CONTROL STRATEGY

INTRODUCTION

The complex nature of the PM10 pollutant in the SJVAB requires a multi-faceted control strategy that encompasses a wide variety of controls on many different sources of emissions. This chapter describes the type of controls required for the SJVAB to attain the air quality standard for PM10. To facilitate a better understanding of the information found in this chapter, key air quality terms are identified as follows:

- control strategy is the combination of all actions taken by all agencies with authority to control air pollutant emissions that affect attainment of the PM10 standard.

- control measure is a general term that applies to an individual control strategy. The District implements control measures with "regulations", "rules" and "programs. In addition, control measures that rely on voluntary participation are usually implemented as programs; examples include incentive programs and education programs.

- regulations are groups of rules that have some common element, such as prohibitory rules (Regulation IV) and fugitive dust rules (Regulation VIII). The state and federal government also adopt rules, regulations, and programs within their authority.

- BACM and BACT are best available control measures and best available control technology, respectively. BACM and BACT are defined as the maximum degree of emission reduction considering technical and economic feasibility and environmental impacts of the control, and must be implemented independent of attainment requirements.

One of the most important elements of control strategies found in a serious PM10 nonattainment area is the requirement for the regulating air quality control district to demonstrate that best available control measures (BACM) and best available control technologies (BACT) have been implemented on all significant sources of PM10 and PM10 precursors. The emission inventory and the chemical speciation of PM10 samples collected at sites throughout the SJVAB provide the starting point for the BACM/BACT determination. A discussion of the significant source determination is located later in this chapter.

Appendix G contains the BACM/BACT Demonstration prepared for the PM10 Plan, which includes the following: analysis of rules that regulate significant source categories, agricultural conservation management practices (CMP) program, fugitive PM10 prohibition rules under Regulation VIII, and wood burning fireplaces and wood burning heaters. The rules, regulations, and control measures listed below reflect

the results of this demonstration. In most cases, the existing level of control meets the BACM/BACT definition, but in other cases, changes were identified that were needed to bring the control up to the BACM/BACT level. The proposed changes are listed as new commitments in this chapter.

The District, the ARB, and the EPA have adopted and implemented numerous measures to control PM10 and PM10 precursors. While these measures have reduced many sources of emissions, they were not enough to bring the region into attainment by the December 31, 2001 deadline for serious nonattainment areas. This PM10 Plan control strategy relies on continued implementation of rules and regulations now in effect, new regulations currently under development, and additional control measures needed to attain the PM10 standards at the earliest practicable date.

DISTRICT APPROACH TO ATTAINMENT

Attainment will require substantial reductions in directly emitted PM10 pollutants and PM10 precursors. During the worst episodes that occur during the winter, secondary nitrate is the largest contributor to the problem followed by geologic material and carbon from wood combustion and motor vehicles. Modeling using UAM-Aero indicates that controls of oxides of nitrogen (NOx controls) are the most effective at reducing nitrate concentrations throughout the air basin. Fugitive dust controls on activities in the urban area are most effective at reducing geologic dust in the areas with the highest readings, although reductions in rural areas may be important to protect people living in proximity to large sources. Controls on wood burning fireplaces and wood burning heaters will result in substantial reductions in carbon particles in urban areas with high concentrations of wood burning devices. The state and federal motor vehicle program and diesel fuel regulations will also significantly reduce NOx, volatile organic compounds (VOC), diesel particulate and oxides of sulfur (SOx) emissions. Although modeling indicates that VOC controls do not have a significant effect in reducing secondary nitrate, existing and planned regulations on VOC sources adopted for ozone will result in some air quality benefit due to reduction in condensable PM10 emissions from these organic compounds.

The District's control strategy must address the basin's 24-hour and annual PM10 problems. The annual emissions are dominated by fugitive PM10. Year round controls are needed on significant fugitive PM10 sources such as construction, paved and unpaved roads, open areas, and agricultural operations to attain the annual standard. Episodic controls on sources such as open burning, prescribed fire, and wood burning fireplaces and wood burning heaters are needed to avoid violations of the 24-hour standard during periods when dispersion is poor.

The District, the state, local agencies, and the federal government have already adopted many of the controls needed to attain the PM10 standard as rules and regulations. Some of these regulations are fully implemented while others that rely

on equipment/vehicle turnover take many years to make a large impact. The new control measure commitments contained in this plan include changes related to several different requirements. Some upgrades are the result of the District's BACM/BACT demonstration. For example, changes to Regulation VIII were identified in the BACM demonstration. Other upgrades reflect corrective actions taken to comply with prior EPA deficiencies on portions of adopted District rules. For example, Rule 4901 (Wood Burning Fireplaces and Wood Burning Heaters) falls under this category. The final category of changes includes controls that are proposed to achieve the PM10 standard as expeditiously as practicable. These include new control measures proposed by the state and federal government as well as District stationary source controls identified as all feasible control measures required by the California Clean Air Act.

While some strategies contained in this PM10 Plan do not claim emission reductions, they provide critical support for pursuing difficult and sometimes contentious regulations. For example, the District's public education program increases support for air quality programs and influences citizens to take personal actions to reduce emissions on a voluntary basis. A second example is the District's environmental review program that educates the public and decision makers on the effect of land use decisions on air quality and proposes ways that developers can mitigate emissions.

Expeditious Attainment of the PM10 Standards

The PM10 Plan provides for attainment of the PM10 standards by 2010. To show that this date represents expeditious attainment, the District must demonstrate that an earlier attainment date is not possible. The attainment strategy primarily relies upon reductions in directly emitted PM10 and NOx. The three most significant source categories of directly emitted PM10 are addressed by Regulation VIII Fugitive PM10 Prohibitions, the Agricultural Conservation Management Practices Program, and Rule 4901 – Wood Burning Fireplaces and Wood Burning Heaters. These rules and regulations will be fully implemented between 2003 and 2006. Most of the reductions from these measures will be obtained in the first few years of implementation. Exceptions are actions included in these rules and regulations that accrue benefits over time like unpaved road paving programs that add new paving each year and changeout of non-EPA certified wood burning devices at the time of sale. NOx reductions are obtained during the entire 2003-2010 period, but stationary source measures under the District's authority are nearly all implemented prior to 2006. Later stationary source measures have a high degree of uncertainty in their emission reductions and typically need additional emission inventory work prior to implementation. The bulk of the emission reductions scheduled for after 2006 are from adopted and committed state and federal mobile source measures that rely on fleet turnover at purchase of the vehicle or equipment. These regulations cannot be moved forward by the District, and because mobile sources represent a large part of the NOx inventory, attainment cannot be projected until 2010.

The monitoring sites with the highest design values in Fresno and Bakersfield attain the annual and 24-hour standards in 2010, but other SJVAB nonattainment sites with lower design values are expected to attain the standard earlier. Sites currently in attainment of the standard will benefit from the attainment strategy and are expected to stay well below the annual and 24-hour PM10 standards.

OVERVIEW OF CONTROL MEASURES IMPLEMENTED

District PM10 and PM10 Precursor Rules

The District has adopted numerous rules that reduce emissions of PM10 and the precursors to PM10, which include NOx, SOx and VOC. Furthermore, certain precursor pollutants involved in the formation of ammonium nitrate are critical to the attainment strategy. Table 4-1 below lists the rules adopted or amended since 1990:

Table 4-1 PM10 and PM10 Precursor Rules Adopted and/or Amended between 1990-2003

Rule Number	Rule Title	Rule Number	Rule Title
4101	Visible Emissions	4102	Nuisance
4103	Open Burning	4104	Reduction of Animal Matter
4105	Commercial Offsite Multiuser Hazardous Waste and Nonhazardous Waste Disposal Facilities	4106	Prescribed Burning and Hazard Reduction Burning
4201	Particulate Matter Concentration	4202	Particulate Matter Emission Rate
4203	Particulate Matter Emissions from Incineration of Combustible Refuse	4301	Fuel Burning Equipment
4302	Incinerator Burning	4303	Orchard Heaters
4304	Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters	4305	Boiler, Steam Generators, and Process Heaters (Phase2)
4306	Boiler, Steam Generators, and Process Heaters (Phase 3)	4311	Flares

Table 4-1 PM10 and PM10 Precursor Rules Adopted and/or Amended between 1990-2003

Rule Number	Rule Title	Rule Number	Rule Title
4313	Lime Kilns	4351	Boilers, Steam Generators, and Process Heaters - (Phase 1)
4352	Solid Fuel Fired Boilers, Steam Generators, and Process Heaters	4354	Glass Melting Furnaces
4401	Steam-enhanced Crude Oil Production Well Vents	4402	Crude Oil Production Sumps
4403	Components Serving Light Crude Oil or Gases at Light Crude Oil and Gas Production Facilities and Components at Natural Gas Processing Facilities	4404	Heavy Oil Test Station – Kern County
4405	NOX Emissions from Existing Steam Generators Used in Thermally Enhanced Oil Recovery – Central and Western Kern County Fields	4406	Sulfur Compounds from Oil-Field Steam Generators – Kern County
4407	In-situ Combustion Well Vents	4408	Glycol Dehydration Systems
4451	Valves, Pressure Relief Valves, Flanges, Threaded Connections and Process Drains at Petroleum Refineries and Chemical Plants	4452	Pump and Compressor Seals at Petroleum Refineries and Chemical Plants
4453	Refinery Vacuum Producing Devices or Systems	4454	Refinery Process Unit Turnaround
4601	Architectural Coatings	4602	Motor Vehicle and Mobile Equipment Refinishing Operations
4603	Surface Coating of Metal Parts and Products	4604	Can and Coil Coating Operations

Table 4-1 PM10 and PM10 Precursor Rules Adopted and/or Amended between 1990-2003

Rule Number	Rule Title	Rule Number	Rule Title
4605	Aerospace Assembly and Component Manufacturing Operations	4606	Wood Products Coating Operations
4607	Graphic Arts	4610	Glass Coating Operations
4621	Gasoline Transfer into Stationary Storage Containers, Delivery Vessels, and Bulk Plants	4622	Transfer of Gasoline into Vehicle Fuel Tanks
4623	Storage of Organic Liquids	4624	Organic Liquid Loading
4625	Wastewater Separators	4641	Cutback, Slow Cure, and Emulsified Asphalt Paving and Maintenance Operations
4642	Solid Waste Disposal Sites	4651	Volatile Organic Compound Emissions from Decontamination of Soil
4652	Coatings and Ink Manufacturing	4653	Adhesives
4661	Organic Solvents	4662	Organic Solvent Degreasing Operations
4663	Organic Solvent Cleaning, Storage and Disposal	4672	Petroleum Solvent Dry Cleaning
4681	Rubber Tire Manufacturing	4682	Polystyrene Foam, Polyethylene and Polypropylene Manufacturing
4684	Polyester Resin Operations	4691	Vegetable Oil Processing
4692	Commercial Charbroiling	4693	Bakery Ovens
4701	Stationary Internal Combustion Engines - (Phase 1)	4702	Stationary Internal Combustion Engines - (Phase 2)
4703	Stationary Gas Turbines	4801	Sulfur Compounds
4802	Sulfuric Acid Mist	4901	Wood Burning Fireplaces and Wood Burning Heaters
4902	Residential Water Heaters		

District Fugitive PM10 and Burning Rules

The District has adopted and amended rules that reduce emissions of directly emitted PM10 from all significant sources. The rules are summarized below.

Fugitive PM10 Prohibitions

Regulation VIII (Fugitive PM10 Prohibitions) is a series of rules aimed at reducing fugitive PM10 emissions. Sources regulated under these rules include: construction, demolition, extraction, excavation, earthmoving activities, bulk materials, landfill disposal sites, carryout and trackout, open areas, paved and unpaved roads, unpaved vehicle/equipment traffic areas, and agricultural sources. Regulation VIII was adopted in 1993 and was revised in 1994, 1996, and 2001. Regulation VIII will be discussed in more detail later in this chapter.

Wood Burning Fireplaces and Wood Burning Heaters

Rule 4901 (Wood Burning Fireplaces and Wood Burning Heaters), seeks to reduce emissions from fireplaces, wood and pellet stoves, and other sources of wood combustion from residential sources. This rule was adopted in 1993 and revised in 2003 to implement BACM.

Burn Rules and Allocation System

Rule 4103 (Open Burning) and Rule 4106 (Prescribed Burning and Hazard Reduction Burning), regulate and coordinate the use of burning while trying to minimize smoke impacts on the public. Rule 4103 was adopted in 1992 and was amended in 1992, 1993, and 2001, while Rule 4106 was adopted in 2001. The 2001 action for both rules included the use of a burn allocation system that is based on predicted meteorological conditions, the total number of burns conducted, and the potential impacts to the population and monitors. The EPA has approved these two rules as BACM. Rule 4103 is currently being amended to address recent changes to the California Health and Safety Code. Details of these amendments are addressed later in this chapter.

State Control Measures

The ARB has adopted numerous regulations affecting sources under their regulatory authority. The Bureau of Automotive Repair (BAR) has responsibility for vehicle inspection and maintenance programs.

Table 4-2 Control Measures Already Adopted by ARB and BAR

Control Measure Adopted by ARB and BAR	Adoption Date
M1: Light-duty vehicle scrappage	1998
M2: Low Emission Vehicle II program	1998
M3: Medium-duty vehicles	1995
M4: Incentives for clean engines (Moyer Program)	1999
M5: California heavy-duty diesel vehicle standards	1998
M8: Heavy-duty gasoline vehicle standards	1995
M9: CA heavy-duty off-road diesel engine standards	2000
M11: CA large off-road gas/LPG engine standards	1998
CP2: Consumer products mid-term measures	1997/1999
CP3: Aerosol paint standards	1995/1998
Enhanced I/M (Smog Check II) BAR administered program	1982/1994
Clean fuels measures	Multiple
Marine pleasurecraft (reductions beyond M16)	1998/2001
Motorcycle Standards	1998
Urban transit buses	2000
Enhanced vapor recovery program	2000
Medium/heavy-duty gasoline standards (beyond M8)	2000
2007 Heavy-duty diesel truck standards (beyond M5 and M6)	2001
Small off-road engine standard revisions	1998

Federal Control Measures

The EPA has adopted numerous regulations affecting sources regulated under their jurisdiction. Table 4-3 lists those control measures adopted by the EPA.

Table 4-3 Control Measures Adopted by the EPA

Control Measure	Adoption Date
M6: National heavy-duty diesel vehicle standards	1998
M10: National heavy-duty off-road diesel engine standards	1998
M12: National large off-road gas/LPG engine standards	2002
M13: Marine vessel standards	1999
M14: Locomotive engine standards	1997
M16: Marine pleasurecraft standards	1996
2007 Heavy-duty diesel truck standards (beyond M5 and M6)	2001

EMISSIONS REDUCTIONS FROM ALL ADOPTED CONTROL MEASURES

The rules and regulations adopted by the District, ARB, BAR, and EPA, have provided substantial emissions reductions in the past twelve years. Table 4-4 shows the absolute and percentage change in the emission inventory from 1990 to 2001.

Table 4-4 Historical Emissions Inventory Reductions in the SJVAB, 1990-2001

Pollutant	Annual Emissions by Pollutant (tpd)*		Tons Reduced	% Decrease
	1990	2001		
NOx	796	547	249	31
VOC	625	472	153	24
PM10	450	465	-15	-3
SOx	86	46	40	47

*****Emission figures were obtained from ARB's website - www.arb.ca.gov**.**

As shown in the table above, emissions in the SJVAB have seen substantial decreases during the last decade. The PM10 inventory shown in the table has not been updated with changes that will be implemented with this PM10 Plan. The changes will impact both recent and past inventories due to changes in emission factors and activity data. The 2002 PM10 inventory used for this Plan totals 329.5 tons per day. An updated 1990 PM10 inventory is not available at the time of this writing to provide a valid comparison. One reason for the apparent increase in growth in PM10 in the mid-1990s is that a significant new emissions inventory category, prescribed burning, totaling approximately 23 tons per day, was added to the emissions inventory in the late 1990s and was not back cast into prior year inventories. With that correction, the PM10 inventory will show a small decline during that period. Regardless, PM10 reductions have been difficult to achieve and maintain. A large fraction of PM10 sources are area-wide sources whose emissions are directly related to growth in population and vehicle miles traveled.

The two sources, with the highest growth within the time period of 1990-2001, are residential wood combustion and paved road dust. The previous wood burning fireplaces and wood burning heaters rule contained a voluntary curtailment program that achieves limited reductions and no measures to reduce the number of old high emitting wood stoves and new wood burning devices in the Valley. The paved road dust emission category has been impacted by rapid increases in VMT in the Valley. These factors have been taken into account when developing the control strategy for this Plan.

CURRENT RULEMAKING CALENDAR

The District has several rules currently under development. These rules were originally included as part of the District's ozone strategy, but also reduce PM10 and

will aid the District in attaining the NAAQS for PM10. Table 4-5 lists the rules that are currently under development. As noted in the revised text, a number of these rules have been adopted.

Table 4-5 District Rules Currently Under Development

Rule	Pollutant	Category	Adoption Date (Quarter/Yr)	Compliance Date(s) (Quarter/Yr)
4204	PM10	Cotton Gins (see page 4-29)	1Q/05	3Q/05
4403 & 4455	VOC	Fugitives from Oil and Gas Facilities, and Refinery & Chemical Plants	2Q/05	2Q/06
4604	VOC	Can and Coil Coatings	1Q/04	1Q/06
3180 & 9510	NOx, PM10	Indirect Source Mitigation Program (see page 4-40)	4Q/05	1Q/06
9310	NOx	School Bus Fleets	3Q/06	post 2010
4550	PM10	Conservation Management Practices Program (see page 4-22)	2Q/04	3Q/04

Rule 4403 – Oil and Gas Fugitives

REASON FOR CONTROL MEASURE: Rule 4403 is a commitment in the Ozone ROP, and would reduce fugitive VOC emissions from crude oil and gas production operations and natural gas processing plants.

AFFECTED SOURCES: Rule 4403 applies to business establishments with Standard Industry Code (SIC) 1311 (crude Oil and Natural gas) and SIC 1321 (Natural Gas Liquids). There are approximately 200 businesses in the San Joaquin Valley that are potentially subject to Rule 4403. The California Department of Oil, Gas, and Geothermal Resources Report shows approximately 105 oil and/or gas production fields in the San Joaquin Valley. The District's permit database indicates eight permitted natural gas processing plants.

DESCRIPTION: Crude oil and gas production facilities and natural gas processing facilities contain a large number and different types of components such as flanges, valves, fittings, threaded connections, hatch, packing, sealing mechanism, seal fluid system, sight glass, meter, pressure relief valves, pumps, and compressors. Leakage of fluids or gases from these components can be expected to occur during process and transfer operations, causing fugitive VOC emissions. The actual percentage of leaking components for most of these facilities may be ~~is~~ small, but

due to the large number of components the fugitive VOC emissions from leaking components, in aggregate, could be significant.

