Chapter 4

Regulatory Control Measures

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Chapter 4: Regulatory Control Measures

[Note: The evaluation being conducted to develop this plan is an ongoing work in progress, and will continue to be revised and updated throughout the public process.]

The San Joaquin Valley air basin (Valley) faces significant challenges in meeting the national ambient air quality standards (NAAQS). Despite the fact that these challenges are unmatched by any other region in the nation, the District, Valley businesses, and local jurisdictions have been successful in reducing 80% of emissions from stationary sources in the Valley. The District has demonstrated leadership in developing and implementing groundbreaking regulatory strategies to reduce emissions. Tough and innovative rules, such as those for indirect source review, residential fireplaces, glass manufacturing, and agricultural burning, have set benchmarks for California and the nation.

Given the significant investment necessary to achieve necessary emissions reductions, the Valley is at the point of diminishing returns from new controls on stationary sources. Keeping in line with the District Guiding Principles, staff will consider all opportunities for timely, innovative, and cost-effective emission reductions, including additional regulatory strategies, new incentive programs, policy initiatives, guidance documents, and enhanced outreach efforts. The District recognizes that there is no "silver bullet" for attainment, and every sector – from the public through all levels of government, businesses, and industry – must continue to reduce emissions.

This regulatory control measure chapter contains a discussion about regulations contributing to PM2.5 improvement, a description of federal RACT/RACM requirements, and the District's ongoing approach for evaluating potential new control measures for opportunities for emissions reductions. After a thorough evaluation has been completed using the criteria described in this chapter, the District will determine which control strategies should be included in the plan. These ongoing analyses are presented in Appendix D (Stationary and Area Source Control Strategy Evaluation). The regulatory control strategies will be summarized in this chapter accompanied by a rule making schedule.

4.1 REGULATIONS CONTRIBUTING TO PM2.5 IMPROVEMENT

The *2012 PM2.5 Plan* will build on the District's and the California Air Resources Board (ARB) aggressive control strategies of the *2007 Ozone Plan* and *2008 PM2.5 Plan*. Of the 26 control measure commitments in the *2007 Ozone Plan* and the *2008 PM2.5 Plan*, the District has adopted all measures except one. The District's remaining control measure commitment is the *2008 PM2.5 Plan* commitment to amend Rule 4905, Natural Gas-Fired, Fan-Type Residential Central Furnaces. The District has committed to amend this rule by the end of 2014, in conjunction with the South Coast Air Quality Management District's completion of their technology demonstration evaluation for furnaces.

In December 2010, ARB signed Executive Order G-10-126, determining that the District had undertaken all feasible measures to reduce nonattainment air pollutants from sources within the District's jurisdiction and regulatory control. This finding was required under California Health and Safety Code Section 40612, which requires that an air district undertake all feasible measures before adopting DMV fees to provide funding for programs needed to achieve state and federal air quality standards. California Administrative Code, title 17 section 70600(a)(1) defines "all feasible measures" as air pollution control measures, including but not limited to emissions standards and limitations, applicable to all air pollution source categories under a district's authority that are based on the maximum degree of reductions achievable for emissions of ozone precursors, taking into account technological, social, environmental, energy and economic factors, including cost-effectiveness. ARB's 2010 finding was based on the District's recent and approved State Implementation Plans, including the *2007 Ozone Plan,* the *2007 PM10 Maintenance Plan*, the *2008 PM2.5 Plan*, and the *2009 RACT SIP*. ARB also noted that the District evaluates the feasibility of emission control technologies in all specific rulemaking actions.

As the District's and ARB's adopted regulations are fully implemented over the next few years, there will be a dramatic reduction in directly emitted PM2.5 and PM.5 precursor emissions, which will contribute to the Valley's progress towards the 2006 PM2.5 standard. That said, the District and ARB must continue to consider new control measure opportunities to ensure expeditious attainment of the 2006 PM2.5 standard.

This PM2.5 attainment plan must demonstrate that the Valley will attain the NAAQS "as expeditiously as practicable." The initial attainment deadline is five years from the effective date of the nonattainment designation, though up to a five year extension is possible. This sets initial attainment dates at December 14, 2014, with an extension up to December 14, 2019, if needed. This *2012 PM2.5 Plan* will demonstrate that the Valley will attain the 2006 standard as expeditiously as possible, with all feasible measures and strategies being considered to accomplish this goal.

4.2 RACT/RACM

The plan must show that sufficient emissions reductions will be achieved for the Valley to reach attainment. At a minimum, a PM2.5 plan should demonstrate that Reasonably Available Control Technologies (RACT) and Reasonably Available Control Measures (RACM) are in place.[1] RACT/RACM analyses must address both direct PM2.5 and the area's relevant precursors.

