Air Resources Board

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Alan C. Lloyd, Ph.D.
Agency Secretary

Arnold Schwarzenegger
Governor

November 4, 2005

Mr. David L. Crow
Air Pollution Control Officer
San Joaquin Valley Air Pollution Control District
1990 East Gettysburg
Fresno, California 93726-0244

Dear Mr. Crow:

Please find enclosed three copies of the report titled "San Joaquin Valley Air Pollution Control District Program Review Report of Findings and Recommendations." The report is based on our evaluation of the San Joaquin Valley Air Pollution Control District's (District's) air pollution control program.

I would like to take this opportunity to express our pleasure in working with you and the staff of the District. We appreciate your comments on the draft report and found them useful in helping us finalize the report. We hope this report will be useful to you in enhancing the District's air pollution control program.

Consistent with our policy on program evaluations, I am requesting that you prepare an action plan identifying your response to the report recommendations. I would like to receive the action plan by December 30, 2005. I also request that you submit a progress report on implementing the action plan by June 30, 2006.

Once again, I thank you for the cooperation that District staff demonstrated during the program evaluation. If you have any questions regarding this matter, please contact me at (916) 445-4383 or Bob Fletcher, Chief, Stationary Source Division, at (916) 324-8167.

Sincerely,

Catherine Witherspoon
Executive Officer

Enclosure

cc: Bob Fletcher, Chief
Stationary Source Division

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our Website: http://www.arb.ca.gov.

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AIR RESOURCES BOARD

San Joaquin Valley Air Pollution Control District Program Review

Report of Findings and Recommendations

Prepared by the
California Air Resources Board
Stationary Source Division
October 2005

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REPORT OF FINDINGS AND RECOMMENDATIONS

Introduction

Air Resources Board (ARB) staff conducted a review of San Joaquin Valley Air Pollution Control District's (District) air quality program. This program review was conducted as part of ARB's oversight role with respect to air pollution control and air quality management districts (districts) in California and is in accordance with Section 41500 of the Health and Safety Code (HSC). The purpose of district program reviews is to provide constructive feedback to the districts to assist districts in carrying out their air quality programs. The program reviews acknowledge significant district accomplishments and identify and make recommendations for program improvement.

This review of the District's program was comprehensive in nature. Areas reviewed by ARB staff consisted of the District's compliance, permitting, portable equipment registration, rule development, emissions inventory, AB 2588 "Hot Spots," Carl Moyer, and ambient air monitoring programs. Staff from five ARB Divisions participated in this effort.

This program review commenced with an entrance conference held in the District's Fresno office. During the conference, an outline of proposed review activities was presented to District management. ARB staff's presentation covered the scope, method and content of the program evaluation, general logistics and time lines related to the effort. Following the entrance conference, a detailed review of the air pollution control activities of the District was conducted including major field inspection activities. ARB staff examined files and records from the preceding two years. Once the field and site review work was completed, the data obtained were reviewed and analyzed, and initial findings and recommendations were prepared. Several discussions were held with the District, and the District provided comments on drafts of the review document.

ARB has asked the District to submit an action plan within 90 days that sets forth how the District intends to address the recommendations that resulted from our review. Periodic reports are expected from the District that summarizes steps taken to carry out the action plan.

The District's air program was last reviewed in 1994 at the request of the then newly unified District to provide input on strengths and weaknesses in critical program areas. To accommodate the District's desire for a comprehensive review, the scope of this year's review was expanded beyond the traditional permitting and compliance components to cover other areas like emissions inventory, air monitoring, rules and regulations, and air toxics programs. For purposes of historical perspective, the current District is the sole air quality management organization in the San Joaquin Valley Air Basin and was formed in 1992 by the unification of eight individual county districts.

The program review findings and recommendations presented in this report are based on an office review of various program areas, interviews with staff and management, and field data from facility inspections, diagnostics testing of gasoline dispensing facilities, and source testing of selected stationary sources. As part of the review, ARB staff also interviewed a number of stakeholders, including business, agriculture, and environmental representatives. Their comments are included in this report.

District Information

The District's jurisdiction is coincident with the area contained in the San Joaquin Valley Air Basin, encompassing nearly 25,000 square miles. The area includes Fresno, Kings, Madera, Merced, San Joaquin, Stanislaus and Tulare Counties, and the valley portion of Kern County. Valley population has grown from 2.9 million in 1994 to approximately 3.3 million in 2002, and is expected to exceed 3.6 million by 2005. In 1994, approximately 69 million vehicle-miles were traveled each day within the District boundaries. In 2003, an estimated 90 million vehicle-miles are driven daily.

The District maintains regional offices in Modesto, Fresno, and Bakersfield, with headquarters in the Fresno office. In the 2002 – 2003 fiscal year, the District was staffed by a total of 233 positions, with a budget of approximately 34 million dollars. The District's organization includes the Compliance Division with 70 positions, the Permit Services Division with 67 positions and the Planning Division with 54 positions. The balance of 42 positions are for General Administration, Personnel, Administrative Services, and the District Counsel.

Attainment Status

Ozone

The San Joaquin Valley experiences some of the worst ozone pollution in the country, with both high levels and frequent episodes. Since 1980, pollution controls have cut ozone-forming emissions substantially, despite growth in population, vehicle travel, and the expanding economy. The emission controls have improved the long-term air quality trends, decreasing the number of days over the federal 1-hour standard and the geographic scope of the problem. However, based on the United States Environmental Protection Agency's (U.S. EPA) more protective 8-hour standard, Valley residents still breathe unhealthy levels of ozone on about a third of the days in a year.

The San Joaquin Valley was originally classified as a serious nonattainment area for the federal 1-hour ozone standard, with a 1999 attainment deadline. The Valley did not attain in 1999 and was reclassified in 2001 by U.S. EPA as a severe area with a 2005 attainment deadline. The District then adopted the 2002 and 2005 Rate of Progress Plan that satisfied all the planning requirements for

severe nonattainment areas except for the attainment demonstration. In 2003, the District Board recognized the difficulty in attaining the standards by 2005 and voted to request a voluntary reclassification to extreme nonattainment. U.S. EPA granted the request in May 2004, reclassifying the Valley from severe to extreme nonattainment, which requires tighter emission controls and a demonstration that the region would attain by 2010. In October 2004, the District adopted the 2004 Ozone Plan. The 2004 Ozone Plan is designed to attain the federal 1-hour ozone standard by 2010 and fulfills the remaining legal requirements of the federal 1-hour ozone planning.

In June 2004, U.S. EPA's more health-protective 8-hour ozone standard went into effect. Under the federal 8-hour standard, the Valley is classified as a serious nonattainment area, with a 2013 attainment deadline. The District is required to prepare an 8-hour ozone State Implementation Plan (SIP) by June 2007. ARB staff has begun working with staff from districts throughout California to prepare the necessary inventory and modeling updates for the 8-hour ozone SIPs.

The San Joaquin Valley is also a severe nonattainment area for the State 1-hour ozone standard. State air quality standards are more health protective than the federal standards.[1] The District is pursuing an all feasible measures strategy to attain the State standard.

Particulate Matter

Particulate matter consists of a mixture of fine airborne solid particles and liquid droplets (aerosols). The size of particulate matter can vary from coarse wind blown dust particles to fine particles directly emitted or formed from chemical reactions occurring in the atmosphere. Federal and State particulate matter standards focus on PM10 and PM2.5. PM10 comprises particles with an aerodynamic diameter less than or equal to 10 microns, while PM2.5 are particles less than or equal to 2.5 microns in aerodynamic diameter.

In the Valley, particulate matter varies significantly by season. The highest peak concentrations occur during October through January, while spring and summer experience the lowest peak concentrations. Over the last decade, substantial progress has been made reducing ambient levels of PM10 and the number of days over the federal PM10 standard.

The federal 1990 Clean Air Act Amendments established air quality standards for PM10 that consist of a 24-hour standard and an annual standard. The Valley was initially classified as a moderate PM10 nonattainment area, but could not demonstrate attainment by the 1994 attainment date. As a result, in 1993, U.S. EPA reclassified the Valley as a serious nonattainment area. The District submitted a new PM10 SIP in 1997, but subsequently withdrew it due to likely

[1] ARB approved a new State 8-hour ozone standard in April 2005, with special consideration for children's health. The State 1-hour ozone standard is retained.

U.S. EPA disapproval. In 2003, the District submitted the 2003 PM10 Plan designed to attain the standards by 2010, and fulfilled all outstanding legal requirements under the federal PM10 standard. The 2003 PM10 Plan also includes a commitment to update the Plan in 2006 to ensure continued progress towards meeting the 2010 attainment deadline.

In 2004, U.S. EPA published final designations for the federal PM2.5 standards. The Valley is designated as a nonattainment area, and the District is required to submit a PM2.5 SIP in 2008.

The San Joaquin Valley is also designated as a non-attainment area for both the State PM10 standards and the State PM2.5 standard. As with ozone, the State air quality standards for particulate matter are more health protective than the federal standards.

Findings and Recommendations

Presented below are findings and significant recommendations for program improvement, by program area. Also presented are summaries of the District's actions with respect to the 1994 program review findings. Finally, a summary of the stakeholder comments is presented. Appendices A through J following this Report of Findings and Recommendations provide details regarding individual program areas, additional suggestions for program improvements, progress made by the District since the 1994 program review, and stakeholder comments.

The District should continue to ensure that it is implementing all reasonable emission reduction opportunities for stationary sources. We are aware of the many challenges (i.e., geographical, meteorological, and population growth rate) faced by the District as it works towards improving air quality in the Valley. We also are cognizant of the current budgetary challenges faced by government agencies. The recommendations contained in this report are designed to constructively assist the District with its clean air efforts in consideration of these factors.

A. Compliance Program

The ARB staff evaluated the District's compliance program with respect to inspection of permitted facilities, documentation requirements, and adherence to policies and procedures. Appendix A contains a detailed discussion of our review of the compliance program. To accomplish this task (office review), ARB staff reviewed numerous source files, interviewed District staff, and reviewed existing policies and procedures. Our review of the compliance program includes a discussion of associated elements such as legal action, complaint handling, equipment breakdown procedures, continuous emissions monitoring, source testing, asbestos demolition and renovation program, high priority violators, variances, training, and agricultural burning.

In addition to the office review, ARB staff obtained compliance data by conducting inspections of selected permitted facilities. The field portion included joint inspections by ARB and District staff of 206 industrial facilities. Stack testing to verify compliance with permitted emission rates was conducted at five facilities. ARB staff (in cooperation with District staff) also conducted diagnostics testing at 80 gasoline dispensing facilities.

A.1 Source Inspection Program

The source inspection program serves as the compliance verification component of District operations. Inspections provide feedback on the actual compliance status of permitted facilities. As part of this program, the District inspects permitted facilities on a periodic basis, documents findings in the form of inspection reports, and issues violation notices to facilities found in violation.

The District's inspection program was evaluated with respect to guidance policies, actual inspection frequency, quality of field inspections, and documentation of violations discovered during the inspection process. The District has nearly 7400 stationary sources, including about 2450 gasoline dispensing facilities (GDFs). The available inspection staff totals 53.5 positions, about 23 percent of the District's workforce.

ARB staff reviewed Compliance Division policy and procedure documents, examined selected reports, and sampled District files as part of this review. The District provided an electronic spreadsheet report of Notices of Violation (NOVs) issued in calendar years 2001 and 2002, which was of particular use in deriving the tabulated information. In addition, ARB staff interviewed District personnel including field inspectors, settlement staff, and Compliance Division management during the program review. Observations and data from joint source inspections also contributed to the findings.

The District has written policies and procedures providing guidance on all facets of this program ranging from desired inspection frequency to inspection techniques, and definition of violations for various rules. The District conducts annual inspections at most facilities, including all major sources.[2] The review showed that the District follows its inspection frequency guidelines and generally reaches its inspection goals. The District has a policy document entitled, "Variable Inspection Frequency" that guides compliance inspection frequencies in order to maximize efficiency. District policy allows for scheduling compliance inspections at frequencies that vary from 3 to 24 months depending on source category (for example internal combustion engines) and compliance record. While we believe that annual inspections for all permitted sources are desirable

[2] The District's major source emission thresholds during calendar years 2002 and 2003 are given below. Pollutant thresholds are in tons per year (tpy):
VOC – 25 tpy, NOx – 25 tpy, CO – 100 tpy, PM10 – 70 tpy, SOx – 70 tpy

as a goal, we understand that staffing resources may prevent the District from achieving this goal in all instances.

The District generally conducts thorough inspections and follows its policies and procedures that pertain to inspections and compliance verification. Inspectors use portable analyzers for NOx and CO effectively. This finding is based upon review of completed inspection reports from office files and observation of inspection techniques during the joint inspections conducted with ARB staff at 206 facilities. However, file review and interviews indicate that additional equipment and sampling and analysis capability would benefit the District's inspection program. For example, the District should acquire hydrocarbon vapor analyzers for quantifying perchloroethylene leaks at dry cleaning machines. Also, the District inspectors should place more reliance on sampling and analysis of coatings and solvents for volatile organic compound (VOC) content. Currently, minimal sampling is taking place and inspections rely on Material Safety Data Sheets for compliance verification (typically, less than 10 samples are drawn per year).

In general, inspection reports and subsequent enforcement actions are well documented. File review indicates that notices of violation (NOVs) are generally issued when violations are documented in accordance with District guidelines. District NOV guidelines establish clear procedures for the issuance of NOVs and subsequent compliance verification. Table I shows the NOV issuance for the five broad source categories identified by the District for calendar years 2001 and 2002. Table I also shows that the southern region generates more stationary source NOVs than the other regions considering the number of sources in each region. This is consistent with our findings during the joint inspections where ARB staff observed that the southern region inspectors were more aggressive in documenting violations. A contributing factor to the higher rate of NOV issuance is the fact that some of the permitted facilities in the southern region are larger and more complex than the other regions. Some of the large facilities have hundreds of permit conditions making it more probable for some noncompliance issues to emerge during an inspection.

Table I. NOVs Issued in 2001 and 2002

	Asbestos	Agricultural/ Open Burning	Other*	Stationary Sources (non-GDF)		Gasoline Dispensing Facilities (GDF)		Total
				# NOVs	Approx. # Facilities	# NOVs	Approx. # GDFs	
North	63	261	28	297	1556	165	880	814
Central	4	329	35	432	1451	484	790	1284
South	42	164	49	895	1913	367	777	1517
Total	109	754	112	1624	4920	1016	2447	3615

* The District uses the "other'' category for violations such as excessive construction dust, nuisance complaints, or unpermitted portable equipment.

Recommendations: The District should strive for annual inspections at all permitted sources and quarterly inspections for all sources with actual emissions greater than 25 tons per year. The District should have in-house laboratory capability or have a contract with a local laboratory to analyze solvent and coating samples.

A.2 Results of Source Inspections Conducted by ARB/District Staff

As part of the program review, ARB/District staff conducted 206 stationary source inspections (excluding GDFs), diagnostics testing at eighty GDFs, and source testing at five facilities. Results are discussed below.

A.2.1 Inspections at Stationary Sources (excluding GDFs)

Joint inspections were conducted at 206 facilities to obtain field data and actual compliance rates. District inspectors generally exhibited good inspection technique and issued NOVs and notices to comply (NTCs) appropriately. Table II shows the number of facilities and permit units inspected in each of the three regions as well as the number of NTCs and NOVs issued as a result of the inspections. Each NTC and NOV has a unique number for tracking purposes. NTCs are typically issued for minor violations (such as recordkeeping problems), whereas NOVs are issued for emission related violations. Overall, compliance statistics compare favorably to other districts recently reviewed.

Table II

Region	Facilities Inspected	Permit Units Inspected	NTCs	NOVs
Northern	95	421	3	17
Central	58	225	7	15
Southern	53	189	1	24
Total	**206**	**835**	**11**	**56**

Table III presents the District-wide violation rates for facilities and permit units in each source category. A facility is considered to be in violation if one or more of its permit units is in violation. Violations that result in NOVs are categorized as emission related, whereas those that result in NTCs are considered to be minor. The coatings category includes metal, wood, and plastic product coatings other than vehicle coatings. The Other VOCs category encompasses polyester resin and printing operations. The five Title V facilities in the miscellaneous category consist of two glass plants, two landfills, and one chemical waste management facility.

Table III

Source Category	Facilities Inspected	Permit Units Inspected	Violation Rate Permit Unit Basis				Violation Rate Facility Basis			
			Minor (Only)		Emission Related		Minor (Only)		Emission Related	
			No.	%	No.	%	No.	%	No.	%
Coatings	31	105	3	3%	4	4%	2	6%	4	13%
Auto Coatings	16	18	0	0%	2	11%	0	0%	2	13%
Other VOCs	11	45	0	0%	6	13%	0	0%	4	36%
Dry Cleaning	25	32	3	9%	4	13%	3	12%	4	16%
ICEs	22	45	0	0%	9	20%	0	0%	6	27%
PM (Aggregate Type Sources)	16	50	1	2%	4	8%	1	6%	4	25%
Power Plants	11	80	4	5%	3	4%	1	9%	3	27%
Food Processing	26	177	0	0%	12	7%	0	0%	7	27%
Petroleum	10	56	0	0%	5	9%	0	0%	2	20%
Incinerators	4	7	0	0%	0	0%	0	0%	0	0%
Misc.	34	220	1	0%	3	1%	1	3%	3	9%
Total	**206**	**835**	**12**	**1%**	**52**	**6%**	**8**	**4%**	**39**	**19%**

Recommendations: None

A.2.2 Diagnostics Testing of Gasoline Dispensing Facilities

This part of the program review was conducted in two phases. During the initial phase in 2003, ARB staff visited a total of 83 gasoline dispensing facilities (GDFs) during the In-Use Vapor Recovery portion of the program review. The second phase was recently conducted to determine the impact of rule improvements not reflected during the original inspections. During the second phase, 72 additional GDFs were inspected. The entire testing effort was conducted in cooperation with District staff who participated in the testing and were also present to take enforcement action at those facilities that failed the tests.

During the initial phase, 29 of the 83 facilities were balance type Phase II systems and the remaining 54 facilities were of the vacuum-assist type Phase II systems. Three of the facilities could not be tested because wind gusts at the locations on the day of the test were sufficiently strong to adversely affect the pressure measuring devices.

Eighty facilities were tested using Test Procedure (TP) 201.3, Determination of 2-Inch Water Column Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities. Eleven facilities (14%) passed TP 201.3. These included nine vacuum-assist and two balance type facilities. The nine vacuum assist systems (consisting of 146 fueling points or nozzles) were then tested under TP 201.5, Air to Liquid Volume Ratio (A/L test). A total of 105 (72%) of the fueling points passed the A/L test. The two balance systems were tested under TP 201.4, Dynamic Back Pressure. Both facilities passed this test.

Of the 69 (86%) facilities that failed to meet the static pressure performance criteria, 43 of the facilities could not be pressurized in accordance with TP 201.3. Inability to pressurize is considered a gross failure of TP 201.3 and indicates a serious and significant leak of gasoline vapor to the atmosphere. The other 26 of the facilities could not hold the required pressure for the entire five minutes in accordance with the test procedure. As summarized in Table IV, 42 of the 51 (82%) vacuum-assist type installations did not successfully complete TP-201.3. These facilities were tagged out of service by District personnel. Tagging out of service vacuum-assist systems that fail TP 201.3 is required because the systems effectiveness is reduced by more than 5 percent. Twenty-seven of the 29 (93%) balance type installations accounted for the remaining failures and were tagged with a seven day notice to comply by District personnel. The less severe seven day notice to comply provision was applied to balance type installations because balance type systems that fail TP 201.3 experience less than a 5 percent loss in effectiveness as explained later in this section.

The results of the testing clearly showed the need for more work in this area to ensure that the gasoline vapor recovery systems are operating with the effectiveness that they demonstrated during certification. The significant loss in effectiveness of vacuum-assist type of systems combined with the cumulatively, potentially substantial, loss of effectiveness of balance type systems that fail TP 201.3 must be addressed and action taken to improve performance.

The ARB's Enhanced Vapor Recovery (EVR) regulations adopted on March 23, 2000 were intended to alleviate problems associated with equipment failures. The requirement for the installation of Phase I EVR by April 1, 2005 was the first step toward correcting problems associated with equipment durability. The implementation of Phase II EVR by January 2009 should further correct problems associated with equipment durability.

A review of gasoline dispensing rules from several districts shows that District Rule 4622 appears to contain stringent requirements. This rule, titled Gasoline Transfer Into Motor Vehicle Fuel Tanks, was amended September 19, 2002. The implementation of requirements for weekly or daily periodic maintenance and inspection of facilities based on monthly throughput was a first step in addressing performance failures resulting from poor maintenance. Removing the monthly throughput criteria and implementing a requirement for self-inspection of the facility each day the facility dispenses gasoline was expected to further mitigate problems associated with poor maintenance. Requirements for annual and semi-annual testing of gasoline dispensing facilities implemented in District Rule 4622 should have improved compliance with standards associated with EVR requirements.

In order to determine the impact of the program improvements implemented in the two years since the initial vapor recovery field work was conducted for this review, ARB staff recently revisited 72 GDFs in the District to perform TP-201.3. This was

done as a means to gauge the impact of the implementation of the Phase I EVR requirements and the rule amendments. Each one of these facilities should have been subject to and passed TP-201.3 at least once in between the rounds of testing conducted by ARB. In the latest testing, 34 facilities (47%) passed TP-201.3. These included 23 vacuum-assist and 11 balance type facilities.

Although results of the testing do illustrate an improvement in the performance of the vapor recovery systems, the compliance rate with TP-201.3 is still only 47 percent, as compared to 14 percent in 2003. Table IV summarizes the results for the two sets of TP-201.3 testing. From the 2005 results, 38 (53%) facilities failed to meet the static pressure performance criteria, 22 of which could not be pressurized. These results are somewhat disappointing when considering the extent of the changes that have been put in place to the vapor recovery programs at the State and District levels to raise the in-use performance of vapor recovery equipment.

Table IV

System Type	TEST PROCEDURE (TP) 201.3 RESULTS					
	2003			2005		
	Tested	Pass	Fail	Tested	Pass	Fail
Vacuum-assist	51	9	42	31	23	8
Balance	29	2	27	41	11	30

Particularly alarming is the continued poor performance of the GDF's equipped with balance systems to comply with the leak decay requirement. As summarized in Table IV, 30 of the 41 (73%) installations did not successfully complete TP-201.3. In two-thirds of these failures, the facilities could not be pressurized. It should be noted that balance type systems configured with open vent pipes to the atmosphere have historically demonstrated the ability to achieve the required 95 percent control of vehicle refueling emissions. Although, with the implementation of Phase I EVR, these systems are no longer allowed to operate with open vent pipes. Consequently, the emissions impact associated with a balance installation failing to comply with TP-201.3 is considered minor. However, it is still crucial to maintain the leak integrity at balance sites to ensure that the optimal reductions of refueling emissions are realized. Additionally, since the district has a high number of balance sites (1800) the cumulative emissions across the region may be substantial. Furthermore, it is anticipated that the penetration of balance sites will increase to fulfill regulatory requirements. This indicates that significant concerns remain with a major control strategy for the district and as stated earlier, action must be taken to improve vapor recovery system performance.

<u>Recommendations</u>: Although District Rule 4622 has been in place for almost two years prior to the most recent review of GDFs, a high number of stations still cannot comply with the static pressure performance requirement (TP-201.3). The District should consider adding more resources to the vapor recovery program. Currently, the District allocates 10.5 positions to the enforcement of

their vapor recovery rules. In a district as geographically large as the San Joaquin Valley, to assure an improvement in compliance, the District should allocate more resources to the enforcement of their vapor recovery rules.

A.2.3 Source Testing Results

As part of this review, abbreviated relative accuracy test audit (RATA) tests for NOx and CO were performed at four facilities. Continuous emission monitoring (CEM) systems at all four facilities passed the relative accuracy test requirements. Compliance testing for NOx and CO at one additional facility showed compliance with the permitted emission limits. These results are for reporting purposes only. No attempt should be made to conclude the compliance status of permitted facilities in the District based on this limited source testing activity.

Recommendations: None

A.3 Legal Action Program

The legal action program encompasses enforcement actions taken by the District after a facility is documented to be in violation of applicable rules and regulations. In particular, the program covers the mutual settlement of notices of violation issued to non-compliant sources and any civil actions that may follow unsuccessful mutual settlement attempts. The goal of the District's legal action program is to ensure that a facility returns to compliance before settlement, and that notices of violation are settled for penalties that are commensurate with the magnitude of the violation.

In general, the District's legal action program appears to be operating properly. Mutual settlement for the District is handled by the Central Office. The District has a good policy document for the administration of its mutual settlement program. This document includes a penalty schedule, NOV guidelines, and guidelines for transfer of cases to District Counsel.

The District is effective in collecting penalties from mutual settlement cases, while fostering communication and cooperation with the responsible party throughout the process. The District has increased penalty amounts since 1994. Most stationary source (non-GDF) penalties, which are directly emission related, are listed above $500 on the penalty schedule. Since 1994, the average settlement has increased from $723 to $1215. In 1999, the District adopted a size multiplier of 1 to 5 in computing penalties; the largest facilities are subject to a five-fold penalty increase. Our review indicates that the District has used the multiplier fairly and consistently. The District has an alternative settlement program for first time violators in GDF and burn cases. If the responsible party attends a District training class, a $150 credit is applied toward reducing the penalty. The District averaged 221 days from NOV issuance to settlement for calendar years 2001 and 2002. To ensure the effectiveness of the mutual settlement program, ARB staff recommends that the District strive to achieve a

target of 90 days for average case settlement time. We recognize that staffing constraints may have contributed to delays in case settlement. It is our understanding that the District has hired additional mutual settlement staff since the review period. This should expedite case settlement.

Penalties collected and recorded by early April 2003, from NOVs issued in 2001 and 2002, are categorized and tabulated in Table V. Table V also shows the average penalties and median settlements for five source categories.

Table V. Penalties Collected from NOVs Issued in 2001 and 2002

	North		Central		South		Total
	Settlements	Average Per Closed NOV (Median)	**Settlements**	Average Per Closed NOV (Median)	**Settlements**	Average Per Closed NOV (Median)	**Settlements**
Asb.	**$52,020**	$1,576 ($600)*	**$6,600**	$2,200 ($600)	**$37,300**	$1,622 ($400)	**$99,696**
Burn	**$65,332**	$375 ($300)	**$61,233**	$280 ($165)	**$52,954**	$430 ($337)	**$180,174**
Vapor	**$31,113**	$305 ($240)	**$88,376**	$259 ($180)	**$62,357**	$217 ($180)	**$182,430**
Stat.	**$206,013**	$1,296 ($600)	**$232,562**	$1,092 ($600)	**$1,702,013**	$3,692 ($1200)	**$2,200,078**
Other	**$9,910**	$762 ($600)	**$8,770**	$675 ($300)	**$35,985**	$1,799 ($600)	**$56,102**
Total	**$364,408**		**$397,541**		**$1,890,609**		**$2,652,558**

* Median penalty values are shown in parenthesis.

As shown in Table V, there is not a large difference between average and median settlement values for the vapor (GDFs) and open/agricultural burn cases. For the stationary source category, there is a significant difference between the median and average settlement values. For example, in the southern region the median settlement for stationary sources is $1200 as compared to the average value of $3692. This difference should be expected because this category covers sources ranging from dry cleaners and coating shops to power plants and oil refineries. In the southern region, 45 percent of the NOVs in Table V settled for under $1000. Seven percent of the NOVs settled in the range of $10,000 to $76,500. The difference between median and average values in the northern and central regions is not as pronounced (compared to southern region) because they do not have as many large sources.

Recommendations: To ensure the effectiveness of the mutual settlement program, ARB staff recommends that the District strive to achieve a target of 90 days for average case settlement time.

A.4 Complaint Program

The District's complaint handling program governs the investigations of complaints received from the general public. Air pollution complaints received by the District are an essential source of information. Timely and attentive response to air pollution complaints is critical to ensure protection of public health and to maintain public trust. The District's complaint program was evaluated with respect to the framework of best management practices to respond to complaints as described in the ARB/CAPCOA Complaint Resolution Protocol of October 2002. These include the receipt, evaluation, response, and resolution of air quality complaints and feedback to the complainant. The District received approximately 6,200 complaints for calendar years 2001 and 2002. Of these complaints, individual contributions include 37 percent from odors, 33 percent from smoke/burning, 20 percent from dust, and 10 percent miscellaneous.

ARB staff did a detailed review of five percent of the complaints received in calendar years 2001 and 2002. Based on the review, the District has a good program in place to receive, process, and investigate complaints, including an after-hour complaint response program. Complainants can talk to District staff during normal working office hours. Complainants can contact the District by dialing any of three dedicated toll-free telephone numbers. The toll-free numbers are found in the District's Internet web-site and the local telephone directory. Each dedicated toll-free number represents the number from one of the three regional offices (Modesto, Fresno, and Bakersfield).

The District has an after-hour complaint response program. When a complainant calls after-hours, an after-hour message service pages the on-call inspector. The on-call inspector is then notified that a complaint has been received. The inspector then calls the message center to get the complainant's information. The inspector then responds to the complaint.

Overall, 80 percent of the complaints received are investigated within 24 hours. Complainants are informed of complaint status if the complainant leaves his/her name and telephone number.

Recommendations: None

A.5 Equipment Breakdown Program

The breakdown program is an integral component of the District's compliance program. The District's breakdown rule protects a source from enforcement action by the District, if the source reports a legitimate breakdown condition. Pollutants can be emitted during a breakdown episode at higher concentrations than during controlled operation. Therefore, it is important that breakdown occurrences are minimized and are corrected quickly. The District's Equipment Breakdown program was evaluated with respect to receipt, investigation, and

resolution of equipment breakdowns. The District received approximately 1600 breakdown reports during calendar years 2001 and 2002. Overall, the District's breakdown program is operating in a satisfactory manner. Our determination is based upon the detailed review of breakdown analysis reports and the fact that the District has a demonstrated system in place for receiving and resolving reported breakdowns. This includes identifying frequent breakdowns from the same equipment. However, ARB staff found that the District does not incorporate excess emissions arising from breakdown episodes into its emission inventory.

Recommendations: The District should consider quantifying emissions from equipment breakdowns and include them in their emissions inventory.

A.6 Continuous Emission Monitor Program

A comprehensive and efficient continuous emission monitor (CEM) program is an effective tool for compliance verification and a significant component of a district's compliance program. CEM reports allow District staff to verify a source's compliance status on a continuous basis. The District has a modern system for retrieving emissions data from facilities equipped with continuous emission monitors (CEMs). The District's telemetry system was installed in 2001 and polls 70 CEM systems within the District. The District can generate a daily and monthly polling report showing the daily and hourly operating averages for each facility. Each CEM has an alarm system set at each pollutant's permitted emission limit. The alarm system reads the telemetry system and notifies the District if emission limits are exceeded.

CEMs are tested at the prescribed frequency. District policy calls for enforcement action to be taken against sources with excess emissions or those who fail source test protocols. Our review found documented examples where the District took enforcement action against sources with excess emission reports, CEM downtime, or failed relative accuracy test audits /source tests.

The District has a CEM Excess Emissions Reporting Form for forwarding excess emission reports to the Air Resources Board (within 5 working days) as required by HSC section 42706. A minor concern in this area is that the Central and Northern Regions do not report CEM Excess Emissions to ARB.

Recommendations: CEM Excess Emissions in the Central and Northern Region should be reported to ARB within 5 working days as required by HSC section 42706.

A.7 Source Testing Program

Source testing of specific points in a process or its control devices is usually the only way to determine whether actual emissions are in compliance with a unit's

allowed emission limits. Source testing is also used to verify the accuracy of continuous emission monitors. Source testing confirms that equipment can operate in a normal representative mode while complying with its permitted emission limits. Equipment units are tested at the prescribed frequency by ARB certified contractors. The District witnesses most of the source tests and reviews all of the source test results. The District takes appropriate enforcement action against failed source tests. The District is also developing its own source testing capability. The Southern Region has a source testing van and can test for gaseous emissions (CO, NOx, and SOx). District inspectors are also trained in operating portable gas analyzers for verifying compliance of internal combustion units with permitted emission limits.

Recommendations: None

A.8 Asbestos Program

The District is responsible for enforcing the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Asbestos under the Code of Federal Register 40 Part 61 Section 61.145(a), (b), and (c) and Section 61.150. The District has adopted the Asbestos NESHAP under their Rule 4002 National Emission Standards for Hazardous Air Pollutants and collects fees under Rule 3050 Asbestos Removal Fees. The District is also responsible for meeting the 105 Grant conditions by maintaining a system for tracking asbestos demolition and/or renovation notifications. Grant conditions require the District to submit notification data to U.S. EPA on a quarterly basis and to perform a minimum number of inspections to ensure compliance.

In each region, ARB staff reviewed notifications, inspection reports, notice of violations, and the system used to track and report notifications to U.S. EPA. Also, joint inspections were conducted and District staff was interviewed as part of the review process. All three regions have proper inspection gear and have kept their asbestos certification and medical surveillance up to date. The District reviews the asbestos notification forms to ensure completeness and accuracy and also maintains a system that tracks all asbestos notifications. The District also submits quarterly notification related data to U.S. EPA on time.

With respect to inspection technique, the Northern and Southern Regions conducted their inspections in accordance with established protocols. However, the District should improve the asbestos inspections protocols adopted in the Central Region. While conducting a joint inspection in the Central Region, there was a breach of containment at the facility, and the District inspectors failed to contact the owner or the asbestos removal contractor to let them know so they could secure the area. Also, some possible asbestos containing debris was found outside the building. The District inspector collected the sample without spraying it with water. Spraying the sample with water is standard operating procedure in order to minimize exposure. Based on interviews with the Central

Region District staff, most inspections were done prior and after the asbestos removal. They should be conducted during regulated asbestos containing material removal operations in order to ensure the asbestos containing material is being removed properly. The majority of the inspection forms did not include the owner's name, contractor's name, location of facility, time of inspection, name and signature of inspector, and date of inspection.

It should be noted that as of March 1, 2005, the District has responded to many of these issues by reassigning staff in the Central Region. Staff has been trained to ensure that U.S. EPA's inspection protocols and techniques are followed in the Central Region.

Recommendations: As discussed above, the District should continue the improvement of the asbestos inspection protocols adopted for the Central Region. Further, inspection forms in the Central Region should be improved by documenting the inspection activity and including the owner/operator name.

A.9 Air Facility System Program

U.S. EPA's Title V compliance and permit database for Stationary Sources is called the Air Facility System (AFS). AFS used to be called the Aerometric Information Retrieval System or by the acronym AIRS. The requirements for AFS are governed by U.S. EPA's Continuous Monitoring Strategy (CMS) policy. This policy requires the District to submit a CMS plan which states the District will comply with the CMS policy and will submit the appropriate data on mega, major, and synthetic minor facilities to AFS. The required data include reporting of components of a Full Compliance Evaluation (FCE) quarterly and High Priority Violations (HPV) monthly. A FCE is comprised of site inspection(s), source test(s), and an annual Title V certification review. Each of these components must be entered into AFS before an FCE code can be entered. A HPV is a District's notice of violation (NOV), which meets the standards of a HPV as specified by U.S. EPA.

We found that the District is substantially behind schedule in entering the FCE data into AFS. Annual Title V certifications and source tests for pertinent AFS sources are not being updated into the AFS database. The District CMS target list does not match the list of sources in the AFS database. Both lists have overlap but each list has its own unique sources. The District should make sure the CMS target list matches the list of sources in the AFS database. The District and U.S. EPA were working to resolve this problem prior to the program review. Also, the source names, addresses and contacts of the sources in AFS do not match the source names, addresses and contacts contained in the District's NOV database. In addition, the District is not putting all the HPVs into the AFS Database. The District issued a total of 360 NOVs in calendar year 2002 to sources listed as AFS sources, but less than 5 percent of the NOVs made it into AFS database as HPVs. The District does not run Quality Assurance Reports to

confirm that data entry of FCE data and HPV data are making it into AFS, and does not generate monthly HPV reports and quarterly FCE reports for management review. District AFS staff does not routinely attend the annual AFS workshops.

Recommendations: The District should enter the Full Compliance Evaluation (FCE) data into the Air Facility System (AFS) database. The District should make sure the CMS target list matches the list of sources in the AFS database, and that source names, addresses and contacts of the sources in AFS match the source names, addresses and contacts contained in the District's NOV database. District staff should run Quality Assurance Reports to confirm that data entry of FCE data and HPV data are making it into AFS. Monthly HPV reports and quarterly FCE reports should be generated for management review. The District AFS staff should routinely attend the annual AFS workshops.

A.10 Variance Program

The District's variance program was evaluated in order to determine its consistency with HSC requirements. To accomplish this task, ARB staff reviewed District files, interviewed District staff, and listened to audio tapes of variance hearings. This is the only District in the State that has three hearing boards, one per zone. During the study period of January 1, 2001 through January 1, 2003, there were a combined total of 184 variances granted by all three zones; 25 in the northern zone, 42 in the central zone and 117 in the southern zone. ARB staff reviewed and evaluated a total of 30 variance files (4 in the northern zone, 8 in the central zone and 18 in southern zone). Numerous audio tape recordings were evaluated in each zone.

The District has developed a user friendly petition form that is provided to persons who want to request a variance. The District's petition form is well drafted and contains useful fields to help the petitioner submit a complete variance package. These fields include elements such as: what actions the petitioner has taken since first discovering they are not in compliance, a requirement to show all calculations and to provide emission factors used in estimating excess emissions, and a requirement to attach a health risk assessment and receptor modeling data if there are excessive hazardous or toxic emissions. The District is consistently recommending (and the hearing boards imposing) enforceable interim emission limits and other requirements to limit and mitigate excess emissions from sources under variance. The District staff consistently verifies that the variance's increments of progress and final compliance dates are met.

