Compliance and Enforcement Activities

Fiscal Year 98/99

California Environmental Protection Agency

Air Resources Board

California Environmental Protection Agency

Air Resources Board

Compliance and Enforcement Activities – FY 98/99

Protecting the public health and welfare by ensuring compliance with air-pollution law...

Introduction

This is the report of the compliance and enforcement activities of the Air Resources Board (ARB) during fiscal year 98/99. Compliance and enforcement activities have the goal of ensuring that sources of air pollution in the state operate in compliance with applicable air-pollution control laws and regulations. Therefore, they include a wide range of activities that go well beyond the common view of enforcement that includes inspections, citations and penalties. They include programs aimed at assisting both air-pollution professionals and operators of equipment subject to regulation to achieve and maintain compliance with those regulations, such as training and certification programs, development and distribution of compliance-assistance materials, program audits – indeed virtually every activity which will further progress toward the goal.

Compliance and enforcement activities at the ARB are chiefly the province of two divisions: the Compliance Division and the Mobile Source Operations Division. Staff of other Divisions are occasionally called upon to assist with enforcement activities or to provide particular expertise.

It is important to remember that California's air pollution control program is shared between the Air Resources Board and the 35 local air pollution control districts or air quality management districts. The local air districts have the primary responsibility to resolve air pollution violations from non-vehicular sources, whether uncovered by district personnel or ARB staff. The ARB pursues violations of law that are its responsibility. If a district declines to resolve a violation, or requests assistance, the ARB may pursue it and seek resolution.

When violations of state air pollution control law or regulation are brought to light, enforcement action can follow any of several paths, including variances, settlement out of court, administrative action, civil litigation and criminal prosecution. Out-of-court settlements frequently involve payment of a civil penalty in addition to achieving compliance. They may also involve commitment by the violator to undertake programs with special air quality benefits, or to establish a special program of research or of employee training. Where a class or category of vehicles does not meet California's standards, the remedy is often a recall by the manufacturer to correct excess emissions, by replacing defective parts or by making necessary adjustments. In administrative or civil litigation, the ARB usually seeks a monetary penalty. The ARB may also seek court orders enjoining further violative behavior or otherwise strengthening provisions of a settlement or other resolution of a violation.

The ARB seeks criminal penalties only in the most refractory cases, where criminal intent is involved or violations have been committed with wanton disregard for the public's well-being and with full prior or concurrent knowledge of the violation, and where the will to comply is lacking.

While the staffs of the two divisions are responsible to bring to light violations, the staff of the Office of Legal Affairs is involved in the negotiating of settlements of those violations or the preparation and conduct of litigation or criminal prosecution.

This report, then, describes the ARB's compliance and enforcement activities during fiscal year 98/99.

Questions and comments about this report should be addressed to the appropriate section or branch managers or to Mr. James Morgester, Chief, Compliance Division, at (916) 322-6022; or to Mr. Rod Summerfield, Chief, Mobile Source Operations Division, at (626) 450-6152, or to Mr. Robert H. Cross, Chief, Mobile Source Control Division, at (626) 653-6807.

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Air Pollution Compliance Professionals Protecting the Public Health & Welfare...

Program Overview

The Compliance Division (CD) is the enforcement arm of the California Air Resources Board (ARB). Of the Board's 1,014 employees, 81.5 (8 percent) work for the Compliance Division. The objectives of the Division's enforcement program are straightforward -- reduce excess emissions, through cost-effective reductions, thus protecting California's environment and maintaining a level playing field for business. The scope of the challenge is tremendous. California has 32 million people, 25 million motor vehicles consuming 14 billion gallons of gasoline, 11,300 service stations, 5,500 cargo tanks, 600 million consumer products, and 40,000 stationary sources. All contribute to the state's air pollution problems. To meet such a daunting challenge, the Division's staff works with some 300 additional compliance personnel from the state's 35 air pollution control districts.

In order to make this enforcement program efficient, several governing principles guide the Compliance Division:

- Enforce the law firmly and fairly;
- Consistent application of the standards;
- Apply penalties commensurate with the nature of the violation;
- Use compliance education to enhance compliance;
- Provide a level playing field;
- Assist air pollution control districts in following these principles.

