQMD subsidy for the control equipment.

As outlined in Table 2-7, the costs of the retrofit equipment and corresponding efficiency achieved varies for different size boilers. The program funding would likely finance retrofit equipment that would be the least costly and yet would generate cost effective efficiency. Thus, non-condensing economizer would likely be purchased for small and medium boilers as it cost the least and would generate three percent efficiency gain for the existing boiler ($11,000/one percent efficiency gain). Condensing economizer is add-on equipment to boilers already retrofit with a non-condensing economizer. For those boilers with no retrofit equipment, both the non-

condensing and condensing economizer could be installed at a total cost of $119,000 to achieve 6.25 percent efficiency ($19,040/one percent efficiency gain). For the larger boilers, the least expensive retrofit equipment, O_2 trim system, only provides one percent efficiency gain ($93,000/one percent gain), while the non-condensing economizer provides three percent efficiency gain and at $33,412/one percent efficiency gain, is the most cost effective retrofit equipment.

Small and medium sized boilers constitute approximately 80 percent of the boilers sold and, thus, 20 percent are larger boilers (greater than 40 MMBtu/hr). Thus, the program funding amount could be divided accordingly. Therefore, the $2.8 million annual funding could finance 68 non-condensing economizers for small/medium boilers and four non-condensing economizers for large boilers. All 72 retrofits would be installed each at a separate location within one year. On average, two retrofits would occur each week. Thus, the "worst-case" scenario assumes three retrofits construction activities occur on one given day.

TABLE 2-7

Estimated Costs and Efficiency of Boiler Retrofit Equipment

	Firetube Boiler (20 MMBtu/hr)		Watertube Boiler (50 MMBtu/hr)	
Retrofit Equipment	**Cost**	**Efficiency Gain** (percent)	**Cost**	**Efficiency Gain** (percent)
Non-Condensing Economizer	$33,000	3.0	$142,000	4.25
O_2 Trim System	$54,000	1.0	$93,000	1.0
Condensing Economizer (add-on with a non-condensing equipment)	$86,000	3.25	$149,000	3.25
New Boiler	$550,000	4.0	$1,400,000	5.25
O_2 Trim System and Non-Condensing Economizer (added to New Boiler)	$44,000	4.0	$117,000	5.25

Table 2-8 provides the peak daily emissions from the boiler replacement and the boiler retrofit on a given day assuming $2.8 million is spent just on this protocol either on replacement or retrofit. Emission calculations, assumptions, etc., can be found in Appendix B. Both activities would not be expected from the same boiler as a new boiler would not need a retrofit. Both actions are compared to the SCAQMD's significance threshold for construction phase of the project to determine significance of the potential impact.

The emissions in Table 2-8 are not additive because the boiler can either be replaced or retrofit but not both. As presented in Table 2-8, peak daily construction emissions from either replacing boilers or retrofitting boilers would not generate significant adverse air quality impacts because none of the criteria pollutant emissions exceed

the SCAQMD's CEQA significance thresholds for the construction phase of a project.

TABLE 2-8

Peak Daily Construction Emissions from Boiler Replacement/Retrofit

Source	VOC (lbs/day)	CO (lbs/day)	NOx (lbs/day)	SOx (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Boiler Replacement	2.74	10.65	19.47	0.02	1.11	0.86
Boiler Retrofits	4.94	19.84	30.68	0.04	1.90	1.69
SCAQMD Daily Significance Thresholds	75	550	100	150	150	55
Significant?	No	No	No	No	No	No

Truck Stop Electrification

There are three truck stops in the district that have already installed truck stop electrification units. The number of parking spaces with electrification units range from 72 to 93 depending on the location. With the initial program funding, it is estimated that 175 spaces truck stop electrification units could be financed. Considering the number of spaces currently occupied by electrification units at truck stops in the district, the initial financing could fund two new locations (87 spaces in each location). It is assumed that all truck stops, rest stops, etc. already have a source of electricity coming into the facility to power existing services. Electricity from existing sources would need to be extended to the parking spaces where the electrification equipment will be located. A single electrical line extension to the first unit is necessary because the power lines to other units are already installed within the trusses that are prefabricated equipment constructed out of the area. Securing the proper electric connection entails breaking the existing asphalt, trenching a route, laying the cable and repaving with asphalt to previous conditions. Because of the relatively small size of an electrical line, minimal dirt is expected to be moved, and complying with fugitive dust control requirements pursuant to SCAQMD Rule 403, fugitive dust emissions are expected to be negligible.

Additionally, a skid steer loader has a hoist/claw that will be needed to install the pylons and the overhead trusses of the electrification structure into place. A cement mixer is needed to secure the pylons into the ground. A welder could be needed to attach the pylons to the trusses albeit a majority of the equipment is prefabricated so a welder would only be necessary for spot repair activities. A generator set will be needed to power the welding equipment. A crew size of 20 construction workers is assumed to work eight hours per day. Finally, heavy-heavy duty trucks would be delivering the equipment and hauling away any waste. Construction typically occurs sequentially based on the type of activity, e,g. demolition, site preparation, and construction of structures. Similarly, construction of electrification equipment occurs in the following phases: phase one involves digging a trench where the electrical line

will be place to connect the power source, removing asphalt waste with the usage of a backhoe and hauling waste away from site; phase two consists of using a backhoe to backfill the trench and a asphalt paver/paving equipment to resurface the parking lot; and phase three involves a mixer pourer to secure the pylons and a skid steed loader with a hoist or crane to place the trusses and electrification equipment in place. These three phases of construction activity were analyzed to determine the highest, or peak, daily emissions from the construction of one electrification structure. Details of the installation process and emissions from construction equipment operation can be found in Appendix B.

Table 2-9 provides the peak daily construction emissions from installing 87 units at one site for a "worst-case" scenario, however the construction phases would be the same for the construction of the remaining units at the second location. Again, emissions in Table 2-9 are based on $2.8 million being spent just on this protocol. Funding would provide for enough spaces for two locations but it is not expected that construction would take place on the same day. Peak daily emissions (from phase one) are compared to the SCAQMD's significance threshold for the construction phase of the project to determine the significance of the potential impact.

As presented in Table 2-9, peak daily construction emissions from installing truck stop electrification units would not generate significant adverse air quality impacts because none of the criteria pollutant emissions exceed the SCAQMD's CEQA significance thresholds for the construction phase of a project.

TABLE 2-9

Peak Daily Construction Emissions from Installing Truck Stop Electrification

Source	**VOC** (lbs/day)	**CO** (lbs/day)	**NOx** (lbs/day)	**SOx** (lbs/day)	**PM10** (lbs/day)	**PM2.5** (lbs/day)
Truck Stop Electrification (during Phase One)	4.21	21.57	33.48	0.04	1.86	1.51
SCAQMD Daily Significance Thresholds	75	550	100	150	150	55
Significant?	No	No	No	No	No	No

Operational Impacts

Forests/ Urban Forestry

The operational phase of the forests/urban forestry protocol would involve the maintenance of the trees including watering, trimming, and undergrowth management. A typical large tree may have 200,000 to 400,000 leaves. Most urban areas install automatic watering systems when planting the trees, but the forest areas require more attention to maintain healthy growth. Urban trees require annual

trimming while the forest setting may require periodic management of the leaves and branches fallen as they could act as fuel when wildfires occur. Forest management emissions is expected to not have an operational impact because 1.) forestry management (controlled burns) already occur in California; 2.) specific forest management emission from controlled burning is specified in the AQMP inventory; and 3.) AQMP inventories and Rule 444 limit forest management controlled burning. Therefore, forest management cannot increase compared to current practices. Operational emission from periodic maintenance of urban trees is provided in Table 2-10. Emission calculations, assumptions, etc., can be found in Appendix B.

TABLE 2-10

Peak Daily Operational Emissions from Urban Tree Maintenance

Source	VOC (lbs/day)	CO (lbs/day)	NOx (lbs/day)	SOx (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Urban Tree Maintenance	3.35	12.77	22.11	0.02	1.71	1.57
SCAQMD Daily Significance Thresholds	55	550	55	150	150	55
Significant?	No	No	No	No	No	No

Lawn Mower/Leaf Blower

The operation of the electric lawn mowers and more efficient leaf blowers will provide an air quality benefit as old dirty equipment will be replaced with zero emission or low emission equipment. According to the SCAQMD staff report and socioeconomic assessment for Rule 1623 – Credits for Clean Lawn and Garden Equipment, there are approximately one million residential lawn mowers in the district contributing 4.4 tons of VOC per day (0.008 pound VOC/day per lawn mower). To exchange 14,358 gasoline-powered lawn mowers for electric mowers would provide a reduction of 118 pounds VOC/day. The current hydrocarbon + NOx emission standard for leaf blowers is 72 grams/kilowatt-hour (0.118 pound per horsepower-hour). Emissions would be 19 grams/kilowatt-hour (0.03 pound per horsepower-hour) from a new more efficient leaf blower. The current CO emission standard is 536 grams/kilowatt-hour would be 490 grams/kilowatt-hour from a the newer leaf blower model. With the exception of GHG emission reductions, no other operational air quality impacts, either positive or negative, were identified as a result of using new electric lawn mowers or low emission leaf blowers.

Boiler Replacement/Retrofit

New boilers are 86 percent efficient, which is approximately four percent more efficient than existing boilers. Actual emissions would vary depending on the size and usage of the old and new boiler. Assuming the same capacity and usage, the replacement would generate a four percent reduction in current criteria pollutant

emissions. Similarly, an economizer installed on a boiler will provide a three percent efficiency improvement and an O_2 trim would provide a one percent efficiency improvement. Specific efficiencies are listed in Table 2-7. GHG emission reductions would not be issued for those replaced or retrofitted boilers complying the existing boiler rules. With the exception of GHG emission reductions, no other operational air quality impacts, either positive or negative, were identified as a result of replacing or retrofitting existing boilers

Truck Stop Electrification

Operation of the truck stop electrification units will provide an air quality benefit as the diesel auxiliary engine will not need to operate in lieu of the electric unit providing the needed power. Using projected 2008 data from the Ontario truck stop[5] where 93 electrification units are currently in operation, the following emission reductions have been achieved: 180 pounds NOx/day, 85 pounds CO/day and 19 pounds VOC/day. The 2008 data was determined using actual usage figures and trends of system utilization since the site opened. Assuming that all 175 electrification spaces financed by the initial known funding follow a similar trend in usage, air quality benefits are anticipated to be approximately 340 pounds NOx/day, 160 pounds CO/day and 36 pounds VOC/day from the operation of the additional truck stop electrification units.

III. c): Since PR 2702 is not expected to generate potentially significant adverse project-specific construction or operational air quality impacts, the proposed project's contribution to a potentially significant cumulative impact during construction or operation is rendered less than cumulatively considerable and, thus, is not significant (CEQA Guidelines §15064(h)(2)).

Significant changes in global climate patterns have recently been associated with global warming, an average increase in the temperature of the atmosphere near the Earth's surface, attributed to accumulation of GHG emissions in the atmosphere. GHGs trap heat in the atmosphere, which in turn heats the surface of the Earth. Some GHGs occur naturally and are emitted to the atmosphere through natural processes, while others are created and emitted solely through human activities. The emission of GHGs through the combustion of fossil fuels (i.e., fuels containing carbon) in conjunction with other human activities, appears to be closely associated with global warming. State law defines GHG to include CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6. The most common GHG that results from human activity is CO_2, followed by CH_4 and N_2O. The combustion processes affected by the proposed project by the off-road equipment and on-road vehicles during the construction and operational phases of the project will generate GHG emissions, primarily CO_2 and CH_4, which are evaluated in the following section. Other GHGs cannot be analyzed at this time because emission factors are not currently available. Specifically, the

[5] 2008 SCAQMD MSERC application with IdleAire Technologies Corporation

following analysis focuses on directly emitted CO_2 and CH_4 emissions because these are the primary GHG pollutants emitted during the combustion process and are the GHG pollutants for which emission factors are most readily available. CO_2 and CH_4 emissions were estimated using emission factors from CARB EMFAC2007 and Off-Road 2007 models and EPA's AP-42. The GWP was applied to the CH_4 emissions to provide equivalent CO_2 emissions so they can be added and presented as CO_2E emissions in Table 2-11. The CO_2 and CH_4 emission factors and calculations can be found in the emission calculation spreadsheets in Appendix B.

The analysis of GHGs is a much different analysis than the analysis of criteria pollutants for the following reasons. For criteria pollutants, significance thresholds are based on daily emissions because attainment or non-attainment is based on daily exceedances of applicable ambient air quality standards. Further, several ambient air quality standards are based on relatively short-term exposure effects on human health, e.g., one-hour and eight-hour. Since the half-life of CO_2 is approximately 100 years, for example, the effects of GHGs are longer-term, affecting global climate over a relatively long time frame. As a result, the SCAQMD's current approach is to evaluate GHG effects over a longer timeframe than a single day.

Table 2-11 provides the total CO_2E emissions from implementing each of the protocols using the known initial funding into PR 2702. As shown in Table 2-11, the construction activities generating the CO_2E emissions are expected to be relatively small. Further, based on the assumption that the initial year funding will occur indefinitely into the future, these construction GHG emission would also be expected to occur indefinitely into the future. Aside from tree maintenance, the overall primary net effect of PR 2702 is that GHG reductions created through implementing projects pursuant to the protocols will be used to mitigate GHG emission increases on a one-to-one basis from projects implemented by the purchaser. It may be possible that some GHGs will be purchased and retired to the benefit of the environment. GHG emissions listed in Table 2-11 are not additive as the $2.8 million is assumed to fund only one protocol.

TABLE 2-11

Total CO_2E Emissions Generated from Implementation of the Protocols

Activity	**TOTAL CO_2E Emissions** (metric tons/year)
Construction Phase	
Planting 18,794 Trees – Forest Setting	16.64
Planting 18,794 Trees – Urban Setting	15.74
Exchanging 14,358 Lawn Mowers	82.03
Exchanging 15,730 Leaf Blowers	25.20
Boiler Replacement with 38 New Boilers	35.79
Boiler Retrofit with 72 Non-Condensing Economizers	28.55

TABLE 2-11 (CONCLUDED)

Total CO_2E Emissions Generated from Implementation of the Protocols

Activity	**TOTAL CO_2E Emissions** (metric tons/year)
Truck Stop Electrification at 175 Parking Spaces	15.64
Operational Phase	
Tree Maintenance	253.9

As shown in Table 2-11, the total CO_2E emissions generated from implementing the protocols is not significant for the reasons discussed in the following paragraphs.

Neither SCAQMD nor any other air regulatory agency in California has formally established a significance threshold for GHG emissions yet. In the absence of a specific significance threshold, SCAQMD staff has evaluated significance for projects where it is the lead agency on a case-by-case basis. In this analysis, SCAQMD staff has used a variety of benchmarks to evaluate GHG impacts. As additional information is compiled with regard to the level of GHG emissions that constitute a significant cumulative climate change impact, SCAQMD will continue to revisit and possibly revise the level of GHG emissions considered to be significant.

In its *CEQA & Climate Change* document (January, 2008), the California Air Pollution Control Officers Association (CAPCOA) identifies many potential GHG significance threshold options. The CAPCOA document indicates that establishing quantitative thresholds is a balance between setting the level low enough to capture a substantial portion of future residential and non-residential development, while also setting a threshold high enough to exclude small development projects that will contribute a relatively small fraction of the cumulative statewide GHG emissions. For example, CAPCOA identifies one potential significance threshold as 10,000 metric tons (MT) per year, which was considered by the Market Advisory Committee for inclusion in a Greenhouse Gas Cap and Trade System in California. Another potential threshold identified by CAPCOA is 25,000 MT per year, which is CARB's mandatory reporting threshold under Assembly Bill (AB) 32. As shown in Table 2-11, GHG emissions increases from implementing PR 2702 would be orders of magnitude lower than both of these potential thresholds.

SCAQMD's current GHG significance threshold draft guidance[6] proposes a tiered approach to determining GHG significance of projects (SCAQMD, 2008, pg. 3-10). The first two tiers involve (1) exempting the project because of potential reductions of GHG emissions allowed under CEQA and (2) demonstrating that the project's GHG emissions are consistent with a local general plan. Because neither of these tiers is applicable for the proposed project, the analysis shifts to Tier 3. Tier 3 proposes a limit of 10,000 MT CO2 equivalent (CO_2E) per year for industrial

[6] http://www.aqmd.gov/ceqa/handbook/GHG/oct22mtg/oct22.html

projects and 3,000 MT CO_2E per year for commercial/residential projects as the incremental increase signifying significance (SCAQMD, 2008, pg. 3-11). Projects with incremental increases below this threshold will not be cumulatively considerable. GHG emissions from each protocol as listed in Table 2-11 are below both the industrial and commercial/residential GHG significance thresholds.

CARB's recently released proposed GHG significance threshold is 7,000 MT CO_2E per year for industrial projects and GHG emissions from each protocol as listed in Table 2-11 are below CARB's industrial GHG significance threshold.

Finally, another approach to determining significance is to estimate what percentage of the total inventory of GHG emissions are represented by emissions from a single project. If emissions are a relatively small percentage of the total inventory, it is possible that the project will have little or no effect on global climate change. According to available information, the statewide inventory of CO_2E emissions is as follows: 1990 GHG emissions equal 427 million MT of CO_2E and 2020 GHG emissions equal 600 million MT of CO_2E. with business as usual (536 metric tons per year by 2009 by extrapolating the known data).

The highest CO2 emission increase from implementing one of the protocols would be approximately 82.03 metric tons of CO_2E in the initial implementation year, during the construction phase and 253.9 MT of CO_2E during operation. This small percentage (0.000015 percent from construction phase and 0.000047 percent from operational phase) of GHG emissions from PR 2702 implementation as compared to the total projected statewide GHG emissions inventory is another basis for the SCAQMD's conclusion that GHG emissions from implementing PR 2702 are less than significant.

PR 2702 will become part of a comprehensive ongoing regulatory program that includes implementing related SCAQMD 2007 AQMP control measures as amended or new rules to attain and maintain all state and national ambient air quality standards for all areas within its jurisdiction. The 2007 AQMP estimates a CO_2 reduction of 427,849 MT per year by 2014, and a CO_2 reduction of 1,523,445 MT per year by 2020. Therefore, PR 2702 in connection with other 2007 AQMP control measures is not considered to be cumulatively considerable and, therefore, is not considered to be a significant cumulative GHG impact.

Since GHG emissions are considered cumulative impacts, and the GHG emission increases from PR 2702 construction and operational activities are considerably below the 10,000 metric ton per year Market Advisory Committee threshold; below the 25,000 metric ton per year CARB proposed mandatory reporting threshold under AB 32; substantially below CARB's current proposed GHG significance thresholds of 7,000 MT CO_2E per year for industrial projects; substantially below the SCAQMD current proposed GHG significance thresholds of 10,000 MT CO_2E per year for industrial projects and 3,000 MT CO_2E per year for commercial/residential projects; a small percentage of the total statewide GHG inventory; and, with other control

measures in the 2007 AQMP, which is a comprehensive ongoing regulatory program that would reduce overall CO2 emissions; adverse cumulative GHG impacts from PR 2702 are not considered significant and implementation of PR 2702 is not expected to contribute appreciably to climate change. Thus, potential GHG emission impacts from the proposed project will not be a significant contributor to the current global warming or climate change setting.

III. d): Implementation of the protocols is not expected to increase exposure by sensitive receptors to substantial pollutant concentrations for the following reasons: 1) trees are not toxic air pollutant emitters; 2) affected boilers are typically at existing facilities located in industrial or commercial areas; 3) any replacement, retrofit or exchange of equipment, such as boilers, lawn mowers, leaf blowers or truck stop electrification units, is expected to reduce emissions compared to existing equipment; and 4) the limited emission increases associated with the construction or implementation of the protocols (equipment replacement or retrofitting existing equipment) are concluded to be less than significant and temporary. Therefore, significant adverse air quality impacts to sensitive receptors are not expected from implementing PR 2702.

III. e): Historically, the SCAQMD has enforced odor nuisance complaints through SCAQMD Rule 402 - Nuisance. Objectionable odors are often associated with diesel exhaust and gasoline emissions. To the extent that PR 2702 could implement a truck stop electrification program that will eliminate the usage of 175 diesel auxiliary engines while idling at truck stops, normally eight to ten consecutive hours, diesel PM emissions for certain engines, odors are expected to be reduced or, at least, not worsen from current conditions. Similarly, new electric lawn mowers will replace 14,358 old gasoline-powered engines. New leaf blowers, new boiler and retrofit boilers will be more efficient, less polluting, and, thus, expected to be less odorous. New trees are expected to enhance the aroma surroundings. Therefore, no significant adverse odor impacts are expected from implementing the proposed project. There are odors that will be generated by the construction equipment. These odors, however, will not be significant because the construction activities are short-term, few pieces of construction equipment are needed, and, as shown in Tables 2-5, 2-6, 2-8, and 2-9, daily diesel PM emissions, the primary source of potential odor impacts, are relatively low.

III. f): The proposed project establishes a new voluntary program with rule requirements intended to demonstrate emission reductions, and, thus, will not diminish an existing air quality rule or future compliance requirement.

Based on the above considerations, significant adverse impacts to air quality are not expected from implementing PR 2702. Since there are no significant adverse impacts, no mitigation measures are required.

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

conservation plan?

Significance Criteria

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

The project results in a loss of plant communities or animal habitat considered to be rare, threatened or endangered by federal, state or local agencies.

The project interferes substantially with the movement of any resident or migratory wildlife species.

The project adversely affects aquatic communities through construction or operation of the project.

Table 2-12 outlines the potential biological resources impacts from applicable protocols.

