California Environmental Protection Agency
AIR RESOURCES BOARD

Butte County Air Quality Management District Program Review

Report of Findings and Recommendations

Prepared by the
California Air Resources Board
Stationary Source Division
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ACKNOWLEDGMENT

The findings and recommendations contained in this report were developed based on a review of office programs and field inspections. In conducting the program evaluation, Butte County Air Quality Management District (District) staff assisted the Air Resources Board (ARB) staff through interviews and file reviews in addition to performing their normal duties. We acknowledge the professionalism and cooperation of the District staff and management.

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Butte County Air Quality Management District Program Review

REPORT OF FINDINGS AND RECOMMENDATIONS

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Butte County Air Quality Management District Program Review

REPORT OF FINDINGS AND RECOMMENDATIONS

Introduction

Air pollution control district (district) program reviews are conducted as part of Air Resources Board's (ARB) oversight role with respect to districts in California and 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. Findings and recommendations specific to each program area reviewed are included in the report.

From May through August 2005, ARB staff conducted a review of Butte County Air Quality Management District's (District) air quality program. As part of this review, ARB staff evaluated the District's compliance, permitting, rule development, AB 2588 "Hot Spots," emissions inventory, and ambient air monitoring programs. Staff from four ARB divisions participated in this effort.

The review activity commenced with an entrance conference on May 4, 2005. ARB staff presented an outline of proposed review activities that covered the scope, method and content of the program evaluation, general logistics, and time lines related to the effort. Following the entrance conference, staff initiated a review of the program areas identified above in May 2005, with the major field inspection activity finishing by August 2005. Staff examined files and records, interviewed District staff and management, and conducted inspections of permitted sources. Findings and recommendations presented in this report are based on the information gathered from this effort.

District Information

The District's jurisdiction is coincident with the area contained in Butte County, encompassing approximately 1,640 square miles. Butte County is located in the Sacramento Valley Air Basin. Butte County's population has grown in recent years, from 183,200 in 1990 to approximately 215,600 in 2005. In 1990, approximately 4.3 million vehicle-miles were traveled each day within the District boundaries. By 2005, an estimated 5 million vehicle-miles were driven daily.[1]

The District maintains its office in Chico. As of May 2005, the District employs a total of 11 staff: an Air Pollution Control Officer (APCO), an assistant APCO, an engineer, three inspectors, a planner, a clerk, and three office support personnel.

[1] The California Almanac of Emissions and Air Quality, 2006 Edition. According to the Butte County Association of Governments, approximately 5.4 million vehicle-miles were traveled daily in 1990, and 7 million vehicle-miles were traveled daily in 2005

As of May 2005, the District had 470 permitted facilities. Agricultural burning, mostly rice straw followed by orchard prunings and open burning operations, constitute an important emissions source in the District. It is our finding that the District has a large workload for its relatively small staff.

Attainment Status

Ozone

Under the federal 8-hour standard, Butte County is designated as a basic nonattainment area, with a 2009-2014 attainment deadline. Butte County experienced one recorded day exceeding the federal 8-hour standard in 2005 and seven days in 2006. The District is required to prepare an 8-hour ozone State Implementation Plan (SIP) by June 2007. ARB staff is working with staff from districts throughout California to prepare the necessary inventory and modeling updates for the 8-hour ozone SIPs.

Butte County is a moderate nonattainment area for the State ozone standard. State air quality standards are more health protective than the federal standards.[2] There were no days exceeding the State 1-hour ozone standard in 2005. Eight days exceeded this standard in 2006. Preliminary data indicate that there were 59 exceedance days for the State 8-hour standard in 2006.

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.

The federal 1990 Clean Air Act Amendments established air quality standards for PM10 that consist of a 24-hour standard and an annual standard. In 2004, U.S. EPA published final designations for the federal PM2.5 standards. Butte County is designated as a federal nonclassified/attainment area for both PM10 and PM2.5. However, Butte County is designated as a nonattainment area for 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.

[2] 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.

Overall Findings

This section summarizes the overall findings of the program review. The District's compliance policy requires monthly inspections of major sources. This policy is neither desirable nor necessary from a compliance verification perspective. In actual practice, the District is able to conduct annual inspections of federal major sources, but many other sources are only inspected every two to ten years due to resource constraints. Since the time of the review, the District added one inspector position. This additional staff should help the District meet ARB's goal of annual inspections for all permitted sources and quarterly inspections of major sources. The District should evaluate its available resources to see if this additional position is adequate to meet the compliance source inspection workload.

Most inspections are thorough and document noncompliance issues. However, during the joint inspections, we found some instances of noncompliance related to open containers of volatile organic compounds, fugitive dust, and unpermitted equipment that were not pursued by District inspectors through written violation notices.

In the area of the District's mutual settlement compliance program, the District follows its policies and has achieved several noteworthy settlements in recent years. The common settlement terms include payment of a penalty amount, evidence of corrective action taken, and final compliance with the violated rule(s). However, the District should strive to reduce the number of cases that are settled for zero penalty amounts.

Air quality complaints received by the District are recorded and the progress of each investigation is actively tracked. When the complaints are received, the District informs, or attempts to inform, complainants about the status of the complaint and the end result of the investigation.

The District's compliance policy document that relates to the breakdown program should be updated. This section of the compliance policy lacks guidelines for handling after-hours breakdowns, the timely investigation of breakdowns, and the inclusion of excess emissions from breakdowns into the District's emission inventory. The District should also increase the number of on-site investigations, especially for recurring breakdown incidents.

The District requires periodic source testing of its major sources to confirm that they are operating in compliance with their permitted emission limits. Facilities are required to submit source test protocols to the District prior to testing. The District should continue its practice of witnessing emission source tests.

The District is required to submit appropriate data on mega, major, and synthetic minor facilities into U.S. Environmental Protection Agency's Air Facility System (AFS) program. The data must include reporting of Full Compliance Evaluations (FCE) quarterly and High Priority Violations (HPV) monthly. ARB staff found that the District met the requirements of the FCE and the HPV program.

When a violation occurs and the source cannot come into compliance immediately, then it must seek protection under the District's variance program. The District offers thorough forms and documents to the public for assistance with its variance program. Variance files contain significant and precise documentation, and staff tracks the entire variance process from petition to final compliance. However, variance petition orders need to include an estimate of excess emissions as a result of being temporarily out of compliance.

ARB staff also reviewed recorded variance hearing board proceedings to ensure that the process of granting a variance is conducted according to the Health and Safety Code (HSC) requirements. Staff found that the hearing board proceedings can be improved by discussing thoroughly the six findings in HSC section 42352 prior to granting or denying a variance petition.

On an acreage basis, most of the agricultural burning conducted in the District is rice straw, followed by orchard prunings. The District has a comprehensive set of rules for regulating agricultural burning and open (nonagricultural) burning. District rules are consistent with State requirements, except for HSC section 41804. This section requires the District board to develop criteria, and authorizes the Board to adopt rules, for minimizing smoke production from "land clearing" wood waste burning. The District staff has committed to work with ARB staff to establish the criteria for this type of burning as specified in HSC section 41804.

In the area of its permitting program, the District uses a thorough and well organized policies and procedures document. The District usually issues permits within its required timelines and has no permit backlog. However, the District's workload has significantly increased without a corresponding increase in staff resources, making it difficult in some situations for the District to meet deadlines and leaving little time to streamline its programs.

The District has a "New Source Review Implementation Policy" that states that the District considers a modification to have occurred if there is more than a 10 percent increase in annual actual emissions over the historic actual emissions. This policy should be clarified to state that it is only applicable to situations where the source has been operating without a potential to emit limit on its permit.

At the time of the review, the District's BACT trigger level was 50 pounds per day as specified in their new source review (NSR) rule; however, this was twice the

trigger level required by State law. As a result of the review finding, the District took action and amended its NSR rule (Rule 430) to be consistent with State law. The amendments to their rule became effective on September 28, 2006.

ARB staff found that in some projects the thoroughness of the District's BACT determinations could have been improved by inclusion of a "top down" analysis. The analysis should include the potential to emit in pounds per day for each pollutant and a direct comparison to the BACT thresholds. The analysis should indicate if BACT was triggered, and the control technology selected with its corresponding emission limit. Additionally, the analysis should discuss other technologies reviewed, reasons for rejecting other control technologies, and indicate the BACT clearinghouses researched for the determination.

The District has established a format for its engineering evaluations. However, ARB staff found several instances where the District issued an authority to construct to a facility without conducting an engineering evaluation.

In the area of prohibitory rules, the District has an established rule review process that includes workshops to discuss proposed or revised rules and an opportunity to receive public comments by interested parties. However, the District is behind schedule in adopting new rule categories as committed to in the Sacramento Valley Basinwide Air Pollution Control Council endorsed Air Quality Attainment Plan. The District should also amend its breakdown rule (Rule 266) to include the issues that are specified in ARB's model breakdown rule. The District should consider adding an additional staff person for the rule development program in order to better meet its rule adoption schedule and its Attainment Plan commitments. This person can also work on improving the permitting issues that were previously mentioned.

The District has met most of the AB 2588 Air Toxics "Hot Spots" requirements. The District annually updates its inventory, but some of this information is not sent to ARB. The District should provide to ARB a list of all of the facilities and their status in the "Hot Spots" program each year.

With regard to its emission inventory program, the District submitted electronic updates for criteria pollutants to the ARB's CEIDARS database for 2002. However, the audit revealed that there are opportunities for improving the overall quality of the emissions inventory and management system, such as the institution of quality assurance/quality control procedures, tracking and reporting of facility operating status, and documentation of area source methodologies.

The District operates, maintains, and manages the data generated for its gaseous and particulate matter ambient air monitoring sites. The Annual Quality Assurance Data Analysis Report for the year 2004 recognized the District as producers of "excellent" quality ambient air data.

Findings and Recommendations by Program Area

As with any air pollution control program, there is room for improvement in individual program areas. The recommendations contained in the report are designed to assist the District in its clean air efforts. In the case of Butte County, additional resources would be required to accomplish many of the improvements discussed in this report. However, the report also contains recommendations which are not resource intensive and can be implemented by instituting new procedures or by changing existing policy.

The rest of the report provides detail findings and recommendations for program improvement by program area.

A. Compliance Program

This section covers the evaluation of the District's Compliance Program. The evaluation consisted of an office review of relevant records and a joint field inspection effort. Findings and recommendations are presented for each of the following areas:

- Source Inspection Program
- Legal Action Program
- Complaint Program
- Breakdown Program
- Continuous Emission Monitor Program
- Source Testing Program
- Air Facility System Program
- Variance Program
- Open and Agricultural Burning Program

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. When a source is found to be in noncompliance, the District documents its observations and conclusions in the form of an inspection report and issues a corresponding notice to the source. The District's inspection program was evaluated with respect to its policies and procedures, inspection frequency, and inspection documentation. In addition to this records review, ARB staff conducted joint inspections of several District permitted facilities. The results are tabulated and discussed in Section A.1.5.

A.1.1 Inspection Staff Resources

The District has three inspectors charged with inspecting approximately 470 stationary sources, including 145 gasoline dispensing facilities (GDFs). The Butte County Weights and Measures Agency typically handles the inspection of phase II vapor recovery systems at GDFs. The District conducts inspections of phase I enhanced vapor recovery systems. The District informed ARB staff that, at the time of the audit, current resources did not allow them to conduct annual inspections of all permitted sources. The District should augment staff resources to fully meet source inspection program requirements. Since the review, the District has added one inspector position.

Recommendation: The District should evaluate whether compliance program requirements will be fully met by the addition of one inspector position.