RACT is the lowest emissions limit that a particular source is capable of meeting by the application of control technology that is reasonably available, considering technological and economic feasibility. RACT is intended as the minimum level of control that nonattainment areas must achieve for existing sources. RACT is a slow moving target

[1] EPA (April 25, 2007). *Clean Air Fine Particle Implementation Rule*. 20610-20612.

that gradually changes over time as new technologies are developed. The District's *2009 RACT Demonstration for Ozone State Implementation Plans* and related rule amending projects have recently demonstrated that District rules are at least as stringent as RACT. In fact, these efforts have shown that many District rules are more stringent than established RACT standards. The District is closely reviewing its control measures in light of newer information that may have arisen since the recent RACT determinations, as a part of the regulatory evaluations presented in Appendix D.

RACM is broader than RACT. Whereas RACT is specific to an emissions source, RACM is a collection of measures that, taken as a group, advance attainment by at least one year.

RACT/RACM are, by their definition, reasonable. Although plans must include a thorough analysis of reasonably available measures, it need not analyze every conceivable measure; reasonability must drive the analysis. Any unreasonable measure, which is absurd, unenforceable, impractical, or that would cause severely disruptive socioeconomic impacts (e.g., gas rationing and mandatory source shutdowns), would not be required. Measures that are not necessary to satisfy Reasonable Further Progress (RFP) or expeditious attainment are also not required RACT/RACM for the area.

Identifying potential RACT/RACM measures entails three main steps:

(1) Examine the emissions source categories in the nonattainment area with direct PM2.5 and precursor emissions, such as NOx.

(2) Consider technologically feasible emissions control technologies or measures for each source. Technological feasibility determinations should include considerations of the source's operating procedures, raw materials, physical plant layout, and any other environmental impacts.

(3) Consider the control efficiency and possible emissions reductions, by pollutant, for each technology or measure and the date by which the technology or measure could be reasonably implemented. This should consideration of the capital costs, annual costs, and cost effectiveness of an emissions reduction technology, as well as any effects on the local economy. There is no fixed cost effectiveness threshold for RACT. If essential reductions are more costly to achieve because many sources are already controlled, the cost per ton of control may necessarily be higher.

Appendix D of this plan demonstrates the District's analysis of reasonably available emissions control opportunities for each source of PM2.5, and its precursor emissions in the Valley. As of this June draft, this analysis is ongoing. Future drafts will provide the conclusions of the District's RACT/RACM analysis.

4.3 APPROACH FOR EVALUATING POTENTIAL NEW CONTROL MEASURES

The District utilizes Guiding Principles to provide overall strategic direction to each step in the plan development process, and to synthesize and articulate project goals. The District is evaluating all relevant source categories for potential emission reduction opportunities, including input received from stakeholders throughout the public plan development process. This ongoing analysis is presented in Appendix D (Stationary and Area Source Control Strategy Evaluation). As presented in Appendix D, potential emission reduction opportunities will be considered using each of the following key factors:

- **Technological Feasibility** – District staff evaluated various BACT guidelines, permits, and other air districts' rules, regulations, guidelines, and studies to identify potential opportunities and determine the technological feasibility of any identified potential opportunities.

- **Cost-Effectiveness** – District staff is evaluating the cost-effectiveness of any technologically feasible potential emission reduction technologies or control methods. As a part of this process, staff reviewed BACT guidelines to identify additional potential controls that might be cost effective. Additionally, staff reviewed previous rule staff reports from District rules and from other air districts to determine if any technologically feasible opportunities that were previously not cost effective have changed to become cost effective since the last amendment.

- **Risk-Based Strategy** – A qualitative evaluation is being performed to prioritize potential emission reduction opportunities that maximize potential health benefits (see Chapter 3). The PM2.5, NOx, and SOx emissions from each source category will be evaluated, based on each category's potential contribution to attaining the PM2.5 standard and other factors that establish the health impact and benefits of each category.

Based on the findings of the analyses, the District will make commitments for future control measures and identify areas for further study and research. Those control measures may include incentive programs, technology advancement programs, legislative platform items, increased public outreach and education, or rule amendments or adoptions as appropriate.

4.4 NEW COMMITMENTS IDENTIFIED IN THE APPENDIX

After control measures have been thoroughly evaluated for technological feasibility, cost effectiveness, and their relevance to the risk-based strategy, and the public has had opportunities to contribute to and comment on the evaluations, the District will determine which control strategies should be included in the plan. These ongoing

analyses are presented in Appendix D (Stationary and Area Source Control Strategy Evaluation).