Our review found that the northern and southern zone hearing boards continue to ignore ARB's recommended procedure that hearing boards make the findings required by HSC section 42352 at the hearing. Instead, these two zones make the statement that the findings have been made in the staff report, or other

similar statements, at the hearing. It is ARB's long standing direction to hearing boards that a review of the staff report and other information, which may include a discussion and exchange of information between the petitioner and the board members, is required, if only to determine that the facts, emissions, circumstances, and conclusions provided are accurate. It is essential that hearing procedures do not give the impression, or allow for, a variance to be considered in a pro forma or cursory manner by the very panel that is charged with an independent and impartial review of the matter. Also, abatement orders that act as a variance do not always contain all the required findings for such an order (see HSC section 42452).

Recommendations: Northern and Southern zone hearing boards should make the findings required by HSC section 42352 at the hearing. It is essential for the District to ensure that hearing procedures do not give the impression, or allow for, a variance to be considered in a pro forma or cursory manner by the very panel that is charged with an independent and impartial review of the matter.

A.11 Training and Safety Program

The District has established a formal training program for new and existing field staff. The purpose is to enable all of the field staff to adequately conduct inspections and discharge their job responsibilities. The District maintains an electronic centralized "Training File" system in order to track field staff training participation. The District institutes source specific training focusing on technical issues associated with each rule category. In addition, safety aspects such as first aid, driver training, and annual physical examinations are included in the training program. Inspectors are issued sufficient safety equipment and personal protective gear.

Recommendations: None

A.12 Open/Agricultural Burning Program

Open burning can be a significant source of criteria pollutant emissions, whether from legally sanctioned open burning, agricultural burning, or wildland burning for fire prevention and forest management. The District's open/agricultural burning program was evaluated for consistency with the requirements of the HSC and the Smoke Management Guidelines in Title 17 of the California Code of Regulations (CCR). Documents reviewed for this evaluation included written policies, public information handouts, burn permits, various forms and correspondence.

The District has a comprehensive Open Burning Policy document, developed in 1994 and revised in 2002, to provide guidance in applying Rule 4103, Open Burning. It outlines extensive information on burn permit requirements, burn authorizations, complaint and compliance inspection procedures, and includes a

21-page appendix which lists 51 situations and/or materials which may be regulated by the rule.

The District now has its own Meteorology section, which determines the daily burn decisions (in consultation with ARB meteorologists), operates the prescribed burn forecast system for the District, and conducts daily conference calls with weather forecasters and burners. The District Meteorology section also allocates burn acres daily for the 93 burn allocation zones in the District. A District daily burn authorization program has been created and is centralized at the Fresno office. Burn operators take calls from all over the District, and enter the burn authorizations into the computer. The burn acres in the 93 allocation zones are authorized on a first-come, first-served basis. The daily burn report is faxed to the fire agencies every hour.

The District has a number of public information handouts: vineyard fact sheet, vegetable crop handout, vine, orchard removal burns, grape stake burn restrictions, the ban on yard burning brochure, a day-glow tag warning about burning illegal materials, and a hazard reduction burning pamphlet. The District encourages orchard growers to chip the prunings, particularly in the case of removal of an entire orchard. There is a list kept of facilities that accept green waste, or have use for biomass.

Recommendations: *None*

B. Permit Program

The districts adopt permitting regulations to govern the construction of new sources and modifications to existing sources that emit air contaminants within their jurisdiction. These programs must ensure the attainment or maintenance of applicable ambient air quality standards. Due to the severity of the District's air quality, the ARB staff conducted a review of the District's permitting program. Refer to Appendix B for further discussion of the permitting program. The primary objective was to determine whether the District has been issuing permits in accordance with their regulations and with State law, but more importantly, to assist the District in identifying specific areas for improvement.

The methodology the ARB staff used consisted of a review of the District's permit files, a review of guidelines and policy documents, and interviews with District staff and management. The review of permit files focused on the quality of the engineering evaluations and the resulting operating permits issued to the facilities. Interviews covered areas such as general administration, permit processing, filing, and application intake, computer support, staff resources, and emission calculation procedures.

The ARB staff reviewed approximately 700 of 2,782 project applications for new units and modifications to existing units issued by the District, with a focus on the 2000 to early-2003 timeframe. A conscious effort was made to cover a broad spectrum of the District's permitting actions by reviewing files for different source types and sizes. In addition, the ARB staff reviewed the permits for the biomass facilities to determine the prevalence and limitations of using urban wood waste as fuel.

B.1 Permit Administration - General

The District has a pool of well-qualified and trained professionals for permit processing. At the time of the program review, the District employed about 70 permitting services staff including managers, supervisors, engineers, and specialists. Each of the three regions in the District has a permitting office administrated by a permit services manager. The three regional managers report to the Director of Permit Services. The District is able to process about 3,000 to 4,000 permit applications per year. The District has about 7,000 permitted sources consisting of 21,000 separate permit units in its jurisdiction. The District has about 220 Title V facilities.

The District uses information technology resources to maintain a comprehensive permit database, computer network, and an intrarnet site containing files related to all permitting actions. The District is in the process of converting all of its paper files to electronic documents, another step in the District's efforts to improve permit-processing efficiency. The District's engineering evaluations are generally thorough and consistent in format and organization. Evaluations were easily accessible and made available to ARB staff via the computer network system. The District maintains an extensive list of written permitting policies that function as guidance in implementing the District's written rules.

A major challenge facing the District is the permit backlog in spite of many permit streamlining efforts. In 2003, the District had a backlog of 887 permits, which is higher than the 250 backlogged permits it had at the time of the previous review in 1994. While we acknowledge the District's extensive efforts at permit streamlining, we found a larger than expected permit backlog. To address this situation, the District should explore additional steps, including augmentation of staff resources. Backlog of permit applications was a major concern of stakeholders interviewed by ARB staff as part of the review process.

Recommendation: The District should develop and carry out a plan to reduce its permit backlog. The District may need to add additional staff to support this effort.

B.2 New Source Review Rule

ARB staff reviewed District Rule 2201 - New and Modified Stationary Source Review and several engineering evaluations conducted pursuant to the requirements of the rule.

At the time of the program review, District Rule 2201 exempted an emission unit from Best Available Control Technology (BACT) at an existing facility if the installation or modification of an emission control technique is performed solely for the purpose of compliance with a District rule, subject to several emission-limiting conditions. The ARB staff's concern was that the District could apply this exemption inappropriately and too broadly—resulting in the replacement of an entire emission unit without requiring BACT, even though the replacement is needed because the equipment is at the end of its useful life. District Rule 2201 has since been modified, and the current version exempting BACT for "the installation or modification of an emission control technique performed solely for the purpose of compliance with the requirements of District, State or Federal air pollution control laws…" does not apply to the replacement of an entire emission unit.

District Rule 2201 exempts a "routine replacement" from BACT. ARB staff believes that the District's application of this routine replacement clause may allow a new emission unit to be installed at a stationary source without requiring BACT. Regarding engineering evaluations conducted pursuant to Rule 2201, ARB staff found a case where the replacement of a turbine was considered a new unit and required to meet BACT. In a very similar project, the replacement of a turbine was considered a *routine replacement* of an existing emission unit and exempt from BACT in accordance with District Rule 2201 section 4.2.6. Such inconsistent treatment for similar situations is inappropriate.

Furthermore, ARB staff found a case where the District's calculation procedures allowed the generation of "paper" emission reductions by lowering an emission factor, apparently without confirmation via source test, rather than producing an actual reduction in usage and/or throughput.

Recommendations: Rule 2201 should be amended to clarify that routine replacement should be reserved for routine maintenance and repair of broken or worn components, not for the complete replacement of an entire stand-alone emission unit. Also, the District should ensure that the replacement of an emission unit is treated consistently. The District should ensure that its calculation procedures do not generate "paper" emission reductions by lowering an emission factor rather than actually reducing usage and/or throughput.

B.3 Permitting Policies

The District maintains an extensive list of permitting policies. These policies provide guidance to permitting staff in its three regions and help ensure that permitting actions are consistent. However, one specific policy appears to conflict with a District rule. District *Policy APR 1305: Best Available Control Technology (BACT) Policy* (November 9, 1999) allows a "small emitter" to apply BACT that is merely "achieved-in-practice," as opposed to considering applying a more stringent "technologically feasible and cost effective" BACT. This policy is in direct conflict with the definition of BACT as defined in District Rule 2201 - New and Modified Stationary Source Review. The ARB staff reviewed Rule 2201 and did not find a reference to the term "small emitter" or a specific exemption from BACT requirements for small emitters.

ARB staff noted that several permitting policies available through the District's web site and through internal documents reference incorrect rule sections, contain rule terminology that is now obsolete, and specify outdated office procedures. Furthermore, at the time of the program review, 45 policies were posted on the web. ARB staff identified 20 other policies relevant to permitting issues that should also have been posted on the Internet. Examples of these policies include Offset Requirements, Calculation of Stationary Source Potential to Emit (SSPE), and Wellhead Stuffing Box Emission Factors. A complete list of District policies which should be included on the web site is included in Appendix B.

Recommendations: The District should ensure that its policies serve to clarify rule requirements and do not alter an approved regulation. Specifically, the "smaller emitter" exemption allowed in District Policy APR 1305 should be removed or incorporated into District Rule 2201. The District should also discontinue Policy SSP 1705 for Dormant Emissions Units. Furthermore, all permitting policies should be updated to reflect the most current rule interpretation, and the non-administrative policies should be made available to industry and the public through the District's web site and/or as a published document.

B.4 Best Available Control Technology Determinations

ARB staff believes that the District is not always requiring BACT as often as it is warranted. For example, the District maintains its own Clearinghouse of BACT determinations performed by District staff for various classes and categories of source. The Clearinghouse is a functional tool that imparts consistency and provides useful guidance to project proponents. ARB staff, however, believes the District's BACT determinations can be improved. Several components of the District's BACT policy, as discussed below, do not promote the use of state-of-the-art control technologies.

The District's BACT cost-effectiveness thresholds for ozone precursors have not been revised since 1989 and are substantially lower than other districts with similar or better air quality status (Bay Area, South Coast, Ventura, San Diego). (See Table VI.)

Table VI. California Air District BACT Cost-Effectiveness Thresholds

District		NOx [per ton]	CO [per ton]	VOC [per ton]	PM10 [per ton]	SOx [per ton]
San Joaquin Valley		$9,700	$300	$5,000	$5,700	$3,900
Bay Area		$17,500	n/d	$17,500	$5,300	$18,300
South Coast		$18,300 ($19,059) [a]	$380 ($396) [a]	$19,400 ($20,204) [a]	$4,300 ($4,478) [a]	$9,700 ($10,102) [a]
Ventura		$18,000	$1,000	$18,000	$10,000	$10,000
San Diego,	small source (<15 tpy)	$13,200	n/d	$7,480 [b]	n/d	n/d
	large source (>15 tpy)	$18,000	n/d	$10,200 [b]	n/d	n/d

[a] District is proposing to update maximum cost-effectiveness criteria to these values.
[b] Proposed revision to the district's New Source Review rule would increase thresholds to $13,200 (small source) and $18,000 (large source).

The District should review and update its BACT determinations to more accurately reflect cost-effectiveness thresholds used by other districts with similar air quality status. In this manner, control technologies that are considered technologically feasible and cost effective for a class or category of source will be more frequently achieved in practice, and therefore be required to be installed.

The District uses only its own BACT Clearinghouse to make BACT determinations, unless there are classes and categories of equipment not contained in the Clearinghouse. Conducting a broader technology search would help District staff become more aware of technology advancements in other jurisdictions, encourage the advancement of emission controls, and promote consistency statewide.

When determining whether a BACT control technology is achieved in practice for a given class or category of source, the District currently requires that the "type of business where the emissions units are utilized must be the same." CAPCOA/ARB Guidance on Achieved in Practice BACT Determinations does not include business type as part of the criteria for achieved-in-practice BACT determinations. ARB staff believes that business type, in itself, does not warrant establishment of a different class or category of source unless unique operational or technical issues justify alternative emission levels.

Finally, the District publishes an updated Clearinghouse each quarter, but the majority of the changes appear to consist of adding new guidelines rather than

updating existing ones. Routine assessments are necessary to ensure control technologies previously identified as "technologically feasible" are upgraded to the "achieved-in-practice" classification.

The combined effect of these BACT policies results in missed opportunities to install the best emission controls on new or modified equipment.

Recommendations: The District should review and update its BACT determinations to reflect more accurately the cost-effectiveness thresholds used by other districts with similar air quality status. The District should also widen its BACT search to include BACT determinations from other sources. The District could include links to other available control technology databases (for example South Coast AQMD, ARB/CAPCOA, ARB DG Guidance) on its BACT Clearinghouse web site. The District should also reexamine its in-house procedures for updating its BACT Clearinghouse. The District should amend its Policy APR 1305, removing "type of business" as a criteria for determining whether a BACT control technology is achieved in practice for a given class or category of source. The District should update the interest rate used for BACT cost-effectiveness analyses to reflect current economic conditions.

B.5 Biomass Facilities

ARB staff reviewed the District permits for the biomass plants to determine the prevalence of use of urban wood waste as fuel at biomass facilities, the District limitations of such use, and the enforceability of the associated District permits.

ARB staff reviewed nine biomass permits. For most of these facilities, the initial offsets were provided by burning agricultural biomass in the boilers that had been historically burned in the field. That is, the difference in emissions from open-field burning versus burning in the boilers provided the offsets for the plant to be built. Therefore, most of the biomass facilities have permit conditions that require them to burn a minimum of agricultural biomass to meet their offset commitments. After the minimum is consumed, the balance of the fuel may come from a variety of sources—including urban wood waste.

Our review did not find specific issues with the facility permits regarding conditions relating to the use of agricultural biomass versus other fuel. Of the nine permits issued to biomass plants, only one prohibited the use of urban wood waste as fuel. Of the remaining eight biomass permits, the conditions placed in the permits related to burning wood waste varied. The most comprehensive and enforceable biomass permit issued by the District to a biomass facility was issued to Madera Power. The District should consider using the permit issued to Madera Power as a template for modifying the permits of other biomass facilities.

Three biomass facilities were inspected as part of the District review and were found to be substantially in compliance. One facility had a visible emissions

exceedance (over 5% opacity) at a conveyor transfer point. The second facility received a notice to comply for missing records related to internal combustion engine repairs and maintenance. The third facility was in full compliance.

Recommendation: The District should consider using the permit issued to Madera Power as a template for modifying the other Title V permits for biomass facilities upon renewal. These permits should contain an explicit definition of urban wood waste, a limit on contaminants in the wood waste, a periodic testing of the fuel stream for contaminants, and source-test requirements when significant changes in fuel composition occur. For minor (non-Title V) biomass facilities, the recommendations should also apply, except that source-testing requirements may be less stringent.

B.6 Adequacy of Permit Conditions

ARB staff determined that District permits have sufficient conditions to qualify them as "stand alone" documents. However, some conditions are in the form of specific emission limits that can neither be verified during a field inspection nor practically source-tested by the facility. These emission limits can only be verified by combining actual facility conditions (throughput, material type) with the emission factors used in the original engineering evaluation. An example of such a permit condition is "emissions from the material handling operation – including receiving, unloading, and conveying to silos, batch mixers, and scales – shall not exceed 0.0038 lb PM10/ton of material."

The clarity of the District's more complicated permits can be improved. For example, before inspections of complex facilities, ARB staff had to categorize permit conditions into record-keeping conditions and source-test conditions to know what documentation to request: operating data or source-test results. Industry regulated by the District also commented that conditions should be grouped together. Also, the District's permits have an equipment description on the first page of every permit. In some permits, especially when the description is more complex, clarity may be improved with a clearer item-by-item equipment listing instead of a paragraph of text describing the equipment.

Recommendations: The District should improve the clarity of its permits, especially for more complex facilities. Specifically, permits should have a clearer item-by-item equipment listing, and the District should consider grouping specific types of conditions in its permits, such as those for record-keeping, source testing or abatement. This could make the permits more user-friendly to the source and inspector.

B.7 Organization and Adequacy of Permit Evaluations

The District's engineering evaluations follow a detailed format that covers all the necessary elements of a complete engineering evaluation. The formatting in the

District's evaluations includes: a general description of the proposal, applicable rules, project location, process description, equipment listing, emission control technology evaluation, calculations, compliance, recommendations, and appendices. The appendices include BACT analysis, health risk assessments, permits to operate and other information.

The District's engineering evaluations are generally thorough and consistent in format and organization as set by internal policy and due to the use of templates for common applications and equipment. However, some of the District's engineering evaluations contained contradictory statements and inconsistencies, more than likely attributed to "cut-and-paste" mistakes when past engineering evaluations were used as templates.

Evaluations were easily accessible and made available to ARB staff via the computer network system. ARB supports the District's intentions to convert permitting documentation from hard copy to an electronic filing system. Nevertheless, ARB staff found that many of the electronic engineering evaluations were missing supporting appendices.

The ARB staff found instances where previous District requirements were weakened through the removal of permit conditions as part of a project to modify existing equipment. For example, a source received emission reduction credits (ERCs) for the replacement of natural gas-fired engines. One of the conditions of the ERCs was that a continuous emission monitoring system (CEMS) would be required to continually demonstrate the validity of the ERCs. In a subsequent permitting action, the CEMS requirement was removed and replaced with annual source testing.

Recommendations: The District should ensure that existing permit conditions are not weakened through subsequent permitting actions related to equipment modifications. As documents are converted from hard copy to an electronic filing system, the District should make sure all engineering evaluations are complete, stand-alone documents. ARB staff supports the use of templates for the purposes of permit streamlining; however, when these templates are utilized, ARB staff recommends that the District staff exercise more care in reviewing its evaluations.

C. Rule Development Program

The District's rule development program was reviewed with respect to the quality of existing rules (at the time of the review in March 2003) and the mechanism and procedures followed by the District for adopting new rules or making amendments to existing rules.

The District has a process for rules to be reviewed for enforceability, clarity, and Best Available Retrofit Control Technology (BARCT) consistency. Enforcement,

planning, and legal staff can provide input to the rule development and amendment process. Staff reports are prepared for each new or amended rule scheduled for adoption. The District gives adequate consideration to the planning and conduct of public workshops. Based on our review, there is a good public process in place for the rule development program.

An extensive analysis of the District's existing prohibitory rules (March 2003 version) was performed as part of the review process. The rule's emission limits, exemptions, monitoring and recordkeeping requirements were compared to other districts' rules in the State with similar air quality status and to BARCT and "All Feasible Measures" determinations. Emission inventories, rule development history, cost effectiveness, and special case practicability were not taken into account. These elements are usually reviewed and covered during the district's rule development process.

At the time of the rule analysis, ARB staff identified rules that could technically have more stringent emission limits. Refer to Appendix C for a listing of reviewed rules. We should note that the District has acknowledged the scope for rule improvement. The District has done extensive work, since our rule analysis, in updating many of its rule emission limits especially for boilers, turbines, and internal combustion engines, and we commend the District for this effort.

In addition, in late 2003 and early 2004, staff from the District, Sacramento Metropolitan AQMD, Bay Area AQMD, and ARB conducted an extensive review of 10 major rule categories. For each rule category, each of the appropriate district rule or rules were compared to the most stringent rule in California, as determined by the ARB. The rule categories compared included boilers, turbines, stationary internal combustion engines, adhesives, solvent cleaning, degreasing, vehicle refinishing, valves and flanges, organic liquid storage, can and coil coatings, and graphic arts. For each category examined, staff prepared a detailed comparison of each rule element, including emission limits, applicability, exemptions, and inspection requirements. In general, there were a few areas where there was a potential for further emission reductions, but no major deficiencies were identified. Where a potential for further emission reductions was identified, each district committed to evaluating and updating the rules as appropriate.

We also found that there are certain industrial source categories (such as boilers, engines, and turbines) that are covered by many rules. Having many rules for the same source category leads to confusion and difficulty in implementing the rule.

Recommendations: We recommend the District continue to review its rules to ensure that it has implemented the most effective standards commensurate with its air quality challenges. The District should repeal superseded rules for those

source categories that are covered by many rules such as boilers, engines, and turbines.

D. Portable Equipment Registration Program

The District has had an active portable equipment registration program for almost 10 years, with approximately 600 units registered according to District Rule 2280. In addition to administering these portable units, the District has enforcement responsibility for those units operating in the District that are registered under the Statewide Portable Equipment Registration Program. We estimate this range to be between 3 to 4 thousand units operating in the District under Statewide registration. The District does not routinely inspect ARB registered portable equipment or consistently enter inspection reports into the ARB database.

Some inconsistencies and inaccuracies in the District's portable equipment registration program were noted by ARB staff during the program review. Refer to Appendix D for details of the portable equipment evaluation. For example, the District should recognize the existence of certified nonroad engines in the program and not subject them to additional emission standards. Federal regulation (40 CFR Part 85) preclude states from enforcing any standards or requirements to control emissions from nonroad engines. Other discrepancies included the inconsistent use of nitrogen oxide limits from Rule 2280 in the operating conditions and the omission of annual throughput limitations in the operating conditions.

Recommendations: The District should expand its inspections to include portable equipment registered in the Statewide program and enter inspection reports into the ARB database. The District should recognize the existence of certified nonroad engines in their portable equipment registration program, and therefore should not impose any emission standards from Rule 2280 on these engines.

E. "Hot Spots" Program

The Air Toxic "Hot Spots" Program requires stationary sources to report the types and quantities of certain substances their facilities routinely release into the air to their district. The goals of the Air Toxics "Hot Spots" Program are to collect emission data, to identify facilities having localized impacts, to ascertain health risks, to notify nearby residents of significant risks, and to reduce the risk from high-risk facilities. Refer to Appendix E for a detailed discussion of the "Hot Spots" Program Evaluation.

The District has completed the evaluation of all Phase I (facility that emits greater than 25 tons per year of PM, NOx, or SOx) and Phase II (>10 tons per year) "Hot Spots" facilities (about 150 facilities). However, in 2003, staff identified several

Phase III (less than 10 tons per year) facilities that had not completed inventory requirements.

As part of this evaluation, the District received and approved Health Risk Assessments (HRAs) in a timely manner. Upon approval of the HRA, the District immediately determined whether the facility was significant and informed the facility of the significance level and the requirements for public notification. Since the inception of the "Hot Spots" Program, the District has conducted public notification for 14 facilities. The District worked extensively with the facility and public throughout the public notification process. In cases where a facility poses a significant risk and no receptors presently exist within the impacted area, the District notifies landowners and land-use agencies of the potential significance.

The District has adopted a Board-approved policy that specifies trigger levels at which a "Hot Spots" Risk Reduction Audit and Plan (RRAP) will be required. For cancer risk, the trigger level is 100 potential cancer cases in a million. For non-cancer chronic and acute health impacts, a hazard index greater than 5 is the trigger level for RRAP.

For several facilities in the 2001 database, it was unclear why the prioritization score of a facility had changed in the "Hot Spots" program. Staff found that the District's electronic records were often incomplete and paper files were not consistently documented. The District contends that sufficient documentation exists regarding each change in a facility's status and how that affects their prioritization. The District has begun to describe any change in a facility's prioritization score or health risk assessment in their annual "Hot Spots" report.

In addition, the District has not completed all of the (screening) health risk analyses for gasoline stations, dry cleaners, and other industry-wide facilities (note: no district with significant risk industry-wide facilities has completed this evaluation).

Recommendations: The District should complete inventory reports for these last remaining Phase III facilities (less than 10 tons/yr) and submit them to ARB. The District should continue to describe any change in a facility's prioritization score or health risk assessment in their annual "Hot Spots" report, and when possible, update the emission inventory to reflect the change in status. The District should complete the screening health risk assessments for industry-wide facilities and, when necessary, require public notification for facilities with a risk above the notification threshold, as they have done for the other "Hot Spots" facilities.

F. Emission Inventory Program

Two primary areas of the emission inventory program were examined, the inventory development and data submittals. Refer to Appendix F for a detailed

discussion on the evaluation of the Emission Inventory Program. With regards to inventory development, the District has provided criteria emissions updates for facilities that emit greater than 10 tons of any criteria pollutant. For those area source categories it has updated, the District has provided ARB with detailed and clear methodologies. The District has also developed a comprehensive growth data set for use in emissions forecasting.

Currently, the District maintains criteria and toxics emissions inventories in a single database that allows data to be easily accessed and merged, making a merged data submittal possible in the future. The District has improved the data exchange process between the District and ARB with electronic databases, automated inventory calculations, and the use of ARB's most recent (CEIDARS 2.5) inventory transaction format. The District is improving in its reporting of toxics data.

As requested in the ARB Emission Inventory Guidelines, the District has provided criteria emissions updates for facilities emitting greater than 10 tons of any criteria pollutant. Although the District has recently made improvements in the reporting of facility toxics data, there are a number of facilities in the Air Toxics "Hot Spots" program for which toxics emissions have not been reported to ARB.

In addition, the District has not estimated criteria emissions for some of those area source categories for which it has responsibility. The District should review and update their area source methodologies as well as provide ARB with updated emissions estimates for these categories.

Recommendations: The District is encouraged to continue providing toxics updates for as many facilities as possible, especially those in the "Hot Spots" program. It would be helpful if the District posts their area source methodologies on their web site. The District has recently begun providing ARB with merged facility criteria and toxics data submittals and is encouraged to continue doing so.

G. Carl Moyer Program

The Carl Moyer Memorial Air Quality Attainment Program (Carl Moyer Program) is a voluntary incentive program designed to increase the replacement of older, higher-emitting diesel engines to improve air quality. ARB distributes the funds to participating Districts for local implementation and maintains monitoring, management and statewide reporting responsibilities.

As part of this program review, ARB staff reviewed files, interviewed District staff and made site visits to view engines and equipment. Refer to Appendix G for a detailed discussion of the evaluation of the Carl Moyer Program. ARB's review and findings pertaining to the Carl Moyer Program indicates the District has made many improvements to their implementation of the Carl Moyer Program since program start-up (FY1998-99). ARB continues to see progress in

implementation over time, with District staff receptive to suggestions for programmatic changes. ARB staff estimates that Carl Moyer Program Funds obligated by the District will provide over 1300 tons of NOx and a substantial amount of PM10 reductions annually for the life of the projects.

At the time of the program evaluation, some of the information contained in the District databases was inconsistent with hard copy files. The District should institute procedures for updating databases whenever there are changes to the projects.

With regards to grant applications, at the time of the program evaluation, the ARB staff found that the District uses them as working documents, with handwritten changes made throughout. Documentation of the status of the old replaced engine is not always complete. ARB staff did not find any situations where the District analyzed and responded to the absence or presence of the grant recipient's annual reports with respect to operating parameters such as hours of operation.

Recommendations: At the time of the program evaluation, ARB staff recommended that the District should institute procedures for updating databases whenever there are changes to the projects. The District should use grant applications as stand-alone documents of exactly what the grant recipient requested. Separate forms should be used to correct errors, calculate emission estimates, and justify changes. For those projects not completed as outlined in the grant contract, project eligibility and determinations should be made accordingly. The District should also completely document the status of old replaced engines. The District should analyze and respond to the absence or presence of the grant recipient's annual reports.

H. Air Monitoring Program

The districts establish air monitoring programs to collect ambient air quality data in compliance with U.S. EPA requirements to monitor progress toward meeting air quality standards, identify patterns of transported pollutants, locate metropolitan pockets of high pollutant concentrations, and provide data for indicators of daily air quality such as the Pollutant Standard Index. The District's air monitoring program was evaluated with respect to network size and siting, resources and facilities, data and data management, and quality assurance/quality control (QA/QC). Refer to Appendix H for a detailed discussion of the Air Monitoring Program.

Overall, the District complies with the U.S. EPA's regulations for air monitoring set forth in 40 CFR 50, and the U.S. EPA's guidelines included in the Quality Assurance Handbook for Air Pollution Monitoring Systems, Volume II. As such, the ARB considers the data generated and submitted by the District to the U.S.

EPA's Air Quality System (AQS) to be of good quality and data-for-record. However, the District does not have all certification equipment re-certified at the intervals suggested by the U.S. EPA, and all monitoring equipment is not calibrated using the U.S. EPA's frequency guidelines. The District has not implemented a Corrective Action Program for handling data which falls outside established limits. The District has not conducted a current detailed review of the siting criteria and instrumentation listed for each of the District's air monitoring sites in the U.S. EPA's AQS. In addition, the District has not created comprehensive QA/QC documents detailing procedures and/or guidelines for the collection, analysis, validation, storage, and reporting of data.

The District has taken several actions since the last program review, which have improved their monitoring program and data. For example, site reports are now kept at the District office and at the monitoring stations. Reports are reviewed and updated as time and personnel allow. All log entries are now initialed by the station operator. The District now operates both PM10 samplers on make-up days at collocated sites. Precision data are now being reported to the AQS for samplers run on make-up days. All calibration report files are now being kept accurate and current and at each monitoring location. Non-current calibration reports are sent to the District office where they are stored for future reference. District staff has made progress in organizing documentation and making all records accessible, and this should remain a priority until accomplished.

Recommendations: The District should have all certification equipment re-certified at the intervals suggested by the U.S. EPA. All monitoring equipment should be calibrated using the U.S. EPA's frequency guidelines. The District should implement a Corrective Action Program. The District should conduct a detailed review of the siting criteria and instrumentation listed for each of the District's air monitoring sites in the U.S. EPA's AQS. The District should create QA/QC documents detailing procedures and/or guidelines for the collection, analysis, validation, storage, and reporting of data.

I. District Actions Regarding the 1994 Program Review Findings

As mentioned previously, in 1994 the ARB conducted the first comprehensive program review of the unified District. As with all program reviews, a district is asked to implement the report's recommendation. Appendix I of this report provides several examples where the District still needs to implement the 1994 recommendations. Appendix I also includes some recommendations that have been effectively implemented. Below we highlight key recommendations that have been implemented and those significant ones that we believe still need to be addressed.

Items District has Addressed

- Consistent with ARB's 1994 recommendations, the District has increased penalty amounts since 1994.

- In response to ARB's 1994 recommendations, the District has improved its air quality complaint handling statistics.

- In 1994, ARB staff recommended improvements in the District's monitoring of emissions at major sources. In response, the District has installed a modern system for retrieving emissions data from facilities equipped with continuous emission monitors on a real time basis.

- In response to ARB's 1994 recommendations, the District has made significant improvements to its open/agricultural burning program. A daily burn authorization program has been created and is centralized at the Fresno office. Burn authorizations for the 93 allocation zones are entered into the centralized database. Further, the District now has its own meteorology section which determines the daily burn decisions and operates the prescribed burn forecast system for the District.

Items District has not Addressed

- For a district of this size, procedures for establishing in-house laboratory testing capability should be explored as recommended in 1994. The District does minimal sampling and analysis for VOC content. Compliance with VOC coating limits is typically determined by relying on material safety data sheets and facility records.

- The northern and southern zone variance hearing boards should ensure that they discuss the findings in HSC section 42352 at the hearing as is done by the central zone hearing board. An exchange of information between the petitioner and the board members regarding each finding is necessary, if only to determine that the facts, circumstances and conclusions provided are accurate.

- Although the District has taken many steps to improve and streamline its permitting process, the permit backlog has increased from 250 to 887. The District had reduced the backlog from 1700 at unification to 250 in 1994. We believe the District needs to make a concerted effort to solve this problem.

- The District's BACT cost-effectiveness thresholds for ozone precursors are still low compared to other Districts with similar air quality status (Bay Area, South Coast, Ventura, and San Diego).

- The District needs to continue its progress in making permitting policies available to interested parties by posting all non-administrative policies on its website.

- Emission inventory methodologies for area sources are still not being updated on a regular basis.

- The District has not notified ARB of all new or closed facilities for purposes of estimating emission inventories from these facilities. The District should provide an updated list of these facilities each year to ARB.

J. Summary of Comments by Stakeholders

As part of the program review process, ARB staff interviewed selected stakeholders in the San Joaquin Valley. These represent environmental/public health groups, industry, and agriculture. Most stakeholders were complimentary of the technical ability of the District rule making and other technical staff. Stakeholders mentioned that the District's mutual settlement program (for air violations) was fair in its penalty settlement amounts. Some stakeholders stated that the District holds its ground with respect to penalty amounts and will reduce penalties only if there are valid mitigating circumstances. Many stakeholders commented about the need for additional permit streamlining efforts so that new permits or modifications can be processed in a reasonable amount of time.

Some comments indicated that a number of the stakeholders did not feel the District was acting aggressively enough. A comment made was that the District's rule adoption agenda was driven by U.S. EPA sanctions, lawsuits, or fear of lawsuits instead of a genuine desire to improve the air quality at a rapid pace. Perception by one stakeholder was that adopted rules did not reflect stringent emission levels required to protect health. More than one stakeholder reflected the sentiment that the regulations associated with the oil industry were not stringent enough and contained too many exemptions.

Almost all stakeholders mentioned that the Citizens Advisory Committee (CAC) was not functioning to its full potential or doing the job it was originally designed to perform. Some comments in this area were that the CAC was dominated by industry and many of the environmental designees were not connected to any environmental or public health group. Additional comments by stakeholders can be found in Appendix J.

California Environmental Protection Agency
AIR RESOURCES BOARD

San Joaquin Valley Air Pollution Control District Program Review

Report of Findings and Recommendations

Appendices

Prepared by the
California Air Resources Board
Stationary Source Division
October 2005

Appendix A – Compliance Program

San Joaquin Valley Air Pollution Control District
Program Review

Appendix A
Compliance Program
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A. COMPLIANCE PROGRAM **A - 1**

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A. COMPLIANCE PROGRAM REVIEW

An effective Compliance Program includes many elements such as policies and procedures, enforcement, training, testing, and legal actions. During this review, ARB staff interviewed numerous staff and reviewed hundreds of District files and reports. Joint inspections were also conducted in some cases as part of the review process. Presented below are a summary of the findings, accomplishments and recommendations of a dozen areas in the Compliance Program that were evaluated.

A-1. Source Inspection Program

The source inspection program serves as the compliance verification component of District operations. Source inspections provide feedback on the actual compliance status of permitted facilities. As part of this program, the District inspects permitted facilities on a periodic basis, documents findings in the form of inspection reports, and issues violation notices to facilities found in violation. Written policies and procedures provide guidance on all facets of this program ranging from desired inspection frequency to inspection techniques, and definition of violations for various rules.

The District's inspection program was evaluated with respect to guidance policies, actual inspection frequency, quality of inspections, and documentation of violations discovered during the inspection process. The District has nearly 7400 stationary sources, including about 2450 gasoline dispensing facilities (GDFs). The available inspection staff totals about 23 percent of the District workforce. ARB staff reviewed Compliance Division policy and procedure documents, examined selected reports, and sampled District files as part of this review. The District provided an electronic spreadsheet report of NOVs issued in 2001 and 2002, which was of particular use in deriving the tabulated information. In addition, ARB staff interviewed District personnel including field inspectors, settlement staff, and Compliance Division management during the program review. Observations and data from joint source inspections also contributed to the findings.

Findings

<u>Policies and Procedures</u>

The District has a comprehensive set of general and rule specific policies and procedures for the Compliance Division that provide guidance on all aspects of the program. These compliance policies and procedures include guidelines for field inspections and enforcement actions.

1. The District has a guideline document for notices of violation (NOVs) that establishes clear procedures for the issuance of NOVs and subsequent compliance verification. The NOV guidelines specify that a NOV shall be issued for all violations of District regulations or permit conditions except

for specific minor violations detailed in the notice to comply (NTC) guidelines.

2. The District has a NTC guideline document that specifies situations where an inspector may issue a NTC in lieu of a NOV. District inspectors must get prior approval from a supervisor or manager in order to issue a NTC for situations that are not mentioned by the guideline document.

Inspection Frequency

The District conducts annual inspections at most facilities, including all major sources. In general, the District follows its inspection frequency guidelines and reaches its inspection goals. This finding is based upon review of completed inspection reports from office files and information obtained during the joint field inspections conducted with ARB staff at 206 facilities.

1. District policy does not require annual inspections for all sources. The District has a policy document entitled, "Variable Inspection Frequency" that guides compliance inspection frequencies in order to maximize efficiency. Certain source categories, including Title V and synthetic minor sources, must be inspected every 12 months. District policy allows for scheduling compliance inspections at frequencies that vary from 3 to 24 months depending on source category and compliance record. ARB staff believes that annual inspections for all permitted sources are desirable as a goal, subject to staff availability.

2. District policy does not include quarterly inspections for sources with actual emissions over 25 tons per year.

3. The District's inspection procedures for perchloroethylene dry cleaners state that each facility must be inspected at least once a year. However, these facilities are not on the Inspection Frequency Policy's list of sources subject to required annual inspections. In practice, the District does not always inspect dry cleaning facilities on an annual basis.

4. Emergency IC engines are routinely placed on a 3 year inspection schedule, whereas the policy specifies that compliance inspections may be scheduled at frequencies from 3 to 24 months, not specifically allowing for a 36 month frequency. Some IC engines were not inspected at all during the review period.

5. Draft rule specific District guidelines specify that GDFs with Phase II vapor recovery are to be inspected twice a year at four to six-month intervals. GDFs with only Phase I vapor recovery equipment are to be inspected once per year. Re-inspections are to be performed to document that Phase I or Phase II deficiencies have been corrected. Approximately 70%

to 80% of the gasoline dispensing facilities (GDF) in the District have balance vapor recovery systems and the remainder have bootless systems. The District inspects GDFs with assist-type vapor recovery systems and contracts inspections of balance-type GDFs to local county Weights and Measures agencies.