TABLE 2-12

Potential Biological Resources Impacts from Applicable Protocols

GHG Reduction Protocol	GHG Reduction Action	Biological Resources Impact
Forests	Conserve and/or increase on-site forest carbon stocks	Minor impact if appropriate native species are planted
Urban Forestry	Urban tree planting	Already disturbed area
Lawn Mowers	Purchase of electric lawn mower and early retirement of older, gasoline-polluting lawn mower	No change
Leaf Blowers	Purchase of lower-emitting, quieter leaf blower and early retirement of older, louder leaf blower	No change
Boiler Replacement/Retrofit	Early retirement of older, less efficient boilers or retrofit with economizer to improve efficiency	No change
Truck Stop Electrification	Use of electric power in lieu of diesel power to operate on-board HVAC system while the truck is at rest but occupied.	No change

Discussion

IV. a), b), d): The type of trees to be planted in a forest setting is expected to be comprised of appropriate native species comparable with the existing local native species. Use of proper planting procedures is not expected to adversely modify local native habitats or affect any riparian habitat or other sensitive natural community. Approval to plant trees in wildlife areas would be required from California

Department of Fish and Game, U.S. Fish and Wildlife Service, or other applicable agencies. It is not likely that approval would be granted to plant trees in areas known to harbor endangered, candidate sensitive, or special status species identified in any local or regional plans, policies, or regulation or by appropriate agencies such as California Department of Fish and Game or U.S. Fish and Wildlife Service. For urban areas, the existing biological resources will have already been disturbed such that local native habitats, riparian habitats or other sensitive natural communities are no longer present. Usage of lawn mowers and leaf blowers is expected to take place in existing urban environments with the purpose of landscaping, grass cutting, weed control, and leaf management. Boiler replacement/retrofits and installation of truck stop electrification units are not expected to require any major construction activities as described in the "Air Quality" section and are expected to take place in existing facilities and parking lots. Implementing these protocols will not require the construction of new structures on property not already established with a foundation. Therefore, PR 2702 will have no direct or indirect impacts that could adversely affect plant or animal species or the habitats on which they rely in the SCAQMD's jurisdiction. PR 2702 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. Any changes to the existing physical environment would occur for business reasons, not as a result of implementing PR 2702.

IV. c): Acquisition of protected wetlands is not expected to be necessary to implement the protocols as all but one do not require new land. While it is not known where a new forest could be developed, a wetland is not a healthy option for the type of trees, such as oaks, evergreens and pines, which would be expected of the new forest. No new property is required for installation and operation of new boilers, retrofit boilers and truck stop electrification units, or the exchanges of lawn mowers and leaf blowers. Thus, none of the protocols are expected to require removing, filling or interrupting any hydrological system or have an adverse effect on federally protected wetlands.

IV. e), f): There are no provisions in the proposed project 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. PR 2702 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.

Based on the above considerations, significant adverse impacts to biological resources are not expected from implementing PR 2702. Since there are no significant adverse impacts, no mitigation measures are required.

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

Significance Criteria

Impacts to cultural resources will be considered significant if:

The project results in the disturbance of a significant prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group.

Unique paleontological resources are present that could be disturbed by construction of the proposed project.

The project would disturb human remains.

Table 2-13 outlines the potential cultural resources impacts from applicable protocols.

TABLE 2-13

Potential Cultural Resources Impacts from Applicable Protocols

GHG Reduction Protocol	GHG Reduction Action	Cultural Resources Impact
Forests	Conserve and/or increase on-site forest carbon stocks	Historical data bases should be checked

TABLE 2-13 (CONCLUDED)

Potential Cultural Resources Impacts from Applicable Protocols

GHG Reduction Protocol	GHG Reduction Action	Cultural Resources Impact
Urban Forestry	Urban tree planting	Already disturbed area
Lawn Mowers	Purchase of electric lawn mower and early retirement of older, gasoline-polluting lawn mower	No change
Leaf Blowers	Purchase of lower-emitting, quieter leaf blower and early retirement of older, louder leaf blower	No change
Boiler Replacement/Retrofit	Early retirement of older, less efficient boilers or retrofit with economizer to improve efficiency	No change
Truck Stop Electrification	Use of electric power in lieu of diesel power to operate on-board HVAC system while the truck is at rest but occupied.	Minor trenching – proper required procedures should be followed if cultural resource is discovered

Discussion

V. a) - d): There are existing laws in place that are designed to protect and mitigate potential impacts to cultural resources. Historical or archaeological resource databases are expected to be checked before planting new trees occurs. CEQA Guidelines §15064.5 states that resources listed in the California Register of Historical Resources or in a local register of historical resources are considered "historical resources." If any human remains are discovered during the forest development process, proper notification procedures are expected to take place.

For urban forests and truck stop electrification installations, the existing cultural resources will have already been disturbed so new tree planting and minor trenching is not expected to change any historical or archaeological resource, or destroy a unique paleontological resource or site or unique geologic feature. The extent of previous earth disturbance reduces the likelihood that previously unknown archaeological or paleontological resources will be encountered during project construction. However, it is possible that intact prehistoric deposits may occur below the disturbed horizon, although the proposed project will not involve extensive subsurface construction activities.

While the likelihood of encountering cultural resources is low, if such resources were to be encountered unexpectedly during ground disturbance associated with construction of the proposed project, there would be the potential for significant adverse impacts. To minimize the risk of adverse impacts occurring, project construction will be required to incorporate a number of standard protective measures during earth-disturbing activities:

- If cultural resources are exposed, a professional archaeologist and a Gabrielino/Tongva representative will be retained to monitor the subsurface work;

- The archaeological monitor will have the authority to temporarily halt or redirect earth disturbance work in the vicinity of the exposed cultural resources, so the find can be evaluated and mitigated as appropriate; and

- As required by State law, if human remains are unearthed, no further disturbance will occur until the County Coroner has made the necessary findings concerning the origin and disposition of these remains. The Native American Heritage Commission will be notified if the remains are determined to be of Native American descent.

Boiler replacement and retrofit installations will take place at existing facilities, and exchanges of lawn mower and leaf blowers do not involve any level of construction that would have any impact on cultural resources.

Therefore, cultural resources are not expected be disturbed in any way. As a result, the proposed project has no potential to cause a substantial adverse change to a historical or archaeological resource, directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, or disturb any human remains, including those interred outside a formal cemeteries.

Based on the above considerations, significant adverse impacts to cultural resources are not expected from implementing PR 2702. Since there are no significant adverse impacts, no mitigation measures are required.

		Potentially Significant Impact	**Less Than Significant Impact**	**No Impact**
VI.	**ENERGY.** Would the project:			
a)	Conflict with adopted energy conservation plans?	☐	☐	☑
b)	Result in the need for new or substantially altered power or natural gas utility systems?	☐	☐	☑
c)	Create any significant effects on local or regional energy supplies and on requirements for additional energy?	☐	☑	☐
d)	Create any significant effects on peak and base period demands for electricity and other forms	☐	☐	☑

of energy?

e) Comply with existing energy standards? ☐ ☐ ☑

Significance Criteria

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

The project conflicts with adopted energy conservation plans or standards.

The project results in substantial depletion of existing energy resource supplies.

An increase in demand for utilities impacts the current capacities of the electric and natural gas utilities.

The project uses non-renewable resources in a wasteful and/or inefficient manner.

Table 2-14 outlines the potential energy impacts from applicable protocols.

TABLE 2-14

Potential Energy Impacts from Applicable Protocols

GHG Reduction Protocol	GHG Reduction Action	Energy Impact
Forests	Conserve and/or increase on-site forest carbon stocks	Impact from fuel usage
Urban Forestry	Urban tree planting	Impact from fuel usage
Lawn Mowers	Purchase of electric lawn mower and early retirement of older, gasoline-polluting lawn mower	Impact from increase in electricity usage; decrease in gasoline fuel usage
Leaf Blowers	Purchase of lower-emitting, quieter leaf blower and early retirement of older, louder leaf blower	Benefit – more efficient, less fuel usage
Boiler Replacement/Retrofit	Early retirement of older, less efficient boilers or retrofit with economizer to improve efficiency	Benefit – more efficient, less fuel usage
Truck Stop Electrification	Use of electric power in lieu of diesel power to operate on-board HVAC system while the truck is at rest but occupied.	Impact from increase in electricity usage; decrease in diesel fuel usage

Discussion

VI. a), e): While there will be need for additional fuel to implement GHG reduction protocols, the amount needed is not expected to conflict with adopted energy

conservation plans. In addition, new, more efficient equipment such as the boilers, lawn mowers, and leaf blowers will slightly reduce the demand for fuel. Affected facilities would still be expected to comply with any existing energy conservation standards, to the extent that affected equipment are subject to energy conservation standards.

VI. b), c), d): Implementation of PR 2702 will result in a temporary increased need for diesel and gasoline fuel to power off-road construction equipment, such as backhoes, cranes and pavers, and on-road mobile sources, such as delivery trucks, haul trucks and workers' vehicles. Table 2-15 provides the total diesel and gasoline usage needed to implement each protocol activity and provide the benefit (in parentheses) resulting from implementing the same protocols. For example, gasoline power lawn mowers will be exchanged for electric ones so gasoline fuel usage will be eliminated. The quantification of that benefit is dependent on the size of the lawn mower and the level of usage from the existing lawn mower. However, the standard assumption is that a mower uses half a gallon of gasoline per hour, takes one hour to mow and the activity is typically done 50 times per year (i.e., 50 hrs/year x 0.5 gal/hr = 25 gal/yr). With the exchange of 14,358 lawn mowers, an estimated usage of 358,950 gallons of gasoline will be eliminated per year.

Leaf blowers will continue to be powered by gasoline but the new 4-stroke engine leaf blowers are expected to be 26 percent more efficient than the 2-stroke engine older model so fuel savings will be 26 percent less than current usage levels.

Electrification of HVAC systems in truck cabs at rest stops will eliminate the need to operate the auxiliary engine, which will eliminate the use of diesel fuel used to power the auxiliary engine. It has been documented at one Ontario truck stop[7] with 93 electrification units to have saved 283,272 gallons of diesel in 2008. Assuming similar truck stop electrification activity and behavior, 175 units would save approximately 532,550 gallons per year.

Urban trees, however, will require maintenance, such as branch trimming and leaf collection, which will require the use of material handling equipment and greenwaste haul trucks needing diesel fuel to power. In addition, the crew of tree maintenance workers would need to travel in their own vehicles powered by gasoline. Because of the potentially large number of new trees, it is expected the tree maintenance activity would take place over the whole year. Fuel usages listed in Table 2-15 are not additive as the $2.8 million is assumed to fund only one protocol.

[7] 2008 SCAQMD MSERC application with IdleAire Technologies Corporation

TABLE 2-15

Total Fuel Usage from Implementation of the Applicable Protocols

Activity	*Temporary Construction Phase*		*Annual Operational Phase*	
	Total Diesel Fuel Usage (gallons)	**Total Gasoline Fuel Usage** (gallons)	**Total Diesel Fuel Usage** (gallons)	**Total Gasoline Fuel Usage** (gallons)
Planting and Maintaining 18,794 Trees – Forest Setting	770	475	n/a	n/a
Planting and Maintaining 18,794 Trees – Urban Setting	779	575	9,270	3,900
Exchanging 14,358 Lawn Mowers	300	7,650	n/a	(358,950)
Exchanging 15,730 Leaf Blowers	427	1,728	n/a	(26 percent reduction from current levels)
Boiler Replacement with 38 New Boilers	2,458	475	n/a	n/a
Boiler Retrofit with 72 Non-Condensing Economizers	1,541	720	n/a	n/a
Truck Stop Electrification at 175 Parking Spaces	290	100	(532,550)	n/a

NOTE: Parenthesis denote reductions

According to the latest California Energy Commission (CEC) projections[8], diesel fuel supplies are 1.09 billion gallons per year and gasoline fuel supplies are 6.47 billion gallons per year. The highest amount of diesel fuel usage during construction is 2,458 gallons, which is 0.00023 percent of the current diesel supplies, and 9,270 gallons during operation, which would be 0.00085 percent of the current diesel supplies. The highest amount of gasoline fuel usage during construction is 7,650 gallons, which is 0.00012 percent of the current gasoline supplies, and 3,900 gallons during operation, which would be 0.00006 percent of the current gasoline supplies. The fuel supply impact from the proposed project is not significant because the SCAQMD's energy threshold for diesel and gasoline is one percent of supply.

Based upon the aforementioned considerations, the proposed project is not expected to use energy in a wasteful manner, and will not exceed SCAQMD significance thresholds. There will be no substantial depletion of energy resources nor will significant amounts of fuel be needed when compared to existing supplies.

New truck stops electrification units will require additional electricity to operate the units. Based on the documented annual idling time of 2100 hours per year, the corresponding electricity needed to power the HVAC unit during those hours is 1,890

[8] Year 2008 CEC projections from California Energy Demand 2008-2018 Staff Revised Forecast, California Energy Commission, November 2007 (CEC-200-2007-015-SF2).

kW-hr per year. Therefore, 175 units installed from the proposed project would require 330,750 kW-hr per year.

Electric lawn mowers take ten hours to recharge the battery per mow consuming 0.035 kW or 0.35 kW-hr per mow. Fifty mows are performed annually per lawn mower. Therefore, 14,358 lawn mowers will need 251,265 kW-hr per year.

The total electricity from each protocol is not additive as the total initial funding could not finance both protocols at the same time. However, individually, the electricity impact would not be considered a significant adverse impact on energy supplies. Future CEC projection[9] of electricity usage in southern California is 142,902 GW-hr of electricity. Electricity impact from annual usage of 175 truck stop electrification units would be 0.23 percent of the total electricity supply in southern California. Electricity impact from annual usage of 175 truck stop electrification units would be 0.17 percent of the total electricity supply in southern California. Thus, the electricity supply impact from the proposed project is not significant because the SCAQMD's energy threshold for electricity is one percent of supply.

New boilers will be two to six percent more efficient than older boilers. Retrofit equipment can improve efficiency from one to six percent. Such efficiencies in both boiler replacement and retrofit will generate a net natural gas savings.

Based on the impact to current supplies, the proposed project will not result in the need for new or substantially altered power or natural gas utility systems. The times of truck stop electrification usage and lawn mower recharging time are not known, no significant adverse impacts on peak or base demands for electricity are anticipated because the overall annual electricity usage is not a significant impact.

Based on the above considerations, significant adverse impacts to energy are not expected from implementing PR 2702. Since there are no significant adverse impacts, no mitigation measures are required.

	Potentially Significant Impact	**Less Than Significant Impact**	**No Impact**
VII. GEOLOGY AND SOILS. Would the project:			
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☑
• Rupture of a known earthquake fault, as	☐	☐	☑

[9] SCAQMD 2007 AQMP Final Program EIR, 2008-2016 projections (CEC, 2005b)

	delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?			
	• Strong seismic ground shaking?	☐	☐	☑
	• Seismic–related ground failure, including liquefaction?	☐	☐	☑
	• Landslides?	☐	☐	☑
b)	Result in substantial soil erosion or the loss of topsoil?	☐	☐	☑
c)	Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☑
d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☑
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☑

Significance Criteria

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

Topographic alterations would result in significant changes, disruptions, displacement, excavation, compaction or over covering of large amounts of soil.

Unique geological resources (paleontological resources or unique outcrops) are present that could be disturbed by the construction of the proposed project.

Exposure of people or structures to major geologic hazards such as earthquake surface rupture, ground shaking, liquefaction or landslides.

Secondary seismic effects could occur which could damage facility structures, e.g., liquefaction.

Other geological hazards exist which could adversely affect the facility, e.g., landslides, mudslides.

Table 2-16 outlines the potential geology/soils impacts from applicable protocols.

TABLE 2-16

Potential Geology/Soils Impacts from Applicable Protocols

GHG Reduction Protocol	GHG Reduction Action	Geology/Soils Impact
Forests	Conserve and/or increase on-site forest carbon stocks	Benefit – assist in reducing erosion
Urban Forestry	Urban tree planting	Benefit – assist in reducing erosion
Lawn Mowers	Purchase of electric lawn mower and early retirement of older, gasoline-polluting lawn mower	No change
Leaf Blowers	Purchase of lower-emitting, quieter leaf blower and early retirement of older, louder leaf blower	No change
Boiler Replacement/Retrofit	Early retirement of older, less efficient boilers or retrofit with economizer to improve efficiency	No change – existing facility
Truck Stop Electrification	Use of electric power in lieu of diesel power to operate on-board HVAC system while the truck is at rest but occupied.	Minor trenching

Discussion

VII. a): PR 2702 will not expose people to substantial geological effects greater than what they are exposed to already. Boilers and truck stop electrification are located at existing facilities and will not require acquisition of new property that has not already been developed. Lawn mowers and leaf blowers are portable equipment. Thus, boiler replacement/retrofit, truck stop electrification, lawn mowers exchanges and leaf blowers exchanges will not expose people or structures to new risks of loss, injury, or death involving: rupture of an earthquake fault, seismic ground shaking, ground failure or landslides. The planting of the trees in forest or urban areas will not expose people or structures to new risks of loss, injury, or death involving: rupture of an earthquake fault, seismic ground shaking, ground failure or landslides. Trees are expected to be planted firmly in the ground with healthy roots so that, if an earthquake was to occur, will not be easily toppled causing any new risk or injury to those around.

VII. b): With the exception of minor construction to install truck stop electrification units, the proposed project will not require major construction activities (e.g., grading, trenching, or refilling) on property that has not already been developed, so no potential impacts to existing geophysical conditions are anticipated. Boiler replacement, boiler retrofits, lawn garden exchanges, and truck stop electrification are primarily located at existing facilities on established foundations or minor foundation work may be necessary, little or no soil will be disrupted. The planting of trees is expected to benefit the stability of the land and assist in evading soil erosion. Therefore, no substantial soil erosion or loss of topsoil is expected from the proposed project. Any soil disturbance that does occur will be subject to the dust control requirements of SCAQMD Rule 403, which would minimize any wind erosion.

VII. c) & d): Boiler replacement, boiler retrofits, and truck stop electrification are primarily located at existing affected facilities and, therefore, will not involve locating any structures on soil that is unstable or expansive. Similarly, tree planting is not expected to take place in areas where the soil is unstable, however, there may be instances when the developer decide to plant the trees in a location to assist in stabilizing the soil. Electric lawn mowers and low emission leaf blowers are portable equipment and are not expected to be used on unstable soils or geological units. Thus, little or no new soil disturbance is anticipated from the proposed project, therefore, no further destabilization of unstable soils would be expected that could cause on- or off-site landslides, lateral spreading, subsidence, liquefaction or collapse.

VII. e): The proposed project does not involve the installation of septic tanks or alternative waste water disposal systems. Therefore, this type of soil impact will not occur.

Based on the above considerations, significant adverse impacts to geology and soils are not expected from implementing PR 2702. Since there are no significant adverse impacts, no mitigation measures are required.

		Potentially Significant Impact	**Less Than Significant Impact**	**No Impact**
VIII.	**HAZARDS AND HAZARDOUS MATERIALS.** Would the project:			
a)	Create a significant hazard to the public or the environment through the routine transport, use, and disposal of hazardous materials?	☐	☐	☑
b)	Create a significant hazard to the public or the environment through reasonably foreseeable	☐	☑	☐

	upset and accident conditions involving the release of hazardous materials into the environment?			
c)	Emit hazardous emissions, or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☑
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would create a significant hazard to the public or the environment?	☐	☐	☑
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☑
f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☑
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☑
h)	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☑
i)	Significantly increased fire hazard in areas with flammable materials?	☐	☑	☐

Significance Criteria

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

Non-compliance with any applicable design code or regulation.

Non-conformance to National Fire Protection Association standards.

Non-conformance to regulations or generally accepted industry practices related to operating policy and procedures concerning the design, construction, security, leak detection, spill containment or fire protection.

Exposure to hazardous chemicals in concentrations equal to or greater than the Emergency Response Planning Guideline (ERPG) 2 levels.

Table 2-17 outlines the potential hazards/hazardous materials impacts from applicable protocols.

TABLE 2-17

Potential Hazards/Hazardous Materials Impacts from Applicable Protocols

GHG Reduction Protocol	GHG Reduction Action	Hazards/Hazardous Materials Impact
Forests	Conserve and/or increase on-site forest carbon stocks	Increase in leaves (fuel)
Urban Forestry	Urban tree planting	Increase in leaves (fuel)
Lawn Mowers	Purchase of electric lawn mower and early retirement of older, gasoline-polluting lawn mower	Impact during exchange and handling of fuel; benefit from no more storage of gas mower
Leaf Blowers	Purchase of lower-emitting, quieter leaf blower and early retirement of older, louder leaf blower	Impact during exchange and handling of fuel
Boiler Replacement/Retrofit	Early retirement of older, less efficient boilers or retrofit with economizer to improve efficiency	No change
Truck Stop Electrification	Use of electric power in lieu of diesel power to operate on-board HVAC system while the truck is at rest but occupied.	No change

Discussion

VIII. a), b), & c): Hazard impacts from operations from boiler replacement, boiler retrofits, new lawn and garden equipment usage are not expected to change, although new boilers would be expected to use less fuel as they operate more efficiently. In the case of the lawn mowers and truck stop electrifications, fuel powered engines will be eliminated and, thus, the amount of gasoline-fuel and diesel-fuel burned will be reduced. Leaf blowers will be more efficient so less gasoline will be necessary. Therefore, no additional usage and transport of gasoline and diesel fuel is expected.

Lawn mower and leaf blower exchanges are carefully monitored so if accidental releases of gasoline were to occur, the disposal is handled by professional employees properly trained in material handling and disposal. Risk of upset from fuel transport and usage for affected equipment is reduced or eliminated and, therefore, it is anticipated that the proposed project will not create a significant new hazard to the public or create a reasonably foreseeable upset conditions involving the release of hazardous materials greater than existing conditions. Implementing all protocols is expected to reduce GHG emissions as well as providing co-benefits of reducing criteria and air toxic pollutants. So, no increases in emissions of hazardous pollutants within one-quarter mile of a school are anticipated.

VIII. d): Government code §65962.5 refers to hazardous waste handling practices at facilities subject to the Resources Conservation and Recovery Act (RCRA). If any affected facilities are identified on such a list, compliance with the proposed project is not expected to affect in any way any facility's hazardous waste handling practices.

