South Coast
Air Quality Management District
21865 E. Copley Drive, Diamond Bar, CA 91765-4182
(909) 396-2000 · http://www.aqmd.gov

BOARD MEETING DATE: April 12, 1996 AGENDA NO. 37

PROPOSAL: Amend Rule 1303 - Requirements (New Source Review) and Rule 2005 - New Source Review for RECLAIM

SYNOPSIS: The proposed amendments to Rule 1303 - Requirements (New Source Review) and Rule 2005 - New Source Review for RECLAIM will incorporate protection of visibility for Federal Class I areas into Regulations XIII and XX. Protection of visibility for Federal Class I areas and notification of Federal Land Managers are requirements of federal law.

COMMITTEE: Not applicable

RECOMMENDED ACTION:

1. Amend Rule 1303 - Requirements and Rule 2005 - New Source Review for RECLAIM, and
2. Certify the CEQA Notice of Exemption for the proposed amendments in accordance with the attached resolution.

James M. Lents, Ph.D.
Executive Officer

PL:AG: RAR

Background

The AQMD Governing Board amended Regulation XIII - New Source Review on December 7, 1995. At that time, the Governing Board deferred some issues including Federal Class I areas protection of visibility and notification to Federal Land Managers (FLMs), which are requirements of federal law and are designed to protect visibility in pristine areas, such as national parks and national forests. There are six Federal Class I areas in the AQMD, namely: Agua Tibia, Cucamonga, Joshua Tree, San Gabriel, San Gorgonio and San Jacinto. Attachment A contains a map showing the locations of these

six areas. The United States Forest Service and the National Park Service are the two FLMs that supervise these six Federal Class I areas in the AQMD.

The objective of the protection of visibility and FLM notification requirements is to ensure that the construction of a new major source or modification of an existing major source does not adversely impact the visibility of Federal Class I areas. Such visibility impacts may be caused by the formation of a visible plume or regional haze. The proposal maintains the air quality objectives of Regulation XIII - New Source Review (NSR) and Regulation XX - Regional Clean Air Incentives Market (RECLAIM) while facilitating the ability to new and modified existing sources to comply with the NSR requirements. The overall emission reduction potential of Regulation XIII - New Source Review (NSR)and Regulation XX - Regional Clean Air Incentives Market (RECLAIM) are not expected to change as a result of these proposed amendments.

The staff proposal to amend Rule 1303 - Requirements and Rule 2005 - New Source Review for RECLAIM, will help make the AQMD's NSR program and RECLAIM approvable by EPA for inclusion in the SIP, without unnecessary administrative burden to facilities or government agencies involved. Subsequent amendments to NSR regulations will address the other items that were deferred from the December 7, 1995 Board meeting.

Proposal

Protection of visibility and FLM notification requirements are related to the definitions of "major polluting facility" and "major modification." The AQMD has extremely low thresholds for these definitions because federal and state law have designated the AQMD Basin as being an extreme nonattainment area of air quality standards. If these thresholds were used to require new and modified sources to protection of visibility and FLM notification requirements, thousands of permits each year could potentially be affected. The administrative burden would overwhelm the regulated community, the AQMD, and the FLMs, with potentially little benefit. The AQMD has worked with the federal EPA, Forest Service, National Park Service, and industry in an attempt to reduce the regulatory and administrative burden of these requirements without compromising the CAA goals for protection of visibility in Federal Class I areas. This work has led to the development of applicability criteria for these requirements based on extensive modeling and other CAA requirements.

The staff proposal requires visibility analysis for visible plumes and FLM notification only for new or modified major sources that emit PM10 or NO_X in excess of 15 tons/year of PM10 or 40 tons/year of NO_X and are located within specific distances of Federal Class I areas in the AQMD. The applicable emission thresholds for PM10 and NO_X correspond to the trigger levels for major modifications in areas which are in attainment of the relevant NAAQS, namely, 15 tons/year of PM10 and 40 tons/year of NO_X. All other

criteria pollutants do not affect plume formation or regional haze and therefore, are not part of this analysis. The only applicable pollutant for Rule 2005 is NO_X since PM10 is not subject to Regulation XX - RECLAIM. Visible plume modeling is required only for projects that meet or exceed the clearly established emission thresholds and proximity values from Federal Class I areas. The proposed rule amendment also contains requirements for visible plume modeling and specifies certain technical parameters to be used.

If initial modeling identifies potential adverse impacts on visible plumes in a Federal Class I area, additional detailed modeling is required. The rule provides guidance to the Executive Officer relative to permitting and noticing actions, and specifies time limits for FLM review actions so that permit applications are not unduly impacted. In the very unlikely event that a new or modified major stationary source is expected to cause an adverse impact on visibility in a Federal Class I area, the Executive Officer may be required to deny the permit. The applicant always has the option of modifying the project or providing mitigations to obviate any potential adverse impact on visibility, in order to obtain a permit from the AQMD. Attachment B shows the permit action flowcharts for both proposed rules which captures the essence of this proposal.

AQMP & Legal Mandates

The AQMD is required to comply with federal and state NSR requirements, including visibility protection analysis and notification of FLMs as set forth in the CAA. This proposal meets these requirements without an undue administrative burden to industry, the AQMD, or other agencies.

CEQA & Socioeconomic Analysis

The AQMD has reviewed the proposed projects pursuant to CEQA Guidelines Section 15002(k) - Three-Step Process, to determine which type of CEQA document to prepare for the proposed action. The AQMD has determined that the proposed amendments are exempt from CEQA pursuant to CEQA Guidelines Section 15308 - Action by Regulatory Agencies for the Protection of the Environment, since the activity is covered by this Class 8 exemption for actions to assure the maintenance, restoration, enhancement, or protection of the environment.

The Notice of Exemption, prepared pursuant to state CEQA Guidelines Section 15062 - Notice of Exemption, will be filed with the county clerks of Los Angeles, Orange, Riverside and San Bernardino counties immediately following the adoption of the proposal.

A socioeconomic impact assessment will be prepared for part of the adopt hearing package. The approach proposed in the rule is not expected to result in significant

financial impact on facilities and will result in much lower compliance costs than if the rule were implemented at a lower threshold.

Implementation Plan

AQMD permitting staff are responsible for implementation of NSR, while AQMD planning staff can assist with modeling analyses. Staff will be trained on the changes to Regulation XIII and will provide technical assistance to applicants regarding the new requirements for modeling and FLM notifications. The FLMs are committed to review visibility modeling results and provide written comments to the Executive Officer for projects that meet the applicability thresholds contained in Proposed Amended Rules 1303 and 2005.

Resource Impact

Current AQMD resources are sufficient to implement the proposed rule amendments rules with negative budget impact.

Attachments

A. Map of Federal Class I Areas
B. Permit Action Flow Chart
C. Key Issues
D. Rule Development Flow Chart
E. Key Contacts List
F. AQMD Governing Board Resolution
G. CEQA Notice of Exemption
H. Rule Language
I. Staff Report
J. Socioeconomic Impact Report
K. Comment Letters

RESOLUTION NO. 96 - _____

A Resolution of the Governing Board of the South Coast Air Quality Management District (AQMD) that Proposed Amended Rule 1303 - Requirements and Rule 2005 - New Source Review for RECLAIM are exempt from the requirements of the California Environmental Quality Act (CEQA).

A Resolution of the Governing Board of the AQMD amending Rule 1303 - Requirements and Rule 2005 - New Source Review for RECLAIM.

WHEREAS, AQMD staff reviewed the proposed project and determined that these rules ares exempt from the requirements of CEQA; and

WHEREAS, the AQMD Governing Board has determined that a need exists to amend Rule 1303 - Requirements and Rule 2005 - New Source Review for RECLAIM to comply with federal Clean Air Act requirements for the protection of visibility in mandatory Federal Class I areas; and

WHEREAS, the AQMD Governing Board has authority to adopt, amend, or repeal rules and regulations from California Health and Safety Code sections 39002, 39650 e.t. seq., 40000, 40001, 40412, 40440, 40441, 40463, 40702, 40725 through 40728, 40920.5, 41508, 41700, 40702, 40920.5, 42300, 42301.10 through 42301.12, and 42 U.S.C. sections 7410, 7491, 7501, 7503, 7511a and 40 CFR sections 51.300 to 307 and 40 CFR Section 52.28; and

WHEREAS, the AQMD Governing Board has determined that Rule 1303 - Requirements and Rule 2005 - New Source Review for RECLAIM, as proposed to be amended takes into consideration public comments from persons affected by these rules, and as a result, their meaning can be easily understood by the persons directly affected; and

WHEREAS, the AQMD Governing Board has determined that Rule 1303 - Requirements and Rule 2005 - New Source Review for RECLAIM, as proposed to be amended are in harmony with, and not in conflict with or contracdictory to, existing federal or state statutes, court decisions or regulations; and

WHEREAS, the AQMD Governing Board in amending and adopting these rules references the following statutes which the AQMD hereby implements, interprets, or makes specific: federal Clean Air Act sections 110, 169A, 171, 173, and 182(e) (Title 42 U.S.C. sections 7410, 7491, 7501, 7503, and 7511(a); and Health and Safety Code sections 40440, 40913, 41700 and 40702; and

WHEREAS, the AQMD Governing Board has determined that Rule 1303 - Requirements and Rule 2005 - New Source Review for RECLAIM, as proposed to be amended do not impose the same requirements as any existing state or federal regulations; and

WHEREAS, the AQMD Governing Board has determined that the socioeconomic impact assessment of Rule 1303 - Requirements and Rule 2005 - New Source Review for RECLAIM, as proposed to be amended, are consistent with the AQMD Governing Board's March 17, 1989, resolution that proposed rule amendments consider whether the matter is being presented in order of cost-effectiveness and complies with all applicable state law requirements concerning socioeconomic impacts of new air regulations; and the AQMD Governing Board finds that cost-effectiveness and costs of the program are as set forth in the Final Staff Report; and

WHEREAS, the AQMD Governing Board has actively considered the socioeconomic impact of these rules and has made a good faith effort to minimize adverse socioeconomic impacts as defined in Health and Safety Code Section 40728.5; and

WHEREAS, a public hearing has been properly noticed in accordance with the provisions of Health and Safety Code Section 40725; and

WHEREAS, the AQMD Governing Board has held a public hearing in accordance with all provisions of law; and

NOW, THEREFORE, BE IT RESOLVED, that the AQMD Governing Board does hereby certify the Notice of Exemption for Rule 1303 - Requirements and Rule 2005 - New Source Review for RECLAIM, as proposed to be amended, completely in compliance with state CEQA Guidelines, sections 15002(k)(1), 15308 and 15062, and that it has been presented to the AQMD Governing Board, whose members reviewed, considered, and approved the information therein prior to acting on Proposed Amended Rule 1303 - Requirements and Proposed Amended Rule 2005 - New Source Review for RECLAIM.

BE IT FURTHER RESOLVED that the AQMD Governing Board hereby amends, pursuant to the authority granted by law, Proposed Amended Rule 1303 - Requirements and Proposed Amended Rule 2005 - New Source Review for RECLAIM, as set forth in the attached and incorporated herein by this reference.

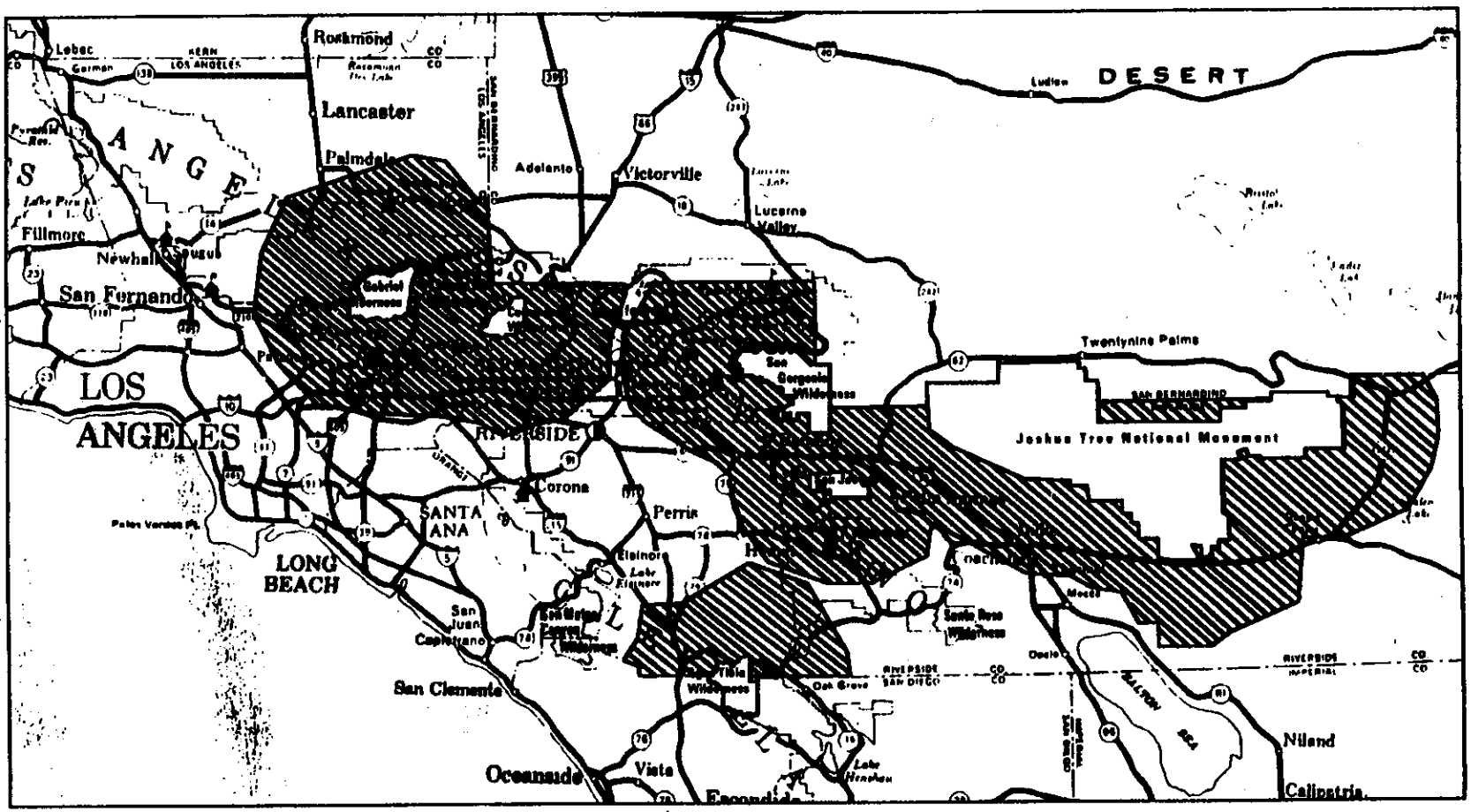
BE IT FURTHER RESOLVED, that the effective date of the above amendments is April 12, 1996.