Possible controls include lowering the gaseous leak threshold of 10,000 ppmv, eliminating some existing exemptions, improving the existing inspection and repair programs by increasing the frequency of inspection, and shortening the repair period for leaking components and replacing frequently leaking components with Best Available Control Technology.

IMPLEMENTATION SCHEDULE: Rule adoption is scheduled for the second quarter of 2005. Full implementation is scheduled for the second quarter of 2006.

EMISSIONS AND EMISSIONS REDUCTIONS: Total VOC emissions from sources subject to Rule 4403 are estimated to be 10.6 tons per day in 2005. Upon full implementation of Rule 4403 in 2006, 4.8 tons per day of VOC reductions is anticipated.

Rule 4455 – Oil and Gas Fugitives from Petroleum Refineries and Chemical

REASON FOR CONTROL MEASURE: Rule 4455 is a commitment in the Ozone ROP. Rule 4455 would replace Rules 4451 and 4452, and it would reduce fugitive VOC emissions from leaking components in petroleum refining and chemical manufacturing plants by strengthening and expanding the requirements in existing Rules 4451 and 4452.

AFFECTED SOURCES: Rule 4455 would apply to businesses with Standard Industry Code (SIC) 2911 (Petroleum Refining) and SIC 286 (Industrial Organics). There are four petroleum refineries and one gas liquids processing facility that would be subject to Rule 4455. No chemical plant currently operates in the San Joaquin Valley.

DESCRIPTION: Petroleum facilities, gas liquids processing facilities, and chemical plants contain a large number and different types of components such as flanges, valves, threaded connections, pressure relief valves, process drains, pump seals, compressor seals, and seal fluid systems. Leakage of fluids or gases from these components can be expected to occur during process and transfer operations, causing fugitive VOC emissions. The actual percentage of leaking components for most of these facilities may be small, but due to the large number of components the fugitive VOC emissions from leaking components, in aggregate, could be significant.

In general, the state RACT/BARCT and other air districts' rules establish lower leak thresholds, require operators to conduct more frequent inspections of components, and provide shorter periods to repair leaking components than currently allowed in Rules 4451 and 4452. Rules 4451 and 4452 could be made more effective by implementing a rigorous leak detection and repair program and by requiring BACT equipment to replace or retrofit frequently leaking devices.

IMPLEMENTATION SCHEDULE: Rule adoption is scheduled for the second quarter of 2005. Full implementation is scheduled for the second quarter of 2006.

EMISSIONS AND EMISSIONS REDUCTIONS: Total VOC emissions from sources subject to Rule 4455 are estimated to be 0.5 tons per day in 2005. Upon full implementation of Rule 4455, 0.2 tons per day of VOC reductions is anticipated.

Rule 4604 – Can and Coil Coatings

REASON FOR CONTROL MEASURE: Amendments to Rule 4604 is a commitment in the Ozone ROP that would reduce VOC emissions from can and coil coating operations.

AFFECTED SOURCES: Eight of the affected sources are located in the northern part of the District, one is located in the central part and none in the southern part. There is one additional source in the north that has active permits although the facility is closed. All except one of the active facilities manufacture food cans. The remaining facility produces 55-gallon steel drums, most of which are used in the food industry. There are no coil coating operations in the District at this time.

DESCRIPTION: This control measure is intended to reduce VOC emissions from can and coil coating operations. These units are currently subject to District permitting requirements and Rule 4604 (Can and Coil Coating Operations) for VOC control. Effective means of controlling VOC emissions are the use of compliant coatings and the use of a VOC emission control system.

The choice of coating used by a can/drum manufacturer is driven by the buyer of the can or drum. For some customers, only solvent-based coatings meet their performance needs. Even if a customer could be persuaded to consider a different coating, the testing necessary to approve the change takes 18-24 months to complete. Accordingly, most sources subject to this rule use emission control devices to meet VOC emission limits, rather than using rule-compliant coatings.

IMPLEMENTATION SCHEDULE: The amendments to Rule 4604 were approved on January 15, 2004, with full implementation scheduled for the first quarter of 2006.

EMISSIONS AND EMISSIONS REDUCTIONS: Total VOC emissions from sources subject to Rule 4604 are estimated to be 4.6 tons per day in 2005. Upon full implementation, 0.3 tons per day of VOC reductions is anticipated.

Rule 9310 - School Bus Fleets

REASON FOR CONTROL MEASURE: The California Clean Air Act requires Districts to develop ambient air quality standard attainment plans that consider “the full spectrum of emission sources and focus particular attention on reducing emissions from transportation and area-wide emission sources.” (Health and Safety Code, Section 40910). In particular, Districts responsible for air basins designated

as having "serious," "severe," or "extreme" air pollution, "shall, to the extent necessary to meet the requirements of the plan,…" include in their attainment plans "[m]easures to achieve the use of a significant number of low-emission motor vehicles by operators of motor vehicle fleets." [Health and Safety Code section 40919(a)(4)]. Rule 9310, which is currently under development, represents the District's emerging program for controlling mobile source emissions.

AFFECTED SOURCES: The regulation would apply to school bus fleets, including privately-owned fleets providing contracted services to schools. Fleet exemptions that could be implemented as part of the rule may include vehicles operated at locations where clean fuels are not readily available.

DESCRIPTION: Rule 9310 will focus on NOx and PM emissions from diesel school buses. This regulation is intended to achieve greater and earlier NOx and PM emission reductions than would occur through the normal vehicle replacement process for school buses. Emissions could be reduced in a number of ways, including (1) replacing buses before scheduled retirement; (2) replacing engines/power trains of existing sources with cleaner technology; (3) retrofitting emission control technology to existing sources; or (4) switching to cleaner fuels.

Several mobile source rules have been adopted or are being developed by ARB. These rules address emissions from refuse haulers, urban transit vehicles, and heavy duty vehicle; vehicle idling limits; diesel fuel sulfur limits; toxic emissions from transportation refrigeration units; and other similar measures. The District is not currently planning to pursue any enhanced requirements to the mobile source rules which ARB has adopted or is developing.

IMPLEMENTATION SCHEDULE: Regulation adoption is scheduled for the third quarter of 2006, with implementation starting in the fourth quarter of 2007 but, due to the number, the cost of school buses, and limited school district budgets, final rule implementation is expected to occur well after 2010.

EMISSIONS AND EMISSIONS REDUCTIONS: The emissions and emissions reductions from sources affected by the control measure are not known at this time. Emission reductions will be determined as the exact control strategies and rule requirements are developed.

NEW COMMITMENTS

Background

The CAA requires all serious nonattainment areas to implement BACM no later than four years after reclassification of an air district from moderate to serious. The EPA

guidance[1] adds that BACM includes BACT on all significant sources of PM10 or PM10 precursors. The EPA will generally presume the contribution to nonattainment of any source category to be de minimis if the source category causes an impact in the area of less than 1 $\mu g/m^3$ for the annual mean concentration and 5 $\mu g/m^3$ for a 24-hour average. Source categories are defined as categories of area-wide sources or large individual sources of PM10 or PM10 precursor emissions that may be regulated under a specific rule, generic emission limit, or standard of performance, or a specific control program in a SIP.

The District took a conservative approach for determining de minimis levels. The analysis matched annual average daily emissions with the maximum annual average PM10 measurement for each county, and matched the worst-case 24-hour ambient measurement with seasonal quarter emissions for each corresponding pollutant. The worst-case condition for each component of PM10 was examined separately. This approach determines a de minimis level for each contributing component of PM10 based on the *potential* for a worst-case PM10 day, which is greater than the actually measured highest 24-hour PM10 concentration. The de minimis levels, in terms of tons of emissions per day, for the SJVAB are provided in Table 4-6, as follows:

Table 4-6 SJVAB De Minimis Levels
(tons/day)

NOx	SOx	VOC	PM10
1.3	2.5	2.8	0.9

Should any source category in the SJVAB contribute more than these levels, those categories are considered significant and BACM (including BACT) is required to be implemented.[*] The District analyzed the emissions inventory to identify significant source categories, the results of which can be found in Tables 4-7 and 4-8. For a detailed analysis of the de minimis calculations, please see Appendix G.

[1] State Implementation Plans for Serious PM-10 Non-Attainment Areas, and Attainment Date Waivers for PM-10 Non-Attainment Areas Generally; Addendum to the General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990, Federal Register, Vol. 59, No. 157, August 16, 1994
[*] Ibid.

Table 4-7 Significant Source Categories Not in the District's Regulatory Authority

Source Category	1999 Emissions of Qualifying Pollutant(s) (tpd)				Regulatory Entity
	VOC	NOx	SOx	PM10	
Agricultural Equipment	16.8	66.2		4.2	EPA/ARB
Agricultural Pesticides	28.1				DPR
Aircraft	11.0	3.3			EPA
Construction & Mining Equipment	3.7	32.7		2.0	EPA/ARB
Consumer Products	24.0				ARB
Heavy Duty Diesel Urban Buses		3.6			EPA/ARB
Heavy Duty Diesel Trucks	4.1	86.0		2.3	EPA
Heavy Duty Gas Trucks	3.6	5.5			EPA/ARB
Industrial Equipment		3.6			ARB
Lawn & Garden Equipment	5.5				EPA/ARB
Light Commercial Equipment		3.2			ARB
Light Duty Passenger	52.4	47.2		1.4	ARB
Light Duty Trucks	43.1	53.6		1.2	ARB
Light Heavy Duty Diesel Trucks		3.4			EPA/ARB
Light Heavy Duty Gas Trucks	8.3	3.7			EPA/ARB
Medium Duty Trucks	7.4	11.8			EPA/ARB
Medium Heavy Duty Diesel Trucks		18.0			EPA/ARB
Medium Heavy Duty Gas Trucks	5.7	3.0			EPA/ARB
Motorhomes		2.1			EPA/ARB
Off-road Recreational Vehicles	4.8				EPA/ARB
Recreational Boats	12.2	2.2			EPA/ARB
School Buses		2.0			EPA/ARB
Trains		19.9			EPA
Transportation Refrigeration Units		3.2			EPA

Source categories within the District's regulatory authority are listed in Table 4-8. Since BACM (including BACT) implementation is required, a discussion of the implementation status is included. While each source category may or may not have emissions for all of the pollutants, only the emissions that are above the de minimis levels are listed. The "status" column in Table 4-8 summarizes the BACM findings.

Table 4-8 Significant Source Categories Within the District's Regulatory Authority

SOURCE CATEGORY	Rule Number (if any)	Commitment ID (if any)	1999 Emissions of Qualifying Pollutant(s) (tpd) VOC	NOx	SOx	PM10	Status
Agricultural Crop Processing Losses Unspecified				3.1		4.4	The emissions from this source category could not be further broken down to represent source categories that would be regulated under a similar rule or emissions limit and be a significant source category. Therefore, BACM has not been identified at this time. It is expected that this category represents drying and fugitive emissions from processing corn, various grains, rice, various seeds/nuts, soybeans, sugar, wheat, and other misc. crops. Please see the emissions inventory improvement section of chapter 8, Ongoing Activities.
Agricultural Irrigation IC Engines		N		17.4		1.2	The District's Heavy-Duty Engine Program is rapidly replacing uncertified diesel engines with new engines certified to the EPA off-road NOx engine standard or better. Also see control Measure N.
Agricultural Products Processing Losses Unspecified				6.2			The emissions from this source category could not be further broken down to represent source categories that would be regulated under a similar rule or emissions limit and be a significant source category. Therefore, BACM has not been identified at this time. It is expected that this category represents drying emissions from processing almonds, candy, corn, cotton, flour, grain feed, milk/dairy, peanuts, potato chips, and other misc. products. Please see the emissions inventory improvement section of Chapter 8, On-Going Activities.
Agricultural Unpaved Roads	8081	A, D				11.0	1. See Appendix G for BACM analysis of the Proposed Ag CMP Program. **Rule adoption on May 20, 2004.** 2. See Appendix G for BACM analysis on Regulation VIII. **Rule revision completed August 19, 2004.**
Agricultural Windblown Dust		A				41.4	See Appendix G for BACM analysis of the Proposed Ag CMP Program. **Rule was adopted May 20, 2004.**

Table 4-8 Significant Source Categories Within the District's Regulatory Authority

SOURCE CATEGORY	Rule Number (if any)	Commitment ID (if any)	1999 Emissions of Qualifying Pollutant(s) (tpd) VOC	NOx	SOx	PM10	Status
Architectural Coatings	4601		11.8				The current rule is BACM. Please see BACM Analyses for existing rules in Appendix G.
Can & Coil Coatings	4604	L	4.6				This rule was amended January 15, 2003.
Cattle Feedlot Dust		A				7.0	See Appendix G for BACM analysis of the Proposed Ag CMP Program. **Rule adoption May 20, 2004.**
Charbroiling	4692					1.3	The current rule is BACM. Please see BACM Analyses for existing rules in Appendix G.
Components at Oil and Gas Facilities	4403		10.4				This rule is currently being amended.
Cotton Gins		B				2.7	**Rule was adopted February 17, 2005.**
Degreasing	4662		11.3				The current rule is BACM. Please see BACM Analyses for existing rules in Appendix G.
IC Engines, stationary	4701, 4702			47.0			Rule 4702 was adopted August 21, 2003
Earthmoving	8021	D				12.9	See Appendix G for BACM analysis on Regulation VIII. **Rule revision was completed on August 19, 2004.**
Glass Manufacturing	4354	E		12.3	4.0		The current rule is BACM for NOx. Please see BACM Analyses for existing rules in Appendix G. **Rule revision is necessary for SOx.**
Harvest Operations		A				36.8	See Appendix G for BACM analysis of the Proposed Ag CMP Program. **Rule was adopted May 20, 2004.**
Livestock Wastes		A	57.1				See Appendix G for BACM analysis of the Proposed Ag CMP Program. **Rule was adopted May 20, 2004.**
Manufacturing and Industrial Fuel Combustion		C, I, J		24.3	5.2		**RULE ADOPTION IS NECESSARY.**

Table 4-8 Significant Source Categories Within the District's Regulatory Authority

SOURCE CATEGORY	Rule Number (if any)	Commitment ID (if any)	1999 Emissions of Qualifying Pollutant(s) (tpd)				Status
			VOC	NOx	SOx	PM10	
Natural Gas Boilers	4305, 4306			3.7			Rule 4306 was adopted for BACT NOx control August 18, 2003.
Natural Gas Fired Oilfield Steam Generators	4305, 4306, 4406	F		6.4	6.9	1.4	Rule 4306 was adopted for BACT NOx control August 18, 2003. A BACT investigation revealed that there are no available controls for PM10. **SOx emissions are de minimis.**
Oil Drilling and Workover	2280			10.8			Please see BACM Analyses for existing rules in Appendix G.
Open Areas	8051	D				3.1	See Appendix G for BACM analysis on Regulation VIII. **Rule was revised August 19, 2004.**
Open Burning	4103		10.3	4.6		11.4	The current rule is BACM. Please see BACM Analyses for existing rules in Appendix G.
Organic Solvents	4661		7.6				The current rule is BACM. Please see BACM Analyses for existing rules in Appendix G.
Paved & Unpaved Roads	8061	D				66.8	See Appendix G for BACM analysis on Regulation VIII. **Rule was revised on August 19, 2004.**
Plastic and Plastic Products Manufacturing						1.5	Emissions for 1999 totaled 1.5 tpd. However, adopted controls reduce emissions for 2000 to 0.1 tpd Therefore, this category is now considered de minimis.
Prescribed Burning	4106		16.5			28.9	The current rule is BACM. Please see BACM Analyses for existing rules in Appendix G.
Residential Space Heating		M		2.7			**Rule adoption is necessary.**
Residential Water Heaters	4902			1.6			Please see BACM Analyses for existing rules in Appendix G.
Wood Burning Fireplaces and Wood Burning Heaters	4901		6.0			11.3	See Appendix G for BACM analysis on Wood Burning Fireplaces and Wood Burning Heaters

Table 4-8 Significant Source Categories Within the District's Regulatory Authority

SOURCE CATEGORY	Rule Number (if any)	Commitment ID (if any)	1999 Emissions of Qualifying Pollutant(s) (tpd) VOC	NOx	SOx	PM10	Status
Service and Commercial-Other Fuel Combustion		C, I, J		25.7		1.0	**Rule adoption is necessary.**
Solid-Fueled Boilers, Steam Generators and Process Heaters	4352	H		3.5			**RULE REVISION NECESSARY.** PLEASE SEE PAGE 4-41.
Stationary Gas Turbines	4703			10.2			The current rule is BACM. Please see BACM Analyses for existing rules in Appendix G.
Steam Enhanced Crude Oil Production Well Vents	4401		14.0				**Rule revision is necessary**.
Storage of Organic Liquids	4623		6.9				The current rule is BACM. Please see BACM Analyses for existing rules in Appendix G.
Tilling Dust		A				36.4	See Appendix G for BACM analysis of the Proposed Ag CMP Program. **Rule adopted May 20, 2004.**
Windblown Dust from Pasture Lands		A				6.6	See Appendix G for BACM analysis of the Proposed Ag CMP Program. **Rule adopted on May 20, 2004.**
Wineries	4696	K	7.0				**Rule adoption is necessary.**

RACM Demonstration

Moderate PM10 nonattainment areas are required to implement reasonably available control measures (RACM) and reasonably available control technology (RACT). In this discussion, the term RACM will include both RACM and RACT. Although the District is now subject to the more stringent BACM requirement, EPA has not approved several of the District's rules as RACM. Further discussion of this situation is provided below.

The District's 1991 Moderate Area PM10 Attainment Plan contained commitments to implement RACM. The EPA never acted to approve or disapprove the 1991 Plan, but it has acted on the rules and regulations submitted by the District to implement the 1991 Plan, the 1994 Serious Area Plan, and the 1997 PM10 Attainment Demonstration Plan. When the District was reclassified to serious nonattainment in 1993, it was required to implement the more stringent BACM within four years. After submittal of the 1994 Serious Area Plan, the District began amending the RACM rules and added several new rules to meet BACM. In 2001 and 2002, EPA completed its review of District PM10 rules that were submitted as early as 1993 and the new and amended rules.

The EPA took action to approve some of the rules, and to partially approve or partially disapprove several other rules. In the EPA's judgment, some of the rules had not met the stringency needed to demonstrate BACM, but were likely to have met the RACM level of stringency. The EPA requested that the District provide a detailed analysis demonstrating whether the rules are RACM or BACM. The District embarked on a BACM analysis designed to meet the current requirement and also to satisfy the RACM requirement. If the BACM analysis identified sources that were not controlled to the BACM level, the District was committed to upgrading the rules that applied to those sources in its new PM10 Plan.

In August of 2002, Earthjustice, on behalf of Medical Advocates for Healthy Air, Latino Issues Forum, and the Sierra Club, notified the EPA of their intent to file a lawsuit against the EPA insisting that a Moderate Area Federal Implementation Plan (FIP) containing RACM go forward in the San Joaquin Valley to be followed by a BACM FIP. Since the District was in the midst of preparing a BACM analysis for the 2003 PM10 Plan, it was the District's belief that the results of the more stringent BACM analysis would satisfy any RACM requirements for sources, hence, rendering an actual RACM analysis unnecessary. However, rule development to upgrade rules that are found to need increased stringency would take nine to twelve months to complete even with expedited timelines. Therefore, as an interim measure to eliminate the EPA's need to implement a RACM FIP, the District is including a RACM demonstration with this PM10 Plan.