A.1.2 Inspection Policies and Procedures

The District has a guidance document that includes guidelines for the source inspection program. This document covers inspection frequency and issuance of violation notices. The District also has information for the public concerning inspections and enforcement actions on its website.

The District's inspection frequency guidelines specify monthly inspections of major sources and sources with ongoing compliance issues; semi-annual inspections of State Implementation Plan "SIP" sources; and, annual inspections of dry cleaners, incinerators, rock crushing operations, and GDFs (phase II vapor recovery systems). Guidelines call for biennial inspections of miscellaneous sources including paint spray facilities, bulk stations, and small internal combustion engines (ICE). According to guidelines, inspections of phase I vapor recovery systems are to be scheduled when complaints are received or loading of underground storage tanks are observed.

The District's inspection frequency policy should be revised to make it consistent with achievable goals. During interviews, District staff agreed that the current policy is too rigorous with respect to requiring monthly inspections of major sources and semi-annual inspections of "SIP" sources. At the same time, the policy is too lax with respect to phase I vapor recovery inspections. Monthly inspection of sources is neither desirable nor necessary from a compliance verification perspective. ARB staff considers quarterly inspections for major sources and annual inspections for all other sources, including phase I vapor recovery inspections of GDFs, to be an adequate compliance goal. The clarity of the existing policy should also be improved. For example, "SIP" sources are not defined.

Recommendations: The District should revise their inspection frequency policy to make it consistent with achievable goals.

A.1.3 Inspection Frequency

Staff's file review of source inspection reports showed that the District inspected the District's three Title V sources annually. Dry cleaners and phase II vapor recovery systems at GDFs were generally also inspected on an annual basis. However, we noted that some sources had not been inspected for several years. For example, the inspection frequency varied from two to ten years for seven of the 23 facilities inspected jointly by ARB and District staff.

The District has a contract with Weights and Measures to conduct annual inspections of phase II vapor recovery systems. The District conducts phase I vapor recovery inspections, but not as a priority. Because of more complex

enhanced vapor recovery requirements, the District is considering taking over all inspection requirements for GDFs[3].

To verify the actual compliance status of permitted facilities, ARB staff recommends the District conduct, at a minimum, annual inspections for all permitted sources.

Recommendations: As resources allow, the District should strive for annual inspections for all permitted sources and quarterly inspections for major sources.

A.1.4 Inspection Documentation

ARB staff reviewed the District's inspection reports, notices issued, and enforcement action taken. ARB staff found the inspection reports to contain essential documentation to adequately determine the compliance status of the facility inspected. The District followed through with enforcement action for each violation contained in the inspection reports.

The District uses the notice of noncompliance (NON)[4] to formally document violations, unless the violation is considered to be minor. Minor violations will be documented with a notice to comply (NTC), per District Rule 701.

Table I shows the number of NONs and NTCs issued in 2003 and 2004 (includes notices issued by Weights and Measures at GDFs). The source of the figures contained in Table I is derived from District's inspection reports.

Table I
Summary of 2003 and 2004 NON and NTC Issuance

Year	Type of Notice	Number of Notices Issued
2003	NON	88
	NTC	51
2004	NON	95
	NTC	33

Recommendations: None

A.1.5 Compliance Results of ARB and District Staff Source Inspections

Joint inspections were conducted at 23 sources to obtain information on the compliance status of sources inspected. In order to obtain an adequate understanding of the compliance of sources located in the District, ARB staff selected sources that varied in size and type.

[3] Subsequent to the review in July 2006, the District did not renew its contract with Weights and Measures.
[4] The term NON is used by the District in lieu of the more traditional NOV (notice of violation).

Most source operations were found to be in compliance. The District issued four NONs as a result of the joint inspections. However, ARB staff found some instances of noncompliance such as open volatile organic compound (VOC) containers, unpermitted equipment, lack of records, and a fugitive dust issue which were not formally documented by NON or NTC issuance. Also, at GDFs the District should have the equipment and knowledge to verify compliance with the Title 17 requirement of less than 100 ml of liquid in the vapor path of hoses. Staff recommends that additional training would help new inspectors to observe violations, and adequately document them during a source inspection. Training can be in the form of on-the-job training by an experienced inspector and combined with formal classroom inspector training as provided by ARB. ARB training staff will work with the District to accommodate their request for scheduling training classes close to the District office.

District actions and ARB staff comments are summarized in Table II.

Table II
Joint Inspection Results Summary

Facility Name	Equipment Description	Compliance Status and District Findings	ARB Staff Comments
Major Sources			
Chico Terminal (Kinder Morgan)	Petroleum storage tanks, loading rack, vapor processing system with flare	In compliance	
Neal Road Landfill	Flare station	In compliance	
Pacific Oroville Power, Inc	22 MW Biomass Power Plant: 2-Zurn boilers, controlled by multiclone and Electrostatic Precipitator, material handling system, Internal Combustion Engine (ICE)	-In compliance with all requirements except for fugitive dust emissions -NON issued for fugitive dust emissions	
Other Sources			
North State Rendering Company	Rendering plant: Boiler, above ground fuel storage tank	In compliance	
Oroville Cogeneration	Natural Gas-Fired ICEs	In compliance	

Facility Name	Equipment Description	Compliance Status and District Findings	ARB Staff Comments
Triple B Ranch	Natural Gas-Fired Prune Dehydrators	In compliance	
Butte Oroville Veterinary Hospital[5]	Pathological Waste Incinerator	-In compliance -Lack of records noted	-Last inspection conducted over 10 years ago. -No records provided to inspectors (conditions #35&36 require records)
Setzer Forest Products, Inc.	Wood Products Manufacturing Equipment: Priming stations, gas-fired dryer, paint booth with filter, moulders and saws with cyclones	-In compliance -Saw dust noted on ground around wood waste bins	-Open volatile organic compound (VOC) container. -Wood waste spillage at areas below cyclones. -District should check whether 2 gappers with 4 large dust collector bags need permits.
Sun West Milling Company	Rice Milling Facility: Receiving conveyors, huskers, drum cleaners, separators, baghouse	-In compliance -Fugitive dust noted around work areas	-Fugitive dust emissions on unpaved roadways and around work areas. -No records or other evidence of actions taken to minimize dust emissions on roadway and work areas.
Baldwin Contracting Company	Asphalt plant: Natural gas fired drum mixer & baghouse, conveyors, crushers, screens	In compliance	District should determine whether 170kw and 100kw ICEs on site require permits
Granite Construction Company	Asphalt plant: Drum mixer plant, baghouses, conveyors, crushers, screens	In compliance	
Sewerage Commission – Oroville Region (SCOR)	Municipal Waste Water Treatment: Carbon canister, exhaust fan, clarifiers, sludge digesters, storage ponds	In compliance	
Expressions Auto Body & Custom Paint	Paint booth with filters, spray guns, low VOC materials	In compliance	
Marketplace Cleaners	Perchloroethylene dry cleaning machine	In compliance	
Sierra Pacific Packaging, Inc.	Printer, boiler, waste processing equipment with cyclone	-In compliance -Verbal warning given for open VOC container	Observed open VOC container
Golden State Auto Body & Paint	Paint booth with filters, spray guns, low VOC materials	NON issued for open VOC containers, gaps in spray booth filter areas	
California Color	Paint booth with filters, spray guns, low VOC materials	In compliance	
Sierra Nevada Brewery	Natural gas fired boilers, ICEs, baghouses	In compliance	

[5] Subsequent to the review, the incinerator was removed from service.

Facility Name	Equipment Description	Compliance Status and District Findings	ARB Staff Comments
Rio Pluma Company	Wastewater treatment system with aerators, boilers	In compliance	
Wild Goose Storage	Natural gas storage facility: natural gas fired ICEs with compressors	In compliance	
North State Electric & Pump	Natural gas fired bake-off oven	In compliance	
Ledford Beacon	Gasoline station: phase I & II vapor recovery	NON issued for uncertified phase I pressure relief valve	
Lakeside Market & Gas	Gasoline station: phase I & II vapor recovery	NON issued for < 100 ml of liquid in vapor path, torn hose & face plate	The District should have the equipment and knowledge to test for liquid in the vapor path

Recommendations: The District should issue NONs for all emission-related violations and NTCs for minor procedural violations. District inspectors should be equipped to verify compliance with the Title 17 requirement of less than 100 ml of liquid in the vapor path of hoses. For making inspections more effective and consistent, District inspectors should receive more on-the-job training and/or have access to ARB training courses.

A.2 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 NONs issued to non-compliant sources and any civil actions that may follow as a result of an unsuccessful mutual settlement process. The goal of the legal action program is to ensure that a facility returns to compliance before settlement, and that NONs are settled for penalties that are commensurate with the magnitude of the violation.

The District's mutual settlement policy document and associated civil penalty matrix provide for the administration of the mutual settlement program. In determining the penalty amount assessed, the District's guidelines include the "relevant circumstances" the District must consider as cited in HSC section 42403. These factors relate to: the extent of harm caused by the violation; the nature and persistence of the violation; the length of time over which the violation occurs; the frequency of past violations; the record of maintenance; the unproven or innovative nature of the control equipment; any action taken by the defendant to mitigate the violation, and; the financial burden to the defendant.

The assistant APCO conducts the mutual settlement program according to its written policies and procedures. The District tracks the status of all the NONs

from initial issuance to final settlement agreements. These cases are organized into separate files for easy access, and contain sufficient documentation for further legal action, if necessary. The District always has the source come into compliance before a penalty settlement agreement is reached.

The District's mutual settlement letter stipulates a penalty amount, and provides an opportunity for an office conference. The common settlement terms include a payment of a penalty amount, evidence of corrective action taken, and final compliance with the violated rule(s). A 25 percent reduction of the initial penalty amount is offered for those that provide a "good faith" effort for a quick response and remedial action taken. Any reductions above 50 percent require APCO approval. The District sends a release letter upon payment of penalty amount.

Table III shows the approximate settled NON tally, the number of NONs that were dropped or settled for zero[6], settlement amounts, and penalty ranges for NONs issued in 2003 and 2004 and closed by June 7, 2005 (as indicated on the District's reports). Approximately 50% of the violations issued by the District are for noncompliance with Rule 300 (General Prohibitions and Exemptions on Open Burning). Compliance status reports provided by the District at the time of the program review lumped all mutual settlement activity related to agricultural and nonagricultural burning as Rule 300 violations. However, subsequent to the review, the District provided data which categorized Rule 300 violations as agricultural burning, business-related open burning, and residential open burning. An analysis of Rule 300 violation activity shows that approximately 80% of the violations are related to illegal open burning conducted by individuals at residences.

[6] A dropped NON means a NON that is not pursued for mutual settlement. NONs that settle for zero include dropped NONs or NONs where the penalty is not collected.

Table III
Penalty Settlement Information for 2003 and 2004 by Rule Category

Source/Rule Category	Number of Settled NONs*	# NONs Dropped or Settled for Zero Penalty	Recorded Penalty Amounts	Penalty Range (from actual case settlements)	
				Lower (non-zero)	Upper
Residential-related Open Burning Rule 300	47	16	$7,292.50	$30.00 (Prohibited Burning – Residential)	$1,230.00 (Open Burn)
Business-related Open Burning Rule 300	9	4	$2,137.50	$607.50 (Burning prohibited materials)	$720.00 (Burning prohibited materials)
Agricultural Burning Rule 300	4	0	$1,275.00	$120.00 (Burning without authorization)	$630.00 (Escaped fire burned neighbors property)
Gasoline Dispensing Facilities Rule 222.4	21	0	$18,110.00	$180.00 (Torn face plate)	$4,320.00 (Torn face seals – multiple violations)
Permit Conditions (including unpermitted equipment) Rule 400.5	18	4	$7,300.00	$90.00 (Forms not returned)	$5,000.00 (No authority to construct)
Fugitive Dust Rule 205	10	0	$9,122.50	$120.00 (Fugitive dust)	$1,677.00 (Fugitive dust)
Vehicle and Mobile Equipment Coating Rule 235	4	3	$270.00	NA (3 NONs voided or zero penalty)	$270.00 (Spray painting without booth)
Opacity Rule 700	2	0	$27,510.00	$10,500.00 (Multiple opacity exceedances)	$17,010.00 (Multiple opacity exceedances)
PERP	1	1	0	NA	NA
Total	116	28	$73,017.50		

*Includes NONs that were dropped, where the log included the violator's name and the rule violated. Subsequent to the review, the District provided information that shows more NONs have been settled than appear in Table III.