Perhaps the best way to adhere to these principles is the "Three Legged Stool" theory of compliance, which likens the state's compliance program to a three-legged stool. The three legs are: 1) training and compliance assistance; 2) district program review and evaluation; and 3) inspection, monitoring, and, when appropriate, penalty. For California's compliance program to be effective and stable, all three legs of the enforcement stool must be firmly in place. Recognizing the validity of this theory, the Compliance Division has been organized to optimize all components. The Surveillance Branch includes the Source Test, Field Enforcement, and Certification & Investigation Sections. The Program Assessment and Compliance Data Management Branch includes the Program Review and Compliance Data Management Sections. Finally, the Training and Compliance Assistance Branch includes the Compliance Assistance and Compliance Training Sections (more information on each of these sections and their activities is included in this annual report).

Studies have shown that this three-legged approach improves compliance and is more cost-effective than other approaches, especially self-inspection and certification by sources. EPA research has shown that sources that are inspected more often have a higher compliance rate. In fact, experience in California with vapor recovery has shown that a 95 percent compliance rate can be achieved in this fashion. Although self-inspection can help a source to stay in compliance, complete reliance on self-inspection has proven ineffective. The South Coast AQMD reported 63 percent and Bay Area AQMD reported 52 percent compliance rates when relying on self-inspection. Often, diligent enforcement of existing rules can be more effective than developing additional control measures. Because of these, and other facts, the Division maintains that all three legs of the stool must be firm to ensure compliance and protect the health and welfare of California's citizens.

The importance of regular and frequent inspections is strikingly borne out in the negative; a three-fold reduction in inspections of motor-vehicle fuel cargo tanks has resulted in a four-fold increase in the non-compliance rate and a nearly six-fold increase in emissions. Since 1996, the non-compliance rate for cargo-tanks is up from 5 percent in 1996 to 23 percent in fiscal year 98/99, while emissions are up from 2.8 to 15.8 tons per day. This increase coincides with a decrease in the number of inspections that the Division is able to conduct (748 in 1996, down to 273 in fiscal year 98/99), and the growth of the number of certified cargo tanks in the fuel distribution system (up from 4,500 to 5,500).

The Compliance Division also conducts Compliance Assistance and Training programs that are available to both air district staff and industry representatives. These programs help ensure the competence of the people operating sources of air contaminants and of inspectors for the regulatory agencies. They also provide valuable materials for maintaining skills and for putting them to good use. Review of the local districts' enforcement and

permitting programs provides valuable feedback for improving the effectiveness of those components of the state's program to protect its citizens from the ravages of air pollution. Field enforcement activities ensure that no-one benefits from non-compliance, and that violators run a significant risk of detection and penalty.

The Compliance Division operates on a very flexible basis, internally and externally, and staff members from one section are often assigned on a short-term or a long-term basis to activities based in other sections. Staff of all sections in the Division participate in a wide variety of activities, including emergency response and complaint response, investigations and training, regardless of the primary task of their section. From time to time, Division staff participate in activities based in another division of the ARB, or, staff from another division may work on specific projects within the Compliance Division.

Dynamic transitions in business and government, especially the rapid changes in technologies, continue to challenge the environmental community. These changes are redefining priorities and have increased the Division's workloads. The dedicated people of the Compliance Division act as an interdisciplinary enforcement team of varied backgrounds ranging from engineering, law enforcement and criminal investigation, health science, biological science, aeronautical science, business administration, and more. Although most hold bachelor degrees, many hold advanced degrees including MS, MA, MBA, and Ph.D. These skills and knowledge prove invaluable as staff activities range from emergency response, to field inspection, to complaint handling, to surveillance, to testing and certification, to education and training. Many of these activities also require specialized training. The emergency response team personnel, for example, require extensive and ongoing training in Hazardous Waste Operations, use of emergency breathing apparatus, first aid and CPR, use of air monitoring equipment, and visible emission evaluation. A well trained, well educated, and well disciplined team is indeed the key to the division's past and future successes.

An important new development since March, 1999, is the creation of the Strategic Environmental Investigations (SEI) program in the Division. The SEI program is responsible for investigating particularly egregious and complex violations of environmental law or regulation, and developing such cases for prosecution as appropriate. The SEI program embodies Cal/EPA's new approach to compliance issues in environmental regulation, based on the recognition that direct enforcement is vital to ensuring the protection of California's citizens and their environment and to maintaining a "level playing field" for complying businesses. The staff of the SEI team has hit the ground running, and several cases are already under development.