The District's RACM Analysis used several different approaches to meet its objectives. The District contracted with Sierra Research to prepare a Technical and Economic Feasibility Study for fugitive dust measures as part of the BACM analysis.

This information also provides a basis to demonstrate RACM. The District also contracted with a consultant to help coordinate the BACM and RACM demonstrations. For a substantial number of rules, EPA had already approved the District's existing rules as BACM or RACM. In those cases, no further analysis was required. District staff prepared the analysis of stationary sources, agricultural sources, and wood burning fireplaces and wood burning heaters.

The results of the RACM analysis are presented in Appendix G. In summary, the analysis determined that all significant sources of PM10 and PM10 precursors are regulated to the RACM level or that no RACM was available for that source. The analysis provides a comparison with RACM suggested in the EPA guidance documents, and RACM and BACM adopted in other areas (South Coast Air Quality Management District, Maricopa County, Arizona, and Clark County, Nevada) as a test of feasibility. When a measure is identified to be more stringent than the current District measure, the analysis provides a reasoned justification for not pursuing that measure. For example, the source category controlled may be very small in the SJVAB or local factors may greatly increase implementation costs. Since the comparison was done with areas that had met the BACM requirement, in some cases, federal administrative actions required the EPA to approve the rules found in these other areas as RACM and BACM. If a measure was approved as BACM in another area, the District used that measure as a standard of comparison for its BACM analysis. When the District's existing rule was reasonably close to measures suggested in the EPA Guidance or to those adopted in other areas, the District concluded that the rule is, at a minimum, RACM.

District Commitments

For the purposes of implementing the PM10 Plan, the District is committed to adopt and implement control measures that will achieve, in aggregate, emission reductions specified in the following section. Emission reductions achieved in excess of the amount committed to in a given year can be applied to the emission reduction commitments of subsequent years. The District is committed to adopt the control measures listed below unless these measures or a portion thereof are found infeasible and other substitute measures that can achieve equivalent reductions in the same adoption/implementation timeframes are adopted. Findings of infeasibility will be made at a regularly scheduled meeting of the District Governing Board with proper public notification. For purposes of State Implementation Plan (SIP) commitment, infeasibility means that the proposed control technology is not reasonably likely to be available by the implementation date in question, or achievement of the emission reductions by that date is not cost-effective. The District acknowledges that this commitment is enforceable under Section 304(f) of the CAA.

The District has identified the following source categories that will require a rule adoption or amendment to assist in attaining the NAAQS at the earliest practicable date. Some of these commitments were not necessary to satisfy the BACM requirement, but were necessary to demonstrate attainment, such as the Indirect

Source Mitigation Fee. All measures will go through additional analysis and public review during rule development that will determine their technical and economic feasibility and the specific rule provisions that are ultimately adopted. The District commitments are as follows:

Table 4-9 List of New District Commitments

Commitment ID	Source Category	Pollutants*
A	Agriculture (Conservation Management Practice Program)	PM10, VOC
B	Cotton Gins	PM10
C	Dryers	NOx, SOx
D	Fugitive PM10 (Regulation VIII)	PM10
E	Glass-Melting Furnaces	SOx
F	Indirect Source Review, and Indirect Source Mitigation Fee	NOx, PM10
G	Solid Fuel Boilers, Steam Generators, and Process Heaters	NOx, SOx
H	Small Boilers, Steam Generators, and Process Heaters	NOx, SOx
I	Water Heaters (Industrial, Commercial, and Institutional)	NOx, SOx
J	Wineries	VOC
K	Steam Enhanced Crude Oil Production Well Vents	VOC
L	Residential Space Heating	NOx
M	Agricultural Internal Combustion Engines	PM10, NOx

* Pollutants covered by specific control measures may be revised during the rulemaking process.

The following section provides control measure summaries for each plan commitment. The summaries include the reason for adopting the control measure, affected sources, a description of the potential control technology, the expected emission reductions, and the implementation schedule. All of the control measures will require rule development. The District is committing to proceed with rule development as rapidly as possible. Rule development is scheduled to begin immediately upon adoption of the PM10 Plan for the most critical control measures. The remaining measures will begin rule development in accordance with an ambitious schedule and no measures will be delayed unnecessarily. Upon adoption of each rule, the rule will immediately be forwarded to ARB for SIP Submittal.

A. Agricultural Conservation Management Practice Program (Rule 4550)

The Governing Board Adopted Rule 4550 on May 20, 2004. Because EPA has not yet approved the submitted rule, the original text of the commitment follows.

The State of California legislature approved and the Governor signed legislation that will impact the Conservation Management Practice (CMP) Program. Senate Bill (SB) 700 contains provisions requiring the District to adopt controls on onfield agricultural sources. The District believes that the basic provisions of the CMP Program will fulfill these requirements; however, procedural changes relating to the processing of the CMP Plans will be included in the rule. Changes related to SB 700 are included in the revision to the control measure provided below.

REASON FOR CONTROL MEASURE: Areas designated as serious nonattainment for PM10 are required to implement BACM and BACT on all significant sources of emissions. Review of regulations in other serious nonattainment areas revealed that two other air basins (South Coast Air Quality Management District, and Maricopa County, Arizona) have implemented agricultural best management practices (BMP) to fulfill their BACM requirement. The District's proposed program, Agricultural Conservation Management Practices (CMP) Program, relies on similar practices and is at least as stringent as the two existing programs. In addition, the Governor recently signed Senate Bill (SB) 700 that requires the District to implement BACM for on-field agricultural practices.

Samples collected from monitoring sites in the SJVAB over the last three years indicate that geologic material comprises as much as 95 $\mu g/m^3$ on the worst days. Data from the California Regional PM10/PM2.5 Air Quality Study (CRPAQS) indicates that geologic material comprises about 46 percent of the mass on an annual basis. Although agriculture is only responsible for a portion of these geologic emissions, several agricultural source categories are likely to exceed significant source thresholds.

The PM10 Plan CMP Program commits to reduce only fugitive PM10 emissions; however, the program is being structured to allow additional pollutants to be added in the future. For example, VOC emissions from concentrated animal feeding operations (CAFO) or from reduced pesticide application may be added as commitments in the upcoming ozone plan. In addition, the District commits to implement ammonia controls if the results from CRPAQS indicate that ammonia reductions would expedite attainment of the PM10 standard. For any new source category added to the CMP Program, the District must demonstrate that there are no other feasible BACM rules that could be applied to that source category.

AFFECTED SOURCES: The affected sources for this category include on-field agricultural operations, such as land preparation and harvesting; off-field activities, such as unpaved access roads; equipment parking and storage areas; and inactive open area windblown emissions. Other affected agricultural sources include concentrated animal feeding operations (CAFO). Growers preparing fugitive dust management plans to comply with Regulation VIII, Rule 8081 (Agricultural Sources) will be considered to meet the requirements of the CMP Program for off-field activities. Regulation VIII currently contains a daily trip exemption threshold of 75 for unpaved agricultural roads and for unpaved vehicle and equipment parking and traffic areas. The CMP Program will require management practices for unpaved roads and vehicle and equipment parking

and traffic areas exempt from Regulation VIII where feasible. At a minimum, practices such as limiting access and speed restrictions should be feasible on most roads and parking areas. Many growers raising dust sensitive crops are expected to choose to apply dust suppressants and water as their CMP for unpaved roads and parking areas. Small farms will not be subject to the program reporting requirements, but will be given program information to promote the implementation of the practices. Certain crop categories that prevent PM10 emissions or produce only small amounts of PM10 during some or all of the growing cycle will be considered to meet one or more of the CMP requirements.

DESCRIPTION: See adopted rule for updated description. The CMP Program is not a traditional air pollution control measure. The District considers command and control regulations to be inappropriate for most activities related to agricultural practices used for the growing of crops. Emissions from agricultural sources vary by many factors that are beyond the control of the grower. For example, drought conditions and related cuts in water deliveries can lead to increased fallow lands and more wind blown dust emissions. Market conditions can change quickly and can turn a profitable crop into a losing proposition. This limits the ability of growers to absorb the costs of controls in many cases. Limited research on the effectiveness of agricultural practices on emissions has been completed to date. The EPA has recognized these problems and has allowed programs where growers can select practices that are feasible for their operation as BACM.

Participation in the CMP Program will be mandatory, but the growers will, by their own choosing, select measures most appropriate for their operation. The source categories include (1) unpaved roads, (2) unpaved vehicle/equipment traffic areas, (3) land preparation, (4) harvest, and (5) other - including windblown PM10 from open areas, and agricultural burning. Practices that reduce pesticide application may be added at a later date. Growers must select at least one management practice from each of the five categories, but have no specific emission reduction target. One option being considered is for growers to be able to select two measures from one category that would result in emission reductions greater than or equal to that obtained from one practice from each category. This allows growers the flexibility they need, but ensures that emission reductions from agricultural sources will be achieved. Growers that cannot identify a feasible practice for a category can propose new practices or justify not providing a practice due to technical or economic feasibility considerations. The District and the NRCS will work with growers claiming infeasibility to identify alternate measures or to verify that no measures are feasible. No calculations will be required of the grower. The District will calculate emission benefits.

The District expects that growers operating CAFOs will also participate in the program. They will be required to select practices from at least three source categories: (1) entrained PM10 from animal activity, (2) unpaved roads, and (3) unpaved equipment parking and storage areas. CMPs related to manure and waste disposal are not in the current proposal, but are expected to be added as a potential measure for the District's next ozone plan expected later this year. Different types of CAFO's such as poultry and swine will likely have different categories to reflect the

differences in their operation. The District is working closely with agencies and organizations with experience in raising livestock to develop CMPs specific to CAFOs. Some CAFO operators also grow field crops. Those growers must select CMPs for both their field crops and for their CAFO.

In order to meet the federal BACM requirements, the CMP Program must include an enforcement mechanism to ensure participation. The mandatory provisions of the program will be contained in a District rule to be developed and adopted prior to program implementation in July 2004. The District has authority to adopt regulations for these sources under California Health and Safety (H&S) Code 40716(a)(1). Growers that fail to comply with the rule will be subject to District enforcement action. The District originally proposed to have growers submit their CMP Plans to NRCS/RCDs for approval. Based on interpretation of SB 700 requirements to provide an enforcement mechanism to ensure that BACM and best available retrofit control technology (BARCT) are implemented, the District now proposes that CMP Plans will be approved by the District and will be on file at the District offices. This will ensure that District compliance staff investigating a complaint or spotting excessive emissions will be able to identify the responsible party. The District may adopt a schedule of fees to cover the estimated reasonable costs of evaluating plans and monitoring and enforcing activities in accordance with H&S 41512.5. The CMP rule must contain a mechanism to ensure that the District and EPA will be able to verify that all growers subject to the rule are participating and that CMP plans are being implemented. The District is proposing that the CMP Plans will be subject to normal District compliance procedures. The rule will go through an extensive public participation process prior to adoption.

One of the objectives of the program is to promote the widespread adoption of practices that growers have found beneficial in some way to their operation and that also help reduce emissions. For some CMPs, incentive funds will be available to offset increased costs. Education and outreach to growers regarding the most effective measures are critical to program success.

The Natural Resources Conservation Service (NRCS) and Resource Conservation Districts (RCD) will be the primary points of contact to assist growers in identifying CMPs, in preparing CMP Plans, and in implementing the practices. The NRCS/RCD will provide growers with a CMP Handbook describing the CMPs available for the various crop categories. The growers would select practices prior to the beginning of the year and implement those measures during that year. The growers would fill out a simple form listing the CMPs selected that would constitute their CMP Plan. The form is envisioned to have a section providing contact information for the applicant, a section for off-field practices, and a separate page for each commodity that would cover land preparation/cultivation, harvest, and other. The goal is to keep the CMP Plan to easy for the grower to prepare with readily available information. The growers would submit a copy of the CMP Plan to the District and maintain a copy on site. This grower would update the CMP Plan as needed to reflect changing practices. Individual farms will not have emission reduction targets, but must be able to demonstrate that they have implemented the CMPs they selected. The program will be judged on its effectiveness as a whole and not on a farm by farm basis.

The NRCS and/or RCD's will provide assistance to growers in selecting CMPs and filling out forms. The District will be responsible for accepting and approving the CMP Plans, for tracking emission reductions achieved by the program and for taking any enforcement action regarding the mandatory portions of the program. Additional assistance to growers may be available from the Agricultural Research Service (ARS), California Department of Food and Agriculture (CDFA) and agricultural groups, such as farm organizations, agriculture trade associations, and grower groups. The District has a Memorandum of Understanding (MOU) with the NRCS and the CDFA in place that commits the agencies to work together on the development and implementation of measures dealing with agricultural operations. The NRCS has committed funding and is hiring staff to support this program. Please see Appendix H for a more detailed discussion on the proposed Agricultural CMP Program. Appendix H has not been updated to reflect changes in program responsibility described earlier.

TYPES OF CONTROL REQUIRED: See adopted rule and CMP Handbook for current information. Through the work of stakeholders, the District, ARB, NRCS, and farm organizations, a preliminary list of CMPs has been developed. The list is quite extensive, and is expected to increase in control options prior to publication of the CMP Handbook. Practices reducing emissions fall into several broad categories:

- Practices that reduce or eliminate the need to disturb the soil;
- Practices that protect the soil from wind erosion;
- Equipment modifications to physically produce less PM10;
- Applying water or dust suppressants in off-field high traffic areas;
- Reducing speeds or access on unpaved roads and parking areas;
- Alternative practices to waste burning; and
- Actions that reduce pesticide application.

Some examples of the suggested CMPs are combined operations, conservation tillage, cover crops/native vegetation, equipment changes, overhead systems, orchard floor management, and dust suppressants. For example, the combined operations CMP would specify combining pieces of equipment to perform several operations in one pass, which would reduce soil disturbance and PM emissions. The details of each CMP will be included in the CMP Handbook.

The District is also proposing to include PM10 emissions from CAFO, such as dairies, beef feedlots and poultry operations in the CMP Program. There are a number of practices listed in the literature for these facilities that are expected to reduce PM10 emissions. However, most research literature on the subject that describes possible control methods contains little or no performance data. VOC emissions and potential reductions are not well characterized. The District will be working with stakeholders and researchers to identify VOC measures in the coming months. The District will estimate emission reductions based on available information prior to program implementation. The PM10 Plan will not claim any VOC reductions from the CMP Program; however, the next ozone plan will likely contain

CMP VOC measures. SB 700 requires permits for CAFOs in ozone nonattainment areas such as this District. This could make CMPs for ozone purposes unnecessary.

The District will approve all proposed CMPs after review by the Agricultural Technical Advisory Committee and will rely heavily upon the expertise of the NRCS in this process. Resource Conservation Districts (RCD) are encouraged to work with grower members on identifying and developing CMPs representing the conditions unique to their district, and to the extent possible, develop RCD specific handbooks. The primary criteria for including a conservation practice in the program is that there must be a reasonable certainty that it will result in emission reductions. The San Joaquin Valley Study Agency is a Board consisting of elected officials that was formed to provide oversight of the large air quality studies performed in the region for ozone and PM. The Study Agency recently approved taking on responsibility for funding pass through and oversight of agricultural air quality research projects that will improve emission factors for agricultural sources and better quantify the benefits of CMPs.

EMISSIONS AND EMISSION REDUCTIONS: The 2002 inventory indicates that PM10 emissions from agriculture-related sources total 197 tons per day, or more than half of all directly emitted PM10 emissions.

The effectiveness of a CMP can be influenced by various factors such as weather conditions, soil types, cropping systems, moisture conditions, water availability, and relation to urban centers. Each CMP must be specifically selected for an agricultural source based on the factors encountered by the agricultural source. A single CMP may not work equally well for all growers. Although there is a limited amount of scientific information concerning the effectiveness of some CMPs in reducing PM10 emissions, it is reasonable to balance this limitation with the common sense recognition that minimizing agricultural activities that disturb the soil would reduce the entrainment of dust, thereby reducing PM10 emissions.

Table 4-10 summarizes the emissions and estimated emission reductions for each identified source category. For practices where no emission reduction data was available the District used a conservative estimate of the expected benefit.

IMPLEMENTATION SCHEDULE: The District Governing Board adopted Rule 4550 on May 20, 2004 and re-adopted it on August 19, 2004, with an effective date of July 1, 2004, to correct a public hearing noticing deficiency.

Table 4-10 PM10 Emissions and Potential Emissions Reductions San Joaquin Valley Agricultural CMP Program

CMP Category	2010 Emissions (tpd)	2010 Emissions Reductions (tpd)	%
Unpaved Roads (Ag)*	10.6	2.3	21.7
Unpaved Traffic Areas (Ag)*	6.3	0.6	9.5
Harvest	35.6	13.2	37.1
Land Prep	35.2	9.2	26.1
Windblown Dust	40.1	7.9	19.7
Ag Burning	9.5	0.5	5.3
CAFO PM10**	7.0	0.1	**1.4**
TOTAL PM10	**144.3**	**33.8**	**23.4%**

*The emissions attributed to Ag Unpaved Roads and Ag Unpaved Traffic Areas will be controlled by Regulation VIII, and the Proposed Indirect Source Mitigation Fee, in addition to the Proposed Ag CMP Program. The % reduction listed is only for the Proposed Ag CMP Program compared to the entire category

**CAFO PM10 only includes PM10 from feedlots and dairies.

B. Cotton Gins (Rule 4204)

REASON FOR CONTROL MEASURE: PM10 emissions from cotton gins exceed the "de minimis threshold" level and, therefore, are subject to federal BACM requirements.

AFFECTED SOURCES: There are 72 cotton gin facilities in the SJVAB, approximately 85% of which use state-of-the-art 1D-3D cyclones as part of their PM10 control strategies.

DESCRIPTION: The Governing Board adopted Rule 4204 on February 17, 2005. Because EPA has not yet approved the submitted rule, the original text of the commitment follows.

Cotton gins are currently subject to District permitting requirements, and Rule 2201 (New and Modified Stationary Source Review Rule) is the rule under which permit conditions apply. No District prohibitory rule sets specific emission limits for cotton gins. Many cotton gins have recently retrofitted with cyclones in order to reduce emissions and create emission reduction credits.

According to District estimates, the overall control efficiency of PM10 controls on District cotton gins is currently around 78%. A new rule specifically for cotton gins, if similar to the Maricopa County, Arizona rule, could increase PM10 control efficiency to over 90%. Under this control measure, cotton gins could be retrofitted with 1D-3D cyclones or equivalent devices with at least 95% efficiency, which is considered as

BACT for seed-cotton loading, first seed-cotton cleaning, master trash system and other high-pressure exhaust emission units. The 2D-2D cyclones or equivalent devices with at least 90% efficiency could be installed for low-pressure exhaust units. A trash hopper with a properly positioned auger and a two-sided enclosure could be employed to minimize fugitive emissions.