The median penalty for 2003 and 2004 was $180, and the average penalty amount was $629. These figures include the NONs that were dropped, or

otherwise resulted in zero penalty amounts. These figures are comparable to other districts in the Sacramento Valley Air Basin.

The District successfully settles most violations, as indicated in Table III. The District has obtained several noteworthy settlements that are intended to deter future noncompliance. Two of these cases concerned opacity violations at a major source and multiple vapor recovery system violations at a GDF (see Table III).

As indicated in Table III, staff found that the District is successfully able to settle all violations related to agricultural burning. The District has not been able to get similar results for violations issued for illegal residential open burning, where 34 percent of NONs were not pursued or settled for zero penalty. It is typically difficult for districts to settle these types of violations for a monetary amount. The District has noted that there is not sufficient information to pursue mutual settlement for some of the cases referred by the local fire departments. The District needs to work with the fire departments to persuade them to provide complete information when making referrals. Fourteen percent of all other NONs settled for zero penalty or were not pursued. ARB staff recommends that no more than ten percent of NONs are dropped or result in no further action. This figure is based upon our experience and is accepted by many districts as an acceptable level to have in a mutual settlement program.

The District averaged 126 days to settle cases from NONs issued in 2003 and 2004 that settled by July 2005. This average settlement time is in the upper range of average settlement times when compared to other districts in the Sacramento Valley Air Basin. However, we did not discover process issues during our review of the District's legal action program.

There is an understanding by the District that the District Attorney's office will prosecute "large" cases that are prepared by the District. A major criminal case that had been referred to the District Attorney for prosecution was in litigation at the time of the review. In July 2006, the main defendant in this case pleaded no contest to three misdemeanor counts of burning hazardous waste, illegal disposal of hazardous waste, and outdoor burning of demolition debris. Earlier, the two other defendants each pleaded no contest to one count of misdemeanor open burning. Court ordered fines, penalties, and restitution amounts total over $350,000. During interviews, the District staff indicated that because of the successful resolution of this case, the District has referred more cases to the District Attorney's office.

<u>Recommendations:</u> The District should strive to reduce the number of NONs that are settled for zero penalty amounts, particularly in the residential-related open burning category. The District should consider developing a form for the local fire departments to use, which would include the necessary information to pursue settlement of cases referred by them.

A.3 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.

Complainants contact the District by phone during office hours. Weekend and evening complaints can be left on the District's voice mail, and an on-call District staff monitors the voice mail during the weekend. However, the on-call District staff is not immediately notified when a complaint is received. Other government agencies, such as the local fire department, may also investigate after-hour or weekend air quality complaints. District staff is aware of the ARB language line service. The District gives high priority to the investigation of received complaints.

The District received approximately 603 complaints for calendar years 2003 and 2004. Of these complaints, there were 42 percent from dust, 38 percent from open burning (i.e., smoke, illegal burning), and 10 percent from painting operations. Complaints from gasoline dispensing facilities, dry cleaners, fumes, asbestos, odors and abrasive blasting operations account for the final 10 percent of complaints received by the District. ARB staff reviewed 36 percent of the complaints received in calendar years 2003 and 2004.

Based on our sample of complaints reviewed, the District investigates almost all (99 percent) of the complaints received. The majority (89 percent) of the complaints were reviewed by District staff within 24 hours of receipt. On-site investigations by either District, or fire agency staff were conducted on about three-fourths of complaints. There is sufficient supervisory review of complaint reports through a sign-off on individual reports and a weekly status check of pending complaints with the area inspectors.

The District informs complainants about the status of the complaint or results of the investigation. Approximately 96 percent of complaints with known complainants were informed of the results of the investigation. However, complainants that reported an air quality complaint to the local fire agencies were not updated on the results of the investigation. Subsequent to the review, the District indicated that local fire agencies often did not provide contact information, so the District could not inform complainants the results of investigations. The

District should communicate with the local fire agencies to determine a method to acquire the contact information.

Recommendations: The District should communicate with local fire agencies to determine a method to acquire a complainant's contact information. This would help ensure that complainants that report air quality complaints to the local fire agencies can receive a follow-up report on the status or report of the investigation from the District.

A.4 Equipment Breakdown Program

If a source reports a legitimate breakdown condition, the District's breakdown regulation, Rule 266, Reporting Procedures for Excess Emissions, protects that source from enforcement action. Pollutants can be emitted during a breakdown episode at higher concentrations than during controlled operation. Therefore, it is important that breakdowns 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's breakdown regulation (Rule 266) is less stringent than that adopted by other districts and ARB's model breakdown rule. The rule requires a source operator to report a breakdown within two hours of its discovery, instead of one hour. District's Rule 266 lacks information on: the disposition of short-term breakdown conditions; emergency variance procedures; burden of proof; failure to comply with reporting requirements; what constitutes a recurrent breakdown, and; how to handle a false breakdown report.

The District has a breakdown policy document within section 5.8 of its administrative code called "Policy for Reporting Procedures for Excess Emissions." The District's policy document lacks: guidelines for handling after-hour breakdowns; the timely investigation of breakdowns (i.e. within 24 hours of a call), and; guidelines on including excess emissions from breakdowns in the District's emission inventory.

The District enters information received from faxed stationary source breakdown notifications into its handwritten Status Change Log. For each breakdown incident, the log includes a separate column for inputting the date, breakdown number, time, source/equipment type, name of who reported the incident, and which District staff was notified. The usefulness of the breakdown log could be enhanced by including more information such as: the date and time of occurrence and discovery by the source, the date and time of correction, and an indication if breakdown relief was granted (see Appendix A for other details).

ARB staff reviewed 47 stationary source breakdown reports from 2003 and 2004. These reports do not indicate the time and date the breakdown was discovered, or an estimate of emissions emitted during the breakdown incident. In addition,

the District received seven notifications after more than two hours of discovery. These late notifications violated the District's rule, but the District did not take enforcement action.

When a breakdown incident is reported to the District, on-site investigations are the preferred method of investigating these incidents. District inspectors review stationary source breakdown reports submitted by the source, and staff fills out a District Form 277 "Status Change Report Action Form." The District's Form 277 serves as the District's report of a breakdown occurrence. The District indicated that supervisors review the stationary sources breakdown reports and the Status Change Report Action Forms, but these documents do not reflect this fact. ARB staff reviewed the 47 Status Change Report Action Forms filed by the District from 2003 and 2004. An on-site investigation was conducted for only one out of the 47 breakdowns. Many equipment breakdowns seemed to involve recurring events. Only five of the reports showed the District investigated the breakdown within 24 hours of receiving the notice, and five breakdowns were reviewed 19 days after the date of notification.

Recommendations: The District should amend its breakdown rule to make it as stringent and consistent with other districts and ARB's model breakdown rule. Once Rule 266 is amended, the District should update its breakdown policies to make it consistent with the amendments.

District Supervisors should initial the District's breakdown reports (Form 277) to document their review and provide overall guidance on the administration of this program. The number of on-site investigations should increase, especially for recurring breakdown incidents. Appendix A contains more details on improving the breakdown program.

A.5 Continuous Emission Monitor (CEM) Program

A comprehensive and efficient 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 enforces applicable rules, regulations, policies, and permit conditions pertaining to continuous emission monitors. Our findings are based upon a review of District files, database reports, and interviews with staff persons responsible for this program. The District has two facilities (two units) equipped with four CEMs. See Table IV. These facilities are Title V sources. Permit conditions for these facilities specify calibration frequency, maintenance, quarterly challenge audits, annual relative accuracy test audits (RATA), and other reporting requirements.

Table IV
Facilities with Continuous Emission Monitors

Facility	Unit	CEMs
Pacific Oroville Power	Biomass Boiler	Opacity, NOx, CO
Kinder Morgan	Vapor Combustor	Hydrocarbons

CEMs are tested annually. Facilities submit quarterly excess emissions and downtime reports. These reports are reviewed by the District. Pacific Oroville Power reported nine opacity violations in 2003 and five opacity violations in 2004. The District issued NONs for these violations.

Excess emissions recorded by CEMs are reported to the Districts within 96 hours and the District reports these excess emissions to ARB within five working days as required by HSC 42706.

Recommendation: None

A.6 Source Testing Program

Source testing of specific points in a process or its control devices is often 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 requirements are placed on facility permits as specific conditions and define the type and frequency of test activity. Sources are required to provide test protocols, provide the district an opportunity to witness testing, and provide a detailed report after the conclusion of the test. Source testing confirms that equipment can operate in compliance with its permitted emission limits.

The District's facility permits include source testing requirements and the District enforces these requirements. The District requires periodic source testing of its major sources. Table V shows the frequency of source testing at these facilities. ARB staff determined that in 2003 and 2004, these facilities source tested according to this frequency.

Table V
Facilities with Periodic Source Testing Requirements

Facility	Unit	Source Testing Frequency
Pacific Oroville Power	Biomass Boiler	Annually
Kinder Morgan	Vapor Combustor	Annually
Wild Goose Storage	Natural Gas ICE A Natural Gas ICE B Natural Gas ICE C Natural Gas ICE D	Annually Annually Annually Annually
Neal Road Sanitary Landfill	Ground Flare	Biennially

Permit conditions require facilities to notify the District prior to source testing. There is no other tracking mechanism. Facilities submit source testing protocols prior to testing. In 2003 and 2004, the District witnessed the source tests at Pacific Oroville Power, Kinder Morgan and Neal Road Sanitary Landfill, but did not witness the tests at Wild Goose Storage. All of the units source tested in 2003 and 2004 complied with their emission limits.

Recommendations: The District should continue its practice of witnessing emission source tests.

A.7 Air Facility System Program

U.S. EPA's compliance and permit database for Stationary Sources is called the Air Facility System (AFS). The requirements for AFS are governed by the Clean Air Act Stationary Source Compliance Monitoring Strategy (CMS) policy, dated April 2001. 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 data must 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, which meets the standards of a HPV. The standards are spelled out in Table A-5 of the U.S. EPA's workbook titled "The timely and Appropriate (T&A) Enforcement Response to High Priority Violations (HPVs)" dated June 23, 1999. A more detailed description of the reporting requirements are found in two documents, The Information Collection Request dated October 5, 2001 and The AFS Business Rules dated June 23, 2003. The AFS Business Rules contain a description of the minimum data reporting requirements.

Based on our review, it is our finding that the District meets or exceeds the requirements of the Full Compliance Evaluation Program and the High Priority Violation Program.

ARB would support a District request to U.S. EPA for funds to improve the District Database's stationary source tracking capabilities to include the AFS required reporting elements. This improvement would help the District more effectively meet the required reporting timeframe and reduce the resource drain on the District.

Recommendations: None

A.8 Variance Program

The District's variance program was evaluated in order to determine its consistency with HSC requirements. Documents reviewed for this evaluation included District files of variance hearings, district rules, written policies and forms, correspondence, tapes of variance hearings, and an oral interview with District variance staff. ARB staff reviewed the seven variances granted by the District hearing board from 2003 to 2004, which included four emergency and three regular variances. One of the regular variances was for a final compliance date modification.