Quality of Inspections

File review of completed inspection reports and observation of inspection techniques during the joint field inspections indicate that the District generally conducts thorough inspections and follows its policies and procedures that pertain to inspections and compliance verification. Inspectors use portable analyzers for NOx and CO effectively. However, file review and interviews indicate that additional equipment and sampling and analysis capability would benefit the District's field inspection program.

1. The District uses portable analyzers for NOx and CO emissions from combustion sources to good effect. All three regions have access to portable NOx analyzers, but the Southern Region uses the analyzers more extensively than the Central or Northern Regions. The District has a portable analyzer policy that clarifies both methodology and enforcement for NOx and CO emissions testing.

2. The District does not have hydrocarbon vapor analyzers that quantify concentration for perchloroethylene leak testing at dry cleaners. Inspectors leak test perchloroethylene dry cleaning machines using their sense of smell in conjunction with an audible halogenated-hydrocarbon detector and soap bubbles.

3. Coating Sampling: The District does minimal sampling for volatile organic compound (VOC) content. Interviews with District management indicate that about 6 samples of coatings and solvents are drawn per year. The District typically relies on Material Safety Data Sheets and facility records to determine coating contents, which may not provide adequate verification of compliance.

4. The District does not always follow its rule specific visible emissions procedures, which require observations to be for a minimum of 10 minutes if any opacity reading exceeds 20%. Also, the District does not always adhere to its visible emission procedures that require the use of VEE forms to document no visible emissions.

Documentation of Inspection Findings

In general, inspection reports and subsequent enforcement actions are well documented. File review indicates that NOVs are generally issued when violations are documented in accordance with guidelines.

1. Inspection reports are generally adequate to support enforcement and follow the District's inspection procedures and report preparation policy. Inspectors use source specific forms where applicable. However, some inspection reports indicate that a facility is in compliance even though all permit units were not observed in operation.

2. The Central Region inspection reports include a comment on compliance with every permit condition, whereas the other regions may follow a different report format.

3. Inspection reports sometimes indicate that compliance with all permit conditions cannot be determined because some permit conditions are not enforceable.

4. File review verifies that NOVs are generally issued when violations are documented in accordance with District policies.

5. Documentation of NOVs is adequate for possible use in court.

6. NOVs for the five broad source categories identified by the District are shown in Table I.

Table I. NOVs Issued in 2001 and 2002

	Asbestos	Agricultural/ Open Burning	Other*	Stationary Sources (non-GDF)		Gasoline Dispensing Facilities (GDF)		Total
				# NOVs	Approx. # Facilities	# NOVs	Approx. # GDFs	
North	63	261	28	297	1556	165	880	814
Central	4	329	35	432	1451	484	790	1284
South	42	164	49	895	1913	367	777	1517
Total	109	754	112	1624	4920	1016	2447	3615

* The District uses the "other" category for violations such as excessive construction dust, nuisance complaints, or unpermitted portable equipment.

Recommendations

Significant Recommendations:

1. The District should strive for annual inspections at all permitted sources.

2. The District should strive for quarterly inspections for all sources with actual emissions greater than 25 tons per year.

3. The District should have in-house laboratory capability or have a contract with a local laboratory to analyze coating samples. Currently, minimal sampling is taking place and inspections rely on Material Safety Data Sheets for compliance verification.

Other Suggestions to Improve Program Effectiveness:

1. The District should acquire hydrocarbon vapor analyzers and adopt guidelines for their use at dry cleaners to quantify leaks and ensure uniform enforcement at this source category.

A-2. Results of Source Inspections Conducted by ARB/District Staff

As part of the program review, ARB/District staff conducted 206 stationary source inspections (excluding GDFs), diagnostics testing at eighty GDFs, and source testing at five facilities. Results of these inspections are discussed below. A complete summary of stationary source inspection results and is presented in the diskette at the end of this section.

A.2.1 Inspections at Stationary Sources (excluding GDFs)

Joint inspections were conducted at 206 facilities to obtain field data and actual compliance rates. District inspectors generally exhibited good inspection technique and issued NOVs and notices to comply (NTC) appropriately. Table II shows the number of facilities and permit units inspected in each of the three regions as well as the number of NTCs and NOVs issued as a result of the inspections. Each NTC and NOV has a unique number for tracking purposes. NTCs are typically issued for minor violations (such as recordkeeping problems), whereas NOVs are issued for emission related violations.

Table II

Region	Facilities Inspected	Permit Units Inspected	NTCs	NOVs
Northern	95	421	3	17
Central	58	225	7	15
Southern	53	189	1	24
Total	**206**	**835**	**11**	**56**

Table III displays the violation rates of facilities and individual permit units that were inspected throughout the District and in each of the three regions. A facility is considered to be in violation if one or more of its permit units is in violation. Violations that result in NOVs are categorized as emission related, whereas those that result in NTCs are considered to be minor. During the joint inspections, there was not always a strict one-to-one correspondence between the number of permit units in violation and the number of NOVs issued. On some occasions, one NOV was issued for multiple permit units in violation; at other times, multiple NOVs were used for violations occurring at a single permit unit.

Table III

Region	Facilities Inspected	Permit Units Inspected	Violation Rate Permit Unit Basis				Violation Rate Facility Basis			
			Minor (Only)		Emission Related		Minor (Only)		Emission Related	
			No.	%	No.	%	No.	%	No.	%
Northern	95	421	3	1%	17	4%	3	3%	11	12%
Central	58	225	7	3%	17	8%	5	9%	13	22%
Southern	53	189	2	1%	18	10%	0	0%	15	28%
Total	**206**	**835**	**12**	**1%**	**52**	**6%**	**8**	**4%**	**39**	**19%**

Table IV summarizes joint inspection results for the entire District by source category. The number of facilities and permit units and the number of NOVs and NTCs in each category are tabulated. The coatings category includes metal, wood, and plastic product coatings other than vehicle coatings. The Other VOCs category encompasses polyester resin and printing operations. The five Title V facilities in the miscellaneous category consist of two glass plants, two landfills, and one chemical waste management facility.

Table IV

Source Category	Facilities Inspected	Permit Units Inspected	Title V Facilities	NTCs	NOVs
Coatings	31	105	1	2	4
Auto Coatings	16	18	0	0	2
Other VOCs	11	45	0	0	9
Dry Cleaning	25	32	0	3	6
ICEs	22	45	0	0	7
PM (Aggregate Type Sources)	16	50	0	3	4
Power Plants	11	80	7	2	3
Food Processing	26	177	4	0	12
Petroleum	10	56	3	0	6
Incinerators	4	7	0	0	0
Misc.	34	220	5	1	3
Total	**206**	**835**	**20**	**11**	**56**

Table V presents the District-wide violation rates of facilities and permit units in each source category. Source categories are determined as described for Table IV.

Table V

Source Category	Facilities Inspected	Permit Units Inspected	Violation Rate Permit Unit Basis				Violation Rate Facility Basis			
			Minor (Only)		Emission Related		Minor (Only)		Emission Related	
			No.	%	No.	%	No.	%	No.	%
Coatings	31	105	3	3%	4	4%	2	6%	4	13%
Auto Coatings	16	18	0	0%	2	11%	0	0%	2	13%
Other VOCs	11	45	0	0%	6	13%	0	0%	4	36%
Dry Cleaning	25	32	3	9%	4	13%	3	12%	4	16%
ICEs	22	45	0	0%	9	20%	0	0%	6	27%
PM (Aggregate Type Sources)	16	50	1	2%	4	8%	1	6%	4	25%
Power Plants	11	80	4	5%	3	4%	1	9%	3	27%
Food Processing	26	177	0	0%	12	7%	0	0%	7	27%
Petroleum	10	56	0	0%	5	9%	0	0%	2	20%
Incinerators	4	7	0	0%	0	0%	0	0%	0	0%
Misc.	34	220	1	0%	3	1%	1	3%	3	9%
Total	**206**	**835**	**12**	**1%**	**52**	**6%**	**8**	**4%**	**39**	**19%**

A.2.2 Diagnostics Testing of Gasoline Dispensing Facilities

This part of the program review was conducted in two phases. During the initial phase in 2003 ARB staff visited a total of 83 gasoline dispensing facilities (GDFs) during the In-Use Vapor Recovery portion of the program review. During the second phase, which was conducted recently to determine the impact of rule improvements not reflected during the original inspections, 72 additional GDFs were inspected. The entire testing effort was conducted in cooperation with District staff who participated in the testing and were also present to take enforcement action at those facilities which failed the tests.

During the initial phase 29 of the 83 facilities were balance type Phase II systems and the remaining 54 facilities were of the vacuum-assist type Phase II systems. Three of the facilities could not be tested because wind gusts at the locations on the day of the test were sufficiently strong as to adversely affect the pressure measuring devices.

Eighty facilities were tested using Test Procedure (TP) 201.3, Determination of 2-Inch Water Column Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities. Eleven facilities (14%) passed TP 201.3. These included nine vacuum-assist and two balance type facilities. The nine vacuum assist systems (consisting of 146 fueling points or nozzles) were then tested under TP 201.5, Air to Liquid Volume Ratio (A/L test). A total of 105 (72%) of the fueling points passed the A/L test. The two balance systems were tested under TP 201.4, Dynamic Back Pressure. Both facilities passed this test.

Of the 69 (86%) facilities which failed to meet the static pressure performance criteria, 43 of the facilities could not be pressurized in accordance with TP 201.3. Inability to pressurize is considered a gross failure of TP 201.3 and indicates a serious and significant leak of gasoline vapor to the atmosphere. The other 26 of the facilities could not hold the required pressure for the entire five minutes in accordance with the test procedure. As summarized in Table VI, 42 of the 51 (82%) vacuum-assist type installations did not successfully complete TP-201.3. These facilities were tagged out of service by district personnel. Tagging out of service vacuum-assist systems that fail TP 201.3 is required because the systems effectiveness is reduced by more than 5 percent. Twenty-seven of the 29 (93%) balance type installations accounted for the remaining failures and were tagged with a seven day notice to comply by district personnel. The less severe seven day notice to comply provision was applied to balance type installations because balance type systems that fail TP 201.3 experience less than a 5 percent loss in effectiveness as explained later in this section.

The results of the testing clearly showed the need for more work in this area to ensure that the gasoline vapor recovery systems are operating with the effectiveness that they demonstrated during certification. The flow chart on page A-11 describes the testing effort conducted in 2003. The significant loss in effectiveness of vacuum-assist type of systems combined with the cumulatively, potentially substantial loss of effectiveness of balance type systems that fail TP 201.3 must be addressed and action taken to improve performance.

The Enhanced Vapor Recovery (EVR) regulations adopted by the Air Resources Board on March 23, 2000 were intended to alleviate problems associated with equipment failures. The requirement for the installation of Phase I EVR by April 1, 2005 was the first step toward correcting problems associated with equipment durability. The implementation of Phase II EVR by January 2009 should further correct problems associated with equipment durability.

A review of gasoline dispensing rules from several districts shows that District Rule 4622 appears to contain stringent requirements. This rule, titled Gasoline Transfer Into Motor Vehicle Fuel Tanks, was amended September 19, 2002. The implementation of requirements for weekly or daily periodic maintenance and inspection of facilities based on monthly throughput was a first step in addressing performance failures resulting from poor maintenance. Removing the monthly throughput criteria and implementing a requirement for self-inspection of the facility each day the facility dispenses gasoline was expected to further mitigate problems associated with poor maintenance. Requirements for annual and semi-annual testing of gasoline dispensing facilities implemented in District Rule 4622 should have improved compliance with standards associated with EVR requirements.

In order to determine the impact of the program improvements implemented in the Two years since the initial vapor recovery field work was conducted for this audit, ARB staff recently revisited 72 GDF's in the district to perform TP-201.3. This was done as a means to gauge the impact of the implementation of the Phase I EVR requirements and the rule amendments. Each one of these facilities should have been subject to and passed TP-201.3 at least once in between the rounds of testing conducted by ARB. In the latest testing, 34 facilities (47%) passed TP-201.3. These included 23 vacuum-assist and 11 balance type facilities.

Although results of the testing do illustrate an improvement in the performance of the vapor recovery systems, the compliance rate with TP-201.3 is still only 47%, as compared to 14% in 2003. Table VI summarizes the results for the two sets of TP-201.3 testing. From the 2005 results, 38 (53%) facilities failed to meet the static pressure performance criteria, 22 of which could not be pressurized. These results are somewhat disappointing when considering the extent of the changes that have been put in place to the vapor recovery programs at the state and district levels to raise the in use performance of vapor recovery equipment.

Table VI

System Type	TEST PROCEDURE (TP) 201.3 RESULTS					
	2003			2005		
	Tested	Pass	Fail	Tested	Pass	Fail
Vacuum-assist	51	9	42	31	23	8
Balance	29	2	27	41	11	30

Particularly alarming is the continued poor performance of the GDF's equipped with balance systems to comply with the leak decay requirement. As summarized in Table VI, 30 of the 41 (73%) installations did not successfully complete TP-201.3. In two-

thirds of these failures, the facilities could not be pressurized. It should be noted that balance type systems configured with open vent pipes to the atmosphere have historically demonstrated the ability to achieve the required 95 percent control of vehicle refueling emissions. Although, with the implementation of Phase I EVR, these systems are no longer allowed to operate with open vent pipes. Consequently, the emissions impact associated with a balance installation failing to comply with TP-201.3 is considered minor. However, it is still crucial to maintain the leak integrity at balance sites to ensure that the optimal reductions of refueling emissions are realized. Additionally, since the district has a high number of balance sites (2400) the cumulative emissions across the region may be substantial. Furthermore, it is anticipated that the penetration of balance sites will increase to fulfill regulatory requirements. This indicates that significant concerns remain with a major control strategy for the district and as stated earlier, action must be taken to improve vapor recovery system performance.

Recommendations

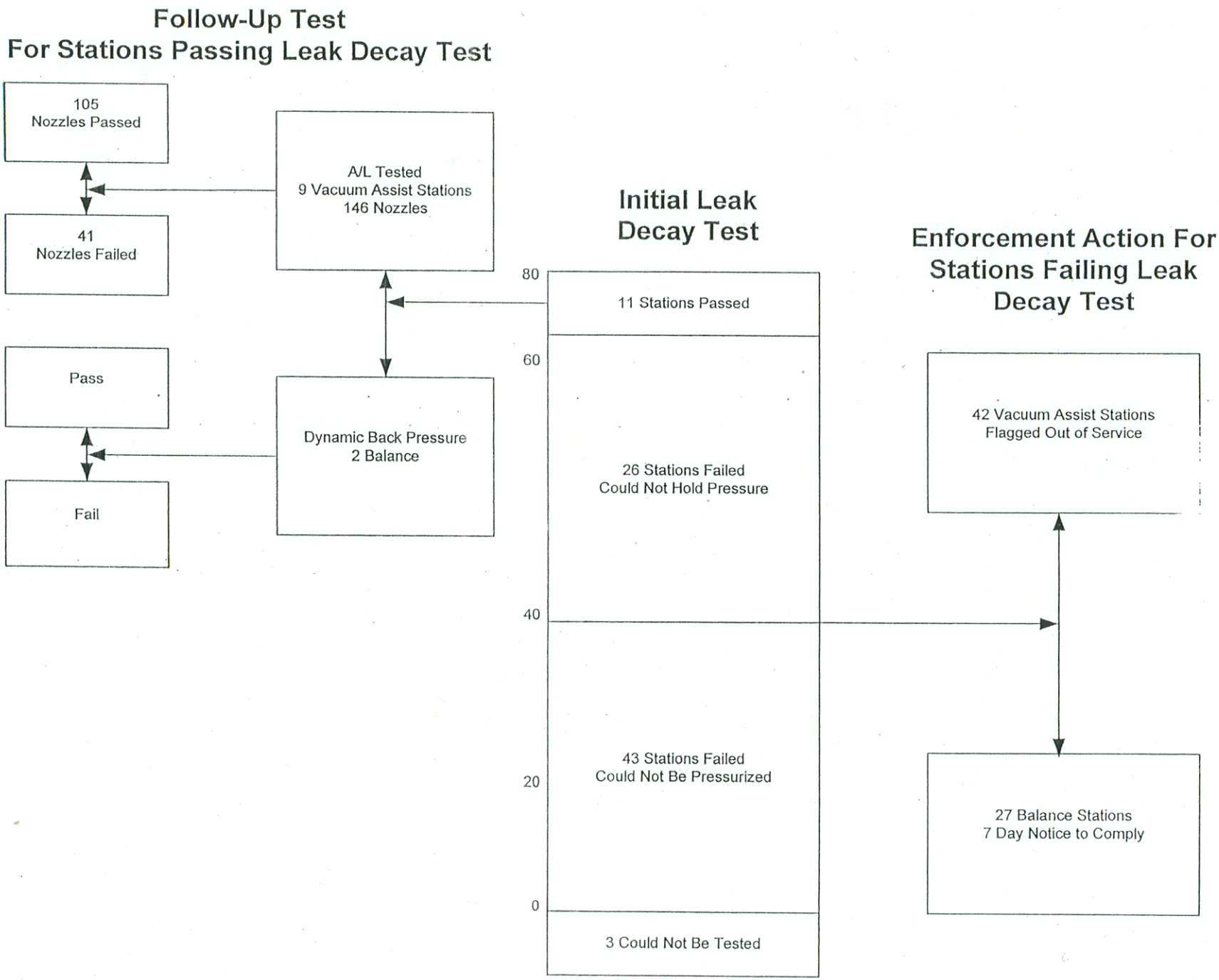
Significant Recommendations:

1. Although District Rule 4622 has been in place for almost two years prior to the most recent review of GDFs, a high number of stations still cannot comply with the static pressure performance requirement (TP-201.3). The District should consider adding more resources to the vapor recovery program. Currently, the District allocates 10.5 positions to the enforcement of their vapor recovery rules. In a district as geographically large as the San Joaquin Valley, to assure an improvement in compliance, the District should allocate more resources to the enforcement of their vapor recovery rules.

Other Suggestions to Improve Program Effectiveness:

None

San Joaquin Valley 2003 GDF Test Results



A.2.3 Source Testing Results

Source Testing was performed by ARB staff at five facilities. The results of the testing are summarized in Table VII.

Table VII

Facility Name	Emission Point Tested	Test Type	Results	Comments
St. Gobain, Madera	Stack from 75 MM Btu/hr Glass Melting Furnace #2	Abbreviated RATA for NOx and CO (4 runs conducted)	NOx: Allowed Relative Accuracy: 20% Actual: 4.2% CO: Allowed Relative Accuracy: 15% Actual: 0%	CEM Passed RATA CEM Passed RATA
Rio Bravo, Fresno	Stack from 352 MM Btu/hr Circulating Fluidized Bed Combustor	Abbreviated RATA for NOx and CO (4 runs conducted)	NOx: Allowed Relative Accuracy: 20% Actual: 15% CO: Allowed Relative Accuracy: 15% Actual: 0%	CEM Passed RATA CEM Passed RATA
Shell Oil, Bakersfield	209 MM Btu/hr Crude Oil Heater Unit 10-H1	Compliance Test (3, ½ hr runs)	NOx: Permit Limit: 30.0 ppm @ 3% O_2 Actual: 24.2 ppm @ 3% O2 CO: Permit Limit: 290 ppm @ 3% O_2 Actual: less than 50 ppm @ 3% O_2	In Compliance In Compliance
Guardian Industries, Kinsburg	Stack from 182 MM Btu/hr Float Glass Line	Abbreviated RATA for NOx and CO (2 runs conducted)	NOx: Allowed Relative Accuracy: +/-20% Actual: 11% SO_2: Allowed Relative Accuracy: +/-20% Actual: 9.5% O_2: Allowed Relative Accuracy: +/-20% Actual: -7.2%	CEM Passed RATA
Mendota Biomass Power Plant	Main Stack from Combustor	Abbreviated RATA for NOx and CO (2 runs conducted)	NOx: Allowed Relative Accuracy: +/-20% Actual: -2.6% CO: Concentration Permit: 400 ppm @ 3% O_2 Actual: 8.4 ppm @ 3% O_2	CEM Passed RATA

A.2.4 Observations from Joint Inspections and Diagnostics Testing

General findings for all areas (South, Central, North)

1. The District has sectioned each area into zones and specific inspectors are given facilities within their zones to inspect. Some inspectors may live in or near their zones so they can spend more of their time in the field conducting inspections. Inspectors can have increased productivity since they do not have to drive as far between facilities. The system of zones also helps the District organize the facilities in each region. This system works well for the District.

2. The District attempts to maximize inspector time in the field. Each inspector has a vehicle that often functions as the inspector's office (in the field). The District's policy document indicates that the inspectors should only come to the office when required to do so. Inspectors indicated they are required to come into the office at least once a week.

3. Each inspector has a laptop computer and a cell phone. Some inspectors can remotely access the District's database with the laptop computers. These were recent improvements by the District. In the past, inspectors were required to share computers.

4. The District inspectors have inspection forms for specific types of equipment including boilers, baghouses, internal combustion engines and other units. The forms are designed to accommodate several inspections in a check-off format. Some forms may be designed to have data from five or more years of annual inspections.

5. A large portion of the District's resources are being consumed by facilities under the Title V program. New Title V requirements for sources have created more paperwork, increased the complexity of permits, and increased the workload of inspectors.

6. The District does not inspect all its sources on an annual basis. During joint inspections, ARB staff found that some dry cleaning facilities had not been inspected for over 18 months. Dry cleaning facilities should be inspected every year because of the potential of emitting toxic air contaminants. The District's policy document states the standard compliance frequency is 12 months but also states that it can be less frequent with management approval. The District has an inspection frequency of 12, 18, 24 or 36 months for their sources. Larger sources have an increased field presence since they may have more breakdowns and complaints and inspectors may have to visit the facilities to reconcile them. The field presence at smaller and medium sources may be lower.

7. The District's permits have an equipment description on the first page of every permit. ARB staff believes that in some permits, especially when the description is more complex, clarity could be improved with a clearer item-by-item equipment listing.

8. For complaint handling on nights, weekends and holidays, the District has an "on-call" inspector. The on-call duty is rotated through the staff of inspectors. This system appears to work well for the District.

9. District inspectors (especially in the north & central regions) commented that permit engineers should more actively participate in joint inspections of their facilities.

10. The District currently uses the presence of perchloroethylene (PERC) odors in conjunction with an audible halogenated-hydrocarbon detector and soap solution to verify leaks. However, none of these methods can determine if the leaks are over the 50 ppm limit of Rule 7070 for dry cleaning operations. We recommend the District to use more modern equipment to verify PERC leaks in a consistent manner.

11. In interviews, the District indicated that only about a half dozen samples were taken the previous year for analysis of volatile organic compound (VOC) content. The District currently sends samples to the Bay Area AQMD for analysis. During the joint inspections, VOC materials were not sampled at any of the facilities. By the District's developing the capability to analyze its own samples or contracting with a local laboratory, the process of sending samples to the Bay Area will not be an impediment to sample collection.

12. The source contact for Delano Energy commented that his permit was too complicated with over 600 conditions and was more complicated and lengthy than any other biomass plant in the District.

Staff observations on miscellaneous issues are given below:

<u>Southern Region Inspection Findings</u>

1. The southern region is better equipped to test sources for compliance with emission limits.

2. In general, the southern region compliance staff more aggressively seeks enforcement action than the central and northern region compliance staff.

3. The District, especially the southern region office, has portable analyzers for checking compliance with emission limits for combustion related

sources. They also have the knowledge and equipment to calibrate, operate and conduct minor repairs of the units.

4. The southern region management (supervisors and region manager) was involved in the day to day activities of the inspections, had knowledge of the sources in the region and was responsive to the needs of inspectors.

Central Region Findings

1. As with other regions, ARB staff encountered a few vague permit conditions. For example, the permit for Angelica Health Care Services had a condition that would become enforceable after "implementation" of the equipment.

2. District inspectors in the central region felt that the engineers needed to participate in more joint inspections get a better understanding of writing enforceable permit conditions.

3. In the diagnostics testing of gasoline dispensing facilities, ARB staff observed that some Central Region staff acted more like a "test and repair" crew instead of just testing the station (test only) and acting on the results (pass or fail).

Northern Region Findings

1. Northern region inspectors indicated that they do not issue violations as readily as inspectors in the central region. ARB staff found that the northern region inspectors work to get their facilities in compliance, but may not issue NOVs or NTCs when a facility is not in compliance. Examples: not enough bags for baghouses at Regency Cabinets, lack of records at Hansen's Furniture, no NOV for a dry cleaner with strong PERC odors. The inspector had soap solution but did not use it.

2. As with the other regions, some of the permits have unenforceable conditions, especially ones with emission limits for equipment that is not source tested.

3. An Inspector commented that one of the main challenges they faced was the backlog of change orders in permit services. For example, an inspector will do a change order after a start up inspection to change an ATC to a PTO, and a year later the inspector still will not have the permit ready for the source's annual inspection.

4. Most of the northern inspectors did not write a summary report at the end of their inspections to give to the source. However, an inspector trained in the central region habitually wrote summary reports at the end of

inspections for sources. Some inspectors use the summary sheet to get facilities to change their practices without issuing an NTC or NOV.

5. Northern region management was supportive of inspectors and was involved in day-to-day activities of inspections.

A-3. Legal Action Program

The legal action program encompasses enforcement actions taken by the District after a facility is documented to be in violation of applicable rules and regulations. In particular, the program covers the mutual settlement of notices of violation issued to non-compliant sources and any civil actions that may follow unsuccessful mutual settlement attempts. The goal of the District's legal action program is to ensure that a facility returns to compliance before settlement, and that notices of violation are settled for penalties that are commensurate with the magnitude of the violation.

The District's legal action program was evaluated with respect to the adequacy of policies and procedures pertaining to the program, documentation requirements, and the overall effectiveness of the program. Topics considered under the program effectiveness section include the timely settlement of cases and the collection of penalty amounts sufficient to deter future non-compliance.

In general, the review showed that the District's legal action program appears to be operating properly. The District verifies that a source is returned to compliance before negotiating a violation settlement. The majority of violations are resolved through the mutual settlement program for penalties that are commensurate with the magnitude of the violation. Cases that cannot be closed through mutual settlement are referred to District Counsel for further legal action. Exceptional high profile cases may be referred directly to District Counsel. Mutual settlement for the three regions is handled by the Central Office.

ARB staff conducted interviews, reviewed applicable policies and guidelines, and used an electronic spreadsheet report provided by the District of NOVs issued in 2001 and 2002 to obtain these findings. In addition, staff sampled 179 closed mutual settlement files, including 131 stationary source case files. The stationary source sample files represented approximately 15% of closed stationary source cases, settled from NOVs issued in 2001 and 2002. Some cases included multiple NOVs. Tabulated figures are primarily based on the electronic spreadsheet report provided by the District.

Findings

<u>Policies and Procedures</u>

1. The District has a policy for the administration of its mutual settlement program. The District also has a penalty schedule, NOV guidelines, and guidelines for transfer of cases to District Counsel. These documents provide guidance for administering the legal action program, including the treatment of multiple day violations and repeat violations.

2. The District's mutual settlement policy document is still in draft format though dated from August 1994.

3. The penalty schedule specifies higher penalty tiers for repeat violators and uses this provision for most facilities with repeat violations.

4. The penalty guidance schedule recommends an initial dollar amount for settling violations and cites the eight elements of HSC section 42303. However, the District does not apply specific factors for all the 8 elements in calculating penalties on the mutual settlement worksheet. Reductions are typically generalized.

5. In 1999, the District adopted a size multiplier of 1 to 5 in computing penalties; the largest facilities are subject to a five-fold penalty increase. The District has used the multiplier fairly and consistently.

6. Penalties in the guidance schedule for some toxic sources are low; the first tier penalty for a perchloroethylene leak is $300.

7. The District does not have written protocols or memoranda of understanding with the local county prosecutors. District Counsel indicated in an interview that the Kern County District Attorney's Office has demonstrated good cooperation with the District and typically handles about six cases a year. The District has not pursued this cooperation with other county prosecutors.

Documentation Requirements

1. District headquarters in Fresno maintains NOV binders, mutual settlement case files, and the electronic database for all NOVs issued throughout the District. Case files are generally well organized and contain adequate documentation for legal action.

2. The District has a well-established mutual settlement letter program. A mutual settlement letter is issued for all violations that are not retracted or referred directly to District Counsel. The letter recommends a dollar amount and provides an opportunity for the responsible party to request a conference. The District does not provide a separate release letter for settled cases.

3. The NOV database contains adequate fields of information except the date of the return inspection to document compliance and a brief description of the reason that NOVs are dropped, voided, or result in no further action (NFA).

4. Approximately 3 percent of the records included in the electronic spreadsheet report of NOVs provided by the District were missing status codes. The status code indicates whether the facility is still in violation,

the NOV dropped, the case transferred to District Counsel, closed, put on hold, or is in the mutual settlement process.

Program Effectiveness

1. The District has increased penalty amounts since 1994. Most stationary source (non-GDF) penalties, which are directly emission related, are listed above $500 on the penalty schedule. The average settlement has increased from $723 to $1215. In 1999, the District adopted a size multiplier of 1 to 5 in computing penalties; the largest facilities are subject to a five-fold penalty increase. The District has used the multiplier fairly and consistently.

2. The District has an alternative settlement program for first time violators in GDF and burn cases. If the responsible party attends a District training class, a $150 credit is applied toward reducing or eliminating the penalty.

3. District reports show that 9 percent of cases were dropped or resulted in NFA during the two-year review period. This figure compares favorably with other districts recently reviewed.

4. However this 9 percent figure does not include the following. The spreadsheet report provided by the District indicates that about 2 percent of cases are recorded as settled without a monetary penalty. In addition, less than one percent of cases are placed on probation. If there are no repeat violations, these cases are ultimately dropped.

5. The District is effective in collecting penalties from mutual settlement cases, while fostering communication and cooperation with the responsible party throughout the process. The District collected $2,652,558 from NOVs issued in 2001 and 2002.

6. The Southern Region stationary sources accounted for most of the penalty dollars in 2001 and 2002, reflecting the presence of the larger facilities in this region and a higher number of repeat cases. The District uses a size multiplier of 1 to 5 in computing penalties; the largest facilities are subject to a five-fold penalty increase.

7. Penalties collected and recorded by early April 2003, from NOVs issued in 2001 and 2002, are categorized and tabulated in Table VIII. Table VIII also shows the average penalties and median settlements for five source categories.

Table VIII. Penalties Collected from NOVs Issued in 2001 and 2002

	North		Central		South		Total
	Settlements	Average Per Closed NOV (Median)	Settlements	Average Per Closed NOV (Median)	Settlements	Average Per Closed NOV (Median)	Settlements
Asb.	**$52,020**	$1,576 ($600)*	**$6,600**	$2,200 ($600)	**$37,300**	$1,622 ($400)	**$99,696**
Burn	**$65,332**	$375 ($300)	**$61,233**	$280 ($165)	**$52,954**	$430 ($337)	**$180,174**
Vapor	**$31,113**	$305 ($240)	**$88,376**	$259 ($180)	**$62,357**	$217 ($180)	**$182,430**
Stat.	**$206,013**	$1,296 ($600)	**$232,562**	$1,092 ($600)	**$1,702,013**	$3,692 ($1200)	**$2,200,078**
Other	**$9,910**	$762 ($600)	**$8,770**	$675 ($300)	**$35,985**	$1,799 ($600)	**$56,102**
Total	**$364,408**		**$397,541**		**$1,890,609**		**$2,652,558**

* Median penalty values are shown in parentheses.

As shown in Table VIII, there is not a large difference between average and median settlement values for the vapor (GDFs) and open/agricultural burn cases. For the stationary source category, there is a significant difference between the median and average settlement values. For example, in the southern region the median settlement for stationary sources is $1200 as compared to the average value of $3692. This difference should be expected because this category covers sources ranging from dry cleaners and coating shops to power plants and oil refineries. In the southern region 45 per cent of the NOVs in Table VIII settled for under $1000. Seven per cent of the NOVs settled in the range of $10,000 to $76,500. The difference between median and average values in the northern and central regions is not as pronounced (compared to southern region) because they do not have as many large sources.

8. For NOVs issued in 2001 and 2002, the average penalty per NOV for all categories was $1215. Of those NOVs issued in 2001 and 2002 that settled for a monetary amount, 173 out of 751 stationary source NOVs and 316 out of 441 burn NOVs settled under $500. 451 of 657 vapor NOVs settled for less than $250. Many of these NOVs were emission related. (Some burn and vapor case settlements were reduced by $150 due to the alternative settlement credit for training attendance.)

9. The District averaged 221 days from NOV issuance to settlement for calendar years 2001 and 2002. To ensure the effectiveness of the mutual settlement program, ARB staff recommends that the District strive to achieve a target of 90 days for average case settlement time. We

recognize that staffing constraints may have contributed to delays in case settlement. It is our understanding that the District has hired additional mutual settlement staff since the review period. This should expedite case settlement.

10. The Compliance Department transferred less than 10% of cases to the Legal Department during the review period. The District collected complete penalty payments for approximately one third of the cases transferred in 2001 and half of the cases transferred in 2002. The District obtained default judgments in about one tenth of the transferred cases for both years.

11. There is a time lag in the transfer of unresolved mutual settlement cases to District Counsel. The average time from the date of mailing of the initial mutual settlement letter to transfer date was 272 days for NOVs issued in 2001 and 2002.

12. A breakdown of settlement times by region and source category is shown in Table IX. Settlement times are displayed as the average number of days from NOV issuance to mutual settlement letter mailing and from mutual settlement letter mailing to final closure. According to staff interviews, the time needed to document return to compliance caused the longest delay in settling NOVs for stationary sources.

Table IX. Average Number of Days to Settle NOVs*

	North		Central		South	
	NOV to MSL**	**MSL to Settlement**	**NOV to MSL**	**MSL to Settlement**	**NOV to MSL**	**MSL to Settlement**
Asbestos	204	44	149	28	224	78
Burn	106	76	86	71	72	94
Stationary Sources	245	106	236	52	210	78
Vapor	201	53	103	62	106	50
Other	130	62	261	56	128	55

***Table IX includes only NOVs that were issued in 2001 and 2002, and that were closed by April 10, 2003.
**MSL – mutual settlement letter mailing

Recommendations

Significant Recommendations:

1. To ensure the effectiveness of the mutual settlement program, ARB staff recommends that the District strive to achieve a target of 90 days for average case settlement time.

Other Suggestions to Improve Program Effectiveness:

1. The District's mutual settlement policy document, dated August 1994, is still in draft format. The District should update and finalize the policy document.

2. The District should consider increasing the baseline penalty amount for perchloroethylene leaks in the penalty schedule.

A-4. Complaint Program

The District's complaint handling program governs the investigations of complaints received from the general public. Air pollution complaints received by the District are an essential source of information. Timely and attentive response to air pollution complaints is critical to ensure protection of public health and to maintain public trust. More than merely notification from the public that a perceived problem exists, the specific observations of a public complainant can provide valuable clues about the daily operations and compliance status of industrial sources. Complaints are normally related to injury, nuisance, or annoyance caused by some type of air contaminant. The District also receives complaints that are not necessarily affecting any particular person but are intended to inform the District that a source may be operating out of compliance with District rules and regulations.

The District's complaint program was evaluated with respect to the framework of best management practices to respond to complaints as described in the ARB/CAPCOA Complaint Resolution Protocol of October 2002 (Protocol). These include the receipt, evaluation, response, and resolution of air quality complaints and feedback to the complainant. The intent of the Protocol is to ensure timely and effective resolution of air pollution complaints and to inform the public of the process. As part of this commitment, ARB subscribes to an over-the-phone verbal translation service and has made that service available for use by the local air districts to translate complaints from languages other than English and to provide verbal feedback to the complainants. Overall, this review indicates that the District has a good complaint handling program.

Findings

1. ARB staff did a detailed review of five percent of the complaints received in calendar years 2001 and 2002. Based on the review, the District has a good program in place to receive, process, and investigate citizen complaints. Complainants can contact the District by dialing any of three dedicated toll-free telephone numbers. The toll-free numbers are found in the District's Internet web-site and the local telephone directory. Each dedicated toll free telephone number represents the number from one of the three regional offices (Modesto, Fresno, and Bakersfield).

2. The District has an after-hour complaint response program. When a complainant calls after hours, an after-hour message service pages the on-call inspector. The on-call inspector is then notified that a complaint has been received. The inspector then calls the message center to get the complainant's information. The inspector then responds to the complaint.

3. Complaints are being logged Monday through Friday. After-hour and weekend complaints are logged on the first normal business day at the District. Each complaint generates a complaint number and report.

4. Complainants are being informed of complaint status if the complainant leaves his/her name and telephone number.

5. The District received approximately 6200 complaints for calendar years 2001 and 2002. The type of complaints received by the District in 2001 and 2002 and their alleged origin are presented in Table X:

Table X

Complaint Type	Percent of Total	Complaint Origin
Odor	37	Facilities, residences, unknown
Smoke/burning	33	Residential, construction, facilities, agriculture, city parks, unknown
Dust	20	Construction, agriculture, facilities, residential, city parks, unknown
Fumes	5	Facilities, residences, unknown
Asbestos	3	Construction, residences, schools
Miscellaneous*	2	Residential, agriculture, facilities

* Burn piles staged closed to a resident's property line; a neighbor's garage loaded with paint and spray guns, or a facility operator purchased new non-permit equipment.

6. Almost all (99%) complaint reports received supervisory review.

7. The current District average for complaints investigated within 24 hours is 80 percent, compared to 70 percent in the 1994 review. 17 percent of the complaints were investigated beyond 24 hours. For about 2 percent of the complaints, it was not clear if an investigation was conducted or not. About 1 percent of the complaints were not investigated (due to District policy in reference to nuisances). This information is shown in Table XI.