This measure could also require operation of cyclones at their designed gas flow rates, which could be assured by conducting flow maintenance evaluations. This requirement would ensure maximum particulate matter collection efficiency for the cyclones.

IMPLEMENTATION SCHEDULE: The District Governing Board adopted Rule 4204 on February 17, 2005, which is to be effective July 1, 2005.

EMISSIONS AND EMISSIONS REDUCTION: Total PM10 emissions from sources subject to the proposed Cotton Gin Rule are estimated to be 2.9 tons per day in 2005. Upon final implementation of the Cotton Gin control measure, 1.5 tons per day of PM10 reductions is anticipated.

C. Commercial Dryers (Rule 4309)

REASON FOR CONTROL MEASURE: NOx and SOx emissions from industrial and commercial dryers may exceed the “de minimis threshold” levels and may therefore be subject to federal BACM requirements. Further information on which pollutants are de minimis will be developed during the rulemaking process.

AFFECTED SOURCES: Dryers are used to remove water from process material by heating, causing evaporation of the water. Most dryers in the SJVAB are used to remove moisture from fruits, nuts, vegetables, cotton, and also from clothing at dry cleaning plants. Facilities with units that are subject to this control measure represent a wide range of industries, including but not limited to cotton ginning, dairy products, laundry cleaning services, concrete manufacturing, and nut, fruit, and vegetable processing. Units in this source category are located throughout the eight county area of the SJVAB. The emissions inventory categories affected include Manufacturing and Industrial Fuel Combustion, and Service and Commercial-Other Fuel Combustion.

DESCRIPTION: These units are currently subject to District permitting requirements, but not a specific prohibitory rule. The BACM would establish BACT NOx and SOx emission standards for dryers subject to permitting requirements. Differing emission standards may be established based on the heat input capacity of the dryer, and whether the unit is new or existing. Emission controls appropriate for dryers include combustion of PUC quality natural gas, low excess air, low NOx burners, and flue gas recirculation (FGR).

IMPLEMENTATION SCHEDULE: Rule adoption is scheduled for the fourth quarter of 2005. Full BACM implementation for NOx and SOx (as appropriate) is projected for the year 2009.

EMISSIONS AND EMISSIONS REDUCTION: Total NOx emissions from sources subject to the Dryer control measure are estimated to be 8.6 tons per day in 2006. Upon final implementation of the Dryer control measure, 1.0 tons per day of NOx reductions is anticipated. Total SOX emissions from sources subject to the Dryer control measure are currently estimated to be 1.1 tons per day in 2006. Upon final implementation of the Dryer control measure, 0.1 tons per day of SOx reductions is anticipated if BACM is needed.

D. Fugitive PM10 Prohibitions and Commitments from Local Agencies to Reduce Fugitive PM10 Emissions (Amendments to Regulation VIII)

REASON FOR CONTROL MEASURE: As required by the CAA, a serious nonattainment area must provide BACM for fugitive dust sources. Regulation VIII (Fugitive PM10 Prohibitions) is the District's regulatory instrument used to control fugitive dust emissions. The eight rules comprising Regulation VIII (Rules 8011, 8021, 8031,8041, 8051, 8061, 8071, 8081) are *prohibitory* rules, that is, they are rules that do not require the issuance of a District permit.

In March 2003, the EPA finalized a conditional approval of Regulation VIII with respect to CAA requirements for RACM and a limited approval/limited disapproval of Regulation VIII with respect to the CAA for BACM. Failure by the District to provide a RACM Demonstration within a 12-month timeframe (March 2004) will result in automatic imposition of two sanctions, (1) an increase in emission reduction offsets, and (2) a withholding of transportation-related funding. In addition to the two sanctions, the CAA also requires the imposition of a federal implementation plan (FIP). Failure to provide a BACM Demonstration and receive EPA approval of BACM amendments to Regulation VIII within an 18-month timeframe (September 2004) will also result in immediate imposition of both emission reduction offsets and highway funding sanctions, and a FIP.

As part of the District's efforts to comply with the CAA, the District amended Regulation VIII on August 19, 2004 to meet BACM requirements. Also, the 58 cities, 8 counties, and the California Department of Transportation ("Caltrans" Districts 6 & 10) within the District's jurisdictional area have committed to undertaking a comprehensive effort in reducing sources of fugitive PM10 emissions within their purview (e.g., budget considerations, codes and regulations, land use decisions, etc.). The local jurisdictions have provided BACM commitments that have been incorporated as part of this plan. An overview of the Regional Transportation Planning Agency process to identify and implement BACM is support the PM10 Plan is provided as Appendix I.

AFFECTED SOURCES: Anthropogenic (human-caused) activities result in the majority of fugitive dust emissions in the SJVAB. Regulation VIII applies only to anthropogenic fugitive dust sources; it does not apply to PM10 precursor sources or sources of smoke. Mechanical disturbance (for example, vehicles traveling over an unpaved surface, or earthmoving operations associated with construction activities, or sand and gravel or other mining activities) is a significant source of fugitive dust emissions. Wind events, although infrequent within the SJVAB, also contribute to fugitive dust emissions especially as wind travels over a previously disturbed, unstabilized surface. Regulation VIII applies to activities that have the potential to emit or result in primary PM10 fugitive dust emissions such as construction, demolition, excavation, extraction or other earthmoving activities; handling, transport, and storage of bulk materials; landfill operations; unpaved roads; unpaved vehicle/equipment traffic areas; disturbed open areas; and off-field agricultural sources.

DESCRIPTION: See adopted rule for updated description. Amendments to Regulation VIII would apply to various fugitive dust generating sources. Proposed amendments include changes in administrative requirements (e.g., reporting requirements and dust control plans), applicability (i.e.; what sources the rules apply to), thresholds (e.g., amount of activity, such as vehicular passes per day, or size of an area where an activity occurs, or amount of material moved during an activity, etc.), and additional control options. Controlling fugitive dust sources often requires compliance with more than one Regulation VIII rule. For example, during construction activities, it is possible that earthmoving activities, handling and storage of bulk materials, use of unpaved roads, use of unpaved vehicle/equipment traffic areas, and carryout/trackout will occur.

In order to reduce, minimize, or eliminate fugitive dust emissions, guidance developed by the EPA places an emphasis on preventive techniques rather than mitigation techniques when developing BACM level controls (i.e., prevent soil trackout vs. clean up trackout). Therefore, the District is pursuing BACM that will prioritize techniques that prevent fugitive dust as opposed to techniques that require a reactive or mitigation response.

As noted earlier, Regulation VIII is a prohibitory rule that does not require the issuance of District permits. Prohibitory rules rely on both field enforcement and citizen complaints to ensure compliance. The District proposes to enhance the effectiveness of enforcement through several actions that include an increased presence of Compliance Division staff in the field, increased use of Dust Control Plans, increased compliance assistance, and greater public outreach. By making Regulation VIII enforcement a greater priority, the District expects to significantly improve compliance rates.

The “BACM Technological and Economic and Feasibility Analysis,” a report prepared by Sierra Research for the District was used as a resource to identify potential BACM-level amendments to Regulation VIII and is included as Appendix G of this Plan. Appendix G contains a table entitled “Identification and Justification of BACM Selected,” that provides

a comprehensive listing of control measures, what the control measure does, technological feasibility, cost effectiveness, and discussion/justification of control measures. The BACM Analysis provides a preliminary indication that additional controls may be feasible. Additional BACM analysis has been conducted since the approval of the 2003 PM10 Plan to support changes and clarifications proposed for the Draft 2003 PM10 Plan Amendment scheduled for adoption in December 2003. The analysis is titled 2003 PM10 Plan Amendment Supplemental BACM Analysis. Feasibility or infeasibility will be confirmed during rule development. Below is a rule-by-rule description of the potential amendments to the seven rules under Regulation VIII that the District will consider during the rule development process. Measures listed as contingency measures are those that were not selected as BACM, but could be implemented if emission milestones are not achieved.

The District commits to strengthening Regulation VIII to the extent necessary to achieve the BACM level of control for the San Joaquin Valley and to obtain the emission reductions necessary to attain the PM10 standards as expeditiously as practicable. Rule development is the time when individual measures will ultimately be judged on technical and economic feasibility based on input from the public and stakeholders and the detailed socioeconomic study that is required under California law. Therefore, the measures listed below are subject to change, but will meet the test of economic and technical feasibility when adopted in rule form.

1. **Rule 8021** (Construction, Demolition, Excavation, Extraction and Other Earthmoving Activities) affects construction or demolition related disturbances of soil, including land clearing, grubbing, scraping, excavation, extraction, land leveling, grading, cut and fill operations, travel on a site, travel on access roads to and from a site, and demolition of structures. The following measures were identified in the District's BACM analysis and reflect changes based on comments received from stakeholders during public comment on the PM10 Plan and from EPA since plan submittal:

<u>For Demolition Activities</u>:

- Require application of dust suppressants to erodible surfaces within 100 feet of a structure where debris may fall;
- Require application of water within 1-hour of demolition to erodible surfaces within 100 feet of structure;
- Require application of water or dust suppressants to areas where equipment will operate; and
- Require application of water or dust suppressants to disturbed soils and debris within one hour after demolition is complete or at the end of each workday.

<u>For Construction Activities</u>

- Require Dust Control Training Class;
- Limit on-site vehicle speeds to 15 mph;

- Require speed limit signage at sites greater than 10 acres;
- Require Dust Control Plans for residential projects larger than 10 acres and for commercial projects larger than 5 acres;
- Require notification to the District of any earthmoving operations between 1 and 10 acres for residential construction projects, and 1 and 5 acres for commercial construction projects;
- Cease construction activities that disturb the soil when a wind event is declared. (A wind event is defined as any day in which 1-minute wind gust exceeds 25 mph as determined by the District.);
- Cease construction activities that disturb the soil when 20% opacity is exceeded due to wind; and
- Require continued operation of water trucks when construction ceases due to wind, unless unsafe to do so.

2. **Rule 8031** (Bulk Materials) affects the outside storage and handling of any unpackaged material that emits dust when stored or handled. Rule 8031 requires bulk handling and storage facilities to limit dust from material transfer and from storage piles that emit dust within a facility's location. This rule also requires measures to reduce emissions caused by transport of material off-site. The District's BACM analysis identified the following measures that will be considered during the amendment process for Rule 8031:

- Limit an exemption to the storage of materials where the total amount of material stored is 100 cubic yards or less (specifically, section 4.4);
- Require wind barriers to have less than 50% porosity;
- Require control during the handling of bulk material piles regardless of size and retain an exemption for stored bulk material piles where no material is being added or removed; and
- Add an additional option to Table 8031 to allow 3-sided enclosures that are at least as high as the storage pile and with less than 50% porosity.

3. **Rule 8041** (Carryout and Trackout) requires prevention or expeditious cleanup of mud and dirt deposited on adjacent paved public roads. A key phrase in understanding impacts caused by carryout and trackout is "deposition." Amendments to carryout and trackout are intended to prevent or expedite removal of material, mostly in the form of dirt (soil), that are deposited on paved public road surfaces. The District's BACM analysis identified the following measures that will be considered during the amendment process for Rule 8041:

- Add requirements applicable to 20 vehicles trips per day with three or more axles;
- Require trackout control devices to be a minimum of 25 feet in length and full width of the unpaved road (where entry and exit roads are separated

and clearly designated, control devices are only required for the exit roads);

- Require paved interior roads to be 100 feet in length and full width of the unpaved road (including the turning radius where an interior road meets a paved public road);
- Require gravel pads to be 3 inches deep, 50 feet long, and cover the full width of the unpaved road (including the turning radius where an unpaved road meets a paved public road) (where entry and exit roads are separated and clearly designated, gravel is only required for the exit roads);
- In rural areas, remove trackout onto public paved roads from construction sites 10 or more acres immediately when it extends 50 feet from the nearest exit point of a site.

4. **Rule 8051** (Open Areas) addresses open areas by requiring measures to prevent or minimize fugitive emissions from activities that have disturbed surface areas that will not be used in the immediate or short-term. The District's BACM analysis identified the following measures that will be considered during the amendment process for Rule 8051:

- Change applicability to 0.5 acres in urban areas, or 3 acres in non-urban areas, which contain disturbed surface areas of at least 1,000 square feet;
- Require control measures immediately after cessation of disturbance;
- Require more than one control method for disturbed open areas if VDE exceeds 20% opacity due to windblown dust;
- Add an exemption for mowing and/or cutting weeds that maintain at least 3 inches of stubble.

5. **Rule 8061** (Paved and Unpaved Roads) affects any paved, unpaved, or modified public or private road, street highway, freeway, alley, way, access drive, access easement, or driveway constructed or modified within the District. The District's BACM analysis identified the following measures that will be considered during the amendment process for Rule 8061:

<u>For Paved Roads</u>:

- Caltrans and local governments within the District have committed to controlling fugitive dust emissions through a variety of means. The Transportation Planning Agencies (TPA) have compiled commitments from the local agencies that are included in the Plan.
- Obtain commitments from municipalities to construct 4-foot paved shoulders on 50% of existing paved roads with the highest ADT in urban areas and on 25% of existing paved roads with the highest ADT in rural areas (measure subject to state and local funding constraints);

- Require municipalities, or their contractors, to purchase PM10-efficient street sweepers when new street sweepers are purchased;
- Require municipalities to purchase at least one PM10-efficient street sweeper within three years;
- Require priority sweeping on dirt-laden roads;
- Require street sweeping frequency of at least once per month on roads where PM10-efficient street sweepers are used;
- Require removal of dirt/debris from roadways within 24 hours of identification of such conditions after a wind or rain runoff event;
- Require that PM10-efficient street sweepers are operated according to manufacturer's specifications; and
- Require that proper procedures be followed to minimize entrainment of material during removal of wind/rain related dirt deposits from roads.

For Unpaved Roads:

- Limit vehicle speeds to 25 mph;
- Require all new non-temporary roads in urban areas to be paved; and
- Require existing unpaved roads in urban areas to be paved.
- Require application of specified controls to prevent VDE and provide a stabilized surface on roads with 26 AADT and above.
- Require public agencies responsible for public unpaved roads to report ADT estimates to the District in addition to the current reporting requirement for road miles and controls implemented.

6. **Rule 8071** (Unpaved Vehicle/Equipment Traffic Areas) requires operations to control fugitive dust emissions from unpaved vehicle/equipment areas, parking, fueling and service areas, and shipping, receiving, and transfer areas. The District's BACM analysis identified the following measures that will be considered during the amendment process for Rule 8071:

- Eliminate the existing one-acre applicability provision (i.e.; the provisions of this rule will apply to all sites regardless of size);
- Establish a vehicle threshold limit of 50 average annual daily trips before specified controls must be used to prevent VDE and to provide a stabilized surface;
- Establish a single day peak threshold of 150 VT/day or require specific controls for sources that exceed the 150 VT/day threshold limit on at least 30 days per year;
- Establish a threshold limit of 25 or more vehicle trips/day for vehicles with three or more axles; and
- Require 48-hr notification to the District of special events whenever 1,000 or more vehicles will use unpaved surfaces for parking.

7. **Rule 8081** (Agricultural Sources) only applies to off-field agricultural source activities. Rule 8081 provides control requirements for bulk material storage and handling, unpaved roads, unpaved traffic areas, and unpaved staging/storage areas on farms. On-field agricultural sources (on cultivated land) are exempt from Rule 8081, but are subject to the control techniques specified in an agricultural Conservation Management Practice Program. The District's BACM analysis identified the following measures that will be considered during the amendment process for Rule 8081:

- Agricultural unpaved roads that do not meet the applicability threshold(s) for VDE or surface stabilization are subject to the Conservation Management Practices Program that contains a speed control option;
- Establish a vehicle threshold limit for agricultural unpaved roads of 75 vehicle trips/day before specified controls must be used to prevent VDE and to provide a stabilized surface;
- Establish a threshold limit for agricultural unpaved roads of 26 or more vehicle trips/day for vehicles with three or more axles;
- Eliminate the exemption for implements of husbandry from vehicle trip counts;
- Establish an average annual trip threshold of 50 trips for unpaved vehicle/equipment traffic areas before specified controls must be used to prevent VDE and to provide a stabilized surface;
- Establish a single day peak threshold for unpaved vehicle/equipment traffic areas of 150 VT/day or require specific controls to prevent VDE and provide a stabilized surface for sources that exceed the 150 VT/day threshold limit on at least 30 days per year;
- Limit an exemption to the storage of materials where the total amount of material stored is 100 cubic yards or less (specifically, section 4.6);
- Eliminate the existing one-acre exemption for unpaved vehicle and equipment parking and traffic areas for farms within one mile of any city or unincorporated rural community in section 4.7;
- Carryout and trackout from off-field agricultural sources are proposed to be part of the CMP Program, therefore, section 4.9 will need to be modified to reflect this situation;
- Add the existing California Vehicle Code Regulations sections 23112-23113 requiring trackout cleanup to section 5.2;
- Require wind barriers to have less than 50% porosity; and
- Add an additional option to Table 8081-1 to allow 3-sided enclosures that are at least as high as the storage pile and with less than 50% porosity.

Regulation VIII does not address on-field agricultural activities. On-field agricultural sources (e.g., tilling, land preparation, and harvesting) will be regulated under the

Conservation Management Practices (CMP) Program described earlier in this chapter. In addition, the CMP Program proposes to require growers to implement CMPs on their unpaved roads and unpaved staging/storage areas even if area (site size) or vehicle thresholds would normally preclude compliance with Rule 8081 provisions. The combination of the CMP Program and Rule 8081 are expected to make the District's agricultural fugitive dust program the most stringent in the nation for this source category.

EMISSIONS AND EMISSIONS REDUCTION:

Table 4-11 PM10 Emissions Reductions from Regulation VIII in 2010

Rule	2010 PM10 Emissions (tpd)	2010 PM10 Emissions Reductions (tpd)	% Reduced
8021	30.5	6.1	20.0
8031	0.2	0.0	0.3
8051	3.0	0.5	16.7
8061	85.3	10.4	12.2
8071	1.0	0.3	30.0
8081*	16.9	1.5	8.9
Total	**136.9**	**18.8**	**13.7**

*Quantifies agricultural Unpaved Roads and Unpaved Traffic Areas only.

The reductions listed in Table 4-11 Include local commitments that overlap with Regulation VIII controls. Specific local commitment reductions that cover the same Regulation VIII source categories will be developed during the rule amendment process.

IMPLEMENTATION SCHEDULE: Implementation of amended rules to Regulation VIII became effective as specified by the Governing Board upon adoption but not later than October 1, 2004. Amendments to rules 8011, 8021, 8031, 8041, 8051, and 8061 were adopted by the Governing Board on August 19, 2004 and became effective on October 1, 2004. Amendments to rules 8071 and 8081 were adopted on September 16, 2004 and became effective on October 1, 2004. Amendments to Regulation VIII were required to be implemented not later than October 1, 2004 in order to satisfy EPA approvability requirements.