Attachments

DATE:_____

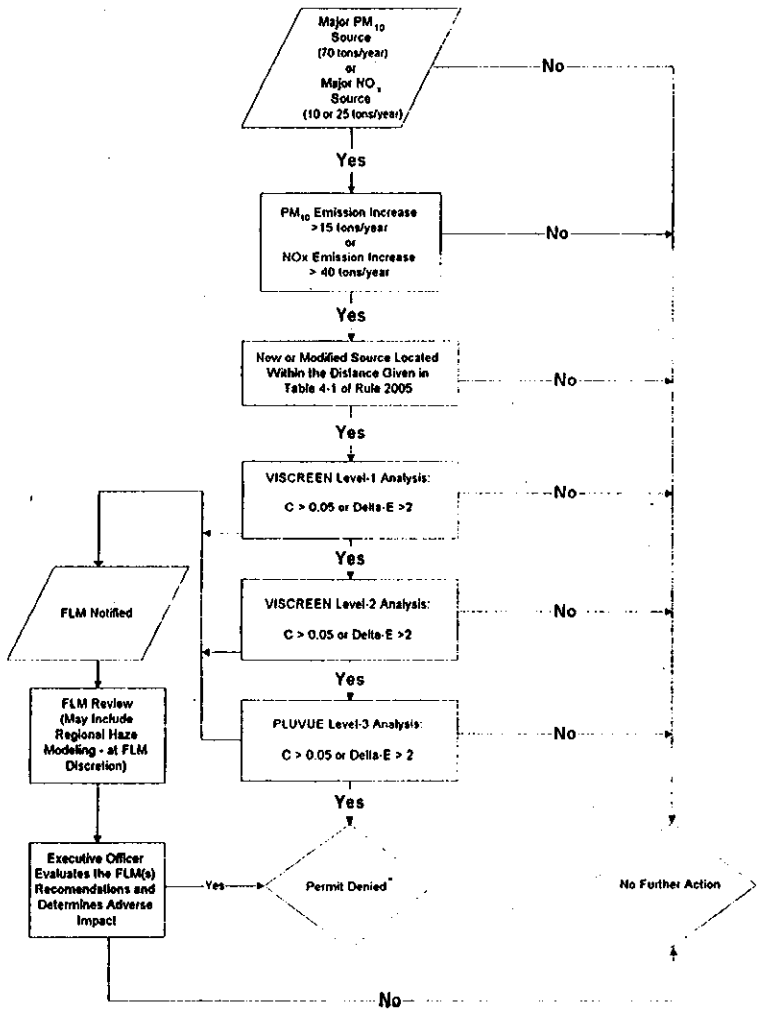
_____
CLERK OF THE DISTRICT BOARD

Class 1 Areas in the South Coast Air Quality Management District



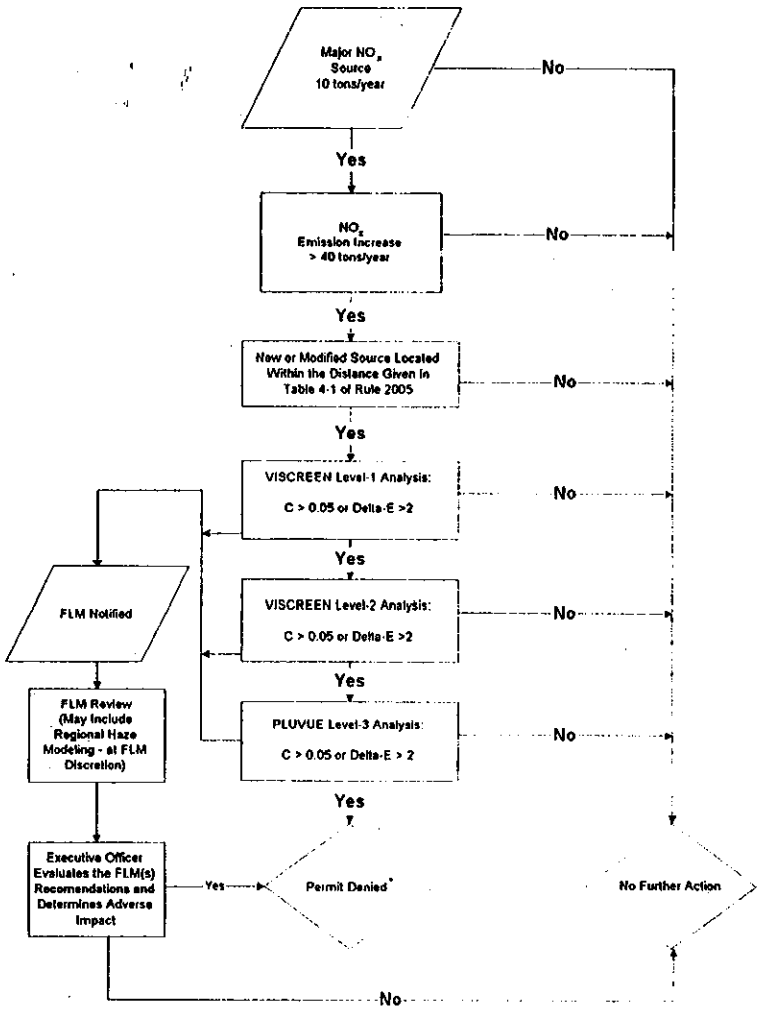
Cross-hatched area shows the location of projects subject to visibility analysis.

ATTACHMENT B
PERMIT ACTION FLOWCHARTS
Proposed Amended Rule 1303



* Upon permit denial or at any step in the process, the applicant may elect to modify the project to eliminate adverse impact.

ATTACHMENT B (Cont.)
PERMIT ACTION FLOW CHARTS
Proposed Amended Rule 2005



* Upon permit denial or at any step in the process, the applicant may elect to modify the project to eliminate adverse impact.

ATTACHMENT C

KEY ISSUES

♣	CAA Requirement or EPA Concern
♦	CARB Requirement
#	Industry Concern
♠	AQMD Change
Italics	AQMD Response/Compliance

♣♦ Regulation XIII must comply with all federal NSR requirements, including protection of visibility and FLM notification requirements set forth in 42 U.S.C. Section 7491 and 40 CFR Section 51.300 - 307.

The proposed amendments incorporate into Regulation XIII the protection of visibility and FLM notification requirements. These are statutory requirements of federal law.

Protection of visibility and FLM notification requirements applicability thresholds should be based not only at the PSD thresholds for increases in emissions but should also consider the PSD major stationary source thresholds of 100 to 250 tons per year.

Although it is generally perceived by industry that the protection of visibility in mandatory Federal Class I areas and the notification of FLMs is only a requirement for areas in attainment with applicable NAAQS (i.e. PSD areas), 42 U.S.C. Section 7491; [CAA Section 169A] states in pertinent part that the national goal for visibility in Federal Class I areas calls for "the prevention of any future, and the remedying of any existing impairment of visibility in mandatory Federal Class I areas which impairment results from man-made air pollution." The remediation of existing visibility impairment is a clear statement of Congress' intention to have visibility protection also apply to nonattainment areas. The definition of a major stationary source in an extreme nonattainment area is set forth in Section 182 of the 1990 Amendments to the CAA and reflected in Rule 1302. Use of the PSD definition of a major stationary source in an extreme nonattainment is unsupported by law and would render Section 169A of the CAA meaningless in a nonattainment area. This interpretation of federal law would likely lead to EPA disapproval of the AQMD's NSR program.

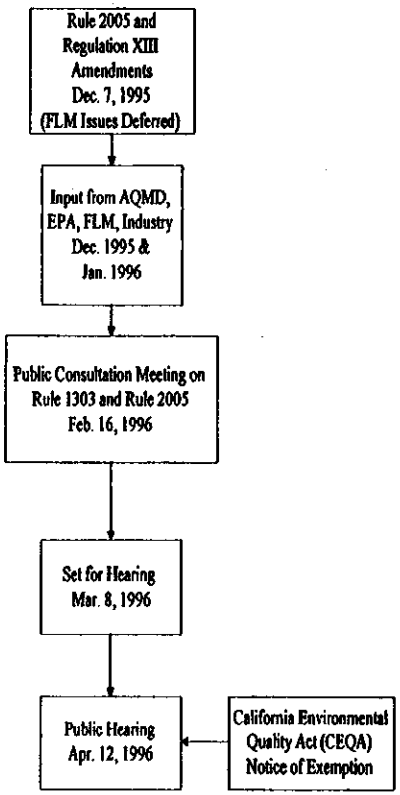
Therefore, the AQMD's proposal has been developed in collaboration with the National Park Service (Department of Interior) and Forest Service (Department of Agriculture) and EPA, with the intent to facilitate the ability to new and modified sources to comply with NSR requirements.

The proposed use of emission increase thresholds of 15 tons per year for PM10 and 40 tons per year of NOx reasonably links the provisions of 42 U.S.C. Section 7491 (added by the 1977 Amendments to the CAA) and Section 7511a (added by the 1990 Amendments to the CAA) so that it creates an appropriate protection of visibility threshold in an extreme nonattainment area. It represents consensus between EPA and the FLM's position on this issue.

ATTACHMENT D

RULE DEVELOPMENT PROCESS

Proposed Amendments to Rule 1303 - Requirements (New Source Review) and Rule 2005 - New Source Review for RECLAIM



Total Time Spent in Rule Development, Pre-Board Hearing: 5 months

ATTACHMENT E

KEY CONTACTS LIST

- United States Department of Agriculture, Forest Service
- United States Department of Interior, National Park Service
- Environmental Protection Agency
- Air Resources Board
- AQMD Committees
  - Stationary Source Committee (SSC)
  - Technical Advisory Committee to the IAIC
- Home Rule Working Group
- Industry/Regulated Community/Other
  - The Gas Company
  - Los Angeles County Sanitation District
  - Los Angeles Department of Water and Power
  - Southern California Edison
  - Western State Petroleum Association
  - City of Los Angeles

South Coast
Air Quality Management District
21865 E. Copley Drive, Diamond Bar, CA 91765-4182
(909) 396-2000 • http://www.aqmd.gov

March 7, 1996

Subject: **Notice Of Exemption From The California Environmental Quality Act**

Project Title: **Proposed Amended Rule 1303 - Requirements (New Source Review) and Rule 2005 - New Source Review For RECLAIM**

Pursuant to State California Environmental Quality Act (CEQA) Guidelines, the South Coast Air Quality Management District (AQMD) is the Lead Agency and will prepare a Notice of Exemption for the project identified above.

As discussed in the attached Notice of Exemption, the proposed project is exempt from CEQA pursuant to state CEQA Guidelines sections 15002 (k)(1) - Three Step Process and 15308 - Actions by Regulatory Agencies for the Protection of the Environment. The Notice of Exemption has been prepared pursuant to state CEQA Guidelines Section 15062 - Notice of Exemption.

The Notice of Exemption will be filed with the county clerks of Los Angeles, Orange, Riverside and San Bernardino counties immediately following the adoption of the proposed project.

Any questions regarding this Notice of Exemption should be sent to Jonathan D. Nadler (c/o Office of Planning and Policy) at the above address. Mr. Nadler can also be reached at (909) 396-3071.

Date: 3/7/96 Steve Smith

Steve Smith, Ph.D.
Program Supervisor
Office of Planning and Policy

Reference: California Code of Regulations, Title 14

NOTICE OF EXEMPTION

To: *County Clerks*
Riverside, Los Angeles,
Orange, San Bernardino
Diamond Bar, CA 91765

From: *South Coast Air Quality Management District*
21865 Copley Drive

Project Title:
Proposed Amended Rule 1303 - Requirements (New Source Review) and Rule 2005 - New Source Review for RECLAIM

Project Location:
South Coast Air Quality Management District (the South Coast Air Basin [Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties] and the Los Angeles County and Riverside County portions of the Southeast Desert Air Basin within the jurisdiction of the SCAQMD (Note: RECLAIM applies only to the South Coast Air Basin)

Description of Nature, Purpose, and Beneficiaries of Project:
The proposed project will incorporate protection of visibility for Federal Class I areas into Regulations XIII and XX. Protection of visibility for Federal Class I areas and notification of Federal Land Mangers are requirements of federal law.

Name of Public Agency Approving Project:
South Coast Air Quality Management District

Name of Person or Agency Carrying Out Project:
South Coast Air Quality Management District

Exempt Status:

-Three-Step Process [CEQA Guidelines Section 15002(k); and
- Review for Exemption [CEQA Guidelines Section 15308]

Reasons why project is exempt:
The proposed project has no significant effect on emissions or emission limits and merely incorporates rule language for compliance with federal visibility requirements. Having reviewed the proposed project pursuant to CEQA Guidelines Section 15002(k) - Three Step Process, the AQMD has determined that the proposal is exempt from CEQA pursuant to CEQA Guidelines Section 15308 - Actions by Regulatory Agencies for Protection of the Environment, since the activity is covered by this Class 8 exemption for actions to assure maintenance, restoration, enhancement, or protection of the environment.

Contact Person:	**Area Code**	**Telephone**
Jonathan D. Nadler	*(909)*	*396-3071*

Signature *signed upon certification*
Steve Smith, Ph.D.
Program Supervisor
Office of Planning and Policy

Date Received for Filing_____

(Adopted Oct. 5, 1979)(Amended March 7, 1980)(Amended Sept. 10, 1982)
(Amended July 12, 1985)(Amended August 1, 1986)(Amended June 28, 1990)
(Amended May 3, 1991)(December 7, 1995)

PAR 1303h
March 20, 1996

PROPOSED AMENDED RULE 1303. REQUIREMENTS

(a) Best Available Control Technology (BACT):

(1) The Executive Officer or designee shall deny the Permit to Construct for any relocation or for any new or modified source which results in an emission increase of any nonattainment air contaminant, any ozone depleting compound, or ammonia, unless BACT is employed for the new or relocated source or for the actual modification to an existing source.

(2) In implementing subdivision (a), the Executive Officer or designee shall periodically publish guidelines indicating the administrative procedures and requirements for commonly permitted sources. BACT for other source categories shall be determined on a case-by-case basis using the definition of BACT in Rule 1302 and the general administrative procedures and requirements of the BACT Guidelines.

(3) Where the requirement of paragraph (a)(1) is applicable to a small business that is not a major polluting facility, the Executive Officer or designee shall consider cost in determining the level of BACT required for new or modified sources at such a facility, provided that the applicant fully substantiates his eligibility as a small business as defined in Rule 1302. Notwithstanding the preceding sentence, BACT for such sources shall be at least as stringent as Lowest Achievable Emission Rate (LAER) as defined in the federal Clean Air Act Section 171(3) [42 U.S.C. Section 7501(3)].

(4) The BACT requirements of this paragraph shall apply regardless of any modeling or offset exemption in Rule 1304.

(b) The Executive Officer or designee shall, except as Rule 1304 applies, deny the Permit to Construct for any new or modified source which results in a net emission increase of any nonattainment air contaminant at a facility, unless each of the following requirements is met:

(1) Modeling

The applicant substantiates with modeling, according to Appendix A or other analysis approved by the Executive Officer or designee, that the new facility or modification will not cause a significant increase in an air quality concentration as specified in Table A-2 of Appendix A.

(2) Emission Offsets

Unless exempt from offsets requirements pursuant to Rule 1304, emission increases shall be offset by either Emission Reduction Credits (ERCs) approved pursuant to Rule 1309, or by allocations from the Priority Reserve in accordance with the provisions of Rule 1309.1. Offset ratios shall be 1.2-to-1.0 for ERCs and 1.0-to-1.0 for allocations from the Priority Reserve, except for facilities located in the SEDAB, where the offset ratio for ERCs only shall be 1.2-to-1.0 for VOC, NO_X, SO_X and PM_{10} and 1.0-to-1.0 for CO.

(3) Sensitive Zone Requirements

Unless credits are obtained from the Priority Reserve, facilities located in the South Coast Air Basin are subject to the Sensitive Zone requirements specified in Health and Safety Code Section 40410.5. A facility in zone 1 may obtain ERCs originated in zone 1 only, and a facility in zone 2A may obtain ERCs from either zone 1 or zone 2A or both or demonstrate to the Executive Officer or designee a net air quality benefit in the area impacted by the emissions from the subject facility.

(4) Facility Compliance

The subject facility complies with all applicable rules and regulations of the District.

(5) Major Polluting Facilities

In addition to the above requirements, any new major polluting facility or major modification at an existing major polluting facility shall comply with the following requirements:

(A) Alternative Analysis

Conduct an analysis of alternative sites, sizes, production processes, and environmental control techniques for such proposed source and demonstrate that the benefits of the proposed project outweigh the environmental and social costs associated with that project.

(B) Statewide Compliance

Demonstrate prior to the issuance of a Permit to Construct, that all major stationary sources, as defined in the jurisdiction where the facilities are located, that are owned or operated by such person (or by any entity controlling, controlled by, or under common control with such person) in the State of California are subject to emission limitations and are in compliance or on a schedule for compliance with all applicable emission limitations and standards under the Clean Air Act.

(C) Protection of Visibility

(i) Conduct a modeling analysis for plume visibility in accordance with the procedures specified in Appendix B if the emission increase from the new or modified source exceeds ~~82 lbs/day~~ *15 tons/year* of PM_{10} or ~~219 lbs/day~~ *40 tons/year* of NO_X; and the location of the source, relative to the closest boundary of a specified Federal Class I area, is within the distance specified in Table C-1.

Table C-1

Federal Class I Area	*Distance (km)*	*Background Visual Range (km)*
Agua Tibia	28	171
Cucamonga	28	171
Joshua Tree	29	180
San Gabriel	29	175
San Gorgonio	32	192
San Jacinto	28	171

(ii) In relation to a permit application subject to the modeling analysis required by clause (b)(5)(C)(i), the Executive Officer shall:

(I) deem a permit application complete only when the applicant has complied with the requisite modeling analysis for plume visibility pursuant to clause (b)(5)(C)(i);

(II) notify and provide a copy of the complete permit application file to the applicable Federal Land Manager(s) within 30 calendar days after the application has been deemed complete and at least 60 days prior to final action on the permit application;

(III) consider all written comments, *relative to visibility*, from the responsible Federal Land Manager(s), including any regional haze modeling performed by the Federal Land Manager(s), received within 30 days of the date of notification when determining the terms and conditions of the permit; and,

(IV) explain its decision or give notice as to where to obtain this explanation if the Executive Officer finds that the Federal Land Manager(s) analysis does not demonstrate that a new or modified source may have an adverse impact on visibility in an affected Federal Class I area; or

(V) deny the Permit to Construct or Permit to Operate if the Executive Officer determines that the new or modified source would cause an adverse impact on the visibility of an affected Federal Class I area.