Table XI

Complaint Findings	Percent Based on Review
Investigated within 24 hours	80
Investigated after 24 hours	17
Unclear when investigated	2
Not investigated	1

8. Approximately 51 percent of the complaint reports reviewed did not contain one or more of the following details.

   a. No date and/or time of investigation.

b. Alleged facility (permit or non-permit) complaint source was not investigated to determine District rule and/or permit condition violations.
c. No compliance or final determination made after investigation was conducted.
d. No comments from area inspector or follow-up.
e. Complaint was investigated beyond 24 hours (as late as 13 days from the time the District received a complaint).
f. Lack of enforcement on violations found (No NTC or NOV issued).
g. Complaint was not investigated.
h. No copy of Fire Department Incident Reports.
i. No supervisor review/signatures.
j. No name of complaint source (i.e., construction company, facility)
k. Not specific if complaint source of origin operator was contacted on-site or via telephone.
l. Complaint was not investigated.

Accomplishment

1. The District has a good program in place to receive, process, and investigate complaints, including an after hour complaint response program.

Recommendations

Significant Recommendations:

None

Other Suggestions to Improve Program Effectiveness:

1. All applicable elements of complaint reports should be filled in completely.

A-5. Equipment Breakdown Program

The breakdown program is an integral component of the District's compliance program. The District's breakdown rule protects a source from enforcement action by the District, if the source reports a legitimate breakdown condition. Pollutants can be emitted during a breakdown episode at higher concentrations than during controlled operation. Therefore, it is important that breakdown occurrences are minimized and are corrected quickly. The District's equipment breakdown program was evaluated with respect to receipt, investigation, and resolution of equipment breakdowns. The District received approximately 1600 breakdown reports during calendar years 2001 and 2002. Overall, the District's breakdown program is operating in a satisfactory manner. Our determination is based upon the detailed review of breakdown analysis reports and the fact that the District has a demonstrated system in place for receiving and resolving reported breakdowns. This includes identifying frequent breakdowns from the same equipment.

Findings

General Comments

1. A set of written policy and guidelines exist. The written policy and procedures were approved in November 1, 1994 and last revised on March 11, 1998. The District has improved in this area since the 1994 ARB review.

2. For the review period (calendar year 2001 and 2002), the Northern Region Office received 313 reports; Central Region Office received 449 reports and the Southern Region Office received 842 reports. The District received a total of 1604 equipment breakdown reports during the review period.

Receipt of Breakdowns

1. Breakdowns are reported by telephone or faxed to the District. The District advertises the telephone number and fax number in the local telephone books, handouts and on its web-site.

2. All breakdowns reported to the District are recorded in a breakdown log and database which includes: facility ID #; reported by; time reported; time facility discovered; time incident ended; District inspector who investigated; specific equipment; etc.

3. The District reviews all incoming breakdown reports.

4. Breakdown reports are reviewed and handled by the area inspector during regular business hours.

5. On weekends and after hours, the on-call inspector reviews and handles the breakdown report. The inspector telephones the source to determine if the breakdown is allowed under Rule 1100 and if they need to do an on-site investigation at the source.

6. Not all breakdown reports received by the District are relevant to the equipment breakdown program (i.e., equipment start-up, equipment shutdown, equipment maintenance, source testing).

7. The total number of reports that were found irrelevant to the District's equipment breakdown program but reported to the District was 289. Of these, the northern office received 31, the central office received 94, and the southern office received 164.

8. At the time of the review, ARB staff found a total of 82 breakdown reports with "no position" indicated in the database. District staff indicated these were breakdown reports that were completed but not turned in to update the breakdown database and or completed reports that were turned in but were not cleared in the database. These "no position" reports were found in all three region offices and broken down to 52 from the northern office; 25 from the central office and 5 from the southern office.

9. There were a total of 1071 breakdown reports that were granted breakdown relief. The northern office granted 224 breakdown relief; the central office granted 314 breakdown relief; and the southern office granted 533 breakdown relief.

10. There were a total of 162 breakdown reports that were denied relief. The northern office denied 6 reports; the central office denied 16 reports; and the southern office denied 140 reports. District policy calls for enforcement action to be taken against sources with excess emissions where breakdown relief is denied. Our review found documented examples where the District took enforcement action against sources where breakdown relief was denied. Table XII provides a summary of breakdown reports received during our study period and the action taken by District staff.

Table XII. Summary of 2001 and 2002 Breakdown Reports Received at the North, Central and South District Offices

Region Office	Breakdowns Accepted	Denied Relief	Should Not Have Called*	No Positions**	Total
North	224	6	31	52	313
Central	314	16	94	25	449
South	533	140	164	5	842
TOTAL	1071	162	289	82	1604

* The information reported to the District was found irrelevant to the District's equipment breakdown program and should not have been reported. ** These reports were found to be administrative issues (i.e., paperwork not cleared at the database, reports not turned in for closure.)

Investigation of Breakdowns

1. According to District Staff, the District attempts to investigate all breakdown requests within 24 hours of receipt unless they occur on weekends or are not a significant emergency breakdown.

2. About half of the breakdown investigations are conducted on-site.

3. Breakdowns that result from process upsets do not constitute a breakdown, and the District does not qualify process upsets as a breakdown.

4. The inspector fills out a Breakdown Investigation Report with all the information received at the District from the source. If an on-site investigation is conducted at the source, the inspector fills out and completes an Inspection / Investigation Summary report. The report is then reviewed by a District supervisor and signed.

5. When required, the District conducts a re-inspection to determine if the breakdown condition was corrected.

6. District staff indicated the breakdown source is required in their 10 days report to estimate the amount of excess emissions but not at the onset. However, they always ask if it is available.

7. The District has a procedure in place to identify frequent breakdowns from the same equipment.

8. District staff indicated they have several informal meetings with supervisors and inspectors with discussions on breakdown reports. The District does not incorporate excess emissions arising from breakdowns

into its emission inventory. However, District Staff indicated their Central Office Planning Group may be involved in incorporating excess emissions.

Recommendations

Significant Recommendations:

The District should quantify excess emissions arising from equipment breakdowns and incorporate them into their emission inventory.

Other Suggestions to Improve Program Effectiveness:

1. A review of District Rule 1100 requires sources to submit a written report within 10 days after the breakdown condition. CARB recommends this source report be submitted within 1 week or 7 days after the breakdown occurrence.

2. The District should amend its web-site to comply with District Rule 1100 by requiring breakdowns of CEM equipment to be reported by telephone or fax within one hour after detection instead of eight hours.

3. The District should consider updating their breakdown reports by including the date/time the breakdown was discovered by the source, the date/time the inspector investigated the breakdown, and whether the investigation was conducted on-site.

A-6. Continuous Emission Monitor Program

A comprehensive and efficient continuous emission monitor (CEM) program is an important tool for compliance verification and a significant component of a district's compliance program. CEM reports allow District staff to verify a source's compliance status on a continuous basis. The accuracy of CEMs is verified through relative accuracy test analysis (RATA) or source tests of CEM equipped units. To obtain these findings, ARB staff conducted interviews and reviewed CEM related documents such as permits to operate, quarterly CEM reports, CEM inspection reports, and CEM RATA tests.

Findings

1. The District has a modern system for retrieving emissions data from facilities equipped with continuous emission monitors (CEMs). The District's telemetry system was installed in 2001 and polls 70 CEM systems within the District. There are 14 facilities in the Northern Region, 20 facilities in the Central Region and 36 facilities in the Southern Region with CEMs. The District can generate a daily and monthly polling report showing the daily and hourly operating averages for each facility.

2. CEM requirements are placed on facilities in accordance with District rules. District Policy requires all CEMs to be on the polling system. Permit conditions require each facility to calibrate and maintain their CEMs and the inspectors enforce these permit condition requirements. The District inspects CEM systems during the annual inspection. Permit conditions specify the frequency of relative accuracy testing audits (RATAs) of CEMs. CEMs are tested at the prescribed frequency.

3. District policy calls for enforcement action to be taken against sources with excess emissions or those who fail source test protocols. Our review found documented examples where the District took enforcement action against those sources with excess emission reports, CEM downtime, or failed relative accuracy test audits/source tests.

4. Each CEM has an alarm system set at each pollutant's emission limit. The alarm system reads the telemetry system and notifies the District. The District investigates all excess emission reports (CEM Alarm Reports) over the phone, by facsimile or in the field. Most CEM Alarm Reports are associated with a breakdown report.

5. Facilities submit CEM Excess Emissions and Downtime Reports to the District on a quarterly basis and the District submits these reports to the U.S. EPA.

6. The District has a CEM Excess Emissions Reporting Form, but the Central and Northern Regions do not report CEM Excess Emissions to ARB within 5 working days as required by HSC section 42706.

Recommendations

Significant Recommendations:

1. The District should report CEM excess emissions from the Central and Northern Regions to ARB within five working days as required by HSC section 42706.

Other Suggestions to Improve Program Effectiveness:

None

A-7. Source Testing Program

An effective source testing program is necessary for a district's compliance program to function properly. Source testing of specific points in a process or its control devices is usually the only way to determine whether actual emissions are in compliance with a unit's allowed emission limits. Source testing is also used to verify the accuracy of continuous emission monitors. Source testing confirms that equipment can operate in a normal representative mode while complying with its permitted emission limits. ARB staff conducted interviews and sampled District files from the three regions to obtain these findings. In general, the District has a strong source testing program.

Findings

1. Permit Services determines what facilities are source tested and the frequency of testing is determined by permit conditions and the rules specific to the equipment being tested, e.g., internal combustion engines are tested every 24 months; boilers 12-36 months; and turbines every 12 months.

2. Each region has a dedicated staff person to track source tests, review protocols, and witness actual testing to the extent possible.

3. The Southern Region tracks source tests in three ring binders, on the Permit Administrative System (PAS) and with a Source Testing Data Base that gives this region the capability to know when the next source test is due. The Northern and Central Regions track source tests in three ring binders and on the PAS System but do not have the capability to know when the next test is due.

4. The District has a tracking system to ensure that source tests are performed at the frequency required by the facility permit.

5. The District takes appropriate enforcement action for failed source tests.

6. ARB Certified Contractors conduct source testing within the District. Facilities hire these contractors and notify the District 30 days before the test and provide a protocol 15 days prior to the test.

7. The District is developing their own source testing capabilities. The Southern Region has a source testing van and can test for CO, NOx and SO2. The van is equipped with two gas chromatographs (one for ambient sampling and one for grab sampling). The District does not have Method 5 equipment. The District wants to conduct parallel source testing with contractors and test problem units with the van. The Southern Region submitted their resumes and sample test reports to ARB for Source Testing Certification.

8. All three regions have portable gas analyzers for testing emissions from internal combustion units. These analyzers are used extensively in the Southern region and less often in the Central and Northern Regions for verifying compliance with permit limits. The Southern District issues NOVs for NOx exceedances greater than or equal to 125 percent of the emission limit and the Central and Northern Regions issue NOVs for emissions violations that are 150 percent of the emission limit.

9. The District leak tests perchloroethylene dry cleaning machines using their sense of smell and soap bubbles. The District needs to quantify these leaks with a hydrocarbon vapor analyzer.

Recommendations

Significant Recommendations:

None

Other Suggestions to Improve Program Effectiveness:

1. The Southern Region tracks source tests with a Source Testing Data Base that gives this region the capability to know when the next source test is due. We suggest that the Northern and Central Regions develop this capability also.

A-8. Asbestos Program

The District is responsible for enforcing the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Asbestos under the code of federal register 40 Part 61 Section 61.145(a), (b), and (c) and Section 61.150. The District has adopted the Asbestos NESHAP under their Rule 4002 National Emission Standards for Hazardous Air Pollutants and collects fees under Rule 3050 Asbestos Removal Fees. The District is also responsible for meeting the 105 Grant conditions by maintaining a system for tracking asbestos demolition and/or renovation notifications. Grant conditions require the District to submit notification data to U.S. EPA on a quarterly basis and to perform a minimum number of inspections to ensure compliance.

In each region, ARB staff reviewed notifications, inspection reports, notice of violations, and the system used to track and report notifications to U.S. EPA. Also, joint inspections were conducted and District staff was interviewed as part of the review process.

Findings

Training and Certification

1. All three regions have kept their asbestos certification and medical surveillance up to date.

2. All three regions have proper inspection gear.

3. U.S. EPA has a training class "Asbestos NESHAP Inspection and Safety Procedure Workshop." This class is fully funded by U.S. EPA. We recommend District asbestos inspectors attend the class to ensure they obtain updated information on asbestos issues.

Inspection Technique

ARB staff conducted three joint inspections with District staff, one in each region. The following comments are provided based on the joint inspections.

1. The Northern and Southern Regions conducted their inspections in accordance with the EPA Asbestos NESHAP inspector training course.

2. We identified several issues with the inspection protocols adopted by the Central region.

    - At one joint inspection where the site had a breach of containment and no one was present, the inspector failed to contact either the owner or the asbestos removal contractor to secure the site and to ensure that there were no emissions from inside containment to the outside air.

Also, some asbestos containing debris was found outside the containment. The inspector did not follow proper procedures to collect and document the sample.

- Inspection forms reviewed in the Central region do not document inspection activity and some inspection forms have no owner/operator name or basic information. A sample of a District inspection report from the Central region that is missing basic information is displayed on pages A-37 and A-38. Also, on pages A-39 and A-40 (for comparison) is an inspection report from the District's Southern region containing all the necessary information required to document inspection results.

- During the interview process, ARB staff was told that most of the inspections in the Central region are conducted either before or after the asbestos abatement. ARB and U.S. EPA recommends that asbestos inspections be conducted during regulated asbestos containing material removal operations.

As of March 01, 2005, the District has responded to the issues mentioned above by reassigning staff to the Asbestos program in the Central region. The new staff has been properly trained to ensure that the Central region inspects sources according to U.S. EPA's NESHAP protocol. Also, a joint training inspection was conducted with District, ARB, and U.S. EPA personnel to train District staff on proper inspection techniques.

Data Base Management (01/01/01 – 04/01/03)

The District reviews the asbestos notification forms to ensure completeness and accuracy. They also maintain a system that tracks all asbestos notifications. The District also submits quarterly notification related data to U.S. EPA on time. Table XIII provides a summary of the District's asbestos inspection and enforcement data for the respective study period.

Table XIII. Inspection Activity

	Northern Region	**Central Region**	**Southern Region**
Renovation/Demo-lition Notifications	687	1079	588
Inspections Conducted	576	1006	321
Sites Receiving Violations	38	Not provided by Region	24

The District settled 39 cases arising from Notices of Violations from 01/01/01 to 04/01/03. Asbestos cases may involve multiple Notices of Violations.

Consistency Among Regions

The District has a senior asbestos coordinator responsible for representing the District at meetings and workshops conducted by ARB and U.S. EPA to all delegated districts where statewide asbestos related issues are typically discussed twice a year. The senior asbestos coordinator also handles the Asbestos NESHAP enforcement in the Southern region (Bakersfield) only. Staff in the other two regions are responsible for enforcing the Asbestos NESHAP rule. The senior asbestos coordinator shares the asbestos issues and problems discussed during the asbestos NESHAP Workshop with the asbestos staff from the other regions. During the office interviews, we have determined that the senior asbestos coordinator has no direct control over the training and work procedures of other region staff. We recommend that for purposes of the asbestos program, staff from the other two regions should comply with the directions of the senior asbestos coordinator. This will improve work quality and bring uniformity to the District's asbestos program.

Enforcement Actions

Violations notices issued during inspections are settled for amounts comparable with other Districts.

Recommendations

Significant Recommendations:

1. The District should continue the improvement of the asbestos inspection protocols for the Central Region. Specifically, District inspectors should contact the owner or the asbestos removal contractor when there is a breach of containment, inspectors should follow proper sample collection and documentation procedures, and inspections should be conducted during regulated asbestos containing material removal operations.

2. The District's Asbestos Inspection forms in the Central region should be improved by documenting the inspection activity and including the owner/operator name.

Other Suggestions to Improve Program Effectiveness:

1. The asbestos coordinator for the Southern Region is also the senior asbestos coordinator responsible for representing the District at meetings and workshops for statewide asbestos related issues. Asbestos staff from the Northern and Central regions should follow the direction of the senior asbestos coordinator to improve the quality of work and bring uniformity to the District's asbestos program.

SAN JO[illegible]N VALLEY UNIFIED AIR POLLUTION [illegible]ROL DISTRICT
Asbes[illegible]s Demolition/Renovation/ Inspection [illegible]rm [10.11.00]

Site Name	Contact	Date 2-18-03
Address	City	Time
Owner	Address	City
Contractor	Contact	Phone
Address	City	Notice No.

Type of Inspection: Routine Complaint Surveillance Burned Bldg Training Burn

Suit up?: Yes No | PAPR SCBA Supplied Air Protective Suit | Inspector's Name:

INTERIOR INSPECTION

Material List Type	In Survey Y/N	Total Amount	Amount Disturbed	Asbestos Contain'g %	Thorough Removed Y/N	Friable Y/N	APCD Sample Y/N	Comments/Condition/Location
TSI								Re inspection = OK
Acoustic Plaster		20 SQ FT		1%	3/6/03	Y		RACM Removed
Wall Texture								
Acoustic Tile								
HVAC								
Flooring								

EXTERIOR INSPECTION

Material List Type	In Survey Y/N	Total Amount	Amount Disturbed	Asbestos Contain'g %	Thorough Removed Y/N	Friable Y/N	APCD Sample Y/N	Comments/Condition/Location
Roofing								
Paint								
Stucco								
Transite								
Window Putty								

3/18/03

WASTE DISPOSAL

	YES	NO	COMMENTS
k-tight wrap/container			
eled "asbestos"			
nerator name, location			3/03/03 - ok
ste adequately wet?			3/4/03 - ok
nsport vehicle marked?			
aste shipment records onsite?			

on site =

Additional Comments

3-3-03 AM - on site - set up
AM - removal in progress
3-4-03 AM - " -
3-4-03 PM Removal complete - clean up to pickup

n Compliance? Y / N

Sketch

SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT

Asbestos Demolition/Renovation/ Inspection Form [11-20-01]

Site Name Student Center	Contact Maria Baker	Date 4/28/03
Address 435 College	City Modesto	Time 09:50
Owner YCCD	Address 435 College	City Modesto
Contractor Janus Corporation	Contact Mel Keuch	Phone (925) 969-9200
Address 1081 Shary Circle	City Concord	Notice No. 2003-095

Type of Inspection: (Routine) Complaint Surveillance Burned Bldg Training Burn

Suit up?: (Yes) No | PAPR SCBA Supplied Air Protective Suit | Inspector's Name: Leat Sexton

INTERIOR INSPECTION

Material List Type	In Survey Y/N	Total Amount	Amount Disturbed	Asbestos Containing %	Thorough Removed Y/N	Friable Y/N	APCD Sample Y/N	Comments/Condition/Location
Acoustic Plaster	N/A	3,168 ft	~ 1/2	?	in process	yes	no	I was accompanied by Ron
Wall Texture								Giannone, Brian Dedds &
Acoustic Tile								from CARB - Ahmad Najjar;
HVAC								Nestor Castillo. All individuals
Flooring								suited up and went into
								containment with all PPE

EXTERIOR INSPECTION

Material List Type	In Survey Y/N	Total Amount	Amount Disturbed	Asbestos Containing %	Thorough Removed Y/N	Friable Y/N	APCD Sample Y/N	Comments/Condition/Location
Roofing								
Paint								
Stucco								
Transite								
Window Putty								

WASTE DISPOSAL

	YES	NO	COMMENTS
Leak-tight wrap/container			no waste out of containment yet, all
Labeled "asbestos"			waste is adequately wet
Generator name, location	✓		will correct address
Waste adequately wet?	✓		
~~Transport vehicle marked?~~			
Waste shipment records onsite?	✓		manifest # 22019325 (will correct address)

Additional Comments

of workers: 10 plus supervisor

PPE: PAPR & tyvek

AHERA supervisor on-site: Raul Luevano

Certification #: CAK - 18253 Expiration Date: 1/18/04

Containment: good

Negative air machines: size: 2,000 cfm total #: 1 (3 more set-up) manometer: -0.027

Decontamination: 3 stage decon

Notification: ✓

Visible emissions: no

Water application: water hose and airless

power and water from the site

In Compliance?: (Y) / N

Sketch

Inspector: [signature] Title: A.Q.I.

A-9. Air Facility System Program

U.S. EPA Title V compliance and permit database for Stationary Sources is called the Air Facility System (AFS). AFS used to be called the Aerometric Information Retrieval System or by the acronym AIRS. This name change was officially announced at the 2003 AFS workshop held in Chicago, Illinois from July 8, 2003 through July 11, 2003. The requirements for AFS are governed by the Continuous Monitoring Strategy (CMS) policy. This policy requires the District to submit a CMS plan which states that the District will comply with the CMS policy and will submit the appropriate data on mega, major, and synthetic minor facilities to AFS. The data will include reporting of components of a Full Compliance Evaluation (FCE) quarterly and High Priority Violations (HPV) monthly. A FCE is comprised of site inspection(s), source test(s), and an annual Title V certification review. Each of these components must be entered into AFS before an FCE code can be entered. A HPV is a District's notice of violation (NOV), which meets the standards of a HPV. The standards are spelled out in Table A-5 of the USEPA's workbook titled "The timely and Appropriate (T&A) Enforcement Response to High Priority Violations (HPVs)" date June 23, 1999.

Findings

<u>Full Compliance Evaluations</u>

1. The District is substantially behind schedule in entering the FCE data into AFS. Approximately 25 percent of the codes have been entered into the AFS database. As of July 1, 2003 almost 90 percent of the FCE's should have been entered into AFS. The deadline for the District to complete a FCE for all major and synthetic minor sources is September 30, 2003.

2. Annual Title V certifications and source tests for pertinent AFS sources are not being updated into the AFS database. The District has received funding from U.S. EPA to upgrade their tracking database to resolve this problem. The problem still exists.

3. The District upgraded tracking database, funded by U.S. EPA, is scheduled for rollout in April 2005.

4. The District CMS target list does not match the list of sources in the AFS database. Both lists have overlap but each list has its own unique sources. The District and U.S. EPA were working to resolve this problem prior to the program review.

5. The source names, addresses and contacts of the sources in AFS do not match the source names, addresses and contacts contained in the District's NOV database.

High Priority Violations

1. Approximately 10 percent of the sources with a NOV in the District's NOV database are not properly identified as an AFS source.

2. NOV numbers are sequential but some numbers are missing. The reason for the missing or unused numbers is not in the District's NOV database.

3. The District is not putting all the HPVs into the AFS Database. The District issued 360 NOVs in calendar year 2002 to sources listed as AFS sources but less than 5 percent of the NOVs are making it into AFS database as HPVs. The District is divided into three regions: Northern, Central, and Southern. The regions had 45, 50 and 265 NOVs and only 0, 16, and 2 HPVs, respectively.

Quality Assurance

1. District AFS staff are not running Quality Assurance Reports to confirm data entry of FCE data and HPV data are making into AFS.

2. District AFS staff is not generating monthly HPV reports and quarterly FCE reports for management review.

Training

1. District AFS staff is not routinely attending the annual AFS workshops as required by 105 Grant conditions.

Resources

1. Only one staff person is working with the AFS Database. Time reports from the District show only one-third of staff's time spent on the FCE and HPV related items.

Recommendations

Significant Recommendations:

1. The District should enter the Full Compliance Evaluation (FCE) data into the Air Facility System (AFS) database.

2. The District should make sure the Continuous Monitoring Strategy (CMS) target list matches the list of sources in the AFS database. Both lists have overlap but each list has its own unique sources. The source names, addresses and contacts of the sources in AFS should also match the source names, addresses and contacts contained in the District's NOV

database. The District and U.S. EPA were working to resolve this problem prior to the program review.

3. The District's AFS sources in the NOV database should be properly identified as AFS sources.

4. The District should put all the HPVs into the AFS Database.

5. District AFS staff should run Quality Assurance Reports to confirm that data entry of Full Compliance Evaluation (FCE) data and HPV data are making it into AFS. Monthly HPV reports and quarterly FCE reports should be generated for management review.

6. The District AFS staff should routinely attend the annual AFS workshops as required by 105 Grant conditions. The District Management of AFS staff should periodically attend the annual AFS Workshops.

Other Suggestions to Improve Program Effectiveness:

None

A-10. Variance Program

The District's variance program was evaluated in order to determine its consistency with HSC requirements. To accomplish this task, ARB staff reviewed District files, interviewed District staff, and listened to audio tapes of variance hearings. This is the only District in the state that has three hearing boards, one per zone. During the study period of January 1, 2001 through January 1, 2003, there were a combined total of 184 variances granted by all three zones; 25 in the Northern Zone, 42 in the Central Zone and 117 in the Southern Zone. ARB staff reviewed and evaluated a total of 30 variance files (4 in the Northern Zone, 8 in the Central Zone and 18 in Southern Zone). Numerous audio tape recordings were evaluated in each zone.

Findings

1. Abatement orders that act as a variance do not always contain all the required findings for such an order (see HSC section 42452).

2. Our review found that the northern and southern zone hearing boards continue to ignore ARB's recommended procedure that hearing boards make the findings required by HSC section 42352 at the hearing. Instead, these two zones make the statement that the findings have been made in the staff report, or other similar statements, at the hearing. It is ARB's long standing direction to hearing boards that a review of the staff report and other information, which may include a discussion and exchange of information between the petitioner and the board members, is required, if only to determine that the facts, emissions, circumstances, and conclusions provided are accurate. It is essential that hearing procedures do not give the impression, or allow for, a variance to be considered in a pro forma or cursory manner by the very panel that is charged with an independent and impartial review of the matter. Also, abatement orders that act as a variance do not always contain all the required findings for such an order (see HSC section 42452).

3. The District has developed a user friendly petition form that is provided to persons who want to request a variance. The District's petition form is well drafted and contains useful fields to help the petitioner submit a complete variance package. These fields include elements such as: what actions the petitioner has taken since first discovering they are not in compliance, a requirement to show all calculations and to provide emissions factors used in estimating excess emissions, and a requirement to attach a health risk assessment and receptor modeling data if there are excessive hazardous or toxic emissions.

4. The District is consistently recommending (and the boards' imposing) enforceable interim emission limits and other requirements to limit and mitigate excess emissions from sources on variance.

5. The District staff consistently verifies that increments of progress and final compliance dates are met.

6. The District's written variance orders contain standard language which serves as a caution to sources that U.S. EPA does not recognize variances, which is important for a source to realize.

Recommendations

Significant Recommendations:

1. The Northern and Southern Zone Hearing Boards should conform to proper procedure when making the six specific required findings of HSC section 42352. These findings must be made at the hearing and addressed on the record. It is essential that hearing procedures do not give the impression, or allow for, a variance to be considered in a pro forma or cursory manner by the very panel that is charged with an independent and impartial review of the matter.

Other Suggestions to Improve Program Effectiveness:

None

A-11. Training and Safety Program

The District has established a formal training program for new and existing field staff. The purpose is to enable all of the field staff to adequately conduct inspections and discharge their job responsibilities.

Findings

1. Each new inspector will go through a one-year in-house training program, which is conducted by senior/supervisory inspection staff in each of the three regional offices, Modesto, Fresno and Bakersfield. New inspectors will shadow their training inspectors in the field to observe various inspection techniques until the new inspectors are comfortable to conduct their own inspections. Thereafter, new inspectors will attend post inspection follow up meetings with their training staff for clarification, questions and answers.

2. New inspectors are trained in specific areas of air pollution sources and processes. As their initial training and as expertise increases and expands, they will be trained in other areas of air pollution sources and processes based on progress and performance.

3. All new inspectors will attend the Uniform Air Quality Training Program (UAQTP) offered by ARB staff as soon as possible after hired by the District. The UAQTP is a weeklong series of 15 courses providing an introduction to air pollution control and enforcement techniques. Both the new and existing field staff will attend the annual Cross-Media Enforcement Symposium sponsored by the California Environmental Protection Agency as long as it is feasible in terms of time and finance.

4. The District maintains an electronic centralized “Training File” system in order to track all the District field staff training participation. Moreover, the District maintains its own continuing education program for its field staff by conducting regular meetings to focus on various important issues or tropics related to air pollution control.

5. The District institutes source specific training focusing on technical issues associated with each rule category. Field staff will attend in-house training when new District rules are adopted or when new amendments are made to existing District rules in order for all field inspectors to become familiar with the technical issues and compliance requirements of the new rules and amendments to the existing District rules.

6. The District ensures that the field staff attends the ARB’s Fundamental of Enforcement (FOE), a three-day course, which presents a basic overview of air pollution related topics and is a prerequisite to certifying as a visible

emission evaluator. The District maintains a centralized “Training File” system in order to track District staff’s completion of the FOE course; however, the same system does not track whether each District inspector’s certificate for visible emission evaluation is current. In addition, the District does not have any inspector who is currently certified for visible emission evaluation at nighttime.

7. The District provides training to its inspectors in CPR and First Aid every two years and driving training annually.

8. The District assigns one staff member to coordinate their hearing board members and hearing board clerks. The staff member involved in the variance process attends ARB’s Hearing Board Workshop.

9. The District has a general safety program that ensures the field staff attend ARB’s Inspector Safety Course at least once. In addition, the District conducts safety committee meetings on a quarterly basis.

10. The District provides the following safety equipment to field staff in order to minimize the possibility of a field staff being injured while performing an inspection.

    a. Hard Hat
    b. Respirator (if required)
    c. Hearing protection
    d. Safety Shoes
    e. Goggles/Safety Glasses
    f. Gloves, and
    g. Special Protection:
       -Nomex coveralls for refinery inspections, and
       -Coveralls for asbestos inspections

11. The District has a medical monitoring program that requires pre-employment and annual physical examinations to ensure that field staff are able to wear respirators when needed to carry our their job duties.

12. The District has a formal training program that must be completed by field staff before conducting National Emission Standards for Hazardous Air Pollutants (NESHAPS) inspections. Such training includes information on NESHAPS regulation, asbestos technical background issues and safety. The District inspectors are required to attend a three-day asbestos training course.

13. The District inspectors who perform NESHAP inspections have specialized training on the use of personal protective equipment and basic field safety prior to any field activity. The training includes information on

the selection of respiratory protection, suit up and decontamination procedures, and respiratory maintenance.

14. In conclusion, the District appears to meet the criteria of an adequate training and safety program for a district.

Recommendations

Significant Recommendations:

None

Other Suggestions to Improve Program Effectiveness:

None

A-12. Open/Agricultural Burning Program

Open burning can be a significant source of criteria pollutant emissions, whether from legally sanctioned open burning, agricultural burning, or wildland burning for fire prevention and forest management.

The District's open/agricultural burning program was evaluated for consistency with the requirements of the HSC, the Smoke Management Guidelines in Title 17 of the California Code of Regulations (CCR), and the ARB program evaluation criteria document. Documents reviewed for this evaluation included written policies, public information handouts, burn permits, various forms and correspondence.

Findings

General Comments

1. The District has a comprehensive Open Burning Policy document, developed in 1994 and revised in 2002, to provide guidance in applying Rule 4103, Open Burning. It outlines extensive information on burn permit requirements, burn authorizations, complaint and compliance inspection procedures, and includes a 21-page appendix which lists 51 situations and/or materials which may be regulated by the rule.

2. The District now has its own Meteorology section, which determines the daily burn decisions (in consultation with ARB meteorologists), operates the prescribed burn forecast system for the District, and conducts daily conference calls with weather forecasters and burners. The District Meteorology section also allocates burn acres daily for the 93 burn allocation zones in the District.

3. A District daily burn authorization program has been created and is centralized at the Fresno office. Burn operators take calls from all over the District, and enter the burn authorizations into the computer. The burn acres in the 93 allocation zones are authorized on a first-come, first-served basis. The daily burn report is faxed to the fire agencies every hour.

4. The District has a number of public info handouts: vineyard fact sheet, vegetable crop handout, vine, orchard removal burns, grape stake burn restrictions, the ban on yard burning brochure, a day-glow tag warning about burning illegal materials, and a hazard reduction burning pamphlet.

5. The District encourages orchard growers to chip the prunings, particularly in the case of removal of an entire orchard. There is a list kept of facilities that accept green waste, or have use for biomass.

Rule Effectiveness

1. The District open burn rules 4103, Open Burning, and 4106, Prescribed Burning and Hazard Reduction Burning, last revised in June 2001, mingle the nonagricultural and agricultural burning categories in the HSC. Definitions are included in both rules.

2. Rule 4103 lists activities that are exempt from no-burn day restrictions, including empty pesticide sacks, agricultural burning, raisin trays, and contraband materials.

Permitting/Emissions Tracking

1. The District has an extensive computerized system in place for issuing open and agricultural burning permits, authorizing individual burns, and keeping track of daily emissions.

2. The vast majority of growers in the District apply for their agricultural burn permits by phone. The permit is valid for one year and a renewal form is mailed out a month before expiration.

3. The District mails an agricultural burn permit form to the growers after he/she submits the permit application form or information, listing all of the burn locations, the crops and the acreage to be burned. The burn permit is a legal-sized two-sided form with the grower's name, address, and burn locations and information printed on the form. The remainder of the form lists the permit conditions, which are informative, extensive and contain the information required by state law.

4. The District encloses a two-page information form, plus two handouts on fire safety with the burn permit. The grower is directed to cut off and return the bottom of the form to the District, with the required permit fees. The District then returns the wallet-sized permit receipt, printed with a local and an 800 District phone number, and instructions to call prior to burning.

5. In calendar year 2002, 234 such permits were issued. The District is large, encompassing eight counties in the San Joaquin Valley. The valley's economy is based on agriculture, and traditionally agricultural waste, particularly orchard prunings, must be burned in the fall and winter when the air quality is poor. No-burn days may be declared for weeks at a time. Only two hundred acres may be burned on a no-burn day per county, and this limit is rarely approached.

   The reason given for "imminent and substantial economic loss" on the majority of the permits issued is to clear the almond orchard rows of

prunings in order for spray rigs, which apply fertilizer and pesticides, to move about freely. Spraying operations are scheduled far in advance, as the operators travel a circuit and must service all the orchards in the dormant season. A few open spaces are available in the orchard for pile burning, and the prunings are bucked to those few spaces row by row and burned.

The District office in Fresno issues all of the permits. The new permit is called the "Application to Exceed Daily Burn Emission Allocation," as there are no longer many no-burn days. Since the District instituted the Burn Allocation Program, some burning may be conducted in selected allocation zones on almost any day. The new permit also requires that there be no expected downwind impact or air quality exceedance, that the reason "imminent and substantial loss" threatens, and that some number of "insufficient emission allocation" days occurred prior to burning. A fee of $30 is required for this permit.

The grower calls the District to request to burn without an allocation, and District staff fills in the application form with the grower's answers. The grower is then given a confirmation number, which is necessary to conduct any open burning in the District on a given day. The District mails out the completed application form and an invoice for the $30 fee, and the grower has 15 days to sign the application and return it to the District with the fee money.

6. The District requires that persons and agencies conducting prescribed burning submit a smoke management plan to the District. The conditions and information required are consistent with title 17. The District-approved smoke management plan serves as the burn permit. As with the ARB, the Meteorology section provides burn day forecasts for large burns, and District staff works closely with the land managers executing these burns.

7. District staff meets with the land management agencies conducting prescribed burning on a quarterly basis. They are working on a new memorandum of understanding (MOU), as the old one has lapsed. The issue of wildland use fires, naturally ignited fires which may be allowed to burn over long periods, but which can produce increasing amounts of pollutants in times and in areas with worsening air quality, is the topic of major interest now.

8. The District has developed a permit form for pile burning, to be used for both hazard reduction burning, the vegetation cleared from 100 feet around structures, and prescribed burning, the burning of vegetation cleared from property beyond the 100 foot structure clearance. The District has made the permit conditions as strict as those for agricultural

burning, and has limited the ignition hours to between ten am and two pm. The permit is not valid during the summer burn ban season. Permit conditions warn that the burner will be held liable for suppression costs, and/or will be issued a Notice of Violation if the burn creates a smoke nuisance.

9. The District assesses fees for agricultural burning and prescribed burning. Agricultural burn permit fees are assessed by the number of burn locations listed on the permit: one is $22; two is $38; and three or more is $62.

10. Prescribed burn fees, based on acres, are calculated in one of two ways: for broadcast burning, the acreage burned is the number of blackened acres, and for pile burning, the acreage burned is the number of acres of a project treated by assembling burn piles. Broadcast burning is $5 per acre and pile burning is $3 per acre. By February 1, each agency or person using prescribed burning must report to the District the number of acres burned in the previous calendar year. By May 1, the District reports the fee owed, and by June 30, the burners are to pay the assessed fee.

Senate Bill 705 Designed to Ban Open Burning Beginning June 2005

1. To help the District meet the ambient air quality standards for ozone and particulate matter, the State Senate adopted SB 705. As of June 1, 2005, the burning of field crop wastes, most prunings, and weeds will be prohibited. At that time the District shall also adopt rules to regulate burning diseased crops, and rules establishing best management practices for weed control and maintenance.

2. A second action date is June 1, 2007, when orchard removal burning will be eliminated. A third date is June 1, 2010, when the burning of vineyard materials, vineyard removals, and “surface harvested” prunings (almond, walnut, pecan and grape prunings) will be eliminated.

Recommendations

Significant Recommendations:

None

Other Suggestions to Improve Program Effectiveness:

None

Appendix B – Permitting Program

San Joaquin Valley Air Pollution Control District
Program Review

Appendix B
Permitting Program
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B. PERMITTING PROGRAM EVALUATION

The districts adopt permitting regulations to govern the construction of new sources and modifications to existing sources that emit air contaminants within their jurisdiction. Sections 40702 and 42300 of the California Health and Safety Code (HSC) allow districts to adopt rules and regulations and establish such permitting programs. Additionally, these programs must ensure the attainment or maintenance of applicable ambient air quality standards, and according to section 42301 of the HSC, be at least as stringent as federal regulations (40 Code of Federal Regulations §51.160). In response to these requirements, the San Joaquin Valley Air Pollution Control District (District) has adopted rules within its "Regulation II – Permits."