Also noteworthy are the Division's accomplishments in field inspections and audits, source testing, vapor recovery, training (including the justly acclaimed multi-media enforcement symposium), compliance assistance documents, and data management. The following material summarizes the Compliance Division's accomplishments for fiscal year 98/99.

Compliance Division
Surveillance Branch

Key Personnel

	Phone:
Chief – Bob Leonard	**916-322-6034**
Source Test Section **Manager – Gary Zimmerman**	**916-322-2866**
Field Enforcement Section **Manager – Chuck Beddow**	**916-322-6033**
Certification and Investigation Section **Manager – Laura McKinney**	**916-327-1525**

Certification and Investigation Section

Leading the Nation in Certification...

Program Overview

The Certification and Investigation Section is responsible for the certification of independent contractors for compliance testing, the certification of abrasives used for permissible outdoor blasting, and the granting of exemptions from the ban on open burning to burn non-industrial wood waste. The section is also responsible for the certification of cargo tanks and phase I and II vapor-recovery equipment for use in California. Many other states and countries have adopted regulations which require the installation of vapor recovery systems and allow only those which have been certified by ARB. Enforcement of the regulations regarding the certification of cargo tanks and vapor recovery systems is also the responsibility of the section.

Vapor Recovery Certification Program

What Does it Take to Get ARB Approval?

California Air Resources Board (ARB) testing and certification procedures for vapor recovery systems in service stations were developed and adopted in the mid-1970s. Three other agencies must grant approval as a precondition to ARB certification. These agencies are the State Fire Marshal, the Department of Occupational Safety and Health, and the Department of Food and Agriculture- Division of Measurement Standards.

EPA Mandates Vapor Recovery/States Want ARB Certification

The Federal EPA Clean Air Act Amendments of 1990 mandated the adoption of regulations which require dispenser based vapor recovery systems in all areas which are classified moderate through extreme non-attainment for ozone -- a ground level pollutant. In recognition of the experience and expertise in

vapor recovery of ARB, EPA required that the programs of all other states meet one of the following criteria:

- Specify that only ARB-certified equipment be used;
- Establish a certification program using ARB test certification and test procedures; or
- Establish certification and test procedures which are approved by EPA as equivalent to ARB procedures.

Almost without exception the affected states adopted regulations which require ARB certification. Several European countries are also taking this approach. This has caused the requests for certification to increase significantly, and therefore also the workload for the Certification and Investigation Section staff. Staff has also responded to hundreds of requests for information and expertise from local districts and other states, as well as other countries. The following is a summary of vapor recovery activities during the last fiscal year.

Vapor Recovery Data -- Fiscal Year 98/99

9 Vapor recovery systems evaluated
2 New Executive Orders issued
25 Additional components submitted for certification
16 Component approvals granted

ARB/CAPCOA Field Testing

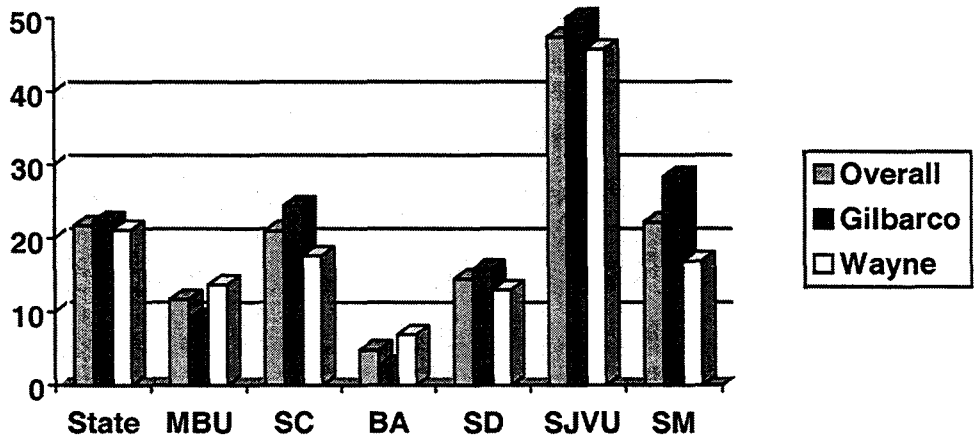
The Compliance Division, with the cooperation of the Bay Area AQMD, Monterey Bay AQMD, Sacramento Metropolitan AQMD, San Diego County APCD, San Joaquin Valley APCD, and South Coast AQMD recently tested 99 service stations equipped with vacuum assist (also called bootless) vapor recovery systems. The testing centered on the Air to Liquid (A/L) ratio test. This test is the principal test of functionality and efficiency of bootless vapor recovery systems. The testing was performed at the request of the California Air Pollution Control Officer's Association (CAPCOA).