(~~C~~)(D) Compliance Through California Environmental Quality Act (CEQA)

The requirements of subparagraph (b)(5)(A) may be met through compliance with the California Environmental Quality Act (CEQA) in the following manner:

(i) if the proposed project is exempt from CEQA analysis pursuant to a statutory or categorical exemption pursuant to Title 14, California Code of Regulation ("CCR") Sections 15260 to 15329, subparagraph (b)(5)(A) shall not apply to that project;

(ii) if the proposed project qualifies for a negative declaration pursuant to 14 CCR Section 15070, or for a mitigated negative declaration as defined in Public Resources Code section 21064.5; subparagraph (b)(5)(A) shall not apply to that project, or

(iii) the proposed project has been analyzed by an environmental impact report pursuant to Public Resources Code Section 21002.1 and 14 CCR Section 15080 et seq., subparagraph (b)(5)(A) shall be deemed to be satisfied.

APPENDIX A

The following sets forth the procedure for complying with the air quality modeling requirements of Rule 1303(b). An applicant must either (1) provide an analysis, approved by the Executive Officer or designee, or (2) show by using the Screening Analysis below, that a significant increase in air quality concentration will not occur. Modeling for VOC and SO_x is not required.

Table A-1 of the screening analysis is subject to change by the Executive Officer or designee, based on improved modeling data.

SCREENING ANALYSIS

Compare the emissions from the source you are applying for to those in Table A-1. If the emissions are less than the allowable emissions, no further analysis is required. If the emissions are greater than the allowable emissions, a more detailed air quality modeling analysis is required.

Table A-1

Allowable Emissions
for Noncombustion Sources and for
Combustion Sources less than or equal to 40 Million BTUs per hour

Heat Input Capacity (million BTUs/hr)	NO_x (lbs/hr)	CO (lbs/hr)	PM_{10} (lbs/hr)
Noncombustion Source	0.068	3.7	0.41
<2	0.20	11.0	1.2
>2 <5	0.31	17.1	1.9
>5 <10	0.47	25.9	2.8
>10 <20	0.86	47.3	5.2
>20 <30	1.26	69.3	7.6
>30 ≤40	1.31	72.1	7.9

TABLE A-2

Most Stringent Ambient Air Quality Standard and
Allowable Change in Concentration
For Each Air Contaminant/Averaging Time Combination

Air Contaminant	Averaging Time	Most Stringent Air Quality Standard		Significant Change in Air Quality Concentration	
Nitrogen Dioxide	1-hour	25 pphm	500 ug/m^3	1 pphm	20 ug/m^3
	Annual	5.3 pphm	100 ug/m^3	0.05 pphm	1 ug/m^3
Carbon Monoxide	1-hour	20 ppm	23 mg/m^3	1 ppm	1.1 mg/m^3
	8-hour	9.0 ppm	10 mg/m^3	0.45 ppm	0.50 mg/m^3
Suspended Particulate Matter-<10um (PM_{10})	24-hour	50 ug/m^3			2.5 ug/m^3
	Annual Geometric Mean	30 ug/m^3			1 ug/m^3
Sulfate	24-hour	25 ug/m^3			1 ug/m^3

~~APPENDIX B~~

~~AVAILABLE AREAS FOR OBTAINING EMISSION OFFSETS~~

APPENDIX B
MODELING ANALYSIS FOR VISIBILITY

(a) The modeling analysis performed by the applicant shall consider:

(1) the emission increase from the new or modified source;

(2) the location of the source and its distance to the closest boundary of specified Federal Class I area(s); and,

(3) the applicable background visual range from Table C-1.

An adverse plume impact on visibility results when either the total color contrast value (Delta-E) is greater than 2.0 or the plume contrast value (C) is greater than 0.05 *unless the Executive Officer determines that there is no adverse visibility impact based upon substantial evidence provided by the project applicant.*

(b) The modeling analysis for plume visibility required pursuant to clause (b)(5)(C)(i) of this rule shall comply with the most recent version of:

(1) "Workbook for Plume Visual Impact Screening and Analysis (Revised)," EPA-454-/R-92-023, US EPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711;

(2) "Permit Application Guidance for New Air Pollution Sources," Natural Resources Report/NRAQD/NRR-93/09, US Department of the Interior National Park Service, Air Quality Division; and

(3) "Guidance for Evaluating Air Pollution Impacts on Class I Wilderness Areas in California," General Technical Report PSW-GTR-136, US Department of Agriculture Forest Service, Pacific Southwest Research Station.

(c) For the purpose of subclause (b)(5)(C)(ii)(III) an adverse regional haze impact on visibility may occur when regional haze modeling shows a greater than ten percent change in visual range *extinction* or greater than one deciview change due to a particular project.

(Adopted October 15, 1993)(Amended December 7, 1995)
PAR2005e
March 20, 1996

PROPOSED AMENDED RULE 2005. NEW SOURCE REVIEW FOR RECLAIM

(a) Purpose

This rule sets forth pre-construction review requirements for new facilities subject to the requirements of the RECLAIM program and for modifications to existing RECLAIM facilities. The purpose of this rule is to ensure that the operation of such facilities does not interfere with progress in attainment of the National Ambient Air Quality Standards, and that future economic growth within the South Coast Air Basin is not unnecessarily restricted.

(b) Requirements for New or Relocated RECLAIM facilities

(1) The Executive Officer shall not approve the application for a Facility Permit to authorize construction or installation of a new or relocated facility unless the applicant demonstrates that:

(A) Best Available Control Technology (BACT) will be applied to every emission source located at the facility; and

(B) the operation of any emission source located at the new or relocated facility will not result in a significant increase in the air quality concentration for NO_2 as specified in Appendix A. The applicant shall use the modeling procedures specified in Appendix A.

(2) The Executive Officer shall not approve the application for a Facility Permit authorizing operation of a new or relocated facility, unless the applicant demonstrates that:

(A) the facility holds sufficient RTCs to offset the total facility emissions for the first year of operation, at a 1-to-1 ratio; and

(B) the RTCs procured to comply with the requirements of subparagraph (b)(2)(A) were obtained pursuant to the requirements of subdivision (e).

(c) Requirements for Existing RECLAIM Facilities

(1) The Executive Officer shall not approve an application for a Facility Permit Amendment to authorize the installation of a new source or modification of an

existing source which results in an emission increase as defined in subdivision (d), unless the applicant demonstrates that:

(A) BACT will be applied to the source; and

(B) the operation of the source will not result in a significant increase in the air quality concentration for NO_2 as specified in Appendix A. The applicant shall use the modeling procedures specified in Appendix A.

(2) The Executive Officer shall not approve an application for a Facility Permit Amendment to authorize operation of the new or modified source which results in an emission increase as defined in subdivision (d), unless the applicant demonstrates that the facility holds sufficient RTCs to offset the annual emission increase for the first year of operation at a 1 to 1 ratio.

(3) The Executive Officer shall not approve an application to increase an annual Allocation to a level greater than the facility's starting Allocation plus non-tradable credits, unless the applicant demonstrates that:

(A) each source which creates an emission increase as defined in subdivision (d) will:

(i) apply BACT;

(ii) not result in a significant increase in the air quality concentration for NO_2 as specified in Appendix A; and

(B) the facility holds sufficient RTCs acquired pursuant to subdivision (e) to offset the annual increase in the facility's starting Allocation plus non-tradable credits at a one to one ratio for a minimum of one year.

(d) Emission Increase

An increase in emissions occurs if a source's maximum hourly potential to emit immediately prior to the proposed modification is less than the source's post-modification maximum hourly potential to emit. The amount of emission increase will be determined by comparing pre-modification and post-modification emissions on an annualized basis by using: (1) an operating schedule of 24 hours per day, 365 days per year; or (2) a permit condition limiting mass emissions.

(e) Trading Zones Restrictions

Any increase in an annual Allocation to a level greater than the facility's starting plus non-tradable Allocations, and all emissions from a new or relocated facility must be

fully offset by obtaining RTCs originated in one of the two trading zones as illustrated in the RECLAIM Trading Zones Map. A facility in Zone 1 may only obtain RTCs from Zone 1. A facility in Zone 2 may obtain RTCs from either Zones 1 or 2, or both.

(f) Offsets

Any facility which was required to provide offsets pursuant to paragraphs (b)(2), (c)(2) or subparagraph (c)(3)(B) shall, at the commencement of each compliance year, hold RTCs in an amount equal to the amount of such required offsets. The Facility Permit holder may reduce the amount of offsets required pursuant to this subdivision by accepting a permit condition limiting emissions which shall serve in lieu of the starting Allocation plus non-tradable credits for purposes of paragraph (c)(3). Unused RTCs acquired to comply with this subdivision or with paragraphs (b)(2), (c)(2), or subparagraph (c)(3)(B) may be sold only during the reconciliation period for the fourth quarter of the applicable compliance year. The Facility Permit for a new or modified facility shall require compliance with this subparagraph, if applicable.

(g) Additional Federal Requirements for Major Stationary Sources

The Executive Officer shall not approve the application for a Facility Permit or an Amendment to a Facility Permit for a new, relocated or modified major stationary source, as defined in the Clean Air Act, 42 U.S.C. Section 7511a(e), unless the applicant:

(1) certifies that all other major stationary sources in the state which are controlled by the applicant are in compliance or on a schedule for compliance with all applicable federal emission limitations or standards (42 U.S.C. Section 7503(a)(3)); and

(2) submits an analysis of alternative sites, sizes, production processes and environmental control techniques for the proposed source which demonstrates that the benefits of the proposed source significantly outweigh the environmental and social cost imposed as a result of its location, construction, or modification (42 U.S.C. Section 7503(a)(5));

(3) Compliance Through California Environmental Quality Act (CEQA)

The requirements of paragraph (g)(2) may be met through compliance with the California Environmental Quality Act (CEQA) in the following manner.

(A) if the proposed project is exempt from CEQA analysis pursuant to a statutory or categorical exemption pursuant to Title 14, California Code of Regulations ("CCR") Sections 15260 to 15329, paragraph (g)(2) shall not apply to that project;

(B) if the proposed project qualifies for a negative declaration pursuant to 14 CCR Section 15070, or a mitigated negative declaration as defined in Public Resources Code Section 21064.5, paragraph (g)(2) shall not apply to that project; or

(C) if the proposed project has been analyzed by an environmental impact report pursuant to Public Resources Code Section 21002.1 and 14 CCR Section 15080 et seq., paragraph (g)(2) shall be deemed satisfied.

(4) Protection of Visibility

(A) Conduct a modeling analysis for plume visibility in accordance with the procedures specified in Appendix B if the emission increase from the new or modified source exceeds ~~219 lbs/day~~ *40 tons/year* of NO_x; and the location of the source, relative to the closest boundary of a specified Federal Class I area, is within the distance specified in Table 4-1.

Table 4-1

Federal Class I Area	*Distance (km)*	*Background Visual Range (km)*
Agua Tibia	28	171
Cucamonga	28	171
Joshua Tree	29	180
San Gabriel	29	175
San Gorgonio	32	192
San Jacinto	28	171

(B) In relation to a permit application subject to the modeling analysis required by subparagraph (g)(4)(A), the Executive Officer shall:

(i) deem a permit application complete only when the applicant has complied with the requisite modeling analysis for plume visibility pursuant to subparagraph (g)(4)(A);

(ii) notify and provide a copy of the complete permit application file to the applicable Federal Land Manager(s) within 30 calendar days after the application has been deemed complete and at least 60 days prior to final action on the permit application;

(iii) consider all written comments, *relative to visibility*, from the responsible Federal Land Manager(s), including any haze modeling analysis performed by the Federal Land Manager(s), received within 30 days of the date of notification when determining the terms and conditions of the permit; and

(iv) explain its decision or give notice as to where to obtain this explanation if the Executive Officer finds that the Federal Land Manager(s) analysis does not demonstrate that a new or modified source may have an adverse impact on visibility in an affected Federal Class I area; or

(v) deny the Permit to Construct or Permit to Operate if the Executive Officer determines that the new or modified source would cause an adverse impact on the visibility of an affected Federal Class I area.

(h) Public Notice

The applicant shall provide public notice, if required, pursuant to Rule 212 - Standards for Approving Permits.

(i) Rule 1401

All new or modified sources shall comply with the requirements of Rule 1401 - New Source Review of Carcinogenic Air Contaminants, if applicable.

(j) Compliance with State and Federal New Source Review Requirements

By May of each year, beginning in 1995, the Executive Officer will report to the District Governing Board regarding the effectiveness of Rule 2005 in meeting the

federal New Source Review (NSR) requirements for the preceding year. The Executive Officer may impose permit conditions to monitor and ensure compliance with such requirements.

(k) Exemptions

(1) Functionally identical source replacements are exempt from the requirements of subparagraph (c)(1)(B) of this rule.

(2) Physical modifications that consist of the installation of equipment where the modification will not increase the emissions rate of any RECLAIM pollutant, and will not cause an increase in emissions above the facility's current year Allocation, shall be exempt from the requirements of paragraph (c)(2).

(3) Increases in hours of operation or throughput for equipment or processes permitted prior to October 15, 1993 that the applicant demonstrates would not violate any permit conditions in effect on October 15, 1993 which were imposed in order to limit emissions to implement New Source Review offset requirements, shall be exempt from the requirements of this rule.

(4) Increase to RECLAIM emission concentration limits or emission rates not associated with BACT permit conditions provided that the increase is not a result of any modification to equipment shall be exempt from the requirements of this rule.

APPENDIX A

The following sets forth the procedure for complying with the air quality modeling requirements. An applicant must either (1) provide an analysis, or (2) show by using the Screening Analysis below, that a significant increase in air quality concentration will not occur.

Table A-1 of the screening analysis is subject to change by the Executive Officer, based on improved modeling data.

SCREENING ANALYSIS

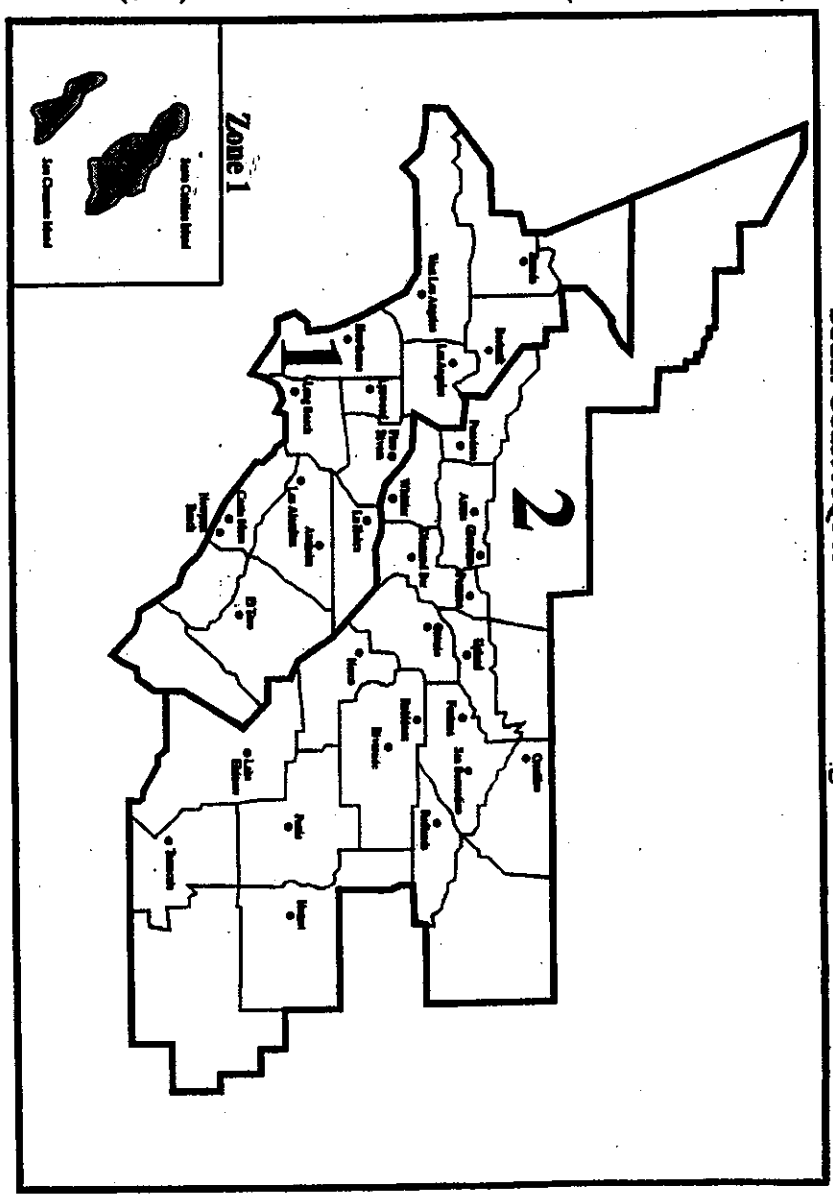
Compare the emissions from the equipment you are applying for to those in Table A-1. If the emissions are less than the allowable emissions, no further analysis is required. If the emissions are greater than the allowable emissions, a more detailed air quality modeling analysis is required.