Within District Regulation VI, "Procedures before the Hearing Board," Rule 600 defines a regular and product variance, but there is no definition for a 90 day variance. A 90 day variance is referred to several times throughout the Rule, and a definition should be included. Section 2.14 of Rule 600 defines a variance as a temporary dispensation from District Rules and Regulations or State law. A hearing board is authorized to grant variances from HSC section 41701 or district rules only.

During the study period, the District had two different versions of its variance petition. The both versions are deficient in requiring the petitioner to give an estimate of excess emissions. The District's older version of its variance petition also lacks a requirement that the petitioner demonstrate that problems are beyond the reasonable control of the source, a description of the petitioner's effort to curtail operations in lieu of a variance; and a description of how the petitioner will reduce excess emissions to the maximum extent.

In an ongoing effort to effectively meet HSC requirements, the ARB has requested districts to include in all variances a description of all excess emissions associated with operation under the variance. Greater scrutiny has been paid to variances granted to stationary sources especially to variances involving the release of excess emissions. Reporting excess emissions is an important part of the variance process. This enables a hearing board to make a determination of the impact on the public if the variance is granted.

ARB is also requesting that excess emission information be included in every written board order. Excess emissions were not included in the written orders. The Hearing Board is not discussing excess emissions at the hearings and does not require the source to quantify or report them at the end of the variance period.

Moreover, the Hearing Board is not making the required findings at hearings. ARB staff reviewed hearing tapes for variance orders 02-13, 03-03, 04-01 and found that the justifications for findings were not being addressed by the Hearing Board. HSC section 42352 states no variance shall be granted unless the Hearing Board makes all of the six required findings. In one case the Hearing Board chair refers to "the findings of fact included in the staff report." When a hearing board chooses to adopt the required findings, it is understood that the findings were addressed and discussed at the hearing as required by State law. The findings must be addressed to ascertain the Hearing Board's mode of analysis of an independent decision.

The District offers well prepared documents to the public for their variance program. Variance files contain significant and precise documentation, hearing tapes are clear and audible, and staff does a very good job of tracking variances from petition to final compliance.

<u>Recommendations:</u> The District should amend Regulation VI of Rule 600 to include a definition for a 90 day variance. Also, Section 2.14 of the Rule which defines a variance as a temporary dispensation from District Rules and Regulations or State law should be amended. A hearing board is authorized to grant variances from District Rules or HSC section 41701 only.

The District should revise their latest variance petition to include an estimate of excess emissions. The District should no longer use the older version of their variance petition.

The Hearing Board should make and justify the six findings of HSC section 42352 prior to granting a variance. If the Hearing Board is unable to make all of the findings, the variance must be denied. Each finding must be separately addressed, discussed and a determination of justification made, on record. The Hearing Board has the authority to grant the variance, therefore, it is the Hearing Board's responsibility to justify the findings.

Excess emissions must be discussed at the hearing and it should be made the responsibility of the applicant to report actual excess emissions for the duration of the variance period. When appropriate, the Hearing Board should impose conditions (interim limits) with the goal of minimizing emissions from the source while on variance.

A.9 Open and Agricultural Burning Program

Open burning can be a significant source of criteria pollutant emissions, whether from legally sanctioned open burning, agricultural burning, or wild land burning for fire prevention and forest management. The District's open/agricultural burning program was evaluated for consistency with HSC requirements, the Smoke Management Guidelines in Title 17 of the California Code of Regulations (CCR), and with the ARB program evaluation criteria document. Documents reviewed for this evaluation included District rules, public information press releases, handouts and brochures, burn permits and forms, policy procedures, maps and computer summary reports.

Most of the agricultural burning conducted in the District (by acreage) is rice straw, followed by orchard prunings. District records show that 9,439 acres of rice straw were burned in 2003, and 12,053 acres in 2004. The orchard prunings burned are mostly almonds (6,092 acres in 2003 and 5,799 acres in 2004) and walnuts (2,372 acres in 2003 and 2,386 in 2004). Residential burning is also allowed in most of the District. The City of Chico prohibits residential burning by ordinance.

District burn permits are valid for one year. The District rice straw burn permit fees consist of an initial fee of $65, plus a $5 basin surcharge, and an additional charge of $2.50 per acre burned. Orchard, weed, and other field crop burn permit fees consist of an initial fee of $15, plus a $5 basin surcharge, and an additional $0.50 to $0.75 per acre permitted to burn. Prescribed burn permit fees consist of a base fee of $15, plus a $5 basin surcharge, plus $120 program registration fee, and $0.50 per acre burned. The fees for a special permit to burn on a no-burn day consist of an initial $55 fee, plus $0.50 to $0.75 per acre. The burning permits issued contain comprehensive conditions taken from the District rules.

Each rice grower is required to meet with District staff during the annual registration period in August, to go over any rule or procedure changes, and to register fields planted. Traditionally, September, October, and November are major rice straw burning months, although March and April can also have significant rice straw burning. Orchard prunings are burned in the winter months, mainly December through March.

The District has three burn zones, and burns are scheduled spatially and temporally to minimize smoke impacts on roads and populated areas. Growers notify the District when the field has been "harvested." That field is then placed on the Harvested Field Log. The (Burn) Ready List is generated every day from the Harvested Field Log for each zone. The Ready List is posted twice a week in towns around the District, so the growers can track their fields' progress while waiting to burn.

The District has a comprehensive set of rules for agricultural burning and for open [nonagricultural] burning. The rules are consistent with the Smoke Management Guidelines in Title 17, and with the nonagricultural and agricultural burning requirements in the HSC, except for HSC section 41804. Rule 300, Section 2.4, Land Clearing Exemption, states that such burning must be conducted "pursuant to the provisions of sections 41802-41805 of the Health and Safety Code…" However, HSC section 41804 requires the district board to develop criteria for conducting this type of burning to minimize smoke production, and to submit them to the state board for approval. In addition, the district board must adopt rules and regulations to authorize all such burning, or establish the State board approved criteria, and to require board review of each proposed burn, or delegate that authority to the Air Pollution Control Officer.

Further, the District burn rules have some obsolete sections that should be deleted. These sections became outdated in 2001 with the introduction of the Smoke Management Guidelines as contained in Title 17 of the CCR. District staff plans to revisit the burn rules to implement these changes, and to work with ARB staff to establish the land development burning criteria.

The District has information brochures for the public on burning residential waste, agricultural burning, wood smoke health effects, and enforcement procedures. There is also a burn summary form which outlines and summarizes the requirements for the different types of burning that are conducted in the District. Each summer, the District sends a letter to every field crop grower, outlining the changes to the rice straw burn permit program. The District also meets with each interested grower to register their rice fields, and obtain the necessary burn permits. In response to the Air Toxic Control Measure (ATCM) for residential burning, the District released a comprehensive notice to the public, providing information on which fire agency issues a residential burn permit for each town and unincorporated area in the county, and what requirements each agency has for residential burning.

Prescribed burning is conducted by or through CDF (California Department of Forestry and Fire Protection) ranger units, the U.S. Forest Service, and also some rural fire districts. The District requires a smoke management plan in advance of the burn. The District issues a small number of permits to burn on a no-burn day, principally for prescribed burns.

Public complaints are either about fugitive dust, or burning/smoke, with odors a distant third. The District has good rapport with the fire agencies, and has a fire agency report form that is completed by fire agency staff and forwarded to the District when they discover someone burning prohibited materials or burning on a no-burn day. The District also has written burning complaint response guidelines for the fire agencies, to prioritize agency actions and coordination with District staff when the fire agency is the first on the scene.

Three District inspectors rotate on-duty seven days a week, and are charged with following up on complaints, allocating acres, and taking the burn calls. They are in the office in the morning, go out into the field, and come back to the office for more rice acreage allocations in the afternoon. Evenings and weekends are covered by the on-duty inspector, although no field burning is allowed on the weekend, outside of the rice season, unless the grower has made previous arrangements.

Recommendations: *The District should amend its Rule 300 to be consistent with HSC section 41804.*

B. Permitting 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. The primary objective of the review was to determine whether the District has been issuing permits in accordance with their regulations and with State law and to assist the District in identifying specific areas for improvement.

ARB staff reviewed permit files, reviewed guidelines and policy documents, and interviewed 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. Guidelines and policy documents were reviewed to ensure that they were consistent with the intent of District rules and provided clear and adequate guidance for permit processing. Interviews covered areas such as general administration, permit processing, filing, computer support, staff resources, and emission calculation procedures.

ARB staff reviewed approximately 35 of 247 project applications for new units and modifications to existing units issued by the District, with a focus on those issued from January 2002 to mid-2005 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.

The following discussion covers:

- Permit Administration – General
- Permitting Policies
- Best Available Control Technology (BACT) Determinations
- Adequacy of Permit Conditions
- Organization and Adequacy of Permit Evaluations
- Offsets and Emission Reduction Credits (ERCs)

B.1 Permit Administration - General

The number of applications received by the District every year has been steadily rising since 2001. In 2001 the District received 57 applications, in 2004 they received 102 applications, and as of June 2005, 75 applications had been received. At the time of the program review the District had 470 permitted facilities. The District has three Title V facilities that include a power plant, a bulk terminal facility, and a landfill. The District has about 145 gasoline dispensing facilities, 39 auto body facilities, and 9 dry cleaners.

The District issues permits within its required timelines and has no permit backlog. The District issues expedited permits for specific sources including: petroleum storage purges, soil aeration with low levels of contamination, gasoline

phase 1, and other equipment and operations the APCO approves. The policy for these permits is to issue them within 48 hours of receiving a complete application. Most are issued the same day.

B.1.1 Staff

The District has 11 total staff: an APCO, an assistant APCO, an engineer, three inspectors, a planner, a clerk and three front office support personnel. The permitting work is performed by five staff: the assistant APCO, the engineer, and the three inspectors. The District staff has had some turnover, but the number of staff has remained constant in recent years. At the time of the review, the engineer had only been at the District for several months, but he came with permitting experience from another state. The previous engineer had left the District after working there for approximately two years. The District also has an engineer specializing in AB 2588 and toxics, but he was in the process of retiring at the time of this review. In spite of these staff changes, four staff members, including the APCO and assistant APCO, have been at the District over 14 years.

While there has been a significant increase in the permitting workload, there has been no corresponding increase in staff resources. The District indicated that their responsibilities are increasing due to new and changing District's programs such as SB 700, Phase I EVR, and the portable diesel fueled engine Air Toxic Control Measure (ATCM). In addition, the number of applications received by the District every year has been steadily rising. The staff indicated they often have to operate in "crises mode" to meet deadlines and don't have time to work on streamlining their programs. There is a backlog of entering application and permitting data into their computer system because of the work load. Staff also stated that they cannot always witness start-up inspections because of the current workload. At the time of the review, the District had hired a contractor for 3rd party enforcement for a landfill clean-up project, had contracted with the County Weights and Measures to conduct Phase II gasoline inspections, and used a consultant for software development. The District set up a task force to find ways to reduce redundancy and implement efficiencies in the permitting program.

Recommendation: As funding resources allow, the District should consider evaluating staff resources to help with the District's increasing workload.

B.1.2 Permit Filing System

The District has separate permit files for authorities to construct, and permits to operate. The "authorities to construct files" have a hand written log that tracks the status of each project. The activity log includes columns for the date, time, initials of staff, and a comment section of what occurred (i.e., District inquiries regarding application, scheduling of start up inspection, etc.). These files also contain information on inspection reports, billing notices, correspondence, permit

applications, and the engineering evaluations. The "permit to operate files" contains the source's conditional permits, correspondences, and annual renewal request forms and receipts.