The goal of the District's stationary-source regulatory program is to review new and modified sources of air pollution and provide mechanisms by which permits may be granted, without interfering with the maintenance of ambient air quality standards. The permitting process must also ensure that no project will be permitted unless the Air Pollution Control Officer (APCO) is satisfied that the project will be in compliance with all applicable rules and regulations.

At the time of the program review, the District employed about 70 permitting services staff including managers, supervisors, engineers, and specialists. Each of the three regions in the District has a permitting office administrated by a permit services manager. The District headquarters in the Central Region also has a technical services office. The three regional managers and the technical services manager report to the Director of Permit Services. The approximate number of permit engineers in each region included 9 in the Northern Region, 12 in the Central Region, 17 in the Southern Region, and 13 in Technical Services. The Northern Region, Central Region and Technical Services have a supervising engineer that supervises the permit engineers in each respective office. Supervision is divided among two supervising engineers in the Southern Region.

The District has about 7,000 permitted sources consisting of 21,000 separate permit units in its jurisdiction. Each year the District processes about 3,000 to 4,000 permit applications. The District has about 220 Title V facilities.

The primary objective of this review was to determine whether the District has been issuing permits in accordance with their regulations and with State law, but more importantly, to assist the District in identifying specific areas of improvement. In addition, the ARB staff reviewed the permits for the biomass facilities to determine the prevalence and limitations of using urban wood waste as fuel.

The methodology the ARB staff used consisted of a review of the District's permit files, a review of guidelines and policy documents, and interviews with District staff and management. The review of permit files focused on the quality of the engineering evaluations and the resulting operating permits issued to the facilities. Interviews covered areas such as general administration, permit processing, filing, and application intake, computer support, staff resources, and emission calculation procedures.

The ARB staff reviewed approximately 700 of 2,782 project applications for new units and modifications to existing units issued by the District, with a focus on the 2000 to early-2003 timeframe. A conscious effort was made to cover a broad spectrum of the District's permitting actions by reviewing files for different source types and sizes. In addition, the ARB staff reviewed the permits for the biomass facilities to determine the prevalence and limitations of using urban wood waste as fuel.

The ARB staff evaluated the District's permitting program with special emphasis on the following topics:

1) The adequacy and effectiveness of the District's permit administration, rules, permitting policies, permit conditions and engineering evaluations;
2) The determination of best available control technology (BACT);
3) Whether the District's rules and practices allow the use of best available retrofit control technology (BARCT) emission reductions to offset emission increases;
4) The consistency of District permitting actions; and
5) The prevalence of urban wood waste as fuel at biomass facilities, the District limitations of such use, and the enforceability of the associated District permits.

The ARB staff's Findings and Recommendations are included in chapters B-1 through B-7.

B-1. Permit Administration - General

Findings

Staff

1. The District has a pool of well-qualified and trained professionals for permit processing.

Half of the District's permitting workload is generated by projects in the Southern Region. The Northern Region and Southern Region mainly handle their own respective permitting workloads. At any given time, older applications or excess permitting workload may be shifted to regions with less workload. The Central Region handles all the Title V permitting, modeling, and toxics [Health Risk Assessments (HRAs)].

2. Management in the Central Region felt that the permitting staff level was adequate; however, management in the Northern Region and Southern Region indicated that they could use more permitting staff.

There were six vacant permitting positions in the Central Region, but no shortage of qualified applicants. Job offers for some of the positions were pending as of the time of the office portion of the review.

3. Compliance in the Central Region has a staff engineer that acts as a permit services advisor to help facilitate communication between compliance and permitting and to recommend updates to permitting policies.

4. According to District management, permitting staff conduct joint inspections with District inspectors for start-up inspections; however, ARB staff found that inspectors felt engineers did not get into the field often enough to facilitate the writing of enforceable permit conditions for their sources.

5. Northern Region management indicated that there has been an increase in the amount of workload due to more detailed review required for applications, but the amount of staff has not increased. The increase in the number of facilities triggering Title V has contributed to this.

Backlog and Streamlining Efforts

1. A major challenge facing the District is its backlog in spite of many permit streamlining efforts. The District has a significantly higher backlog level than the 250 backlogged permits it had as of the previous review in 1994. As of the 2003 office review, the backlog was 190-Northern Region, 158-Central Region, 539-Sourthern Region, and 887-total.

2. It is very likely that the District's workload will increase due to the possibility of regulating agricultural sources in the future. Because of the increased workload, the District's backlog could increase. According to some of the District's major sources, it takes six to seven months to get a permit for new or modified equipment.

3. The Certified Air Permitting Professionals (CAPP) program was originally created as an expedited permit program, but sources regulated by the District have indicated that the CAPP is not reducing their costs or improving the efficiency of permit issuance.

4. The District is making an effort to reduce the backlog. The District is giving first priority to backlogged projects. The District has a program titled Guidelines for Expedited Application Review (GEARs) that has staff (non-engineers) handling applications for projects such as gasoline dispensing facilities and abrasive blasting that are simple and can be boiler plated). This allows engineers to handle the most complex applications (i.e. those involving New Source Review).

5. The District has an expedited permit process. It is available upon request by the applicant if they meet the District's criteria (i.e. the source says it will lose money if their application is delayed). Overtime is given to engineers to do these projects and the applicants pay for the overtime.

6. The District has a Preliminary Review Worksheet to help facilitate the acquisition of information necessary to deem applications complete. Engineers use the worksheet as a checklist and flowchart to evaluate whether an application is complete.

Quality Control

1. Applications receive two levels of review:
   - The supervising engineer; and
   - The region manager.
   Public notice projects are also reviewed by the Permitting Division Chief.

2. Besides permitting, the Compliance Division in the Central Region reviews Authorities to Construct (ATC) Permits for enforceability.

Database and File System

1. The District has an abundance of forms, policies, and templates for permit processing on their computer database. The District also provided ARB staff with hard copies of compliance and permitting policies and procedures.

2. The District has an Intranet for permit processing that provides permit engineers with many of the necessary resources. With the system, engineers can access District policies, engineering evaluations, calculation procedures, forms, and templates. Evaluations from all the regions are organized and can be accessed in directory folders of different source categories in Microsoft Word.

3. The District provided ARB staff with listings of ATCs issued from the year 2000 to early-2003 on CDROM.

These listings were Excel spreadsheets and separate listings of new equipment and modifications were provided. The District was able to generate the listings from their database and, at ARB's request, narrowed the projects in the listing to those that did not involve gasoline dispensing facilities, charbroilers, and emergency engines. ARB staff reviewed about 700 project files for new and modified equipment.

4. The District's files were well organized and ARB staff had access to all the files. The files were organized by facility identification number. Within each facility file, the District had files for correspondence, breakdowns, inspection reports, and engineering evaluations. Each project for new equipment or modifications is tracked by a seven-digit project number. Each region of the District has its own filing system.

5. The District is developing an electronic filing system. As documents are converted from hard copy to an electronic filing system, the District should make sure all engineering evaluations are complete, stand-alone documents. The ARB staff found that many of the electronic files were missing necessary supporting appendices and the ARB staff could not locate these appendix files in the common network drive.

6. The District should ensure that all permitting staff place final electronic engineering evaluation documents in the District's common network drive for shared access. The ARB staff could not locate the relevant files in several cases.

Accomplishments

1. The District maintains high-quality information technology resources that include a comprehensive permit database, computer network, and Internet web site containing files related to all permitting actions. The District is in the process of converting all of its paper files to electronic documents.

Recommendations

Significant Recommendations:

1. The District should develop and carry out a plan to reduce its permit backlog. The District may need to add additional staff to support this effort.

Other Suggestions to Improve Program Effectiveness:

1. As documents are converted from hard copy to an electronic filing system, the District should make sure all engineering evaluations are complete, stand-alone documents. The ARB staff found that many of the electronic engineering evaluations were missing supporting appendices.

B-2. District New Source Review (NSR) Rule

Findings

Routine Replacement and Transfer of Location

1. District Rule 2201 exempts a "routine replacement" from Best Available Control Technology (BACT). The District's application of the routine replacement clause may allow a new emission unit to be installed at a stationary source without requiring BACT. The following examples illustrate this point.

Example
The ARB staff found an inconsistency in the treatment of replacements of emission units under the District's New Source Review rule. In one case, the replacement was considered a new emission unit subject to BACT. In another case, the replacement was considered a routine replacement and not subject to BACT. Specifically, Fresno Cogeneration Partners (Applications C-14-1-8, '-1-9, '-2-3, '-3-11, '-3-12, '-7-8, '-10-1, and '-10-2; Project #1030115) proposed to replace a Pratt & Whitney FT-4 gas turbine with either a Pratt & Whitney FT-8 gas turbine or a General Electric LM-2500+ gas turbine. The District's engineering evaluation stated that the replacement gas turbine was considered a new unit and subject to BACT. Conversely, Turlock Irrigation District (Application N-3299-2-3, Project #1030015) proposed the replacement of a General Electric LM-5000 gas turbine with a GE LM-6000 gas turbine. However, the engineering evaluation stated that the action was considered a routine replacement of an existing emission unit. The District then showed that the new turbine met the criteria outlined in Rule 2201 - New and Modified Stationary Source Review (Amended December 19, 2002) section 3.33 for routine replacements. Routine replacements are exempt from BACT per section 4.2.6.

ARB staff believes installation of a new turbine is considered a new emission unit, regardless of whether an existing turbine will be removed from service concurrently. Staff believes routine replacement considerations should be reserved for routine maintenance and repair of broken or worn components, not to the change out of an entire stand-alone emission unit. ARB staff estimates that if BACT was required for the Turlock turbine, an additional 6.39 tons per year of oxides of nitrogen (NOx) reductions could potentially have been gained based on a 2--parts per million, dry volume basis (ppmvd) at 15 percent (%) oxygen gas emission limit.

Example
In the application for Permit N-2429-16-0 (Project #1021553), Nuevo Energy Company requested an Authority to Construct (ATC) permit to install one 370 brake horsepower (bhp) reciprocating internal combustion engine (IC engine) as a "routine replacement" for three existing IC engines (Permits N-2429-1-4, '-4-4, and '-7-4). In the engineering evaluation, the District aggregated the three individually permitted and independently operated emission units to show that there was no increase in capacity or emissions.

Per District Rule 2201 - New and Modified Stationary Source Review (Amended December 19, 2002), a routine replacement is exempt from BACT and is not considered a modification when the action consists of a "replacement of a whole or partial emissions unit where the replacement part is the same as the original emissions unit in all respects except for the serial number." Further, section 3.33 of the rule defines a routine replacement "in whole or in part of any article, machine, equipment, or other contrivance with a valid District Permit to Operate…." ARB staff believes that the three existing IC engines each represent separate emission units. Staff also believes that the rule language does not support the aggregation of several emission units such that BACT and offsets are not required. If BACT was triggered, ARB staff estimates that additional NOx reductions of 1,206 pounds per year could have been achieved based on a 9-ppmvd at 15% O_2 BACT requirement.

Example

In the engineering evaluation for Project #1010776 for End of Trail Cabinet Co. (Applications N-4076-2-1 and '-3-1), high volume low pressure (HVLP) spray guns were listed as having a 75 percent transfer efficiency; generally, 65 percent transfer efficiency is used by most permitting agencies. The reference for the transfer efficiency is another District permit, not an independent or verifiable source. Additionally, the entire facility was undergoing a transfer of location. The evaluation cited District Rule 2201 - New and Modified Stationary Source Review (Amended June 15, 1995) section 4.1.1 as exempting the source from BACT because the calculated increase in permitted emissions (IPE) was less than 2 pounds per day. The IPE for the modification of an emission unit was calculated in accordance with section 6.3.1 of the rule by taking the difference in emissions before and after the modification. Because the applicant did not propose to change the type of control equipment or emission rates at the new site, the emissions before and after were deemed equivalent, and the net emissions change was determined to be zero. Therefore, BACT was not triggered.

ARB staff believes the calculation for IPE was performed incorrectly for a transfer of location. Staff believes the calculations should have been completed with respect to the new site only. Because there was no existing equipment at the new location, the emissions before the modification would be zero. Then, using values from the District's engineering evaluation, the IPE for VOC emissions would be in excess of 2 pounds per day and a BACT analysis would have been triggered. ARB staff understands that the June 2001 amendments to District Rule 2201 now require BACT for the relocation of an emission unit with emissions greater than 2 pounds per day.

BACT Exemption When Meeting Prohibitory Rule Requirement

2. District Rule 2201 exempts an emission unit from BACT at an existing facility if the installation or modification of an emission control technique is performed solely for the purpose of compliance with a District rule, subject to several emission-limiting conditions. Two examples of this follow.

Example

AG Formulators (Application C-1576-6-0, Project #990098) proposed to remove a boiler from service because the unit could not meet the emission standards required by District Rule 4305 - Boilers, Steam Generators, and Process Heaters. The boiler was originally permitted and rated at 11 million British Thermal Units per hour (MMBtu/hr). The replacement unit was rated at 12.55 MMBtu/hr. As part of the new application, the District recalculated the capacity of the old boiler to be 14.6 MMBtu/hr. The engineering evaluation did not include any statements explaining how the heat input was originally determined or why it was readjusted. The new unit was then erroneously exempted from BACT based on it being installed to comply with Rule 4305. The facility was not required to install the new boiler to comply with the rule. Rather, the existing boiler could have been shut down to meet the rule. As such, the installation of the new boiler was initiated due to the steam needs of the facility and not for sole compliance with Rule 4305. NOx emissions reductions of 1,030 pounds per year could be gained from a 12-ppmvd at 3% O_2 BACT requirement versus the 20-ppmvd level proposed by the applicant.

Example

The engineering evaluation for Oilseeds International Ltd. (Application C-903-2-0, Project #980836) stated: "The applicant proposes to replace an existing 8.36 MMBtu/hr Cleaver Brooks boiler equipped with a gas burner, with a new 8.36 MMBtu/hr Superior Mohawk boiler equipped with a low NOx burner and [flue gas recirculation (FGR)], in order to comply with Rule 4305 - Boilers, Steam Generators, and Process Heaters. The boiler is replaced with a new one because the tubes are pulling away from the bulkhead and the header has stress cracks from aging. No increase in emissions will result from this project…Note: The applicant proposed to retrofit the existing boiler with low NOx and FGR in project #970446. But since retrofitting the existing boiler is not possible because of the physical conditions of the boiler, the applicant proposed to replace the boiler. This ATC #C-903-2-0, supercedes ATC #C-903-1-1." ARB staff calculated the NOx emissions difference between the proposed limit (30 ppmvd at 3% O_2) versus the BACT limit (12 ppmvd at 3% O_2) at 1,787 pounds per year.

The ARB staff's concern was that the District could apply this exemption inappropriately and too broadly—resulting in the replacement of an entire emission unit without requiring BACT, even though the replacement is needed because the equipment is at the end of its useful life. It is ARB staff's understanding that District Rule 2201 has since been modified, and the current version exempting BACT for "the installation or modification of an emission control technique performed solely for the purpose of compliance with the requirements of District, State or Federal air pollution control laws…" does not apply to the replacement of an entire emission unit. ARB staff supports this interpretation, because staff believes that it would otherwise represent a lost opportunity for the District to get additional emission reductions when applications are handled in this manner.

Artificial Emission Reductions

3. ARB staff found a case where the District's calculation procedures allowed the generation of "paper" emission reductions by lowering an emission factor rather than producing an actual reduction in usage and/or throughput.

Example

Project #1001191, which included Applications S-1131-988-4, '-989-4, '-990-3, '-991-4, and '-992-3, consisted of a heavy oil production facility located in central Kern County. This operation utilized five identical capacity natural gas-fired steam generators to produce steam for injection into the oil reservoirs to assist in recovering the oil. At the time that the steam generators were permitted, the original owner committed to pave 0.14 miles of road per generator to contribute towards offsets. It was determined that 0.14 miles of paved road would reduce PM10 emissions by 1 pound per hour. At a rate of 0.14 miles of road paving per pound-hour, 24 pounds per day of particulate emissions per generator would be created for use as offsets.

The current owner applied for Authorities to Construct to eliminate the road paving requirements from the permitted steam generators. The District's engineering evaluation accounted for the potential emission increases by reducing each steam generator's PM10 emission factors. In order to eliminate the road paving requirement, each steam generator's permitted emission rate for particulates needed to be reduced by 24 pounds per day—equal to reducing the PM10 emission factor from 0.045 pounds per million British Thermal Unit (lb/MMBtu) to 0.029 lb/MMBtu. The engineering evaluation did not state whether the applicant justified the ability to meet the lower emission factor based on a source test. No other controls or changes in operation were suggested by the applicant or the District to compensate for the 24-pound per day increase in PM10 associated with the removal of 0.14 miles of paved roads per steam generator. The engineering evaluation recommended that Authorities to Construct be issued for the steam generators.

The Valley's air quality situation warrants a more rigorous approach by District staff during the Authority to Construct evaluation process to reduce the additional particulate emissions failed to be mitigated by the removal of the paving requirement.

Recommendations

Significant Recommendations:

1. The District should ensure that the replacement of an emission unit is treated consistently under the District's New Source Review rule. ARB staff found a case where the replacement of a turbine was considered a new unit and required to meet BACT. In a very similar project, the replacement of a turbine was considered a *routine replacement* of an existing emission unit and exempt from BACT in accordance with District

Rule 2201 section 4.2.6. ARB staff believes the installation of a new turbine should be considered a new emission unit, regardless of whether an existing turbine will be removed from service at the same time. The District should consider amending Rule 2201 to clarify that routine replacement should be reserved for routine maintenance and repair of broken or worn components, not for the complete replacement of an entire stand-alone emission unit.

2. The District should ensure that its calculation procedures do not generate "paper" emission reductions by lowering an emission factor rather than actually reducing usage and/or throughput. For example, ARB staff found a case where a source committed to pave roads to offset PM10 from natural gas-fired steam generators. A subsequent owner applied for an Authority to Construct to eliminate the road-paving requirement and reduce each steam generator's PM10 emission factors by an equivalent amount. Source test results were not provided to demonstrate that the lower emission factor could be met.

Other Suggestions to Improve Program Effectiveness:

1. District Rule 2201 exempts an emission unit from BACT if the installation or modification of an emission control technique is performed solely for the purpose of compliance with a District rule, subject to several emission-limiting conditions. ARB staff recommends that the District reassess its practice of allowing the replacement of an entire emission unit without BACT under this provision. ARB staff believes that the replacement of an entire emission unit does not fit the spirit of the rule specifying installation or modification of an emission control technique, particularly when the equipment is at the end of its useful life and cannot be retrofitted.

B-3. District Permitting Policies

Findings

1. The District has a useful and fairly extensive list of permitting policies. However, all of the relevant permitting policies are not available on the District's web site. Also, some of the policies available through the District's web site are out-of-date. While some policies may be retained for historical purposes, the policies are not labeled as such and may cause some confusion.

The District maintains an extensive list of written permitting policies. These policies provide guidance to permitting staff in its three regions and help ensure that permitting actions are consistent. Currently, the District has about 98 written policies. 33 of these policies are administrative in nature and do not need to be out for public consumption. At the time of the program review, 45 policies were posted on the District's web site for public access. ARB staff identified 20 other policies relevant to permitting issues that should also have been posted on the Internet. Examples of these policies include Offset Requirements, Calculation of SSPE, and Wellhead Stuffing Box Emission Factors. Details of Permitting Policy Statistics are on Pages B-19 and 20.

ARB staff noted that several permitting policies available through the District's web site and through internal documents reference incorrect rule sections, contain rule terminology that is now obsolete, and specify outdated office procedures. For example, District *Policy APR 1305: Best Available Control Technology (BACT) Policy* (November, 11, 1999) contains a definition for BACT which is not the same as the definition in District Rule 2201 - New and Modified Stationary Source Review (Amended December 19, 2002). As discussed in *Section B-4* of this report, the interest rate used for calculating an equivalent annual cost is out of date.

In addition, two District policies, *APR 1210: Identical Replacements* (April 29, 1996) and APR 1215: *Functionally Identical Replacements* (December 20, 1994), provide guidance pertaining to the usage of the terms "identical replacements" and "functionally identical replacements" in the District's New Source Review (NSR) rule. These terms are no longer used in District Rule 2201 - New and Modified Stationary Source Review (Amended December 19, 2002).

District *Policy APR 1510: Public Noticing Requirements* (June 21, 1993) provides guidance for section 5.1.3 of District Rule 2201 pertaining to public noticing requirements. Section 5.1.3 of the current version of Rule 2201 pertains to application completeness and specifically requires the Air Pollution Control Officer (APCO) to notify the applicant upon determination that an application is complete.

Lastly, District *Policy APR 1310: Office Procedures for Implementing BACT Policy* (April 18, 1995) specifies the method of communication between offices to be by facsimile

(fax). This is a slow and outdated communication method of sharing electronic files and is in conflict with the District's goal of attaining a paperless office.

The ARB staff understands that maintaining old policies may be useful in establishing a historical record of the District's permitting actions. However, for the purpose of clarity, the ARB staff suggests that these old policies be archived. In addition, the ARB staff believes the District would greatly benefit from regular examinations and updates to its permitting policies. An opportune time for these updates may occur when rule amendments are adopted, so policies reflect the most current rule interpretation.

2. A District policy that differs from the corresponding rule should be addressed as part of the rulemaking process.

District *Policy APR 1305: Best Available Control Technology (BACT) Policy* (November 9, 1999) defines a "small emitter" as any facility with annual emissions less than two tons per year or maximum daily emissions below 30 pounds per day of VOC, PM10, and SOx; 40 pounds per day of NOx; and 220 pounds per day of CO (see also Table I). As stated in the policy, "unless proposed by the applicant, technologically feasible and cost effective control that is more effective than the achieved-in-practice option shall not be required for a small emitter. A small emitter shall be required to use the most effective control technology or equipment that has been achieved-in-practice, including achieved-in-practice alternate basic equipment and process for new equipment." Because the tons per year and pounds per day limits are mutually exclusive, a facility could have annual NOx and VOC emissions of up to 7.3 and 5.5 tons per year (tpy), respectively, and still be considered a small emitter.

Table I. District Small Emitter Thresholds

Pollutant	Daily Limit	Annual Limit Based on Daily Restriction
VOC, PM10, Sox	30 lb/day	5.5 tpy
NOx	40 lb/day	7.3 tpy
CO	220 lb/day	40.2 tpy

This policy is in direct conflict with the definition of BACT as defined in District Rule 2201 - New and Modified Stationary Source Review (Amended December 19, 2002) section 3.9, where BACT is defined as the most stringent emission limitation or control technique of the following:

- Achieved in practice for such category and class of source;
- Contained in any State Implementation Plan approved by the United States Environmental Protection Agency for such category and class of source. A specific limitation or control technique shall not apply if the owner of the proposed emissions unit demonstrates to the satisfaction of the APCO that such a limitation or control technique is not presently available; or
- Contained in an applicable federal New Source Performance Standard; or

- Any other emission limitation or control technique, including process and equipment changes of basic or control equipment, found by the APCO to be cost effective and technologically feasible for such class or category of sources or for a specific source."

The ARB staff reviewed Rule 2201 and did not find a reference to the term "small emitter" or a specific exemption from BACT requirements for small emitters. The ARB staff found some files that illustrate the potential lost opportunity for further emission reductions by applying less stringent requirements to small emitters.

Ice Cream Partners replaced a 10.46 MMBtu/hr dual fuel-fired boiler with a new 19.9 MMBtu/hr natural gas-fired boiler equipped with low NOx burners and FGR (Application S-879-5-0, Project #1001447). The new boiler was not considered a functionally identical replacement, because there was an increase in the boiler rating. Therefore, BACT was required for NOx, VOC, and PM10. The applicable BACT Guideline 1.1.1 listed achieved in practice BACT for NOx as 20.0 ppmv at 3% O_2 and use of natural gas with LPG or propane backup as BACT for VOC and PM10. Technologically feasible NOx levels of 9.0 and 15.0 ppmv at 3% O_2 were not evaluated, because the facility is a small emitter. Current NOx BACT for this class and category of source in the South Coast AQMD is ≤12 ppmv at 3% O_2 based on NOx emission levels achieved at various facilities. A 12-ppmv NOx limit would have yielded an additional 1,583 pounds per year of NOx emissions reductions. The same small emitter consideration was applied at Unifirst Corporation (Application N-4212-2-0, Project #1020684) for a new 10.46 MMBtu/hr natural gas-fired boiler equipped with low NOx burners. Similarly, an achieved in practice BACT level of 20.0 ppmv at 3% O_2 was required for NOx. A 12-ppmv NOx requirement would have produced another 300 pounds per year of reductions.

Project #1011421 for SCE Electric Company involved the modification of an existing 82 bhp propane-fired IC engine generator equipped with PCV and a three-way catalyst from emergency to full time use (Application C-1174-7-1). Because the facility is a small emitter, only achieved in practice BACT was required. The requirements of the applicable BACT Guideline 3.3.2 (4th quarter 2001) were satisfied by use of PCV, O_2 monitor and weekly adjustments, and a three-way catalyst. Associated emission levels were 1.1 g/bhp-hr NOx, 2.1 g/bhp-hr CO, and 0.43 g/bhp-hr VOC. The ARB's DG Guidance (approved on November 15, 2001) recommended BACT emission levels for fossil fuel-fired IC engines of 0.15 g/bhp-hr NOx, 0.6 g/bhp-hr CO, and 0.15 g/bhp-hr VOC. These limits reflect the most stringent levels achieved in practice based on annual source tests ranging from 1997 to 2001. Another 1,495 pounds per year of NOx emissions reductions would have been gained with a 0.15 g/bhp-hr NOx limit.

3. The District's policy defining "zero" may allow some facilities to avoid offsets.

District *Policy APR 1115: Calculation of Daily Increase in Permitted Emissions (IPE) Definition of Zero in Determining IPE* (December 17, 1993) states that the "contribution

from emissions units with maximum daily IPE [increase in permitted emissions] or PE [potential to emit] below 0.5 pounds per day (based on the maximum daily emissions) must be set to zero. In other words, emissions units with an IPE or PE of less than 0.5 pounds per day will not contribute to the…quantity of offsets needed." The District's rationale for defining zero is the "lack of accuracy in determining very small emission rates, and the difficulties in having to obtain minute amounts of offsets." However, in these cases, the pollutant contribution could be as much as 182 pounds per year per emission unit. The policy poses a more significant air quality concern from a programmatic standpoint, as individual contributions are aggregated at facilities throughout the District with multiple small emission points. To illustrate this, the ARB staff found some permitting actions where the District had set the pollutant contribution from multiple emission units to zero at a single stationary source. Four examples follow.

Example

At the Dos Palos Cooperative Gin (Application N-1233-1-2, Project #1000031), several pieces of ginning equipment and one new 8 MMBtu/hr propane-fired heater were to be installed. Five existing propane-fired heaters excluded from the original permit were also to be added. According to District definition, each heater was considered a separate emission unit. For each existing heater, the volatile organic compound (VOC) and sulfur oxides (SOx) daily emissions were less than 0.5 pounds per day, so each was set to zero. For the new heater, SOx daily emissions were less than 0.5 pounds per day, so the PE was set to zero. If daily emissions were not set to zero, the total post-project VOC and SOx emissions from the six heater burners combined would be 3.0 pounds per day (versus 1.1) and 1.4 pounds per day (versus 0), respectively. Per District policy, pollutants from each emission unit less than 0.5 pounds per day were not included in the offset calculations (in this case, each of the five existing burners)—specifically, the District calculated annual VOC emissions of 106 pounds per year (versus 370 pounds per year) and daily SOx emissions of 0 pounds per day (versus 1.4 pounds per day).

In addition, the District did not follow its *Policy APR 1105: Use of Significant Figures* (July 16, 1992) in determining the appropriate level of rounding for the engineering calculations in Project #1000031. For SOx, daily emissions should have been rounded to the tenth place in accordance with the policy. However, SOx daily emissions of 0.46 pounds per day were rounded to 0.4 pounds per day and erroneously set to zero.

Example

A modification at Interlake Material Handling (Application N-422-6-3, Project #1020338) involved the replacement of an existing burner system (three burners at 3.8 MMBtu/hr) with a new burner system (one burner at 3.4 MMBtu/hr and one burner at 3.8 MMBtu/hr) serving a metal parts/products power spray washer. According to District definition, each burner was considered a separate emission unit. The VOC and SOx daily emissions for both new burners were less than 0.5 pounds per day, so each was set to zero. Per District policy, pollutants from each emission unit less than 0.5 pounds per day were not included in the calculation for offset purposes. If daily emissions were not set to zero, the total post-project VOC and SOx emissions from both burners would be

0.9 pounds per day and 0.5 pounds per day, respectively. Annual emissions would amount to 329 pounds per year VOC and 183 pounds per year SOx.

A similar rounding error was made in the Interlake Material Handling file. For VOC, daily emissions should have been rounded to the tenth place. However, VOC emissions of 0.48 pounds per day were characterized as being less than 0.5 pounds per day and subsequently set to zero.

Example

In the permit for Art's Custom Cabinet Inc. (Application C-3975-1-4, Project #1020364), devices emitting less than 0.5 pounds per day were set to zero in accordance with Policy APR 1115. The woodworking operation was considered a single permit unit controlled by two baghouses. The controlled PM10 emissions from the DCE UMA 450 baghouse were calculated at 0.6 pounds per day and emissions from the Torit-Donaldson 90 were 0.2 pounds per day. The Torit-Donaldson baghouse emissions were zeroed per the policy. Since the woodworking operation was considered one permit unit, the emissions should have been combined for a total of 0.8 pounds per day PM10—a 52 pounds per year increase in emissions.

Example

At Brooks Product Inc. (Application N-142-4-1, Project #99062), District staff applied control efficiencies adjusting for moisture content that had already been accounted for in the equations used to calculate emissions from the transfer of aggregate. In other words, there appeared to be "double counting" of control factors. This double counting resulted in emissions less than 0.5 pounds per day, which were subsequently zeroed out. After removing the assumed control efficiency, ARB staff calculated the emissions to be 1.3 pounds per day.

ARB staff expressed concern with the District's zero-rounding policy in the April 1996 program review report. Given the District's air quality status, the ARB staff again recommends a more conservative approach with respect to this policy. This approach would forego rounding at intermediate steps (i.e., emissions unit level) and only "zero out" limits if the *total* emissions are less than 0.5 pounds per day. The ARB staff believes this approach to be reasonable from an operational standpoint—particularly at a facility where a single process line is comprised of many individual emission units operating in tandem, or at a facility where several emission units operate independently but are all required to complete a single product. (To address this comment after ARB staff's visit, the District issued Policy APR 1130 on October 21, 2003, which supercedes Policy APR 1115. The policy now applies to a permit unit rather than individual emission units.)

Recommendations

Significant Recommendations:

1. All permitting policies should be updated to reflect the most current rule interpretation and made available to the industry and other oversight agencies through the District's web site or as a published document. Further, policies which are material to the interpretation of a rule should not be drafted without public review or input.

2. We strongly suggest that the District should ensure that its policies serve to clarify rule requirements and do not establish guidance that alters an approved regulation.

3. The District should discontinue Policy SSP 1705 for Dormant Emissions Units. The policy allows an emission unit that cannot meet emission limits to cease operating and be designated dormant in lieu of modifying to meet the emission limits or surrendering the permit. When commencing operation again, the emission unit must meet the applicable emission limits. A Dormant Emissions Unit cannot meet the emissions standards contained in the District's rules and therefore should not receive a Permit to Operate. Any such unit should be subject to New Source Review as a new emission unit.

4. The District should discontinue its policy to require only achieved-in-practice BACT for sources deemed "small emitters" in accordance with District Policy APR 1305. The policy is not consistent with the definition of BACT as defined in District Rule 2201 and could result in the application of a substandard control method if the District's BACT Clearinghouse is not up-to-date.

Other Suggestions to Improve Program Effectiveness:

1. ARB staff found that some of the policies available through the District's web site are out-of-date (e.g., Policies APR 1120, APR 1210, APR 1215). To the extent that old policies are retained for historical purposes, ARB staff recommends that the District label the policies as such to avoid confusion.

2. The District should post all its policies relevant to permitting issues on its web site.

3. Given the District's air quality status, the District should take a more conservative approach with respect to Policy APR 1115 (<0.5 pounds per day is set to zero). This approach would forego rounding at intermediate steps (i.e., emissions unit level) and only "zero out" limits if the total

emissions are less than 0.5 pounds. (To address this comment after ARB staff's visit, the District issued Policy APR 1130 on October 21, 2003, which supercedes Policy APR 1115. The policy now applies to a permit unit rather than individual emission units.)

San Joaquin Permitting Policy Statistics

Total number of policies: 98

Total number of policies on the web: 45

Additional policies that should be on the web: 15

1. APR 1405 Offset Requirements
2. APR 1410 Calculation of SSPE
3. APR 1415 Offsets for PM10; SOx; CO
4. APR 1120 Determining Control Efficiency (CE)
5. ADM 1030 Confidential Information
6. ADM 1110 SBA Application Completeness Checklist
7. APR 1720 SOx Emission Factor for Combustion of PUC Quality Natural Gas
8. APR 1910 TBACT for New & Modified Diesel IC Engines
9. SSP 1405 Stationary Source Designation (for Concrete Batch plants): Describes when aggregate and asphalt facilities can be considered one source or two
10. SSP 1815 Irrigation District Engines: Describes whether these ICEs are subject to permits
11. SSP 1910 Wellhead Stuffing Box Emission Factors
12. SSP 2205 Tank Inspection and Maintenance: Part V of policy describes that sources subject to Rule 4623 (voluntary inspection and maintenance and tank interior cleaning program) may trigger Rule 2201 because their cleaning of the tank is a modification, but modification may be exempt from BACT if rule requirements (4.2.3.1 – 4.2.3.4) are met.
13. APR 1840 Reporting ERC Costs: Reports that AB 3785 requires District to record cost information of offset transactions which is public record and the District will publish this annually.

ARB does not have all the policies listed below. These were listed in the District policy binder table of contents (3/19/03 issue) and/or the updated policy listing (4/18/03 issue)

14. APR 1725 Averaging Periods for Emission Limits: This policy is not listed in the policy binder (Maybe this is a new policy since the binder date is 3/19/03 but the other list provided ARB is dated 4/8/03)
15. APR 1815 ERCs from Early BARCT: Only the third page of the policy is in the binder

Additional policies that may benefit the public by being on the web: 5

1. ADM 1230 Rule 2020 Section 4.2 and 5.0 Clarification: Explanation of exempt equipment (when applicant claims emissions less than 2 lbs/24hrs.) and interpretation of “uncontrolled emissions”
2. ADM 1410 Schedules 5 (Tanks) and 11 (Fuel Dispensing): Billing information

3. ADM 1415 Schedules 7 (Resource Recovery) and 8 (Electric Generation): Billing information
4. ADM 1420 Schedule 12 (Waste Disposal): Billing information
5. APR 1310 Updating BACT Clearinghouse: (Especially section on when top down analysis is required. The permit staff and BACT coordinator responsibilities in this policy may not need to be provided to public)

Administrative policies that do not need to be on the web: 33

Examples:

1. ADM 1025 Organizing File Folders
2. ADM 1035 Staff Meetings
3. ADM 1040 Activity Codes for Timesheets
4. ADM 1265 Letter Signature Format

B-4. Best Available Control Technology Determinations

Findings

1. When making a best available control technology (BACT) determination, most districts in California are required to consider more stringent control technologies than those that are achieved in practice. The more stringent controls must be both technologically feasible and cost effective. The District's BACT cost-effectiveness thresholds are well below other districts with similar air quality status. As a result, more stringent emission limits and/or pollution control techniques identified in the District's BACT Clearinghouse may not be required due to cost considerations.

The District's 1996 action plan, drafted in response to the ARB's last program review, acknowledged that the cost-effectiveness thresholds had not been reexamined since 1989 and stated that the District had started a process to reevaluate the figures and adopt revised thresholds that more accurately represent current economic and technological factors. To this day, the District continues to utilize the same cost values. A comparison of ozone precursor (NOx and VOC) cost-effectiveness thresholds at other districts reveals that the San Joaquin Valley's thresholds are nearly two to four times lower (see Table II).

Table II. California Air District BACT Cost-Effectiveness Thresholds

District		NOx [per ton]	CO [per ton]	VOC [per ton]	PM10 [per ton]	SOx [per ton]
San Joaquin Valley		$9,700	$300	$5,000	$5,700	$3,900
Bay Area		$17,500	n/d	$17,500	$5,300	$18,300
South Coast		$18,300 ($19,059) [a]	$380 ($396) [a]	$19,400 ($20,204) [a]	$4,300 ($4,478) [a]	$9,700 ($10,102) [a]
Ventura		$18,000	$1,000	$18,000	$10,000	$10,000
San Diego,	Small source (<15 tpy)	$13,200	n/d	$7,480 [b]	n/d	n/d
	Large source (>15 tpy)	$18,000	n/d	$10,200 [b]	n/d	n/d

[a] District is proposing to update maximum cost-effectiveness criteria to these values.
[b] Proposed revision to the district's New Source Review rule would increase thresholds to $13,200 (small source) and $18,000 (large source).

Five examples where the District used cost considerations to eliminate more stringent technologically feasible control technologies are described below. In these permitting actions, the costs of additional controls exceeded the District's thresholds but were below the thresholds in other districts.