Table A-1
Allowable Emissions
for Noncombustion Sources and for
Combustion Sources less than 40 Million BTUs per hour

Heat Input Capacity (million BTUs/hr)	NOx (lbs/hr)
Noncombustion Source	0.068
2	0.20
5	0.31
10	0.47
20	0.86
30	1.26
40	1.31

Table A-2
Most Stringent Ambient Air Quality Standard and
Allowable Change in Concentration
For Each Air Contaminant/Averaging Time Combination

Air Contaminant	Averaging Time	Most Stringent Air Quality Standard		Significant Change in Air Quality Concentration	
Nitrogen Dioxide	1-hour	25 pphm	500 ug/m^3	1 pphm	20 ug/m^3
	Annual	5.3 pphm	100 ug/m^3	0.05 pphm	1 ug/m^3



RECLAIM Trading Zones
South Coast AQMD Air Monitoring Stations

~~PLACEMENT OF~~
~~REGULATION XIII EMISSIONS OFFSET ZONES~~
~~INTO RECLAIM TRADING ZONES~~

	~~RECLAIM Trading Zone 1~~	~~RECLAIM Trading Zone 2~~
	~~1~~	~~8~~
	~~2~~	~~9~~
	~~3~~	~~10~~
	~~4~~	~~11~~
	~~5~~	
~~REGULATION XIII~~	~~6~~	~~15 (In Part)~~
~~EMISSION OFFSET~~	~~7~~	~~22~~
~~ZONES~~	~~12~~	~~23~~
	~~13~~	~~24~~
	~~16~~	~~25~~
	~~17~~	~~26~~
	~~18~~	~~27 (In Part)~~
	~~19~~	~~28~~
	~~20~~	
	~~21~~	~~32~~
		~~33~~
		~~34~~
		~~35~~
		~~36~~
		~~37~~
		~~38~~

APPENDIX B
MODELING ANALYSIS FOR VISIBILITY

(a) The modeling analysis performed by the applicant shall consider:

(1) the emission increase from the new or modified source;

(2) the location of the source and its distance to the closest boundary of specified Federal Class I area(s); and,

(3) the applicable background visual range from Table 4-1.

An adverse plume impact on visibility results when either the total color contrast value (Delta-E) is greater than 2.0 or the plume contrast value (C) is greater than 0.05 *unless the Executive Officer determines that there is no adverse visibility impact based upon substantial evidence provided by the project applicant.*

(b) The modeling analysis for plume visibility required pursuant to subparagraph (g)(4)(A) of this rule shall comply with the most recent version of:

(1) "Workbook for Plume Visual Impact Screening and Analysis (Revised)." EPA-454-/R-92-023. US EPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711;

(2) "Permit Application Guidance for New Air Pollution Sources," Natural Resources Report/NRAOD/NRR-93/09. US Department of the Interior National Park Service, Air Quality Division; and

(3) "Guidance for Evaluating Air Pollution Impacts on Class I Wilderness Areas in California," General Technical Report PSW-GTR-136. US Department of Agriculture Forest Service, Pacific Southwest Research Station.

(c) For the purpose of clause (g)(4)(B)(iii) an adverse regional haze impact on visibility may occur when regional haze modeling shows a greater than ten percent change in ~~visual range~~ *extinction* or greater than one deciview change due to a particular project.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Draft Staff Report for:
Proposed Amended Rule 1303 - Requirements (New Source Review) and
Proposed Amended Rule 2005 - New Source Review for RECLAIM

March 13, 1996
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AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
AQRV	Air Quality Related Value
BACT	Best Available Control Technology
CAA	Clean Air Act
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
EPA	Environmental Protection Agency
ERC	Emission Reduction Credit
FLM	Federal Land Manager
FS	Forest Service
ICE	Internal Combustion Engine
LAER	Lowest Achievable Emission Rate
NAAQS	National Ambient Air Quality Standard
NO_x	Oxides of Nitrogen
NPS	National Park Service
NSR	New Source Review
OCS	Outer Continental Shelf
PM10	Particulate Matter with Aerodynamic Diameter less than 10 Microns
PSD	Prevention of Significant Deterioration
RFP	Reasonable Further Progress
SEDAB	Southeast Desert Air Basin
SIP	State Implementation Plan
SO_x	Oxides of Sulfur
U.S.C.	United States Code
VOC	Volatile Organic Compound

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

The South Coast Air Quality Management District (AQMD) Governing Board amended Regulation XIII - New Source Review (NSR) and Rule 2005 - New Source Review for RECLAIM on December 7, 1995. At that time, the Governing Board deferred some issues including Federal Class I areas protection of visibility and notification to Federal Land Managers (FLM).

Protection of visibility in Federal Class I areas and notification to FLM are requirements of federal law. 42 USC Section 7491 [CAA section 169A]; 40 CFR section 51.300 et. seq.; and 40 CFR section 52.28. This staff report presents a proposal to amend Rule 1303 - Requirements (NSR) and Rule 2005 - New Source Review for RECLAIM incorporating these two requirements.

The proposal maintains the air quality objectives of Regulation XIII - New Source Review and Regulation XX - Regional Clean Air Incentives Market (RECLAIM) while facilitating the ability of new and modified existing sources to comply with NSR requirements. The overall emission reduction potential of Regulations XIII and XX are not expected to change as a result of these proposed amendments.

CHAPTER ONE
PROJECT DESCRIPTION

BACKGROUND

Federal Class I Areas, Protection of Visibility & FLM Notification

Pursuant to the Clean Air Act (CAA) and federal regulations, the AQMD is required to contain within its NSR regulation, protection of visibility analysis and FLM notification requirements for new major sources or major modifications to existing major sources that may impact visibility in Federal Class I areas. 40 CFR Section 51.307(b)(2). Federal Class I areas are specified in 40 CFR sections 81.401-436. Within the State of California, Federal Class I areas are managed by the Forest Service (FS) (Department of Agriculture) or the National Park Service (NPS) (Department of Interior). Table 1-1 presents the name and corresponding managing agency for Federal Class I areas located within AQMD's jurisdiction. Appendix A of the staff report provides a geographical description of the Federal Class I areas listed in Table 1-1.

Currently, the AQMD does not have approvable procedures for protection of visibility in Federal Class I areas in its SIP. 40 CFR section 52.281(d). Therefore, the EPA, by default, has been given the authority to implement protection of visibility requirements and notice procedures set forth in 40 CFR section 52.28 for Federal Class I areas in the AQMD. This proposal is intended to rectify this situation and put these statutory requirements under local control as set forth in the CAA.

Table 1-1 Federal Class I Areas

Federal Class I Area	Managing Agency
Agua Tibia	Forest Service
Cucamonga	Forest Service
Joshua Tree	National Park Service
San Gabriel	Forest Service
San Gorgonio	Forest Service
San Jacinto	Forest Service

Based on the applicable definitions of "major polluting facility"[Rule 1302(p) and Rule 2002(c)(38)] and "major modification" [Rule 1302(o)] for AQMD's jurisdiction, the protection of visibility and FLM notification requirements could potentially affect thousands of permit actions. *Instead*, the AQMD has worked *closely* with the federal Environmental Protection Agency (EPA), Forest Service, National Park Service, and industry in an attempt to reduce the regulatory and administrative burden of these requirements without compromising the CAA goals for protection of visibility.

The objective of the protection of visibility and FLM notification requirements is to prevent future or remedy existing impairment of visibility at a Federal Class I area *42 U.S.C. Section 7491(a)*. Further, these requirements will ensure that the construction and operation of a new major source or the modification of an existing major source does not adversely impact the Federal Class I area's air quality related values (AQRV) for visibility. AQMD, in partnership with EPA, Forest Service, and National Park Service, has set the applicability threshold for these requirements based on extensive modeling. The AQMD has determined, with the concurrence of all affected federal agencies, that the preferred approach of reducing the regulatory and administrative burden is to set the threshold level for extensive visibility modeling to a level greater than the one pound per day increase definition set forth in Rule 1302(o) for these two requirements.

There are two basic reasons why the AQMD proposes to meet the visibility protection requirements through this more flexible approach (increase of the threshold level). The first reason involves consideration of the large number of major stationary sources in the AQMD and the associated administrative burden it places on industry, Forest Service, National Park Service, and the AQMD to analyze the potential visibility impact each project may or may not have on Federal Class I areas. As the only extreme ozone nonattainment area in the nation subject to this requirement and with over 5,000 permits handled annually, reality dictates that not every one of these permits be subject to the heightened scrutiny and cost of plume visibility analyses. Secondly, the EPA, in 45 Fed. Reg. 80084 (Dec. 2, 1980), which initially promulgated 40 CFR Sections 51.300 to 51.307, recognized that "unlike review under the PSD provisions, the state may, for these sources, [major stationary sources in a nonattainment area], consider cost, energy, and other relevant factors in determining whether to permit construction of the new source relative to visibility protection." The "other relevant factor" chosen by the AQMD, in consultation with the FLMs, EPA and industry, is a threshold level greater than the major stationary source and major modification levels for an extreme ozone non-attainment area but more stringent than PSD levels for a major stationary source. *This is graphically displayed in the chart below:*

	Extreme Nonattaiment	*AQMD Proposal*	*PSD Approach*
Major Stationary Source	*10 tons/year NOX 70 tons/year PM10*	*10 tons/year NOX 70 tons/year PM10*	*100-250 tons/year NOX and PM10*
Major Modification (emission increase)	*1 lbs/year NOX 15 tons/year PM10*	*40 tons/year NOX 15 tons/year PM10*	*40 tons/year NOX 15 tons/year PM10*
Potential # of Permits	*~ 5,000/year*	*~ 3 - 5/five years*	*None*
Regulatory Burden	*High*	*Appropriate*	*None*
SIP Approvability	*Likely*	*Likely*	*No*

The proposed amended rules require visibility analysis and FLM notification only for new or modified sources that exceed ~~82 lbs/day~~ *15 tons/year* of PM_{10} or ~~219 lbs/day~~ *40 tons/year* of NO_X and the location of the source, relative to the boundary of any Federal Class I area, is within the distances specified in Table 1-2. The background visual range to be used in the modeling analysis is also set forth in the proposed amended rules and in Table 1-2. All other criteria pollutants do not affect plume visibility or regional haze, and therefore are not part of this analysis. For Rule 2005 the only applicable pollutant is NO_X.

Table 1 - 2
Federal Class I Areas Modeling Distance Thresholds

Federal Class I Area	Minimum Distance (km)	Background Visual Range (km)
Agua Tibia	28	171
Cucamonga	28	171
Joshua Tree	29	180
San Gabriel	29	175
San Gorgonio	32	192
San Jacinto	28	171

Protection of Visibility Analysis Objective

As required by federal regulations, a person responsible for a project subject to these requirements must demonstrate, by modeling, that the new source or modification to an existing source would not cause a degradation of visibility at a Federal Class I area. There are two tests that must be met: 1) no degradation of regional visibility (i.e. regional haze) and, 2) visible plume analysis.

The test for regional visibility must demonstrate that the construction of a new source or the modification of an existing source would not further degrade visibility in the region. Based on the completeness of its regulatory program, the AQMD believes that there is no need to subject permit applicants to regional visibility analysis. The AQMD's overall regulatory program calls for: 1) no net increase in emissions (offsets); 2) installation of Best Available Control Technology (BACT); and, 3) emission reductions achieved by the implementation of Air Quality Management Plan (AQMP) control measures. The AQMD believes that these requirements will protect regional visibility and not compromise it any further. *As shown in an AQMD study (Lewis & Davidson, 1991), visibility has improved over the period of 1960 to 1989, with the greatest improvements occurring in the coastal areas.* Therefore, the AQMD is proposing that a source subject to the protection of visibility analysis only be required to conduct plume analysis and not regional haze visibility analysis. *To date, the EPA and the FLM for Federal Class I areas in the South Coast Air Basin have expressed their support for the AQMD position on regional haze.*

The FLM may however, conduct a regional haze analysis on a project at it's discretion, and provide their comments and findings to the AQMD based on such analysis. *The AQMD is not required to agree to such findings and will still be able to exercise its discretionary permit authority over the affected project.*

Visible Plume Analysis

A plume is visible if its constituents scatter or absorb sufficient light such that the plume is brighter or darker than its viewing background (e.g., the sky or a terrain feature such as a mountain). A visible plume analysis is required for the same reason that an air quality modeling analysis is required by Rules 1303 and 2005. Although the emissions from a new or modified source are offset, these offsets are generally not occurring locally. While it is true that the new or modified source is not adding to the South Coast Air Basin (Basin) emissions, the local emission budget is being increased. Since the Basin is nonattainment for ozone, NO_2, CO, and PM_{10}, a local modeling analysis is needed to assure that local unhealthful air quality is not being further degraded.

For similar reasons, a visible plume analysis is required. As discussed in the previous section, the offsetting requirements of Rules 1303 and 2005 assure that regional visibility is not further degraded. However, these offsets are not generally

experience at a class I national park or wilderness area. To ensure that is not occurring, a visible plume analysis may be required.

Figures 1-1 and 1-2 illustrate the permit action with respect to visibility modeling procedures of Proposed Amended Rules 1303 and 2005, respectively. There are two conditions which lead to the need to perform a visibility modeling analysis.

First, the PM_{10} and/or NO_x emission increase of the new or modified source must exceed their respective threshold levels of ~~82 lbs/day~~ *15 tons/year* and ~~219 lbs/day~~ *40 tons/year*, respectively. For sources directly emitting sulfuric acid mist, these emissions should be doubled and added to the PM_{10} emissions for comparison with the ~~82 lbs/day~~ *15 tons/year* threshold level. This is necessary to compensate for the higher light extinction efficiency of sulfate aerosol particles (formed from sulfuric acid) relative to PM_{10}. In adding sulfuric acid emissions to PM_{10}, any primary sulfate already occurring with the PM_{10} should be subtracted to avoid double counting. New or modified sources emitting below the threshold levels are not required to perform a visible plume analysis.

Second, a new or modified source that exceeds the threshold levels but is more than approximately 15 to 20 miles from the nearest Federal class I area (see Table 1-2 and Figure 2), also does not need to perform a visibility analysis. Therefore, a visible plume analysis is only required if a new or modified source exceeds the PM_{10} or NO_x threshold levels and it is located within the distances given in Table 1-2 of a Federal Class I area.

An internal review of the permitting activity from October 1990 to December 1995 showed that only three permits would have been subject to protection of visibility analysis. These three permits would have been able to comply with the modeling analysis for plume visibility required pursuant to the proposed amended rules.