Recommendations: None

B.1.3 District Permit Application Process

The District uses an Excel spreadsheet for each calendar year for tracking permit applications. The District provided ARB spreadsheets from 2002 to 2005 and they showed that the District usually met their timeline requirements. For each application the spreadsheet included the date received, date deemed complete, date authority to construct issued, date permit issued, application number, facility name and description, and assigned engineer.

The District has application forms on their website that can be easily downloaded or printed by the applicant. This quick access to the application forms is designed to assist facilities in the permitting process. Each submitted permit application is logged in by the clerk. The clerk then directs the applications to the staff (either the engineer or inspectors) for permit processing. Each staff person specializes and is responsible for permit processing of selected source categories. For example, one inspector is responsible for agricultural burning applications, and another's responsibility includes the processing of gasoline vapor recovery systems at GDFs. Each inspector drafts and signs their own engineering analysis, cover letters, authorities to construct and permits to operate. The deputy APCO or the engineer reviews the documents prior to being mailed.

District Rule 430 section 8.1 and section 6.1.3(5) in the Administrative Policy document requires that the District determine if an application is complete or incomplete within 30 days and to issue a complete/incomplete letter based on their review. ARB staff found the District does not issue completeness letters. The District indicated that completeness letters are generally not issued if the permit is issued within 30 days of the receipt of the application. When the District determines that an application is complete, they complete the authority to construct and send it to the applicant with a billing letter.

Recommendation: The District should consider adding a statement to their policy document indicating that completeness letters are not issued if a permit is issued within 30 days of the receipt of the application.

B.1.4 Permit Renewals

Each month, the District processes permit renewals for permits that are due to expire in the following month. Each source receives a new permit that is valid for a year once their permit fees are paid. Each District inspector processes the

renewals for each source they inspect and the assistant APCO reviews all permit renewal issuances. If permit conditions need to be updated, such as required by a recently amended or adopted rule, then they are completed during the renewal process. Further, upon renewal, each source file (i.e. outstanding authorities to construct, production data, and inspection reports) is reviewed to determine if the permit should be modified to ensure continued compliance.

Recommendation: None

B.2 Permitting Policies

The District has a policies and procedures document for the administration of its permitting issuance program. The policies are located in section six of the "Butte County AQMD Administrative Code Part B." In order to ensure that everyone has the most recent policy document, the last revision date (October 27, 2003 since our review) is printed on the bottom of the pages of the document. The District indicated that they update the document when a need is warranted, such as from rule amendments. One staff person is responsible for updating the policy document, but any staff member can recommend to management a change to its permitting policies.

ARB staff reviewed the policy and found it to be organized and useful in clarifying permitting process issues. We do have a couple of issues. The "New Source Review Implementation Policy" states that the District considers a modification to have occurred if there is more than a 10 percent increase in annual actual emissions over the historic actual emissions. ARB staff did not find an instance where this 10 percent increase above the new source review trigger level was used, but there is the potential of a source avoiding the application of BACT or offsets. However, the District intends to use this policy only for sources which were "grandfathered" and did not have a prior limit for potential to emit in their permit.

District Rule 400, Permit Requirements, Section 4.13 allows an exemption from permit for "Other sources of minor significance specified by the APCO." However, "minor significance" is not defined in the District rules or policies.

Recommendations: The District should clarify its policy that allows a 10 percent increase in emissions without requiring NSR. The policy should clearly state that it is only applicable to those situations where the source has been operating without a potential to emit limit on its permit.

The District should develop a policy or revise its rule to define an appropriate emission limitation that constitutes sources of minor significance.

B.3 Best Available Control Technology Determinations (BACT)

At the time of the review, the District's BACT trigger was 50 lbs/day and thus not in conformance with the requirements of the California Clean Air Act. HSC section 40918 requires each district with moderate nonattainment air pollution to have a stationary source control program that requires the use of best available control technology for any new or modified stationary source which has the potential to emit 25 pounds per day or more of any nonattainment pollutant or its precursors. We are pleased to note that the District has amended Rule 430 on September 28, 2006.

However, the full benefit of this change in terms of emission reduction opportunities can only be realized if the District applies the calculation procedures recommended by ARB (and followed by other air districts) for determining BACT applicability. The District has been using the Potential to Emit (PTE) definition for determining BACT applicability. The District's position is that their rule allows controls to be considered when establishing the PTE to determine whether a BACT threshold has been exceeded.

This is not according to the intent of ARB's Model New Source Review (NSR) Rule. The PTE definition should be used for calculating emission changes for a new or modified emissions unit. The emission change is calculated by subtracting historic emissions (zero for new units) from proposed emissions. Proposed emissions are calculated based on the potential to emit for the new or post-modification unit. Emission changes calculated in this manner are used to track the emissions of a stationary source and for determining if offsets will be required. This was also the consensus of the CAPCOA NSR Task Force Committee in 1991.[7] The Committee recommended that calculation procedures for calculating emission increases should not be used to determine whether BACT is triggered.

BACT by definition means the more stringent of the most effective emission control device or emission limit which has been achieved in practice or is technologically feasible/cost effective for the class/type of equipment under review. With the calculation procedures followed by the District, an applicant is free to employ controls which can bring the PTE of the proposed equipment just below the BACT trigger level and thus not undergo a rigorous "top down" BACT analysis. Under this scenario, BACT becomes a method of reducing emissions just below the threshold level instead of being a mechanism for employing the best or most effective emission control technique. This is contrary to the intent of ARB's Model NSR Rule.

District staff has been informed of our position. District staff has also been informed that there is no need for a rule change to employ calculation procedures

[7] Suggested CCAA NSR Calculation Procedures (Revised March 20, 1991)

suggested by ARB staff. Two examples illustrate the District's use of their calculation procedure:

1) The Neal Road Landfill application involved a landfill gas collection and flare system. The applicant's flare system had an emissions level of 0.05 lb/MMBtu NOx. Our review showed that a 0.015 lb/MMBtu emissions level could have been achieved by using an ultra low emission landfill gas flare system available since 2002. The District's engineering evaluation stated that a flare was installed "in compliance with BACT." The District's analysis should have included a "top-down" BACT analysis, the control technologies available for use, and reasons why the control system and emission limits proposed by the applicant was selected as BACT.

2) An application for a 1468 hp Roplast internal combustion engine included SCR controls which reduced NOx emissions to 0.84 pounds per hour (approximately 21 ppm). Our review showed that an emission level of 9 to 12 ppm could have been achieved for this equipment. The District determined that a BACT analysis was not required because potential to emit after considering the included controls was less than the trigger level of 50 pounds per day. The correct procedure would have been to determine uncontrolled emission of the engine and conduct a "top-down" analysis to select BACT and associated emissions limits.

The District does not regularly include a "top down" analysis in its BACT determinations. A "top down" BACT determination analysis would assist the District in ensuring the thoroughness of the BACT selection process. In brief, the "top down" process requires that all available control technologies are ranked in descending order of effectiveness. The most stringent – or "top" – alternative is examined first. That alternative is established as BACT unless the applicant can demonstrate, and the permitting authority in its informed judgment agrees, that technical considerations, or energy, environmental, or economic impacts justify a conclusion that the most stringent technology is not "achievable" in that case. If the most stringent technology is eliminated in this fashion, then the next most stringent alternative is considered, and so on.

An example of a project where the clarity of the BACT determination could have been improved is in evaluation #03-11-05. In evaluation #03-11-05, which involved a 402 Bhp diesel engine, it was not clear how the permit engineer determined that BACT was not required based on the lack of analysis performed. The District later informed ARB staff that BACT was not required because the engine is exclusively used for emergency back-up. It is our position that this engine cannot be exempt from BACT just because it is used for emergency service. The projected usage cycle should be the determining factor.

In the authority to construct evaluation #04-01-04 for a spray painting operation, the District did not estimate the VOC emissions based on the applicant's usage

information contained in the application. Instead, the evaluation assumed the source's potential to emit to be up to 50 lbs. of VOC per day (i.e., the BACT trigger level). Similarly, in the evaluation for Sierra Pacific Packaging, which involved the addition of a new printing press, the District permitted the source at the 50 lbs/day without calculating the VOC emissions based on the source's usage of VOC containing materials. The BACT analysis for VOC sources should include a VOC emission limit that is based on the applicant's coating usage estimates, and not on the BACT threshold level.

Recommendations: The District should employ calculation procedures recommended by CAPCOA NSR Task Force Committee for determining BACT eligibility. Calculation procedures for calculating emission increases (potential to emit) should not be used to determine whether BACT is triggered. This can be achieved by instituting new policies and does not require an amendment to the existing rule.

The District should ensure that BACT determinations are thorough. The BACT determination should include a "Top Down" analysis with a discussion of the controls selected for BACT and those that were eliminated from consideration because they were not achieved in practice or technically feasible and cost effective. The associated emission limits and the clearinghouses used for the determination should also be included in the evaluation.

The BACT analysis for VOC sources should include emission levels based on selected controls or the applicant's material usage estimates.

B.4 Adequacy of Permit Conditions

District permits to operate have lists of conditions that facility owners or operators are required to meet in order to be in compliance with applicable rules and regulations. Permit conditions also provide a means for District inspectors to verify a source's compliance status. Permit conditions must be specific enough to inform and notify a facility owner or operator of all the conditions needed to operate in compliance. Permits should qualify as "stand alone" documents meaning the facility owner or operator should not have to refer to District or State regulations to determine how to comply with any conditions.

The District organizes its permit conditions into five categories: General Conditions, Operational Conditions, Emission Limitation Conditions, Recordkeeping Conditions, and Source Testing Conditions. This format helps make the permit easier to follow for industry personnel and inspectors. Equipment operators at a facility can also more easily identify monitoring, recordkeeping, and reporting requirements they need to operate equipment in compliance.

The clarity of the effective dates of the District's permits can be improved. The District uses two succeeding conditions within the General Conditions section of permits to operate to define the effective date. The District uses the fourth and eleventh conditions in its authorities to construct to define the effective date. The District should consider clearly labeling the dates the permit is valid on the front page of the permit. This could help reduce the number of the conditions in the permits, and make the permits easier for sources to use. For example, industry personnel will be able to tell more easily if the most current permit is posted by the permitted equipment.

Practically every condition in the General Conditions section on the District's permits, which includes 14 conditions, and the first half of the conditions in the Operational Conditions section are the same on every permit. The District should consider reducing duplicative permit conditions in the "General Conditions" section of the permit. For example, the District's permits have the term "Revocable and Non-Transferable" on the bottom of the permit and also have several conditions concerning these requirements.

Most of the District's permits have enforceable permit conditions. However, ARB staff found several permits with enforceability issues. For example, in the permit for Esplande Cleaners, the 24th condition requires that the equipment be vapor tight, but this is not defined (i.e., how many ppm is a leak or vapor tight). In addition, this condition is not "stand alone" since the source may have to refer to other regulations to determine how many ppm is a leak. In the permit for Butte Oroville Veterinary Hospital, the 25th condition requires that the source clean the primary chamber of an incinerator at least twice a week, but there is no recordkeeping required to verify this condition[5]. In the permit for North State Electric and Pump, which was for a natural gas bake-off oven, the 24th condition requires that the afterburner chamber be maintained at normal operating temperature, but no temperature is indicated and the permit does not require a temperature gauge on the oven to measure the temperature.