Example

The file for Golden Valley Grape Juice and Wine (Applications C-3280-2-0 and '-3-0, Project #1010807) involved the installation of two new 8.4 MMBtu/hr natural gas-fired boilers equipped with low NOx burners and FGR. The applicant proposed a NOx emission concentration of 20 parts per million by volume (ppmv) at 3% O_2 as BACT. The applicable District BACT Guideline 1.1.1 listed several technologically feasible control options that could reduce NOx emissions to 9 ppmv at 3% O_2. As part of the top-down BACT analysis, the District evaluated the cost of retrofitting to 15 ppmv at 3% O_2 with a new burner. Based on the annual fuel limit requested, a 180 pound per year per boiler reduction in NOx emissions could be gained from retrofitting from the proposed BACT level to 15 ppmv. The 15-ppmv level was eliminated from consideration because the District deemed it was not cost effective at $15,067 per ton of NOx reduced. As the 15-ppmv level was not cost effective, the District did not further evaluate the 9-ppmv option.

Example

Project #1010958 for the County of Kings Public Works involved the conversion of an existing 2,848 bhp diesel IC engine generator set from emergency to limited use (Application C-724-8-1). The applicant proposed a NOx emission rate of 5.187 grams per brake horsepower-hour (g/bhp-hr) as BACT. The applicable District BACT Guideline 3.2.2 listed 1.0 g/bhp-hr NOx with selective catalytic reduction (SCR) as technologically feasible. Estimated annual NOx emissions reduction from SCR was calculated to be 8.5 tons per year. As part of the top-down BACT analysis, the District determined that SCR was not cost effective at $12,145 per ton of NOx reduced, and the control option was eliminated from consideration.

Example

In the evaluation for Application S-160-19-0 at O.H. Kruse (Project #991071), the applicant proposed to install a new 20.4 MMBtu/hr natural gas-fired boiler equipped with low NOx burners at a dairy/poultry/livestock feed manufacturing plant. A NOx emission concentration of 15 ppmv at 3% O_2 was proposed to meet BACT. The applicable District BACT Guideline 1.1.1 listed technologically feasible controls that could reduce NOx emissions to 9 ppmv at 3% O_2 (equivalent to 1,260 pounds per year reduction). As part of the top-down BACT analysis, the District evaluated the cost of retrofitting to 9 ppmv at 3% O_2 with a new burner. The 9-ppmv level was deemed not cost effective at $14,600 per ton and eliminated from further consideration.

Example

OXY USA Inc. (Applications S-1326-290-0 and '-291-0, Project #1020107) proposed the installation of a 62.5 MMBtu/hr natural gas-fired steam generator with a NOx limit of 14 ppmv at 3% O_2. According to District BACT Policy APR 1305, "a new cost effectiveness analysis is not required if cost effective analysis for the specific piece of equipment or operation was conducted by the District within 12 months preceding the date an application is received." The District based the BACT cost-effectiveness analysis on a previous evaluation that resulted in NOx cost-effectiveness of $15,941 per ton. Because the cost effectiveness of SCR was greater than the NOx cost-effectiveness

threshold of $9,700 per ton, SCR was not required. NOx emissions reductions of 1.68 tons per year could be gained from retrofitting with SCR to meet 9 ppmv at 3% O_2.

Example

At Alecia's Furniture Refinishing (Application S-3669-1, Project #1000270), a wood-coating operation was exempt from BACT because the cost of the control would have been $6,679 per ton VOC reduced, which was in excess of the District's $5,000 per ton cost-effectiveness threshold. In the South Coast Air Quality Management District (South Coast AQMD) or the Bay Area Air Quality Management District, this would have been accepted as a cost-effective control. The maximum emissions were estimated to be 33 pounds per day VOC. With the 95-percent control of carbon adsorption, the emissions would have been 1.6 pounds per day VOC—a reduction of 31.4 pounds per day or 4 tons per year. The current controls are VOC coatings less than 5.7 pounds per gallon, high volume low pressure (HVLP) spray guns, and an enclosed gun cleaner.

2. The District's BACT policy may allow the use of outdated BACT determinations for classes and categories already covered in the District's BACT Clearinghouse.

District *Policy APR 1305: Best Available Control Technology (BACT) Policy* (November 11, 1999) states that "BACT determinations are to be based upon the control technologies and methods for the same or similar source categories, listed in the District's BACT Clearinghouse for the calendar quarter during which the application is deemed complete." Even if better control technologies are known to exist, the District may not require them to be applied because they are not listed in the BACT Clearinghouse. ARB staff understands the permit streamlining advantages of having the BACT Clearinghouse. However, when the control technology search is limited in this manner, the BACT requirement becomes highly dependent on whether the Clearinghouse has kept pace with the latest emission control advances. The ARB staff found several permits where the limiting nature of the District's policy resulted in substandard control technologies being accepted as BACT.

Project #1001457 involved the installation of a new 23-megawatt (MW) natural gas-fired turbine generator equipped with dry low-NOx combustors (DLN) in simple-cycle configuration (Application C-14-9-0). Annual operating hours were limited to less than 877 hours per year. The applicant proposed a NOx emission concentration of ≤15 ppmv at 15% O_2 as BACT. At the time the application was deemed complete (December 20, 2000), the applicable District BACT Guideline 3.4.4 had not been updated since October 2, 1997. The District's engineering evaluation acknowledged that new technologies (e.g., SCR and SCONOx™) had since been introduced and the guideline should be updated. Therefore, the District included a separate top-down BACT analysis to concurrently update Guideline 3.4.4. However, the engineering evaluation stated that per District policy, "the BACT determination for NOx and VOC emissions, will be based upon the control technologies and methods listed on the District's BACT Clearinghouse that was in effect during which the application was deemed complete. Therefore, Fresno Cogeneration Partners will only have to show

compliance with the technologies listed on the current BACT guideline." In accordance with the 1997 guideline, NOx emissions of 15 ppmv were accepted as BACT for this project. Table III (page B-30) illustrates the difference in the BACT requirements in the 1997 and updated 2001 versions of Guideline 3.4.4. According to the District's updated BACT, the most stringent technologically feasible NOx control method could achieve emissions of 2.5 ppmvd at 15% O_2, a 6.14 tons per year difference from what was required in this project.

The file (Project #1020746) for Visalia Wastewater Treatment required out-of-date NOx and carbon monoxide (CO) BACT levels for a new 554 bhp lean-burn digester gas-fired IC engine generator (Application S-984-13-0). The applicant proposed the following emission levels as BACT, consistent with District BACT Guideline 3.3.9: 1.0 g/bhp-hr NOx and 2.7 g/bhp-hr CO. Guideline 3.3.9 was later rescinded (as of October 1, 2002) and superceded by Guideline 3.3.13, which reflects the BACT recommendations in the ARB's *Guidance for the Permitting of Electrical Generation Technologies* (DG Guidance): 0.6 g/bhp-hr NOx and 2.5 g/bhp-hr CO. The ARB adopted the DG Guidance on November 15, 2001. A final version was issued in July 2002; however, it did not include changes to the recommended BACT emission levels for reciprocating IC engines. Even though the District BACT Clearinghouse was not updated until October 2002, a thorough top-down BACT analysis should have included an assessment of the DG Guidance levels, because the document was available at the time the project application was deemed complete (July 23, 2002). The ARB DG Guidance represents a compilation of permitted emission levels required by various regulatory agencies throughout the United States and the actual emission levels demonstrated by these units in the field. NOx emissions reductions of 2.1 tons per year could have been gained from meeting the 0.6 g/bhp-hr NOx standard rather than the District Guideline.

North of the River Municipal Water District (Application C-688-4-0, Project #1010492) proposed to install a new 376 bhp rich-burn natural gas/LPG-fired IC engine generator equipped with positive crankcase ventilation (PCV), O_2 controller, and a three-way catalyst to provide alternate means of running an electric water pump for up to 1,000 hours per year. BACT was required for NOx and VOC. The District applied BACT Guideline 3.2.6 and required the following as BACT: 25 ppmv at 15% O_2 NOx and 35 ppmv at 15% O_2 VOC. The South Coast AQMD's BACT requirement for this class and category of source has been 9 ppmv at 15% O_2 NOx and 25 ppmv at 15% O_2 VOC since 1998. The difference in NOx emissions between the District's BACT requirement and the South Coast AQMD's requirement is 172 pounds per year. This project illustrates the importance of a thorough, up-to-date BACT analysis in minimizing emission impacts. The applicant proposed to install the IC engine because the facility had signed up to participate in a voluntary demand reduction program with the local utility. The intent of demand reduction programs is to offer a reduced electric rate to customers who agree to reduce electricity during times of high demand (i.e., peak periods). The project's well pump is normally powered by an electric motor, so the new IC engine provides an alternate means of running the pump when the facility's power is curtailed by the local utility. Peak periods generally occur during warm summer days,

coincident with high air conditioner use, which are also the worst times for ozone formation.

Under Project #1021069 (deemed complete August 12, 2002), the Harris Ranch Beef Company proposed to install a new 19.950 MMBtu/hr boiler equipped with low NOx burners and FGR (Applications C-616-3-2, '-9-0). BACT was required for NOx, VOC, and PM10. For VOC and PM10, BACT for this type of source is generally use of gaseous fuel and good combustion practices, which were required. The District deemed that their achieved in practice level of 20 ppmv at 3% O_2 was BACT for NOx after eliminating other technologies capable of producing NOx emissions in the 9 to 15 ppmv range due to cost considerations. The South Coast AQMD's BACT requirement for this class and category of source has been ≤12 ppmv at 3% O_2 since October 20, 2000. As part of the BACT determination process for NOx for natural gas- or propane-fired boilers rated <20 MMBtu/hr, the South Coast AQMD reviewed source tests on recently-permitted boilers that could meet 12 ppmv at 3% O_2 (see Table IV page B-31). The South Coast AQMD determined that since the 12-ppmv limit was exceeded in only a small minority of these tests (7 of 40 tests), the data supported the 12-ppmv limit. This limit was determined to be achieved in practice, and therefore declared BACT for this class and category of source. The 12-ppmv NOx BACT level would have resulted in an additional 1,626 pounds per year of NOx emissions reductions.

Another District project for Maxco Supply Company, Inc. (Application C-4004-3-0, Project #1020705), further confirms the availability of technology to meet NOx emissions ≤12 ppmv at 3% O_2 for this class and category of boiler. The project involved installation of a new 19.985 MMBtu/hr boiler equipped with low NOx burners and FGR. The applicant proposed NOx emissions of 12 ppmv at 3% O_2 as guaranteed by the manufacturer. This project was deemed complete approximately two months before the Harris Ranch project.

In the file for Project #1021348 at Pacific Choice Brands, the District used an outdated BACT guideline contrary to its own policy. The project involved the installation of a new 197 bhp natural gas-fired IC engine generator equipped with PCV, O_2 controller, and three-way catalyst for full time use at a food processing facility (Application C-906-9-0). BACT was only required for NOx emissions. The District applied BACT Guideline 3.3.2 from 4th quarter 1998 (even though this application was deemed complete on October 8, 2002). Guideline 3.3.2 identified only an achieved-in-practice BACT level of 25 ppmv at 15% O_2 and no other technologically feasible options. The District accepted this as BACT and disregarded BACT Guideline 3.3.12, which had already superceded Guideline 3.3.2 on October 1, 2002. Guideline 3.3.12 reflected the BACT recommendations contained in the ARB's DG Guidance, which was approved by the ARB on November 15, 2001. The ARB DG Guidance recommends a NOx BACT emission level of 9 ppmv at 15% O_2 for this class and category of source. The 9-ppmv NOx BACT level would have resulted in an additional 738 pounds per year of NOx emissions reductions.

3. The District's BACT policy limits the application of controls for small emitters of toxic air contaminants to those that are "achieved in practice."

ARB staff also found that District *Policy APR 1305* is being used inappropriately at sources that emit toxic air contaminants (TACs). District Policy APR 1305 only addresses the five criteria pollutants in determining a small emitter and does not and should not be used to limit toxic best available control technology (T-BACT). In effect, this practice confines the application of emission limits or controls to those that are achieved in practice for small emitters of TAC emissions. For example, Commercial Electro Plating (Application C-1340-1-1, Project #1000490) proposed an increase in amp-hours on a chromic acid tank. Hexavalent chromium emissions resulted in a health risk assessment score of greater than 1 in a million, so T-BACT was triggered. The District's engineering evaluation stated that Option 1 [a chrome dome emission elimination device (EED), Merlin Cover with 99.9% control] was technologically feasible, but not achieved in practice. The engineering evaluation concluded that because the source was a small emitter, only achieved-in-practice BACT was required. Therefore, an EED cover was not required.

4. The District could improve its in-house procedures for updating its BACT Clearinghouse.

District *Policy APR 1305: Best Available Control Technology (BACT) Policy* (November 9, 1999) states that the District will actively update its Clearinghouse and publish an updated version each quarter. In addition, District *Policy APR 1310: Office Procedures for Implementing BACT Policy* (April 18, 1995) outlines District staff responsibilities for implementing these updates. Specifically, Section III.5 of Policy APR 1310 states that permit processing staff responsibilities include notifying "the BACT Coordinator by fax whenever an ATC requiring a technologically feasible BACT is implemented so that the technology may be moved to the achieved-in-practice category." According to the District's BACT Coordinator, this procedure is not consistently implemented, because it relies on the permitting staff to remember that a particular Authority to Construct established a technologically feasible BACT requirement.

Although the District *does* publish an updated Clearinghouse each quarter, the majority of the changes consist of adding new guidelines. There does not appear to be a consistent effort to update existing guidelines unless a source cannot meet an established BACT requirement. Of the 300+ individual guidelines in the District's BACT Clearinghouse, over 50 percent are more than three years old (pre-2000). Routine assessments are necessary to ensure control technologies previously identified as technologically feasible are upgraded to the achieved in practice classification after equipment is placed into operation and demonstrates consistent compliance.

5. The terms "business type" and "class or category of source" should not be automatically interchangeable.

District *Policy APR 1305: Best Available Control Technology (BACT) Policy* (November 9, 1999) outlines the conditions that must be met for a control technology to be deemed

achieved in practice. The criteria includes a requirement that the "type of business where the emissions units are utilized must be the same." Similar language was contained in the December 1993 version of the BACT policy, which ARB staff commented on in the April 1996 program review report. It appears that the same criterion has been carried over to the most current BACT policy. The ARB staff disagrees that business type, in itself, warrants establishing a different class or category of source.

The California Air Pollution Control Officers Association (CAPCOA)/ARB *Guidance on Achieved in Practice BACT Determinations* (January 11, 2001) outlines general criteria that may be used by districts when establishing achieved in practice BACT requirements. To determine whether an emission unit belongs to a class or category of source for which a control technology has been achieved in practice, the guidelines state that the following criteria should be considered:

- source size (e.g., rating or capacity);
- capacity factor (e.g., seasonal vs. full time); and
- unique operational/technological issues.

"Business type" is not listed as a key criterion and should not be used to exclude a control technology without technical justification. According to the guidelines, similar basic equipment should only constitute different classes or categories of source if "operational or technological needs with demonstrable impact on effectiveness or reliability…that are essential to successful operation of an emission unit…cannot be overcome by other reasonable measures…" In other words, a boiler located at a commercial laundry plant should be treated the same as a similarly sized boiler at a hospital, unless unique operational conditions or technical difficulties justify alternative emission levels.

6. The interest rate used for BACT cost-effectiveness analyses is outdated.

District *Policy APR 1305: Best Available Control Technology (BACT) Policy* (November 9, 1999) establishes the formula to calculate the equivalent annual cost from a capital cost using a recovery factor. This amount is then used to determine if a technologically feasible alternative control technology is cost effective. The formula uses a default 10 percent annual interest rate. According to Harlan Wood, CFP, (Registered Principal, CA Ins. Lic. #0725955) of Planned Solutions, Inc., a 10 percent rate of return greatly exceeds any return on investments nowadays. The ARB currently uses a rate of 5 percent (on a real time basis) for cost-effectiveness analysis.

Recommendations

Significant Recommendations:

1. BACT cost-effectiveness thresholds for other districts with similar air quality status are higher than the District's thresholds. The District should

reevaluate and update its BACT cost-effectiveness thresholds. In this manner, control technologies that are considered technologically feasible and cost effective for a class or category of source will be more frequently achieved in practice, and therefore will be required to be installed.

2. The District should revise Policy APR 1305 to allow control technology searches beyond its own BACT Clearinghouse for emission sources covered in the Clearinghouse. Under the current policy, "BACT determinations are to be based upon the control technologies and methods…listed in the District's BACT Clearinghouse for the calendar quarter during which the application is deemed complete." Conducting a broader technology search would help District staff become more aware of technology advancements in other jurisdictions, encourage the advancement of emission controls, and promote consistency statewide. ARB staff recommends that the District include links to other available control technology databases on its BACT Clearinghouse web site.

3. The District should amend its Policy APR 1305 which requires that the "type of business where the emissions units are utilized must be the same" in determining whether a BACT control technology is achieved in practice for a given class or category of source. CAPCOA/ARB Guidance on Achieved in Practice BACT Determinations does not include business type as part of the criteria for achieved-in-practice BACT determinations. ARB staff believes that business type, in itself, does not warrant establishment of a different class or category of source unless unique operational or technical issues justify alternative emission levels.

4. ARB staff recommends that the District reexamine its in-house procedures for updating existing BACT determinations contained in its BACT Clearinghouse. While a centralized repository for BACT determinations is a useful permit-streamlining tool, routine assessments are necessary to ensure control technologies previously identified as *technologically feasible* are upgraded to the *achieved-in-practice* classification. District Policy APR 1310 instructs permit processing staff to notify the BACT Coordinator whenever an Authority to Construct requiring a technologically feasible control method is implemented; however District staff indicated that this procedure is not consistently implemented. The District publishes an updated Clearinghouse each quarter, but the majority of the changes appear to consist of adding new guidelines rather than updating existing ones. ARB staff suggests incorporating some type of "flag" or identifier within the permit database to identify the Authority to Construct as a technologically feasible BACT application.

5. The District should update the interest rate used for BACT cost-effectiveness analyses to reflect current economic conditions.

Other Suggestions to Improve Program Effectiveness:

None

Table III. Summary of Requirements in District BACT Guideline 3.4.4 for Limited Use Gas-Fired Turbines ≤26 MW

	Last Updated October 2, 1997		Last Updated April 5, 2001	
Pollutant	Achieved in Practice or Contained in SIP	Technologically Feasible	Achieved in Practice or Contained in SIP	Technologically Feasible
VOC	PUC quality natural gas with fuel oil #2 as backup	Oxidation catalyst to achieve 71% control	PUC quality natural gas with fuel oil #2 as backup	1. 90% control efficiency (SCONOx, or equal) 2. 71% control efficiency (Oxidation catalyst, or equal)
NOx	Water injection system with a minimum emission concentration of 42 ppmvd @ 15% O_2	Dry low NOx burners	42 ppmvd @ 15% O_2 (Water injection system, or equal)	1. 2.5 ppmv NOx @ 15% O_2 (SCR, SCONOx, or equal) 2. 15 ppmv @ 15% O_2 (Dry low NOx Combustors, or equal) 3. 25 ppmv @ 15% O_2 (Dry low NOx Combustors, or equal)
PM10	Natural gas, air intake filter, and a lube oil coalescer with a maximum lube vent exhaust visible emissions of 0% opacity Natural gas, air intake filter, and a lube vent high efficiency particulate filter with a maximum lube vent exhaust visible emissions of 0% opacity Natural gas, air intake filter, and a lube vent routed to the turbine or exhaust for oxidation with a maximum lube vent exhaust visible emissions of 0% opacity		Natural gas, air intake filter, and a maximum lube vent exhaust visible emissions of 0% opacity with either • a lube oil coalescer, • a lube vent high efficiency particulate filter, or • a lube vent routed to the turbine or exhaust for oxidation	
CO			PUC quality natural gas	1. 90% control efficiency (SCONOx, or equal) 2. 71% control efficiency (Oxidation catalyst, or equal)
SOx			PUC quality natural gas	

Table IV. Source Test Results for Boilers with Ultra Low-NOx Burners

Boiler Mfr.	Burner Mfr.	Boiler Rating, Type [MMBtu/hr]	Facility Name, Location	Permit Date	Permit NOx Limit	Operating History	Test Date	NOx Results [ppm]	Test Conditions
Superior	ACT	16.4, FT	(Adohr Farms) Heritage Foods, Riverside	11/5/99	9	Apr-00	7/27/00 12/1/00	10.2-12.4 9.4-14.9	Hi Lo Avg Norm/Unc
Superior	ACT	10.5, WT	Beverage Concepts, Rancho Santa Margarita	6/21/00	12		11/3/00	11.1-11.2	Hi Lo Avg
Superior	ACT	5.0, WT	Gar Labs, Riverside	5/4/00	12	9/25/00	11/2/00	10.6-11.1	Hi Lo Avg
Superior	ACT	6.3, FT	L&N Uniform, Santa Ana	4/6/00	12	Jul-00	8/28/00	10.0-10.5	Hi Lo Avg
Johnston	Alzeta	20.3	California Box, Santa Fe Springs	3/16/00	12	8/2/00	10/27/00	3.4-4.3	Hi Lo Avg
CB	Alzeta	20.9, FT	Hi-Country, Corona	12/16/99	9	Apr-00	8/28/00	6.7 and 6.2 (two boilers)	Hi Lo Avg
Donlee	Alzeta	28.8, WT	Nation Wide, various	4/7/00	9	5/1/00	7/7/00	4.5-6.7	Hi Lo Avg
CB	Alzeta	6.0, WT	San Bernardino Co., San Bernardino	2/15/00	12	Apr-00	8/23/00 10/24/00	6.3-7.6 9.4	Hi Lo Avg Norm/Unc
Clayton	Clayton	12.6, WT	Packaging Ad., Los Angeles	12/8/99	12	Pre May-99	5/19/99 7/11/00 8/25/00	9.9-11.1 14.8-20.1 17.5	Hi Lo Avg Hi Lo Avg Normal
Clayton	Clayton	4.3, WT	SCHI, Santa Monica	12/1/99	12	unknown	9/5/00	#1: 6.2-8.4 #2: 5.8-11.6	Hi Lo
QuikWater	Eclipse	2.8	QuikWater, OK				8/11/00	5.7-8.5	Hi Lo Avg
QuikWater	Eclipse	3.8	QuikWater, OK				8/10/00	5.8-7.7	Hi Lo Avg
QuikWater	Eclipse	5.0	QuikWater, OK				8/8/00	5.4-7.1	Hi Lo Avg
Superior	Ind. Comb.	16.8, FT	Bumble Bee, Santa Fe Springs	3/10/00	12	Apr-00	7/7/00 8/10/00 12/5/00	≤12 16.5 9.0-11.7	Hi Lo Avg Norm/Unc Hi Lo Norm
Miura	Miura	8.15, WT	Dae Shin USA, Inc.	4/18/00	12	Aug-00	8/28/00	#1: 9-10	Hi Lo
Miura	Miura	8.2, WT	Maruchan, Irvine	4/18/00	12	Aug-00	10/28/99	#7: 7.6-8.1 #8: 5.7-6.3	Hi Lo
				9/9/99	15	Pre Oct-99	9/22/00	#7: 14.2 #8: 13.1	Norm/Unc
							9/25/00	#7: 10.2 #8: 9.3	Normal
Miura	Miura	8.2, WT	Maruchan, Irvine	2/11/00	12		12/30/99	7.0-7.9	Hi Lo
Parker	Parker	3.6, WT	Lakeshore Towers, Irvine	12/21/99	12	Jun-00	7/28/00 9/29/00	5.9-10.1 6.8-9.2	Hi Lo Avg Hi Lo Avg
Parker	Parker	6.3, WT	Minimed Tech, Sylmar	2/8/00	12	10/5/00	12/8/00	#1: 7.5-8.2 #2: 9.7-10.8 #3: 4.5-8.6	Hi Lo Norm Hi Lo Norm Hi Lo Norm
Parker	Parker	3.0, WT	Salvation Army, Long Beach	1/11/00	12	Pre Mar-00	3/9/00	7.4-11.8	Hi Lo Avg
Parker	Parker	3.0, WT	Walt Disney Co., Burbank	3/10/00	12	Apr-00	8/25/00	#1: 3.3-9.6 #2: 9.6-10.9	Hi Lo Avg

WT = water tube, FT = fire tube; *Hi Lo Avg* means three steady-state tests at maximum, minimum, and average loads; *Normal* means scheduled test(s) done under normal, modulating operating conditions; *Norm/Unc* means unannounced test(s) done under normal, modulating operating conditions; *Hi Lo* means two steady-state tests at high and low load; *Hi Lo Norm* means steady-state tests at maximum and minimum loads and another test under normal, modulating conditions

B-5. Biomass Facilities

There have been concerns raised that biomass plants in the Valley are burning more urban wood waste—imported from the South Coast Air Basin—at the expense of local agricultural biomass. ARB staff reviewed the District permits for the biomass plants to determine the prevalence of use of urban wood waste as fuel at biomass facilities, the District limitations of such use, and the enforceability of the associated District permits. The scope of the permit evaluation did not include the compliance history of the permittees.

ARB staff reviewed nine biomass permits. For most of these facilities, the initial offsets were provided by burning agricultural biomass in the boilers that had been historically burned in the field. That is, the difference in emissions from open-field burning versus burning in the boilers provided the offsets for the plant to be built. The offset credit is calculated using "A Procedure Relating to the Determination of Agricultural/Forestry Waste Emission Offset Credits," developed through a CAPCOA/ARB/U.S. EPA Agricultural Waste Committee, and adopted by the ARB on November 9, 1989. Therefore, most of the biomass facilities have permit conditions that require them to burn a minimum of agricultural biomass to meet their offset commitments. After the minimum is consumed, the balance of the fuel may come from a variety of sources—including urban wood waste.

Our review did not find specific issues with the facility permits regarding conditions relating to the use of agricultural biomass versus other fuel. Of the nine permits issued to biomass plants, only one prohibited the use of urban wood waste as fuel (Nordman of California, Permit #C-869-1-0). Nordman is limited to pumace, sawdust, walnut shells, and pistachio shells as fuel to its gasifiers. Of the remaining eight biomass permits, the conditions placed in the permits related to burning wood waste varied.

Three biomass facilities were inspected as part of the District review and were found to be substantially in compliance. One facility had a visible emissions exceedance (over 5% opacity) at a conveyor transfer point. The second facility received a notice to comply for missing records related to internal combustion engine repairs and maintenance. The third facility was in full compliance.

<u>Madera Power (Permit #C-799-7) – Title V</u>

The most comprehensive and enforceable biomass permit issued by the District to a biomass facility was issued to Madera Power (Permit #C-799-7). The permit specifically identifies the agricultural fuels that are eligible for offset credits, the calculation method for offset credits, the associated daily and annual recordkeeping requirements, and the quarterly fuel-usage reporting requirements. These conditions allow District enforcement staff to determine if the plant is burning at least the minimum amount of agricultural biomass to meet offset requirements.

Furthermore, the limitations on burning urban wood waste are clear and enforceable. For example:

- Urban wood waste (construction, demolition, and landfill-derived wood wastes) is approved as fuel as long as there is less than 1% by weight of plastic, rubber and other non-wood combustibles (other than dirt or ash).
- No fuel shall be chemically treated, painted, or oil stained.
- If urban wood wastes have been burned during the 365-day period prior to October 31 of any year, fuel testing shall be conducted by December 31 of that year.
- Fuel testing shall be conducted as follows: one truckload of urban wood waste fuel shall be weighed, dumped, and all contaminants shall be sorted from the fuel, identified and weighed. The report for this test shall be forwarded to the District by January 1 (one month after fuel testing deadline).
- The District shall be contacted and notified of the proposed date of any fuel testing.
- In addition to the scheduled annual fuel testing, testing shall also be performed on urban wood waste on-site within 24 hours of any such request from District staff.
- In accordance with the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (amended June 1993), the facility shall be source tested while fired on the maximum proposed mix of urban wood waste for the following: full set of metals, PAHs, dioxins, furans, formaldehyde, acetaldehyde, PCBs and POM. The ratio of urban wood waste to other fuel combusted during the toxics testing will become the maximum ratio allowed for all subsequent combustion, unless otherwise revised under future Authorities to Construct.

These conditions assure that the contents of urban wood waste are inspected on a routine basis; District personnel have the opportunity to witness the fuel testing and request additional testing; and the toxics emitted from burning urban wood waste are quantified and their health risks are determined.

<u>Rio Bravo Fresno (Permit #S-1820-1-12) – Title V</u>

This permit specifically identifies the agricultural fuels that are eligible for offset credits, the calculation method for offset credits, the associated daily and annual recordkeeping requirements, and the quarterly fuel-usage reporting requirements.

The permit allows for "construction wood waste" and "urban wood waste" to be burned as fuel; however, it does not define these terms, nor does it limit the amount of plastics and other prohibited materials in the wood waste stream. The permit requires that the mass ratio of creditable biomass fuel to total biomass fuel not be less than 0.48, which means that urban wood waste, which is one of the noncreditable fuels, can make up half of the fuel stream of the biomass boiler. Furthermore, there are no provisions for testing the urban wood waste stream for prohibited materials or requiring source testing for "Toxic Hot Spots" purposes at the highest proposed urban wood waste throughputs.

Mendota Biomass Power, LTD (Permit #C-825-5-8) – Title V

This permit specifically identifies the agricultural fuels that are eligible for offset credits, the calculation method for offset credits, the associated daily and annual recordkeeping requirements, and the quarterly fuel-usage reporting requirements.

The permit allows "clean unpainted urban wood waste and "unpainted paper waste" to be burned as fuel; however, it does not define these terms, nor does it limit the amount of plastics and other prohibited materials in the wood waste stream. There is no limit to the amount of urban wood waste that can be burned as long as the agricultural biomass requirements have been met. There are no provisions for testing the urban wood waste stream for prohibited materials or requiring source testing for "Toxic Hot Spots" purposes at the highest proposed urban wood waste throughputs.

AES Delano Inc. (Permits #S-75-6-15 and #S-75-11-12) – Title V

These permits specifically identify the agricultural fuels that are eligible for offset credits, the calculation method for offset credits, the associated daily and annual recordkeeping requirements, and the quarterly fuel-usage reporting requirements.

These permits also allow wood waste to be burned, and they define wood waste to include "clean, chipped wood products, plywood, wood products manufacturing wood products, construction and demolition wood materials, and wood pallets, crates and boxes." Furthermore, the permits state: "Contamination of the biomass fuel, as delivered to the boiler, shall not exceed 0.04% by weight plastics or 0.62% by weight total of the following materials: metals, plastics, paper, painted wood, particle board, wood treated with preservatives, and non-wood roofing materials (except asbestos)."

To enforce the contamination limits, the permits say that the District can request a 25-ton representative sample of biomass in the reclaim pile to be sorted by category, according to the contamination limits in the permit, and the results submitted to the District within 30 days after collection. There are no source-testing requirements for "Toxic Hot Spots" purposes at the highest proposed urban wood waste throughputs, as in the above Madera Power permit (#C-799-7).

Sierra Power Corporation (Permit #S-834-3-4)

This facility is not a major source requiring a Title V permit. This permit allows "clean, dry construction wood waste" to be burned as fuel, as well as agricultural biomass. Although "clean, dry construction wood waste" is not defined, the permit states: "No plastic, rubber, tar paper, asphalt shingles, plaster, metals, painted or chemically treated wood products or wastes shall be burned in the combustor." Finally, the permit states: "A daily record of the quantities and types of agricultural fuels burned in the combustor shall be maintained and submitted to the District quarterly."

There is no minimum amount of agricultural biomass required to be burned at this facility. Additional documentation in the permit file indicates that traditional offsets were used in the original permitting of this facility in 1988; agricultural offset credits were not applied. Furthermore, there is no limit to the amount of urban wood waste that can be burned as long as the boiler does not exceed its annual emissions limitations. There are no provisions for testing the urban wood waste stream for prohibited materials.

Dinuba Energy (Permit #S-285-2-2)

This facility is not a major source requiring a Title V permit. There is no minimum amount of agricultural biomass required to be burned at this facility. This permit allows "only natural gas and wood fuels" to be burned in the boiler. The definition of "wood" includes "wood waste," which is further defined as "clean, chipped wood products, plywood, wood products manufacturing wood materials, construction and demolition wood materials, and wood pallets, crates and boxes." The permit further states: "Contamination of the wood fuel, as delivered to the boiler, shall not exceed 1.0% by weight total of the following materials: metals, plastics, paper, painted wood, particle board, wood treated with preservatives, and roofing materials. None of the contaminants allowed by this condition shall contain asbestos."

To enforce the contamination limits, the permit requires that the facility must sort "a District-selected 5 ton representative sample of wood fuel within 60 days of startup and, thereafter, as requested by the District compliance division." At a minimum, the facility must sample the wood fuel for metals and asbestos quarterly, pursuant to a District-approved test plan, and submit the results to the District within 30 days of testing.

Auberry Energy, Inc. (Permit #C-1700-1-1)

This facility is not a major source requiring a Title V permit. There is no minimum amount of agricultural biomass required to be burned at this facility. This permit limits the amount of No. 2 fuel oil consumed to 2,000 gallons per year and allows biomass to be burned, including "clean urban wood waste." The permit states: "Clean urban wood waste may contain rocks, dirt, concrete, and other non-combustible materials in an amount not to exceed 5% of the total weight of the fuel (including wood ash) on a dry basis." Furthermore: "Clean urban wood waste shall be considered free of non-wood combustible materials if less than 1% of a representative sample of the fuel on a dry basis are materials other than non-combustibles or wood….Clean plywood, particle board, and oriented-strand board shall be considered clean urban wood waste….Clean urban wood waste is defined as wood from construction/demolition projects and which is free of non-wood combustible materials."

To enforce the contamination limits, the permit requires that the facility test a minimum of five pounds of wood fuel—collected by the District or a third-party testing laboratory—at least twice a year and as "deemed necessary by the District."

Recommendations

Significant Recommendations:

1. The District should consider using the permit issued to Madera Power (Permit C-799-7) as a template for modifying the other Title V permits for biomass facilities upon renewal. These permits should contain an explicit definition of urban wood waste, a limit on contaminants in the wood waste, a periodic testing of the fuel stream for contaminants, and source-test requirements when significant changes in fuel composition occur. For minor (non-Title V) biomass facilities, the recommendations should also apply, except that source-testing requirements may be less stringent.

Other Suggestions to Improve Program Effectiveness:

None

B-6. Adequacy of Permit Conditions

Findings

1. The District does not annually review the enforceability of all its conditions in each permit as required by Health and Safety Code Section 42301 (e). The District reviews its permits every 5 years upon expiration and reviews and updates permits impacted by rule revisions. The District could satisfy State law requiring annual permit review by linking permit review to the annual inspection.

2. Some conditions are in the form of specific emission limits that can neither be verified during a field inspection nor can practically be source tested by the facility. These emission limits can only be verified by combining actual facility conditions (throughput, material type) with the emission factors used in the original engineering evaluation. Examples of such permit conditions are given below:

   - Emissions from the material handling operation – including receiving, unloading, and conveying to silos, batch mixers, and scales – shall not exceed 0.0038 lb PM10/ton material. (Certainteed Corporation)
   - Emissions of particulate matter from the concrete batch plant shall not exceed 34 pounds per day. (Calmat of Fresno)

   Examples of readily verifiable permit conditions as surrogates to ensure compliance with emission limits would be material throughput, visible emissions, covered hoppers, operational water sprays, and correct operation of control equipment such as cyclones and baghouses.

3. For all permit conditions, the District references the applicable District rule. On its computer system the District indicates if each permit condition is federally enforceable.

4. The District's permits have an equipment description on the first page of every permit. In some permits, especially when the description is more complex, clarity may be improved with a clearer item-by-item equipment listing instead of a paragraph of text describing the equipment.

Equipment units that are sources of emissions can be grouped in an equipment list separate from abatement equipment. This way the sources and control equipment in each permit can be more easily identified. [For example Bay Area permits use an equipment list where equipment sources are listed with a sequential S-# designation and abatement equipment is listed with a sequential A-# designation].

5. The clarity of the District's more complicated permits can be improved.

Specific types of conditions such as those for record keeping, source testing or abatement equipment could be grouped. This could make the permits more usable to the source and inspector. Before inspections of more complex facilities, for example, staff had to categorize which permit conditions were record keeping conditions and source testing conditions, in order to know what records to request from the source and in order to know which conditions would be verified by source test. Industry regulated by the District also commented that conditions should be grouped together.

6. Most of the District's permit conditions that limited the activity or throughput of a source had limits that were in readily verifiable units. However, ARB staff encountered conditions that relied on annual limits to verify compliance instead of a shorter (i.e. daily) limit, which can assure more continuous compliance. (Example: Emerzian Woodworking C-1967-4-0 condition #8 limits adhesive use to 2080 gal/year, a daily gallon limit could be better)

7. Most of the permits reviewed by ARB staff included record-keeping conditions to help verify continuous compliance. However, some parameters on permits lacked specific parameters for verification. For example, Robinson's sheet (C-4028-1-0) had record keeping required for the plasma arc cutting, but did not include record-keeping for the maximum 1.35 inches of water column for the HEPA filter.

8. Some permits had conditions that did not necessarily apply to the source.

One of the two District chrome plating permits reviewed had conditions limiting visible emission to 20% opacity or Ringelmann 1. (See Commercial Electro Plating C-3140-1-2 which is a decorative chrome facility). A permit for a printing and degreasing operation (Lustre Cal Nameplate N-4445-1-0: screen printing, N-4445-2-0: degreasing operation) also had a VE condition.