Figure 1-1
Permit Action Flowchart - Proposed Amended Rule 1303

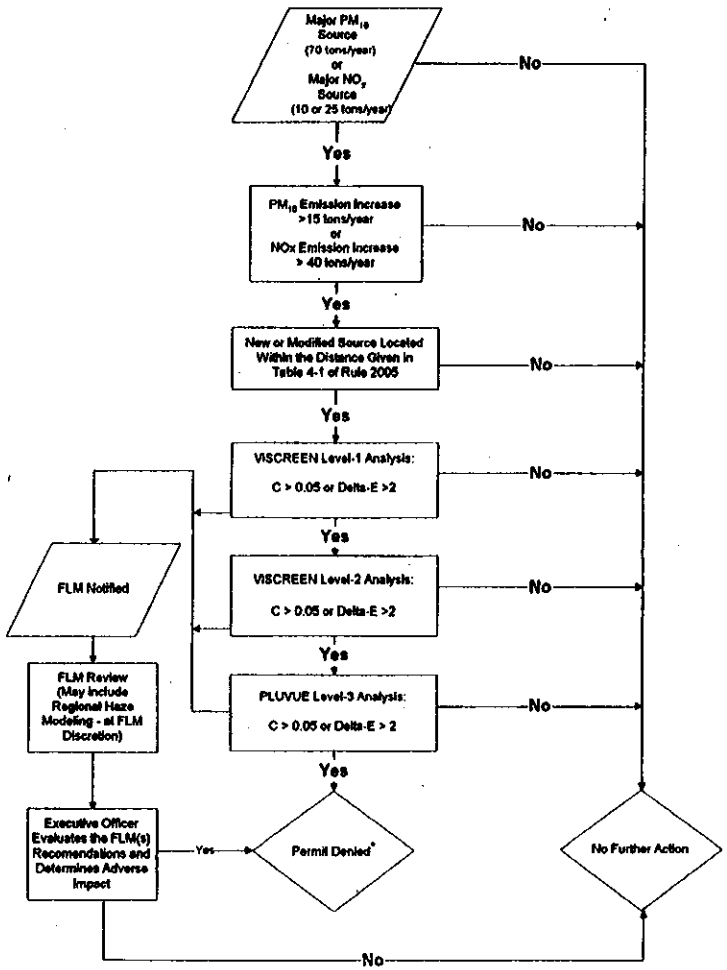
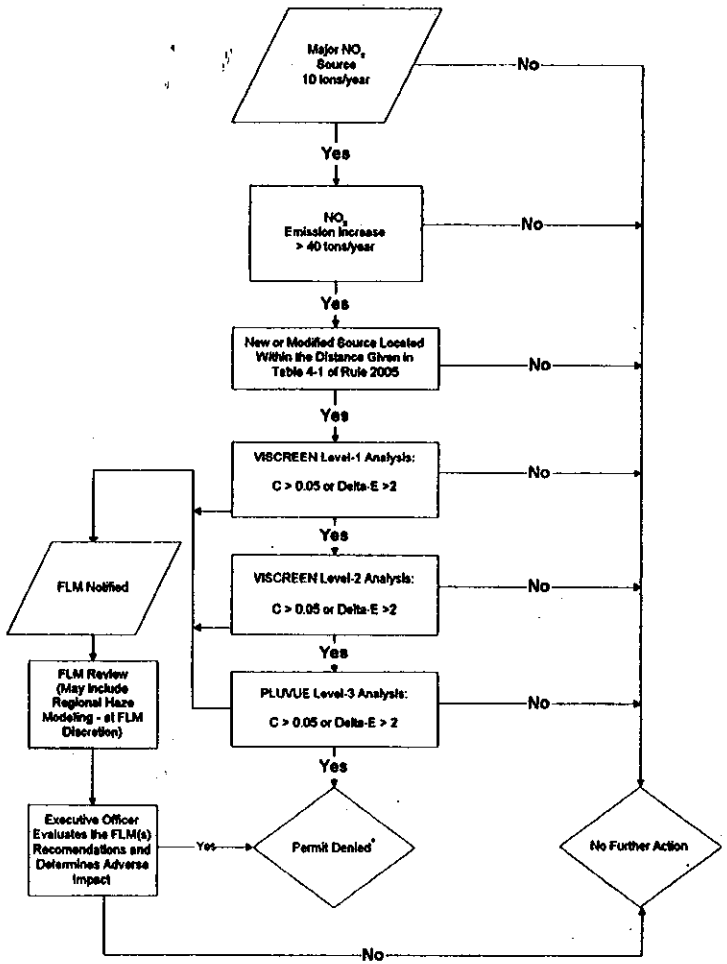


Figure 1-2
Permit Action Flowchart - Proposed Amended Rule 2005



The plume visibility analysis being proposed for Proposed Amended Rules 1303 and 2005 consists of a modeling analysis using the US EPA's plume visual impact screening model, called VISCREEN (US EPA, 1992) for preliminary analyses and US EPA's PLUVUE II model (US EPA, 1986) for refined analysis if necessary. These two models are used to determine if a plume will be visible across its viewing background. The US EPA (US EPA, 1992), the National Park Service (NPS, 1993), and the US Forest Service (FS, 1992) have provided guidance on performing plume visibility analyses for Federal Class I areas. *These models have been reviewed and are generally accepted by scientific community.* This guidance should be followed for visibility analyses for sources subject to the protection of visibility analysis of Proposed Amended Rules 1303 and 2005.

Basically, the guidance establishes three levels of analysis with an increasing degree of specificity at each successive level. VISCREEN is applied in the first two levels.

A Level-1 analysis simply requires the following parameters:

- the NO_x, PM_{10}, and primary sulfate (or sulfuric acid mist) emission rates for the new or modified source,
- the distance to the nearest *Federal* Class I area, and
- the representative background visual range.

The background visual range for each Federal Class I area is provided in the proposed amended rules and in Table 1-2 above. The second level of analysis is very similar except that more explicit input, representative of the source and the applicable Federal Class I area is assumed. Specifically, local worst-case meteorological data and particle size distribution representative of the source are used. A Level-3 visibility analysis, using US EPA's PLUVUE (US EPA, 1986), is required only if the source fails both the Level-1 and Level-2 screening tests. No further action is needed by the applicant if the source passes any level screening test, showing no adverse impact on visibility on account of visible plumes.

Regional Haze

The FLMs are concerned with regional haze and its impact on a visitor's national park and wilderness area experience. Emissions from varied and multiple sources

upwind and locally are the cause of regional haze. A single source, such as that addressed in Proposed Amended Rules 1303 and 2005, is (by itself) generally a small contributor to regional haze. Improvement in regional visibility can only be accomplished through a broad-based control strategy that reduces emissions from mobile and stationary sources. The AQMD regulatory control strategy, including Proposed Amended Rules 1303 and 2005, is designed to gradually but continuously reduce pollutant emissions in the Basin.

It is worthwhile to review the air quality trends in the Basin for the purpose of evaluating the success of the AQMD's control strategy. According to the AQMD's most recent trend report (Hoggan et al., 1994), over the period 1976-93 there have been significant improvements in ozone, CO, NO_2, SO_2, PM_{10}, lead, and sulfate air quality in the Basin. The federal annual NO_2 air quality standard was met for the first time in 1992 and has continued to be met through 1995. The state one-hour NO_2 air quality standard was met for the first time in 1994, and 1995 was the cleanest year on record for ozone. These improvements in air quality have resulted in improved visibility in the Basin. An earlier AQMD study (Lewis and Davidson, 1991), showed that visibility has improved over the period 1960 to 1989, with the greatest improvements occurring in the coastal areas.

Despite these improvements, the Basin continues to record the greatest number of days exceeding the federal air quality standards for ozone and CO, and the highest annual average NO_2 and PM_{10} concentrations, of any area of the US The 1994 Air Quality Management Plan (AQMP) calls for significant VOC, NO_x, SO_x, PM_{10}, and CO emission reductions as shown in Table 1-3 below. The table shows the 1990 emissions and the projected controlled emission levels in the year 2010 in order to attain all national ambient air quality standards. Under the AQMD's 1994 AQMP, VOC, NO_x, CO, SO_x, and PM_{10} emissions will be reduced (from the 1990 levels) by 79%, 80%, 40%, 55%, and 10%, respectively.

Table 1-3. South Coast Air Basin Emission Inventory

Year	VOC	NO_x	CO	SO_x	PM_{10}
1990	1517	1361	7990	121	838
2010 Control	~~295~~ *323*	~~531~~*556*	1570	54	755

Proposed Amended Rules 1303 and 2005 controls emissions from new and modified sources in a three tiered process:

- best available control technology (BACT) is required;
- emissions of VOC, NO_x, SO_x, PM_{10}, and CO are offset; and,
- incremental impacts must be below detectable concentration levels.

The BACT and modeling requirements minimize the local impacts from all new and modified sources. By definition, BACT is at least as stringent as Lowest Achievable Emission Rate (LAER) as defined in federal law, thus insuring that the state-of-science control technology is employed. In addition, the incremental impacts in Table A-2 of Proposed Amended Rule 1303 are stringent enough to preserve local air quality. And finally, regional air quality is gradually improved by requiring that emission increases of VOC, NO_x, SO_x, PM_{10}, and CO from new or modified sources be offset at a 1.0-to-1.2 ratio (1-ton for CO in SEDAB).

In summary, the protection and improvement of regional visibility must be achieved through a broad-based regulatory program. The AQMD's regulatory program has successfully reduced Basin-wide emissions as demonstrated by improved air quality and visibility. Proposed Amended Rules 1303 and 2005 are important components of the AQMD's control strategy; it insures improved local and regional air quality by 1) requiring all new or modified sources to install BACT; 2) demonstrating through air quality modeling that there is no further degradation of local air quality; and 3) requiring no net increase in emissions through the rule's offsetting policy. Continued improvement of air quality and visibility is expected through the implementation of Rules 1303 and 2005 and the 1994 AQMP control measures.

In their role of protecting the best ten percent of the clearest days at *Federal* Class I areas, the FLMs reserve the right to perform a regional haze calculation for new or modified sources that trigger a visible plume analysis as outlined in the prior section. The regional haze analysis may be performed by the FLMs in order to

provide proper review of potential visibility impacts at a *Federal* Class I area. This analysis would be submitted to the AQMD within the 30 day comment period provided for in the proposed amended rules. It is important to note that NPS and FS analyses of regional haze impacts by major stationary sources throughout the United States since 1977 have resulted in fewer than six projects that were required to conduct periodic monitoring of visibility impacts as a condition of their receiving an operating permit from the local air pollution control district. In none of these cases was there any request by the FLM to relocate or deny the proposed project.

The procedures for performing a regional haze analysis were developed by an interagency working group consisting of representatives of the US EPA, NPS, FS, and the US Fish and Wildlife Service and are summarized in a report titled, "Interim Recommendation for Modeling Long Range Transport and Impacts on Regional Visibility." The methodology assumes that regional visibility degradation is due primarily to fine primary particulates; sulfates as ammonium sulfate, $(NH_4)_2SO_4$; and nitrates as ammonium nitrate, NH_4NO_3. The steps for performing a regional haze analysis are summarized below:

1. **Estimate Impacts from New or Modified Source at Nearest *Federal* Class I Area** -- Run the Industrial Source Complex model, Version 3 (ISCST3) and estimate the peak 24-hour concentrations at the nearest *Federal* Class I area due to the source's increased PM_{10}, NO_x, and SO_x emissions. ***Since regional haze is a long range transport phenomena, the transport distance should be 50 km or greater.*** Assume all SO_x emissions are emitted as SO_2 and NO_x emissions as NO_2.

2. **Estimate Conversion of SO_2 to SO_4 and NO_2 to NO_3** -- From the average wind speed over the 24-hour period and the distance from the source to the class I area, estimate the transport time. Assuming a conversion rate of 3 percent per hour estimate the sulfate and nitrate concentrations at the class I area. Adjust the concentrations for the differences in the molecular weights between SO_2 and SO_4 and between NO_2 and NO_3. Specifically, multiply the mass concentration of SO_2 by 1.5 to obtain SO_4 and multiply the mass concentrations of NO_2 by 1.35 to obtain NO_3.

3. **Correct the SO_4 and NO_3 Concentrations for the Presence of NH_4** -- As is noted above, it is assumed that the compounds of concern are $(NH_4)_2SO_4$, NH_4NO_3, and primary fine particulate; therefore, the

concentrations of $(NH_4)_2SO_4$ and NH_4NO_3 must be adjusted for the differences in the molecular weights between SO_4 and $(NH_4)_2SO_4$ and between NO_3 and NH_4NO_3. Specifically, multiply the mass concentration of SO_4 by 1.375 to obtain $(NH_4)_2SO_4$ and multiply the mass concentrations of NO_3 by 1.29 to obtain NH_4NO_3.

4. **Adjust for the Hygroscopic Characteristics of $(NH_4)_2SO_4$ and NH_4NO_3** -- Estimate the relative humidity over the 24-hour period and use the table below to correct the $(NH_4)_2SO_4$ and NH_4NO_3 concentrations.

Relative Humidity (%)	Multiplying Factor
0	1
30	1
40	1.2
50	1.35
60	1.65
67	1.95
70	2.3
75	2.6
80	3.5
92	6.5
98	16

5. **Estimate the Background Extinction Coefficient** -- The background extinction coefficient, b_{ext}, is 3.912 divided by the visual range (in km) given in Table 1-2.

6. **Estimate the Plume Extinction Coefficient** -- The plume extinction coefficient, plume b_{ext}, is 0.003 times the sum of the primary particulate concentration, the $(NH_4)_2SO_4$ concentration, and NH_4NO_3 concentration at the Class I area as estimated in the above five steps.

7. **Estimate the Change in Background Extinction Coefficient (b_{ext})** -- Background extinction (b_{ext}) is estimated in step 5 and plume extinction (plume b_{ext}) at the class I area is estimated in step 6. The change in background extinction is estimated from the following equation:

$$10 \bullet \ln[1 + (\text{plume } b_{ext})/ b_{ext}]$$

The units are deciviews and a value greater than one deciview indicates a potentially significant change to regional visibility.

The above procedures are provided in the document titled, "Interim Recommendation for Modeling Long Range Transport and Impacts on Regional Visibility," which is available from members of the interagency working group. A sample calculation is provided next:

Sample Regional Haze Calculation

1. **Estimate Impacts from New or Modified Source at Nearest Class I Area**
   - Model-predicted 24-hour SO_2 concentration is estimated to be 0.25 $\mu g/m^3$
   - Model-predicted 24-hour PM_{10} concentration is estimated to be 0.18 $\mu g/m^3$

2. **Estimate Conversion of SO_2 to SO_4**
   - Average wind speed over the 24-hour period is 1 m/s, which is 3.6 km/hr
   - Distance from the source to the nearest class I area is 36 km
   - Transport time = (36 km)/(3.6 km/hr) = 10 hrs
   - SO_2 to SO_4 conversion rate is 3%/hr; 30% (10 hrs x 3%/hr) of SO_2 is converted to SO_4
   - The ratio of the molecular of SO_4 to that of SO_2 is 1.5
   - SO_4 concentration = 0.25 $\mu g/m^3$ x 0.30 x 1.5 = 0.11 $\mu g/m^3$

3. **Correct the SO_4 and NO_3 Concentrations for the Presence of NH_4**
   - The ratio of the molecular weight of $(NH_4)_2SO_4$ to that of SO_4 is 1.375
   - $(NH_4)_2SO_4$ concentration = 0.11 $\mu g/m^3$ x 1.375 = 0.15 $\mu g/m^3$

4. **Adjust for the Hygroscopic Characteristics of $(NH_4)_2SO_4$**
   - The relative humidity is 68%; according to the above table the multiplying factor is 2.
   - $(NH_4)_2SO_4$ concentration adjusted for water = 0.15 $\mu g/m^3$ x 2 = 0.30 $\mu g/m^3$

5. **Estimate the Background Extinction Coefficient**
   - The background visual range at class I area is given as 180 km

- Background extinction, b_{ext} = 3.912/180 = 0.02173

6. **Estimate the Plume Extinction Coefficient (plume b_{ext})**
   - Plume b_{ext} = 0.003 x 0.30 $\mu g/m^3$ of $(NH_4)_2SO_4$ + 0.003 x 0.18 $\mu g/m^3$ of PM_{10}
   - Plume b_{ext} = 0.00144

7. **Estimate the Change in Background Extinction Coefficient**
   - Change in Background Visual Range = 10 x ln(1 + 0.00144/0.02173)
   - Change in Background Visual Range = 0.6 deciview
   - Since the value is less than 1 deciview, the impacts to regional visibility are insignificant.

Definition of Modeling Terms

This section provides an explanation of the terminology as used throughout the proposed amendments. The plume impact on visibility analysis requires the applicant to demonstrate through modeling that the new or modified source would not create an adverse impact on the visibility of an affected Federal Class I area. An adverse plume impact on visibility results when either the plume contrast (C) value is greater than 0.05 or the total color contrast (Delta-E) value is greater than 2.

Plume contrast is the parameter most commonly used to describe the sensitivity of the human eye-brain system. Contrast is also the most easily calculated plume visibility parameter, since it can be based on a single wavelength of light and does not require calculations at other wavelengths in the visible spectrum as do more sophisticated parameters. Contrast is the relative difference in light intensity (radiance) of two viewed objects and be calculated as follows;

$$C = (I_1 - I_2)/I_2$$

where:

C = Plume Contrast;

I_1 = Plume light intensity at a given wavelength; and,

I_2 = Plume background light intensity at a given wavelength

Total color contrast is a plume perceptibility parameter based on the human eye/brain system's relative sensitivity to all wavelengths in the visibility spectrum. It is proportional to the perceptibility of color differences and is essentially identical to just noticeable difference.