Most of the District's permits have good recordkeeping requirements; however, ARB staff found that some recordkeeping requirements may be too general or don't apply to the permitted equipment. This may have occurred when the District's standard recordkeeping conditions were electronically cut-and-pasted in the permit in an effort to get the permit issued promptly. For example, in the permit for an incinerator at Butte Oroville Veterinary Hospital, the recordkeeping condition requires items including production records, raw material used, and purchase orders. However, the records required should include more specific items such as a log of the weight and type of charge incinerated. This condition would allow the weight limit of animal waste put into the incinerator (150 lbs/hr) and the no metals or glass incinerated requirement (conditions #28 & 27) to be enforced. In the ATC for West Coast Asphalt, the 44th condition, which is in the recordkeeping section, requires the source to keep a log of the hours of operation of the engine, but there is no engine permitted at the facility.

ARB staff found an instance where a 170 BHP emergency back-up engine had concentration emission requirements (in g/Bhp) listed on the authority to construct, but did not include them on the permit to operate. Authority to construct CWS -03-01-18-AC Condition #29 included concentration limits for the engine (6.9 g/Bhp NOx, 0.4 g/Bhp TOC, etc..). On the final permit to operate, the condition is missing and no concentration limits are required.

Recommendations: The District should clearly and distinctively state the valid dates on the cover of its permits.

During renewal, the District should take the opportunity to correct permits with the enforceability issues discussed above to improve their clarity.

The District should ensure that recordkeeping conditions are specific to the permitted source. The District should consider having the permits reviewed more thoroughly prior to issuance.

The District should make sure that all the applicable conditions are transferred from the authority to construct to the final permit to operate.

B.5 Adequacy of Permit Evaluations

The District has established a complete format for its engineering evaluations. Most of the District's evaluations have sections for the facility name and address, a project description, a throughput or material usage section, an equipment listing, emission estimates, a listing of applicable rules including a BACT and offsets discussion, a summary, a conclusion, and proposed conditions.

Most applications receive an engineering analysis; however, ARB staff found two instances where the District issued an authority to construct to a facility, but no engineering evaluation was conducted. For example the authority to constructs for Denis (A/C# DPS-01-01-AC) and California Classics (A/C #CAC94-01-AC), were issued, but no engineering analysis was drafted. District staff confirmed that these were issued without any written engineering analysis.

Staff found an instance where a calculation mistake resulted in an emission limit that was approximately 600 percent greater than what the actual emission limit should have been. Roplast Industries, Inc. (A/C No, ROP-02-06-AC) was granted an authority to construct for a 1,468 bhp I.C. engine, permitted at 116 ppm NOx at 15 percent O_2, as a result of incorrectly converting the source tested ppm to a standard oxygen concentration. The engine was subsequently permitted at this level. The correct emission limit, based on the source test, should have been approximately 20 ppm at 15 percent. The mistake was subsequently carried over to another authority to construct (Sierra Nevada Brewing Company, Inc. A/C# SNB-03-11-AC) for a similar engine. After the

District was notified of this mistake (on October 26, 2005), the District amended the subject permit and reissued it with a 21.53 ppm NOx limit.[8]

ARB staff found a case where an assumption in an engineering evaluation was not transferred to the authority to construct as a permit condition. The evaluation for Sierra Nevada Brewing Company, #00-03-07, which was for a new boiler to replace an existing boiler, indicated that the source had three boilers and that only two would operate at any time so there would be no increase in emissions. However, there was no condition in the authority to construct that required that no more than two boilers operate at once.

In the evaluation for West Coast Asphalt (WCA-01-01), the District calculated the maximum production the source could have without triggering BACT. The evaluation showed that, based on a trigger level of 50 lbs/day for VOC, the source could produce 547 tons/day of asphalt; however, the limit in the permit was 568 tons/day. Though the evaluation stated that a reduction in VOC emissions was expected from the project, there were no calculations in the evaluation to support the higher production limit in the permit (568 tons/day).

In the authority to construct evaluation #04-01-04, which involved the permitting of a paint booth, the authority to construct had the District's general recordkeeping condition requiring a monthly log of operating hours, fuel or raw material usage, and each product produced. However, the evaluation and ATC should have proposed more specific recordkeeping conditions including *daily* records of solvents for cleanup and/or maintenance of equipment and the coatings used. The evaluation indicated the coatings that would be used (i.e., acrylic lacquer, sealer, retardner), but they were not included in the permit to operate.

Recommendations: The District should conduct a complete engineering evaluation for each project.

The District should transfer assumptions made in its engineering evaluations into enforceable permit conditions.

B.6 Offsets and Emission Reduction Credits (ERCs)

The District does not have its own emission tracking system for tracking emission increases and decreases for permitted facilities. In order to evaluate if a facility is close to the offset threshold, all of the projects for the facility have to be individually reviewed from separate file folders, and then summed up. In some evaluations, the District indicated that it was their "judgment" that no offsets were triggered; however, staff did not find enough information to review the adequacy of such determinations. The District had very few projects that triggered emission offsets. ARB staff found only one recent project that triggered offsets – Wild

[8] After the review, the District indicated that the equipment for this project was not installed.

Goose Gas Storage (a project involving two 3,550 BHP internal combustion engines that operate compressors).

The District maintains a spreadsheet of credits in the ERC bank as well as the community bank. The spreadsheets reflected errors in the correct amounts for both ERC and community bank. After these errors were brought to the attention of the District, the District updated the spreadsheet to correct these errors.

ERC's are not tracked as each authority to construct is issued. This makes it hard to track emissions increases and decreases over the life of an ERC certificate.

The current total of ERCs in the District as of August 25, 2005:

Table VI – Emission Reduction Credits Held

	ROC (Tons/Year)	NOx (Tons/Year)	PM10 (Tons/Year)	SOx (Tons/Year)	CO (Tons/Year)
ERCs Held	295.1	120.8	221.1	0	69.7
Community Bank	58.5	66.4	34.2	0.9	44.6

<u>Recommendation</u>: Emission reduction credits should be tracked as each authority to construct is issued to determine facility wide emission increases and decreases.

The District should provide adequate review of ERC and community bank data entries into its spreadsheet, and thus reduce its data entry errors.

C. Rule Development Program

The Sacramento Valley Basinwide Air Pollution Control Council (BCC) is a regional coordinating body composed of members from the air districts in the air basin. There are nine council members currently sitting on the BCC. The council is required by law to adopt an annual Agricultural Burn Plan for the air basin. The Council also reviews and endorses proposed control measures in the Attainment Plan prior to consideration of adoption by the Air Pollution Control Boards. The Council meets on a bimonthly schedule at locations throughout the air basin.

A Technical Advisory Committee (TAC) made up of air pollution control officers from districts in the air basin meets monthly to review and coordinate the development of uniform rules before submitting them to the BCC for their consideration. Once a rule has been through the BCC review process, it is then "ready" to go through the public participation and adoption process by each district's governing Board. This rule development and coordination process has allowed the basin to have uniform air quality regulations. This rule coordination effort also fosters communication of ideas among air quality professionals and encourages sharing of limited resources.

The Valley is designated nonattainment of the State ambient air quality standards for ozone and PM10. So a uniform set of rules works well for the entire basin. However, Butte County (and the southern portion of Feather River) has to contend with the need for additional or more stringent requirements due to its current "basic" designation of the 8 hour ozone standard. Convincing a District Board to adopt more stringent rules than neighboring districts can be a challenge, but staff recommends the District pursue this effort.

The District's rule development program was reviewed with respect to the quality of existing rules and the mechanism and procedures for adopting proposed or revised rules. The primary driving force behind the Valley's rule development program appears to be measures contained in the BCC's Air Quality Attainment Plan. The District actively participates in the BCC coordinating rule development effort at the staff level by participating in a basinwide rule development group. This sharing of resources with other districts in the Valley is critical to the District's rule development program due to its limited resources. District management currently believes that it does not have the necessary staff resources for the administration of its rule development program to meet the necessary rule makings and public outreach to implement new state diesel particulate ATCMs.

Once a rule has gone through the BCC rule development process, it must still go through a public review and participation process by each district. The District has an established rule review process that includes workshops to discuss proposed or revised rules and an opportunity to receive public comments by

interested parties. In order to encourage full public participation, the District conducts workshops and meetings in the evening hours. The District also provides interpretation services at these meetings, if needed.

ARB and CAPCOA have a mutually agreed protocol designed to facilitate the rule review and coordination process among ARB staff and District staff. The protocol essentially establishes deadlines by when a draft, proposed, and adopted rule needs to be sent to ARB for its review. It also specifies the time ARB has for its rule review period and the method by which comments are communicated back to the Districts. ARB staff found that on several occasions the District has to be reminded by ARB staff to submit Board-adopted rule for ARB's final review. This review by ARB staff is important in order to verify the content and changes that resulted at the rule adoption hearing. HSC section 40704 requires the District to file with the ARB, within 30 days, any rule or regulation adopted or amended by the District. ARB staff recommends that the District comply with this requirement.

ARB staff also conducted a limited review of the District's adopted rules. With respect to Butte County, ARB staff found that New Source Review Rule 430 has a BACT threshold of 50 pounds per day for reactive organic gases (ROGs) and oxides of nitrogen (NOx), which is in conflict with HSC section 40918(a)(1), which mandates a BACT threshold of 25 pounds per day of any nonattainment pollutant or its precursors. As a result of relaying this finding to management, the District took action and amended its NSR Rule (430) to be consistent with State law. The amendments to their rule became effective on September 28, 2006. Appendix B summarizes additional new source review rule improvement issues.

We also encourage the District to make some of the prohibitory rules more stringent at the next available opportunity. One example is the visible emissions level contained in Rule 201. This is currently at Ringelmann 2 or 40 percent opacity, which is at the same level as most of the air districts in the Sacramento Valley Air Basin. However, the District should follow the lead of most air districts in the State such as Sacramento County and Placer County by lowering it to Ringelmann 1 or 20 percent opacity. Another example where it warrants the District to take a more assertive role due to its more serious ozone situation is Rule 233 Organic Solvent Degreasing Operations. ARB staff provided comments on this rule during its development process stating that we believed the rule did not represent reasonably available control technology (RACT). Further, ARB staff stated that Sacramento Metropolitan Air Quality Management District's Rule 454 was more representative of RACT stringency levels and should be considered by the District. The District did not incorporate the recommended changes.

The District has scheduled several rules for adoption during calendar year 2006 and has provided ARB staff with this schedule per Health and Safety Code requirements. This schedule consists of rule categories identified and committed

to by the District in the BCC endorsed Air Quality Attainment Plan. Some of the rule categories up for adoption this year consist of adhesives and sealants, graphic arts, wood, metal parts and products coatings operations, and confined animal facilities. The District, with its limited resources, and the increase in implementation activities associated with recently ARB adopted ATCMs, is behind in meeting its rule adoption schedule. The District has mentioned that it does not have sufficient staff resources dedicated to the ever increasing demand of its rule development and implementation program. ARB staff concurs with the District's conclusion that it needs at least one more staff person dedicated to rule development.

The District also lacks a rule that regulates emissions from abrasive blasting operations. (This rule category is not in the schedule of rules to be adopted). These operations consist of blasting paint from houses, parking lots and other related surface-preparation operations. An abrasive blasting rule could limit such particulate matter emissions by requiring only ARB certified abrasive blasting material and require other emission minimization or prevention techniques during abrasive blasting activities.

The District needs to improve its current Rule 205 (Fugitive Dust Emissions). This rule does not include basic definitions, requirements, and exemptions to guide the District staff in enforcing situations resulting from fugitive dust emissions. Since 42 percent of the complaints received by the District are related to dust, we recommend the District to revisit this rule. The District can refer to the current rule (on this subject) in place at the El Dorado County Air Quality Management District for additional guidance.