VIII. e) & f): Regardless of whether or not affected facilities are located near airports or private airstrips, the proposed project will not create new safety hazards because the proposed project will primarily affect equipment at existing locations or involve new equipment or trees located in areas with similar profiles (height), such as the truck stop electrification units, which are similar in height to the existing trucks visiting the existing setting. No new hazards will be introduced at affected facilities that could create safety hazards at local airports or private airstrips.

VIII. g): The proposed project is expected to result in planting new trees, replacing or retrofitting equipment at existing locations, or installing new equipment at existing truck stops. Such activities do not impose any new emergency conditions at the facility that would warrant amendments to adopted emergency response plans and emergency evacuation plans, nor would the proposed project be expected to physically interfere with implementing an adopted emergency response plans and emergency evacuation plans.

VIII. h,) & i): Because boiler replacement, boiler retrofits, and truck stop electrification are primarily located in existing facilities on established foundations, PR 2702 are not expected to expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands to a greater extent than is currently the case. Since use of the lawn mower and leaf blower protocols would result in replacing existing equipment with new equipment, no new fire hazards would be generated. The increased number of leaves that fall to the ground from the new 18,794 trees could potentially generate an increase in "fuel" in case of wildfires in forests and minimally in urban settings. This "fuel" could create a hazard to the public or the environment through reasonably foreseeable upset during the annual southern California wildfires. Leaves fallen from urban trees tend to blow away and are retrieved by weekly street sweeping equipment but forest undergrowth

tends to be less attended. The regional fire departments conduct prescribed burns (controlled fires) that will destroy the potential "fuel" as part of their established fuel management program. The specific location of those burns taking place is not known at this time but, assuming the resources are available, the function of the prescribed burns will reduce the potential hazard impact to less than significant. Thus, there will be no significant increase of fire hazards in areas with flammable materials greater than whatever currently exists already.

Based on the above considerations, significant adverse hazards and hazardous materials impacts are not expected from implementing PR 2702. Since there are no significant adverse impacts, no mitigation measures are required.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
IX.	**HYDROLOGY AND WATER QUALITY.** Would the project:			
a)	Violate any water quality standards or waste discharge requirements?	☐	☐	☑
b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☑	☐
c)	Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?	☐	☐	☑
d)	Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	☐	☐	☑

e)	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☑
f)	Otherwise substantially degrade water quality?	☐	☐	☑
g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☑
h)	Place within a 100-year flood hazard area structures which would impede or redirect flood flaws?	☐	☐	☑
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☑
j)	Inundation by seiche, tsunami, or mudflow?	☐	☐	☑
k)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☑
l)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☑
m)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☑
n)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☑
o)	Require in a determination by the wastewater	☐	☐	☑

treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Significance Criteria

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

Water Quality:

The project will cause degradation or depletion of ground water resources substantially affecting current or future uses.

The project will cause the degradation of surface water substantially affecting current or future uses.

The project will result in a violation of National Pollutant Discharge Elimination System (NPDES) permit requirements.

The capacities of existing or proposed wastewater treatment facilities and the sanitary sewer system are not sufficient to meet the needs of the project.

The project results in substantial increases in the area of impervious surfaces, such that interference with groundwater recharge efforts occurs.

The project results in alterations to the course or flow of floodwaters.

Water Demand:

The existing water supply does not have the capacity to meet the increased demands of the project, or the project would use a substantial amount of potable water.

The project increases demand for water by more than five million gallons per day.

Table 2-18 outlines the potential hydrology and water quality impacts from applicable protocols.

TABLE 2-18

Potential Hydrology and Water Quality Impacts from Applicable Protocols

GHG Reduction Protocol	GHG Reduction Action	Hydrology and Water Quality Impact
Forests	Conserve and/or increase on-site forest carbon stocks	Minor increase in water demand to assist growth
Urban Forestry	Urban tree planting	Minor increase in water demand to assist growth
Lawn Mowers	Purchase of electric lawn mower and early retirement of older, gasoline-polluting lawn mower	No change
Leaf Blowers	Purchase of lower-emitting, quieter leaf blower and early retirement of older, louder leaf blower	No change
Boiler Replacement/Retrofit	Early retirement of older, less efficient boilers or retrofit with economizer to improve efficiency	No change
Truck Stop Electrification	Use of electric power in lieu of diesel power to operate on-board HVAC system while the truck is at rest but occupied.	No change

Discussion

IX. a), b), f), n), & o): Trees that are planted pursuant to this rule will require periodic watering. It is unknown at this time whether a developer would decide to water the new forest or allow the natural setting to provide that nourishment. Trees in urban settings would likely have an automatic sprinkler system. Assuming approximately one gallon of water is needed for each of the 18,794 trees and the trees are watered once per week, a maximum, "worst-case" of 18,794 gallons of water is needed on a given day and a total of 977,288 gallons of water would be needed on an annual basis. Based on the SCAQMD's current hydrology significance threshold of five million gallons per day, water demand impacts from tree watering is not significant. For the other elements of the proposed project, no direct or indirect impacts on hydrology and water quality because operators at affected facilities are not expected to use water to a greater extent than they currently do. Boiler retrofits, lawn mowers, leaf blowers and truck stop electrification typically do not involve the use of water. Therefore, PR 2702 will not adversely affect water resources, water quality are expected standards, groundwater supplies, water quality degradation, existing water supplies or wastewater treatment facilities.

IX. c), d), e): The proposed project may result in planting new trees, replace or retrofit equipment at existing locations, or install new equipment at existing truck stops. With the exception of minor construction activities to install truck stop electrification units, no major construction activities will be necessary to comply with PR 2702, so the proposed project will not alter any existing drainage patterns, increase the rate or amount of surface runoff water that would exceed the capacity of

existing or planned stormwater drainage systems. Planting trees may alter existing drainage patterns, but this change is expected to reduce surface runoff and provide erosion reduction benefits.

IX. g) & h): PR 2702 does not involve construction of housing so it will not result in placing housing in 100-year flood hazard areas that could create new flood hazards. The proposed project would primarily affect existing facilities so any flood hazards would be part of the existing setting.

IX. i), j): Since implementing PR 2702 primarily affects existing facilities and does not require major construction of new facilities, it will not create new flood risks or risks from seiches, tsunamis or mudflow conditions. Any risks from seiches, tsunamis, or mudflows would be part of the existing setting.

IX. k): Because implementing the GHG reduction protocols typically does not require significant amounts of water or generate wastewater, no changes to any existing wastewater treatment permits would be necessary. As a result, the proposed project is not expected to alter any affected facility's ability to comply with existing wastewater treatment requirements or conditions from any applicable Regional Water Quality Control Board or local sanitation district.

IX. l) & m): Because implementing the GHG reduction protocols typically does not require significant amounts of water or generate wastewater as part of the control equipment or control process, no increase in wastewater from complying with the proposed project that could exceed the capacity of existing stormwater drainage systems or require the construction of new wastewater or stormwater drainage facilities is anticipated.

Based on the above considerations, significant adverse impacts to hydrology and water quality are not expected from implementing PR 2702. Since there are no significant adverse impacts, no mitigation measures are required.

		Potentially Significant Impact	**Less Than Significant Impact**	**No Impact**
X.	**LAND USE AND PLANNING.** Would the project:			
a)	Physically divide an established community?	☐	☐	☑
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan,	☐	☐	☑

local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

c) Conflict with any applicable habitat conservation or natural community conservation plan? ☐ ☐ ☑

Significance Criteria

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

Table 2-19 outlines the potential land use/planning impacts from applicable protocols.

TABLE 2-19

Potential Land Use and Planning Impacts from Applicable Protocols

GHG Reduction Protocol	GHG Reduction Action	Land Use and Planning Impact
Forests	Conserve and/or increase on-site forest carbon stocks	No change
Urban Forestry	Urban tree planting	No change
Lawn Mowers	Purchase of electric lawn mower and early retirement of older, gasoline-polluting lawn mower	No change
Leaf Blowers	Purchase of lower-emitting, quieter leaf blower and early retirement of older, louder leaf blower	No change
Boiler Replacement/Retrofit	Early retirement of older, less efficient boilers or retrofit with economizer to improve efficiency	No change
Truck Stop Electrification	Use of electric power in lieu of diesel power to operate on-board HVAC system while the truck is at rest but occupied.	No change

Discussion

X. a.): PR 2702 will not create divisions in any existing communities because implementing the GHG reduction protocols to reduce GHG emissions would primarily affect equipment at existing facilities that must comply with any land use policies or local zoning regulations. Planting trees would only be allowed in areas already zoned as open space, rural, or recreation. Planting trees in areas not zoned as open space, rural, or recreation would require a lengthy zone change process, which may or may not be approved. Similarly, boiler replacement, boiler retrofits, and truck stop electrification will affect operations at existing facilities and would

not require major construction of facilities, such as freeways, that would not physically divide an established community. New boilers are expected be installed in the same location as the replaced boiler. Since electric lawn mowers and low emission leaf blowers are portable equipment, they would have no effect on designations.

X. b), c): Operations at affected facilities would still be expected to comply, and not interfere, with any applicable land use plans, zoning ordinances, habitat conservation or natural community conservation plans. There are no provisions of the proposed project that would directly affect these plans, policies, or regulations. Land use and other planning considerations are determined by local governments and no present or planned land uses in the region or planning requirements will be altered by the proposed project.

Based on the above considerations, significant adverse impacts to land use and planning are not expected from implementing PR 2702. Since there are no significant adverse impacts, no mitigation measures are required.

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

Significance Criteria

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

The project would result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.

The proposed project results in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

Table 2-20 outlines the potential mineral resources impacts from applicable protocols.

TABLE 2-20

Potential Mineral Resources Impacts from Applicable Protocols

GHG Reduction Protocol	GHG Reduction Action	Mineral Resources Impact
Forests	Conserve and/or increase on-site forest carbon stocks	No change
Urban Forestry	Urban tree planting	No change
Lawn Mowers	Purchase of electric lawn mower and early retirement of older, gasoline-polluting lawn mower	No change
Leaf Blowers	Purchase of lower-emitting, quieter leaf blower and early retirement of older, louder leaf blower	No change
Boiler Replacement/Retrofit	Early retirement of older, less efficient boilers or retrofit with economizer to improve efficiency	No change
Truck Stop Electrification	Use of electric power in lieu of diesel power to operate on-board HVAC system while the truck is at rest but occupied.	No change

Discussion

XI. a), b): There are no provisions of the proposed project that would directly result in the loss of availability of a known mineral resource, such as aggregate, coal, shale, etc., 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. PR 2702 could result in reducing fuel usage which would reduce the use of fossil fuel (e.g., diesel). Further, replacing equipment or requiring additional control (e.g., boiler retrofits) would not change an existing uses of the mineral resources by facilities that comply with the proposed project.

Based on the above considerations, significant adverse impacts to mineral resources are not expected from implementing PR 2702. Since there are no significant adverse impacts, no mitigation measures are required.

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

Significance Criteria

Impacts on noise will be considered significant if:

Construction noise levels exceed the local noise ordinances or, if the noise threshold is currently exceeded, project noise sources increase ambient noise

levels by more than three decibels (dBA) at the site boundary. Construction noise levels will be considered significant if they exceed federal Occupational Safety and Health Administration (OSHA) noise standards for workers.

The proposed project operational noise levels exceed any of the local noise ordinances at the site boundary or, if the noise threshold is currently exceeded, project noise sources increase ambient noise levels by more than three dBA at the site boundary.

The proposed project will generate noise greater than 90 dBA at the property line (SCAQMD noise significance threshold on 400-CEQA form)

Table 2-21 outlines the potential noise impacts from applicable protocols.

TABLE 2-21

Potential Noise Impacts from Applicable Protocols

GHG Reduction Protocol	GHG Reduction Action	Noise Impact
Forests	Conserve and/or increase on-site forest carbon stocks	Impact temporarily during construction and periodic maintenance
Urban Forestry	Urban tree planting	Impact temporarily during construction and periodic maintenance
Lawn Mowers	Purchase of electric lawn mower and early retirement of older, gasoline-polluting lawn mower	Benefit – electric mowers quieter
Leaf Blowers	Purchase of lower-emitting, quieter leaf blower and early retirement of older, louder leaf blower	Benefit – newer blowers quieter
Boiler Replacement/Retrofit	Early retirement of older, less efficient boilers or retrofit with economizer to improve efficiency	No change
Truck Stop Electrification	Use of electric power in lieu of diesel power to operate on-board HVAC system while the truck is at rest but occupied.	Impact temporarily during construction and benefit during operation

Discussion

XII. a), b), c) & d): It is assumed that the planting of trees will require the usage of backhoes and large heavy heavy-duty trucks to deliver the new trees in either a forest or urban setting. In the urban environment, such equipment usage and corresponding noise levels are expected to blend in with the existing city noise levels, especially since the tree planting is expected to take place in the daytime on or near busy streets, which often have high noise levels. In a forest setting, however, such noise levels will be a new source. The noise level from a backhoe typically ranges from 73 to 95 decibels (dBA) and truck noise typically ranges from 82 to 95 dBA. Human

populations are not expected to be located near remote wilderness areas. Similarly, individual hikers or other individuals hiking in remote areas will be widely dispersed. Noise attenuates approximately six dBAs for every doubling of distance. As a result, noise levels from tree planting would decline rapidly over relatively short distances from the site. Thus, tree planting in remote areas not anticipated to create significant adverse noise impacts on the surrounding affected environment. The SCAQMD noise significant threshold is 90 dBA at the property line, which will be achieved by noise attenuation. In addition, it is expected that the tree planting operations will comply with all existing local sound control and noise level rules, regulations and ordinances.

Construction of truck stop electrification units will also require noise-generating equipment, such as a trencher, backhoe, paver, paving equipment, skid steer loader, cement mixer, haul trucks and delivery trucks. Noise levels from a trencher typically range from 80 to 93 dBA; paver noise typically ranges from 85 to 88 dBA; loader noise typically ranges from 73 to 86 dBA and cement mixers typically range from 75 to 88 dBA. Noise reduction and attenuation over relatively short distances will result in noise levels that are less than significant because they will be traveling across the large truck stop parking lot distances, from the electrification units to the boundaries of the facilities and beyond. Some of the equipment is already emitting noise levels below the SCAQMD noise significance threshold of 90 dBA before attenuation takes place. In addition, these noise levels are expected to be temporary and must comply with all existing local sound control and noise level rules, regulations and ordinances.

The operation of the truck stop electrification units will provide a benefit by eliminating noise from the auxiliary diesel engines, which will not be operating while the truck is parked.

Boiler replacement and retrofits are not expected to change local noise levels because installation of new or retrofitting existing boilers will not require noise intensive construction equipment. In addition, construction activities will occur inside existing structures. As a result, not only will construction noise attenuate over distance, but the facility walls will further block or attenuate noise levels. Noise from installation of new or retrofitting existing boilers is not expected to adversely affect construction workers or employees because of OSHA or Cal OSHA requirements to provide noise protection/safety equipment.

Use of electric lawn mowers or low emission leaf blowers is expected to provide a noise reduction benefit. Noisy gasoline-powered lawn mowers will be exchanged for quieter electric models. New leaf blowers are rated at a noise level of 65 dBA, which is much lower than the older leaf blower models.

As a result of the above analysis, PR 2702 will not cause exposure of persons to excessive groundborne vibration or groundborne noise levels, or generate substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. In addition, PR 2702 does not generate vibration because the activities associated with implementing the protocols doe not generate excessive

vibration. Tree planting and truck stop electrification unit installations will cause a temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project, but as evaluated above, the noise impact is not substantial or significant. Other aspects of the project will provide beneficial effects relative to noise produced by new lawn mowers and leaf blowers and not operating auxiliary truck engines at truck stops.

XII. e) & f): As indicated in the preceding discussion, operational noise levels will not increase substantially, will not change, or will decline as a result of the proposed project and, therefore, will not substantially increase noise levels from affected activities that implement the GHG reduction protocols that may be located within two miles of an airport or private airstrip.

Based on the above considerations, significant adverse noise impacts are not expected from implementing PR 2702. Since there are no significant adverse impacts, no mitigation measures are required.

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

Significance Criteria

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

The demand for temporary or permanent housing exceeds the existing supply.

The proposed project produces additional population, housing or employment inconsistent with adopted plans either in terms of overall amount or location.

Table 2-22 outlines the potential population and housing impacts from applicable protocols.

TABLE 2-22

Potential Population and Housing Impacts from Applicable Protocols

GHG Reduction Protocol	GHG Reduction Action	Population and Housing Impact
Forests	Conserve and/or increase on-site forest carbon stocks	No change
Urban Forestry	Urban tree planting	No change
Lawn Mowers	Purchase of electric lawn mower and early retirement of older, gasoline-polluting lawn mower	No change
Leaf Blowers	Purchase of lower-emitting, quieter leaf blower and early retirement of older, louder leaf blower	No change
Boiler Replacement/Retrofit	Early retirement of older, less efficient boilers or retrofit with economizer to improve efficiency	No change
Truck Stop Electrification	Use of electric power in lieu of diesel power to operate on-board HVAC system while the truck is at rest but occupied.	No change

Discussion

XIII. a), b), c): Human population in the SCAQMD's jurisdiction is anticipated to grow regardless of implementing the proposed project. Implementing the protocols will require a minimal number (two to 20 depending on the protocol) of employees for construction since most of the equipment, such as truck stop electrification units and boilers, are pre-constructed so installation is not labor intensive. Tree planting only requires workers to plant the trees, while lawn mower and leaf blowers do not require any construction workers. The need for construction workers would be ongoing depending on future funding, but it is expected that the construction workers would be available from the existing labor force in the region. Additional permanent employees would not be required as a result of replacing or retrofitting boilers because new boilers would replace existing boilers and retrofitting a boiler means continued operation of the existing boiler. New employees would not be required to continue existing boiler operations. Similarly, replacing an existing lawn mower with an electric lawn mower or existing leaf blower with a new low emission leaf blower will not change lawn mowing or leaf blowing activities in any way. Trees

would require a minimal maintenance crew (two to four) and the truck stop electrification units can be operated by existing workers at the established truck stops. District population will not be affected directly or indirectly as a result of adopting and implementing the proposed project. Further, reducing GHG emissions through implementing protocols will not directly or indirectly induce growth in the area of the existing facilities. The construction of single- or multiple-family housing units would not be required as a result of implementing the proposed project since no new employees will be required at affected facilities. The proposed project will not require relocation of affected facilities, so existing housing or populations in the district are not anticipated to be displaced necessitating the construction of replacement housing elsewhere.

Based on the above considerations, significant adverse impacts to population and housing are not expected from implementing PR 2702. Since there are no significant adverse impacts, no mitigation measures are required.

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

Significance Criteria

Impacts on public services will be considered significant if the project results in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered

government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time or other performance objectives.

Table 2-23 outlines the potential public services impacts from applicable protocols.

TABLE 2-23

Potential Public Services Impacts from Applicable Protocols

GHG Reduction Protocol	GHG Reduction Action	Public Services Impact
Forests	Conserve and/or increase on-site forest carbon stocks	Potential impact to Fire Dept if hazards increase; increase maintenance by parks
Urban Forestry	Urban tree planting	Potential impact from increase maintenance by parks
Lawn Mowers	Purchase of electric lawn mower and early retirement of older, gasoline-polluting lawn mower	No change
Leaf Blowers	Purchase of lower-emitting, quieter leaf blower and early retirement of older, louder leaf blower	No change
Boiler Replacement/Retrofit	Early retirement of older, less efficient boilers or retrofit with economizer to improve efficiency	No change
Truck Stop Electrification	Use of electric power in lieu of diesel power to operate on-board HVAC system while the truck is at rest but occupied.	No change

Discussion

XIV. a): As noted in the hazards section, increased leaf distribution will increase the potential "fuel" or undergrowth in new forests. It is expected that new trees would be planted in or near existing forested areas that are already subject to periodic evaluation and prescribed burn protocols. Therefore, established fuel management programs conducted by local and regional fire departments are expected to continue to maintain the forests and monitor the vulnerability of potential fuel buildup from existing and new trees. Thus, there may be a minor increase in forest oversight by the fire departments but the impact is considered less than significant because forested areas are already being monitored for fire hazards. In addition, fuel management is not a new program so no additional work would be required to establish procedures and expectations from managing the forest undergrowth.

Lawn mower and leaf blower exchanges are carefully monitored so if accidental releases of gasoline were to occur, the amount of gasoline released would not likely cause the need for fire department responders because of the available safety equipment. The disposal of gasoline fuel from the exchanges of lawn mowers and leaf blowers is handled by professional employees properly trained in material

handling and disposal. The other elements of PR 2702 will not involve the use of acutely hazardous materials. As a result, no new fire hazards or increased use of hazardous materials would be introduced at existing affected locations.

XIV. b): No new demands for police protection are expected from implementing PR 2702 since the none of the protocols that would be used as a result of implementing PR 2702 contain any provisions that create emergency situations requiring protection or crowd control. Therefore, PR 2702 is not expected to require additional police services in the event of an emergency or police protection.

XIV. c), d): As noted in the "Population and Housing" discussion, implementing PR 2702 will not require a large number employees for construction because no major construction is necessary to implement the protocols pursuant to PR 2702. Similarly, no new employees will be required to operate new or retrofitted boilers, replaced lawn mowers or leaf blowers, or truck stop electrification. A minimal maintenance crew will be required to periodically trim and water urban trees, which could affect the parks department if the trees are planted in an established park. The potential impact on the parks, however, is expected to be not significant since the parks departments would likely already have existing crews that maintain the trees, benches and walkways located within the established parks. Because PR 2702 has no affect on population growth in the district, no direct or indirect effects on schools, parks or other recreational facilities are foreseen as a result of implementing the PR 2702.

XIV. e): Because implementing the protocols may only result in minor modifications at affected locations, primarily at truck stops and facilities with boilers, 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.