9. Staff found inconsistencies in permit conditions involving baghouses.

American Transit Mix, C-3353-2-1, requires a baghouse be equipped with a magnahelic pressure gauge, but it does not require a pressure drop range, or record-keeping specifically for monitoring any change in the pressure drop. Another condition for baghouses required that the cleaning frequency and duration be adjusted to optimize control efficiency, but this condition is unenforceable. An inspector will have no way to evaluate if the optimum frequency and duration has been reached and if the source had been using the optimum level since the previous inspection. Conditions for baghouses seem to be inconsistent in that some facilities are required to keep 10% extra bags, but others are not.

10. The San Joaquin Valley permits lack a condition giving U.S. EPA, ARB, and District personnel entry into a facility. This language could be written into the permit.

11. The District's permit conditions for internal combustion engines for different facilities may be inconsistent in requiring positive crankcase ventilation (PCV). During joint inspections, ARB staff found that some engines required PCV, but others did not. The District should examine if PCV is regulated equally among its facilities. (For example, CA Water Service 2378-3-0 has Diesel ICE with PCV condition.)

12. Due to concerns raised that San Joaquin Valley biomass plants are burning more urban wood waste imported from outside the District, ARB staff reviewed District permits to determine the prevalence of urban wood waste as fuel, limitations of such use, and the enforceability of the associated District permits. ARB staff found that most biomass plants have permit conditions that require them to burn a minimum of agricultural biomass to meet offset credit commitments. After the minimum is consumed, the balance of the fuel may come from a variety of sources. The most comprehensive and enforceable biomass permit issued by the District was for Madera Power (Permit C-799-7).

Recommendations

Significant Recommendations:

1. The District should improve the clarity of its permits, especially for more complex facilities. Permits should have a clearer item-by-item equipment listing. The District should consider grouping specific types of conditions in its permits such as those for record-keeping, source testing or abatement.

Other Suggestions to Improve Program Effectiveness:

1. The District should annually review the enforceability of all its conditions in each permit as required by HSC section 42301 (e). The District reviews its permit every five years upon expiration and reviews and updates permits impacted by rule revisions. The District could satisfy state law requiring annual permit review by linking the permit review to annual inspection.

2. The District should consider adding a condition giving U.S. EPA, ARB, and District personnel entry into a facility. This language could be written into the permit.

B-7. Organization and Adequacy of Permit Evaluations

Findings

1. The District's engineering evaluations follow a detailed format that covers all the necessary elements of a complete engineering evaluation.

The formatting in the District's evaluations include the Proposal (I), Applicable Rules (II), Project Location (III), Process Description (IV), Equipment Listing (V), Emission Control Technology Evaluation (VI), Calculations (VII), Compliance (VIII), Recommendations (IX), and Appendices. The appendices include BACT analysis, health risk assessments, permits to operate and other information. The proposal section of each evaluation usually provides a good description of the project.

2. It appears that the District relies solely on the applicant's statement rather than checking school boundary maps to verify that each project is compliant with HSC section 42301.6, which requires a public notice if the proposed source or modification is within 1000 feet from the outer boundary of a school site. (It is ARB staff's understanding that District Policy APR 1010 was updated in January 2004. The policy now specifically directs District staff to verify whether equipment will be located within 1,000 feet of a K-12 school and to state this in the engineering evaluation.)

The engineering evaluation for Pacific Choice Brands (Application C-906-4-2, Project #1010347) stated: "The applicant states the source is not located within 1,000 feet of the outer boundary of any K-12 school; therefore, a school notice pursuant to HSC section 42301.6 is not required."

Similar language was included in the engineering evaluation for the California Department of Corrections, Corcoran, CA (Application C-214-31-0, Project #960578) which stated: "The Applicant states that the facility is not within 1,000 feet of the outer boundary of a school site, so the public noticing requirement of California Health and Safety Code 42301.6 does not apply."

Because it is the District's responsibility to determine whether a project will comply with all applicable rules and regulations, the ARB staff believes it would be good engineering practice for the District staff to verify that the applicant's claims are accurate and include a brief statement confirming such in the engineering evaluation. Verification that an emission unit is not located within 1,000 feet of a school could be accomplished by a quick review of local area maps. ARB staff understands that an updated version of Policy APR 1010 - Application Review Format was issued on January 26, 2004. The policy now specifically directs District staff to "Verify whether or not the equipment is or will be located within 1,000 feet of the nearest outer boundary of a K-12 school. State this in the EE [engineering evaluation]."

3. For its calculations, the District often presents tables of emissions with comparisons to trigger levels for BACT, offsets, major sources and public notice. Sample or complete calculations showing how emissions were determined are usually provided. Most of the District's evaluations show the assumptions made by permit engineers.

4. The District should consider streamlining some of its evaluations as a means to help reduce its backlog.

Some evaluations contain extra information that may not be necessary for specific projects adding to the volume and complexity of the evaluation and reducing clarity. District stakeholders also commented that they felt that there was too much "engineering" done in the evaluations. For example, a project involving a new chrome plating tank does not need a discussion on complying with District's visible emission rule, BACT trigger levels for CO, etc. Only a TBACT discussion is necessary. Detailed tables of emissions evaluating whether offsets and public notice are triggered with the respective trigger levels may not be necessary when the emissions from the new equipment or modification would obviously not trigger them.

5. Some of the District's engineering evaluations contain contradictory statements and inconsistencies between stated and calculated operating hours. Some of these errors may be attributed to "cut-and-paste" mistakes when past engineering evaluations were used as templates.

ARB staff found numerous Authority to Construct engineering evaluations that cited the 1991-adopted version or the 1995-amended version of the New Source Review (NSR) rule when more recent versions have been adopted and should have been cited and used.

Archie Crippen Recycling (Applications C-53-4-0 and '-5-0, Project #970066) applied for two Authorities to Construct for 500-bhp and 350-bhp diesel-fueled IC engines used to power equipment at a concrete recycling operation. In the engineering evaluation, the potential to emit for VOC emissions from each engine was calculated to be 2.3 and 6.9 pounds per day, respectively. However, the annual VOC emissions for purposes of offsets and major source determinations were characterized as being zero (in tables in sections VII.F.2 and VII.H). These annual emissions were inconsistent with the 500 hours per year operational limit proposed by the applicant and District Policy APR 1115, which states that values calculated at less than 0.5 pounds per day shall be equal to zero.

An application filed by Stanislaus Food Products Company (Applications N-1680-1-6, '-2-6, '-3-8, and '-4-6; Project #1020497) concerned the replacement of existing boilers with ultra-low-NOx burners. The application stated: "The facility typically operates 24 hours per day, 7 days per week, and 16 weeks per year." It then stated: "It is assumed that the unit's annual emissions are evenly distributed throughout the year as follows: ΔPE (lb/qtr) = [PE2 (lb/yr) – PE1 (lb/yr)] ÷ 4 qtr/yr," which is inconsistent with a seasonal

operation. It is ARB staff's understanding that the quarterly calculation was included to show the values that would be entered into the District's internal emission profile database and do not directly correlate to a particular rule requirement. However, if the emission profile database is used for air quality assessment and planning purposes, ARB staff suggests that emissions be assigned to the quarter(s) in which they actually are expected to occur.

The engineering evaluation for Dunlop Almond Hulling (Application N-2101-1-3, Project #1011801) contained inconsistent determination of the number of annual operating days. The Authority to Construct engineering evaluation said that the maximum operating schedule proposed by the permit applicant was 70 days per year, yet the emissions calculation used 75 days per year.

The engineering evaluation for SK Foods (Application C-1163-1-4, '-2-4, and '-7-0; Project #1020252) showed an increase in potential to emit for NOx emissions greater than 2 pounds per day so the BACT threshold was exceeded and BACT was required. However, a subsequent portion of the evaluation stated that BACT was triggered for VOC only, with no mention or analysis of BACT for NOx. In addition, annual post-project emissions were provided in pounds per day rather than in pounds per year. And lastly, an annual specific limiting condition was determined by limiting the hours of operation, yet there was no permit condition requiring installation of an hour meter, which would be necessary to determine that the operating hours limit was not exceeded.

While not a matter of District policy, these examples show that consistency and accuracy need to be maintained when completing and reviewing the Authority to Construct evaluation in order to avoid confusion and inaccuracy.

6. The ARB staff found instances where previous District requirements were weakened through removal of permit conditions as part of a project to modify existing equipment.

In the project for Vintage Petroleum, Inc. (Applications N-370-1-2 and '-2-2, Project #990773), the engineering evaluation stated: "The applicant received ERC's for the replacement of existing engines with these engines. One of the conditions attached to the issuance of the ERC's was that a CEMS would be utilized on each of these engines such that the validity of the ERC's could be continually demonstrated. Subsequently, as part of Northern Region Project #950618, the CEMS requirement was dropped and replaced with several other conditions including annual source testing. Annual source testing will continue to be required." No technological reasons were provided to show that a CEMS was infeasible. A CEMS represents a more rigorous monitoring requirement than is achieved through enhanced maintenance, periodic NOx readings with a portable analyzer, and annual source testing.

Lepreno Foods (Applications N-474-2-3, '-3-3, and '-4-3; Project #1010462) requested to modify the source-testing frequency for three existing 33.0 MMBtu/hr boilers. Each

boiler was permitted to source test *annually* due to conditions imposed from banking ERCs in accordance with section 5.6 of Rule 2301 (Emission Reduction Credit Banking). At the time the ERC certificate was issued, annual source testing was determined to be the method the source would use to ensure that the ERCs banked were real, surplus, permanent, quantifiable, and enforceable. Under this project, the District determined that if past source test results indicated NOx, and CO emissions of less than or equal to 90 percent of the permit limits, then verification of the validity of the ERCs by the source testing frequency specified in Rule 4305 would be acceptable. District Rule 4305 (Boilers, Steam Generators, and Process Heaters; Amended December 19, 1996) required compliance testing at least once every 12 months, and after demonstrating compliance on two consecutive annual source tests, allowed the units to be tested not less than once every 36 months.

7. The ARB staff found a case where the District applied cost values from different basic equipment types to cost out of a technologically feasible BACT control.

Tempo Plastics Company (Application S-995-5-0, Project #960359) proposed to replace a 7.8 MMBtu/hr turbine with a 9.0 MMBtu/hr cogeneration unit. The BACT cost-effectiveness analysis was based on data obtained from Lone Star Gas Liquids Processing Inc. Project #950676 for a 10.28 MMBtu/hr boiler. The District assumed the cost data for installation of SCR on a boiler was comparable to placing SCR on a turbine. The District BACT cost-effectiveness analysis determined that the final price of $10,048 per ton NOx reduced was not cost effective to install SCR. Instead, the analysis concluded that a 31-ppmv low-NOx combustor was the most effective control strategy remaining after eliminating SCR for cost reasons.

8. Staff found District engineering evaluations containing permissible emission estimates that do not correspond to the permitted equipment.

Permits for Modesto Irrigation District (Applications N-2052-1-3 and '-2-3, Project #1011894) contain conditions that the facility must obtain an Authority to Construct permit from the District before its annual operating hours exceed 877 hours in order to demonstrate how compliance would be achieved. The origin of the 877-hour limit is District Rule 4703 - Stationary Gas Turbines. In accordance with section 4.2, turbines that are limited by permit condition to operate no more than 877 hours per year have less stringent NOx emission requirements. However, in this project, old permit conditions were not updated—the permits still allow approximately 900 hours per year of operation at the maximum hourly fuel rating and more hours if operating below the maximum rating. Annual fuel usage should have been reduced, as it corresponds to the maximum emissions allowed. Since the unit cannot exceed 877 hours without substantial reduction in required NOx ppmv levels, the maximum emissions should be based on 877 hours worth of fuel at the allowable emission rate.

Supreme Specialties (Application N-2923-3-4, Project #1000143) installed control equipment and low-NOx burners with FGR on a natural gas-fired boiler. Section VI of

the engineering evaluation states that the "applicant is proposing to install a low NOx burner with FGR to the existing natural gas fired boiler to reduce the NOx emissions from the generator." However, the higher permitted NOx emission rate and annual emission limit were retained. In addition, VOC emissions increased 3.9 pounds per day. According to the BACT analysis, as the source is a "small emitter," the only VOC control requirement was that the natural gas boiler use natural gas.

Recommendations

Significant Recommendations:

1. The District should ensure that existing permit conditions imposed to satisfy the requirements of a District rule are not weakened through a subsequent permitting action to modify the emission unit. For example, ARB staff found a case where a source received emission reduction credits (ERCs) for the replacement of natural gas-fired engines. One of the conditions of the ERCs was that a continuous emission monitoring system (CEMS) would be required to continually demonstrate the validity of the ERCs. In a subsequent permitting action, the CEMS requirement was removed and replaced with annual source testing.

Other Suggestions to Improve Program Effectiveness

1. ARB staff recommends that the District verify that a source is not located within 1,000 feet of a school using school boundary maps rather than relying solely on the applicant's statement. It is ARB staff's understanding that District Policy APR 1010 was updated in January 2004. The policy now specifically directs District staff to verify whether equipment will be located within 1,000 feet of a K-12 school and to state this in the engineering evaluation.

2. ARB staff found several cases where District engineering evaluations contained contradictory statements and inconsistencies between stated and calculated operating hours. Some of these errors may be attributed to "cut-and-paste" mistakes when previous engineering evaluations were used as templates. ARB staff supports the use of templates for the purposes of permit streamlining. However, when these templates are utilized, ARB staff recommends that the District staff exercise more care in reviewing its evaluations.

3. ARB staff recommends that the District take every reasonable effort to obtain cost values from the same type of basic equipment when conducting a BACT cost-effectiveness analysis. ARB staff found a case where the District applied the cost for installation of selective catalytic reduction on a boiler to a turbine.

Appendix C – Rule Development Program

C. RULE DEVELOPMENT PROGRAM

The Rule Development Program (RDP) is administered by the District's Planning Division. The RDP has several important functions including development of BARCT rules for NOx and VOCs, publication of the District rule book (except Permits, Fees, and Toxics), and development of industrial based control measures for attainment plans. There are currently 10 positions in the RDP: supervisor, supervising engineer, senior engineer, 3 engineers, and 4 staff level specialists. A project lead works with a team including permitting and compliance staff to prepare a draft which is reviewed by the supervisor.

The District's rule development program was reviewed with respect to the quality of existing rules (at the time of the review in March 2003) and the mechanism and procedures followed by the District for adopting new rules or making amendments to existing rules.

The District has a process for rules to be reviewed for enforceability, clarity, and BARCT/RACT consistency. Enforcement, planning, and legal staff can provide input to the rule development and amendment process. Staff reports are prepared for each new or amended rule scheduled for adoption. The District gives adequate consideration to the planning and conduct of public workshops. Based on our review, there is a good public process in place for the rule development program.

An extensive analysis of the District's existing prohibitory rules (March 2003 version) was performed as part of the review process. The rule's emission limits, exemptions, monitoring and recordkeeping requirements were compared to other districts' rules in the State with similar air quality status and to BARCT and "All Feasible Measures" determinations. Emission Inventories, rule development history and special case practicability were not taken into account. These elements are usually reviewed and covered during the district's rule development process.

In addition, in late 2003 and early 2004, staff from the District, Sacramento Metropolitan AQMD, Bay Area AQMD, and ARB conducted an extensive review of 10 major rule categories. For each rule category, each of the appropriate district rule or rules were compared to the most stringent rule in California, as determined by the ARB. The rule categories compared included boilers, turbines, stationary internal combustion engines, adhesives, solvent cleaning, degreasing, vehicle refinishing, valves and flanges, organic liquid storage, can and coil coatings, and graphic arts. For each category examined, staff prepared a detailed comparison of each rule element, including emission limits, applicability, exemptions, and inspection requirements. In general, there were a few areas where there was a potential for further emission reductions, but no major deficiencies were identified. Where a potential for further emission reductions was identified, each district committed to evaluating and updating the rules as appropriate.

Findings

1. At the time of the rule analysis, ARB staff identified rules that could technically have more stringent emission limits (of the 61 rules reviewed, about 34 could technically have more stringent emission limits). A complete analysis of 61 prohibitory rules reviewed by ARB staff has been shared with District staff. Refer to pages C-12 to C-15 for a complete listing of rules reviewed by ARB staff. Examples of District rules (existing at the time of review as of March 2003) which should be more stringent are listed below with a brief analysis. We should note that the District has acknowledged the scope for rule improvement. The District has done extensive work, since our rule analysis, in updating many of its rule emission limits especially for boilers, turbines, and internal combustion engines, and we commend the District for this effort.

NOx

I. Rule 4703, Stationary Gas Turbines, amended 4/25/02 - The 42 ppm Tier I limit in Rule 4703 for turbines rated between 2.9 and 10 megawatts is not as effective as the ARB's Determination of Reasonable Available Control Technology and Best Available Retrofit Control Technology for the Control of Oxides of Nitrogen from Stationary Gas Turbines, dated May 18, 1992 (Determination) limit of 25 ppm. Currently, seven districts have adopted turbine rules with a more stringent 25 ppm emission limit. The Tier II standards will not alleviate this discrepancy between the 42 ppm Tier I standard and the 25 ppm Determination limit for turbines in this size range when dry low NOx (DLN) kits are not commercially available.

Rule 4703 has a Tier II limit of 35 ppm for turbines 10 MWs and less if a DLN system is not commercially available as of April 30, 2003. The Determination and seven district rules (Ventura County, Antelope Valley, Sacramento County, Yolo Solano, South Coast, Placer County, and San Diego County) require turbines rated at less than 10 MW to meet a 25 ppm NOx limit regardless whether a DLN is commercially available or not. There are currently 33 electrical generation turbines in the state rated at less than 10 MWs with permitted emission limits less than or equal to 25 ppm. Nine of these turbines are located in the San Joaquin Valley Unified Air Pollution Control District.

II. Rule 4405, NOx Emissions From Existing Steam Generators Used in Thermally Enhanced Oil Recovery – Central/Western Kern County Fields, amended 12/17/92 - allows a limit of 110 to 140 ppm NOx (based on size) for gas fueled and 150 to 290 ppm for liquid fueled steam generators. This is high compared to a limit of 30 ppm NOx for gaseous fuel and 40 ppm NOx for liquid fuel for similar equipment which does not benefit from the grandfathering provision of Rule 4405.

III. Rule 4701, Internal Combustion Engines, amended 12/19/02 (District amended Rule 4701 on 8/21/03; District amended Rule 4702 on 6/16/05, which regulates emissions from internal combustion engines including those used in agricultural operations) - The emission limits in this rule are not as stringent as those listed in the ARB Determination of Reasonably Available Control Technology and Best Available Retrofit Control Technology for Stationary Spark-Ignited Internal Combustion Engines, November 2001 (Determination). The following table summarizes the differences in the NOx limits between Rule 4701 and the Determination:

NOx EMISSION LIMITS COMPARISON

Engine Type	Rule 4701 NOx Limit	BARCT NOx Limits
GENERAL		
Rich Burn	50 ppm or 90% reduction	25 ppm or 96% reduction
Lean Burn	75 ppm or 85% reduction	65 ppm or 90% reduction
Lean Burn, 2-Stroke, 100 horsepower	75 ppm or 85% reduction	200 ppm
Waste Gas-fueled	125 ppm or 80% reduction 50 ppm/90% if rich burn	65 ppm/90% if lean burn
PUBLIC WATER DISTRICTS		
Rich Burn	90 ppm or 80% reduction	25 ppm or 96% reduction
Lean Burn	150 ppm or 70% reduction	65 ppm or 90% reduction
Lean Burn, 2-Stroke, < 100 horsepower	150 ppm or 70% reduction	200 ppm
CYCLICALLY-LOADED ENGINE		
Rich Burn	300 ppm	300 ppm

A review of source test data and the cost effectiveness analysis contained in the Determination indicates that these recommended limits might be met cost effectively. The Determination is available for downloading at the following Internet address: http://www.arb.ca.gov/ractbarc/ractbarc.htm.

The rule allows 300 ppm NOx for oil field engines. Also the 1,000 hours of use in any one calendar being considered a low use engine is higher than other districts and higher than that of the 200 hours specified in the Determination.

IV. Rule 4354, Glass Melting Furnaces, amended 2/21/02 (District held the most recent rule amendment workshop on 5/17/05) - Rule 4354 specifies emissions limits of 4.0 pounds of NOx per ton of glass pulled for container glass or

fiberglass and 7.0 pounds of NOx per ton of glass pulled for flat glass. These limits exceed those achieved in currently operational plants and do not represent all feasible measures. Based on currently available technology, emissions limits of about 3.0 pounds NO_x per ton of glass pulled for container glass and about 5.0 pounds NO_x per ton of glass pulled for flat glass are achievable.

V. Rule 4352, Solid Fuel Fired Boilers, Steam Generators, and Process Heaters, amended 10/19/95 (The most recent workshop to amend this rule was held on 7/13/04) - The Rule 4352 limit of 0.20 lb/MMBtu for solid fuels other than municipal waste and biomass exceeds the Determination limit of 0.052 by a factor of 4. The Rule 4352 limit of 0.35 lb/MMBtu for biomass exceeds the Placer County APCD Rule 233 limit for biomass of 0.150 lb/MMBtu). The Rule 4352 limit of 200 ppm (equivalent to 0.260 lb/MMBtu) for municipal solid waste exceeds BACT determinations which are as low as 0.023, 0.039, and 0.105 lb/MMBtu for wood, coal, and biomass respectively.

VI. Rule 4311, Flares, adopted 6/20/02 - Limits are identical to the limits found in Santa Barbara County Rule 359, Flares and Thermal Oxidizers, adopted 6/28/94. Rule 4311 limits are higher than the emission limits of 0.06 lb/MMBtu in San Luis Obispo County APCD Rule 426, Ventura County APCD Rule 74.17, Ventura County APCD Rule 74.17.1, and BACT determinations.

VII. Rule 4902, Residential Water Heaters, adopted 6/17/93 - Exempts natural gas–fired water heaters used exclusively to heat swimming pools and hot tubs. Two districts, as listed below, do not exempt swimming pool and hot tub heaters.

South Coast AQMD Rule 1121, Control of Nitrogen Oxides from Residential Type, Natural Gas-Fired Water Heaters, amended 12/10/99

Ventura County APCD Rule 74.11, Natural Gas-Fired Residential Water Heaters – Control of NOx, adopted 4/9/85

VOC

VIII. Rule 4451, Valves, Pressure Relief Valves, Flanges, Threaded Connections and Process Drains at Petroleum Refineries and Chemical Plants, amended 12/17/92 (Since our review, District amended Rule 4451 on 4/20/05), and Rule 4452, Pump and Compressor Seals at Petroleum Refineries and Chemical Plants, amended 12/17/92 (Also amended on 4/20/05) - The State RACT/BARCT and other 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.

IX. Rule 4602, Motor Vehicle and Mobile Equipment Coating Operations, amended 12/20/2001 - does not reflect currently available technology per Air Resources Board's Determination of Reasonably Available Control Technology and Best

Available Retrofit Control Technology for Automotive Refinishing Operations, South Coast AQMD Rule 1151, Bay Area AQMD Rule 8-45, Sacramento Metro AQMD Rule 459, and San Luis Obispo County APCD Rule 423.

X. Rule 4401, Steam-Enhanced Crude Oil Production Well Vents, amended 1/15/98 - Unlike SJV Rule 4401, SCAQMD Rule 1148, Thermally Enhanced Oil Recovery Wells does not have relaxed limits for small cyclic operations. SCAQMD Rule 1148 also has fewer exemptions than SJV Rule 4401.

Both SCAQMD Rule 1173, Control of Volatile Organic Compound Leaks and Releases From Components at Petroleum Facilities and Chemical Plants and the Determination of Reasonably Available Control Technology for the Control of Fugitive Emissions of Volatile Organic Compounds from Oil and Gas Production and Processing Facilities, Refineries, Chemical Plants, and Pipeline Transfer Stations, published by ARB December 8, 1993 (RACT Determination) include inspection requirements. There are no inspection requirements in SJV Rule 4401.

XI. Rule 4403, Components Serving Light Crude Oil or Gases at Light Crude Oil and Gases Production Facilities and Components at Natural Gas Processing Facilities, amended 2/16/95 (District amended Rule 4403 on 4/20/05) - South Coast AQMD amended their fugitive VOC emissions rule (Rule 1173) applicable to oil and gas production fields and natural gas processing plants in late 2002. Rule 4403 is less stringent than SCAQMD Rule 1173. Potential rule improvements include lowering the gaseous leak threshold (10,000 ppm), 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 leak-less hardware technology.

XII. Rule 4402, Crude Oil Production Sumps, amended 12/17/92 - SJV Rule 4402 is less stringent than SCAQMD Rule 1176 VOC Emissions from Wastewater Systems (amended 9/13/96) in the following ways:

- There is no concentration limit for vapors emanating from sumps.
- The gap allowance for a rigid floating cover is 1 inch between wall and cover.
- Fixed-roof covers do not require hook up to a closed vent system vented to an air pollution control device.
- No control requirements for drains opening to sumps.
- Small producer exemptions.

XIII. Rule 4453, Refinery Vacuum Producing Devices or Systems, amended 12/17/92 - Allows for any control method with a 90 percent efficiency, including non-combustion methods, and does not restrict the sulfur content of the gas that is recovered as fuel gas.

SCAQMD Rule 465, Refinery Vacuum-Producing Devices or Systems, requires that all refinery vacuum-produced gases be collected and added to the fuel gas system or be burned in a permitted combustion device. Since SCAQMD has a sulfur limit for combustion in permitted devices and since combustion is much more than 90 percent efficient, this ensures that all the gas is treated for H2S removal and essentially all the VOC is removed.

XIV. Rule 4454, Refinery Process Unit Turnaround, amended 12/17/92 – Does not reflect the most effective process turnaround practices. Rule 4454 could be more stringent by requiring depressurization procedures which minimize venting of VOCs to the atmosphere such as requiring purging to expel essentially all the VOCs from the process units before opening up the units to the atmosphere.

XV. Rule 4404, Heavy Oil Test Station – Kern County, amended 12/17/92 - SJV does not have a fugitives oil production rule for heavy liquid streams. Rule 4404 is less stringent than SBAPCD Rule 331 and SCAQMD Rule 1173.

XVI. Rule 4682, Polystyrene Foam, Polyethylene, And Polypropylene Manufacturing, amended 6/14/94 - does not reflect the most effective district rules or commercially available technology. Requiring capture and control of emissions from all manufacturing processes, through and including storage of the final product for a minimum time period, could reduce VOC emissions. The amount of reduction could be significant and would depend on the foam type, blowing agents, manufacturing process, and the fugitive emissions not currently captured and destroyed under existing SJV definition of "Controllable VOC Emission Sources" (controllable).

XVII. Rule 4684, Polyester Resin Operations, amended 12/17/92 - is less stringent than ARB's RACT/BARCT determination for "Polyester Resin Operations." Rule 4684, Section 4.0 exempts any polyester resin operation from the provisions of Rule 4684 (except recordkeeping requirements of section 6.1) provided the volume of polyester resin materials used are less than 20 gallons per month. This exemption would be more stringent if it applied only to touch-up and repairs.

XVIII. Rule 4652, Coatings and Ink Manufacturing, amended 12/17/92 - does not meet State RACT/BARCT or "all feasible measures" requirements or determinations. Rule 4652 might include specific language, similar to the provisions in Bay Area Rule 35, to control emissions of VOCs during equipment cleaning, wipe cleaning, solvent use and disposal. Rule 4652 could include test methods to determine the VOC content of solvents or VOC emissions resulting from their operations to ensure compliance with these new provisions.

XIX. Rule 4604, Can and Coil Coating Operations, amended 12/20/01 (Since our review, District amended this rule on 1/15/04) - VOC limits do not reflect the most stringent requirements for the following coatings: sheet coat and overvarnish

three-piece can interior body spray and exterior body spray. More stringent VOC limits are found in San Diego County APCD Rule 67.4.

XX. Rule 4603, Surface Coating of Metal Parts and Products, amended 12/20/01 – does not have the most stringent requirements for extreme performance coatings and pretreatment wash primers. More stringent VOC limits are found in South Coast AQMD and Ventura County APCD rules.

XXI. Rule 4653, Adhesives, amended 12/20/01 - does not reflect the most effective commercially available technology. Low VOC technologies may be appropriate. Applicability could include sealants.

XXII. Rule 4661, Organic Solvents, amended 5/16/02 - has current emission limit for processes that use photo chemically reactive solvents of 40 lbs/day (or approximately 1,200 lbs/mo). SCAQMD Rule 442 contains an emission limit of 833 lbs/mo from all VOC-containing materials.

XXIII. Rule 4662, Organic Solvent Degreasing Operations, amended 12/20/01 - could be improved by eliminating exemptions for small degreasers. Additional emissions reductions could also be realized by lowering VOC limit for solvents used in cold cleaners. Also, equipment-operating requirements should be re-instated for cold cleaners using low VOC solvents.

XXIV. Rule 4663, Organic Solvent Cleaning Storage and Disposal, amended 12/20/01 - could be improved by eliminating the exemption that allows facilities to exceed VOC limits if they use less than 55 gallons of solvent per rolling 12-month period. An alternative approach would be to allow the exemption only in cases where compliant solvents are not available. Ventura County APCD Rule 74.6 contains an exemption for "Facility-wide use of less than 1 gallon per week of non-compliant solvent where compliant solvents are not available."

XXV. Rule 4408, Glycol Dehydration Systems, adopted 12/19/02 - Although Rule 4408 is based on the Ventura County rule; it is less stringent in terms of leaks and exemptions. VCAPCD Rule 71.5 has just one definition for gas leak rates: 10,000 ppm, as methane. Also, Ventura's rule does not have a low flow exemption.

SOx

XXVI. Rule 4801, Sulfur Compounds, amended 12/17/92 - Allows a sulfur dioxide concentration at the point of discharge of 0.2 percent by volume (2000 ppm). Other district rules:

Santa Barbara County APCD Rule 309 – Specific Contaminants, Adopted 10/23/78
South Coast AQMD Rule 468 – Sulfur Recovery Units, Adopted 10/8/76

South Coast AQMD Rule 1101 – Secondary Lead Smelters/Sulfur Oxides, Adopted 10/7/77

require that concentrations of sulfur dioxide shall not exceed 200 ppm at the point of discharge calculated on a dry basis averaged over 15 consecutive minutes.

Fugitive Dust – PM10

Note: the following comments refer to Regulation VIII, amended 11/15/01. Since the time of the review, Regulation VIII was amended on 8/19/04, except for Rules 8071 and 8081 were last amended on 9/16/04.

XXVII. Rule 8011, General Requirements, amended 11/15/01. Under the 2003 PM10 Plan, the District is proposing adding in Rule 8011 a visible plume distance limit of 100 feet, and requiring that visible dust emissions not travel beyond the property line. With these changes, Rule 8011 will meet BACM requirements.

XXVIII. Rule 8021, Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities, amended 11/15/01. The District is proposing revisions to Rule 8021 identified in their 2003 PM10 Plan to meet the BACM requirements for controlling fugitive dust emissions. When adopted, Rule 8021 will meet the BACM requirements. To further strengthen the rule, we recommend maintain a moisture content of 12 percent on all earthmoving activities as required in South Coast AQMD Rule 403.

XXIX. Rule 8031, Bulk Materials, amended 11/15/01. Rule 8031 does not meet BACM requirements as written. The District is proposing revisions to the rule to meet the BACM requirements under the District's 2003 PM10 Plan.

XXX. Rule 8041, Carryout and Trackout, amended 11/15/01. The District is proposing revisions to Rule 8041 under their 2003 PM10 Plan consistent with the BACM requirements. Rule 8041 could be further strengthening by eliminating the exemption for operations less than 150 VMT. SCAQMD Rule 403 requires trackout removal immediately and applies to all activities.

XXXI. Rule 8051, Open Areas, amended 11/15/01. The District is proposing revisions to Rule 8051 under their 2003 PM10 Plan consistent with the BACM requirements. The rule could be more effective if the District further reduce the 3 acres threshold in non-urban areas. SCAQMD Rule 403 has no minimal level for non-residential.

XXXII. Rule 8061, Paved and Unpaved Roads, amended 11/15/2001. The rule currently does not meet best available control measure (BACM) requirements. The District is proposing to amend the rule under their 2003 PM10 Plan. With the adoption of the proposed changes listed under the PM10 Plan, Rule 8061 will

meet the BACM requirements. However, the rule can be further strengthened with the following recommendations:

Eliminate the low-end 500 average daily vehicle travel for the shoulder stabilization requirement for paved roads – requires that all paved roads have a minimum of 4 feet of stabilized shoulder.

Eliminate the vehicle trip per day limit on new unpaved roads - requires the owner/operator of an unpaved road to limit VDE to 20% opacity regardless of vehicle trips per day.

XXXIII. Rule 8071, Unpaved Vehicle/Equipment Traffic Areas, amended 11/15/01. Rule 8071 does not meet the BACM requirements. The District is proposing changes to Rule 8071 under their 2003 PM10 Plan. When these changes are adopted, Rule 8071 will meet the BACM requirements.

XXXIV. Rule 8081, Agricultural Sources, amended 11/15/01. Under the District's 2003 PM10 Plan. Changes are being proposed for Rule 8081. When these changes are adopted by the District, Rule 8081 will meet the BACM requirements. For rule effectiveness, we further recommend that the District include a requirement to limit tilling/mulching operations under high wind conditions, and establish a requirement for disturbed surfaces for livestock and feedlots. South Coast addresses these requirements in their rule.

Findings (continued)

2. We found that there are certain industrial source categories (such as boilers, engines, and turbines) that are covered by many rules. Having many rules for the same source category leads to confusion and difficulty in implementing the rule.

3, The District may not have sufficient resources to accommodate future workloads. Developing control measures takes away time from current rule development activity (RDP has a dual function as noted in Item 1 above).

4. The District has developed an effective formal procedure for the development of new rules and amendments to existing rules. The District RDP is based on "Rule Development Procedures" approved by the District Board in 1992. This document is somewhat out of date regarding teleconferencing and electronic procedures, but the RDP has its own procedures so there is no firm plan to update the 1992 document.

5. The District's rule development procedure provides a process for the District's rules to be reviewed for enforceability, clarity, and BARCT/RACT consistency. This procedure also provides a mechanism by which enforcement, planning, and legal staff can provide input to the rule development and amendment process.

6. The District's rule development procedure requires that a staff report be developed for each new or amended rule scheduled for adoption. The staff reports are generally very well done. The District has a public process in place for the rule development program.

7. The District gives adequate consideration to the planning and conduct of public workshops. The time of workshops is selected so that at least one in 3 workshops is conducted in the evening. The venue is based on where the operators are located e.g., oilfields and refineries are in Kern County only. There may be several days of workshops if sources are widespread.

8. The District actively works with the Citizen Advisory Committee and the California Group of Industry. The Citizen Advisory Committee (CAC) and California Group of Industry (CAGI), a coalition of businesses, are the watchdogs for the District. The District meets with these groups monthly, updates them on District's processes, and encourages them to present their concerns at public workshops.

Recommendations

Significant Recommendations:

1. The District should continue to review its rules to ensure it has implemented the most effective standards commensurate with its air quality challenges.

2. The District should repeal superseded rules for those source categories that are covered by many rules such as boilers, engines, and turbines.

Other Suggestions to Improve Program Effectiveness:

1. The District should consider updating its 1992 Rule Development Procedures (RDP) document regarding teleconferencing and electronic procedures.

2. The District should conduct rule effectiveness studies on a routine basis. There is currently no program to conduct rule effectiveness studies.

3. The District should develop rule implementation guidance documents for complex rules to ensure consistency in rule interpretation and enforcement. Guidance documents would be helpful in cases where the District has numerous rules for the same source category (such as boilers or internal combustion engines).

4. The District should consider acquiring sufficient resources to accommodate future workloads for its RDP.

5. The District should ensure that the Citizens Advisory Committee (CAC) can function to its full potential as a vehicle for rule development. The CAC membership should be balanced and include designees from industry, environmental groups, and government.