<u>Recommendation</u>: With respect to Rule 430, the District should consider incorporating the rule improvement issues summarized in Appendix B.

The District should review its prohibitory rules for stringency levels and recommend improvements beyond the other districts' rules in the Valley. One example would be for the District to lower the visible emissions levels to Ringelmann 1 or 20 percent opacity. Other examples would be for the District to improve Rule 233 Organic Solvent Degreasing Operations and make improvements to its current rule (205) on fugitive dust emissions.

The District should consider adding an additional staff person for the rule development program in order to better meet its rule adoption schedule and its Attainment Plan commitments. In addition to the rules already committed to in the schedule, the District should consider adopting a rule to regulate emissions from abrasive blasting operations.

The District should develop a process by which it automatically submits a Board-adopted rule to ARB for final review.

D. "Hot Spots" Program

In general, the District is doing a good job with their "Hot Spots" program, in part because there are relatively few large sources in the District. The District annually updates their inventory, but some of this information is not always sent to ARB. The District has done an excellent job including smaller sources in their inventory in the last few years.

The District has completed the evaluation of all Phase I (greater than 25 tons/yr) and Phase II (greater than 10 tons/yr) facilities. In the past three years, the District has identified many additional facilities subject to "Hot Spots" that emit less than 10 tons of any criteria pollutants (Phase III facilities) and have recently included these facilities in their inventory. ARB staff reviewed several District files and it is clear that the District's annual inventory program has helped the District increase the number of facilities in their inventory. The District should continue to evaluate all facilities subject to "Hot Spots."

The District prioritizes facilities using the "emissions x potency" procedure in the CAPCOA Guidelines. The District strives to annually reprioritize facilities. There are no high-risk facilities in the District, and all facilities are below a prioritization score of 10. The District approved their two major health risk assessments within a reasonable timeframe and the risk at both facilities was less than 10 per million.

The District collects annual facility information like throughput for gasoline dispensing facilities, and amount of perchloroethylene used for dry cleaners, and (re)prioritizes the facility. The annual information reports appear to be sufficient to provide updated inventories for facilities subject to "Hot Spots." However, not all of the emissions data is submitted to ARB. The District should strive to compile and submit the most important inventory data to ARB whenever possible and on a regular schedule.

The District does not always provide inventory updates for facilities that have been reprioritized. Because there are very few major facilities, this is not a critical issue. However, emissions data supports statewide rulemakings and other toxics programs, and outdated inventory information, particularly when previous emissions reductions have been made, does not allow ARB to accurately formulate future potential rulemakings. The District should send updated inventory data to ARB when the status of a facility changes. Facilities that have reduced their emissions and risk should have their inventories updated to reflect these changes. The District has provided inventory updates, but it is unclear if this has been done in a systematic way for all pollutants and all facilities.

The District strives to permit all sources of air pollution and tries to track each facility with annual survey data. A few large facilities have gone out of business and this information was not submitted to ARB. The District does not have a process for notifying ARB when a facility is out of business. The District toxics

inventory (in CEIDARS) has drastic emissions reductions for benzene, formaldehyde, naphthalene, polycyclic aromatic hydrocarbons (PAHs), and 1,1,1-trichloroethane (TCA) from the year 2000 to 2002, but the District has not provided sufficient facility information to determine the status of each facility in the inventory. For example, in 2001, Koppers, a major source of naphthalene and PAHs, appears to go out of business when it is replaced by a different facility name and emissions data in CEIDARS. In that same year, Kinder Morgan had a significant decrease in gasoline vapor emissions, without any communication by the District to ARB staff regarding these major changes to their toxics inventory. District staff should provide a list of facilities and their status in the program to ARB staff, including changes to facility name or identification number. This will allow ARB and the public to track how emissions and risk have changed for each facility in the inventory.

The District has added approximately 100 (mostly small) facilities to their inventory, including GDFs. The District reprioritizes facilities annually and has not reinstated any facilities because they get data from all facilities every year, whether or not they are in "Hot Spots", and no facility has been identified as posing a significant risk. The District has done an excellent job of collecting annual inventory information from most, if not all, of their facilities.

The District's hardcopy files contained the essential inventory components necessary to complete a simple facility prioritization for facilities for which the District collects emission data. The paper copies appear to be sufficient to document facilities in the program. The District should continue to collect inventory data for facilities that includes stack parameters on a process and device-level basis.

The District collects emissions data that conforms to ARB Inventory Guidelines, but for some pollutants at some facilities, the degree of accuracy is likely too precise. The degree of accuracy of emissions is adequate for inventory purposes. The District should continue to collect and submit emissions data and, when possible, report emissions to the appropriate degree of accuracy.

The District has evaluated all of the Industry-wide facilities using the CAPCOA Guidelines for Industrywide Facilities. ARB staff briefly reviewed industrywide files collected as part of the District's annual survey of GDFs. Survey questionnaires were adequate to estimate emissions from industrywide facilities. It appears that all facilities have been prioritized and none will be required to conduct a risk assessment. The District should continue to evaluate facilities using health-conservative assessments. The District should consider posting their methodologies for evaluating "Hot Spots" facilities on their web page.

The District does not have an emission inventory database, and paper copies are difficult to compile and summarize. The District maintains a list of facilities subject to "Hot Spots", but it is not electronically linked to their paper files. Updates to the

list are done by hand. The District appears to be able to meet the needs of their program without maintaining a database of emissions and facility information.

The District sends letters notifying facilities of the schedule for reporting emissions, and to those facilities that must complete additional "Hot Spots" requirements including risk assessments. In addition to "Hot Spots" requirements, the District requires risk assessments for all facilities within 1,000 feet of any school. This allows the District to track facilities very carefully in many parts of their District. There are only two facilities with a risk greater than 1 per million in the "Hot Spots" program in the District. The District is doing a good job notifying facilities of their requirements.

The District's regular system of permits and data surveys appears to be adequate to meet the needs of the "Hot Spots" program. The District adequately assesses warnings and penalties (Notice to Comply and/or Notice of Violation) when facilities do not meet the requirements of their District rules.

The District has an existing annual inventory reporting requirement that allows the District to track facilities in the "Hot Spots" program. There are more than 400 facilities that provide annual data to the District. District staff conducts a risk evaluation on new and modified permitted facilities as part of their District risk management review process. The District should require <u>all new and modified facilities</u> to meet the requirements of the "Hot Spots" program, including those facilities that meet the requirements in HSC section 44344.5 (b). New facilities should be included in the Annual Status Report if their risk is greater than 1 per million.

The District has completed all of the HRAs for facilities in the program. ARB staff was provided a list of facilities that had been prioritized and the year that the prioritization had been completed. The facilities that were required to complete Health Risk Assessments (HRAs) in the early 1990's were evaluated and found to have completed their requirements.

The District's Annual Reports provide an overview of the District's toxics program but do not provide specific information about facilities subject to "Hot Spots." ARB staff was provided a copy of the Annual Report for 2004. In the reports, the District describes their toxics program but did not rank and identify facilities according to the degree of cancer and non-cancer risk posed both to individuals and to exposed populations. ARB recommends posting the three most recent "Hot Spots" Annual Reports on the District's web pages for the public to review. In addition to what is already included in the Annual Report, the Report should also provide a list of all medium and high priority facilities subject to "Hot Spots", and the status of each of the facilities in the program (a description of the status of a facility might include: HRA has been approved, HRA in progress, newly exempted facility including the reason for exemption).

<u>Recommendations:</u> The District should provide to ARB a list of all of the facilities and their status in the "Hot Spots" program each year.

The District should provide the name and status of each facility in the "Hot Spots" program in their Annual Report, and should post it on their District web page for the public to review.

E. Emission Inventory Program

The emission inventory component of the District's audit consisted of an office visit by ARB staff, interviews with District personnel, and a detailed review of facility permit files maintained by the District. As of the date of the audit (July 6, 2005), the ARB's California Emission Inventory Development and Reporting System (CEIDARS) database contained 183 facilities which emit criteria pollutants and 426 facilities which emit air toxics located in the District.

Overall, the audit revealed that there are opportunities for improving the overall quality of the emissions inventory and management system, such as the institution of quality assurance/quality control procedures, tracking and reporting of facility operating status, and documentation of area source methodologies.

E.1 Criteria Pollutant Inventory

At the time of the audit, the District had submitted electronic updates for criteria pollutants to the ARB's CEIDARS database for 2002. The submittal included annual process rate information in addition to estimates of facility emissions. Process rate information is necessary for establishing and/or verifying emissions estimates provided by the District.

Point Sources: The audit revealed that the District has not reported changes to point source facilities on an annual basis to the ARB. For example, the ARB CEIDARS database contains 24 major point source facilities in the District for the 1996 reporting year and 14 major point facilities for the 2001 inventory year. The District did not report that 10 facilities had closed subsequent to the 1996 reporting year. As part of the annual emission inventory update submittal to the ARB, the District should provide a list of all facilities with their operating status (e.g., closed, permit revoked, closed since 2000, etc.). This will ensure that the CEIDARS database reflects the most current information regarding active facilities in the District.

The audit also revealed that, in some cases, facility identification codes assigned by District staff to new point source facilities were the same as the identification codes used for other facilities within the District. The purpose of facility identification codes is to provide a unique identifier for each facility within the District. The same facility identification code should therefore not be used for more than one facility.

At the time of the audit, the last comprehensive point source facility update provided by the District in the correct transaction format was for the 2002 inventory year. However, important facility information (e.g., facility locations, stack parameters) was not provided for all facilities. Although the missing information was later provided to ARB upon request following a quality assurance check by ARB staff, the District should provide location (spatial) data, stack

parameters, and process rate data for all facilities each time an inventory update is provided to ARB.

Area Sources: The most recent update of area source emissions estimates by the District occurred in 2002. The 2002 update included updated emissions estimates of six area sources categories out of 89 total categories for which the District has responsibility for providing emissions data. Prior to 2002, the last District area source emissions update was submitted in 1991.

Since only two area source emissions updates from six area source categories have been submitted to ARB over the last 15 years, the emissions information reflected in the ARB's database on area sources in the District is outdated and incomplete. The District should provide updates to area source emissions estimates for which it is responsible on a regular basis as part of the annual CEIDARS update submittals.

With respect to area source methodologies, the District has provided ARB with two area source methodologies for which the District has responsibility - agricultural burning emissions (i.e., pruning, field crops, range improvement, weed abatement) and emissions from jet aircraft. There are 89 area source categories for which the District is responsible for developing emission estimates and methodologies. The District should provide methodologies for all the area source categories for which the District is responsible.

E.2 Toxics

The toxics inventory for the District was updated for 2002 and submitted to ARB with the criteria pollutants inventory as a one combined dataset. At the time of the audit, no other toxics updates had been submitted. The ARB recommends that the toxics inventory data be updated annually as a combined (merged) dataset.

E.3 General Inventory Management

Growth and Control Factors: Default growth data are routinely developed by ARB staff, or via contractors, for use in developing forecasted emissions estimates. For those area source categories for which the District is responsible for providing emissions data, the District may provide growth factors in place of the ARB's default growth factors.

Control factors reflect rules and other controls on source emissions and are also used in developing forecasted emissions estimates for air quality planning. The ARB relies on local air districts to provide control factors for some source categories. If control factors are not provided, ARB assumes no controls, resulting in inaccurate emissions forecasts.

It is in the interest of the District to ensure that local growth data, if available, and the benefits of emissions control rules are reflected in ARB's forecasts and therefore to provide ARB staff with appropriate growth and control factors. The District has provided growth data and control factors for the agricultural burning categories. The District should provide control factors information on new adopted rules and work with ARB staff on use of the appropriate growth factors.