The testing took place from January 25 through April 2, 1999. Over 2000 A/L tests were performed with an overall failure rate of 21.7 percent. Additional analysis of the test data revealed that improvements need to be made in several areas including equipment design, maintenance procedures, test procedures, and inspection requirements. More specifically, one widespread problem found was that the aluminum spout on the OPW 11VAI gasoline dispensing nozzle could not endure the wear and tear of everyday use for the

duration of its expected service life. Staff estimates that overall failures of vapor recovery equipment contributes to 6.6 tons/day of excess emissions.

This investigation revealed that compliance rates varied greatly in the different geographical testing areas, even though the equipment is basically the same. Data analysis indicates that this variation is directly related to the inspection stringency and frequency required of the service stations. For example, service stations in the district that had the most aggressive inspection program showed a 6 percent overall A/L failure rate vs. 21.7 percent statewide. See chart below for the failure rate breakout.

State & Air District
A/L Failure Rate Percentage



A preliminary draft copy of the Vapor Recovery Test Report was issued, for review and comments, to the six districts which participated in the study.

Enhanced Vapor Recovery

The purpose of enhanced vapor recovery (EVR) is to solve a variety of problems with the currently certified phase I and phase II vapor recovery systems. The main goal of EVR is to ensure that the in-use performance of these systems achieve and maintain the levels demonstrated during certification. This program is necessary for two basic reasons. Field testing has shown that the in-use performance of some certified systems is far less than the level at which they were certified. By raising the standards for certification and applying new technologies to monitor the systems in-use performance, the reliability and efficiency of the systems will be increased.

The second issue is the growing population of vehicles equipped with the onboard refueling vapor recovery (ORVR) systems. Incompatibility between the ORVR systems and some of the phase II systems is causing the loss of previously-controlled emissions through vapor growth in the underground storage tanks, which results in increased fugitive emissions. These emissions must be recovered to minimize the increasingly negative impact on air quality. New standards are being developed for presentation to the Board in December 1999.

Cargo Tank Certification and Enforcement

Cargo tanks are required by district regulations and State law to have a certified vapor recovery system. The Compliance Division administers the annual cargo tank vapor recovery certification program. The Division reviews application forms for certification, issues ARB decals, and provides verified copies of the application to the owner/operators. Several databases have been put into place to monitor the certifications, cargo tank testers, and statewide inspections.

Staff performs random inspections at cargo tank test facilities to ensure the test procedure is carried out properly. In addition to annual certification inspections, ARB staff conducted 273 inspections at bulk terminals and loading racks for compliance with vapor recovery standards. In fiscal year 98/99, Division staff tested 110 cargo tanks, finding a compliance rate of 77 percent.

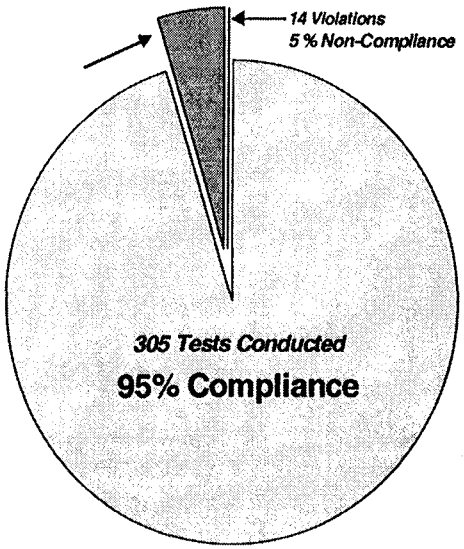
It is disturbing to report that a three-fold reduction in inspections of motor-vehicle fuel cargo tanks has resulted in a four-fold increase in the non-compliance rate and a nearly six-fold increase in emissions. The non-compliance rate for cargo-tanks is up from 5 percent in 1996 to 23 percent in fiscal year 98/99, while emissions are up from 2.8 to 15.8 tons per day. This increase coincides with a decrease in the number of inspections that the Division is able to conduct (748 in 1996, down to 273 in fiscal year 98/99), and the growth of the number of cargo tanks in the fuel distribution system (up from 4,500 to 5,500).