Based on the above considerations, significant adverse impacts to public services are not expected from implementing PR 2702. Since there are no significant adverse impacts, no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant Impact	No Impact
XV. RECREATION.			
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.?	☐	☐	☑

b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☑

Significance Criteria

Impacts to recreation will be considered significant if:

The project results in an increased demand for neighborhood or regional parks or other recreational facilities.

The project adversely effects existing recreational opportunities.

Table 2-24 outlines the potential recreation impacts from applicable protocols.

TABLE 2-24

Potential Recreation Impacts from Applicable Protocols

GHG Reduction Protocol	GHG Reduction Action	Recreation Impact
Forests	Conserve and/or increase on-site forest carbon stocks	Benefit
Urban Forestry	Urban tree planting	Benefit
Lawn Mowers	Purchase of electric lawn mower and early retirement of older, gasoline-polluting lawn mower	No change
Leaf Blowers	Purchase of lower-emitting, quieter leaf blower and early retirement of older, louder leaf blower	No change
Boiler Replacement/Retrofit	Early retirement of older, less efficient boilers or retrofit with economizer to improve efficiency	No change
Truck Stop Electrification	Use of electric power in lieu of diesel power to operate on-board HVAC system while the truck is at rest but occupied.	No change

Discussion

XV. a) & b): As discussed under "Land Use and Planning" above, there are no provisions in the proposed project that would affect land use plans, policies or ordinances, or regulations. Land use and other planning considerations are determined by local governments; no land use or planning requirements will be altered by the proposal. In the case of tree planting, it is expected that trees would be planted in compliance with any relevant tree planting ordinances or other requirements. As already noted in item XII, Population and Housing, the proposed

project is not expected to increase population growth in the district because a minimal number employees would be needed to maintain trees, so no additional demand for recreation facilities is anticipated. However, well-maintained trees will enhance and provide a benefit to the existing recreation setting by providing shade and erosion control. While the use of existing neighborhood and regional parks could increase if trees are planted in the parks, the potential increased use will not cause substantial physically deterioration to any recreational facility. As noted earlier, the additional construction workers needed would be temporary and expected to come from the existing labor force in the region. Operation of replaced boilers, retrofitted boilers, and truck stop electrification units will take place at existing locations and would not increase the use of existing neighborhood or regional parks or other recreational facilities. Similarly, the proposed project is not expected to require the construction or expansion of existing recreational facilities that might create an adverse physical effect on the environment.

Based on the above considerations, significant adverse impacts to recreation are not expected from implementing PR 2702. Since there are no significant adverse impacts, no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant Impact	No Impact
XVI. SOLID/HAZARDOUS WASTE. Would the project:			
a) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☑	☐
b) Comply with federal, state, and local statutes and regulations related to solid and hazardous waste?	☐	☐	☑

Significance Criteria

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

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

Table 2-25 outlines the potential solid/hazardous waste impacts from applicable protocols.

TABLE 2-25

Potential Solid/Hazardous Waste Impacts from Applicable Protocols

GHG Reduction Protocol	GHG Reduction Action	Solid/Hazardous Waste Impact
Forests	Conserve and/or increase on-site forest carbon stocks	Green waste generated during maintenance
Urban Forestry	Urban tree planting	Green waste generated during maintenance
Lawn Mowers	Purchase of electric lawn mower and early retirement of older, gasoline-polluting lawn mower	Potential impact from fuel disposal during exchange; Scrap metal recycled
Leaf Blowers	Purchase of lower-emitting, quieter leaf blower and early retirement of older, louder leaf blower	Potential impact from fuel disposal during exchange; Scrap metal recycled
Boiler Replacement/Retrofit	Early retirement of older, less efficient boilers or retrofit with economizer to improve efficiency	Scrap metal recycled
Truck Stop Electrification	Use of electric power in lieu of diesel power to operate on-board HVAC system while the truck is at rest but occupied.	Potential impact from disposal of asphalt

Discussion

XVI. a): While the planting of trees will not generate any solid or hazardous waste, the operation of maintaining and trimming the trees will generate greenwaste in the form of branches and leaves. Existing state and local recycling ordinances or laws are expected to result in continued recycling of greenwaste materials through composting.

The metal components of old boilers, lawn mowers, and leaf blowers have economic value and are expected to be recycled for metal content. Therefore, the amount of solid waste landfilled as a result of the proposed project would be relatively small since most of the equipment being replaced are comprised primarily of metal components that have commercial value as scrap metal. Fuel from the old lawn mowers and leaf blowers will be properly removed from the equipment by professional employees trained in the removal and disposal of the fuel. Because of high cost of gasoline, the old lawn mowers and leaf blowers are not expected to be exchanged with a full tank. Gasoline retrieved from the old equipment is collected at the disposal facility and reused in vehicles.

A minimal amount of waste, such as trenched asphalt, will be collected during the installation of truck stop electrification unit, which is estimated to occur at only two locations. Assuming a 200-foot long trench at four feet width, the trencher will dig four feet down to provide the room necessary to lay the electricity lines. For a worst-case scenario, one-foot thickness of asphalt will be disposed (200 x 4 x 1 = 800 ft^3). The analysis involves two locations, so a total of 1,600 $ft^3$of asphalt (or 60 yd^3)

would be removed from the both sites. If all the collected waste is classified as hazardous waste, it would be disposed of in a Class I landfill. There are no hazardous waste disposal sites in the district. Hazardous waste generated must be disposed of at a licensed hazardous waste disposal facility. Two such facilities I California are the Consolidated Waste Management's Kettleman Hills facility in King's County and Clean Harbors (formerly Safety-Kleen) facility in Buttonwillow (Kern County). Together, the two hazardous waste landfills in California have 10.8 million cubic yard of permitted available capacity, which will accommodate the minimal waste (60 yd^3) generated by the proposed project during the construction phase.

XVI. b): It is expected that PR 2702 will have no effect on an operator's ability to comply with relevant statutes and regulations related to solid and hazardous wastes. Consequently, it is anticipated that operators of affected facilities would continue to comply with federal, state, and local statutes and regulations related to solid and hazardous waste handling and disposal. Therefore, potential solid waste impacts are considered not significant.

Based on the above considerations, significant adverse solid/hazardous waste impacts are not expected from implementing PR 2702. Since there are no significant adverse impacts, no mitigation measures are required.

		Potentially Significant Impact	**Less Than Significant Impact**	**No Impact**
XVII.	**TRANSPORTATION/CIRCULATION** Would the project:			
a)	Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☑	☐
b)	Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☑
c)	Result in a change in air traffic patterns, including either an increase in traffic levels or	☐	☐	☑

	a change in location that results in substantial safety risks?			
d)	Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	☐	☐	☑
e)	Result in inadequate emergency access?	☐	☐	☑
f)	Result in inadequate parking capacity?	☐	☐	☑
g)	Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks)?	☐	☐	☑

Significance Criteria

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

Peak period levels on major arterials are disrupted to a point where level of service (LOS) is reduced to D, E or F for more than one month.

An intersection's volume to capacity ratio increase by 0.02 (two percent) or more when the LOS is already D, E or F.

A major roadway is closed to all through traffic, and no alternate route is available.

There is an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system.

The demand for parking facilities is substantially increased.

Water borne, rail car or air traffic is substantially altered.

Traffic hazards to motor vehicles, bicyclists or pedestrians are substantially increased.

The need for more than 350 employees

An increase in heavy-duty transport truck traffic to and/or from the facility by more than 350 truck round trips per day

Increase customer traffic by more than 700 visits per day.

Table 2-26 outlines the potential transportation/traffic impacts from applicable protocols.

TABLE 2-26

Potential Transportation/Traffic Impacts from Applicable Protocols

GHG Reduction Protocol	GHG Reduction Action	Transportation/Traffic Impact
Forests	Conserve and/or increase on-site forest carbon stocks	Potential temporary traffic impact during construction and periodic maintenance
Urban Forestry	Urban tree planting	Potential temporary traffic impact during construction and periodic maintenance
Lawn Mowers	Purchase of electric lawn mower and early retirement of older, gasoline-polluting lawn mower	Potential temporary traffic impact during exchange
Leaf Blowers	Purchase of lower-emitting, quieter leaf blower and early retirement of older, louder leaf blower	Potential temporary traffic impact during exchange
Boiler Replacement/Retrofit	Early retirement of older, less efficient boilers or retrofit with economizer to improve efficiency	Potential temporary traffic impact during construction
Truck Stop Electrification	Use of electric power in lieu of diesel power to operate on-board HVAC system while the truck is at rest but occupied.	Potential temporary traffic impact during construction

Discussion

XVII. a), b), f): As noted in the "Discussion" sections of other environmental topics compliance with PR 2702 is not expected to require major construction to install new equipment or retrofit existing equipment at existing facilities or at the site, e.g., site preparation, construction, etc. Table 2-27 provides an outline of the specific number of vehicles expected from each protocol during construction. Trip information can be found in Appendix B. The number of trucks reflects the typical amount needed to implement the particular protocol on a daily basis for a delivery of new equipment (or trees) and/or hauling of the waste generated during installation/construction. The passenger vehicles are expected from workers implementing the protocol or, in the case of the lawn mower and leaf blower exchanges, the number of expected participants in the exchange. With an estimated 1,000 lawn mowers to be exchanged on a given day and the limit of one lawn mower per resident, a total of 1,000 participant vehicles could be driven. Five workers would be necessary to assist in the lawn mower exchange. A leaf blower event could exchange 500 per event, but up to ten leaf blowers would be allowed to be exchanged per participant (or business). Historically, an average of five leaf blowers are exchanged per participant, therefore,

100 participant vehicles would travel to the leaf blower event on a given day. Two workers would be necessary to assist in the leaf blower exchange.

TABLE 2-27

Estimated Vehicles during Daily Construction from Applicable Protocols

GHG Reduction Protocol	Delivery/Haul Trucks	Passenger Vehicles	TOTAL
Forests	2	10	13
Urban Forestry	1	10	11
Lawn Mowers	6	1005	1011
Leaf Blowers	2	102	104
Boiler Replacement	1	5	6
Boiler Retrofit	3	12	15
Truck Stop Electrification	4	20	24

As noted in Table 2-27, the maximum traffic impact will occur during a lawn mower exchange, which could cause 1,011 additional vehicles on the roadways potentially increasing congestion on local roadways and intersections in the vicinity of the lawn mower exchange. To facilitate distribution of lawn mowers and reduce time spent waiting to obtain a new electric lawn mower, in the past the SCAQMD typically has provided specific times to interested parties when they can obtain the new mower so their vehicles are traveling to and from the exchange site during specific non-overlapping periods, which results in reducing congestion and preventing CO hot spot conditions. In addition, the exchange process takes place in such a way that the purchaser of the new lawn and garden equipment does not leave the car as a team of workers take the old equipment, determine the old equipment functions, accept the payment and provides new equipment within a 15-minute period of time. Therefore, even though the lawn mower exchange protocol could generate more than 700 vehicle trips per day, these vehicle trips do not contribute substantially to congestion on local roadways or intersections because interested parties are evenly scheduled to pick up their new mowers throughout the day and, as a result, is not expected to increase the volume-to-capacity ratio at any intersection by two percent or more.

The potential traffic congestion impacts from implementing all other protocols will not increase peak period levels on major arterials to a point where level of service (LOS) is reduced to D, E or F for more than one month, or increase an intersection's volume-to-capacity ratio by 0.02 (two percent) or more when the LOS is already D, E or F.

As already noted, the operation of new or retrofitted boilers at existing facilities is not expected to alter existing operations in any way that would require additional employees. Similarly, new electric mowers and low emission leaf blowers would continue to perform the same activities as the old equipment, so no additional

laborers would be needed. Tree maintenance crews are expected to be necessary to water and trim new trees, primarily in urban areas. It is estimated that two to four maintenance workers and two haul trucks would be necessary on any one day, which will result in a minimal impact to existing urban traffic conditions.

With the exception of implementing the lawn mower exchange protocol as explained above, no other protocols have the potential to generate traffic impacts that exceed any of the significance criteria listed in the "Significance Criteria" section above. Further, the affected facilities or equipment exchange sites are located throughout the district and the construction schedules necessary to implement the currently available protocols will vary over time because of the availability and allocation of funds will differ and the scope of construction activities will differ at each affected facility, no intersections or major arterials are expected to experience a substantial change in traffic that would significantly effect LOS or increase congestion.

Truck stop electrification units will be installed at existing parking spaces and will not change the number of existing parking spaces. New trees, replaced and retrofitted boilers, and exchanges of lawn mowers and leaf blowers will have no affect on parking or existing parking capacity. Thus, impact to existing traffic, LOS and parking capacity is not expected to substantially worsen by the proposed project.

XVII. c): Air traffic patterns are not expected to be directly or indirectly affected by the proposed project because the protocols do not involve transport of control equipment or other materials by air nor will the implementation of the protocols interfere with air traffic because no protocol requires construction of structures that would exceed height limitations identified in Federal Aviation Regulation Part 77. All applicable local, state and federal requirements would continue to be complied with so no increase in any safety risks is expected.

XVII. d), e): PR 2702 is not expected to create or increase roadway hazards due to construction design features because the proposed project does not require or induce the construction of any roadways or other transportation roadway design features. Truck stop electrification units, new trees, replaced and retrofitted boilers, and exchanges of lawn mowers and leaf blowers will have no affect on emergency access routes and, thus, will not make existing emergency access inadequate.

XVII. g): Affected facilities would still be expected to comply with, and not interfere with adopted policies, plans, or programs supporting alternative transportation. Since minimal additional permanent employees are needed to maintain trees and no new permanent employees to implement the other protocols, PR 2702 will not hinder compliance with any applicable alternative transportation plans or policies.

Based on the above considerations, significant adverse impacts to transportation/circulation are not expected from implementing PR 2702. Since there are no significant adverse impacts, no mitigation measures are required.

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

Discussion

XVIII. a.): As discussed in items I through XVII above, PR 2702 is expected to reduce both criteria pollutant and GHG emissions over the long term. Therefore, the proposed project is beneficial to air quality and the environment and not expected to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal. Further, planting trees in or near forest areas in accordance with any regulatory requirements has the potential to enhance wildlife habitats. Similarly, PR 2702 would not eliminate important examples of the major periods of California history or prehistory or otherwise degrade cultural resources because the proposed project would only require minor

construction at some affected facilities at existing locations with established foundations.

XVIII. b.): As indicated in the responses to questions contained herein, since PR 2702 is not expected to generate potentially significant adverse project-specific construction or operational impacts to any environmental topic areas evaluated in this checklist, the proposed project's contribution to potentially significant cumulative impacts during construction or operation is rendered less than cumulatively considerable and, thus, is not cumulatively significant (CEQA Guidelines §15064(h)(2)).

XVIII. c.): Based on the foregoing analyses, PR 2702 is not expected to cause significant adverse effects on human beings, either directly, or indirectly. There is a potential for temporary adverse air quality, energy, hazards, hydrology, noise, public services, solid waste and transportation/traffic impacts during construction activities to implement the protocols. However, these impacts were concluded to be less than significant. It is expected that, to the extent the voluntary protocols are implemented, the proposed project will limit future increases in GHGs as well as provide criteria pollutant co-benefits.

APPENDIX A

PROPOSED RULE 2702

In order to save space and avoid repetition, please refer to the latest version of the PR 2702 located elsewhere in the final rule package. The PR 2702 (October 28, 2008 version) circulated with the Draft PEA released on November 4, 2008 for a 30-day public review and comment period ending December 3, 2008 has 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 PR 2702 (October 28, 2008 version) 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.

APPENDIX B

AIR QUALITY EMISSION CALCULATIONS

Planting Trees in Forests

PR 2702 Affected Equipment **Construction Activity**

Planting 18,794 trees in 172 acre location (deliver 500 trees/truck, 38 deliveries; 2 deliveries/day; 19 day project)

Construction Schedule - 1 day of tree planting (5 crews of 2 workers)

Activity	Equipment Type	No. of Equipment	Hrs/day	Crew Size
Off-Road Mobile Source Operations	Backhoe	1	8	1
On-Road Mobile Source Operations	Delivery Truck	2	-	2
On-Road Mobile Source Operations	Worker Vehicle	10	8	10

2009 Construction Equipment Emission Factors	VOC	CO	NOx	SOx	PM10	PM2.5	CO2	CH4
Equipment Type*	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr
Backhoe (composite)	0.1109	0.3993	0.7227	0.0008	0.0559	0.055	66.8000	0.01

**Equipment is assumed to be diesel fueled.*

Source: CARB's Off-Road Mobile Source Emission Factors for Scenario Year 2009

http://www.aqmd.gov/ceqa/handbook/offroad/offroadEF07_25.xls

Construction Vehicle (Mobile Source) Emission Factors for Years 2009	VOC	CO	NOx	SOx	PM10	PM2.5	CO2	CH4
Construction Related Activity	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile
Offsite (Construction Worker Vehicle)	0.00099	0.00969	0.00101	0.00001	0.00009	0.00005	1.09755	0.00009
Offsite (Tree delivery HHD truck)	0.00329	0.01282	0.04185	0.00004	0.00200	0.00148	4.21081	0.00015

Source: EMFAC 2007 (v2.3) Emission Factors (On-Road Vehicles, Scenario Year 2009)

Composite Emission Factors for Passenger Vehicles and Heavy Heavy Duty Delivery Trucks for Scenario Year 2009

http://www.aqmd.gov/ceqa/handbook/onroad/onroadEF07_26.xls and *http://www.aqmd.gov/ceqa/handbook/onroad/onroadEFHHDT07_26.xls*

Construction Worker Number of Trips and Trip Length

Vehicle	No. of One-Way Trips/Day	Trip Length (miles)
Offsite (Construction Worker)	20	25
Offsite (Delivery Truck-Heavy Heavy)	4	50

Incremental Increase in Onsite Combustion Emissions from Construction Equipment

Equation: Emission Factor (lb/hr) x No. of Equipment x Work Day (hr/day) = Onsite Construction Emissions (lbs/day)

Equipment Type	VOC lb/day	CO lb/day	NOx lb/day	SOx lb/day	PM10 lb/day	PM2.5 lb/day	CO2 lb/day	CH4 lb/day
Backhoe	0.89	3.19	5.78	0.01	0.45	0.44	534.40	0.08
TOTAL	**0.89**	**3.19**	**5.78**	**0.01**	**0.45**	**0.44**	**534.40**	**0.08**

Incremental Increase in Offsite Combustion Emissions from Construction Vehicles

Equation: Emission Factor (lb/mile) x No. of One-Way Trips/Day x Number of workers x Trip length (mile) = Offsite Construction Emissions (lbs/day)

Vehicle	VOC lb/day	CO lb/day	NOx lb/day	SOx lb/day	PM10 lb/day	PM2.5 lb/day	CO2 lb/day	CH4 lb/day
Offsite (Construction Worker Vehicle)	0.50	4.84	0.50	0.01	0.04	0.03	548.78	0.04
Offsite (Tree truck delivery)	0.66	2.56	8.37	0.01	0.40	0.30	842.16	0.03
TOTAL	**1.15**	**7.41**	**8.87**	**0.01**	**0.44**	**0.32**	**1390.94**	**0.07**

Total Incremental Combustion Emissions from Construction Activities

	VOC lb/day	CO lb/day	NOx lb/day	SOx lb/day	PM10 lb/day	PM2.5 lb/day	CO2 lb/day	CH4 lb/day	CO2eq MT/year
TOTAL Construction Emissions Equipment & Workers' Vehicles	**2.04**	**10.60**	**14.65**	**0.02**	**0.89**	**0.76**	**1925.34**	**0.08**	**16.64**
Significant Threshold	75	550	100	150	150	55	n/a	n/a	n/a
Exceed Significance?	NO	NO	NO	NO	NO	NO	n/a	n/a	n/a

Total Increase in Fuel Usage From Construction Equipment and Workers' Vehicles

Construction Activity	Total Project Hours of Operation*	Equipment Type	Off-Road Fuel (gal/hr)**	Total Diesel Fuel Use (gallons)	Total Gas. Fuel Use (gals)
Operation of Equipment	8	Backhoe	3.4	516.80	N/A
Workers' Vehicles - Commuting	N/A	Mixed Passenger***	N/A	N/A	475.00
Offsite Delivery Trucks	N/A	Truck for tree deliveries****	N/A	253.33	N/A
			TOTAL	**770.13**	**475.00**

**Assume construction will take 19 days (8 hrs/day max)*

***Based on CARB's Off-Road Model (Version 2.0) for Equipment Year 2009.*

****Assume that construction workers' commute vehicles use gasoline and get 20 mi/gal and round trip length is 50 miles.*

***** Assume that trucks delivering trees use diesel and get 15 miles/gallon traveling 100 miles roundtrip; 19 trips for life of project.*

Planting Trees in Urban Settings

PR 2702 Affected Equipment **Construction Activity**

Planting 18,794 trees in 23 locations (800 trees/mile route - 1 large truck delivery per location)

Construction Schedule - 1 day of tree planting (5 crews of 2 workers)

Activity	Equipment Type	No. of Equipment	Hrs/day	Crew Size
Off-Road Mobile Source Operations	Backhoe	1	8	1
On-Road Mobile Source Operations	Delivery Truck	1	-	1
On-Road Mobile Source Operations	Worker Vehicle	10	8	10

2009 Construction Equipment Emission Factors	VOC	CO	NOx	SOx	PM10	PM2.5	CO2	CH4
Equipment Type*	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr
Backhoe (composite)	0.1109	0.3993	0.7227	0.0008	0.0559	0.055	66.8000	0.01

**Equipment is assumed to be diesel fueled.*

Source: CARB's Off-Road Mobile Source Emission Factors for Scenario Year 2009

http://www.aqmd.gov/ceqa/handbook/offroad/offroadEF07_25.xls

Construction Vehicle (Mobile Source) Emission Factors for Years 2009	VOC	CO	NOx	SOx	PM10	PM2.5	CO2	CH4
Construction Related Activity	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile
Offsite (Construction Worker Vehicle)	0.00099	0.00969	0.00101	0.00001	0.00009	0.00005	1.09755	0.00009
Offsite (Tree delivery HHD truck)	0.00329	0.01282	0.04185	0.00004	0.00200	0.00148	4.21081	0.00015