Appendix B of Proposed Amended Rules 1303 and 2205

Subdivision (a) of Appendix B in both Proposed Amended Rule 1303 and Proposed Amended Rule 2005 establishes the parameters that must be considered by the applicant to perform plume modeling analysis. Also this subdivision defines what is an adverse plume impact on visibility. An adverse plume impact on visibility is defined as a total color contrast (Delta-E) value greater than 2 or plume contrast (C) value greater than 0.05. *A sensitive observer in the field may be able to detect plumes with a contrast (C) value of 0.02 and color contrast value (Delta-E) of 0.08. The C and Delta-E values in the proposed amended rules can be considered conservative since these values represent perceptibility threshold of a casual observer in the field. It has been shown that a sensitive observer may be able to detect plumes with contrast (C) values as low as 0.02 and color contrast values (Delta-E) of 0.8.*

Subdivision (b) of Appendix B in both the proposed amended rules set forth by reference the procedures for modeling analysis for plume visibility.

Subdivision (c) defines an adverse regional haze impact on visibility as a ten percent change in visual range or a greater than one deciview change.

Appendix A to the Staff Report

Appendix A to the staff report provides the following documents:

1. Permit Application Guidance for New Air Pollution Sources, United States Department of the Interior, National Park Service, Air Quality Division, John Bunyank; and,

2. Guidelines for Evaluating Air Pollution Impacts in Class I Wilderness Areas in California, United States Department of Agriculture, Forest Service, Pacific Southwest Research Station, Peterson, Schmoldt, Eilers, Fisher, and Doty.

The above listed documents are available from District staff upon request.

CHAPTER TWO
PROPOSED AMENDMENTS

PROPOSED AMENDMENTS

Proposed Amended Rule 1303

Paragraph (b)(5) of Proposed Amended Rule 1303 has been modified to include requirement for protection of visibility and FLM notification. New or modified major stationary sources whose emission increases exceed ~~82 lbs/day~~ *15 tons/year* of PM_{10} or ~~219 lbs/day~~ *40 tons/year* of NO_X and which are located, relative to the boundary of any Federal Class I area, within the distances specified in Table 2-1, will be required to conduct modeling to determine the visibility impacts upon any Federal Class I area. The background visual range to be used in the analysis is also set forth in the proposed amended rule.

Although the FLMs are concerned about regional haze, Proposed Amended Rules 1303 and 2005 do not require the applicant to perform a regional visibility analysis from new or modified sources. As discussed earlier, the BACT, modeling, and offset requirements of Regulation XIII plus the implementation of the 1994 AQMP control measures should result in improved regional visibility in the Basin. However, subdivision (c) in Appendix B provides that the responsible FLM may prepare and submit the results of a regional haze modeling analysis during the comment period specified in Rule 1303 (b)(5)(C)(ii)(III) and Rule 2005 (g)(4)(B)(iii). It was agreed that an adverse regional haze impact occurs with a ten percent change in visual range or a one deciview change as defined by Pitchford and Malu (1992).

The proposed amendments also includes requirements for the Executive Officer when a project is subject to the protection of visibility and notification requirements . The Executive Officer is required to: 1) notify and provide a copy of the complete application file to the applicable FLM(s) within 30 days of receipt of any completed application subject to the protection of visibility requirements and at least 60 days prior to the final action on the permit application; 2) consider all written comments from the responsible FLM(s) received within 30 days from the date of the notification; 3) explain his/her decision or give notice as to where to obtain this explanation if the Executive Officer disagrees with a FLM(s) conclusion

that a new or modified source may have an adverse impact on the visibility in an affected Federal Class I area; or, 4) deny the Permit to Construct or Permit to Operate if the Executive Officer determines that the new or modified source would cause a significant deterioration of visibility at any Federal Class I area.

Proposed Amended Rule 2005

The proposed amendments for Rule 2005 are the same as those proposed for Rule 1303, with the exception that the proposed amendments to Rule 2005 only apply to NO_X sources since Regulation XX does not apply to PM_{10} sources.

CHAPTER THREE
FINDINGS AND CONCLUSIONS

DRAFT FINDINGS REQUIRED BY HEALTH AND SAFETY CODE SECTION 40727

Necessity - The AQMD Governing Board finds and determines that Proposed Amended Rules 1303 - Requirements (New Source Review) and 2005 - New Source Review for RECLAIM, as proposed to be amended, is necessary in order to comply with applicable protection of visibility requirements for Federal Class I areas in federal law.

Authority - The AQMD Governing Board obtains its authority to adopt, amend, or repeal rules and regulations from California Health and Safety Code Sections 39002, 39650 et seq., 40000, 40001, 40412, 40440, 40441, 40463, 40702, 40725 through 40728, 40920.5 41508, 41700, 40702, 40920.5, 42300, 42301.10 through 42301.12, and 42 U.S.C. Sections 7410, 7491, 7501, 7503, 7511a and 40 CFR Sections 51.300 to 307 and 40 CFR Section 52.28.

Clarity - The AQMD Governing Board finds and determines that Proposed Amended Rules 1303 - Requirements (New Source Review) and 2005 - New Source Review for RECLAIM, have been amended taking into consideration public comments from persons affected by the rule, and as a result, its meaning can be easily understood by the persons directly affected by it.

Consistency - The AQMD Governing Board determines that Proposed Amended Rules 1303 - Requirements (New Source Review) and 2005 -New Source Review for RECLAIM, are in harmony with, and not in conflict with or contradictory to, existing federal or state statutes, court decisions or regulations.

Non-Duplication - Proposed Amended Rules 1303 - Requirements (New Source Review) and 2005 - New Source Review for RECLAIM, do not impose the same requirement as any existing state or federal regulations, and are necessary and proper to execute the powers and duties granted to, and imposed upon, the AQMD.

Reference - In adopting these rules, the AQMD Governing Board references the following statutes which the AQMD hereby implements, interprets or makes specific: federal Clean Air Act §§ 110, 169A, 171, 173 and 182(e) (42 U.S.C. §§ 7410, 7491, 7501, 7503 and 7511a); and Health and Safety Code Sections 40440, 40913, 41700 and 40702.

CONCLUSION

The AQMD has worked *closely and extensively* with the federal EPA, FS, NPS, and industry to develop amendments to Rule 1303 - Requirements (New Source Review) and Rule 2005 - New Source Review for RECLAIM, with the objective of complying with the mandates of federal law and streamlining the permitting process. The proposed amendments will ensure compliance with the protection of visibility requirements of the CAA and will reduce the regulatory burden for the regulated community. The proposed amendments are also expected to reverse the EPA's finding that the AQMD does not have an approvable visibility protection element in its SIP and to place the protection of visibility in mandatory Federal Class I areas into the AQMD's responsibility as envisioned by the CAA. Therefore, it is recommended that the AQMD Governing Board adopt these amendments at their April 12, 1996 Board meeting.

analysis is not required when the new or modified source is sufficiently distant from the Federal Class I area and thus its emittants are dispersed adequately.

Furthermore, a review of the permitting activities of the last five years using the proposed threshold levels showed that only three (3) projects would have been subject to these requirements. While AQMD recognizes that there is no guarantee than only a small number of projects would be impacted in the future, it is quite confident that the rules, as proposed, would not burden the regulated community or the affected agencies. AQMD also believes that the proposed amendments to Rules 1303 and 2005 will not only meet the statutory requirements of the Clean Air Act, but also will ensure the protection of visibility in Federal Class I areas.

Comment 1-2: The visibility requirements are inevitably tied to Prevention of Significant Deterioration (PSD), no more stringent requirements that those that appear in PSD should be applicable. These include the two-part test as to the size of the major source, either 100 or 250 tons per year, coupled with a modification level of 40 tons per year for NOx and 15 tons per year for PM10. AQMD seems to be selectively extracting only the second part of the PSD test.

Response 1-2: Based on *42 U.S.C. Section 7491(a) and 40 CFR Section 51.307*federal ~~regulations~~, the AQMD believes that the "protection of visibility" requirements apply to new or modified major sources as defined by CAA designation of the AQMD as an extreme nonattainment area *and that the extreme nonattainment area* ~~with its own specific definition~~ of a major stationary source *applies here not PSD levels*. The proposed emission threshold levels and affected distances being proposed as applicability criteria were developed taking into consideration the AQMD's existing NSR program and modeling studies. *Staff* ~~It is believesd~~ that these applicability criteria will meet the statutory requirements of the Clean Air Act and ensure the protection of visibility in Federal Class I areas. The AQMD does not support the emission *major stationary source* thresholds to be raised to 100-250 tons per year, since doing so would *defeat the CAA requirement of making "reasonable progress toward meeting the national goal" of preventing future and remedying existing visibility impairment* ~~render the protection of visibility in Federal Class I areas requirement meaningless in the South Coast~~ *(42 USC Section 7491(b)(2))*. There are very few if any 100-250 tons per year sources in the South Coast that would exceed the suggested 2-tier threshold level for the visibility requirement to even go into effect. ~~The South Coast has extremely low thresholds for these definitions because federal and state law have~~

CHAPTER FOUR
COMMENTS

Comment 1-1: The inclusion of the federal government into the local permitting review process will add a layer of uncertainty for projects that would be impacted by these proposed changes. The uncertainties include whether or not a project can ultimately be approved or must be relocated and what a project ultimately needs in terms of offsets. While we understand that federal law requires federal land manager review, we also believe that these federal agencies and the EPA have the latitude to provide an alternative, as discussed below.

It remains unclear, given the AQMD's NSR program and specifically the zero offsetting requirements and ground level impact analyses currently required, how these requirements are not sufficient in themselves to substantially satisfy the visibility requirements.

We believe that an inconsistency must exist for EPA and the federal land managers to now say that even though a source in the SCAB will not have a measurable impact on the background air quality, it may impact visibility.

AQMD should address this point and also provide a modeling analysis that specifically answers the question if a source demonstrates through modeling (e.g., ISCST or RTDM) that the ground level impact from a source is below the measurable levels defined for NOx and PM10, can the source's plume also be found to have a significant impact on visibility?

Response 1-1: Whereas the commentator is correct in stating that offsetting is the cornerstone of the AQMD's NSR program, and that such offsetting program assures no new increase in emissions from new and modified sources, it is important to understand that offsetting along with the application of BACT are, in general, protective of regional visibility. It is for these reasons that AQMD believes that applicants should not be required to perform regional haze analysis. However, the NSR program (offsets and BACT) may not be sufficient to mitigate adverse plume impacts upon a Federal Class I area. The reason for this is that an adverse plume impact is not a regional impact; an adverse plume impact can be defined as a localized impact perceived by a person located in a Federal Class I area. The proposed amendments to Rules 1303 and 2005 were developed with the extensive collaboration of all federal agencies involved. The commentator suggests a process that has been already considered by AQMD. In fact, the proposal already takes into account the existing regulatory program (New Source Review requirements). Based on the existing NSR program, the applicant is only required to conduct "plume analysis" and not regional haze analysis. In addition, a visible plume

~~designated it as extreme nonattainment area for air quality standards.~~ *The AQMD's use of the second part of the PSD test only is rationally based upon EPA's guidance in 45 FR Section 80084 (12/2/80) when EPA promulgated 40 CFR Section 51.307. The EPA recognized that visibility protection in a nonattainment area would be different than in attainment areas. The EPA allowed air pollution control districts in nonattainment areas to "conserve cost, energy, and other relevant factors" when formulating regulations to comply with the CAA's visibility protection requirement. Staff has read "other relevant factors" in such a way as to merge the PSD elements of 42 U.S.C. Section 7491 with the distinctive elements of 42 U.S.C. Section 7511a to arrive at a flexible, workable, protective and CAA - compliant visibility protection program.*

Comment 1-3: Please clarify that the emission increase from the modified source referenced in Part (c) of Proposed Amended Rule 1303 includes only daily operational emissions and is not triggered by short term NOx or PM10 emissions during construction.

Response 1-4: Staff agrees. Part (c) of Proposed Amended Rule 1303 only applies to daily operational emissions. Please be advised that construction emissions may be governed by CEQA mitigation measures.

Comment 1-5: Even if the rule language is silent as to mitigations, we find it somewhat strange that the Executive Officer can request external offsets given the already conservative 1.2 to 1 ratio required under existing New Source Review. If the efficacy of the 1.2 ratio is not adequate, we are at a loss to explain how additional external offsets will be proven effective. If increasing the external offset ratio only has merit in decreasing the regional haze component of the analysis that is to be performed by the federal land managers, then you are in effect saying that regional haze has the same weight as the plume analysis performed by the applicant. This point needs to be clarified. It seems in our discussion at ~~last Friday's~~ *the* workshop *on February 16, 1996,* the regional haze analysis to be performed by the federal land manager was almost an option on their part which did not seem to carry the same weight as the individual applicant's plume analysis.

Response 1-5: If a project fails to meet the "protection of visibility" requirements and the new or modified source could create an adverse *plume* visibility impact in a Federal Class I area, the Executive Officer may deny the permit if feasible mitigation measures cannot be or are not instituted to address the visibility problem. It will be up to the applicant with AQMD*'s* guidance to determine *the* ~~his/her~~ options for modification of the project, in order to avoid such adverse visibility impacts.

AQMD believes that a source that complies with the offset requirements of NSR would not create a regional visibility problem. It is for this reason and based on the AQMD's over-all regulatory program, that AQMD has elected to require permit applicants to conduct only plume modeling analysis and not regional haze analysis. However, the FLM(s) may elect *to conduct regional haze analysis and provide recommendations to the Executive Officer. If the Executive Officer determines that the new or modified source creates a regional haze problem, the Executive Officer is required to deny the permit. However, as stated before, it is very unlikely that any source that complies with the offset requirements of NSR would ever create a regional haze impact.*

Comment 1-6: In Appendix B, please provide detailed political maps with specific boundaries showing the distances from the Federal Class I areas and the cities that they impact.

Response 1-6: Staff agrees. This report includes a detailed map of the affected areas. Your comment is appreciated.

Comment 1-7: We are somewhat concerned that regulatory compliance is now tied to specific model parameters for instance, referencing AE's of greater than 2.0 or plume contrast values greater than 0.05. The specific version of the models used should be cited in Appendix B so that an applicant can identify if a change has occurred. Also, all models and all parameters that the federal land managers will use in their regional haze analyses need to be specified in Appendix B. Also, copies of all three references at the bottom of page 9 Appendix B should be made available for public review.

Response 1-7: Regulatory compliance for protection of visibility requirements have been tied to specific parameters with the purpose of establishing a clear understanding of the definition of an adverse plume impact. This will ensure that both the applicants and the regulatory agencies consistently model the project's visibility impacts so that specific standards not be exceeded.

The model to be applied will be the latest version available and downloaded from EPA's bulletin board system. This procedure is no different from the dispersion modeling requirements of Rules 1303 and 2005. The specific dispersion model is not specified; it is assumed that the latest version of the appropriate guideline model is used. VISCREEN and PLUVUE are simply EPA's guideline models for evaluating visible plume impacts.

All of the relevant modeling parameters have either been provided in the proposed amended rules (visual ranges and Federal Class I areas) or in the staff report (regional haze). Inputs, such as the emission rate of the source,

the distance to the nearest Federal Class I area, the meteorology, etc., are specific to each individual permit and cannot be specified in the rule.

Copies of the references listed in Appendix B are readily available from the Federal Land Managers.

Comment 1-8: The Park Service has the primary responsibility to protect Federal Class I areas visibility. However, AQMD has the enforcement authority to limit air pollution from sources whose air pollution could potentially impact visibility in Federal Class I areas. Therefore, we believe working together as partners will provide more effective visibility protection and ultimately cleaner, healthier, more beautiful landscapes within the AQMD. For this reason the Park Service fully endorses the concept of AQMD's draft amendment which addresses limiting visibility impacts in Federal Class I areas. We appreciate and vitally need AQMD's support in protecting against visibility impairment and other negative air quality related impacts to ecosystems of Joshua Tree National Park. Your District's effort aimed at protecting visibility in federal Class I areas is an important step towards a future which maintains clear distant vistas in areas of national significance such as Joshua Tree National Park.