E. Glass Melting Furnaces (Rule 4354)

REASON FOR CONTROL MEASURE: SOx emissions from glass melting furnaces exceed the "de minimis threshold" level, therefore, are subject to federal BACM requirements.

AFFECTED SOURCES: This control measure is intended to reduce SOx emissions from glass melting furnaces used in the production of container glass, flat glass, and fiberglass. These units are currently subject to District permitting requirements and Rule 4354 (Glass Melting Furnaces) for NOx, carbon monoxide (CO), and VOC

control only. These facilities are located in all three regions of the District. For most of these facilities, the most effective control of SOx would be achieved through a fuel change or caustic scrubbing of the exhaust gas.

DESCRIPTION: The glass manufacturing industries are comprised of companies engaged in the manufacture of float glass for windows, mirrors, automobile windshields and the manufacture of glass packaging for beverages, food, chemicals and fiberglass products. There are three flat glass, three container glass, and two fiberglass companies in the SJVAB.

For this source category the furnaces are typically fired on a petroleum-based fuel to produce heat in a furnace that melts glass stock to form molten glass which is then formed into either flat or bottle glass. The SOx is a by-product of combustion of the petroleum-based fuel. This measure would affect any new and existing glass furnaces fired on petroleum-based fuel, and would establish specific SOx limits.

EMISSIONS AND EMISSIONS REDUCTIONS: Total SOx emissions from sources subject to Rule 4354 are estimated to be 4.2 tons per day in 2006. Upon final implementation of Rule 4354, 1.1 tons per day of SOx reductions is anticipated.

IMPLEMENTATION SCHEDULE: Rule adoption is scheduled for the fourth quarter of 2006. Full BACM implementation (including BACT) for SOx is projected for the year 2008.

F. Indirect Source Mitigation Program (Rule 9510)

REASON FOR CONTROL MEASURE: Growth in indirect source emissions offsets a substantial portion of the benefit of controls on motor vehicles and directly emitted PM10 from entrained road dust and construction. Indirect source mitigation fees provide an option to reduce emissions off-site when additional on-site emission reductions are not feasible. This control measure is needed for attainment.

AFFECTED SOURCES: The program will be applicable to all development projects that generate motor vehicle trips.

DESCRIPTION: Indirect sources are land uses that attract or generate motor vehicle trips. Indirect source emissions are not emitted directly from activities at the location, as is the case for stationary sources such as boilers, and fuel storage tanks, but are the result of vehicles traveling to and from the site. They include residential, commercial, industrial, and institutional development.

The SJVAB population is expected to continue to grow rapidly. As more people settle in this region and use motor vehicles as their primary means of transportation, vehicle miles traveled also increase. This greater motor vehicle use offsets a significant amount of the progress achieved by tailpipe and fuel controls and by regulations to reduce construction and vehicle related fugitive PM10. Under the Indirect Source Mitigation

Program, new development projects would be required to mitigate a portion of their emissions with onsite mitigation or by contributing to a mitigation fund that would be used to pay for the most cost-effective projects to reduce emissions. The amount of the fee can be revised depending on the emission reductions required to meet RFP and the emission reducing projects available to fund. The program could be managed by the District or delegated to cities and counties.

The District is also proposing a focused mitigation program for the Bakersfield Metropolitan Area. This area has experienced relatively high levels of geologic PM10 on mid-winter days compared to other parts of the Valley. This condition occurs on days with very low wind speed. This indicates that local sources such as construction, paved and unpaved road dust, and unpaved parking areas are a significant problem in the Bakersfield Metropolitan Area. Modeling conducted for the PM10 Plan confirms that additional reductions of approximately 1 ton per day of PM10 emissions are needed to bring the Bakersfield, Golden State Boulevard monitoring site into attainment by 2010. This 1 ton per day commitment is beyond the reductions expected for the Valley-wide Indirect Source Mitigation Program. These additional reductions may be funded by expansion of the program or by directing more of the program funds to PM10 control and less to ozone precursor control in this area. Other possibilities include funding through other fees or through grants such as the federal Congestion Mitigation Air Quality (CMAQ) or state sources. CMAQ is due to be reauthorized by Congress this year, but funding is not certain. During the previous six-year cycle, the San Joaquin Valley received about $160 million in CMAQ funding. To allow time for funding sources to be determined, this commitment is proposed for the 2006 to 2010 period.

Available information indicates that no comprehensive indirect source fee-based programs exist in the country. Some local jurisdictions in the SJVAB have adopted small indirect source fees. Several California air districts negotiate mitigation fees on a project-by-project basis through the California Environmental Quality Act (CEQA) review process.

EMISSIONS AND EMISSIONS REDUCTIONS:

Table 4-12 Estimated Emissions Reductions from Indirect Source Mitigation Program

Category	2010 PM10 Emissions (tpd)	2010 PM10 Emissions Reductions (tpd)	% Reduction
Paved Road Dust	43.3	4.2	9.7
Unpaved Road Dust	6.6	1.2	18.2
Windblown Dust	3.1	0.6	19.4
Unpaved Traffic Areas	1.0	0.2	20.0
Total	54.0	6.2	11.5

It is also anticipated that 4.1 tons per day of NOx will be reduced from this control measure in 2010. The NOx reductions are projected to come from mobile sources

fueled by diesel, such as agricultural equipment or irrigation pumps, heavy duty trucks, heavy duty buses, off-road equipment, and development measures that reduce vehicle trips or miles traveled and area source emissions from buildings and landscape maintenance. The program will not be limited to these sources. All cost-effective projects that reduce emissions will be considered.

IMPLEMENTATION SCHEDULE: The December 18, 2004 PM10 Plan included a rule development schedule beginning in the second quarter of 2003 with adoption in 2004, and implementation beginning in 2005. However, due to modeling constraints, technical analysis, stakeholder concerns, and lack of staff resources, the rulemaking process has been slowed and has fallen behind the original schedule. Rulemaking is anticipated to be completed during the fourth quarter of 2005 with implementation commencing during the first quarter of 2006.

G. Solid-Fueled Boilers, Steam Generators and Process Heaters (Rule 4352)

REASON FOR CONTROL MEASURE: NOx and SOx emissions from solid fuel fired boilers, steam generators, and process heaters, exceed the “de minimis threshold” levels, and therefore are subject to federal BACM requirements.

AFFECTED SOURCES: The SJVAB has 14 permitted units in this category, with half of the units located in the District’s Southern Region, and the remaining units split between the Central and Northern Regions. Facilities in this category generate utility and industrial power (electricity and heat) by burning petroleum coke, municipal solid waste, or biomass wastes (including wood, vine clippings, leaves, grass, and other by products of the farming and food processing industries).

DESCRIPTION: The District’s permitting process has established limits for both NOx and SOx emissions, and Rule 4352 (Solid Fuel-Fired Boilers, Steam Generators, and Process Heaters) regulates the NOx emissions from these units. BACT/BACM emission controls appropriate for solid fuel fired units include low excess air, low NOx burners, selective non-catalytic ammonia injection, thermal de-NOx, and limestone injection for SOx control. All units subject to Rule 4352 are currently equipped with BACT/BACM, therefore Rule 4352 will not be amended to strengthen emission limitations.

Rule 4352, however, currently contains the old definition and threshold for major NOx source. The rule needs to be amended to include the current major source threshold and ensure that all major sources are subject to this rule.

IMPLEMENTATION SCHEDULE: Rule 4352 will be amended to incorporate the correct definition for major source during the second quarter of 2006.

EMISSIONS AND EMISSIONS REDUCTION: All units are already equipped with BACT controls so no further emission reductions are expected from this action.

H. Small Boilers, Steam Generators and Process Heaters, from 2 MMBtu/hr to 5 MMBtu/hr (Rule 4307)

REASON FOR CONTROL MEASURE: NOx and SOx emissions from smaller boilers, steam generators, and process heaters, may exceed the "de minimis threshold" levels and may therefore be subject to federal BACM requirements. Further information on which pollutants are de minimis will be developed during the rulemaking process.

AFFECTED SOURCES: Facilities with units that are subject to this control measure represent a wide range of industries, including but not limited to medical facilities, educational institutions, office buildings, prisons, military facilities, hotels, and industrial facilities (including agricultural processing facilities). Due to the diversity of affected industries, units in this source category are located throughout the SJVAB. Based on population and job base, there are likely to be more units located in urban and suburban settings. The emissions inventory categories affected include Manufacturing and Industrial Fuel Combustion, and Service and Commercial-Other Fuel Combustion.

DESCRIPTION: These units are not currently regulated by the District permitting process or a prohibitory rule. The District does not currently issue permits to operate for gas-fired equipment in this source category, but may do so in the future. Combustion modifications appropriate for small boilers, steam generators, and process heaters include low excess air, low NOx burners, and flue gas recirculation (FGR).

IMPLEMENTATION SCHEDULE: Rule adoption is scheduled for the fourth quarter of 2005. Implementation is expected to begin in the fourth quarter of 2007 with full BACM implementation for NOx and SOx (as appropriate) projected for the year 2009.

EMISSIONS AND EMISSIONS REDUCTIONS: Total SOx emissions from sources subject to the Small Boilers, Steam Generators and Process Heaters control measure are estimated to be 1.1 tons per day in 2006. Upon final implementation of the proposed Small Boilers, Steam Generators and Process Heaters control measure, 0.1 tons per day of SOx reductions are anticipated in 2008 if BACM is needed. Total NOx emissions from sources subject to the Small Boilers, Steam Generators and Process Heaters control measure are estimated to be 8.6 tons per day in 2008. Upon final implementation of the Small Boilers, Steam Generators and Process Heaters control measure, 1.0 tons per day of NOx reductions are anticipated.

I. Water Heaters (Industrial, commercial and Institutional, rated 75,000 Btu/hr to 2 MMBtu/hr) (Rule 4308)

REASON FOR CONTROL MEASURE: NOx and SOx emissions from industrial, commercial and institutional water heaters may exceed the "de minimis threshold" levels and may therefore be subject to federal BACM requirements. Further information on which pollutants are de minimis will be developed during the rulemaking process.

AFFECTED SOURCES: Facilities with units that are subject to this control measure represent a wide range of industries, including but not limited to medical facilities, educational institutions, office buildings, prisons, military facilities, hotels, and industrial facilities (including agricultural processing facilities). Due to the diversity of industries, units in this source category are located throughout the eight (8) county area of the SJVAB. Based on population and job base, more units may be located in urban and suburban settings. Affected emissions inventory categories include Manufacturing and Industrial Fuel Combustion, and Service and Commercial-Other Fuel Combustion.

DESCRIPTION: These units are not currently regulated by the District permitting process or by a prohibitory rule. The BACM would likely affect new and existing commercial, industrial, or institutional water heaters with a rated heat input capacity between 75,000 Btu/hr and 2 MMBtu/hr. NOx and SOx prohibitory rules may be coupled with a financial incentive program to accelerate the replacement or retrofit of higher-polluting units. The District does not anticipate issuing permits for these units in the future.

IMPLEMENTATION SCHEDULE: Rule adoption is scheduled for the fourth quarter of 2005. Implementation should begin in the second quarter of 2007, but because this rule will only affect new or replaced units, full BACM implementation of controls for new units for NOx and SOx (as appropriate) is projected to be after 2010.

EMISSIONS AND EMISSIONS REDUCTIONS: Total SOx emissions from sources subject to the Water Heaters control measure are estimated to be 5.1 tons per day in 2004. Upon final implementation of the Water Heaters control measure, 0.0 tons per day of SOx reductions is anticipated. Upon final implementation of the Water Heaters control measure, 0.2 tons per day of NOx reductions is anticipated.

J. Wine Fermentation and Storage (Rule 4694)

REASON FOR CONTROL MEASURE: VOC emissions from wineries exceed the "de minimis threshold" level, and therefore are subject to federal BACM requirements.

AFFECTED SOURCES: Two winery processes that produce significant VOC emissions are wine fermentation and wine aging. Fermentation is the process in which sugars (glucose and fructose) in grape juice undergo a reaction with yeast to produce ethyl alcohol (ethanol) and carbon dioxide. Temperature is very important in

the fermentation of wine, and there are specific temperature tolerance ranges for red, white, sparkling and dessert wines. It is becoming common practice for wineries to have temperature-controlled fermentation tanks. The EPA AP 42 document lists a range from 53°F to 83°F for fermentation temperatures inside winery tanks. Refrigeration of fermentation tanks can also serve to inhibit the evaporation of ethanol.

The production of wine is seasonal, coinciding with the growth cycle of grapes. The first processing of harvested grapes, called the crush, occurs as early as mid-July with its peak occurring in mid-September to late October. Peak VOC emissions from wineries typically occur between mid-July and late November.

DESCRIPTION: Wine fermentation and wine aging are not currently regulated by the District permitting process or a prohibitory rule. Emission controls (other than process refrigeration) are not currently being used during the production of wines. Reductions of VOC could be achieved through the use of tanks with vapor collection and control systems, carbon adsorption, water scrubbers, catalytic incineration, condensation, and additional temperature control as appropriate.

IMPLEMENTATION SCHEDULE: Rule adoption is scheduled for the fourth quarter of 2005. Full BACM implementation for VOCs is projected for the year 2009.

EMISSIONS AND EMISSIONS REDUCTIONS: Total VOC emissions from sources subject to the Wineries control measure are estimated to be 7.9 tons per day in 2007. Upon final implementation of the Wineries control measure, 2.5 tons per day of VOC reductions is anticipated.

K. Steam-Enhanced Crude Oil Production Well Vents (Rule 4401)

REASON FOR CONTROL MEASURE: VOC emissions from steam enhanced crude oil production well vents exceeds the “de minimis threshold” level, therefore, are subject to federal BACM requirements.

AFFECTED SOURCES: This control measure would reduce VOC emissions from steam-enhanced crude oil production wells and any associated vapor collection and control systems. 1998, there were approximately 23,000 active steam enhanced crude oil production wells in the SJVAB. Most of the steam enhanced crude oil production wells are located in Kern County. As the wells operate throughout the year, emissions occur uniformly during the year. Rule 4401 prohibits the operation of steam enhanced crude oil production wells unless the VOC emissions from oil production well vents are reduced by at least 99 percent by weight. This level of control can be achieved through the operation of a vapor collection and control system. The rule also requires that well vent vapor collection and control systems be maintained in good repair, with standards for specified allowable number of leaks depending upon the number of wells connected to the systems. Limited numbers of cyclic wells that meet specified conditions are currently exempted from the rule.

Sources are also subject to Rule 4002 (National Emissions Standards for Hazardous Air Pollutants) and Rule 4102 (Nuisance).

DESCRIPTION: Further emission reductions can be achieved by lowering the exemption thresholds to make more sources subject to the rule. The rule is enforced through District permit and enforcement programs and would include inspections, annual on site emission source testing and keeping of records.

IMPLEMENTATION SCHEDULE: Adoption for this control measure is anticipated by the fourth quarter of 2006 and full BACM implementation for VOC control is projected for the year 2010.

EMISSIONS AND EMISSIONS REDUCTIONS: Total VOC emissions from sources subject to the Steam-Enhanced Crude Oil Production Well Vents control measure are estimated to be 14.7 tons per day in 2006. Upon final implementation of the proposed Steam-Enhanced Crude Oil Production Well Vents control measure, 1.5 tons per day of VOC reductions is anticipated.

L. Residential Space Heating (Rule 4905)

REASON FOR CONTROL MEASURE: NOx emissions from residential space heating exceed the “de minimis threshold” level and, therefore, are subject to federal BACM requirements.

AFFECTED SOURCES: Residential fan-type central furnaces fueled on natural gas emit NOx emissions from the combustion of fuel and contribute to the PM10 problem as a PM10 precursor. These units are located throughout the District in urban, suburban, and rural settings. The emissions inventory for this source category shows that grow that has occurred in the San Joaquin Valley Air Basin but also shows a decline in emissions over time. Staff believes that the area source emissions inventory is accounting for the sale of units already in compliance with the proposed control. Several other air district’s in the state have rules in place that prohibit the sale of units that do not meet the limits specified in their rules and it is conceivable that rather than manufacturing a non-compliant furnace specifically for the SJVAB, that manufacturers supply the same compliant furnaces for sale in the District. This issue is not fully understood at this time but will be investigated further during the rule development process.

DESCRIPTION: These units are not currently regulated by the District. The control measure would likely affect new furnaces installed in new residences and units replaced in existing homes. The control measure would address central furnaces with a rated heat input capacity of less than 175,000 BTU per hour. Installation of natural gas fired fan type central furnaces will be limited to units certified to have NOx emissions less than 40 nanograms per joule (0.093 lbs NOx per million BTU) of heat output. Existing units installed prior to the adoption of this control measure would not be impacted until the replacement of those units. Bay Area Air Quality Management District has assumed a 20 year full implementation process for this source category

and District staff assumes the same implementation schedule for this control measure.

IMPLEMENTATION SCHEDULE: Adoption for this control measure is anticipated by the fourth quarter of 2005. This will impact only new and replacement units. Implementation is anticipated to begin during the second quarter of 2007, and full BACM implementation for NOx control is projected after 2010.

EMISSIONS AND EMISSIONS REDUCTIONS: Total NOx emissions from sources subject to the Residential Space Heating control measure are estimated to be 2.4 tons per day in 2010. The NOx reduction from the Residential Space Heating control measure is anticipated to be 0.01 tons per day in 2010.

M. Internal Combustion Engines

Two rules will be amended to address emissions from internal combustion engines used in agricultural operations, Rule 4101 (Visible Emissions) and Rule 4702 (Stationary Internal Combustion Engines - Phase 2).

Rule 4101 (Visible Emissions)

REASON FOR CONTROL MEASURE: EPA has indicated that this source category should be evaluated for BACM control, specifically a limitation on visible emissions, as in Rule 4101 (Visible Emissions). Rule 4101 (Visible Emissions) section 4.4 contains an exemption for equipment in agricultural operations necessary for the growing of crops or raising of fowl or animals. The District committed to remove the general exemption for agricultural equipment and investigate the technical and economic feasibility of candidate control options during the rulemaking process.

AFFECTED SOURCES: See text of amended rule. The District currently estimates that there are approximately 5,000 internal combustion engines operated by the agriculture industry in the San Joaquin Valley.

DESCRIPTION: See text of the amended rule. The operation of internal combustion engines involves the combustion of fossil fuels, which generate PM10 emissions. If not properly tuned, diesel engines can emit visible emissions (PM). Rule 4101 establishes the 20% opacity standard for all sources with the exception of certain activities including equipment used in agricultural operations such as irrigation engines. Possible control techniques include periodic engine tune-ups to achieve the visible emission standard of 20% opacity. The District will review the feasibility of this measure during the rulemaking process.

IMPLEMENTATION SCHEDULE: Rule 4101 was amended in the first quarter of 2005 and became effective immediately.

EMISSIONS AND EMISSIONS REDUCTIONS: Emissions reductions are not quantifiable at this time.