Source: EMFAC 2007 (v2.3) Emission Factors (On-Road Vehicles, Scenario Year 2009)

Composite Emission Factors for Passenger Vehicles and Heavy Heavy Duty Delivery Trucks for Scenario Year 2009

http://www.aqmd.gov/ceqa/handbook/onroad/onroadEF07_26.xls and *http://www.aqmd.gov/ceqa/handbook/onroad/onroadEFHHDT07_26.xls*

Construction Worker Number of Trips and Trip Length

Vehicle	No. of One-Way Trips/Day	Trip Length (miles)
Offsite (Construction Worker)	20	25
Offsite (Delivery Truck-Heavy Heavy)	2	50

Construction Emissions - Planting Trees in Urban Setting

Incremental Increase in Onsite Combustion Emissions from Construction Equipment

Equation: Emission Factor (lb/hr) x No. of Equipment x Work Day (hr/day) = Onsite Construction Emissions (lbs/day)

Equipment Type	VOC lb/day	CO lb/day	NOx lb/day	SOx lb/day	PM10 lb/day	PM2.5 lb/day	CO2 lb/day	CH4 lb/day
Backhoe	0.89	3.19	5.78	0.01	0.45	0.44	534.40	0.08
TOTAL	**0.89**	**3.19**	**5.78**	**0.01**	**0.45**	**0.44**	**534.40**	**0.08**

Incremental Increase in Offsite Combustion Emissions from Construction Vehicles

Equation: Emission Factor (lb/mile) x No. of One-Way Trips/Day x Number of workers x Trip length (mile) = Offsite Construction Emissions (lbs/day)

Vehicle	VOC lb/day	CO lb/day	NOx lb/day	SOx lb/day	PM10 lb/day	PM2.5 lb/day	CO2 lb/day	CH4 lb/day
Offsite (Construction Worker Vehicle)	0.50	4.84	0.50	0.01	0.04	0.03	548.78	0.04
Offsite (Tree truck delivery)	0.33	1.28	4.18	0.00	0.20	0.15	421.08	0.02
TOTAL	**0.83**	**6.13**	**4.69**	**0.01**	**0.24**	**0.17**	**969.86**	**0.06**

Total Incremental Combustion Emissions from Construction Activities

	VOC lb/day	CO lb/day	NOx lb/day	SOx lb/day	PM10 lb/day	PM2.5 lb/day	CO2 lb/day	CH4 lb/day	CO2eq MT/year
TOTAL Construction Emissions Equipment & Workers' Vehicles	**1.71**	**9.32**	**10.47**	**0.02**	**0.69**	**0.61**	**1504.26**	**0.08**	**15.74**
Significant Threshold	75	550	100	150	150	55	n/a	n/a	n/a
Exceed Significance?	NO	NO	NO	NO	NO	NO	n/a	n/a	n/a

Total Increase in Fuel Usage From Construction Equipment and Workers' Vehicles

Construction Activity	Total Project Hours of Operation*	Equipment Type	Off-Road Fuel (gal/hr)**	Total Diesel Fuel Use (gallons)	Total Gas. Fuel Use (gals)
Operation of Equipment	8	Backhoe	3.4	625.60	N/A
Workers' Vehicles - Commuting	N/A	Mixed Passenger***	N/A	N/A	575.00
Offsite Delivery Trucks	N/A	Truck for tree deliveries****	N/A	153.33	N/A
		TOTAL		**778.93**	**575.00**

**Assume full project implementation will take 23 days (8 hrs/day max)*

***Based on CARB's Off-Road Model (Version 2.0) for Equipment Year 2009.*

****Assume that construction workers' commute vehicles use gasoline and get 20 mi/gal and round trip length is 50 miles.*

***** Assume that trucks delivering trees use diesel and get 15 miles/gallon traveling 100 miles roundtrip; 23 trips for life of project.*

Exchanging Old Gasoline-Powered for Electric Lawn Mowers

PR 2702 Affected Equipment **Construction Activity**

Exchanging 1,000 mowers at one event (two delivery trucks; four haul trucks)

Schedule - 1 day of lawn mower exchanging (will take 15 events/year to sell all 14,358 subsidized lawn mowers)

Activity	Equipment Type	No. of Equipment	Hrs/day	Crew Size
On-Road Mobile Source Operations	Delivery/Haul Truck	6	N/A	6
On-Road Mobile Source Operations	Worker Vehicle	5	N/A	5

Vehicle (Mobile Source) Emission Factors for Years 2009	VOC	CO	NOx	SOx	PM10	PM2.5	CO2	CH4
Construction Related Activity	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile
Offsite (Passenger Vehicle)	0.00099	0.00969	0.00101	0.00001	0.00009	0.00005	1.09755	0.00009
Offsite (Lawn mower deliveries/haul)	0.00279	0.02016	0.02237	0.00003	0.00081	0.00069	2.72330	0.00014

Source: EMFAC 2007 (v2.3) Emission Factors (On-Road Vehicles, Scenario Year 2009)

Composite Emission Factors for Passenger Vehicles/Delivery Trucks for Scenario Year 2009

http://www.aqmd.gov/cega/handbook/onroad/onroadEF07_26.xls

Construction Worker Number of Trips and Trip Length

Vehicle	No. of One-Way Trips/Day	Trip Length (miles)
Offsite (Purchaser Vehicle)	2000	5
Offsite (Exchange worker)	10	20
Offsite (Delivery/Haul Truck)	12	25

Incremental Increase in Offsite Combustion Emissions from Construction Vehicles

Equation: Emission Factor (lb/mile) x No. of One-Way Trips/Day x Number of workers x Trip length (mile) = Offsite Construction Emissions (lbs/day)

Vehicle	VOC	CO	NOx	SOx	PM10	PM2.5	CO2	CH4
	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day
Offsite (Purchaser Vehicle)	9.92	96.86	10.05	0.11	0.86	0.54	10975.54	0.88
Offsite (Exchange worker)	0.20	1.94	0.20	0.00	0.02	0.01	219.51	0.02
Offsite (Lawn mower delivery)	0.84	6.05	6.71	0.01	0.24	0.21	816.99	0.04
TOTAL	**10.96**	**104.84**	**16.96**	**0.12**	**1.12**	**0.76**	**12012.04**	**0.94**

Construction Emissions - Exchanging Lawn Mowers

Total Incremental Combustion Emissions from Exchange Activities

	VOC lb/day	CO lb/day	NOx lb/day	SOx lb/day	PM10 lb/day	PM2.5 lb/day	CO2 lb/day	CH4 lb/day	CO2eq MT/year
TOTAL Delivery/Haul Trucks and Purchasers' Vehicles	**10.96**	**104.84**	**16.96**	**0.12**	**1.12**	**0.76**	**12012.04**	**0.94**	**82.03**
Significant Threshold	75	550	100	150	150	55	n/a	n/a	n/a
Exceed Significance?	NO	NO	NO	NO	NO	NO	n/a	n/a	n/a

Total Increase in Fuel Usage From Delivery/Waste Haul and Workers' Vehicles

Construction Activity	Total Project Hours of Operation*	Equipment Type	Off-Road Fuel (gal/hr)**	Diesel Fuel Use (gallons)	Gasoline Fuel Use (gals)
Purchasers' Vehicles - Commuting	N/A	Mixed Passenger***	N/A	N/A	7500.00
Workers' Vehicles - Commuting	N/A	Mixed Passenger***	N/A	N/A	150.00
Offsite Delivery/Haul Trucks	N/A	Delivery/haul trucks****	N/A	300.00	N/A
			TOTAL	**300.00**	**7650.00**

**Assume full project implementation will take 15 exchange events*

***Based on CARB's Off-Road Model (Version 2.0) for Equipment Year 2009.*

****Assume that purchasers' commute vehicles use gasoline and get 20 mi/gal and round trip length is 10 miles; workers 20 miles RT.*

***** Assume that trucks delivering/hauling lawn mowers use diesel and get 15 miles/gallon traveling 50 miles roundtrip; 15 event exchanges*

Exchanging Older Leaf Blowers for Newer, Quieter Leaf Blower

PR 2702 Affected Equipment **Construction Activity**

Exchanging 500 leaf blowers at one event (one haul truck; 5 blowers/purchaser; 100 purchasers/exchange)

Schedule - 1 day of leaf blower exchanging (will take 32 events to sell all 15,730 subsidized leaf blowers)

Activity	Equipment Type	No. of Equipment	Hrs/day	Crew Size
On-Road Mobile Source Operations	Delivery/Haul Truck	4	N/A	4
On-Road Mobile Source Operations	Worker Vehicle	2	N/A	2

Vehicle (Mobile Source) Emission Factors for Years 2009	VOC	CO	NOx	SOx	PM10	PM2.5	CO2	CH4
Construction Related Activity	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile
Offsite (Passenger Vehicle)	0.00099	0.00969	0.00101	0.00001	0.00009	0.00005	1.09755	0.00009
Offsite (Leaf Blowers Waste Haul)	0.00279	0.02016	0.02237	0.00003	0.00081	0.00069	2.72330	0.00014

Source: EMFAC 2007 (v2.3) Emission Factors (On-Road Vehicles, Scenario Year 2009)

Composite Emission Factors for Passenger Vehicles/Delivery Trucks for Scenario Year 2009

http://www.aqmd.gov/cega/handbook/onroad/onroadEF07_26.xls

Construction Worker Number of Trips and Trip Length

Vehicle	No. of One-Way Trips/Day	Trip Length (miles)
Offsite (Purchaser Vehicle)	200	5
Offsite (Exchange worker)	4	20
Offsite (Delivery/Haul Truck)	8	25

Incremental Increase in Offsite Combustion Emissions from Construction Vehicles

Equation: Emission Factor (lb/mile) x No. of One-Way Trips/Day x Number of workers x Trip length (mile) = Offsite Construction Emissions (lbs/day)

Vehicle	VOC	CO	NOx	SOx	PM10	PM2.5	CO2	CH4
	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day
Offsite (Purchaser Vehicle)	0.99	9.69	1.01	0.01	0.09	0.05	1097.55	0.09
Offsite (Exchange worker)	0.08	0.77	0.08	0.00	0.01	0.00	87.80	0.01
Offsite (Leaf Blower Waste Haul)	0.56	4.03	4.47	0.01	0.16	0.14	544.66	0.03
TOTAL	**1.63**	**14.49**	**5.56**	**0.02**	**0.25**	**0.20**	**1730.02**	**0.12**

Total Incremental Combustion Emissions from Exchange Activities

	VOC lb/day	CO lb/day	NOx lb/day	SOx lb/day	PM10 lb/day	PM2.5 lb/day	CO2 lb/day	CH4 lb/day	CO2eq MT/year
TOTAL Delivery/Haul Trucks and Worker/Purchasers' Vehicles	**1.63**	**14.49**	**5.56**	**0.02**	**0.25**	**0.20**	**1730.02**	**0.12**	**25.20**
Significant Threshold	75	550	100	150	150	55	n/a	n/a	n/a
Exceed Significance?	NO	NO	NO	NO	NO	NO	n/a	n/a	n/a

Total Increase in Fuel Usage From Delivery/Waste Haul and Workers' Vehicles

Construction Activity	Total Project Hours of Operation*	Equipment Type	Off-Road Fuel (gal/hr)**	Total Diesel Fuel Use (gallons)	Total Gas. Fuel Use (gals)
Purchasers' Vehicles - Commuting	N/A	Mixed Passenger***	N/A	N/A	1600.00
Workers' Vehicles - Commuting	N/A	Mixed Passenger***	N/A	N/A	128.00
Offsite Delivery/Haul Trucks	N/A	Delivery/haul trucks****	N/A	426.67	N/A
		TOTAL		**426.67**	**1728.00**

**Assume full project implementation will take 31 exchange events*

***Based on CARB's Off-Road Model (Version 2.0) for Equipment Year 2009.*

****Assume that purchasers' commute vehicles use gasoline and get 20 mi/gal and round trip length is 10 miles; workers 20 miles RT.*

***** Assume that trucks hauling away old leaf blowers use diesel and get 15 miles/gallon traveling 50 miles roundtrip; 15 event exchanges*

Boiler Replacement

PR 2702 Affected Equipment **Construction Activity**

Installing New Boilers (38 Small Boilers)

Construction Schedule - "Worse-case" Installation of 1 boiler at 1 location/day (38 total, less than 1/wk)

Activity	Equipment Type	No. of Equipment	Hrs/day	Crew Size	
Off-Road Mobile Source Operations	Crane	1	2	1	*Place old boiler in haul truck; Lift new boiler into place*
Off-Road Mobile Source Operations	Welder	1	8	1	*Attach boiler to piping*
Off-Road Mobile Source Operations	Gen Set	1	8	1	*Power the welding equipment*
On-Road Mobile Source Operations	Haul Truck	1	-	1	*Haul away old boiler*
On-Road Mobile Source Operations	Delivery	1	-	1	*Deliver the new boiler*
On-Road Mobile Source Operations	Worker Vehicle	5	-	5	

2009 Construction Equipment Emission Factors	VOC	CO	NOx	SOx	PM10	PM2.5	CO2	CH4
Equipment Type*	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr
Crane (composite)	0.1683	0.5705	1.5293	0.0014	0.0678	0.0066	129	0.0152
Welder (composite)	0.0847	0.2281	0.3015	0.0003	0.028	0.027	25.6	0.0076
Generator Set (composite)	0.102	0.3378	0.6718	0.0007	0.0414	0.0406	61	0.0092

**Equipment is assumed to be diesel fueled.*

Source: CARB's Off-Road Mobile Source Emission Factors for Scenario Year 2009 http://www.aqmd.gov/cega/handbook/offroad/offroadEF07_25.xls

Construction Vehicle (Mobile Source) Emission Factors for Years 2009	VOC	CO	NOx	SOx	PM10	PM2.5	CO2	CH4
Construction Related Activity	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile
Offsite (Construction Worker Vehicle)	0.00099	0.00969	0.00101	0.00001	0.00009	0.00005	1.09755	0.00009
Offsite (Equipment delivery/haul - Heavy Heavy Duty Truck)	0.00329	0.01282	0.04185	0.00004	0.00200	0.00148	4.21081	0.00015

Source: EMFAC 2007 (v2.3) Emission Factors (On-Road Vehicles, Scenario Year 2009)

Composite Emission Factors for Passenger Vehicle and Heavy-Heavy Duty Trucks for Scenario Year 2009

http://www.aqmd.gov/cega/handbook/onroad/onroadEF07_26.xls and http://www.aqmd.gov/cega/handbook/onroad/onroadEFHHDT07_26.xls

Construction Worker Number of Trips and Trip Length

Vehicle	No. of One-Way Trips/Day	Trip Length (miles)
Offsite (Construction Worker)	10	25
Offsite (Delivery/Haul Truck - HHDT)	4	50

Incremental Increase in Onsite Combustion Emissions from Construction Equipment

Equation: Emission Factor (lb/hr) x No. of Equipment x Work Day (hr/day) = Onsite Construction Emissions (lbs/day)

Equipment Type	VOC lb/day	CO lb/day	NOx lb/day	SOx lb/day	PM10 lb/day	PM2.5 lb/day	CO2 lb/day	CH4 lb/day
Crane (composite)	0.34	1.14	3.06	0.00	0.14	0.01	258.00	0.03
Welder (composite)	0.68	1.82	2.41	0.00	0.22	0.22	204.80	0.06
Generator Set (composite)	0.82	2.70	5.37	0.01	0.33	0.32	488.00	0.07
Construction Equip TOTAL	**1.83**	**5.67**	**10.85**	**0.01**	**0.69**	**0.55**	**950.80**	**0.16**

Incremental Increase in Offsite Combustion Emissions from Construction Vehicles

Equation: Emission Factor (lb/mile) x No. of One-Way Trips/Day x Number of workers x Trip length (mile) = Offsite Construction Emissions (lbs/day)

Vehicle	VOC lb/day	CO lb/day	NOx lb/day	SOx lb/day	PM10 lb/day	PM2.5 lb/day	CO2 lb/day	CH4 lb/day
Offsite (Construction Worker Vehicle)	0.25	2.42	0.25	0.00	0.02	0.01	274.39	0.02
Offsite (Delivery/Haul HHDT)	0.66	2.56	8.37	0.01	0.40	0.30	842.16	0.03
Vehicle TOTAL	**0.91**	**4.99**	**8.62**	**0.01**	**0.42**	**0.31**	**1116.55**	**0.05**

Total Incremental Combustion Emissions from Construction Activities (Construction Equipment, Trucks and Workers' Vehicles)

	VOC lb/day	CO lb/day	NOx lb/day	SOx lb/day	PM10 lb/day	PM2.5 lb/day	CO2 lb/day	CH4 lb/day	CO2eq MT/year
TOTAL	**2.74**	**10.65**	**19.47**	**0.02**	**1.11**	**0.86**	**2067.35**	**0.22**	**35.79**
Significant Threshold	75	550	100	150	150	55	n/a	n/a	n/a
Exceed Significance?	NO	NO	NO	NO	NO	NO	n/a	n/a	n/a

Total Increase in Fuel Usage From Construction Equipment and Workers' Vehicles

Construction Activity	Total Project Hours of Operation	Equipment Type	Off-Road Fuel (gal/hr)*	Total Diesel Fuel Use (gallons)	Total Gasoline Fuel Use (gals)
Operation of Off-Road Equipment	2	Crane	9.8	744.80	N/A
Operation of Off-Road Equipment	8	Welder	1.18	358.72	N/A
Operation of Off-Road Equipment	8	Gen Set	2.79	848.16	N/A
Workers' Vehicles** - Commuting	N/A	Mixed Passenger	N/A	N/A	475.00
Offsite Delivery/Haul Trucks	N/A	Delivery/haul truck***	N/A	506.67	N/A
			TOTAL	**2458.35**	**475.00**

**Based on CARB's Off-Road Model (Version 2.0) for Equipment Year 2009.*

***Assume that construction workers' commute vehicles use gasoline and get 20 mi/gal and round trip length is 50 miles/phase.*

****Assume that delivery/haul trucks use diesel and get 15 miles/gallon traveling 100 miles roundtrip; 29 locations*

Retrofitting Boilers with Efficiency Equipment (Non-Condensing Economizer)

PR 2702 Affected Equipment

Construction Activity
Installing 72 Non-condensing Economizers on 68 Small/Medium boilers and 4 Large Boilers

Construction Schedule - "Worse-case" Complete Retrofit Installation at 3 separate locations/same day (overall 72 retrofits/year; avg 2/wk; total 24-day project)

Activity	Equipment Type	No. of Equipment	Hrs/day	Crew Size	
Off-Road Mobile Source Operations	Loader	3	6	3	*Place prefabricated retrofit equipment into place*
Off-Road Mobile Source Operations	Welder	3	6	3	*Attach retrofit equipment to boiler*
Off-Road Mobile Source Operations	Gen Set	3	6	3	*Power the welding equipment*
On-Road Mobile Source Operations	Delivery Truck	3	-	3	*Deliver the retrofit equipment*
On-Road Mobile Source Operations	Worker Vehicle	12	-	12	*4 workers at each of the 3 locations*

2009 Construction Equipment Emission Factors	VOC	CO	NOx	SOx	PM10	PM2.5	CO2	CH4
Equipment Type*	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr
Loader (composite)	0.1109	0.3993	0.7227	0.0008	0.0559	0.055	66.80	0.01
Welder (composite)	0.0847	0.2281	0.3015	0.0003	0.028	0.027	25.6	0.0076
Generator Set (composite)	0.102	0.3378	0.6718	0.0007	0.0414	0.0406	61	0.0092

**Equipment is assumed to be diesel fueled.*

Source: CARB's Off-Road Mobile Source Emission Factors for Scenario Year 2009 http://www.aqmd.gov/cega/handbook/offroad/offroadEF07_25.xls

Construction Vehicle (Mobile Source) Emission Factors for Years 2009	VOC	CO	NOx	SOx	PM10	PM2.5	CO2	CH4
Construction Related Activity	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile
Offsite (Construction Worker Vehicle)	0.00099	0.00969	0.00101	0.00001	0.00009	0.00005	1.09755	0.00009
Offsite (Equipment delivery truck - HHDT)	0.00329	0.01282	0.04185	0.00004	0.00200	0.00148	4.21081	0.00015

Source: EMFAC 2007 (v2.3) Emission Factors (On-Road Vehicles, Scenario Year 2009)
Composite Emission Factors for Passenger Vehicle and Heavy-Heavy Duty Trucks for Scenario Year 2009
http://www.aqmd.gov/cega/handbook/onroad/onroadEF07_26.xls and http://www.aqmd.gov/cega/handbook/onroad/onroadEFHHDT07_26.xls

Construction Worker Number of Trips and Trip Length

Vehicle	No. of One-Way Trips/Day	Trip Length (miles)
Offsite (Construction Worker)	24	25
Offsite (Delivery/Haul Truck - HHDT)	6	50

Incremental Increase in Onsite Combustion Emissions from Construction Equipment

Equation: Emission Factor (lb/hr) x No. of Equipment x Work Day (hr/day) = Onsite Construction Emissions (lbs/day)

Equipment Type	VOC lb/day	CO lb/day	NOx lb/day	SOx lb/day	PM10 lb/day	PM2.5 lb/day	CO2 lb/day	CH4 lb/day
Loader (composite)	2.00	7.19	13.01	0.01	1.01	0.99	1202.40	0.18
Welder (composite)	1.52	4.11	5.43	0.01	0.50	0.49	460.80	0.14
Generator Set (composite)	1.84	6.08	12.09	0.01	0.75	0.73	1098.00	0.17
Construction Equip TOTAL	**3.36**	**10.19**	**17.52**	**0.02**	**1.25**	**1.22**	**1558.80**	**0.30**