The numbers reported in the proposed amendments for determining source size cut-off, minimum distance from, and background visual ranges, Federal Class I areas in the AQMD represent consensus among Park Service, US Forest Service and EPA representatives. Park Service policy for visibility protection is to protect the best visibility days from degradation because those days are the most sensitive to impairment. This policy is supported by the national visibility goal of preventing any future and remedying any existing visibility impairment. Therefore the Park Service recommends permit applicants use the top 10% background visual range values reported for a Federal Class I area when modeling visibility impacts to that area. At Joshua Tree National Park this value is 180 km, obtained using IMPROVE monitoring data during the winter season 1991-1992.

The Park Service uses a significant criteria of one deciview to determine adverse impacts to uniform haze. A one deciview change is considered to be the threshold of noticeable change in uniform haze to the casual observer. The deciview scale was modeled after the decibel scale for sound, whereby it is linear with respect to perceived visual changes throughout its entire range.

Response 1-8: Your comment is noted and appreciated.

Comment 2-1: The proposed rules require a permit applicant to conduct modeling analysis for plume visibility if the emissions increase (PM10 and/or NOX) exceeds a specific threshold and source location is within a minimum distance. Please provide the methodologies used for determination of the minimum distances.

Response 2-1: The distances provided in Table C-1 of PAR 1303 and Table 4-1 of PAR 2005 were estimated by performing a series of VISCREEN simulations of a hypothetical source emitting 30 tpy of PM_{10} and 50 tpy of NO_x. Assuming the visual ranges in Tables C-1 and 4-1, the hypothetical source is backed away from the Federal Class I area until the visible plume impacts were insignificant (i.e., $C < 0.5$ and $\Delta E < 2$). The distance at which the hypothetical source is insignificant is the minimum distance shown in Tables C-1 and 4-1.

Comment 2-2: Please provide the methodologies used for the determination of the background visual range distances.

Response 2-2: The FLMs are primarily concerned with protecting the best visibility days from degradation because those days are the most sensitive to impairment from air pollution. (Visibility is more rapidly and perceptibly affected in an initially clean atmosphere.) The FLMs recommend that the top 10% background visual range values be used for assessing visibility impacts. Background visual range is estimated directly from measurements at approximately 72 Federal Class I areas throughout the U.S. Each site has aerosol monitoring and scene monitoring equipment (automated cameras) and approximately 30 of the sites have optical monitoring equipment (i.e., transmissometers or nephelometers). Visibility measurements at San Gabriel Wilderness Area, San Gorgonio Wilderness Area, and Joshua National Park were used for the values given in Tables C-1 and 4-1. Specifically, camera-based contrast measurements at San Gabriel Wilderness Area over the period 1989 to 1993 were used to establish the visual range of 175 km. A background visual range of 192 km for the San Gorgonio Wilderness Area is based on aerosol sampler and transmissometer measurements over the period 1988 to 1995. Aerosol monitoring and nephelometer measurements taken at Joshua Tree National Park from September 1991 to July 1992 were used to estimate the background visual range of 180 km given in Tables C-1 and 4-1. The background visual ranges for Agua Tibia, Cucamonga, and San Jacinto wilderness areas are estimates from nearby measurements. *In conclusion, the parameters used by AQMD are based upon sound science and policy, based upon federal statutory goals.*

Comment 2-3: To define an adverse regional haze impact as a change in visual range of one deciview is premature. The deciview concept was developed a couple

of years ago during the Grand Canyon Visibility Transport Commission process and is not documented in EPA federal law or regulations. AQMD should refrain from the use of this definition. In addition, the question of how small a change in contrast is perceived as a "just noticeable change" has not been discussed at the federal EPA level and there is scientific debate as to whether "just noticeable change" is 1.0 or some other deciview value.

Response 2-3: A great deal of research has gone into determining a just noticeable change in visibility. This research indicates that, depending on the individual and the scene observed, a 5-to-20 percent change in visual range is detectable *or .5-to-2 deciviews*. The one deciview threshold adopted by the National Park Service (NPS) is a midpoint in that range. The NPS is currently working with the U.S. EPA in the development of a national policy on visibility. *However, until those issues are resolved,* Rules 1303 and 2005 *are based upon the best data available and verifiable for visibility impairment from air pollution*~~will be made consistent with the national policy after it is finalized~~.

Comment 2-4: The proposal requires that sources must comply with the listed ~~Environmental Protection Agency (EPA)~~ and ~~Federal Land Manager~~ (FLM) documents. There is no justification for requiring permit applicants to comply with FLM documents. In addition, it is recommended that FLM documents be available for comment as they are not a part of federal EPA statute or regulations.

Response 2-4: The Clean Air Act of 1970, as amended in 1977, charges the FLMs with the affirmative responsibility to protect visibility at Federal Class I areas from adverse impact. As a result of this assigned *statutory* responsibility, the FLMs have developed procedures and tools to address visibility impacts to class I areas from neighboring new or modified sources. As discussed in the staff report, the visibility modeling tools are VISCREEN and PLUVUE-II. The FLM procedural documents for evaluating visibility are given in Appendix B of proposed amended rules 1303 and 2005 and discussed in the staff report. The procedural documents are available from the AQMD or the FLMs upon request and the modeling tools are available from the U.S. EPA.

Comment 2-5: The proposal requires "additional mitigation measures when appropriate to mitigate an adverse impact of visibility in consultation with the responsible FLM(s)." It is recommended that this provision be replaced with the provisions of 40 CFR Part 52.28(g). This provision states that in "making the decision to issue a permit, the Administrator (Executive Officer for AQMD) may take into account the cost of compliance, the time necessary

for compliance, the energy and non-air quality environmental impacts of compliance, and the useful life of the source."

Response 2-5: AQMD has eliminated the language dealing with "additional mitigations." As with any other rule or regulation, it will be up to the applicant to select the method most appropriate to modify the project in order to comply with the Protection of Visibility requirements of Rule 1303. AQMD staff believes that the inclusion of the CFR language cited in this comment is not necessary~~, and therefore, will not include it~~ *because the AQMD Executive Officer does consider those issues when permitting a particular project.*

Comment 2-6: Please modify the definition of the term "major polluting facility" for both Proposed Amended Rules 1303 and 2005, to include facility exemption from visibility impact analysis requirements as covered in 40 CFR Part 52.28.

Response 2-6: The definition of the term "major polluting facility" as applicable to Proposed Amended Rules 1303 and 2005 are necessary *for an extreme ozone nonattainment area* to comply *with* federal law. *AQMD believes that a major source as defined in Rule 1302 has the potential to affect visibility of Federal Class I areas.* Therefore, the AQMD does not agree that this definition should be modified to exclude a major source from the Protection of Visibility requirements.

Comment 2-7: In the staff report for the proposed amendments the AQMD states that "as required by federal regulations there are two tests that must be met: 1) no degradation of regional visibility (i.e. regional haze) and, 2) visibility plume analysis." This requirement is not explicitly stated in the federal regulations (40 CFR Part 52.28). Under federal regulations, the permit applicant is only required to provide a visibility impairment analysis associated with the new or modified source.

Response 2-7: Whereas, the commentator is correct in verbatim citing of the statute, the explanation in the staff report is correct. AQMD along with all other agencies involved in the Protection of Visibility and some industry representatives agree that the Protection of Visibility Analysis include regional haze and plume analysis.

Comment 3-1: It is recommended that the emission threshold for protection of visibility requirements be stated in units of tons per year instead of pounds per day.

Response 3-1: AQMD staff has agreed to change the units for applicability of protection of visibility to units of tons per year. As changed, the applicability emission threshold units conform with the emission thresholds units of the

Clean Air Act. Annual emission rates are more appropriate and convenient for assessing visibility impacts. A visible plume impact is not considered significant by FLM(s) until it occurs in excess of four days in a year. (i.e.; one percent frequency of occurrence). The analysis for determining frequency of occurrence is greatly simplified by annualizing the emission rate. Furthermore, the use of tons per year reduces ambiguity in determining compliance with the proposed amended rule. For the above stated reasons, AQMD staff has change the applicability emission threshold to units of tons per year. This change is found throughout the proposed amended rules and the staff report.

Comment 3-2: The Eagle Mountain landfill is located in the eastern portion of the SEDAB, which is designated an "unclassified/attainment" area for all pollutants under the national ambient air quality standards. 40 CFR section 81.305. The federal permitting regulations that apply to this area are the Prevention of Significant Deterioration (PSD) regulations found at 40 CFR section 52.21. Federal regulations require a visibility analysis only for "major stationary sources" in attainment or unclassified areas. 40 CFR 52.21(i)(3) and (p).

A "major stationary source" is defined by Section 165 of the Clean Air Act and the federal PSD regulations (40 CFR 52.21 (b) (1) (i) as a source with a potential to emit of 250 tons per year, or 100 tons per year if it belongs to one of the source categories listed in the definition. The list does not included landfills. The Eagle Mountain Landfill has received a letter from EPA Region IX stating that the PSD program does not apply because the project's emissions will be maintained below the 250 ton threshold. Thus, under federal air pollution laws, a visibility analysis is not required for this project. However, as Rule 1303 is currently proposed, this project would require a visibility analysis.

Response 3-2: AQMD disagrees with the comment that "federal regulations require a visibility analysis only for" PSD "major stationary sources." As presented in the staff report, the AQMD has cited federal regulations and federal CAA language that require protection of visibility analyses for nonattainment areas, which are regulated pursuant to NSR regulations.

AQMD agrees in general with the concept that Regulation XIII does not apply to facilities located in unclassified or attainment areas. Based on the information provided by the commentor that the Eagle Mountain Landfill is located in an unclassified/attainment area, the AQMD acknowledges that the proposed amendments incorporating requirements for protection of visibility for Federal Class I areas would not apply to this project. However, in the event that such area is classified as an

nonattainment area for PM10 or NO_2, Rule 1303 including the protection of visibility requirements may apply.

Comment 3-3: Please clarify if netting is allowed under protection of visibility requirements being proposed for Rules 1303 and 2005.

Response 3-4: The protection of visibility requirement proposed under Rules 1303 and 2005 apply to net emission increases for major stationary sources. Netting is met only through internal mitigation.

ADDENDUM A

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ADDENDUM TO STAFF REPORT

FINAL SOCIOECONOMIC IMPACT ASSESSMENT

PROPOSED AMENDED RULE 1303--Requirements
AND
PROPOSED AMENDED RULE 2005 --New Source Review for RECLAIM

MARCH 1996

Prepared by: Francis Goh
Program Supervisor/Senior
Project Coordinator

Socioeconomic Assessment

Protection of visibility in Federal Class I areas and notification to Federal Land Managers (FLMs) of new major sources or major modifications at existing major stationary sources that may impact visibility are requirements of federal law. The proposed amendments to Rules 1303 (New Source Review--Requirements) and 2005 (New Source Review for NOx and SOx RECLAIM) will incorporate these requirements by requiring visibility analyses and notification of FLMs for emission increases over 82 pounds per day of PM10 and 219 pounds per day of NOx at new or modified sources within specified geographic boundaries of Class I areas.

The proposed amendments are administrative and notification oriented and will not directly affect air quality or emissions limitations. Therefore, state law requirements for preparing a socioeconomic impact assessment are not applicable for this rulemaking project (Health & Safety Code Sections 40728.5, 40440.8). Nevertheless, this assessment has been prepared to identify any potentially significant adverse socioeconomic impacts.

The AQMD is proposing a streamlined approach for the requirements in order to minimize the administrative burden on industries and all affected government agencies. Sources subject to the protection of visibility analysis will only be required to conduct plume analysis and not regional haze analysis. Three levels of screening-analysis are established, with each successive level of analysis requiring more realistic (and more stringent) assumptions than the previous level. A higher level of analysis will only be required if a source fails the previous level screening test. Each level of screening analysis uses computer-based models. These models are available in the public domain at little to no-cost to the user. Thus, the proposed screening analysis requirements should not cause any significant increase in compliance costs.

Should a project fail all three levels of screening-analysis, the AQMD may deny the permit for the project on the basis of causing adverse impacts on the visibility of a Federal Class I area. The applicant may elect to provide additional mitigation that could include additional external or internal offsets, limiting the hours of operation, or site relocation to eliminate impacts on visibility. These mitigation options could result in significant additional compliance costs. AQMD reviewed historical permit records as an indicator of the number and types of facilities that could potentially require additional mitigation. Since October 1990, only three applications exceeded the emission thresholds in the proposed rules for PM10 and NOx. Moreover, AQMD performed the screening analyses and found that all three sources would have been able to pass the screening criteria in the Level-1 analysis. Thus, while it is conceivable that a future source could be large enough to require mitigation, AQMD does not anticipate that the proposed amendments would impact a significant number of facilities or result in any significant adverse economic impacts region-wide, given that historically all permits would have passed the Level-1 analysis requirements.

In summary, the proposed amendments are requirements of federal law and are not anticipated to cause any significant region-wide adverse economic impacts.

Alternatives, Emission Reduction Potential, and Necessity of Rule Amendment

The 1994 Air Quality Management Plan (AQMP) analyzed and ranked all control measures by their cost-effectiveness. The 1994 AQMP discussion of control measures and their cost-effectiveness is incorporated herein by reference as though set forth in full. It is generally recommended that the most cost-effective actions be taken first. The proposed amendments to Rules 1303 and 2005 were not proposed in the 1994 AQMP as part of any control measure. As such, the proposed amendments are not identified in the 1994 cost-effectiveness ranking.

The proposed amendments are necessary to comply with federal requirements. None of the control measures presented and ranked in the AQMP satisfy the intent of the proposed amendments. The proposed amendments are, therefore, the preferred alternative at this time. The emission reduction potential and the necessity of the proposed amendments are discussed in the Staff Report.

Rule Adoption Relative to the Cost-Effectiveness Schedule

On October 14, 1994, the AQMD Governing Board adopted a resolution that requires staff to address whether proposed rules being considered for adoption are being presented in order of cost-effectiveness as defined in the 1994 AQMP. The proposed amendments to Rule 1303 and 2005 are not covered by the 1994 AQMP. Instead, these amendments are intended to incorporate the requirements of federal law. Consideration in the order of cost-effectiveness is, therefore, not applicable.

ADDENDUM B

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

Robert Kwong, Esq.
Senior District Counsel
South Coast Air Quality Management District
21865 East Copley Drive
Diamond Bar, California 91765-4182

Dear Robert:

This letter is in response to your request that EPA summarize the authority under the federal Clean Air Act for requiring visibility new source review in nonattainment areas.

I. Statutory Background.

Congress established the visibility protection program in section 169A of the Clean Air Act (CAA or the Act), 42 U.S.C. § 7491, as part of the 1977 amendments to the Clean Air Act.[1] The program is guided by a national goal that calls for "the prevention of any future, and the remedying of any existing, impairment of visibility in mandatory class I Federal areas which impairment results from manmade air pollution." See CAA § 169A(a)(1) (emphasis added). The following key elements of the national visibility goal provide a basic overview of the visibility protection program: (1) only special areas, mandatory class I Federal areas are required to be protected, (2) the program is both preventive and remedial, and (3) only anthropogenic sources of visibility impairment are covered, but "any" anthropogenic impairment is of concern.

Mandatory class I Federal areas are the Federal class I areas specified in section 162(a) of the CAA, 42 U.S.C. § 7472(a). These areas may not be designated as other than class I and include the following: international parks, national wilderness areas and national memorial parks greater than five thousand acres in size, and national parks greater than six thousand acres in size. The areas must have been in existence on

[1] See Pub. L. No. 95-95, 91 Stat. 685, 742-45. For a detailed examination of the programs in the 1977 amendments affecting visibility protection, with a focus on visual air quality in the southwestern United States, see Ostrov, Visibility Protection Under the Clean Air Act: Preserving Scenic and Parkland Areas in the Southwest, 10 Ecology L.Q. 397 (1982).

August 7, 1977.[2] The scope of a mandatory class I area includes any subsequent changes in boundaries, such as park expansions.

Each mandatory class I Federal area is the responsibility of a "Federal land manager" (FLM), namely the Secretary of the federal department with authority over such lands (e.g., the Secretary of Agriculture for U.S. Forest Service lands and the Secretary of the Interior for National Park Service and U.S. Fish and Wildlife Service lands). See CAA § 302(i), 42 U.S.C. § 7602(i). Under their internal agency procedures, the departmental Secretaries have delegated FLM authority to surrogate officials.

The CAA further refines the mandatory class I Federal areas of concern to include those areas where visibility is identified as an important value. See CAA § 169A(a)(2), (b)(2). EPA concluded that visibility is an important value for 156 of the eligible 158 mandatory class I Federal areas. See 44 Fed. Reg. 69,122 (Nov. 30, 1979). Two wildernesses, Rainbow Lake (Wisconsin) and Bradwell Bay (Florida), were excluded. The list of mandatory class I Federal areas where visibility is an important value is codified at 40 CFR part 81, subpt. D.