Rule 4702 (Internal Combustion Engines – Phase 2)

REASON FOR CONTROL MEASURE: Rule 4702 would be expanded to cover internal combustion engines rated greater than 50 brake horsepower used in agricultural operations.

AFFECTED SOURCES: It is estimated that there are approximately 4500 diesel fueled internal combustion engines, rated greater than 50 brake horsepower, used in agricultural operations in the SJVAB. The number of spark-ignition internal combustion engines, rated greater than 50 brake horsepower and used in agricultural operations is approximately 530 units.

DESCRIPTION: Rule 4702 currently controls emissions from spark-ignition stationary IC engines by requiring them to meet specific NOx emission limits while in operation. Engines used in agricultural operations in the growing of crops or raising of fowl or animals are currently exempt from Rule 4702 pursuant to a state law, which was rescinded on January 1, 2004. Further NOx emissions reduction can be achieved by making such engines, as well as diesel-fueled agricultural engines, subject to NOx emission limits in Rule 4702. The emission limits and compliance schedule for agricultural engines will be developed pursuant to the requirements of SB 700 and will reflect the technical and economic feasibility of candidate control options.

IMPLEMENTATION SCHEDULE: SB 700, signed in 2003, mandated the schedule for rule development for such engines. Therefore, on or before September 1, 2004, the District held a public workshop for the purpose of accepting public testimony on the proposed rules. The District will propose to adopt the final rules at a noticed public hearing prior to July 1, 2005 with rule implementation scheduled to commence on or before January 1, 2006.

EMISSIONS AND EMISSIONS REDUCTION: Total NOx emissions from internal combustion engines rated greater than 50 brake horsepower and used in agricultural irrigation operations, are estimated to be approximately 18 tons per day. Upon full implementation, it is anticipated that NOx emissions will be reduced by 7.5 tons per day.

State Commitments

This section was prepared by California Air Resources Board staff. No changes to the text were made by the District.

This section describes the proposed State commitments to achieve further emission reductions in PM10 and its precursors to help attain the federal PM10 standards in the San Joaquin Valley by 2010. The motor vehicles and equipment under State and federal jurisdiction are responsible for the majority of Valley air pollution, and are contributing the majority of the emission reductions needed for attainment. Adopted

State and federal regulations for cleaner engines and fuels are driving Valley NOx emissions down by over 140 tons per day (tpd) or nearly 40 percent between 1999 and 2010. Emissions of direct particulate matter from these sources will drop by over ten percent and ROG by well over 40 percent in the same timeframe.

To supplement the existing program, the Air Resources Board (ARB) staff has identified a series of new measures that would be developed over the next several years to provide additional NOx and PM10 reductions, consistent with the attainment demonstration needs established in this SIP. These measures are a subset of a larger strategy ARB staff has proposed to cut emissions of ROG, NOx, and particulate matter statewide. The draft strategy was released in January; the *Proposed 2003 State and Federal Strategy for the California State Implementation Plan* will be available on ARB's website on May 12. This document contains a description of each proposed measure. ARB began developing the strategy in 2001 with workshops around the State, including the Valley, to solicit ideas from the public and to share initial concepts for emission reduction measures.

The proposed State commitment for this plan has two parts – achieving specific emission reductions and developing the defined measures for Air Resources Board consideration.

State Commitment for Further Emission Reductions

Table 4-13 shows the proposed State commitment to adopt new measures between 2002-2008 that reduce emissions by an additional 10 tpd NOx and 0.5 tpd direct PM10 in the San Joaquin Valley in 2010. ARB may meet this commitment by adopting one or more of the control measures in Table 4-14, by adopting one or more alternative measures, or by implementing incentive program(s), as long as the total new emission reductions are achieved. While the legal commitment is to adopt and implement strategies that achieve the emission reductions by the attainment date, ARB staff is already working on several of the measures for near-term consideration.

The new reductions also include the benefits of planned improvements to the enhanced vehicle inspection and maintenance program, or Smog Check. This implementation may require additional regulatory action by the Bureau of Automotive Repair (BAR).

Table 4-13 Proposed State Commitment for New Emission Reductions San Joaquin Valley, 2010

	TOTAL STATE
NOx	10
Direct PM10	0.5

State Commitment to Propose Defined Control Measures

In addition to the enforceable commitment to reduce emissions, the ARB staff also commits to submit to the Board and propose for adoption the ARB control measures set forth in Table 4-14. For LT/MED-DUTY-1, ARB commits to complete the pilot program and propose a control measure if the approach described proves to be feasible and effective.

Table 4-14 Proposed New State Measures San Joaquin Valley, 2010

Strategy (Agency)	Name	Expected Reductions*, tpd			Action Dates
		ROG	PM10	NOx	
LT/MED-DUTY-1 (ARB)	Replace or Upgrade Emission Control Systems on Existing Passenger Vehicles – Pilot Program	0-2.4	--	0-2.7	2005
LT/MED-DUTY-2 (BAR)	Smog Check Improvements	1.5	--	*3*	2002-2005
ON-RD HVY-DUTY-3 (ARB)	Pursue Approaches to Clean Up the Existing and New Truck/Bus Fleet – PM In-Use Emission Control, Engine Software Upagrade, On-Board Diagnostics, Manufacturers' In-Use Compliance, Reduced Idling	1.5	0.1	4	2003-2006
OFF-RD CI-1 (ARB)	Pursue Approaches to Clean Up the Existing Heavy-Duty Off-Road Equipment Fleet (Compression Ignition Engines) – Retrofit Controls	1.0	0.4	0	2004-2008
OFF-RD LSI-2 (ARB	Clean Up Existing Off-Road Gas Equipment Through Retrofit Controls (Spark-Ignition Engines 25 hp and Greater)	0.1	--	0.1	2004
OFF-RD LSI-3 (ARB)	Require Zero Emission Forklifts (Rental and New Purchases) Where Feasible – Lift Capacity ≤8,000 Pounds	0.1	--	0.2	2004
Total Emission Reduction Commitment from New State Measures		0	0.5	10	2002-2008

* Expected reductions from individual defined measures are shown for information only. The State is proposing commitments for total new reductions in NOx and PM10 emissions only, consistent with the PM10 attainment demonstration. Commitments for further ROG reductions will be considered in the context of the upcoming Valley Ozone SIP.

The specific regulatory proposal for each potential measure will be developed in an extensive public process that considers the technical feasibility, cost-effectiveness,

and other impacts of the strategy. The Board shall take action on or before the dates set forth in Table 4-14. Such action by the Board may include any action within its discretion. For informational purposes, Table 4-14 shows the benefits that would be expected from implementation of each defined measure, although the enforceable commitment is for the total new reductions.

The defined State measures are described in detail in ARB's document *Proposed 2003 State and Federal Strategy for the California State Implementation Plan,* which will be publicly available on May 12. This document also includes evidence of BAR's commitment to finish implementing the Enhanced Smog Check improvements described in LT/MED-DUTY-2.

Process for State Action

ARB staff has provided this section to the District staff for publication in this document to facilitate public review of the plan by consolidating the local and State control strategy. The State's proposal is not subject to action by the District's Governing Board. The Air Resources Board will hold its own public hearing on June 26-27, 2003 in Fresno to consider adoption of ARB staff's proposal for new State commitments, as well as the local elements of the San Joaquin Valley PM10 SIP if approved by the District's Governing Board.

The State proposal is summarized here and in Section I, Chapter D of the comprehensive strategy document. Only the emission reduction commitment for the San Joaquin Valley PM10 SIP and the associated measures identified in this portion of the document will be considered by ARB at its June meeting. If the SIP is adopted by the District and the SIP and the State commitment are approved by ARB, ARB will submit both of these elements to the U.S. EPA for approval as a revision to the California SIP.

State Contacts and Documents

ARB's *Proposed 2003 State and Federal Strategy for the California State Implementation Plan* will be available at http://arb.ca.gov/planning/sip/sip.htm on May 12. For more information on the ARB hearing, please check the "Board Meetings" section of the ARB website at http://arb.ca.gov. Written copies of the Strategy or hearing notice may also be obtained from ARB's Public Information Office at 1001 I Street, 1st Floor, Environmental Services Center, Sacramento, California 95814, or by calling (916) 322-2990.

Transportation Planning Agency Commitments

The Regional Transportation Planning Agencies (RTPA)s conducted an extensive process to identify and implement BACM in support of the PM10 Plan for the SJVAB. The documentation for that process can be found in Appendix I. The resolutions adopted by the RTPAs and their member jurisdictions to commit to implement local government control measures for PM10 precursors are included in the corresponding

Regional Transportation Planning Agency Commitments for Implementation Document (RTPACID) and can be viewed at the District's Fresno Office. Each jurisdiction determined which measures are feasible for implementation by that jurisdiction. The commitment documents also contain the measures that these jurisdictions found not to be feasible and the corresponding justification for their assessment.

EMISSIONS REDUCTIONS FROM ALL COMMITTED MEASURES

Reductions in PM10 and PM10 precursor emissions will be achieved from several different sources. New commitments listed in this PM10 Plan will be quantified in the following tables, as well as commitments listed in the Ozone Rate of Progress (ROP) Plan that have not already been incorporated into the emissions inventory. Several federal, State and District measures have been adopted, but not fully implemented. The emissions reductions attributed to these measures have already been incorporated into the emissions inventory and they will assist the District with attainment of the NAAQS and the 5 percent demonstration. However, they will not be quantified in Tables 4-15 through 4-22. Any shortfall from change of implementation dates in Tables 4-15 and 4-17 will be made up from reductions that will be identified in the contingency measures section.

There are some rules that will reduce emissions of PM10 and PM10 precursors, but these rules are not currently quantifiable and/or were not incorporated into the emissions inventory. These rules are: Soil Decontamination, Regulation VIII – Windblown Dust from Open Areas (other than unpaved roads), and the Fleet Rule.

The emissions reductions identified in Tables 4-15 through 4-22 will be incorporated with the emissions inventory to project future year emissions inventories with controls. These projected year emissions inventories are referred to as attainment inventories and can be found in Appendix J.

Table 4-15 Estimated Annual Emission Reductions of PM10

CM Name	Rule #	PM10 Emission Reduction (tpd)			Final Implementation Date
		2005	2008	2010	
Agriculture Conservation Management Practices	4550	34.4	34.0	33.8	3Q/04
Cotton Gins	4204	0.1	1.4	1.3	4Q/08
Fugitive PM10 Prohibitions (excluding unpaved vehicle areas)	Regulation VIII	10.3	16.4	18.8	4Q/05**
Indirect Source Mitigation Program	3180, 9510	0.0	2.8	4.7	1Q/06
Wood Burning Fireplaces and Wood Burning Heaters	4901	2.9	4.4	5.4	1Q/04
State and Federal Measures*	Various	N/A	N/A	0.5	Varies
Open Burning	4103	0.2	1.0	4.6	2Q/10
Ag Grant Programs	N/A	0.5	0.6	0.5	
PM10 Shortfall ***	N/A	2.0	0.0	0.0	
Contingency	N/A	0.0	-0.6	-4.1	
Total PM10 Emissions Reductions		**50.4**	**60.0**	**65.5**	

*Reductions listed are in winter tpd.
**All of Regulation VIII will be implemented by 4Q of 2005, with the exception of an unpaved road measure, which will be phased and fully implemented by 4Q of 2008.
*** Expressed as tpd of PM10; multiply by 1.5 to convert to NOx (see "Surplus used for PM10" In Table 4-17)

Table 4-16 Estimated Seasonal Emission Reductions of PM10

CM Name	Rule #	PM10 Emission Reduction (tpd)			Final Implementation Date
		2005	2008	2010	
Agriculture Conservation Management Practices	To be Determined (TBD)	27.2	26.9	26.7	3Q/04
Cotton Gins	4204	0.0	0.5	0.9	4Q/08
Fugitive PM10 Prohibitions (excluding unpaved vehicle areas)	Regulation VIII	9.9	15.7	17.9	4Q/05**
Indirect Source Mitigation Program	3180, 9510	0.0	2.6	5.1	1Q/06
Wood Burning Fireplaces and Wood Burning Heaters	4901	18.7	19.7	20.4	1Q/04
State and Federal Measures*	Various	N/A	N/A	0.5	Varies
Total PM10 Emissions Reductions		**55.8**	**65.4**	**71.5**	

*Reductions listed are in winter tpd.
**All of Regulation VIII will be implemented by 4Q of 2005, with the exception of an unpaved road measure which will be phased and fully implemented by 4Q of 2008.

Table 4-17 Estimated Annual Emission Reductions of NOx

CM Name	Rule #	NOx Emissions Reduction (tpd)			Final Implementation Date
		2005	2008	2010	
Boilers, Steam Generators & Process Heaters	4306	1.5	7.9	7.9	2Q/07
Dryers	4309	0.0	1.0	1.0	4Q/08
Incentive Programs	None	12.8	8.8	6.9	N/A
Indirect Source Mitigation Program	3180, 9510	0.0	2.0	3.4	1Q/06
Wood Burning Fireplaces and Wood Burning Heaters	4901	0.2	0.2	0.2	1Q/04
Residential Space Heating	4905	0.0	0.0	0.0	4Q/20
Small Boilers	4307	0.0	0.5	1.0	4Q/08
Smog Check II*[A]	N/A	6.1	5.7	4.9	1Q/03
State and Federal Measures	TBD	N/A	N/A	10.0	Varies
Stationary Internal Combustion Engines***[C, D]	4702	0.4	1.7	1.7	2Q/07
Water Heaters	4308	0.0	0.4	0.6	4Q/20
Open Burning	4103	0.0	0.2	1.1	2Q/10
Stationary Internal Combustion Engines Amendments	4702	0.0	0.0	7.5	2Q/15
Ag Grant Programs		1.8	5.3	0.0	
Surplus Used for PM10		-3.0	0.0	0.0	
Contingency[E]		-2.8	-7.0	-8.4	
Total NOx Emissions Reductions[B, D]**		**17.0**	**26.7**	**37.8**	

A*Smog Check II not accounted for in emissions inventory, so reductions are accounted for in this table.
B**Totals may differ slightly due to rounding.
C *** Includes current rule reductions only. Agricultural engine reductions have been moved to contingency reductions.
D These totals were reduced by 7.5 tons per day to reflect movement of Agricultural IC Engines to contingency reductions.
E Does not include ARB NOx contingency shown in Tables 4-28 and 4-29.

Table 4-18 Estimated Seasonal Emission Reductions of NOx

CM Name	Rule #	NOx Emissions Reduction (tpd)			Final Implementation Date
		2005	2008	2010	
Boilers, Steam Generators & Process Heaters	4306	0.0	7.3	7.3	2Q/07
Dryers	4309	0.0	0.3	0.9	4Q/08
Incentive Programs	None	9.8	6.7	5.3	N/A
Indirect Source Mitigation Program	3180, 9510	0.0	1.5	2.6	1Q/06
Wood Burning Fireplaces and Wood Burning Heaters	4901	1.8	1.9	1.9	1Q/04
Residential Space Heating	4905	0.0	0.0	0.0	4Q/20
Small Boilers	4307	0.0	0.9	1.2	4Q/08
Smog Check II		6.4	6.0	5.2	
State and Federal Measures	TBD	N/A	N/A	10.0	Varies
Stationary Internal Combustion Engines*	4702	0.4	1.7	1.9	2Q/15
Water Heaters	4308	0.2	0.5	0.7	4Q/20
Total NOx Emissions Reductions		**18.4**	**26.4**	**36.3**	

* Includes current rule reductions plus future agricultural engine reductions.

Table 4-19 Estimated Annual Emission Reductions of VOC

CM Name	Rule #	VOC Emissions Reduction (tpd)			Final Implementation Date
		2005	2008	2010	
Can & Coil Coatings	4604	0.3	0.4	0.4	4Q/04
Glass Coating Operations	4610	0.2	0.2	0.2	1Q/04
Glycol Dehydration Systems	4408	1.6	1.7	1.8	4Q/03
Fugitives from Oil and Gas Facilities	4403	4.8	4.8	4.7	1Q/05
Fugitives from Chemical and Refinery Plants	4455	0.2	0.2	0.2	1Q/05
Wood Burning Fireplaces and Wood Burning Heaters	4901	1.3	1.9	2.3	1Q/04
Steam Enhanced Crude Oil Production Well Vents	4401	0.0	1.5	1.4	1Q/06
Wineries	TBD	0.7	2.5	2.6	4Q/06
State and Federal Measures	TBD	N/A	N/A	7.2*	Varies
Total VOC Emissions Reductions		**9.1**	**13.2**	**20.8**	

*The State SIP commitment is for total reductions. Expected reductions from state and federal measures are shown for information only. Specific reductions are to be identified later.

Table 4-20 Estimated Seasonal Emission Reductions of VOC

CM Name	Rule #	VOC Emissions Reduction (tpd)			Final Implementation Date
		2005	2008	2010	
Can & Coil Coatings	4604	0.3	0.4	0.4	4Q/04
Glass Coating Operations	4610	0.1	0.2	0.2	1Q/04
Glycol Dehydration Systems	4408	1.6	1.7	1.8	4Q/03
Fugitives from Oil and Gas Facilities	4403	4.8	4.8	4.7	1Q/05
Fugitives from Chemical and Refinery Plants	4455	0.2	0.2	0.2	1Q/05
Wood Burning Fireplaces and Wood Burning Heaters	4901	9.7	10.1	10.4	1Q/04
Steam Enhanced Crude Oil Production Well Vents	4401	0.0	1.5	1.4	1Q/06
Wineries	TBD	0.7	2.3	2.3	4Q/06
State and Federal Measures	TBD	N/A	N/A	7.2*	Varies
Total VOC Emissions Reductions		**17.4**	**21.1**	**28.6**	

*The State SIP commitment is for total reductions. Expected reductions from state and federal measures are shown for information only. Specific reductions are to be identified later.

Table 4-21 Estimated Annual Emission Reductions of SOx

CM Name	Rule #	SOX Emissions Reduction (tpd)			Final Implementation Date
		2005	2008	2010	
Natural Gas-Fired Oilfield Steam Generators	TBD	2.4	4.8	4.8	2Q/06
Glass Melting Furnaces	4354	0.2	1.1	1.2	4Q/06
Small Boilers	TBD	0.1	0.1	0.15	4Q/06
Dryers	TBD	0.1	0.1	0.15	4Q/06
Total SOX Emissions Reductions		**2.7**	**6.2**	**6.3**	

Totals may differ slightly due to rounding.

Table 4-22 Estimated Seasonal Emission Reductions of SOx

CM Name	Rule #	SOX Emissions Reduction (tpd)			Final Implementation Date
		2005	2008	2010	
Natural Gas-Fired Oilfield Steam Generators	TBD	2.4	4.8	4.8	2Q/06
Glass Melting Furnaces	4354	0.2	1.2	1.2	4Q/06
Small Boilers	TBD	0.0	0.1	0.2	4Q/06
Dryers	TBD	0.0	0.1	0.2	4Q/06
Total SOX Emissions Reductions		**2.7**	**6.2**	**6.3**	

Totals may differ slightly due to rounding.