Incremental Increase in Offsite Combustion Emissions from Construction Vehicles

Equation: Emission Factor (lb/mile) x No. of One-Way Trips/Day x Number of workers x Trip length (mile) = Offsite Construction Emissions (lbs/day)

Vehicle	VOC lb/day	CO lb/day	NOx lb/day	SOx lb/day	PM10 lb/day	PM2.5 lb/day	CO2 lb/day	CH4 lb/day
Offsite (Construction Worker Vehicle)	0.60	5.81	0.60	0.01	0.05	0.03	658.53	0.05
Offsite (Delivery/Haul HHDT)	0.99	3.85	12.55	0.01	0.60	0.44	1263.24	0.05
Vehicle TOTAL	**1.58**	**9.66**	**13.16**	**0.02**	**0.65**	**0.47**	**1921.77**	**0.10**

Total Incremental Combustion Emissions from Construction Activities (Construction Equipment, Trucks and Workers' Vehicles)

	VOC lb/day	CO lb/day	NOx lb/day	SOx lb/day	PM10 lb/day	PM2.5 lb/day	CO2 lb/day	CH4 lb/day	CO2eq MT/year
TOTAL	**4.94**	**19.84**	**30.68**	**0.04**	**1.90**	**1.69**	**3480.57**	**0.40**	**28.55**
Significant Threshold	75	550	100	150	150	55	n/a	n/a	n/a
Exceed Significance?	NO	NO	NO	NO	NO	NO	n/a	n/a	n/a

Total Increase in Fuel Usage From Construction Equipment and Workers' Vehicles

Overall Construction Activity	Total Project Hours of Operation	Equipment Type	Off-Road Fuel (gal/hr)*	Total Diesel Fuel Use (gallons)	Total Gasoline Fuel Use (gals)
Operation of Off-Road Equipment	6	Loader	3.4	489.60	N/A
Operation of Off-Road Equipment	6	Welder	1.18	169.92	N/A
Operation of Off-Road Equipment	6	Gen Set	2.79	401.76	N/A
Workers' Vehicles** - Commuting	N/A	Mixed Passenger	N/A	N/A	720.00
Offsite Delivery Trucks	N/A	Delivery truck***	N/A	480.00	N/A
			TOTAL	**1541.28**	**720.00**

**Based on CARB's Off-Road Model (Version 2.0) for Equipment Year 2009.*

***Assume that construction workers' commute vehicles use gasoline and get 20 mi/gal and round trip length is 50 miles/phase.*

****Assume that delivery trucks use diesel and get 15 miles/gallon traveling 100 miles roundtrip; 72 locations over 24 days*

Installing Truck Stop Electrification Units

PR 2702 Affected Equipment

Construction Activity
Installing 87 Truck Stop Electrification (TSE) Units at 2 Locations (175 total)

Construction Schedule - 3 phases of installation at 1 location (requires trenching, paving, delivery and installation)

Activity	Equipment Type	No. of Equipment	Hrs/day	Crew Size		
Off-Road Mobile Source Operations	Trencher	1	2	1	**Phase 1**	*Trench for power line from source to TSE units*
Off-Road Mobile Source Operations	Backhoe	1	8	1	**Phase 1**	*Backhoe/Loader to remove waste; assist with power line placement*
Off-Road Mobile Source Operations	Backhoe	1	8	1	**Phase 2**	*Backfill the trench*
Off-Road Mobile Source Operations	Paver	1	4	1	**Phase 2**	*Repave over exposed site*
Off-Road Mobile Source Operations	Paving Equipment	1	4	1	**Phase 2**	*Assist paver with paving process*
Off-Road Mobile Source Operations	Skid Steer Loader	1	8	1	**Phase 3**	*Place (pre-constructed) pylons and trusses into proper space*
Off-Road Mobile Source Operations	Cement Mixer	1	8	1	**Phase 3**	*Secure pylons into place*
Off-Road Mobile Source Operations	Welder	1	8	1	**Phase 3**	*Attach trusses to pylons*
Off-Road Mobile Source Operations	Gen Set	1	8	1	**Phase 3**	*Power the welding equipment*
On-Road Mobile Source Operations	Haul Truck	2	-	2	**Phase 1**	*Haul away asphalt waste to Class I facility*
On-Road Mobile Source Operations	Delivery	2	-	2	**Phase 1**	*Delivery the TSE equipment*
On-Road Mobile Source Operations	Worker Vehicle	20	-	20	**Phase 1/2/3**	

2009 Construction Equipment Emission Factors	**VOC**	**CO**	**NOx**	**SOx**	**PM10**	**PM2.5**	**CO2**	**CH4**
Equipment Type*	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr
Trencher (composite)	0.1762	0.4992	0.791	0.0007	0.0663	0.065	58.7	0.0159
Backhoe (composite)	0.1109	0.3993	0.7227	0.0008	0.0559	0.055	66.80	0.01
Paver (composite)	0.1867	0.5756	1.0321	0.0009	0.0739	0.072	77.9	0.0168
Paving Equipment (composite)	0.1405	0.4544	0.94	0.0008	0.0655	0.064	68.9	0.0127
Skid Steer Loaders (composite)	0.0783	0.2565	0.3057	0.0004	0.0276	0.027	30.3	0.0071
Cement Mixer (composite)	0.0107	0.044	0.0626	0.0001	0.004	0.0039	7.2	0.001
Welder (composite)	0.0847	0.2281	0.3015	0.0003	0.028	0.027	25.6	0.0076
Generator Set (composite)	0.102	0.3378	0.6718	0.0007	0.0414	0.0406	61	0.0092

**Equipment is assumed to be diesel fueled.*

Source: CARB's Off-Road Mobile Source Emission Factors for Scenario Year 2009 http://www.aqmd.gov/ceqa/handbook/offroad/offroadEF07_25.xls

Construction Vehicle (Mobile Source) Emission Factors for Years 2009	VOC	CO	NOx	SOx	PM10	PM2.5	CO2	CH4
Construction Related Activity	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile
Offsite (Construction Worker Vehicle)	0.00099	0.00969	0.00101	0.00001	0.00009	0.00005	1.09755	0.00009
Offsite (Equipment delivery/waste haul - Heavy Heavy Duty Truck)	0.00329	0.01282	0.04185	0.00004	0.00200	0.00148	4.21081	0.00015

Source: EMFAC 2007 (v2.3) Emission Factors (On-Road Vehicles, Scenario Year 2009)

Composite Emission Factors for Passenger Vehicle and Heavy-Heavy Duty Trucks for Scenario Year 2009

http://www.aqmd.gov/cega/handbook/onroad/onroadEF07_26.xls and *http://www.aqmd.gov/cega/handbook/onroad/onroadEFHHDT07_26.xls*

Construction Worker Number of Trips and Trip Length

Vehicle	No. of One-Way Trips/Day	Trip Length (miles)
Offsite (Construction Worker)	40	25
Offsite (Delivery Truck - HHDT)	4	50
Offsite (Waste Disposal Haul Truck - HHDT)	4	100

Incremental Increase in Onsite Combustion Emissions from Construction Equipment

Equation: Emission Factor (lb/hr) x No. of Equipment x Work Day (hr/day) = Onsite Construction Emissions (lbs/day)

Equipment Type	VOC	CO	NOx	SOx	PM10	PM2.5	CO2	CH4
	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day
PHASE 1:								
Trencher (composite)	0.35	1.00	1.58	0.00	0.13	0.13	117.40	0.03
Backhoe (composite)	0.89	3.19	5.78	0.01	0.45	0.44	534.40	0.08
Construction Equip TOTAL PHASE 1:	**1.24**	**4.19**	**7.36**	**0.01**	**0.58**	**0.57**	**651.80**	**0.11**
PHASE 2:								
Backhoe (composite)	0.89	3.19	5.78	0.01	0.45	0.44	534.40	0.08
Paver (composite)	0.75	2.30	4.13	0.00	0.30	0.29	311.60	0.07
Paving Equipment (composite)	0.56	1.82	3.76	0.00	0.26	0.26	275.60	0.05
Construction Equip TOTAL PHASE 2:	**2.20**	**7.31**	**13.67**	**0.01**	**1.00**	**0.98**	**1121.60**	**0.20**
PHASE 3:								
Skid Steer Loaders (composite)	0.63	2.05	2.45	0.00	0.22	0.22	242.40	0.06
Cement Mixer (composite)	0.09	0.35	0.50	0.00	0.03	0.03	57.60	0.01
Welder (composite)	0.68	1.82	2.41	0.00	0.22	0.22	204.80	0.06
Generator Set (composite)	0.82	2.70	5.37	0.01	0.33	0.32	488.00	0.07
Construction Equip TOTAL PHASE 3:	**2.21**	**6.93**	**10.73**	**0.01**	**0.81**	**0.79**	**992.80**	**0.20**

Incremental Increase in Offsite Combustion Emissions from Construction Vehicles

Equation: Emission Factor (lb/mile) x No. of One-Way Trips/Day x Number of workers x Trip length (mile) = Offsite Construction Emissions (lbs/day)

Vehicle	VOC	CO	NOx	SOx	PM10	PM2.5	CO2	CH4
	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day
PHASE 1:								
Offsite (Construction Worker Vehicle)	0.99	9.69	1.01	0.01	0.09	0.05	1097.55	0.09
Offsite (Delivery Truck - HHDT)	0.66	2.56	8.37	0.01	0.40	0.30	842.16	0.03
Offsite (Waste Disposal Truck - HHDT)	1.32	5.13	16.74	0.02	0.80	0.59	1684.32	0.06
Vehicle TOTAL Phase 1:	**2.97**	**17.38**	**26.11**	**0.03**	**1.28**	**0.94**	**3624.04**	**0.18**
PHASE 2:								
Offsite (Construction Worker Vehicle)	0.99	9.69	1.01	0.01	0.09	0.05	1097.55	0.09
Vehicle TOTAL Phase 2:	**0.99**	**9.69**	**1.01**	**0.01**	**0.09**	**0.05**	**1097.55**	**0.09**
PHASE 3:								
Offsite (Construction Worker Vehicle)	0.99	9.69	1.01	0.01	0.09	0.05	1097.55	0.09
Vehicle TOTAL Phase 3:	**0.99**	**9.69**	**1.01**	**0.01**	**0.09**	**0.05**	**1097.55**	**0.09**

Total Incremental Combustion Emissions from Construction Activities (Construction Equipment, Trucks and Workers' Vehicles)

	VOC	CO	NOx	SOx	PM10	PM2.5	CO2	CH4	CO2eq	CO2eq
	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	MT/year	MT/year
TOTAL PHASE 1 - Peak Daily	**4.21**	**21.57**	**33.48**	**0.04**	**1.86**	**1.51**	**4275.84**	**0.29**	**3.89**	
TOTAL PHASE 2	**3.19**	**17.00**	**14.68**	**0.02**	**1.09**	**1.04**	**2219.15**	**0.29**	**2.02**	**15.64**
TOTAL PHASE 3	**3.20**	**16.62**	**11.74**	**0.02**	**0.89**	**0.84**	**2090.35**	**0.29**	**1.91**	
Significant Threshold	75	550	100	150	150	55	n/a	n/a	n/a	*Total GHGs from*
Exceed Significance?	NO	NO	NO	NO	NO	NO	n/a	n/a	n/a	*installation at both sites*

Total Increase in Fuel Usage From Construction Equipment and Workers' Vehicles

Construction Activity	Total Project Hours of Operation	Equipment Type	Off-Road Fuel (gal/hr)*	Total Diesel Fuel Use (gallons)	Total Gasoline Fuel Use (gals)
Operation of Off-Road Equipment	2	Trencher	2.72	10.88	N/A
Operation of Off-Road Equipment	8	Backhoe	3.4	54.40	N/A
Operation of Off-Road Equipment	4	Paver	3.58	28.64	N/A
Operation of Off-Road Equipment	4	Paving Equipment	3.16	25.28	N/A
Operation of Off-Road Equipment	8	Skid Steer Loader	1.4	22.40	N/A
Operation of Off-Road Equipment	8	Cement Mixer	0.33	5.28	N/A
Operation of Off-Road Equipment	8	Welder	1.18	18.88	N/A
Operation of Off-Road Equipment	8	Gen Set	2.783	44.53	N/A
Workers' Vehicles** - Commuting	N/A	Mixed Passenger	N/A	N/A	100.00
Offsite Delivery Trucks	N/A	Delivery truck***	N/A	26.67	N/A
Offsite Waste Disposal Haul Trucks	N/A	Waste haul truck***	N/A	53.33	N/A
			TOTAL	**290.29**	**100.00**

**Based on CARB's Off-Road Model (Version 2.0) for Equipment Year 2009.*

***Assume that construction workers' commute vehicles use gasoline and get 20 mi/gal and round trip length is 50 miles/phase.*

****Assume that delivery/haul trucks use diesel and get 15 miles/gallon traveling 100 miles roundtrip; 2 locations*

Urban Tree Maintenance

PR 2702 Affected Equipment **Operational Activity**

Maintaining Urban Trees (trimming, leaf collection, etc.)

Operation Schedule - 2 crews on one 8-Hour Workday Trimming Trees (total 18,794 trees/year; 260 days/yr; 72 trees trimmed/day)

Activity	Equipment Type	No. of Equipment	Hrs/day	Crew Size	
Off-Road Mobile Source Operations	Material Handling Equipment	2	8	2	*Tree trimming equipment (2 crews)*
On-Road Mobile Source Operations	Haul Truck	2	-	2	*2 trucks to haul away greenwaste*
On-Road Mobile Source Operations	Worker Vehicle	6	-	6	*3 workers per crew*

2009 Equipment Emission Factors	VOC	CO	NOx	SOx	PM10	PM2.5	CO2	CH4
Equipment Type*	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr
Material Handling Equipment (120 HP)	0.1493	0.4564	0.8402	0.0007	0.0803	0.0787	60.7	0.0135

**Equipment is assumed to be diesel fueled.*

Source: CARB's Off-Road Mobile Source Emission Factors for Scenario Year 2009 http://www.aqmd.gov/cega/handbook/offroad/offroadEF07_25.xls

Operational Vehicle (Mobile Source) Emission Factors for Years 2009	VOC	CO	NOx	SOx	PM10	PM2.5	CO2	CH4
Operation Related Activity	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile
Offsite (Maintenance Worker Vehicle)	0.00099	0.00969	0.00101	0.00001	0.00009	0.00005	1.09755	0.00009
Offsite (Haul truck of greenwaste - Heavy Heavy Duty Truck)	0.00329	0.01282	0.04185	0.00004	0.00200	0.00148	4.21081	0.00015

Source: EMFAC 2007 (v2.3) Emission Factors (On-Road Vehicles, Scenario Year 2009)

Composite Emission Factors for Passenger Vehicle and Heavy-Heavy Duty Trucks for Scenario Year 2009

http://www.aqmd.gov/cega/handbook/onroad/onroadEF07_26.xls and http://www.aqmd.gov/cega/handbook/onroad/onroadEFHHDT07_26.xls

Maintenance Worker Number of Trips and Trip Length

Vehicle	No. of One-Way Trips/Day	Trip Length (miles)
Offsite (Construction Worker)	12	25
Offsite (Greenwaste Haul Truck - HHDT)	4	50

Incremental Increase in Onsite Emissions from Maintenance Equipment

Equation: Emission Factor (lb/hr) x No. of Equipment x Work Day (hr/day) = Onsite Operational Emissions (lbs/day)

Equipment Type	VOC lb/day	CO lb/day	NOx lb/day	SOx lb/day	PM10 lb/day	PM2.5 lb/day	CO2 lb/day	CH4 lb/day
Material Handling Equipment (120 HP)	2.39	7.30	13.44	0.01	1.28	1.26	971.20	0.22
Maintenance Equip TOTAL	**2.39**	**7.30**	**13.44**	**0.01**	**1.28**	**1.26**	**971.20**	**0.22**

Incremental Increase in Offsite Combustion Emissions from Maintenance Vehicles

Equation: Emission Factor (lb/mile) x No. of One-Way Trips/Day x Number of workers x Trip length (mile) = Offsite Operational Emissions (lbs/day)

Vehicle	VOC lb/day	CO lb/day	NOx lb/day	SOx lb/day	PM10 lb/day	PM2.5 lb/day	CO2 lb/day	CH4 lb/day
Offsite (Maintenance Worker Vehicle)	0.30	2.91	0.30	0.00	0.03	0.02	329.27	0.03
Offsite (Greenwaste Haul Truck - HHDT)	0.66	2.56	8.37	0.01	0.40	0.30	842.16	0.03
Vehicle TOTAL	**0.96**	**5.47**	**8.67**	**0.01**	**0.42**	**0.31**	**1171.43**	**0.06**

Total Incremental Operational Emissions from Maintenance Activities (Maintenance Equipment, Trucks and Workers' Vehicles)

	VOC lb/day	CO lb/day	NOx lb/day	SOx lb/day	PM10 lb/day	PM2.5 lb/day	CO2 lb/day	CH4 lb/day	CO2eq MT/year
TOTAL	**3.35**	**12.77**	**22.11**	**0.02**	**1.71**	**1.57**	**2142.63**	**0.27**	**253.90**
Significant Threshold	75	550	100	150	150	55	n/a	n/a	n/a
Exceed Significance?	NO	NO	NO	NO	NO	NO	n/a	n/a	n/a

Incremental Increase in Fuel Usage From Maintenance Equipment and Workers' Vehicles

Operational Activity	Total Project Hours of Operation	Equipment Type	Off-Road Fuel (gal/hr)*	Total Diesel Fuel Use (gallons)	Total Gasoline Fuel Use (gals)
Operation of Off-Road Equipment	8	Material Handling Equipment	2.79	5803.2	N/A
Workers' Vehicles** - Commuting	N/A	Mixed Passenger	N/A	N/A	3900.00
Offsite Greenwaste Haul Truck	N/A	Haul truck***	N/A	3466.67	N/A
			TOTAL	**9269.87**	**3900.00**

**Based on CARB's Off-Road Model (Version 2.0) for Equipment Year 2009.*

***Assume that maintenance workers' commute vehicles use gasoline and get 20 mi/gal and round trip length is 50 miles/phase.*

****Assume that haul trucks use diesel and get 15 miles/gallon traveling 100 miles roundtrip; 260 days/yr*

APPENDIX C

COMMENTS ON THE DRAFT PEA AND RESPONSES TO THE COMMENTS

City of Fontana
CALIFORNIA

December 3, 2008

VIA MAIL & FACSIMILE [(909)396-3324]

Mr. Michael Krause
Ms. Jill Whynot
c/o CEQA Section, Planning,
Rule Development & Area Sources
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4182

Re: Comments on Proposed Rule 2702 for Greenhouse Gas Reduction Program and Draft Program Environmental Assessment

Mr. Krause and Ms. Whynot,

Thank you for the opportunity to provide the South Coast Air Quality Management District (the "District") with comments on its proposed Rule 2702 and the Draft Program Environmental Assessment ("PEA"). These comments are being submitted for the District's consideration on behalf of the City of Fontana (the "City").

The City of Fontana has a Substantial Interest in Proposed Rule 2702

1-1

The City of Fontana was incorporated in 1952 and includes an area of approximately 36 square miles. The City is located only a few miles north of the 60 freeway and sits along the I-15 freeway between the I-10 and 210, all of which are major Southern California travel corridors. Additionally, the Metrolink rail service runs through the center of the City, and the Ontario International Airport is located nearby. The City's location makes it ideal for commercial enterprise, and several major distribution centers, including Target, Sears, and Mercedes-Benz, are located within the City. In addition to the City's economic expansion, the City has experienced rapid population growth in recent years and is now home to nearly 200,000 people.

The City is located in San Bernardino County within the District's jurisdiction. Because the City anticipates continued population growth and ongoing responsible economic development, the City has unique concerns regarding any proposed District regulations that may limit the City's ability to effectively exercise its local land use authority or otherwise shape the City's future growth and development. Moreover, the City has a well-founded concern that even apparently voluntary programs, such as Rule 2702, are disproportionately burdensome to areas

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Mr. Michael Krause
Ms. Jill Whynot
December 3, 2008

1-1 cont. that are undergoing rapid growth or are already making efforts to design projects that generate less than business-as-usual greenhouse gas ("GHG") emissions. Because of these concerns, the City is submitting this comment letter and seeks clarification from the District regarding the following issues:

Comments

1-2 The District's Draft PEA acknowledges that "no GHG significance threshold has been finalized yet." (Draft PEA Page 1-9.) Nonetheless, Rule 2702 at paragraph (b)(2) states that the GHG credits proposed by the District would be usable for "California Environmental Quality Act (CEQA) or other mitigation." These statements seem incongruous and suggest that the District – a regional air quality regulatory agency – is overlooking local agencies' need for definitive guidance regarding CEQA significance. How can a local agency know whether it is required to mitigate for GHG emissions if it has no means of determining whether those emissions have a significant impact? This issue is especially important for the City because it prepares a large number of CEQA documents each year consistent with its ongoing growth.

1-3 Also related to mitigation for GHG-associated impacts, the District's document is unclear regarding whether the District will accept GHG credits under Rule 2702 as full mitigation for climate change impacts. If the City or a private project proponent seeks and obtains GHG offsets under Rule 2702, will the AQMD agree that impacts to climate change are less than significant for that project? Adding this type of clear statement would assist local agencies in deciding whether to participate in the District's GHG reduction program.

1-4 Further, the District's Draft PEA and the Rule itself state that the District retains discretion in how to dispense the funds received from participating projects. (Draft PEA Page 1-17 and Rule 2702, ¶(d)(3).) Rule 2702 further makes clear that the money received for GHG mitigation projects does not have to be immediately expended, but instead can be held by the District for two years – or longer at the discretion of the Governing Board. (Rule 2702, ¶(d)(3).) Under CEQA, mitigation measures must be fully enforceable if they are to be relied upon to mitigate for potentially significant impacts. Part of that enforceability is demonstrating that mitigation will be undertaken and showing when that mitigation will occur, typically through a mitigation monitoring and reporting program. In direct contrast to the District's stated intent, the District's proposed Rule would arguably disallow reliance upon the GHG reduction program because the District has no commitment to expend monies received on specific projects within a specific time frame. The District should revise the Rule to make the expenditure on GHG reduction projects more affirmative and provide a firm schedule during which projects would have to be implemented.