In fiscal year 98/99 the Compliance Division was responsible for 5,500 cargo tanks, up from 4,500 in 1996.

Cargo Tank Vapor Recovery Performance Testing
Fiscal Year Comparison

1996 Test Results

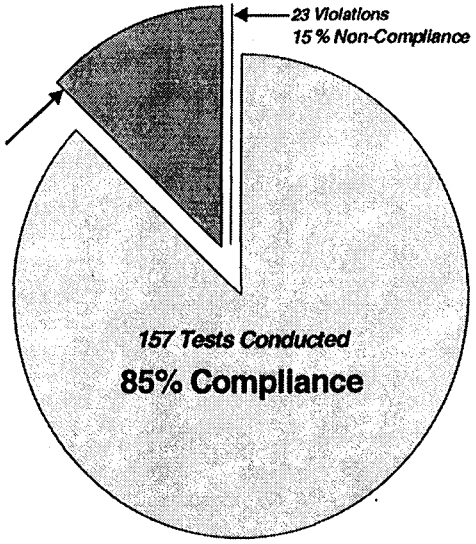
748 Cargo Tanks Inspected



4500 Certified Cargo Tanks
2.8 Tons/Day Hydrocarbon Emissions
(1020 Tons/Year)

1997-98 Test Results

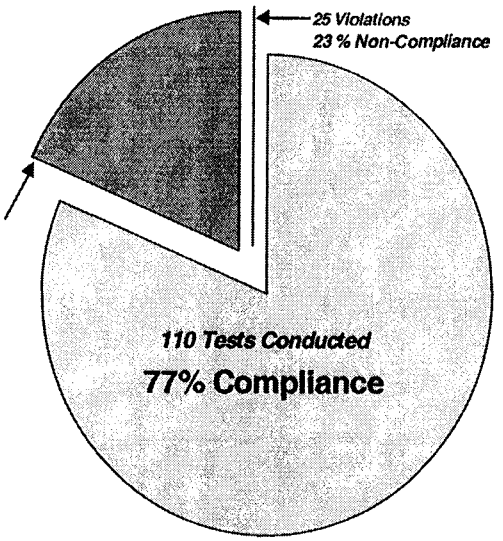
400 Cargo Tanks Inspected



5000 Certified Cargo Tanks
9.4 Tons/Day Hydrocarbon Emissions
(3395 Tons/Year)

1998-99 Test Results

273 Cargo Tanks Inspected



5500 Certified Cargo Tanks
15.8 Tons/Day Hydrocarbon Emissions
(5730 Tons/Year)

Abrasive Blasting Certification

Certification Requirements

The Health and Safety Code authorizes the ARB to adopt air pollution standards for sandblasting operations under title 17 of the California Code of Regulations. Before blasting, the abrasive shall contain not more than 1 percent by weight of material passing a #70 US standard Sieve, or, as an alternative, shall not produce visible emissions of more than 20 percent opacity when blasted in accordance with a specified test method. After blasting, the abrasives shall contain not more than 1.8 percent by weight of material 5 microns or smaller. Vendors submit material for certification renewal biannually in the spring. Vendors may submit material for initial certification at any time during the year.

Certification Activities

During Fiscal Year 98/99 one Executive Order was issued certifying 87 products. Executive Order 98-061 lists abrasives currently certified by ARB. The section received 75 samples for certification from 34 companies. Five of the products failed the sieve test and, of those, one will be tested using the Visible Emissions Alternative Test.

Independent Contractors

Independent Contractor Program

Private companies that conduct compliance testing within the state may apply for approval from the ARB. The Certification and Investigation Section staff check the personnel, equipment, and testing procedures to determine if the company meets minimum standards. Approved contractors are subject to spot checks of their ability in the field, a yearly renewal audit, and full scale re-evaluation after five years.

Demand Remains for the Approval of Independent Contractors

During fiscal year 98/99, three contractors were approved for fifteen test methods of the ARB, USEPA, or American Society for Testing and Materials (ASTM). More than 40 contractors renewed their approval for over 400 test methods. Less than five contractors chose to allow their approval expire. There are currently over 40 contractors approved for over 450 test methods.