SIC Codes: The District has not provided ARB with updated Source Classification Codes (SCC). These codes are important to accurately assign emissions to sources categories. Based on quality assurance (QA) reports run on the 2002 CEIDARS database for the District's inventory data, there were 23 invalid SIC/SCC combinations that were improperly assigned to facilities and processes. The District should notify ARB staff of any new SCC/SIC combinations assigned to a facility and process in the updated inventory. This will prevent emissions from a source category being assigned incorrectly or aggregated into a miscellaneous category.

Data Management System: The District uses both an electronic and paper filing system for compiling emissions data. The District maintains its criteria inventory in an electronic system developed by ARB, the Hotspots Analysis and Reporting Program (HARP). However, the District maintains toxics inventory data in a paper filing system. The District should add toxics data to their existing electronic criteria pollutant emissions inventory database. The ARB also requests that the District merge criteria and toxic emission inventories and provide ARB with a single, merged emissions inventory. The most recent District emission inventory submittal at the time of the audit was provided in an appropriate electronic format (i.e., CEIDARS2.5 transaction format). The District should continue to submit data using this transaction format.

Data QA/QC: The District staff stated that they do not have a QA program in place to check data before they are submitted to ARB, nor does the District have a written QA/QC protocol. The District should develop a QA/QC program and a written protocol to ensure the accuracy and precision of their emission estimates.

Recommendations: The District should continue providing criteria and toxic data updates to ARB as a merged submittal.

The District should continue updating area source categories and provide the information to ARB on a regular basis and as part of the annual CEIDARS submittals.

The District should document all of their area source methodologies and make them available to the ARB and the public.

The District should provide point source updates at the device and process level including spatial, stack, and temporal data for all facilities with each inventory submittal.

As part of the annual emission inventory update submittal to the ARB, the District should provide a list of all facilities with their operating status (e.g. closed, permit revoked, closed since 2000, etc.).

The District should ensure that the facility ID assigned to a facility is unique and not used for other facilities.

The District should develop a written QA/QC protocol to ensure the accuracy and precision of their emission estimates.

The District should notify ARB staff of any new SCC/SIC combinations assigned to a facility and process in the updated inventory.

F. Ambient Air Monitoring Program

ARB staff conducted an audit of the District's ambient air monitoring system. The purpose of the audit was to evaluate the District's compliance with the requirements of the U.S. EPA's 40 Code of Federal Regulations (CFR), Part 58, and the U.S. EPA's Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II, August,1998. The system audit consisted of an in-depth questionnaire, followed by a District program file review, and an inspection of the District's ambient air monitoring system.

The District has been operating the Paradise-Birch air monitoring site since 1979[9]. It is located on the roof of the fire department at 767 Birch St. in Paradise.

Overall, the District's ambient air monitoring program is well run and organized. The day to day operation of the PM10 sampler is handled efficiently by the operator and non-routine difficulties are referred to an ARB technician. The District has a detailed Standard Operating Procedure for the operation of the PM10 sampler. The District's site operator reviews all data and takes appropriate action to correct any deficiencies or problems. A performance audit was conducted at the site in 2005. The results indicated that the instrument was operating within the ARB's control limits. The Annual Quality Assurance Data Analysis Report for the year 2004 recognized the District as producers of "excellent" quality ambient air data.

Recommendation: The District should continue to operate their ambient air monitoring program in accordance with their established methods and procedures.

[9] The site was originally opened on January 1, 1979 for ozone monitoring and was closed on December 31, 1981. The start date for the current PM10 monitor was February 12, 2001.

Appendix A:

Breakdown Program Recommendation Details

(Refers to Section A.4)

Breakdown Program Recommendation Details (Refers to Section A.4)

1. All breakdown notifications reported to the District should be recorded with essential information for immediate review in the breakdown log. ARB staff recommends the District enter the following information into the breakdown log:

    a. Source name, address, telephone number, and contact person,

    b. Specific equipment affected by malfunction,

    c. Specific equipment failure,

    d. Confirmation that breakdown is allowable under rules,

    e. Time and date breakdown occurred,

    f. Time and date of discovery of breakdown,

    g. Time and date breakdown reported by source,

    h. Time and date breakdown investigated by district,

    i. Source's proposed action,

    j. District investigator assigned to the case,

    k. Time and date breakdown was corrected,

    l. Date breakdown correction report was filed by source, and

    m. Indicate if a variance was requested and issued.

2. As part of the stationary source reporting requirements, ARB staff recommends that within one week after a breakdown occurrence has been corrected, the owner or operator shall submit a written report to the air pollution control officer which includes:

    a. A statement that the occurrence has been corrected, together with the date of correction and proof of compliance;

    b. A specific statement of the reason(s) or cause(s) for the occurrence sufficient to enable the air pollution control

officer to determine whether the occurrence was a breakdown condition;

c. A description of the corrective measures undertaken and/or to be undertaken to avoid such an occurrence in the future (the air pollution control officer may, at the request for submitting the description required by this subparagraph);

d. An estimate of the emissions caused by the occurrence; and

e. Pictures of the equipment or controls which failed, if available.

3. All District on-site breakdown investigations should be adequately documented in a breakdown report. On-site breakdown investigation reports should include the following information:

a. Time and date on site breakdowns investigated,

b. Permit units inspected and operating and equipment parameters checked,

c. Specific equipment affected breakdown,

d. Specific equipment failure,

e. Detailed description of problem causing the breakdown,

f. A determination that the breakdown was beyond the reasonable control of the source and is allowable under district rules or a determination that the breakdown was disallowed,

g. A statement of which rules are being violated,

h. Determination of excess emissions resulting from breakdown and all operating parameters needed to determine emissions under the breakdown conditions,

i. Source contact,

j. Source proposed action,

k. Inspector evaluation,

l. Date and time breakdown corrected,

m. Date inspector re-inspected breakdown to verify that breakdown was corrected,

n. Steps taken to correct the breakdown, including equipment replacement, repairs, or modifications,

o. Variance application and issuance, if any, and

p. All data necessary to determine final compliance confirmation.

Appendix B:

Review of Butte County AQMD NSR Rule
(Refers to Section C)

Review of Butte County AQMD New Source Review Rule

(Refers to Section C. Rule Development Program)

How this review was done:

Air Resources Board (ARB) staff looked at the New Source Review rule of the Butte County Air Quality Management District, keeping in mind applicable requirements based on the district's attainment status with regard to State and federal ambient air quality standards.

Table 1
Air Quality Status of District for State and Federal Ambient Air Quality Standards for Ozone

District – NSR Rule Number	State O_3 attainment status	Federal 8 hr O_3 attainment status
Butte - Rule 430	Moderate	Basic

Our comments on the rules are categorized according to topic area. Table 2 lists our comments on BACT. Table 3 lists comments on offsets. Table 4 lists comments on definitions, and Table 5 lists other, miscellaneous comments.

The nature of each comment is indicated by a notation printed in bold at the end of the comment. For example, such notations include ones that indicate if the comment reflects an inconsistency found between the district rule and State or federal requirements. Other notations indicate if a comment reflects an inconsistency found between the district rule and that of other comparable districts, or if improvements are recommended for increased clarity or completeness. Also, one notation highlights areas that will likely be impacted by federal requirements that have implementation dates in the near future and may require rule changes.

Table 2 – Comments on BACT	
Butte Rule 430	• The BACT threshold in the current rule is 50 lb/day for ROGs and NO_x, however H&SC 40918 mandates that such thresholds be at 25 lb/day.[10] **(IS)*** • In the rule, BACT is triggered only when specified emissions are exceeded; it should be triggered when the potential to emit equals or exceeds specified levels as required under H&SC 40918. **(IS)**

*Abbreviations used to characterize nature of comments: **(IS)** = Inconsistent with State law, **(ID)** = Inconsistent with rules of other comparable districts, **(IF)** = Inconsistent with federal requirements, **(CL)** = Improvement to clarity and/or completeness, **(UP)** = Upcoming - federal requirements taking effect in near future

Note: With respect to BACT threshold level discussed above, the District Board took action and amended its NSR Rule 430 to be consistent with state law. The amendments to their rule became effective on September 28, 2006.

[10] The District amended Rule 430 on September 28, 2006 to have a BACT threshold of 25 lbs/day for ROGs and NOx.

Table 3 – Comments on Offsets	
Butte Rule 430	• The section that covers general offset requirements would be clearer if "offsets" were well defined in the rule. While some of the five districts (i.e. Feather River, Glenn, and Colusa) currently have a definition of "offsets," it refers simply to an "emission decrease" and not the fact that such a decrease needs to meet certain criteria, such as being banked as an emission reduction credit, to qualify for use as an offset. **(CL)** • The calculation procedure for "actual remission reductions" is unclear because it does not mention the subtraction of emissions that are not surplus. Even though "actual emission reductions" is defined in the different districts' rules, the equations in the calculation procedures are not completely consistent with that definition. One way to remedy this is to include in the calculation procedure a reference to the definition for "actual emission reductions" (or to "surplus," where it is defined). **(CL)** • Section 6.3.2 should refer to section 5.2 instead of 5.1 and should include a reference to section 5.3 (offset ratios) to determine the amount of offsets required. **(CL)** • Section 5.4, Interpollutant Offsets, would be improved by adding limitations to the use of such offsets similar to those of the other nearby districts, e.g. the other districts do not allow the use of PM10 credits as offsets for NOx or reactive organic compound increases. **(ID)**

*Abbreviations used to characterize nature of comments: **(IS)** = Inconsistent with State law, **(ID)** = Inconsistent with rules of other comparable districts, **(IF)** = Inconsistent with federal requirements, **(CL)** = Improvement to clarity and/or completeness, **(UP)** = Upcoming - federal requirements taking effect in near future

Table 4 – Comments on Definitions	
Butte Rule 430	• The definition of non-reactive halogenated hydrocarbons should be updated using the attached "ARB's Definitions of TOG and ROG (as of November 2004)" **(CL)** • With the exception of Feather River, all the districts need to add the word "Pollutant" after the words "Secondary Air" to the definition of "Precursor." **(CL)**

*Abbreviations used to characterize nature of comments: **(IS)** = Inconsistent with State law, **(ID)** = Inconsistent with rules of other comparable districts, **(IF)** = Inconsistent with federal requirements, **(CL)** = Improvement to clarity and/or completeness, **(UP)** = Upcoming - federal requirements taking effect in near future

Table 5 – Other Comments	
Butte Rule 430	• The State exemption of agricultural operations from NSR and other permit requirements was removed from Health and Safety Code Section 42310 and replaced by permit requirements for agricultural sources in Health and Safety Code Section 42301.16, effective January 1, 2004. This change does not appear to be reflected in the district rules. **(IS)** • U.S. EPA guidelines for implementing NSR for areas that are non-attainment for the 8-hour ozone ambient air quality standard were issued November 29, 2005. Butte is classified as "basic" with regard to non-attainment of that standard. **(UP)** • Changes to the federal NSR program published in the Federal Register on December 31, 2002 require conforming district rule changes to be submitted to U.S. EPA by January 2, 2006 for approval into the SIP.[11] CAPCOA, ARB, and U.S. EPA have agreed on a simple approach to address this requirement that still conforms to State law (Health and Safety Code Sections 42500 – 42507). **(UP)**

*Abbreviations used to characterize nature of comments: **(IS)** = Inconsistent with State law, **(ID)** = Inconsistent with rules of other comparable districts, **(IF)** = Inconsistent with federal requirements, **(CL)** = Improvement to clarity and/or completeness, **(UP)** = Upcoming - federal requirements taking effect in near future

[11] The District adopted new Rule 432, Federal Major Modifications, in September 2006. This new rule conformed the District's NSR program to the 2002 federal NSR changes.