1-5 On a related note, the District's rulemaking documents do not acknowledge or analyze the disproportionate impact that such mitigation programs have to cities that are experiencing rapid growth. The Rule purports to be voluntary, but the fact of the matter is that local agencies are now required to consider each new project's GHG emissions and to find ways to mitigate for them. As a result, a disproportionate burden and cost is being placed on growing areas to mitigate for GHG emissions from "new" development while existing developed areas continue to operate without impediment. The land use implications of asking local land use

2

1-5 cont. authorities to govern by two sets of rules – one that applies to existing development and a separate more stringent set that applies to new development – should be addressed in the District's rulemaking process.

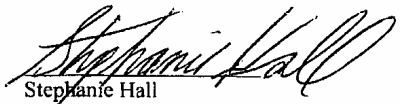
1-6 Neither the District's Draft PEA nor its proposed Rule 2702 take into consideration those efforts that developing cities such as Fontana have made to address GHGs. The City, along with other nearby cities experiencing accelerated growth, has attempted to ensure that development proceeds in a responsible manner that ensures efficient traffic movement, energy efficient residential uses, water conservation, and other measures which directly and indirectly reduce GHG emissions. The District's Draft PEA and Rule 2702 do not provide those proactive agencies with any credit for implementing these types of measures. Instead, Rule 2702 seems to anticipate that developments will not include these measures, but will instead seek to incorporate GHG reduction strategies only after-the-fact in order to obtain "credit" from the District under its GHG reduction program. To avoid having a disproportionate impact on cities which seek to be proactive, the Rule should address whether there are any circumstances in which the District's GHG reduction program would not apply.

1-7 Finally, the District's Draft PEA and proposed Rule establish one-size-fits-all measures for reducing GHGs within the District's jurisdiction. Such measures include planting trees in urban environments, replacing outdated and energy inefficient appliances and boilers, and electrifying truck stops. The District does not, however, adequately consider whether these measures will be effective given the variety of environments within the District's jurisdiction. For example, the wide-spread planting of trees in urban desert environments may actually result in an increase in GHG emissions, as the ongoing water demands of several thousands trees requires a significant investment of electricity and water-pumping. Differences in topography and climate should be considered by the District to ensure that all areas within the District's jurisdiction have an equal opportunity to take advantage of any GHG reduction plan.

Conclusion

Thank you again for considering the City's concerns as set forth in this letter. We request that any approvals of Rule 2702 incorporate and address the City's concerns. Additionally, and because the City's comments have been submitted prior to the December 3, 2008 close of the official comment period, the City looks forward to reviewing the District's responses in the Final PEA.

Sincerely,



Stephanie Hall
Senior Planner
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for City of Fontana

Responses to Draft PEA Comment Letter #1

City of Fontana
Stephanie Hall

December 3, 2008

Response 1-1

The implication in this comment is that rapidly growing areas will be under a larger burden to mitigate Greenhouse Gases (GHGs) because new projects will have to mitigate GHG emission impacts, while existing land uses would not be required to reduce GHG emissions (see also comment #5). This issue is unrelated to Proposed Rule (PR) 2702. This same effect is the case under current CEQA requirements for all environmental topic areas not just GHG emissions. However, PR 2702 – GHG Reduction Program, does not interfere with local land use authority or city growth. PR 2702 is a voluntary program developed to assist those in search of GHG emissions reductions. PR 2702 does not impose GHG emission reduction requirements on cities nor does it dictate choices the cities may make regarding land use decisions. The projects funded by PR 2702 are required to follow the proposed protocols. The cities and counties can exercise their land use authority to approve or deny GHG reduction projects, such as urban tree planting or truck stop electrification installation. Projects funded through PR 2702 are intended to offset GHG emission increases requested voluntarily by an applicant of the program. The cities and counties, acting as lead agencies under CEQA, also have the authority to determine whether certified GHG reductions purchased under the PR 2702 program may be used to mitigate GHG emission impacts. Therefore, based on the above, PR 2702 does not impose additional burdens on local land use planning decisions.

Response 1-2

The SCAQMD staff understands the need for definitive guidance regarding CEQA significance, however, the California Attorney General's (AG) Office (http://ag.ca.gov/globalwarming/ceqa.php) and the California Governor's Office of Planning and Research's (OPR) Technical Advisory (http://www.allenmatkins.com/emails/TechnicalAdvisory/img/Advisorydoc.pdf) clearly state that GHG emissions should be analyzed in CEQA documents. Further, the AG's Office has stated that the absence of a GHG significance threshold does not relieve a lead agency of the obligation to determine significance for GHG emissions and, if necessary, implement GHG mitigation measures. Mitigation measures could include funding GHG reduction projects, including those protocols in PR 2702's GHG reduction program. With regard to the SCAQMD effort to provide guidance, in April 2008, the SCAQMD formed a GHG Significance Threshold Working Group to solicit comments and

suggestions developing an interim GHG significance threshold that is consistent with CEQA requirements, is supported by substantial evidence, and provides guidance to CEQA practitioners with regard to determining whether GHG emissions from a proposed project are significant. At its December 5, 2008 meeting, the SCAQMD Governing Board adopted an interim CEQA GHG significance threshold for stationary sources, rules, and plans where the SCAQMD is lead agency. Further, the SCAQMD staff, through its working group, is developing a residential/commercial GHG significance threshold, as is CARB. Finally, SCAQMD staff will report to the Governing Board in March 2009 on the status of the SCAQMD and CARB's GHG significance threshold for residential/commercial projects.

Response 1-3

In accordance with existing CEQA Guidelines, lead agencies with oversight authority over specific proposed projects will determine the severity of environmental impacts and whether chosen mitigation will adequately reduce significant impacts to less than significant. Impacts to climate change are not expected to be treated differently. Use of Rule 2702 for mitigating GHG emissions to less than significant would require the purchase of sufficient certified GHG reductions to decrease the GHG emissions to less than the significance screening level (e.g., 10,000 metric tons CO_2eq for SCAQMD lead agency projects). It is up to the lead agencies to determine whether or not certified GHG reductions from PR 2702 GHG reduction program are sufficient to reduce GHG emission impacts to insignificance. A local agency's CEQA significance threshold, however, must be supported by substantial evidence.

Response 1-4

CEQA Guidelines §15126.4(a)(2) currently requires "mitigation measures to be fully enforceable through permit conditions, agreements or other legally binding instruments." GHG reduction requests are done through a formal Plan procedure. The SCAQMD will fund projects through a transparent contract process in response to these formal requests for specific proposals. These are all legally binding instruments that can be fully enforceable demonstrating that the mitigation will be undertaken within a time frame pursuant to the rule requirements. Rule 2702(d)(3) requires the Executive Officer to purchase or fund GHG reduction strategies within two years of receiving the funds for this program, unless an extension is granted by the Governing Board. This requirement does not preclude the SCAQMD from identifying and funding a GHG reduction strategy earlier than two years.

Requiring the expenditure of funds in a specific time frame is not necessary because of the following reasons. The intent of the SCAQMD in implementing PR 2702 is to establish an air quality investment program that is pre-funded with certified GHG reductions generated by SCAQMD funds. Consequently, if sufficient certified GHG

reductions are available they could be purchased relatively quickly. If sufficient credits are not available a potential purchaser could pay the fees to the SCAQMD and request an expedited certified GHG reductions generating process. Finally, since the program is voluntary, project proponents are not required to purchase certified GHG reductions if they cannot be generated in a timeframe acceptable to the cities and counties.

Response 1-5

With regard to the opinion that PR 2702 will have a "disproportionate" impact on local mitigation programs, refer to Response 1-2. With regard to the opinion that PR 2702 will have a "disproportionate" impact on growth, refer to Responses 1-1 and 1-6.

Response 1-6

Efforts to reduce GHG emissions by local cities or counties are outside the scope of impacts related to PR 2702. It is unlikely that project developers will decline to implement GHG reduction design features or other measures, since these measures would reduce GHG impacts from the proposed projects that may otherwise need to be mitigated, thus reducing the need to obtain Rule 2702 GHG credits. If the local cities or counties identify GHG reduction projects in their jurisdiction, such as energy efficiency, traffic reductions, water conservation and other measures, then there would be no need to access the GHG emission reductions generated under PR 2702, as this is a voluntary program.

With regard to identifying circumstances in which the SCAQMD's GHG reduction program would not apply, this determination is made by the local government agencies that are requiring GHG reductions. PR 2702 is simply a program for generating GHG emissions reductions.

Response 1-7

The SCAQMD staff recognizes that the GHG reduction projects, such as urban tree planting and electrifying truck stops, will not be effective in all environs within the district's jurisdiction. Implementing the protocols will require an evaluation of feasibility and rate of success in order to determine accurate and appropriate GHG emission reductions. It should be noted that the tree planting protocol requires selecting tree species that are well suited to the site where they would be well adapted. In desert environments, it is likely that drought tolerant trees would be used. If the tree planting protocol does not adequately generate sufficient credits compared to the cost of implementing it, then other protocols may be more appropriate for generating GHG reductions. Further, adverse or secondary impacts from implementing the GHG reduction projects will be considered in accordance to the protocols prepared for each of the GHG reduction projects. For example, the truck stop electrification protocol takes into account the electricity needed to power the units and considers that impact when

calculating the certified GHG reductions awarded to such a GHG reduction project. The analysis of the tree planting protocol did consider such secondary impacts as watering and periodic tree planting. However, if a proposed project is not effective in generating a surplus of GHG emission reductions or it generates more GHG emissions than it reduces, then the SCAQMD would not fund that project.

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PROPOSAL FOR SERVICES

December 3, 2008

Mr. Michael Krause
Mr. Steve Smith, PhD., Program Supervisor
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

RE: **RE: Items 26 and 31 on December 5, 2008 Consent Calendar and Proposed Rule 2702 – Greenhouse Gas Reduction Program**

Dear Mr. Krause, Dr. Smith, and Honorable Board Members:

Urban Crossroads, Inc. (UC) is a consulting firm that represents developers, and municipal agencies in addressing CEQA-level transportation, air quality, climate change, and acoustical needs. Many of our clients have significant operations in Southern California, and particularly in the South Coast Air Basin.

COMMENT 1

From a land use and transportation planning perspective, Industrial Projects often encompass Light-Industrial projects, or Business Park/Warehouse projects.

The Institute of Transportation Engineers (ITE), Trip Generation Handbook 7th Edition Volume 2 (ITE 2003) includes the following land uses under the umbrella heading of "Industrial":

- General Light Industrial
- General Heavy Industrial
- Industrial Park
- Manufacturing
- Warehousing
- High-Cube Warehouse
- Utilities

2-1

It is our understanding that land uses such as an Industrial Park or Warehousing use would not fall under the SCAQMD's definition of "Industrial Projects."

It is our recommendation that SCAQMD Staff and the Draft Guidance Document explicitly define what land uses would be considered "Industrial."

COMMENT 2

2-2

The State of California Governor's Office of Planning and Research (OPR), in their Technical Advisory document: *CEQA AND CLIMATE CHANGE: Addressing Climate Change Through California Environmental Quality Act (CEQA)* explicitly state that when considering GHG emissions:

SCAQMD GHG Comments-02

- *"Lead agencies should make a good-faith effort, based on available information, to calculate, model, or estimate the amount of CO2 and other GHG emissions from a project, including the emissions associated with* ***vehicular traffic, energy consumption, water usage and construction activities****."*

In light of OPR's Technical Advisory document it would be prudent for the SCAQMD and the Working Group to further investigate and assess the inclusion of emissions related to vehicular traffic in developing the industrial threshold and energy consumption and water usage for developing the Industrial threshold.

2-2 cont.

I would also like to reiterate comments that have been made at each Working Group meeting that it is also prudent for the SCAQMD to consider the development of a sub-committee focused on developing an appropriate methodology for inventorying GHG emissions for CEQA projects. It is crucial that there be consistency with respect to the methodology employed in calculating a project's GHG emissions, so that lead agencies can ensure significance determinations have some level of consistency.

Dr. Chang responded to a comment at the November 20th working group and meeting that transportation-related mobile source GHG emissions were not included in developing the threshold since this information is "generally not available to SCAQMD staff" (Working Group Meeting #6 Minutes).

We feel that although this information may not be readily available, there are many sources such as the Institute of Transportation Engineers (ITE), Trip Generation Handbook that could be consulted to determine the appropriate amount of vehicle emissions associated with stationary projects. Alternatively a survey could be sent to the operators of the permitted equipment that was utilized in developing the threshold to obtain information on the number of worker and delivery trips.

COMMENT 3

2-3

These comments are submitted on behalf of Urban Crossroads, consultants providing environmental review services for organizations throughout the South Coast Air Basin (Air Basin). Urban Crossroads chief concern with the South Coast Air Quality Management District's (SCAQMD) greenhouse gas emissions rulemaking (i.e., proposed Rules 2700, 2701 and 2702 as well as the adoption of California Environmental Quality Act (CEQA) Thresholds of Significance for Greenhouse Gas Emissions (GHG Threshold) under Public Resources Code section 15064.7 (Rulemaking)) is the lack of clarity in what is being proposed and the segmentation of the various new rules and standards. We believe that all of the Rulemaking must be considered a single project, which must be clearly and accurately described and fully analyzed for impacts on projects throughout the Air Basin. Because the GHG Threshold staff report, on page 3, acknowledges that "[t]he overarching policy objective with regard to establishing a GHG significance threshold for the purposes of analyzing GHG impacts pursuant to CEQA is to establish *a performance standard...*", it is appropriate to consider this standard in the context of the entire Rulemaking and provide full consideration of potential impacts of the whole program.

The segmentation of Rulemaking creates conflicting statements between the various staff reports and recommendations to the SCAQMD Board. For example, on the GHG Threshold, on November 7, 2008 at a working group discussion, Elaine Chang and the SCAQMD staff stated that they will recommend deferring the development of thresholds for residential and commercial projects, in light of the efforts underway at the California Air Resources Board. Thus, the SCAQMD staff proposal that will go to the Board for consideration and possible adoption on December 5th will address only thresholds for

2-3 cont.

industrial projects where SCAQMD is the "lead agency." However, in the Draft Program Environmental Assessment (PEA) for Proposed Rule 2702 on pages 2-21 and 2-22, the proposed GHG Threshold references three tiers including Tier 3 which "proposes a limit of 10,000 MT CO2 equivalent (CO2E) per year for industrial projects *and 3,000 MT CO2E per year for commercial/residential projects* as the incremental increase signifying significance..." In addition, the staff report for the GHG Threshold for the December 5th Board meeting, on pages 6 and 7, references 5 Tiers, although Tier 4 is not recommended for approval *at this time*.

Stakeholders are left with uncertainty as to what is being proposed and considered for approval by the Board. This may be a function of the segmentation addressed above. We request that the Rulemaking be addressed in a single, coherent fashion to provide the public with a clear understanding of the program SCAQMD is proposing before it irreversibly commits itself to a particular course of action.

If you have any questions, please contact me directly at (949) 660-1994, extension 217.

Thank you for the opportunity to provide comments.

Sincerely,

URBAN CROSSROADS, INC.

Haseeb Qureshi
Senior Air Quality Specialist

AE:HQ

JN: SCAQMD GHG Comments-02
CC: James Koizumi, SCAQMD CEQA Section

Responses to Draft PEA Comment Letter #2

Urban Crossroads
Haseeb Qureshi

December 3, 2008

Response 2-1

The interim GHG significance threshold proposal adopted by the SCAQMD Governing Board at its December 5, 2008 meeting applies only to projects where the SCAQMD is lead agency. These projects are typically stationary source equipment requiring an air quality permit, as well as rules and plans. As part of the adoption of the interim GHG significance threshold, the SCAQMD Governing Board directed staff to continue the GHG significance threshold stakeholders working group to further evaluate a GHG significance threshold for residential/commercial projects and the Tier 4 performance standard compliance option. As part of its continuing efforts to develop GHG significance thresholds for other sectors, staff will consider broadening the definition of industrial to include other types of projects that do not necessarily require air quality permits. Local agencies, however, may make their own determination of which types of projects are defined as "industrial" and they will have to make individual determinations as to what land uses are considered applicable.

Response 2-2

The comments are outside the scope of the proposed project so responses to these comments are not required in this CEQA document. The SCAQMD staff, however, will consider these comments during the continuing discussions of the interim GHG significance threshold.

Response 2-3

The SCAQMD staff strongly disagrees with the opinion provided by the commentator that the climate change rules and GHG significance threshold development "must be considered a single project," inferring that the SCAQMD may be piecemealing the project. First, the GHG significance threshold is not a rule and, thus, is not subject to the same requirements, such as a CEQA evaluation. Moreover there is no reason to think that the interim GHG significance threshold would create any adverse impacts in the environment. So it is exempt under the "general rule" exemption (CEQA Guidelines §15061(b)(3)). The GHG interim significance threshold did, however, go through a public process and was adopted by resolution by the SCAQMD Governing Board. A lead agency may analyze separately one project that is arguably part of a larger scheme where that project has "independent utility," such that the projects are not dependent on one

another[10]. Second, the climate change rules are independent programs and not dependent on each other, that is Rules 2700/2701 can be implemented without implementing Proposed Rule (PR) 2702. Conversely PR 2702 can be implemented without implementing Rules 2700/2701. With regard to Rules 2700/2701 and PR 2702, the SoCal Climate Solutions Exchange and the GHG Reduction Program, respectively, function on their own regardless of the existence of the other program. Further, piecemealing is the term for dividing a single project with significant impacts into two or more smaller impacts to avoid significant impacts. Evaluation of Rules 2700 and 2701 concluded that it could be seen with certainty that they would not generate significant impacts and, therefore, were exempt from CEQA pursuant to CEQA Guidelines §15061(b)(3). The analyses for PR 2702 concluded that no impacts would be significant. Analyzing Rules 2700/2701 with or separately from PR 2702 would not change any conclusions reached for any of the rules.

The commentator also expresses the opinion that various documents for each of the proposals create conflicting statements. The example provided of the conflicting statements is, itself, unclear and takes quotes and statements out of context. The Board letter for the GHG significance proposal (agenda item #31) clearly states that the staff proposal for Board consideration only includes the industrial (stationary source) threshold for projects where the SCAQMD is the lead agency. The CEQA guidelines specifically recommend that lead agencies establish significance thresholds for adoption through a public process (CEQA Guidelines §15064.7). The board letter also clearly states that thresholds for residential and commercial projects and the Tier 4 performance standard are being deferred for further evaluation.

The Draft PEA for PR 2702 does discuss the current GHG significance threshold proposal as the time of writing the document in October 2008 because the GHG threshold proposal was still under development at that time. Since the SCAQMD had not adopted GHG significance threshold at the time the Draft PEA for PR 2702 was prepared and released for public review, the SCAQMD has been making GHG significance determinations for its CEQA documents on a case-by-case basis. In addition, a threshold for commercial/residential projects was proposed at the time of the release of the Draft PEA, so it is included in the CEQA analysis. However, since then, the Governing Board has decided not to adopt a threshold for commercial/residential projects at this time.

Finally, SCAQMD staff strongly disagrees with the opinion expressed in this comment that "[s]takeholders are left with uncertainty as to what is being proposed" as the December 5, 2008 Board package clearly outlines the staff proposal, which was subsequently adopted by the Governing Board at that same meeting, committing the SCAQMD with a particular course of action. Further, the proposed rules are clearly written and described in their respective staff reports, as well as in the CEQA document for PR 2702. The only thing the various projects have in common is the fact that they

10 Remy, et al., 2007. *Guide to CEQA*, page 92

address GHGs. Otherwise, none of the projects rely on any of the other projects, so there is no reason or requirement to combine these projects into a single item.

The comment that the Draft PEA on pages 2-21 and 2-22 "references three tiers including Tier 3 which 'proposes a limit of 10,000 MT CO_2 equivalent (CO_2E) per year…'" implies the Draft PEA is only acknowledging three tiers exist in the proposed tiered threshold approach, which is not true. The Draft PEA clearly states the "draft guidance proposed a tiered approach in determining GHG significance." The Draft PEA then proceeds to discuss how the first two tiers are not applicable to the proposed project and because they don't apply, "analysis shifts to Tier 3." Because the GHG emissions from the proposed project are below the proposed Tier 3 threshold, the GHG impacts from the proposed project are considered to be less than significant. As a result, the analysis does not need to move to the Tier 4 or 5 of the proposed tiered threshold approach.

Elaine

#31

SOUTH COAST AQMD
CLERK OF THE BOARDS

'08 DEC -4 P4 :22

Brownstein | Hyatt Farber | Schreck

A Strategic California Merger with Hatch & Parent

December 4, 2008

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VIA ELECTRONIC MAIL

William A. Burke, Ed.D, Chairperson
And Member of the Governing Board
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

RE: Agenda Item #31: Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans

Dear Chairperson Burke and Members of the Board:

Thank you for the opportunity to provide the South Coast Air Quality Management District (SCAQMD) with comments on its proposed interim CEQA green house gas (GHG) threshold for Stationary Sources, Rules and Plans ("Threshold"). Brownstein Hyatt Farber & Schreck (BHFS) represents numerous businesses in residential, commercial and industrial development that will be impacted by the current proposals. This comment letter expresses our concern about the consequences of adopting this Threshold before any state action by California Air Resources Board (CARB). Below identifies specific areas of concern.