Non-Industrial Wood Waste Burning

Non-industrial Wood Waste Basics

The Health and Safety Code provides for cities and counties to use open outdoor fires to dispose of non-industrial wood waste at designated disposal sites on permissive burn days. Sanitary landfill capacity is very difficult to obtain and these valuable sites should be reserved for high-priority waste such as garbage and low-volume rubbish. The disposal, by burning, of high-volume wood waste will help prolong the life of landfill sites. These burns are reasonably regulated so as not to create a nuisance or significantly reduce the quality of the ambient air. At present there are 36 approved sites for burning non-industrial woodwaste, in 10 districts.

ARB Provides Authorization for Appropriate Burns

ARB must review each request for authorization to burn at a landfill to ensure that the proposal meets the requirements of the Health and Safety Code. No approval, however, will be granted after ARB determines that an alternative method of disposal has been developed which is technologically and economically feasible. No such determination has been made to date. Designated disposal sites for wood waste burning must be located above 1,500 feet elevation mean sea level, or at any elevation within the North Coast Air Basin. The ambient air quality standards must be maintained. If the district board elects to authorize such burning, permits must be obtained from the district and the local fire protection agency having jurisdiction. The burns must not create a nuisance for the local population.

Approved Non-industrial Wood-Waste Burning Sites

District	Burn Site	Conditions and Comments
Calaveras:		
	Redhill	Burning allowed after 1000 hrs during any month which had low TSP during the last two years.
Great Basin:		
	Pumice Valley	Burning allowed June. No more than 600 tons. No longer than 24 hrs.
	Benton Crossing	Burning allowed 4/1-6/30, 9/1-11/31. West or south wind. Pile 20 ft diameter & 5 ft hi. No more than 8 tons. One pile at time. Record complaints. Expire 5/19/99.
Lassen:		
	Westwood	Burning allowed 12/1 - 5/31.

Approved Non-industrial Wood-Waste Burning Sites
(continued)

District	Burn Site	Conditions and Comments
Modoc:		
	Adin	Burning allowed 12/1 - 5/31.
	Alturas	Burning allowed 12/1 - 5/31.
	Canby	Burning allowed 12/1 - 5/31.
	Cedarville	Burning allowed 12/1 - 5/31.
	Davis Creek	Burning allowed 12/1 - 5/31.
	Eagleville	Burning allowed 12/1 - 5/31.
	Fort Bidwell	Burning allowed 12/1 - 5/31.
	Lake City	Burning allowed 12/1 - 5/31.
	Lookout	Burning allowed 12/1 - 5/31.
	Willow Ranch	Burning allowed 12/1 - 5/31.
North Coast AQMD:		
	Carlotta	Burning allowed when wind is $\geq$ 5 mph.
	Orrick	Burning allowed when wind is $\geq$ 5 mph.
	Crescent City	Burning allowed when wind is $\leq$ 20 mph.
Northern Sierra AQMD:		
	Allegahany	Burning allowed 12/1 - 5/31.
	Calpine	Burning allowed 12/1 - 5/31.
	Chester	2 burns 11/1 - 4/15.
	Loyalton	Burning allowed 12/1 - 5/31.
	Portola	Burning allowed 1/1-6/30 & 11/1-12/31. Winds from west or south. Record complaints. Burn <20 tons. Expire 3/4/00.
	Ramshorn	Burning allowed 12/1 - 5/31.
	Sierra City	Burning allowed 12/1 - 5/31.
Placer:		
	Al Tahoe Landfill	Burning allowed 12/1 - 5/31
	Foresthill	Two burns max. allowed 11/1 - 4/30. Only when frontal system is moving through.
Shasta:		
	Fall River Mills Transfer Station	Burning allowed 12/1 - 5/31.
	Round Mountain	Burning allowed 12/1 - 5/31.
	Shingletown Transfer Station	Burning allowed 12/1 - 5/31.

Approved Non-industrial Wood-Waste Burning Sites
(continued)

District	Burn Site	Conditions and Comments
Siskiyou:		
	Happy Camp	See conditions in Executive Order G-582.
	McCloud	See G-582.
	Tulelake	See G-582.
	Yreka	See G-582.
Tuolumne:		
	Groveland	Burning allowed 9/1 - 5/31. Complaint log required. Expires 5/20/99.