The legal centerpiece of the section 169A visibility protection provisions directs EPA to promulgate regulations to assure "reasonable progress" toward meeting the national visibility goal. See CAA § 169A(a)(4). The regulations must require each state containing a mandatory class I Federal area where visibility is an important value (and states with emissions that may reasonably be anticipated to cause or contribute to visibility impairment in a mandatory class I area) to develop and submit State Implementation Plans (SIPs) containing "emission limits, schedules of compliance and other measures as may be necessary to make reasonable progress toward meeting the national goal." See CAA § 169A(b)(2).

II. EPA's 1980 Visibility Protection Regulations and Establishment of Visibility New Source Review SIP Requirements:

In 1980 EPA issued regulations intended to assure reasonable progress toward the national visibility protection goal. See 45 Fed. Reg. 80,084 (Dec. 2, 1980). These regulations are codified at 40 CFR §§ 51.300-307 and represent the existing core requirements for state administered visibility protection programs.

[2] Congress may always specifically designate newly created parks and wilderness areas or other federal lands as mandatory class I Federal areas.

EPA's 1980 regulations required the thirty-six states[3] containing mandatory class I Federal areas where visibility is an important value to submit SIP revisions by September 2, 1981. In broad overview, the SIP revisions were required to include: (1) emission limitations representing best available retrofit technology (BART) for certain existing stationary sources (40 CFR § 51.302(c)(2)(iii)), (2) a monitoring strategy for evaluating visibility and considering available data in state regulatory decisions (40 CFR § 51.305), (3) a long-term (10-15 year) strategy for making reasonable progress toward the national goal and provision for periodic review and revision, as appropriate, of the strategy at least every three years (40 CFR § 51.306), and (4) a program to review the potential visibility impacts from new or modified major stationary sources (40 CFR § 51.307). The fourth of these programmatic elements is addressed below.

The requirement for visibility new source review is derived from the statutory national visibility goal that calls for "prevention of any future" anthropogenic visibility impairment in mandatory class I Federal areas. See CAA § 169A(a)(1). Further, EPA's delegated rulemaking authority under section 169A calls for EPA's visibility protection regulations to require SIPs to contain "such emission limits, schedules of compliance and other measures" that are necessary to make reasonable progress toward meeting the national goal. See CAA § 169A(a)(4), (b)(2). EPA's 1980 regulations reflect the Agency's judgment that SIPs containing visibility new source review programs are necessary to prevent visibility impairment in mandatory class I Federal areas.

The application of the other CAA new source review permit programs--for attainment and maintenance of the national ambient air quality standards (NAAQS)--depend on the ambient air quality status or "designation" of the area in which a proposed source would locate. The nonattainment NSR program applies in areas designated "nonattainment" for the NAAQS under section 107 of the CAA, 42 U.S.C. § 7407. See, e.g., CAA § 172(c)(5), 42 U.S.C. § 7502(c)(5). The program to Prevent Significant Deterioration of Air Quality (PSD) applies to areas designated "attainment" or "unclassifiable" for the NAAQS under section 107 of the CAA. See CAA § 161, 42 U.S.C. § 7461.

By contrast, the CAA's visibility protection program is intended to protect visual air quality resources in mandatory Federal class I areas. Thus, the visibility new source review program applies to all proposed sources that may affect visual air quality in mandatory class I Federal areas, irrespective of whether the area in which the source is locating is designated attainment, nonattainment or unclassifiable with respect to the NAAQS. In its preamble accompanying the adoption of its 1980 visibility regulations, EPA explained that "[t]oday's action

[3] Affected states are listed at 40 CFR § 51.300(b).

requires an analysis of visibility impacts by all new sources which might impair visibility in a mandatory Class I Federal area irrespective of their proposed location." See 45 Fed. Reg. at 80,088.

The visibility new source review requirements apply to "any new major stationary source or major modification." See 40 CFR § 51.307. The visibility rules define the terms "major stationary source" and "major modification" to have the meaning of those terms as defined under the PSD permit program. See 40 CFR § 51.301(p) (40 CFR § 51.24 has been recodified at 40 CFR § 51.166).

The CAA calls for a PSD preconstruction review permit program analyzing the air quality impacts associated with new or modified major stationary sources in attainment and unclassifiable areas. See CAA § 165(a), 42 U.S.C. § 7475(a). In general terms, the PSD permit program protects class I areas by allowing only a small increment of air quality deterioration in these areas and by providing for assessment of the potential impacts on the air quality-related values (AQRVs) of class I areas. See CAA §§ 163(b), 165(a)(3), (a)(5) & (d), 42 U.S.C. §§ 7473(b), 7475(a)(3), (a)(5) & (d). AQRVs include visibility and the other fundamental purposes for which such lands have been established and preserved by Congress. See S. Rep. No. 127, 95th Cong., 1st Sess. 36 (1977). The PSD program places an "affirmative responsibility" on FLMs to protect the AQRVs of class I areas. See CAA § 165(d)(2)(B).

The net effect for a PSD source that may affect the visual air quality of a mandatory Federal class I area is that it must consider both the PSD permit provisions (which include best available control technology, class I increments and protection of AQRVs) and the new source review provisions exclusively related to visibility protection. Similarly, a new or modified major stationary source proposing to locate in a nonattainment area must meet the nonattainment NSR permit requirements in addition to the visibility NSR requirements. However, the dual requirements may be addressed in a single "one-stop" permit proceeding.

For sources proposing to locate in PSD areas, EPA's visibility NSR regulations specifically provide for implementation in conjunction with and through the PSD permitting requirements at 40 CFR § 51.166. See 51.307(a); see also 45 Fed. Reg. at 80,087-89 (description of coordinated implementation of the PSD and visibility NSR provisions). The visibility NSR regulations require state PSD programs to provide for special coordination with FLMs. For example, if the state requires or receives advance notification of a permit application for a source that may affect visibility, the state must notify affected FLMs within 30 days of the early notice. See 40 CFR § 51.307(a)(2). This notification should occur "at the time the

State reasonably believes that a source intends to make an application for a permit that would affect the area" and should initiate consultation that will "continue throughout the permitting process." See 45 Fed. Reg. at 80,088.

In addition to any advance notification of a potential permit application, the state must provide written notification to the FLMs within 30 days of receipt of a permit application for a source that may affect visibility in a mandatory class I Federal area. The notification must include all information relevant to the application, an analysis of the anticipated impacts on visibility, and must be provided at least 60 days prior to the state's public hearing on the permit. See 40 CFR § 51.307(a)(1). The state must consider any analysis performed by the FLM within 30 days after notification of the permit application. If the state disagrees with the FLM about the proposed source's visibility impacts, it must explain its decision or indicate where to obtain such explanation in the notice of public hearing on the proposed permit. See 40 CFR § 51.307(a)(3).

The same protections apply to new or modified major stationary sources proposing to locate in nonattainment areas that may impact visibility in a mandatory class I Federal area. See 40 CFR § 51.307(b)(2), (b)(3). In addition, visibility NSR in nonattainment areas requires compliance with the following PSD provisions: (1) the requirement that the owner or operator analyze the impairment to visibility, soils and vegetation that would occur as a result of the source and general commercial, residential, industrial and other growth associated with the source and the air quality impact projected for the area as a result of other growth (40 CFR § 51.166(o)), (2) the requirement that the reviewing authority provide EPA with a copy of the permit application and notice of actions related to consideration of the permit (40 CFR § 51.166(p)(1)), (3) recognition of the FLMs' affirmative responsibility to protect visibility (40 CFR § 51.166(p)(2)), and (4) the public participation requirements specified in § 51.166(q) including the requirement to send a notice of public comment on the proposed permit to the FLM. See 40 CFR § 51.307(c).

The preceding discussion summarizes the visibility NSR regulations at 40 CFR § 51.307. For comprehensive coverage and understanding of the regulatory requirements, you should review the provisions of 40 CFR § 51.307.

In the preamble discussion accompanying the adoption of EPA's visibility NSR regulations, EPA suggested several options available to a state and source to mitigate potential visibility impacts:

The State could (1) require the source to analyze alternative sites, (2) impose additional control requirements, (3) limit the source's capability to emit the pollutant which is expected to cause the impairment by limiting the source's operating conditions, or (4) deny the source permission to construct. Among the options available to the source are modifying its proposed operating conditions to reduce its potential impact and locating at other sites where the potential impact on the area is expected to be less.

See 45 Fed. Reg. at 80,089. EPA has also endorsed the use of offsetting emissions reductions from existing sources to mitigate the potential impact of a proposed source on visibility impairment in a class I area. See Multitrade Limited Partnership, PSD Appeal Nos. 91-2 et alia at n. 5 (Jan. 21, 1992). The visibility NSR provisions also give states broad authority to require monitoring in a class I area near a proposed source. See 40 CFR § 51.307(d).

Many states failed to submit the visibility SIPs, including visibility NSR, required by EPA's 1980 regulations. In response to a citizen suit, EPA inserted visibility federal implementation plans (FIPs) into the SIPs of the deficient states. Some states have since addressed these deficiencies. The state-by-state status of SIP programs in 40 CFR part 52 indicates to what extent a state is administering its own federally approved visibility protection program, EPA administers the program, or some combination varying with specific program elements.

EPA established visibility NSR programs, including requirements for both PSD and nonattainment areas, for states failing to submit programs meeting the requirements of 40 CFR § 51.307. In summary, EPA issued the following Federal regulatory provisions:

- EPA adopted visibility NSR revisions to the federal PSD regulations at 40 CFR § 52.21 which apply to states that do not have an approved PSD program.
- EPA promulgated and applied 40 CFR § 52.27 to those states having approved PSD programs but not meeting the visibility NSR requirements for attainment and unclassifiable areas (i.e. PSD areas).
- EPA promulgated and applied 40 CFR § 52.28 to those states failing to adopt the visibility NSR program for nonattainment areas.

See generally 50 Fed. Reg. 28,544 (July 12, 1985).

Please do not hesitate to contact me if you have any questions about the preceding regulatory provisions or any further matters to discuss regarding the South Coast Air Quality Management District's visibility new source review program.

Very truly yours,

George E. Hays
Associate Regional Counsel
Chief, Air, Toxics & Water Branch

cc: David P. Howekamp
Gerardo Rios
Vicky Patton

United States Department of the Interior

NATIONAL PARK SERVICE
Pacific West Field Area
Pacific Great Basin System Support Office
600 Harrison Street, Suite 600
San Francisco, California 94107-1372

IN REPLY REFER TO:

N3615 (PGSO-RN)

February 21, 1996

Dr. Anupom Ganguli
Stationary Source Compliance
South Coast Air Quality Management District
P.O. Box 4941
Diamond Bar, CA 91765-0941

Dear Dr. Ganguli:

The National Park Service has reviewed California's South Coast Air Quality Management District's (SCAQMD) proposed New Source Review (NSR) amendments, relative to visibility in federal Class I areas and notification of federal land managers. We appreciate the District's efforts in outreaching to the Park Service and U. S. Forest Service to obtain a unified federal land manager's position on the proposed amendments. Our position reflects the Park Service's affirmative responsibility, given under Section 165 of the Clean Air Act, to protect air quality related values (AQRV's) of Class I areas. AQRV's as defined by the Park Service include aquatic and terrestrial plants and animals, cultural resources and visibility. Joshua Tree National Park (NP), a Class I area, is located in the Southeast Desert Air Basin portion of SCAQMD.

The Park Service has the primary responsibility to protect Class I visibility. However, SCAQMD has the enforcement authority to limit air pollution from sources whose air pollution could potentially impact visibility in Class I areas. Therefore, we believe working together as partners will provide more effective visibility protection and ultimately cleaner, healthier, more beautiful landscapes within the SCAQMD. For this reason the Park Service fully endorses the concept of SCAQMD's draft amendment which addresses limiting visibility impacts in Class I federal lands. We appreciate and vitally need SCAQMD's support in protecting against visibility impairment and other negative air quality related impacts to ecosystems of Joshua Tree NP. Your District's effort aimed at protecting visibility in federal Class I areas is an important step towards a future which maintains clear distant vistas in areas of national significance such as Joshua Tree NP.

The numbers reported in the proposed amendments for determining source size cut-offs, minimum distance from, and background visual ranges for, Class I areas in the SCAQMD represent consensus among Park Service, U. S. Forest Service and Environmental Protection Agency representatives. Park Service policy for visibility protection is to protect the best visibility days from degradation because those days are the most sensitive to impairment. This policy is supported by the national visibility goal of preventing any future and remedying any existing visibility impairment. Therefore the Park Service recommends permit applicants use the top 10% background visual range values reported for a Class I area when modeling visibility impacts to that area. At Joshua Tree National Park this value is 180 km, obtained using IMPROVE monitoring data during the winter season 1991-1992.

The Park Service uses a significance criteria of one deciview to determine adverse impacts to uniform haze. A one deciview change is considered to be the threshold of noticeable change in uniform haze to the casual observer. The deciview scale was modeled after the decibel scale for sound, whereby it is linear with respect to perceived visual changes throughout its entire range.

In closing we wish to re-confirm our willingness to work with SCAQMD on protecting visibility in Class I areas under SCAQMD's jurisdiction. The Park Service fully supports SCAQMD's NSR proposed amendments dealing with Class I visibility protection. Please contact John Notar of our Air Resources Division in Denver at (303) 969-2079, or Judith Rocchio here at the Pacific Great Basin Systems Office at (415) 744-3874, if you have questions regarding our comments.

Sincerely,

George Turnbull
Superintendent, Pacific Great Basin System Support Office

cc:
Ernest Quintana, Superintendent, Joshua Tree NP
Trent Procter, U. S. Forest Service, Region 5
Matt Haber, Air and Toxic Division, EPA, Region 9

United States Department of Agriculture | Forest Service | Angeles National Forest | 701 N. Santa Anita Arcadia, CA 91006-3726
818-574-5209 Text (TTY)
818-574-1613 Voice

File Code: 2580 Rule 1303 amendments

Date: March 5, 1996

Anupom Ganguli
South Coast Air Quality Management District
21865 E. Copley Drive
Diamond Bar, CA 91765-4182

Dear Dr. Ganguli:

The impacts of the New Source Review process on all parties within the South Coast Air Quality and Southeast Desert Air Basins could be overwhelming. This is particularly true for the Federal Land Managers. Review of approximately 10,000 permits annually by the Federal Land Managers would not allow for detailed visibility analysis or provide opportunity for meaningful comment. It seems possible that the intent of this requirement, to maintain and improve visibility in Class I areas, may become diluted or lost in the effort required to process this number of applications.

We appreciate your attempt to develop a screening process for the applicant and Federal Land Managers that focuses on those applications which have a high probability of impacting visibility in Class I areas. We believe the proposed approach, based on your modeling and our monitoring data, to limit the number of permits requiring visibility analysis and review is a good one. While the Federal Land Managers have primary responsibility for protection of visibility in Class I areas you have the enforcement authority to control sources of air pollution which could impact visibility in these areas.

To further that approach we suggest that initial values for National Forest Class I areas be set at; "(Delta)E" = 2.00, "C" = 0.05 and Regional Haze = 1 deciview. Background Standard Visual Range values have been photometricly established for the San Gabriel Class I area and measured at an EPA approved IMPROVE site at San Gorgonio. Based on these results we recommend that Background Standard Visual Range values of 194 km be used for San Gorgonio, 175 km for San Gabriel, and 171 km be assigned to Agua Tibia, Cucamonga, and San Jacinto Class I areas.

With the understanding that all new sources within the District are offset, we would still like to work with you to develop visibility monitoring protocols for our Class I areas that would combined our data and your modeling expertise. With your concurrence, I propose that at the end of 1996 we evaluate this process. I think it would be important to know the total number of applications, their proximity to Class I areas and the changes in emissions that is expected compared to the previous year.

At the end of this period, we may wish to consider entering into a long term MOU describing visibility monitoring at selected Class I areas and procedures for modifying the screening criteria.

We would like to reiterate our support of this approach and our willingness to work with you in this effort. We appreciate your outreach efforts to gain consensus among all parties involved, National Park Service, Environmental Protection Agency and ourselves for the proposed amendments. From our perspective this has proven beneficial and should be applauded.

Sincerely,

F. Michael Mc Corison
Air Resource Specialist
Southern California Province

cc Judy Rocchio - NPS
Rich Fisher - WO
Dave Dahl - LPF
Gene Zimmerman - SBF
Anne Fege - CNF
Michael Rogers - ANF