I. INTRODUCTION

The stated purpose of Agenda Item # 31 is as follows:

> This action is to adopt a resolution approving the Interim CEQA GHG Significance Threshold for Stationary Sources, Rules, and Plans where AQMD is the lead agency. This interim threshold will be used for determining significant impacts for proposed projects. Once CARB adopts the statewide significance thresholds, staff will report back to the Board regarding any recommended changes or additions to the AQMD's interim threshold. (Review: Climate Change Committee, September 19, 2008 and October 29, 2008).

3-1

See Agenda for December 5, 2008, Item No. 31.

It is unclear from the above whether this Threshold is simply an "interim" measure or the first step of a measure distinct from and inconsistent with CARB's directed efforts. On November 20, 2008, the last workshop, SCAQMD staff indicated that this Threshold would be revoked once CARB adopted state-wide thresholds. The stated purpose runs counter to SCAQMD staff statements as to the "interim" nature of this Threshold. Thus, the uncertainty of the length of time the SCAQMD's Threshold will be in place or if it is not really "interim" at all burdens the community with potentially having several differing thresholds with which to comply.

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II. SUMMARY OF COMMENTS

As set forth in greater detail below, the comments focus on: (1) the assumptions behind the setting of the Threshold before CARB implementation of AB 32, and 2) the consequences of setting a premature and not well-detailed Threshold, i.e., inconsistent use by other agencies, conflicts between rules, and segmentation.

III. ANALYSIS

A. Term of Interim Threshold is Uncertain

Conflicting statements exist in the record about the intent of the time period SCAQMD's Threshold will be utilized. For example, in the last working group session, SCAQMD staff stated once CARB adopted thresholds, SCAQMD would utilize state-wide thresholds. However, various places in the record refer to presenting a future proposal to revisit this issue once CARB adopts its thresholds. *See* October 22, 2008 Workshop Notes, pgs. 1; Staff Report, pg 2. Therefore, clarification is requested of how this interim threshold will be treated once CARB releases its proposed threshold and whether projects analyzed under the interim standard will require additional analysis should the CARB standard differ. Specifically, we ask that SCAQMD state unambiguously that it will utilize whatever threshold CARB ultimately adopts.

B. There is No Standard Definition of Industrial Category Rendering Application Uncertain

3-1 Con't

The stated intent of the proposed Threshold is for the interim threshold to apply "only to industrial (stationary source) projects where the AQMD is the lead agency." (Staff Report, p. 2; *See also* p. 5) This intent appears to limit application of the interim threshold to just SCAQMD's own actions (e.g., "SCAQMD rules, rule amendments, and plans"). However, the Staff Report goes on to state the Threshold applies to "projects that require discretionary air quality permits from the AQMD." (Staff Report, p. 5). Essentially, this interim rule would apply to all "industrial" facilities requiring a discretionary permit by SCAQMD not only when it is a "lead" agency, but also when it is a "responsible" agency[1]. Given the contemplated broader application, clarification of the term "industrial (stationary source)" and "stationary source/industrial" is required.

when agmd is the lead

Specifically, the term "industrial" as set forth in the proposed interim guideline is ambiguous. A number of different meanings can be applied to the term "industrial" depending on the type of operation, its land use categorization or its similarity to commercial activities. SCAQMD, however, has an existing and capable mechanism by which to determine when a facility would be required to consider its GHG significance threshold. For example, in determining the proposed 10,000 MT CO2eq limit (Tier 3) it inventoried the existing Annual Emissions Reporting (AER) facilities to arrive at a 90% capture rate. *See* Staff Report, Attachment D, pg. 1. The AER program provides an already defined universe of facilities based upon certain annual emission levels of conventional and hazardous pollutants. For the most part, these thresholds capture "industrial" facilities, particularly those emitting pollutants as a result of permitted combustion processes. Accordingly, substituting the term "AER facility" in place of "industrial" would clarify exactly which facilities are subject to the proposed Threshold much better than a generic and undefined "industrial" facility.

[1] CEQA Guideline Section 15381 defines a "responsible agency" as a public agency which proposes to carry out or approve a project, for which a lead agency is preparing or has prepared an EIR or negative declaration. For the purposes of CEQA, the term "responsible agency" includes all public agencies other than the lead agency which have discretionary approval power over the project.

This point is further demonstrated by utilizing other jurisdictions terms for "industrial", as the expanded application contemplates, i.e., when SCAQMD is a responsible agency. For example, Riverside County has an "Industrial Park" zone (Riverside County Zoning Code, art. X) and at least four "Manufacturing" zones (*See Id.*, Arts. XI, XIa, XII, XIIb) and several "Agricultural" zones (*See Id.*; Arts. XIII–XIVc). None of the zones are facially described as "industrial," but they are all arguably industrial — as opposed to commercial or residential — in nature, as the term "industrial" is commonly understood. Indeed, the first several zones expressly allow for certain "industrial" uses. (*See*, e.g., id. §§10.1(a)(1)(g); 11.2(b)(1)(m); 11.26(b)(1)(n); 12.2(b)(1)(o)). On the other hand, the City of Riverside, defines several Industrial zones that do not necessarily match the uses deemed industrial by the County. (City of Riverside Municipal Code §19.130.) Thus, the term "industrial" as considered for the Threshold is ambiguous without further clarifying its meaning.

This problem is not avoided when examining applicable definitions by SCAQMD in its Rules of either industrial and/or stationary source. Rule 1470 defines the term "Stationary Source."

> any building, structure, facility, or installation that emits any affected pollutant directly or as fugitive emissions. Building, structure, facility, or installation includes all pollutant emitting activities which: (A) are under the same ownership or operation, or which are owned or operated by entities which are under common control; and (B) belong to the same industrial grouping either by virtue of falling within the same two-digit standard industrial code or by virtue of being part of a common industrial process, manufacturing process, or connected process involving a common raw material; and (C) are located on one or more contiguous or adjacent properties. (emphasis added).

3-1 Con't

Focusing on subpart (B), the "two-digit industrial code" on which the definition relies comes from the North America Industry Classification System, a classification system that exceeds 1,400 pages of specific categories. This definition extends well beyond the scope of SCAQMD's methodology that led to the proposed "industrial" threshold of 10,000 MTCO2eq/yr that focused only on natural gas consuming projects that were required to report their natural gas consumption under the AER program. The study did not consider the many thousands of other types, classifications, and sizes of projects that might well fall under SCAQMD's definition of "stationary source." Accordingly, by limiting the definition to AER facilities, or, more narrowly to the frequently discussed refineries[2], the Threshold would comport with the methodology calculated for its GHG "industrial" limit and capture the intent of identifying GHG-significant operations.

C. Adoption of An Indefinite Interim Threshold May Lead to Conflicting Applications and Compliance Issues

Concern has been raised through-out the public process over how project applicants will comply with potentially conflicting thresholds.

> A question was asked when the interim GHG significance thresholds for use by other public agencies would become applicable. Dr. Smith responded that they would be gradually phased in. However, Dr. Barry Wallerstein,, SCAQMD Executive Officer, commented that his topic is

[2] References to refineries are made through out the record, primarily used as projects where SCAQMD is the lead agency. See Minutes for Working Group Meeting #6, dated Oct. 22, 2008, pg 3.

subject to further discussion and direction from the Governing Board. (emphasis added).

See, Minutes for Working Group Meeting #6 dated Oct 22, 2008, Comment g. page 2. As set forth below, this coordination of other agencies use of this interim threshold becomes more complicated when considered in the context of the statutory framework of the Global Warming Act of 2006 (Act).

1. AB 32 and SB 97 Applicability

AB 32 enacts the Act which creates a statewide GHG emission limit that would reduce emissions by 30% by 2020. It further requires CARB to prepare and adopt a rulemaking scoping plan for the rules and regulations it is required to adopt pursuant to the bill's provisions, and requires CARB to comply with specified criteria in developing and adopting the plan by January 1, 2009. Additionally, on or before January 1, 2011, CARB must adopt GHG emission limits and measures to achieve the maximum feasible and cost-effective reductions in GHG emissions in furtherance of the GHG emission limit.

Accordingly, SCAQMD's adoption of an interim threshold conflicts with the intent of the statute to have CARB develop these thresholds. AB 32 does not authorize any other air agency within the State to adopt alternative standards, even in the interim. More pragmatically, an interim threshold creates a potential conflict between different interpretations of this statute. For example, SCAQMD staff has indicated that compliance with AB 32 goals in advance of the timetable set in AB 32 is applicable to its Tier 4 – Option 2 (Tier 4 determines significance relative to GHG emissions for very large projects, including design features or other measures to mitigate, that exceed interim Tier 3 levels). *See* Staff Report, pg. 6; See also Attachment A. The Staff Report also admits that CARB's proposal for such large projects is not equivalent to Tier 4. Accordingly, a project that is trying to comply with GHG regulations is faced with the possibility of differing thresholds, although only one is based upon statutory mandate. *See* Staff Report, Table 1, page 9. 3-1 Con't

This possibility becomes reality when Staff points out that the evolving business as usual (BAU) definition for setting the methodology to calculate baseline emissions differs from both CARB and California Air Pollution Control Officer's Association (CAPCOA) approaches, which each apply their own differing criteria. *See* Staff Report, Attachment D, pages 3-6-3-7. This uniqueness is a critical distinction because SCAQMD adopts two additional factors (2 of the 5) which will be used to form baseline emission levels from which GHG reductions are determined. *Id.* Accordingly, "[t]o resolve some of these issues of an *evolving definition* of BAU, SCAQMD staff recommends that a statewide definition be developed by CARB that is updated periodically." (emphasis added) *Id.* In the absence of a clear and unambiguous statewide definition of BAU, conflicts between various jurisdictions' definitions of BAU (whether interim or not) and the emissions reductions required by those definitions will inevitably arise.[3]

More importantly, the early interim adoption ignores AB 32's attempt to avoid potential conflicts. "ARB shall consult with various other state agencies that have jurisdiction over utilities and other sources of GHG emissions in order to minimize any overlap among those agencies". Here, rather than wait for CARB to act, which SCAQMD staff admits could be as soon as February 2009 (*See* Staff Report, pg 8)

[3] The County of San Diego has published Draft – Interim Guidelines for Determining Significance that define BAU as "the emissions that would have occurred in the absence of mandated reductions." In practice, differing definitions will cause disparate treatment of similar projects and may be utilized by jurisdictions to gain a competitive advantage over neighboring jurisdictions.

it is adopting an interim threshold which it knows is different than what CARB has suggested. See Staff Report, Table 1, page 9.

In conjunction with AB 32, SB 97 requires the Office of Planning and Research (OPR) to develop, by July 2009, guidelines that relate to feasible mitigation of GHG emissions. Specifically, OPR must prepare and develop guidelines for the mitigation or effects of GHG emissions as they relate to meeting the requirements of CEQA, including the effects associated with transportation and energy. Upon completion by OPR, the Resources Agency (CARB) is required to certify and adopt the guidelines by January 1, 2010. Periodically, OPR would be required to update guidelines and incorporate them into the criteria established by the CARB pursuant to the Act. SB 97 does not delegate nor authorize these responsibilities to any other air agency in the State.

3-1 Con't

Given that both AB 32 and SB 97 delegate the responsibility and authority for implementing the Act to CARB, and in part to OPR, the interim Threshold is likely to lead to more confusion, rather than provide a mechanism to expedite project analysis of GHG impacts. Accordingly, we respectfully request that consideration of this guideline be postponed until after CARB has acted.

D. The Proposed Threshold Requires Environmental Review and Its Separation From Other Proposed Components of the Overall GHG Program Is Improper Segmentation

CEQA Guidelines[4] section 15187 requires environmental analysis of a rule or regulation establishing a performance standard:

> (c) The environmental analysis shall include at least the following: (1) An analysis of reasonably foreseeable environmental impacts of the methods of compliance; (2) An analysis of reasonably foreseeable feasible mitigation measures relating to those impacts; and (3) An analysis of reasonably foreseeable alternative means of compliance with the rule or regulation, which would avoid or eliminate the identified impacts.
>
> (d) The environmental analysis shall take into account a reasonable range of environmental, economic, and technical factors, population and geographic areas, and specific sites. The agency may utilize numerical ranges and averages where specific data is not available, but is not required to, nor should it, engage in speculation or conjecture.

3-2

Here, the Staff Report acknowledges that "[t]he overarching policy objective with regard to establishing a GHG significance threshold for the purposes of analyzing GHG impacts pursuant to CEQA is to establish a performance standard..." See Staff Report, page 3. Accordingly, CEQA analysis is required before its adoption.

For example, in *City of Livermore vs. LAFCO* (1986) 184 Cal.App.3d. 541 the Court held that a County local agency formation commission's "sphere of influence" guidelines constituted a "project" under CEQA which required preparation of environmental impact report (EIR) because an EIR is required for all "projects" that may have a significant effect on the environment. Specifically, LAFCO's guideline revisions fit within CEQA's broad definition of a project because they are a discretionary activity of a

[4] See Guidelines for California Environmental Quality Act, 14 Cal. Code Regs. § 15000 *et seq.*

public agency that will unquestionably have an ultimate impact on the environment. The sphere of influence guidelines influence LAFCO decisions about development plans and future growth of cities and service areas. *Id* at 538-539.

Here, SCAQMD is adopting a new threshold or performance standard to measure GHG emission equivalents which potentially may change where and how businesses operate. The interim significance threshold specifically contemplates changing or modifying business behavior, which will have a direct environmental effect through quantifying GHG emissions.

Moreover, CEQA Guidelines section 15064.7 requires adoption and development of thresholds of significance by ordinance, resolution, rule, or regulation, through a public review process supported by substantial evidence. *See* Staff Report, page 3. While the applicability of this rule is acknowledged for the Threshold being discussed today, the analysis falls short of combining all the proposed actions being taken regarding GHG analysis and implementation - specifically, Rules 2700 et seq. Therefore, in order to evaluate and provide full consideration of potential impacts, all of the proposed GHG rules being considered by SCAQMD should be presented collectively.

3-2 Con't

In this regard, the "whole program" should include all of the rules being considered for adoption as Regulation XXVII (Rules 2700 *et seq.)* which establish a number of components of GHG regulation including a fee mitigation program for GHG. *See* Agenda Item No. 26 , December 5, 2008 (proposed rules developed to assist local business and others by providing high quality GHG certified emission reductions for voluntary actions).

Presently, under CEQA Guideline section 15064.7 a lack of clarity exists in what is being proposed due to segmentation of the various new rules and standards (i.e., proposed Rules 2700, 2701 and 2702, as well as the adoption of the interim Thresholds of Significance). We believe that all of these actions must be considered within a single project, which must be clearly and accurately described and fully analyzed for impacts on projects throughout SCAQMD's jurisdictional area. As set forth above, a performance standard is being established and it is therefore appropriate to consider this new standard in the context of the entire program to provide full consideration of potential impacts of the whole program.

Also, the Staff Report for the Threshold describes what it terms its "Mitigation Preference". *See* Staff Report at Page 7. On-site reductions are preferred, with the use of alternative reduction mechanisms limited to those within SCAQMD. International reduction efforts are not even considered. To the extent in-SCAQMD measures cannot achieve SCAQMD's goals an other alternatives do not exist, the result becomes a "de facto" fee program.[5]

By separating (segmenting) the new significance threshold from Rule 2700 et seq., confusion is created by conflicting statements made in various staff reports and recommendations to the SCAQMD Board. For example, with the Threshold, on November 7, 2008 at a working group discussion, Elaine Chang and the SCAQMD staff stated that they will recommend deferring the development of thresholds for residential and commercial projects, in light of the efforts underway at CARB. Thus, Staff's proposal to the Board is stated to address only thresholds for industrial projects where SCAQMD is the "lead

[5] Although much of this comment letter applies to the Threshold, we note that the fee program being considered under Regulation XXVII has relevance to mitigation preference for the Threshold. The extent to which an emissions "banking" regulation is being created must be considered carefully given the recent challenges to the District's other emissions banking rules by the Natural Resources Defense Council.

agency." Contrary to that statement, however, within Proposed Rule 2702 [*See* Draft Program Environmental Assessment (PEA) pages 2-21 and 2-22] the proposed GHG Threshold references three tiers including Tier 3 which "proposes a limit of 10,000 MT CO2 equivalent (CO2E) per year for industrial projects and 3,000 MT CO2E per year for commercial/residential projects as the incremental increase signifying significance..." (emphasis added). In addition, the significance threshold Chart references 5 Tiers, although Tier 4 is not recommended for approval at this time. *See* Staff Report, pages 6-8 (CARB staff proposing a hybrid for stationary source projects).

Given this inconsistency, stakeholders are left with uncertainty as to what is being proposed and considered for approval by the Board. This uncertainty may be a result of the segmentation addressed above, or otherwise. We request that the various proposals, rules and resolutions be addressed in a single, coherent fashion to provide the public with a clear understanding of the program SCAQMD is proposing before it irreversibly commits itself to a particular course of action.

Therefore, we respectfully request that all of the proposed rulemaking and approvals (Agenda Item Nos. 26 and 31) be considered as a single project, which clearly and accurately describe and fully analyze impacts throughout the Air Basin.

IV. CONCLUSION

We appreciate the opportunity to comment upon the proposed interim threshold for GHG. For the reasons discussed above, we believe a continuance of this adoption is appropriate. Additional time will permit clarification of the definition of intended projects to be covered under a rule where SCAQMD is the lead agency. Additional time will also allow stakeholders to consider the collective import of the Threshold as it applies to Regulation XXVII. A clearer understanding of terms like "industrial" and "BAU", and how they apply, will better enable the business community to understand the implications of the GHG threshold requirements.

3-2 Con't

Very truly yours,

Diane C. De Felice
Brownstein Hyatt Farber Schreck, LLP

DCD:ibc

Responses to Draft PEA Comment Letter #3

Brownstein Hyatt Farber Schreck, LLP
Diane C. DeFelice

December 4, 2008

Response 3-1

The comments are outside the scope of the proposed project so responses to these comments are not required in this CEQA document. The SCAQMD staff, however, will consider these comments during the continuing discussions of the interim GHG significance threshold.

Response 3-2

The SCAQMD staff strongly disagrees with the opinion provided by the commentator that the climate change rules and GHG significance threshold development "must be considered a single project," inferring that the SCAQMD may be piecemealing the project. First, the GHG significance threshold is not a rule and, thus, is not subject to the same requirements, such as a CEQA evaluation. Moreover there is no reason to think that the interim GHG significance threshold would create any adverse impacts in the environment. So it is exempt under the "general rule" exemption (CEQA Guidelines §15061(b)(3)). The GHG interim significance threshold did, however, go through a public process and was adopted by resolution by the SCAQMD Governing Board. A lead agency may analyze separately one project that is arguably part of a larger scheme where that project has "independent utility," such that the projects are not dependent on one another[11]. Second, the climate change rules are independent programs and not dependent on each other, that is Rules 2700/2701 can be implemented without implementing Proposed Rule (PR) 2702. Conversely PR 2702 can be implemented without implementing Rules 2700/2701. With regard to Rules 2700/2701 and PR 2702, the SoCal Climate Solutions Exchange and the GHG Reduction Program, respectively, function on their own regardless of the existence of the other program. Further, piecemealing is the term for dividing a single project with significant impacts into two or more smaller impacts to avoid significant impacts. Evaluation of Rules 2700 and 2701 concluded that it could be seen with certainty that they would not generate significant impacts and, therefore, were exempt from CEQA pursuant to CEQA Guidelines §15061(b)(3). The analyses for PR 2702 concluded that no impacts would be significant. Analyzing Rules 2700/2701 with or separately from PR 2702 would not change any conclusions reached for any of the rules.

11 Remy, et al., 2007. *Guide to CEQA*, page 92

The commentator also expresses the opinion that various documents for each of the proposals create conflicting statements. The example provided of the conflicting statements is, itself, unclear and takes quotes and statements out of context. The Board letter for the GHG significance proposal (agenda item #31) clearly states that the staff proposal for Board consideration only includes the industrial (stationary source) threshold for projects where the SCAQMD is the lead agency. The CEQA guidelines specifically recommend that lead agencies establish significance thresholds for adoption through a public process (CEQA Guidelines §15064.7). The board letter also clearly states that thresholds for residential and commercial projects and the Tier 4 performance standard are being deferred for further evaluation.

The Draft PEA for PR 2702 does discuss the current GHG significance threshold proposal as the time of writing the document in October 2008 because the GHG threshold proposal was still under development at that time. Since the SCAQMD had not adopted GHG significance threshold at the time the Draft PEA for PR 2702 was prepared and released for public review, the SCAQMD has been making GHG significance determinations for its CEQA documents on a case-by-case basis. In addition, a threshold for commercial/residential projects was proposed at the time of the release of the Draft PEA, so it is included in the CEQA analysis. However, since then, the Governing Board has decided not to adopt a threshold for commercial/residential projects at this time.

Finally, SCAQMD staff strongly disagrees with the opinion expressed in this comment that "[s]takeholders are left with uncertainty as to what is being proposed" as the December 5, 2008 Board package clearly outlines the staff proposal, which was subsequently adopted by the Governing Board at that same meeting, committing the SCAQMD with a particular course of action. Further, the proposed rules are clearly written and described in their respective staff reports, as well as in the CEQA document for PR 2702. The only thing the various projects have in common is the fact that they address GHGs. Otherwise, none of the projects rely on any of the other projects, so there is no reason or requirement to combine these projects into a single item.

The comment that the Draft PEA on pages 2-21 and 2-22 "references three tiers including Tier 3 which 'proposes a limit of 10,000 MT CO_2 equivalent (CO_2E) per year…'" implies the Draft PEA is only acknowledging three tiers exist in the proposed tiered threshold approach, which is not true. The Draft PEA clearly states the "draft guidance proposed a tiered approach in determining GHG significance." The Draft PEA then proceeds to discuss how the first two tiers are not applicable to the proposed project and because they don't apply, "analysis shifts to Tier 3." Because the GHG emissions from the proposed project are below the proposed Tier 3 threshold, the GHG impacts from the proposed project are considered to be less than significant. As a result, the analysis does not need to move to the Tier 4 or 5 of the proposed tiered threshold approach.