CONTINGENCY CONTROL MEASURES

Sections 172(c)(9) and 189(c)(1) of the CAA require attainment plans to provide for the implementation of specific measures to be undertaken if an area fails to make reasonable further progress (RFP) or to attain the standard on schedule. Contingency measures must take effect without any further action by the District Governing Board, the State, or the EPA. Contingency measures provide assurance to the EPA and the public that progress toward attainment will continue while the area corrects the deficiencies in the plan and adopts new or revised measures.

The overwhelming majority of NOx emission reductions in the plan needed for attainment and progress, 84 percent, come from fully adopted regulations and fully funded and established incentive programs. These programs are being implemented and projected emission reductions are on track. The same is true for established and funded incentive programs. The Carl Moyer Memorial Air Quality Standards Attainment Program (Moyer Program) was established in 1998 and has SIP-creditable criteria for emission reductions. Both the ARB and the District have administrative processes in place to allocate funds and certify reductions. Recent legislation secured funds for the program well beyond the District's PM10 attainment date. State law has also authorized the District since the early 1990s to receive funds generated by a fee on the registration of all motor vehicles in the District.

Recent legislation allowed the District to increase the fee amount, and the District Governing board has taken the necessary action to receive the full funds it is authorized to collect.

Emission reductions from state and District commitments to adopt future rules comprise 16 percent of the NOx reductions in the PM10 Plan. Since these rules have not gone fully through the public process, it is reasonable to expect that the projected emission reductions relied on may change somewhat as these measures undergo the scrutiny of public review, Board consideration, and implementation. Given the potential that rule commitments may not provide all of the reductions anticipated, contingency reductions may be needed for these measures.

The triggering of contingency reductions for failure to meet an RFP milestone is determined by an analysis of the emission reductions achieved by the milestone date versus the minimum required by the CAA. The triggering of contingency reductions for failure to attain is based on the actual air quality in the attainment year, in this case 2010. That assessment is made at the end of the year, since the annual average standard is year round. And the contingency reductions are due subsequently.

State Contingency Reductions

ARB proposes contingency reductions for both RFP and for attainment of the PM10 standard in the attainment year. ARB will provide contingency reductions up to the amounts shown in Tables 4-28 and 4-29. ARB anticipates achieving these contingency reductions through the secured state portion of funding for the Carl Moyer Program either in total or in aggregate with other control programs.

California's ongoing motor vehicle program creates a unique situation that allows ARB to provide contingency reductions for attainment based on the increasing benefits of measures that are already being implemented. These adopted measures have multi-pollutant benefits that will contribute to ongoing reductions in NOx emissions. ARB is providing a portion of the additional reductions achieved through an additional year of ARB's mobile source program as contingency for attainment.

The contingency reductions for attainment are triggered if EPA determines the area did not attain the standard on time. This determination for the annual PM10 standard occurs in early 2011. ARB has quantified the net benefits accrued between 2010 and 2011 of the mobile source program and will provide up to 10 tons per day of NOx reductions for attainment contingency.

District Contingency Reductions

The District's contingency measure strategy contains several different elements. The base contingency measures rely on adopted programs that achieve reductions in excess of those relied upon in the 2003 PM10 Plan. These are intended to fulfill the immediate contingency measure requirement. To provide additional assurance to the public and EPA, additional measures will be adopted in 2005 that will be available as contingency measures later in 2005 through 2010. The third type of measure is rule revisions that will be examined during plan development for the 2006 PM10 Plan. If needed, they will be adopted as rule amendments. Finally, the District is developing a complete plan revision for submittal to EPA by March 31, 2006 that will fulfill a commitment from the 2003 PM10 Plan. The 2006 Plan Update will include new modeling based on the latest science and a new attainment demonstration. This will provide an opportunity to identify new contingency measures, if needed.

Adopted Measures and Programs to Fulfill Contingency Requirement: District Incentive Programs

The 2003 PM10 Plan estimated emission reductions to be achieved by the Heavy-Duty Engine Incentive Program at 6.3 tons per day of oxides of nitrogen (NOx) based on the funding that was in place at the time of plan adoption. The plan used a conservative estimate of cost-effectiveness that would be achieved with the money that was assured to the District. Since then, the District has been very successful at funding very cost-effective projects. Based on the funding expended and available through 2005, the District will achieve 14.6 tons/day of NOx in 2005 or 8.3 tons/day in excess of the 2003 PM10 Plan commitment.

The PM10 Plan did not take credit for PM10 reductions achieved by the Heavy Duty Program because the reductions were not quantified at the time of plan adoption. PM10 reductions from the existing funds total 0.6 tons/day in 2005.

The Governing Board recently approved the REMOVE II Program with funding of $3.7 million for 2005 using DMV Motor Vehicle Registration Surcharge Fees from the District's original $4 per vehicle authorization. An additional $3.7 million is proposed for 2006. When used for incentive programs, these funds must be applied to projects that reduce emissions from motor vehicles. The REMOVE Program was inactive at the time the 2003 PM10 was under development, so no new emission reductions were projected for this program. The District now expects to achieve NOx reductions of 0.15 tons/day and PM10 reductions of 0.04 tons/day from funds allocated to REMOVE II.

The legislature has taken action to secure additional funding for incentive programs. Approximately $6 million per year in DMV Motor Vehicle Registration Surcharge Fees will be available each year. These new funds can be spent on the full range of cost

effective emission reduction projects including Agricultural Internal Combustion Engines.

The District's incentive programs are operated on a first come first served basis to ensure that the emission reductions are achieved as quickly as possible and with a cost-effectiveness cap to ensure projects are reasonably cost-effective. The emission reduction estimates are based on an analysis of eligible projects and historical data with actual emission reductions and cost-effectiveness information. The District is committing to achieve the tons per day listed and not a specific mix of projects with specific funding amounts per project type. As technology advances, new cost-effective projects not currently envisioned for incentive funding will become available. This provides flexibility needed to maximize the use of this resource. District incentive programs are enforced under performance contracts with applicants that require pre- and post installation inspections and annual operation reports.

Table 4-23 Surplus District Incentive Program Reductions (NOx)

Measure	2005 tons/day	2006 tons/day	2007 tons/day	2008 tons/day	2009 tons/day	2010 tons/day
2003 PM10 Plan Commitments	6.3	6.5	6.7	6.8	7.0	6.5
Current Incentive Reductions	12.8	11.7	9.6	8.8	8.3	6.9
Surplus Reductions	6.5	5.2	2.9	2.0	1.3	0.4

Table 4-24 Surplus District Incentive Program Reductions (PM10)

Measure	2005 tons/day	2006 tons/day	2007 tons/day	2008 tons/day	2009 tons/day	2010 tons/day
2003 PM10 Plan Commitments	0.0	0.0	0.0	0.0	0.0	0.0
Current Incentive Reductions	0.5	0.6	0.7	0.6	0.5	0.5
Surplus Reductions	0.5	0.6	0.7	0.6	0.5	0.5

Measures with 2005 Adoption Schedules to Fulfill Contingency Requirement

Legislation approved after the adoption of the 2003 PM10 Plan will result in substantial PM10 reductions and some NOx reductions that were not accounted for in the 2003 PM10 Plan. SB 705 prohibits agricultural burning of many types of materials. The prohibitions will be phased in between 2005 and 2010. The District is amending Rule 4103 (Open Burning) to add provisions that will determine which

prohibitions are feasible based on the availability of feasible alternatives to burning. The rule is expected to be adopted by July 2005 and to achieve reductions of 4.6 tons/day of PM10 and 1.1 tons/day of NOx by 2010. The PM10 reductions will be reduced by 0.1 tons in 2008 and 0.5 tons/day in 2010 to reflect credit already claimed for growers that were expected to choose reduced burning as a practice to comply with Rule 4550 – Agricultural Conservation Management Practices.

Rule 4103 - Open Burning

REASON FOR CONTROL MEASURE: Amending Rule 4103 is intended to reduce NOx, PM10 and VOC emissions from the open burning of agricultural waste materials as required by recent amendments to the California Health and Safety Code (CH&SC), which are described below.

AFFECTED SOURCES: Rule 4103 regulates and coordinates the use of open burning while trying to minimize impacts on the public. Affected sources are agricultural operations throughout the Valley which use open burning to dispose of agricultural waste, eliminate pests, and control plant diseases.

DESCRIPTION: Rule 4103 prohibits agricultural burning on days that the District declares to be no-burn days. No-burn days are days during which meteorological conditions are not conducive to good ventilation and mixing, but they are not necessarily days expected to experience high ozone concentrations. Open burning is controlled on days when the ozone standard is in jeopardy of being exceeded. This rule also prescribes conditions under which burning must be conducted to minimize smoke and controls would be instituted on those days when emissions of NOx and VOC contribute to exceedances of the ozone standard.

Open burning is now required be phased out between 2005 and 2010, pursuant to the schedule in CH&SC 41855.5(a). CH&SC 41855.6 allows the District to postpone the commencement date of a burn prohibition, provided several conditions exist, including the lack of economically feasible alternatives to burning. NOx, PM10, and VOC emissions reduction will be achieved by the new requirement. CH&SC 41855.5(d)(1) requires the District develop a rule to regulate limited open burning for disposal of diseased crops and weed control.

IMPLEMENTATION SCHEDULE: CH&SC 41855.5 mandated the schedule for rule development for these projects. Provisions of the open burning restrictions are self-implementing and will begin in June 2005 with full implementation by 2010. The District will adopt rule amendments before the applicable restriction dates which address appropriate provisions for selected materials for which there are no reasonable alternatives to burning.

EMISSIONS AND EMISSIONS REDUCTION: Adoption for this control measure will be phased in during 2005 and 2007, with full implementation projected for the year 2010. Total emissions from sources subject to this control measure are estimated to be 9.1 tons of PM and 2.3 tons of NOx in 2008. Upon full implementation of this rule,

a reduction of 4.6 tons per day of PM10 and 1.1 tons per day of NOx are anticipated in 2010. The exact reductions realized will depend on the extent to which open burning practices can be replaced by cost-effective, technologically feasible alternatives.

Table 4-25 Rule 4103 Surplus Reductions (NOx)

Measure	2005 tons/day	2006 tons/day	2007 tons/day	2008 tons/day	2009 tons/day	2010 tons/day
2003 PM10 Plan Commitments	0.0	0.0	0.0	0.0	0.0	0.0
Rule 4103	0.0	0.0	0.0	0.2	0.2	1.1
Surplus Reductions	0.0	0.0	0.0	0.2	0.2	1.1

Table 4-26 Rule 4103 Surplus Reductions (PM10)

Measure	2005 tons/day	2006 tons/day	2007 tons/day	2008 tons/day	2009 tons/day	2010 tons/day
2003 PM10 Plan Commitments	0.0	0.0	0.0	0.0	0.0	0.0
Rule 4550*	0.0	0.0	0.0	-0.1	-0.1	-0.5
Rule 4103	0.2	0.2	0.2	1.1	1.1	5.1
Surplus Reductions	0.2	0.2	0.2	1.0	1.0	4.6

* Rule 4550 agricultural burning reductions subtracted to avoid double counting

Rule 4702 – Internal Combustion Engines

Agricultural IC Engines was a control measure added in the December 18, 2003 Amendments to the 2003 PM10 Plan. The 7.5 tons per day credited to this measure were not needed for attainment, but were added to meet best available control measure (BACM) requirements and to strengthen the plan. The District is now proposing to use this measure as a contingency measure based on reductions that will be achieved beginning in 2010. This control measure will become part of Rule 4702 (Internal Combustion Engines - Phase 2). The rule has gone through the public workshop process and is scheduled for adoption on June 16, 2005. The emission reduction for this measure is subject to change but may exceed the amounts listed. The reductions listed in the December 18, 2003 PM10 Plan amendments for Rule 4702 Agricultural IC Engines for 2008 will be achieved through a combination of District and State Moyer incentive funding for the years 2005 through 2007, thereby resulting in earlier than anticipated reductions.

Table 4-27 Rule 4702 Surplus Reductions (NOx)

Measure	2005 tons/day	2006 tons/day	2007 tons/day	2008 tons/day	2009 tons/day	2010 tons/day
2003 PM10 Plan Commitments *	0.0	0.0	0.0	0.0	0.0	0.0
Rule 4702	0.0	0.0	0.0	0.0	0.0	7.5
Surplus Reductions	0.0	0.0	0.0	0.0	0.0	7.5

* Reductions for Ag IC Engines will be achieved through incentive funding in 2005 through 2007 to achieve 7.5 tons/day by 2008.

The following tables (Tables 4-28 through 4-30) provide total excess emissions reductions expected from all control measures in place or that will be adopted in 2005 that would be available as contingencies for NOx and PM10. The amount available for contingency has been adjusted to account for shortfalls in emission reductions from rules that are behind schedule or that achieved reductions less than projected in the 2003 PM10 Plan.

Table 4-28 Total Reductions Available for Contingency (NOx) (Tons/Day)

Measure	2005	2006	2007	2008	2009	2010
District Incentive Programs	8.3	8.7	8.2	7.3	6.6	0.4
Rule 4103	0.0	0.0	0.0	0.2	0.2	1.1
Rule 4702	0.0	0.0	0.0	0.0	0.0	7.5
District NOx Surplus	8.3	8.7	8.2	7.5	6.8	9.0
Shortfall from NOx Rules	-2.6	-3.8	-3.6	-1.1	-0.7	-0.6
NOx for PM10 Shortfall*	-3.0	-2.1	-2.3	-0.0	-0.3	0.0
District NOx Contingency	2.7	2.8	2.3	6.4	5.8	8.4
ARB NOx Contingency	0.1	0.2	0.4	0.6	0.7	See Below
Total Contingency	2.8	3.0	2.7	7.0	6.5	8.4

NOx/PM10 substitution rate = 1.5 to 1

Table 4-29 2010 ARB Contingency Reductions NOx (tons/day)

Purpose:	Reductions (tons/day):
Attainment	10

Table 4-30 Total Reductions Available for Contingency (PM10) (tons/day)

Measure	2005	2006	2007	2008	2009	2010
District Incentive Programs	0.5	0.6	0.7	0.6	0.5	0.5
Rule 4103	0.2	0.2	0.2	1.0	1.1	4.6
District PM10 Surplus	0.7	0.8	0.9	1.6	1.6	5.1
Shortfall from PM10 Rules	-2.7	-2.2	-2.4	-1.0	-1.8	-1.0
PM10 Shortfall /Excess	-2.0	-1.4	-1.5	-0.6	-0.2	4.1
NOx for PM10 Shortfall*	3.0	2.1	2.3	0.0	0.3	0.0
Total Contingency	0.0	0.0	0.0	0.6	0.0	4.1

*NOx/PM10 substitution rate = 1.5 to 1

Contingency Measures Requiring Rule Amendments

The following measures were included in the 2003 PM10 Plan as contingency measures but needed rule development and Governing Board approval to function as contingency measures. The measures will undergo additional review during the development of the 2006 PM10 Plan to determine the appropriate content based on recent experience with the rules and regulations that they would modify.

Regulation VIII Amendments

Appendix G, the BACM analysis for Regulation VIII, of the 2003 PM10 Plan contains a table entitled “Identification and Justification of BACM Selected,” that provides a comprehensive listing of control measures, what the control measure proposes, technological feasibility, cost effectiveness, and discussion/justification of control measures. Of the measures that were not selected for BACM, several measures were identified as contingency measures for varying reasons. The final contingency measures are subject to change based on input received from stakeholders and the

public and from the socioeconomic impact analysis. Below is a description of the potential amendments to the rules under Regulation VIII that the District would implement in the event that emission milestones are not achieved. As noted earlier, these measures would provide only minimal additional reductions above those achieved by the 2004 amendments to Regulation VIII and would be accomplished on at a very high cost per ton reduced (ranging from approximately $60,000 to $650,000 per ton).

Rule 8021

- Prohibit demolition activities when wind speeds exceed 25 mph.
- Require a designated person to monitor and if necessary to manage/optimize dust control activities on-site for constructions projects with 50 or more acres of disturbed surface; and
- Require minimum soil moisture content of 12% for earthmoving.

Rule 8031

- Cease material handling activities when a dust plume crosses property line(s) during a wind event; and
- Require application of water to storage piles at least once per hour or cover piles with tarps or similar coverings during a wind event.

Rule 8071

- Eliminate the use of water as a control option for unpaved parking areas with activity levels of 75 or more vehicle trips/day to prevent VDE more than 25 days per year. The use of water shall remain an optional control technique for vehicles that operate exclusively within the site; and
- Eliminate the use of water as a control option for unpaved parking areas with 25 or more vehicle trips/day for more than 25 days per year with three or more axles to prevent VDE and to provide a stabilized surface.

Rule 8081

- Eliminate the use of water as a control option for unpaved parking areas with activity levels of 75 or more vehicle trips/day to prevent VDE as specified in Rule 8071. The use of water shall remain an optional control technique for vehicles that operate exclusively within the site;
- Eliminate the use of water as a control option for unpaved parking areas with 25 or more vehicle trips/day more than 25 days per year with three or more axles to prevent VDE and to provide a stabilized surface as specified in Rule 8071;
- Cease material handling activities when a dust plume crosses property line(s) during a wind event; and

- Require application of water to storage piles at least once per hour or cover piles with tarps or similar coverings during a wind event.

Agricultural Conservation Management Practices (CMP) Program (Rule 4550)

The Agricultural Conservation Management Practices (CMP) Program (Rule 4550) contains a backstop provision that would require the District to increase the number of measures required, change the acreage exemption level, or make other changes to be determined if the CMP fails to achieve its emission reduction goals. Rule 4550 has achieved the first year goal for the acreage covered by CMP Plans. The District is compiling data (e.g., number of farms, crop types affected, types of CMP utilized, and other data) to substantiate the progress achieved during the first year of the CMP Program. Analysis is underway to determine the actual emission reductions that will be achieved by the practices selected by the growers. This initial analysis will enable the District to diagnose any systemic problems and propose amendments, if needed, to improve the rule. Implementing any contingencies that would go into effect before the effectiveness of the existing rule can be analyzed could be counter productive to the evolving relationship between farmers, the NRCS, and the District.

Additional Local Commitments

The third contingency measure is to obtain additional commitments from local jurisdictions if a shortfall arises in their commitments under Regulation VIII. The District is collecting data from the local jurisdictions in support of the 2006 PM10 Plan that will used to determine if they achieved their plan commitments. Therefore, it is the District's belief that the appropriate timing and mechanism for this measure is in the 2006 PM10 Plan.

FURTHER STUDY CONTROL MEASURES

The District identified several emission source categories that appear to have the potential for emission reductions, but they have highly uncertain emission inventories or control measure effectiveness estimates. For those sources, the District proposes further study to enable an informed decision on whether to pursue a control measure and to determine a realistic emission reduction estimate. The following measures are the District's "Further Study Measures."

Soil Decontamination (Rule 4651)

District staff is currently improving the VOC emission inventory for soil decontamination. This source category is currently covered under prohibitory Rule 4651 and permits are issued for in-situ soil decontamination.