4.4.1 Proposed Rulemaking Calendar

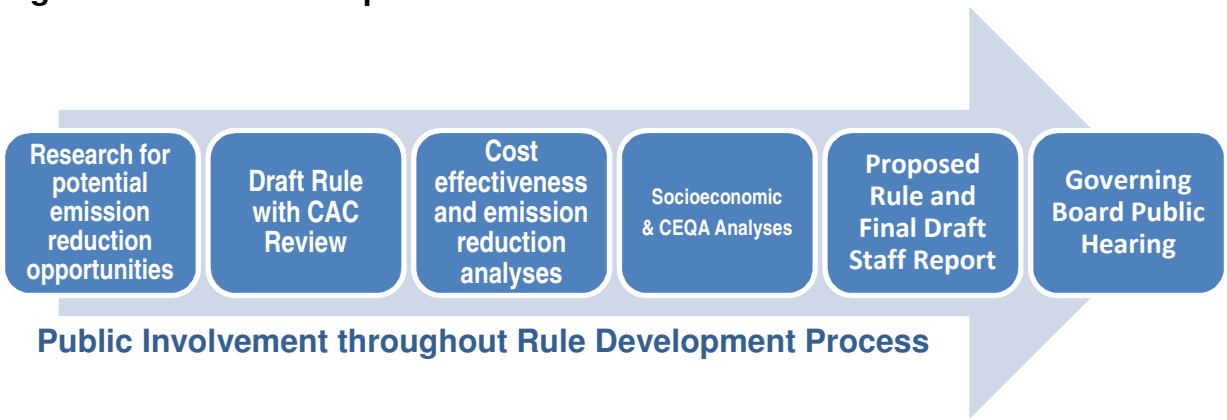
Commitments for rule actions will be summarized in a rule making calendar in later drafts of this plan. The rule making calendar will demonstrate a reasonable implementation schedule.

Emission reduction estimates will be based on control techniques existing at the time this plan was developed. The District expects that technologies will advance and that new, more effective control techniques may be available at the time of rule development for each measure. Any more effective control techniques will be considered during the rule development project. Additionally, the District will consider episodic controls and regionally focused controls during each rule development project in order to optimize the benefits of each measure while mitigating undue impacts to the regulated sources. Emission reduction estimates will be presented in later drafts of this plan.

4.4.2 Rule Development Process

The District will amend existing rules or adopt new rules consistent with the control measure commitments in this chapter according to the rulemaking calendar presented above. The District is committed to a transparent public process that includes stakeholder, industry, and other-agency input at every step possible.

Figure 4.1 Rule Development Process



Prior to preparing a draft rule, staff gathers preliminary data, performs literature reviews of relevant new or existing studies, researches technologies, and explores options for emissions reductions. Through a series of public workshops and focus group meetings, staff presents draft rule concepts and receives feedback on specific technology costs, technical insight, and general public comments. Staff uses this information gathering and discussion to refine the rule throughout the rule development process. Using this iterative process of gathering the most up-to-date cost and technical information, staff analyses the potential emission reduction opportunities for cost effectiveness and

potential emissions reductions. These analyses are shared through the public workshop process throughout the rule development process.

During the ongoing public workshop process, the District enlists the services of an economic consultant to analyze the socioeconomic impact of the proposed rule pursuant to California Health and Safety Code Section 40728.5. As with draft versions of the rule, the public and stakeholders are given the opportunity to review the analysis and provide further feedback. To the extent possible, the District minimizes significant economic and socioeconomic impacts by evaluating viable alternatives, adjusting proposed limits, or extending compliance schedules.

Staff presents the final draft version of the staff report and proposed rule, including the cost-effectiveness analysis, socioeconomic impact report, emissions reductions analysis, RACT analysis, and California Environmental Quality Assessment (CEQA), to the Governing Board during a public hearing. The Governing Board ultimately determines the balance between air quality improvement and rule impacts when adopting proposed rules.

Once adopted, the District forwards the rule through ARB to EPA for inclusion into the California State Implementation Plan (SIP), as appropriate. EPA evaluates the rule, determines if the rule meets federal requirements, and provides an opportunity for further public comment. After this review and comment period, EPA will amend the SIP to include the new rule, as appropriate.

Beyond the rule development and adoption process, District staff will continue to engage the public and affected source operators throughout implementation and compliance. Additionally, District staff continues public outreach and education through notifications to stakeholders of the rule adoption, issuance of compliance bulletins, and assistance through the District's Small Business Assistance program.