Listing of District Rules Reviewed by ARB Staff

Detailed Rule Analyses of San Joaquin Valley
Air Pollution Control District Rules

Rule 4101, Visible Emissions

Rule 4103, Open Burning

Rule 4106, Prescribed Burning and Hazard Reduction Burning

Rule 4201, Particulate Matter Emission Rate

Rule 4202, Particulate Matter Concentration

Rule 4203, Particulate Matter Emissions from Incineration
of Combustible Refuse

Rule 4301, Fuel Burning Equipment

Rule 4302, Incineration Burning

Rule 4303, Orchard Heaters

Rule 4304, Equipment Tuning Procedure for Boilers,
Steam Generators, and Process Heaters

Rule 4305, Boilers, Steam Generators, and Process Heaters

Rule 4306, Boilers, Steam Generators, and Process Heaters

Rule 4311, Flares

Rule 4313, Lime Kilns

Rule 4351, Boilers, Steam Generators, and Process
Heaters – Reasonably Available Control Technology

Rule 4352, Solid Fuel Fired Boilers, Steam Generators
and Process Heaters

Rule 4354, Glass Melting Furnaces

Rule 4401, Steam-Enhanced Crude Oil Production Well Vents

Rule 4402, Crude Oil Production Sumps

Rule 4403, Components Serving Light Crude Oil or Gases at Light Crude Oil and Gas Production Facilities and Components at Natural Gas Processing Facilities

Rule 4404, Heavy Oil Test Station – Kern County

Rule 4406, Sulfur Compounds from Oil Field Steam Generators

Rule 4407, In-Situ Combustion Well Vents

Rule 4408, Glycol Dehydration Systems

Rule 4451, Valves, Pressure Relief Valves, Flanges, Threaded Connections and Process Drains at Petroleum Refineries and Chemical Plants

Rule 4452, Pump and Compressor Seals at Petroleum Refineries and Chemical Plants

Rule 4453, Refinery Vacuum Producing Devices or Systems

Rule 4454, Refinery Process Unit Turnaround

Rule 4501, Alternate Compliance for Best Available Retrofit Control Technology

Rule 4601, Architectural Coatings

Rule 4602, Motor Vehicle and Mobile Equipment Coating Operations

Rule 4603, Surface Coating of Metal Parts and Products

Rule 4604, Can and Coil Coating Operations

Rule 4605, Aerospace Assembly and Component Manufacturing Operations

Coating Rules

Rule 4610, Glass Coating Operations

Rule 4621, Gasoline Transfer into Stationary Storage Containers, Delivery Vessels, and Bulk Plants

Rule 4622, Gasoline Transfer into Motor Vehicle Fuel Tanks

Rule 4623, Storage of Organic Liquids

Rule 4625, Wastewater Separators

Rule 4641, Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations

Rule 4642, Solid Waste Disposal Sites

Rule 4652, Coatings and Ink Manufacturing

Rule 4653, Adhesives

Dry Cleaning ATCM Comparison

Rule 4681 Rubber Tire Manufacturing

Rule 4682, Polystyrene Foam, Polyethylene, and Polypropylene Manufacturing

Rule 4684, Polyester Resin Operations

Rule 4691, Vegetable Oil Processing Operations

Rule 4692, Commercial Charbroiling

Rule 4693, Bakery Ovens

Rule 4701, Internal Combustion Engines

Rule 4703, Stationary Gas Turbines

Rule 4801, Sulfur Compounds

Rule 7070, ATCM Comparison

Rule 8011, General Requirements

Rule 8021, Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities

Rule 8031, Bulk Materials

Rule 8041, Carryout and Trackout

Rule 8051, Open Areas

Rule 8061, Paved and Unpaved Roads

Rule 8071, Unpaved Vehicle/Equipment Traffic Areas

Rule 8081, Agricultural Sources

Appendix D – Portable Equipment Program

D. PORTABLE EQUIPMENT PROGRAM

The District has had an active portable equipment registration program for approximately ten years, since Rule 2280 was adopted on October 20, 1994. Rule 2280 contains all the emission requirements and administrative requirements for the program. All the applications are processed in the Central region, and before final registration is issued, a compliance inspection of the portable unit is performed. These inspection assignments are handled by a coordinator in the central region. This coordinator also handles notifications and inspection assignments for ARB registered units. Currently there are approximately 584 units in the District registration program. For this program evaluation, we reviewed 10 files containing 10 engines and 2 equipment units in order to evaluate engineering and compliance procedures. In addition, we conducted three joint inspections (one per region) with District staff and reviewed 10 previously completed inspection reports to evaluate the inspection procedures for ARB registered units.

Findings

Overall Policies & Procedures

1. The District does not recognize the existence of certified nonroad engines in their portable equipment registration program. Federal law (40 CFR Part 85) preclude states from enforcing any standards or requirements to control emissions from nonroad engines. Rule 2280 has emission control requirements that the District is improperly imposing on certified engines.

Registration Documents

1. Many registrations list two emission units in the equipment description. It is usually an engine with an associated unit that produces PM10 such as a tub grinder. The emissions from the associated unit are not quantified, and the operating limitations on the registration only pertain to the engine. Rule 2280 contains requirements for equipment units such as 150 lbs/day of PM10. The listed registrations do not contain any conditions regarding this emission limit, nor do they contain any emission control requirements for the grinder such as water sprays. Examples found: P-3033-3-0, P-3456-1-0, P-3592-1-0 & P-2833-2-0.

2. Requirements appear on the operating conditions that are not consistent with Rule 2280. NOx limits are listed that are more stringent and some that are less stringent than the rule requires. Limits on conditions that are more stringent than the rule are not legally enforceable. Where less stringent NOx limits were found, the timing has been retarded and is listed in the conditions. One registration listed timing retard when it was not required. It is improper to impose an additional requirement that is not

listed in the rule. Examples found: P-3033-3-0, P-3458-1-0, P-4009-1-0, and P-3564-2-0.

3. On at least one registration (P-3958-1-0), an inappropriate component is listed in the equipment description. The Komatsu loader is a separate unit that is self-propelled and should not be considered part of the plant and therefore, should not be listed on the equipment description of registration.

4. Equipment descriptions on some final registrations do not list engine serial number. This reduces the enforceability of that registration. It allows the operator to swap out similar engines. Example found: P-3592-1-0

5. Calculation of daily and annual limit appears in Engineering Evaluation, but the limits do not appear on registration. For an abrasive blasting unit, throughput limits are calculated based on 150 lb/day and 10 tpy regulation limits, but the throughput limits don't appear on registration conditions. This makes the limits less enforceable. Example found: P-3558-2-0.

Engineering Evaluations

1. There are several incorrect references of diesel engine and equipment unit emission factors in the Engineering Evaluations (EE). District staff should recognize the source of emission factors and correctly reference them in the EE. Examples found: P-3033-3-0, P-3462-6-0, P-3958-1-0, P-2833-2-0

2. Several EE's list allowable annual operating time as >8,760 hours in a year, which does not make sense. Engineering procedures should be revised so that a comment is included with the calculation stating that an annual limitation is not necessary based on the calculation. Examples found: P-3462-6-0, P-3458-1-0, P-3558-1-0

3. On at least one rock crushing plant (P-3958-1-0), and one engine (P-3592-1-0), the emission calculations are incorrect. For the crushing plant, the calculation table assumes that 25% of the material will be re-crushed and re-screened. From the diagram of the plant, it is clear that this does not happen, so it is improper to calculate emissions for this. The engine has timing retarded 4 degrees, but the uncontrolled emission factor from AP-42 is used, resulting in an overestimation of emissions.

4. In some cases, there is inadequate documentation of compliance with the emission requirements. An engine is subject to 4 degree timing retard, yet no timing retard certification form is located in the file. However, the registration was issued with the timing retarded condition. Examples: P-3592-1-0 & P-4009-1-0.

5. There is no documentation of manufacturer's emission factors. The values listed on the application form were used. Documentation of emission factors must accompany the application unless default values are used. Example found: P-4009-1-0.

Review of District's Inspection Reports

1. There was no inspection report in at least one file (P-3033-3-0), even though it has been implemented into the final registration. This is simply an omission of paperwork in the file. Each file should be complete.

2. The Inspection report for P-3592-1-0 lists incorrect applicable rules. The Report lists Rules 4101, 4102 and 4701 as applicable for this engine. The registered engine is not subject to these rules. Only 2280 and 4801 apply, as listed in the Engineering Evaluation.

3. The Inspection report for P-4009-1-0 mentions emission test to verify emissions, but there is no documentation in the file.

4. The Inspector did not check for serial number on registration P-3592-1-0.

Rule 2280

1. Welding units are exempt from permits in Rule 2020, section 6.10; however, the applicability section of Rule 2280 lists welding units as eligible for registration. This is inconsistent.

Inspection Program for ARB units

1. The Inspection report (dated 1/16/02) for crushing plant P-3958-1-0 indicates that the engine powering the plant is registered with ARB #108039. There is no ARB inspection form for this unit submitted. Further checking revealed that this plant has been subsequently registered with ARB (issued 2/11/03), but nothing in the file indicated this change.

2. The District does not routinely inspect ARB registered portable equipment or consistently enter inspection reports into the ARB database.

3. No inspection reports have been entered into the ARB database via the Internet since 5/30/02.

4. The District has not been charging inspection fees of $75 per unit, as allowed by the statewide regulation.

5. Inspection staff has used portable analyzers for inspections to verify NOx and CO emissions for certified engines. On certified engines, there is no

emission limit stated on the registration, so this test is inappropriate. In addition, the portable analyzer test is not adequate to verify emission compliance since the engine originally was tested and certified in a multi-mode situation.

Recommendations

Significant Recommendations:

1. The District should recognize the existence of certified nonroad engines in their portable equipment registration program, and therefore should not impose any emission standards from Rule 2280 on these engines. 40 CFR Part 85 precludes states from enforcing any standards or requirements to control emissions from nonroad engines.

2. The District should inspect ARB registered portable equipment and enter inspection reports into the ARB database via the Internet.

Other Suggestions to Improve Program Effectiveness:

1. When the District's registrations list two emission units in the equipment description, such as an engine and tub grinder, the District should quantify the emissions and state operating limitations for both the associated unit and the engine in the operating conditions.

2. The District should state requirements in the operating conditions that are consistent with the NOx limits in Rule 2280.

3. Equipment descriptions on final registrations should list the engine serial number.

4. The District should place calculated daily and annual operating limitations from the engineering evaluation into the operating conditions of the registration.

5. The District should verify that references to diesel engine and equipment unit emission factors in the engineering evaluations are correct. Files should have adequate documentation of compliance with emission requirements. Documentation of emission factors must accompany an application unless default values are used.

6. The District should revise engineering evaluations that list allowable annual operating time greater than 8,760 hours in a year to include a statement that an annual limitation is not necessary based on the calculation. The District should make sure that emission calculations are correct.

Appendix E – Hot Spots Program

E. HOT SPOTS PROGRAM

The Air Toxics "Hot Spots" Program requires stationary sources to report the types and quantities of certain substances their facilities routinely release into the air in their district. The goals of the Air Toxics "Hot Spots" Program are to collect emission data, identify the number of facilities having localized impacts, ascertain health risks, notify nearby residents of significant risks, and reduce the risk from high-risk facilities. ARB staff included this program as part of the San Joaquin Valley Program Review.

Findings

1. During the program review, ARB staff identified several Phase III (less than 10 tons per year) facilities that had not completed inventory requirements. The District has recently completed these reports and plans to submit the emission inventories to ARB. The District and ARB staff have committed to work more closely to track the status of facilities in the “Hot Spots” program.

2. The District’s emissions inventory database contained the essential components necessary to quickly and accurately calculate a facility prioritization score.

3. The District has never assessed a monetary penalty for a facility that has not complied with the “Hot Spots” Program, nor has the District revoked any permits from facilities for not complying with the reporting requirements.

4. The California Emission Inventory Development and Reporting System (CEIDARS) 2001 emissions inventory shows that approximately 12% of the toxic emissions at facilities were updated since 1996. The District has recently provided inventory updates for more than 50% of the toxics facilities for the year 2002, which is a significant improvement.

5. For several facilities in the 2001 database, it was unclear why the status (prioritization score) of a facility changed in the “Hot Spots” program. However, once a facility was deemed high priority, it was immediately notified of health risk assessment (HRA) requirements.

6. The District has completed the evaluation of all Phase I (>25 tons per year of PM, NOx, or SOx) and Phase II (>10 tons per year) facilities.

7. The District’s Emission Inventory Management System (EIMS) database contained the essential inventory components necessary to complete a facility prioritization.

8. The District received health risk assessments (HRAs) in a timely manner. In most cases, where a facility did not meet a specified timeframe, the District followed up with the facility to ensure completion of the HRA.

9. The District reviewed the modeling, and, following the Office of Environmental Health Hazard Assessment (OEHHA) review, approved HRAs in a timely manner. Upon approval of the HRA, the District immediately determined whether the facility was significant and informed the facility of the significance level and the requirements for public notification. Most facilities successfully reduced their risk below the significance level as part of their public notification.

10. Since the inception of the "Hot Spots" Program, the District has conducted public notification for 14 facilities. The District worked extensively with the facility and public throughout the public notification process. The District worked expeditiously to meet most timeframes as specified in their public notification procedures. Some facilities have conducted more than one public notification.

11. In cases where a facility poses a significant risk and no receptors presently exist within the impacted area, the District notifies landowners and land-use agencies of the potential significance.

12. The District has adopted a Board-approved policy which specifies trigger levels at which a risk reduction audit and plan (RRAP) will be required. For cancer risk the trigger level is 100 in a million. For non-cancer chronic and acute health impacts a hazard index greater than 5 is the trigger level for RRAP. No facilities have been required to complete a RRAP.

13. The District has approximately 1,500 industrywide facilities made up of gas stations, dry cleaners, autobody shops, and printers. Most of these facilities have been inventoried and prioritized. Public notification has not yet been completed for any industrywide facilities (note: this has not been completed for any district with potential significant risk industrywide facilities).

14. The District publishes an Annual "Hot Spots" Report but in the past has not included information about the status of facilities in the "Hot Spots" program. Based on conversations during the audit, the District began to include this type of information in their 2002 report and posted a PDF version on their web site. The District should provide a link to previous annual reports on their web site where all of the most recent reports can easily be reviewed by the public.

Recommendations

Significant Recommendations:

1. The District should complete inventory reports for the last remaining facilities in the “Hot Spots” program.

2. For several facilities in the 2001 database, it was unclear why the status (prioritization score) of a facility changed in the “Hot Spots” program. ARB staff found that the District’s electronic records were often incomplete and paper files were not consistently documented. The District contends that sufficient documentation exists regarding each change in a facility’s status and how that affects their prioritization. The District should include a list of all facilities and their status (prioritization score and risk) in their annual “Hot Spots” report. The District should describe any change in a facility’s prioritization score or health risk assessment in their annual “Hot Spots” report, and when possible, update the emission inventory to reflect the change in status. This will allow ARB and the public to track how emissions and risk have changed for each facility in the “Hot Spots” program. The District has begun to include this type of information in their annual “Hot Spots” report, which is a significant improvement.

3. The District should complete the screening health risk assessments for industrywide facilities and, when necessary, require public notification for facilities with a risk above the notification threshold. It should be noted that no other District with potential significant risk industrywide facilities has completed this program requirement.

Other Suggestions to Improve Program Effectiveness:

1. The “Hot Spots” program only requires facility inventory updates every four years from only some facilities. If possible, and even though it may not be required for all facilities, the District should strive to provide more frequent toxics emissions updates to ensure that ARB efforts to adopt ATCMs, SIPs, and other control measures are supported by the most recent toxics data available.

2. The District should assess penalties for facilities that have not complied with the “Hot Spots” Program.

3. The District should strive to include stack parameters for their point sources in their facility emission inventory submittals. ARB staff recognizes the resources required to collect this data, and in some cases unclear reporting guidelines, and is helping the District prioritize their efforts at submitting more complete emission release (stack) data.

4. The District has exempted a number of new facilities from “Hot Spots” reporting requirements under HSC 44344.5 section (b). New facilities exempted from reporting requirements that meet the requirements in HSC 44344.5 section (b) should be identified in the Annual Status Report. The cancer risk score should be included if the facility risk is greater than 1 per million.

Appendix F – Emissions Inventory Program

F. EMISSIONS INVENTORY PROGRAM

Two primary areas of the emission inventory program were examined, the inventory development and data submittals. With regards to inventory development, the District has provided criteria emissions updates for facilities that emit greater than 10 tons of any criteria pollutant. For those area source categories it has updated, the District has submitted data to the ARB with detailed and clear methodologies. The District has also developed a comprehensive growth data set for use in emissions forecasting.

Findings

Inventory Development

1. There are 1,078 facilities that emit criteria pollutants in the 2001 database. The District has significantly improved their criteria pollutant emission inventory for stationary sources that emit greater than 10 tons per year of any criteria pollutant. However, only two of the top seven facilities emitting the most criteria pollutants had toxic emissions data in CEIDARS, and both inventories were approximately 10 years old. Toxics inventories have recently been updated for more than 50% of the facilities for the 2002 database, which is a significant improvement. The District should continue this progress and confirm that all toxics data that must be reported by facilities has been provided to ARB.

2. The District has implemented the most current ARB emission inventory database structure (CEIDARS 2.5).

3. For those area source categories it has updated, the District has provided ARB with detailed and clear methodologies. However, in the 2001 database year, area source updates were provided for only 10% of the district responsibility area source categories. The District is working to update the remaining important area source estimates and methodologies. The District recognizes that a systematic review of all source categories it is responsible for is necessary. The District has also committed to posting their area source methodologies on their web site.

4. The District has developed and implemented a comprehensive growth rule data set that is being used to support emissions forecasting. However, additional resources should be devoted to review of control factors, especially for those source categories of significance in SIP development.

Data Submittals

1. The District has improved the data exchange process between the District and ARB with electronic databases and automated inventory calculations.

2. Until recently, the District did not provide ARB with merged criteria and toxics submittals, resulting in doublecounting of facilities in the CEIDARS database. Review of the 2001 database indicated that criteria and toxics emissions were not merged however as part of their 2002 submittal to ARB, the District did provide merged facility data.

3. Based on the 2001 inventory, the Toxic Release Inventory (TRI) database, and correspondence with District staff, a number of facilities in the 2001 database were determined to be either closed, newly constructed or had never been inventoried. The District therefore was requested to provide a list of all facilities with their status, indicating whether they are new or closed. The District has subsequently agreed to submit emission inventory data as a complete replacement. That is, any new District data would replace old data which prevents ARB staff from carrying forward old data from a previous inventory year. Starting in September 2003, the District has submitted complete replacement data reflecting the changes in the emission inventory. ARB staff is now able to compare data between the two databases to clarify new and old facilities.

4. Based on the 2001 database year, there are currently 271 SIC/SCC combinations that are not in the CEIDARS category table. Because of these invalid combinations, emissions from these sources are assigned under miscellaneous categories in the Almanac and other reports developed by the ARB. The District has recently implemented a process to restrict the use of only valid SCCs whenever an SIC is assigned. This procedure prevents the use of invalid SIC/SCC combinations and alerts the District when a new SIC/SCC combination is introduced. This information is then forwarded to the ARB for review and, if the combinations are found to be appropriate, will be included in the category table. This is a significant improvement to the emission inventory database, but requires additional coordination between the District and ARB staff.

Recommendations

Significant Recommendations:

1. Until recently, the District has provided toxics emissions updates to ARB for only a small number of facilities. For example, in the 2001 database, toxics data were reported for only two of the top seven emitters of criteria pollutants. Toxics inventories have recently been updated for more than 50% of the facilities in the 2002 database year although a number of facilities in the AB2588 program are still missing toxics data. The District is encouraged to continue their improvements in the reporting of facility toxics data and to provide toxics updates for all AB2588 facilities where data are missing.

2. Although the District has recently reviewed and updated several area source categories of importance to SIP development, the majority of area source categories that are district responsibility have not been updated recently. According to a longstanding agreement between ARB and the districts, 1/3 of all district area source categories should be updated every year such that all area source categories are updated every three years. As part of their 2001 inventory submittal to ARB, the District provided updated area source emissions for approximately 10% of the district responsibility area source categories. The District should review and update the remaining area source categories as soon as possible and provide ARB with the updated emission estimates. The District is also asked to reconcile these estimates with their point source data. It would be helpful if the District posts their area source methodologies on their website.

3. The District has recently begun providing ARB with merged criteria and toxics data for facilities. ARB encourages the District to continue providing merged submittals as it prevents double counting of facilities in the CEIDARS database.

Other Suggestions to Improve Program Effectiveness:

None

Appendix G – Carl Moyer Program

G. CARL MOYER PROGRAM

The Carl Moyer Memorial Air Quality Attainment Program (Carl Moyer Program) is a voluntary incentive program designed to increase the replacement of older, higher-emitting diesel engines to improve air quality. ARB distributes the funds to participating Districts for local implementation and maintains monitoring, management and statewide reporting responsibilities. Following the Carl Moyer Program Guidelines and local policies and procedures, the Districts award and manage these incentive contracts for funds that are made directly with the engine owners.

As part of this program review, ARB staff reviewed files, interviewed District staff, and made site visits to view engines and equipment. ARB's review and findings pertaining to the Carl Moyer Program indicate the District has made many improvements to their implementation of the Carl Moyer Program since program start-up (FY1998-99). The focus of this review is FYs 2000-01 and 2001-02. ARB continues to see progress in implementation over time, with District staff receptive to suggestions for programmatic changes.

Findings

1. During the office portion of the review, ARB staff had the opportunity to use the files and two databases the District maintains for each funded project. While locating the files and the information within them did not present any problems, at the time of the program evaluation, the information in the databases and hard copy files were not consistent. The District needs to assure the quality of the data, including cross checking the information in the databases, and institute procedures for updating the databases whenever there are changes to the projects.

2. The District's written policy is to notify applicants of the completeness of their application within ten days of receipt of their application. At the time of the audit, the District was not always in compliance with its written policy.

3. At the time of the program evaluation, the grant recipients' applications appeared to be used as working documents, with handwritten changes made throughout. These changes rarely included annotations of who, when or why the changes were made. The application should be a stand-alone document of exactly what the grant recipient requested. A separate calculation form (with dates and initials) should be used to correct applicant errors; calculate emissions benefits and cost effectiveness; and, justify changes (e.g. modification to project life). A calculation form should also be used when there are changes in the completion of the project (see finding immediately below).

4. At the time of the audit, in a number of instances, the District's post-inspection monitoring visit revealed that projects were not completed as outlined in the District's contract with the grant recipient. For example, from the documentation in the file for project number 00-01 N-340(1), the project appeared to include an engine that is not eligible for Carl Moyer Program funding – a spray rig. The database and the contract show this engine as an agricultural pump engine. It is unclear from the documentation whether the spray rig engine was inappropriately paid for with Carl Moyer Program funds. At the time of the audit, the District had no procedures for follow-up on such occasions. The District should ascertain continued project eligibility; recalculate emissions benefits and cost effectiveness; and, develop criteria for adjusting payment, when necessary.

5. At the time of the program, documentation of the status of the old replaced engine was not always complete. On the written statements that the engine will only be sold out of state, ARB found a number of occasions in which, these forms (and other engine sale forms) were not signed by the buyer of the old engine. The District did not have procedures for and consistent documentation of the status of the old replaced engine when the engine is destroyed. ARB recommends the post-inspection monitoring form be modified to include a section on the dispensation of the old engine and pictures be included when the engine is destroyed.

6. ARB staff did not find any situations where the District analyzed and responded to the absence or presence of the grant recipient's annual reports. For example, when the annual hours of operation were significantly less than what was committed to in the contract, it appears the District did not take any action. There was no recalculation of emissions benefits and cost effectiveness. Furthermore, the District did not investigate potential problems with the hour meter. Nor did the District take any action against the grant recipient for overestimating the use of the engine. When the lack of an annual report was discovered during a site visit, however, the District immediately took action to obtain the report from the grant recipient.

Accomplishments

1. ARB's review and findings pertaining to the Carl Moyer Program indicates the District has made many improvements to their implementation of the Carl Moyer Program since program start-up (FY1998-99). According to the Draft 2004 Carl Moyer Program Annual Status Report, "Over the first four years of the Carl Moyer Program, SJVAPCD received $17,989,495 in State funding, which it matched with $7,252,524 in district funds…SJVAPCD has provided Carl Moyer Program incentive funds to pay for about 1,280 engines that operate in the district." The staff at ARB

estimates that Carl Moyer Program funds obligated by the District will provide over 1,300 tons of NO_x and a substantial amount of PM_{10} reductions annually for the life of the projects. ARB continues to see progress in implementation over time, with District staff receptive to suggestions for programmatic changes.

Recommendations

Significant Recommendations:

1. The District should update and maintain the information in its databases and make sure information is consistent with hard copy files. The District should institute procedures for updating databases whenever there are changes to the projects.

2. The District should comply with its written policy regarding notification of applicants of the completeness of their application.

3. The District should use the grant recipients' applications as stand-alone documents of exactly what the grant recipient requested. A separate calculation form (with dates and initials) should be used to correct applicant errors; calculate emissions benefits and cost effectiveness; and, justify changes (e.g. modification to project life). A calculation form should also be used when there are changes in the completion of the project (see finding immediately below).

4. For projects that were not completed as outlined in the District's contract with the grant recipient, the District should ascertain continued project eligibility; recalculate emissions benefits and cost effectiveness; and, develop criteria for adjusting payment, when necessary.

5. The District should completely document the status of old replaced engines. On the written statements that the engine will only be sold out of state, forms (and other engine sale forms) should be signed by the buyer of the old engine. The District should develop procedures for consistent documentation of the status of the old replaced engine when the engine is destroyed.

6. The District should analyze and respond to the absence or presence of the grant recipient's annual reports.

Other Suggestions to Improve Program Effectiveness:

None

Appendix H – Ambient Air Monitoring Program

H. AMBIENT AIR MONITORING PROGRAM

Air monitoring programs are established by the districts to collect ambient air quality data in compliance with U.S. EPA requirements to monitor progress toward meeting air quality standards, identify patterns of transported pollutants, locate metropolitan pockets of high pollutant concentrations, and provide data for indicators of daily air quality such as the Pollutant Standard Index.

The overall goal of the District's air monitoring program is to provide accurate and precise data to meet monitoring objectives, to minimize loss of air quality data due to analyzer malfunctions, and to provide representative and comparable data of known precision and accuracy.

The purpose of this evaluation was to determine whether the District's air monitoring program during the study period satisfied the U.S. EPA's regulations stipulated in 40 CFR, Part 58. Compliance with these regulations is necessary if the data are to be considered "data-for-record" per California Code of Regulations, Title 17, Article 3, Section 70301. Only data meeting these requirements are eligible to be used in actions taken pursuant to the Federal Clean Air Act of 1990 and the California Clean Air Act.

ARB staff initiated the evaluation by sending the District a system audit questionnaire. Responses to the questionnaire were used to determine which areas of the program might warrant closer examination. The District's air monitoring program was evaluated with respect to network size and siting, resources and facilities, data and data management, and quality assurance/quality control.

Findings

1. Site reports are now kept at the District office and at the monitoring stations. Reports are reviewed and updated as time and personnel allow.

2. The District now operates both PM10 samplers on make-up days at collocated sites. Precision data are now being reported to the AQS for samplers run on make-up days.

3. All log entries are now initialed by the station operator.

4. The District is now keeping all calibration report files accurate and current and at each monitoring location. Non-current calibration reports are sent to the District office where they are stored for future reference.

5. District staff has made progress in organizing documentation and making all records accessible, and this should remain a priority until accomplished.

6. The District has separated data review responsibilities from the data collection and monitoring activities to improve quality control. To make the position more independent of the staff actually collecting the data, the position has been assigned to the Air Quality Analysis Section. This also provides more technical oversight of the data from meteorologists and modelers that use the data on a regular basis.

7. The District consistently exceeds data completeness criteria and submits required reports ahead of schedule. Data completeness for the last two years has exceeded 90%.

8. The District Air Monitoring Technicians continue to do a good job in maintaining their sites as evidenced by their ability to keep the monitoring instruments operational and providing complete data sets for each pollutant measured.

9. The District is in the process of updating their standard operating procedures (SOP). Since the initial system audit review, several of the SOPs have been finalized.

Recommendations

The items listed below are recommendations to help improve the operation and accountability of the sites and help to ensure good quality data (see the U.S. EPA's 40 CFR, Parts 50 and 58 as well as the U.S. EPA's Quality Assurance Handbook for Air Pollution Measurement Systems, Volumes I and II).

Significant Recommendations:

1. The District should have all certification equipment re-certified at the intervals suggested by the U.S. EPA. All monitoring equipment should be calibrated using the U.S. EPA's frequency guidelines.

2. The District should implement a Corrective Action Program. Procedures should be established for handling data, which falls outside established limits.

3. The District should conduct a detailed review of the siting criteria and instrumentation listed for each of the District's air monitoring sites in the U.S. EPA's AQS. This review will ensure that all monitoring criteria are correct and that all instrumentation and equipment that are no longer operating or reporting data have been closed.

4. The District should create QA/QC documents detailing procedures and/or guidelines for the collection, analysis, validation, storage, and reporting of data.

Other Suggestions to Improve Program Effectiveness:

None

Appendix I – Implementation of 1994 Review Recommendations

I. IMPLEMENTATION OF 1994 PROGRAM REVIEW RECOMMENDATIONS

In 1994, the ARB conducted the first comprehensive program review of the unified District. As with all program reviews, a district is asked to implement the report's recommendations. This chapter provides examples where the District still needs to implement the 1994 recommendations. Recommendations that have been effectively implemented are also mentioned.

Items District has Addressed

Compliance

1. The District adopted written procedures in October 1995 for evidence gathering and sample collection.

2. Consistent with ARB's 1994 recommendations, the District has increased penalty amounts since 1994.

3. The average settlement has increased from $723 to $1215. In 1999, the District adopted a size multiplier of 1 to 5 in computing penalties; the largest facilities are subject to a five-fold penalty increase. The District has used the multiplier fairly and consistently.

4. In response to ARB's 1994 recommendations, the District has improved its air quality complaint handling statistics.

5. In 1994, ARB staff recommended improvements in the District's monitoring of emissions at major sources. In response, the District has installed a modern system for retrieving emissions data from facilities equipped with continuous emission monitors on a real time basis.

6. In response to ARB's 1994 recommendations, the District has made significant improvements to its open/agricultural burning program. A daily burn authorization program has been created and is centralized at the Fresno office. Burn authorizations for the 93 allocation zones are entered into the centralized database. Further, the District now has its own meteorology section which determines the daily burn decisions and operates the prescribed burn forecast system for the district.

Permitting

1. As recommended in the 1996 evaluation report, the District tallies the potential to emit for each project and attaches it to every engineering evaluation.

Hot Spots

1. The District began implementing an improved database system in the mid-1990's and the 1996 evaluation report by ARB acknowledged that this was "an excellent first step toward efficient record keeping." However, additional work needs to be done so the District can track the status of facilities in the program.

2. The District has approved Health Risk Assessments (HRAs) in a timely manner after receiving comments from the Office of Environmental Health Hazard Assessment (OEHHA).

3. The District has conducted public notification for 14 facilities. The District worked extensively with the facility and public throughout the public notification process. The District worked expeditiously to meet most timeframes as specified in their public notification procedures.

4. Based on file reviews and discussions with District staff, no facilities have triggered the significance level necessary to complete a risk reduction audit and plan.

Air Monitoring

1. The previous problems the District faced regarding retrieval and delivery of PM-10 samples have been addressed and corrected. The District has been retrieving and delivering PM-10 filters in a timely manner.

Items District has not Addressed

Compliance

1. For a district of this size, procedures for establishing in-house laboratory capability should be explored as recommended in 1994. The District does minimal sampling and analysis for VOC content.

2. The District typically determines compliance with VOC coating limits by relying on MSDS and facility records, which may not be adequate to determine compliance. The District should collect samples as needed to fully determine compliance.

3. The District does not conduct quarterly inspections on sources with actual emissions greater than 25 tons per year.

4. The District does not have written protocols or memoranda of understanding with local county prosecutors.

5. The Northern and Central Regions do not report CEM violations to ARB within five working days as required by HSC section 42706.

6. The Northern and Central Regions have not developed a computer data base tracking mechanism (such as the one in use in the Southern Region) that would allow them to look forward to see which facilities will need to be source tested in the future.

7. The Northern and Southern Zone variance Hearing Boards should ensure that they discuss the findings in HSC section 42352 at the hearing as is done by the Central Zone Hearing Board. An exchange of information between the petitioner and the board members regarding each finding is necessary, if only to determine that the facts, circumstances and conclusions provided are accurate. Staff reports should refrain from justifying each finding.

Permitting

1. In 2003, the permit backlog had increased from 250 to 887. The District had reduced the backlog from 1700 at unification to 250 in 1994. The District needs to make a concerted effort to solve this problem.

2. The District still has Policy #APR 1115 for the rounding of fractional emissions (less than 0.5) to zero. In accordance with the Policy, the contribution from individual emission units with maximum daily emissions below 0.5 lbs/day are allowed to be set to zero. This policy may allow some facilities to avoid offsets, particularly when applied to multiple emission units at one source.

3. The District's BACT cost effectiveness thresholds for ozone precursors are still low compared to other Districts with similar air quality status (Bay Area, South Coast, Ventura, and San Diego).

4. As a streamlining measure, the District could still reduce the length and complexity of its process descriptions in its engineering evaluations especially for simple modifications.

5. The District needs to continue its progress in making permitting policies available to interested parties by posting all non-administrative policies on its website.

Hot Spots

1. In 1994 the District claimed that all facilities were being prioritized within 90 days. This has not been the case for several facilities over the past few years.

Emissions Inventory

1. Emission inventory methodologies for area sources are still not being updated on a regular basis.

2. The District has not notified ARB of all new or closed facilities for purposes of estimating emission inventories from these facilities. The District should provide an updated list of these facilities each year to ARB.

3. Many SIC and SCC Code combinations have still not been fixed, despite claims from the District that unusable codes are being corrected prior to the annual CEIDARS submittal to ARB.

Air Monitoring

1. The monitoring site at Stockton-Wagner-Holt was established in October 1996; however, the AQS designation is “Other”, not NAMS. The monitoring site at Stockton-March was never established.

2. The CO monitoring at the Bakersfield-Golden site is still classified as “Neighborhood” scale instead of “middle” scale. The District should update the U.S. EPA’s AQS to show the site’s correct classification.

3. Meteorological monitoring has not been initiated at the Fresno-Drummond and Hanford-Irwin stations.

4. The District has not developed a formal training plan. The District takes advantage of on-going training when available.

5. The District has still occasionally had to use expired standards due to time and/or personnel limitations.

Appendix J – Comments From Stakeholder Interviews

J. COMMENTS FROM STAKEHOLDER INTERVIEWS

As part of the review process, ARB staff interviewed selected stakeholders in the San Joaquin Valley. These represent environmental/public health groups, industry, and agriculture. Questions to these groups related to the District's regulations and rule development, permitting, and enforcement programs. Participants were also given an opportunity to comment on any other issues important to their needs. Not all stakeholders commented on every question. A summary of responses is given below:

Rule Development Program

1. Perception by one stakeholder was that the adopted rules did not reflect stringent emission levels required to protect health. More than one stakeholder reflected the sentiment that the regulations associated with the oil industry contained less stringent requirements and exemptions.

2. A comment was made that the adopted rules did not take into account the needs of several communities.

3. A comment was made that the District's rule adoption agenda was driven by U.S. EPA sanctions, law suits, or fear of lawsuits instead of a genuine desire to improve the air quality at a rapid pace.

4. Some stakeholders (particularly from the industry) commented that the rule development process in the last two or three years was extremely rushed and did not allow the opportunity to clearly address all issues.

5. Almost all stakeholders mentioned that the Citizens Advisory Committee (CAC) was not functioning to its full potential or doing the job it was originally designed to perform. Some comments in this area were that the CAC was dominated by industry and the environmental designees were not connected to any environmental or public health group.

6. Most stakeholders were complimentary of the technical ability of the District rule making and other technical staff. A suggestion in regard to rule making meetings was that stakeholders could benefit if a detailed transcript of the main discussion was made available to all attendees.

Permitting Program

1. Almost all Industry representatives interviewed were concerned about the need for additional permit streamlining efforts so that new permits or changes to existing permits can be processed in a reasonable time period. They are not satisfied with the current processing schedule which can take up to six to seven months to process permit applications.

2. A comment made by industry was that applications should be evaluated based on policies or rules existing on the date an application is deemed complete by the District.

3. There is a long turnaround time even when using the priority permitting (paying additional money on cost reimbursable basis) avenue.

4. Industry commented that the turnaround time is not reduced even when permit applications are submitted under the Certified Air Permitting Professionals (CAPP) program. The District needs to reevaluate what level of scrutiny should be given to permit applications which have already been processed by certified permit application preparers. The current process does not provide industry an incentive to use the CAPP program. This program is not working at all.

5. Permitting policies should be made public. Policies which are material to the interpretation of a rule should not be drafted without public review or input. Industry should know how the District intends to interpret a particular rule. Also, if the certified permit preparers are not made aware of the extensive permitting policies used by District engineers, they will not be able to accurately prepare the application packages.

6. Permits are overly complex as compared to permits for similar equipment in other districts. In some areas they have an unnecessary level of detail (for example, should the permit state the manufacturer of an oxygen controller). Also, the permit conditions should be grouped for easier reading.

7. Permits are not consistent with each other. A comment was made about the need for more coordination between rulemaking, permitting, and enforcement divisions of the District.

8. Two stakeholders stated that there was too much “engineering” being done in the evaluation of permit applications. This causes delays in turnaround time. District should streamline the evaluation process. Conversion of authority to construct to permits to operate should also be simplified.

Enforcement Program

1. Industry’s perception of the mutual settlement program (for violations) was that it is fair. Some stakeholders stated the District holds its ground with respect to penalty settlement amounts and will reduce penalties only if there are valid mitigating circumstances.

2. One stakeholder mentioned that the District should conduct more outreach and education programs especially for industry groups which have previously not been regulated.

3. One stakeholder was very concerned about the District conducting unannounced inspections for oilfield operations. He stated that these are typically unmanned locations, are in remote places, and that some advance notice would be reasonable for these operations.

4. One stakeholder requested that the District should issue more notices to comply (NTCs) rather than notices of violation (NOVs). Only “bad actors” should receive NOVs.

5. One stakeholder was not pleased with the quality of inspectors conducting inspections on gasoline dispensing facilities. This stakeholder was also concerned with the turnover of inspectors assigned to his operation. He stated that new inspectors sometimes do not know the facility, take too much time to be educated about the process, yet are too eager to give NOVs for situations which they later realize are not really in violation.

6. Most industry members were in general satisfied with the variance process. A suggestion in this regard was that the variance process should not be used for routine and predictable maintenance or shutdown/startup type events. These situations should be covered by the rule, policy, or permit conditions.

Complaint Handling

1. The only comment about this subject was that repeated complaints (especially by one or two individuals) about the same facility or process should not require an onsite visit. These should be handled over the phone or screened out. Repeated visits by the District inspector are a strain on the facility’s resources.

Misc. Comments

1. A stakeholder wanted to remind the District to reflect on the severe health issues facing Valley residents before making or delaying any air quality decisions. The childhood rate for asthma in San Joaquin Valley at 16% is thrice the national average. Schools have to adjust schedules based on poor air quality days.

2. Several stakeholders were all praise for incentive programs such as the Carl Moyer program as a way to reduce emissions by replacing old high polluting equipment with modern equipment.