The District is aware of some facilities within the SJVAB that receive contaminated soils from locations outside of our District boundaries as well as from within the District. The soils are processed by open aeration volatizing the VOCs in the contaminated soil directly to the atmosphere. District staff will investigate whether this practice is occurring at other locations within the District and establish an emissions inventory for this source category.

The District's permitting process establishes limits for in-situ soil decontamination and Rule 4651 places limitations on open aeration. The emission controls appropriate for this source category includes the improvement of work practices by eliminating open aeration, requiring in-situ aeration and preventing the importation of contaminated soil into the District.

Leaf Blowers

The emissions inventory does not adequately reflect all emissions from the operation of leaf blowers. The current inventory only accounts for NOx and VOC emission related to fuel losses and engine operation. Fugitive PM10 entrained from leaf blowing and general landscape maintenance activities is not accounted for in the inventory. The responsible agency for the emissions inventory for the lawn and garden equipment source category is ARB. ARB has done some work in this area, but has not yet determined SJVAB emissions. District staff conducted research to identify other areas that have adopted leaf blower regulations. No air district regulations were identified that were aimed at PM10 reductions; however, several cities have adopted bans on leaf blowers and time of day restrictions based primarily on noise concerns.

If the emissions inventory identifies this source as significant, the District will conduct an analysis to identify available control measures. In addition, the various control options would need to be analyzed for technical and economic feasibility. For example, a leaf vacuum could be a control option. The bag that collects the debris may not completely capture PM10 that is collected or the cost of purchasing and operating such a system may be excessive compared to the expected emission reduction benefit.

Concentrated Animal Feeding Operations (CAFOs)

CAFO rules are now under development in response to deadlines contained the California Health and Safety Code as modified by SB 700 for these sources; therefore, CAFOs are no longer a further study measure. Further details on these rules will be provided in the 2006 PM10 Plan, as appropriate.

COMPLIANCE/ENFORCEMENT

The District operates a highly efficient and effective compliance program. The Compliance Division's staff of 75 personnel maintains a strong presence in each of the District's three regional service areas. The Compliance Division has a critical role in ensuring that rules and regulations relied upon to attain the PM10 NAAQS are fully enforced.

The District uses several methods to increase compliance while maintaining a streamlined process. The first method is education and outreach. Educational approaches include an extensive array of compliance assistance bulletins, and a compliance school for those who have received a notice of violation. A second method is increased use of information technology. The District's website along with printed information helps to ensure that the regulated community has full access to the applicable regulations and instructions. The District is automating its permitting system to enable applicants to take advantage of streamlined applications for permits such as those required for agricultural burns. By making the process easier, compliance rates will be higher. The third method is the traditional field enforcement activities that include rigorous source tests, inspections, and response to complaints. The District has toll free complaint hot lines that enable the public to contact an on-call inspector at any time. The final approach falls into the District's legal and Mutual Settlement area. District legal staff has the authority to issue large penalties as one of the strongest compliance incentives.

Until recently, the District's Regulation VIII fugitive dust rules were enforced almost entirely on a complaint basis. The District recognized that compliance rates for activities subject to Regulation VIII could be improved. The District is committed to increasing its reliance on field inspections through increases in total compliance staff and by redirecting resources to Regulation VIII compliance. In addition, one of the proposed upgrades to Regulation VIII is to increase the number of construction sites that will be required to file a dust control plan. This will enable Compliance staff to quickly identify active construction sites and to better focus their efforts on dust control. The District's proposed budget includes additional staff assigned to compliance activities.

Compliance School

"Compliance School" is offered as a voluntary educational training session to individuals and companies who have received a "Notice of Violation Settlement Letter" from the District. A person having the authority and responsibility to control the event that led to the violation of a District rule may qualify for a one-time penalty reduction by attending this two-hour training session. The first hour presents an overview of the air quality problems within the SJVAB. The second hour discusses rule requirements and provides recommendations regarding rule compliance.

[2] Final Report, Air Emissions from Animal Feeding Operations: Current Knowledge, Future Needs, National Research Council of the Academies, February 2003

Compliance Assistance Bulletins and Publications

The following Compliance Assistance Bulletins are now available on the District's website:

- Equipment Tuning Procedures for Boilers, Steam Generators and Process Heaters
- Portable Equipment Recordkeeping
- Rescue Requirements for Floating Roof Tank Inspections
- Source Testing Requirements for Alternative Monitoring Schemes for Boilers, Steam Generators, and Process Heaters
- Title V Reporting Requirements
- Rule 4692 – Chain-driven Charbroiling Equipment
- Vineyard Removal Update
- Regulation VIII – Fugitive Dust Control at Construction Sites
- Regulation VIII – Control for Public Agencies

Other informational documents or web pages include the following:

- Fugitive Dust Control at Agricultural Sources
- Asbestos Requirements for Demolitions and Renovations
- Abrasive Blasting Operations
- Degreasing Operations
- Industry Self Inspection Program

INCENTIVE PROGRAMS

The District has operated incentive programs since 1992. The programs have expanded in funding and increased in sophistication over the years. The District is currently operating two incentive programs aimed at reducing ozone precursor emissions: the Heavy-Duty Engine Emission Reduction Incentive Program (Heavy-Duty Program) and the Reduce Motor Vehicle Emissions (REMOVE) Program. In addition, the District recently concluded a highly successful Light and Medium-Duty Vehicle Incentive Program that substantially reduced air pollutant emissions in the SJVAB. As opportunities to achieve cost-effective emission reductions present themselves and funding becomes available, the District has been willing to develop new programs. The District's Clean Green Yard Machine Program that helped consumers purchase electric lawnmowers is an example of a new program that will likely be continued in coming years if funding is available.

Current programs use a combination of state and local funds, including ARB's Carl Moyer Program, San Joaquin Valley Emergency Clean Air Attainment Program (VECAP) funds, State Peaker Power Plant Offset (State ERC) funds, District

Department of Motor Vehicles Surcharge Fees (DMV Fees) and federal Congestion Mitigation and Air Quality (CMAQ). Of these funding sources, only DMV fees are under the sole control of the District. The District has achieved significant, cost-effective emission reductions from a variety of grant programs and will seek funding for cost-effective programs from all potential sources. Emission reductions claimed for this plan are based on funding already committed and estimates of funding for future years. The mix of locally generated funding, state funding, and federal funding will vary. The District has awarded over $90 million to projects that have resulted in over 38,000 tons of lifetime emission reductions at a cost-effectiveness of approximately $2,400/ton.

Heavy-Duty Engine Emission Reduction Incentive Program

The Heavy-Duty Engine Emission Reduction Incentive Program (Heavy-Duty Program) is by far the District's largest and most successful incentive program. The Heavy-Duty Program accepts applications for a wide variety of engines that power vehicles or equipment. It provides funding for new purchases, engine repowers, or retrofits. Emission reductions are obtained when the project applicant purchases vehicles and engines that are cleaner than required by current emission standards or installs an emission certified retrofit kit on an existing engine. The District pays the differential cost of purchasing the lower emitting technology compared to conventional technology up to a cost-effectiveness cap of $13,000 per ton for NOx. The program is primarily aimed at NOx reductions, but many projects also achieve particulate reductions.

SIP submittals for the SJVAB have not included emission reductions from the Heavy-Duty Program. The first projects that were funded began operating in 1998. Since then, each year additional funds have been allocated to the program and additional projects have become operational. Project life varies from 3 to 20 years depending on the application. The average project life is 7.7 years based on the mix of projects received to date. Note that emission reductions are cumulative since additional projects are completed each year. The December 18, 2003 PM10 Plan indicated that emission reductions projected to be achieved by completed projects and with then currently committed funding amounted to 6.3 tons per day of NOx by 2005. The December 18, 2003 PM10 Plan also indicated that the District expected additional funding would be obtained to allow continued emission reductions in later years.

The most successful component of the program is the replacement of agricultural internal combustion (IC) engines used for water pumping. Approximately 65% of all engines retrofitted have been agricultural IC engines that have been replaced with new engines meeting current off-road engine standards.

REMOVE Program

The Reduce Motor Vehicle Emissions (REMOVE) Program is the District's first incentive program. It began its first phase in 1992. The District has developed a new program that was approved by the Governing Board in February 2005. REMOVE II will reduce emissions from light- and medium-duty motor vehicles. This grant

program provides incentives for specific projects that will reduce motor vehicle emissions within the District. The purpose of this grant program is to assist the District in attaining the requirements of the California Clean Air Act. This is accomplished by allocating funds to cost-effective projects that have the greatest motor vehicle emission reductions, thereby creating long-term air quality benefits for the San Joaquin Valley. All projects must have a direct air quality benefit to the District. Any portion of a project that does not directly benefit the District within its boundaries will not be allowed for funding or in calculating emission reductions. Principal components are the Light- and Medium-Duty Vehicle Component, the E-Mobility (Telecommunications) Component, the Bicycle Infrastructure Component, the Public Transportation and Commuter Vanpool Subsidy Component, Accelerated Vehicle Retirement Component and the Alternative Fuel Vehicle Mechanic Training Component.

Light and Medium-Duty Vehicle Incentive Program

The District recently completed a highly successful Light and Medium-Duty Vehicle Incentive Program. The program provided incentives for the purchase of low-emission passenger vehicles, light trucks, small buses, and trucks under 14,000 pounds gross vehicle weight. The purpose of the program was to encourage the early introduction of low-emission vehicles in the SJVAB. The program paid between $1,000 and $3,000 per vehicle depending on the emission certification level and size of the vehicle. Vehicles must be powered by alternative fuel, electric, or hybrid electric engines/motors. Emission reductions from vehicles purchased under this program were claimed under ARB's Low Emission Vehicle program. Since the District is currently out of funds for this incentive program, the program has been discontinued. In the event that additional funds become available in the future, this program may be revisited.

Electric Lawnmower Incentives

The District operated an electric lawnmower incentive program in recent years. The District worked with electric lawnmower manufacturers and local equipment dealers to provide large discounts to people who turned in their gasoline powered mowers. For 2004, District funding provided discount coupons for electric and push-type lawn mowers; 327 mowers were sold in 2004 under the coupon program.

EDUCATION/PUBLIC AWARENESS

Engaging the public in efforts to reduce emissions is a key element of the PM10 attainment strategy. Education increases public support for new and controversial regulations. Helping people understand the complex issues underlying the PM10 problem further improves this support. There are many actions that individuals can undertake to reduce PM10 emissions. When members of the public are aware that

they can make a difference and are convinced that the problem is real, many people will change their behavior in a positive way.

The District's educational program has expanded and evolved over the years. It uses a variety of media and techniques to ensure the widest possible dissemination of air quality information. It uses direct marketing approaches with traditional media including television, radio, and print. It networks with other agencies, educational institutions, organizations, industry groups, and the news media in educational efforts. It produces educational materials, such as videos, brochures, and fact sheets that provide focused information to targeted audiences.

Public Education Program

The District's public education program contains traditional approaches and approaches that are unique to the SJVAB. An overview of the District's program is provided below.

Agricultural Outreach - The agriculture outreach component reflects the importance of this economic sector to the SJVAB's economy and to the PM10 attainment strategy. The District works closely with the Valley's agricultural industry leaders. This cooperative effort has lead to perhaps the most intensive research into agriculture related emissions and conservation practices anywhere in the country. The $27 million California Regional Particulate Air Quality Study (CRPAQS), now nearing completion, was a direct result of this cooperation. A landmark Memorandum of Understanding (MOU) is in place with the Natural Resources Conservation Service (NRCS), the California Department of Food and Agriculture (CDFA) and the District. The MOU solidifies the agencies' commitment to work together to assist the agricultural community in the development and implementation of methods of reducing PM10 from agricultural practices.

Outreach is a critical component of the Agricultural Conservation Management Practice (CMP) Program proposed in this Plan. The contacts developed with agriculture industry leaders and agencies that assist growers such as the NRCS and the Farm Bureaus will help get the word out to the thousands of growers expected to participate in the program.

Spare the Air - The District's Spare the Air Program is a voluntary program that encourages businesses and residents to avoid pollution-producing activities on days when high pollution levels are expected. Although primarily aimed at reducing ozone precursor emissions during the summer ozone season, these same precursor emissions also contribute to secondary PM10 formation and affect the SJVAB's compliance with the annual PM10 standard. In addition to extensive multi-media English and Spanish language campaigns, information regarding the program is communicated to employers through comprehensive employer packets (bilingual), and Spare the Air fairs throughout the Valley. The District notifies participating employers and the public, via faxes, news broadcasts, and radio announcements,

when it is predicted that the ozone standard will be exceeded the following day. The public is asked to postpone or avoid such activities as using oil-based paints, solvents, aerosol spray cans, and gasoline-powered lawn equipment, and avoid making unnecessary vehicle trips.

Educational Videos - One video, currently under development, will focus on the SJVAB itself. Topics to be covered include why we have air quality problems in the SJVAB, where the pollution comes from, the impact of air pollution on public health, agricultural crops and natural vegetation, and District Rules and Regulations. This video will be supplemented by a brochure, which covers the same areas of interest. The production of a second video is planned in order to describe issues related to the PM10 problem in the SJVAB. The District has produced three other educational videos; two of these videos describe commute alternatives, and the third explains the District's Spare the Air program.

Valleywide Public Service Announcements and Paid Advertising - Public Service Announcements (PSAs) have been created for use on television and radio stations throughout the SJVAB. These short PSAs (30-60 second) remind the public to use public transportation, share rides to work (rideshare), walk to lunch, buy nonvolatile consumer products, etc., as their contribution in improving air quality. PSAs for Rules 4901 (Wood Burning Fireplaces and Wood Burning Heaters) have been airing on local newscasts since 1994. Also, through enhanced public outreach, the District has strengthened its Smoking Vehicle Program, which encourages the public to report vehicles with excessive visible emissions. An extensive public outreach campaign also informs SJVAB residents about the Spare the Air program.

Pollutant Standard Index (PSI) Predictions - Daily PSI predictions are faxed directly to local television, radio, and newspaper media to educate the public about air quality and advise them of days with poor air quality so that activities can be modified. Rule 4901 is in the process of being amended to require mandatory curtailment during days expected to have high PSI readings. The widest possible distribution of no burn day information is critical to obtaining a high level of compliance. The District has a staff meteorologist to provide more accurate air quality predictions for the SJVAB. Forecasts now use more detailed information specific to the local daily conditions in the SJVAB.

Air Quality Symposium - The District holds the Air Quality Symposium about every other year. A wide variety of organizations, businesses and individuals participate. More than 200 representatives of business and industry, along with civic leaders, air quality experts, health officials, and community activists, came together to discuss the Valley's healthy-air challenges at the District's 2004 Air Quality Symposium September 29-30 in Bakersfield. "Unique Valley, Unique Solutions: Working Together for Clean Air in the San Joaquin Valley" featured panel discussions exploring innovative solutions to cleaning the air in the Valley. The events also included keynote speakers, general sessions, breakout sessions on topics of special interest, and air quality exhibits.

District Publications

Information Pamphlets – The District continues to develop new and updated brochures to address air quality issues in the SJVAB. Current brochures include the following:

- Guide to the District's Regulation VIII Fugitive Dust Prohibitions
- Residential Wood burning
- Automotive Checkbook (vehicle maintenance record book)
- The Smoking Vehicle Program
- Air Pollution Health Effects

Newsletter – The Valley Air News is a monthly publication of the District widely distributed throughout the SJVAB. The newsletter highlights current activities of the District, summarizes Governing Board actions, highlights commendable efforts by Valley businesses in reducing air pollution beyond what is required, and discusses other relevant air quality issues.

Youth Education

As part of the youth education program, schools are able to contact the District office to request classroom presentations on a variety of topics.

Furthermore, beginning in 1995, children of the SJVAB now have the opportunity to become a member of the Clean Air Kids Club and have information sent directly to their homes regarding air pollution and what they can do to help prevent it. Clean Air Kids Club newsletters will be sent on a quarterly basis.

In the future, the Clean Air Kids Club members will serve as ambassadors to bridge the District's youth outreach program into schools. Environmental curriculum and special activities have been provided to primary schools since the fall of 2000. The Clean Air Kids Club members will also act as special home ambassadors to reinforce the Spare the Air and wood burning outreach efforts.

Events/Activities

The District works with local groups such as the American Lung Association and rideshare agencies to promote annual events that reinforce clean air activities. The following are local and nationally established, annual events held throughout the year in which the District participates:

Event	Lead Organization	Time of Year
Earth Day	Local Earth Day Sponsors	April
Clean Air Month	American Lung Association	May
Rideshare Week	Local Rideshare Committee	October
Car Care Month	Calif. State Automobile Assn. and American Lung Association	October

A wide variety of local activities are conducted by organizations and agencies throughout the Valley. Such activities include the annual Clean Air Rally sponsored by Project Clean Air and the annual Conservation Fair by the County of San Joaquin. The District participates in many of these events and encourages activities that increase public awareness of air pollution and public participation in programs or activities to reduce air pollution. In addition, many of the District activities can be found on its web site at www.valleyair.org.

Agriculture Improving Resources (A.I.R.)

Agriculture Improving Resources (A.I.R.) is a partnership formed to aid agriculture in promoting voluntary improvement of air quality through scientifically proven and cost effective measures. Partners in A.I.R. include the California Cotton Ginners and Growers Associations, Nisei Farmers League, California Citrus Mutual, California Grape and Tree Fruit League, Raisin Bargaining Association, California Apple Commission, California Plant Health Association, Kern County Farm Bureau, Kings County Farm Bureau, Fresno County Farm Bureau, Tulare County Farm Bureau, Madera County Farm Bureau, Merced County Farm Bureau, Stanislaus County Farm Bureau, USDA Natural Resources Conservation Service, The San Joaquin Valley Air Pollution Control District, and the California Air Resources Board.

Recent A.I.R. outreach efforts include outreach to promote alternatives to open field burning, PM10 dust control practices in orchard management, and EQIP cost sharing for fugitive PM10 control through the use of dust suppressants. This partnership will play an increasingly important role in providing information to growers on a wide variety of air quality programs.

CONCLUSION

The control measures described in the preceding sections are the most ambitious ever included in a San Joaquin Valley PM10 Plan. The control strategy touches all significant sources of PM10 and PM10 precursors. The measures will require large new investment in control technology by previously regulated sources, as well as by

sources that have never been regulated. The public will also be called upon to do their part. New wood burning regulations, indirect source mitigation, and changes in personal behavior that generate pollution will affect the public. Improved compliance and enforcement activities, increased public education and awareness, and further implementation of existing incentive programs will assist the District in reaching attainment of the NAAQS at the earliest practicable date.

Because the changes in control measure schedules identified in the May 2005 revision do not adversely affect the overall emissions reductions in the 2003 PM10 Plan, no revisions to the Modeling Analysis (Chapter 5), Attainment Projections (Chapter 6), or Reasonable Further Progress (Chapter 7) were warranted as part of the May 2005 revision. All of these chapters, in addition to Emission Inventory (Chapter 3), will be considered with new information as part of the 2006 PM10 Plan.