Field Enforcement Section

Enforcement Specialists Ensuring Compliance through Field Inspection, Investigation, and Case Development...

Program Overview

The Field Enforcement Section (FES) enforces Motor Vehicle Fuels and Consumer Products regulations through inspections, sampling, and case development. Specifically, the FES:

- Conducts major field investigations statewide through collection of fuels samples and surveillance to ensure compliance with applicable diesel regulations and Cleaner Burning Gasoline (CBG) regulations;
- Oversees and evaluates data submitted by companies using alternative compliance options to ensure accurate reporting and compliance with company protocols;
- Conducts inspections of consumer products at retail and manufacturing sites to enforce administrative requirements and standards for all product categories statewide;
- Conducts red-dyed diesel field inspections and investigations as specified in ARB's contracts with the Internal Revenue Service and with the Board of Equalization.

After violations of the Motor Vehicle Fuels and Consumer Products regulations are documented by inspectors, case development staff evaluate the field data, conduct further investigation into compliance history and company records, and prepare cases for referral to the Office of Legal Affairs.

Consumer Products

The section conducts field inspections of consumer products at retail stores on its own initiative or based on complaints and tips. Inspections are conducted to enforce administrative requirements and standards for all product categories and reveal both administrative and volatile organic compound (VOC) violations.

Regulations

The **Consumer Products Regulation** sets limits on volatile organic compounds (VOC) in 44 categories of consumer products. The Board approved the regulation in three phases, and has adopted several amendments to it. Several amendments to the regulation also were adopted by the ARB. Phase III became legally effective on August 16, 1998.

The Aerosol Coatings Products Regulation sets VOC limits for 35 categories of aerosol coating products. Amendments to the regulation were adopted by the ARB, and will become legally effective on November 19, 1999.

California Code of Regulations (CCR), title 17, section 94509(a) sets standards for volatile organic compounds for consumer products sold, supplied, offered for sale, or manufactured for sale in California. Effective June 1, 1999, the standard for hair sprays changed from 80 percent by weight to 55 percent by weight.

Pursuant to section 94509(c), hairsprays manufactured prior to the effective date specified above, may be sold, supplied, or offered for sale for up to three years after the specified effective date, provided the product container or package displays the date the product was manufactured, or a code indicating such date.

Consumer Products staff sent out an advisory in June 1999, to manufacturers and contract fillers, notifying them of the new hairspray requirement.

Annual Inspection Status

Compliance Division staff has conducted 48 store and/or manufacturer inspections this year covering all categories. A total of 617 samples were obtained, of which 161 were initially believed to be non-compliant with their respective standards according to Method 310 analysis. Of those 161 samples, 100 samples were determined to be compliant based on formulation data provided by the manufacturers. At this time, nine of the remaining 61 samples are pending resolution, leaving 52 samples known to be in violation of the standards. Of these

52 samples, 19 are part of cases still under investigation; 23 are part of cases referred to the Office of Legal Affairs for settlement or prosecution; 10 are part of cases which have already been settled.

Consumer Products Settlements -- Fiscal Year 98/99

Case Name	*Product Category*	*Settlement Amount*
Fox Valley Systems	Aerosol Coatings	$5,000
Howard Products	Furniture Maintenance	$21,000
Orange Glo	Furniture Maintenance	$18,000
Pine Mountain	Charcoal Lighter Material	$25,000
Shoe Store Supplies	Fabric Protectant	$1,000
Sterling Teal	Air Freshener	$6,000
Superior Auto	Air Freshener	$7,715
Ten Seconds	Fabric Protectant	$5,000
Pennchamp	Fabric Protectant	$50,000
TOTAL	:	$138,715

Fuels Distributor Certification Program

During fiscal year 98/99 the Division continued to administer the motor vehicle fuels distributor certification program, reviewing applications for certification, and issuing new certificates to over 400 distributors throughout the state. Staff also continued to audit refinery and terminal operations during this fiscal year to determine compliance with deposit control additive requirements. Some of these audits will result in Reports of Violation being issued.

Motor Fuels Specifications Enforcement

During fiscal year 98/99, Compliance Division staff conducted 17 major fuels inspections statewide which included the enforcement of existing diesel regulations and California Reformulated Gasoline (CaRFG) regulations. Parameters enforced by the regulations include:

- Reid vapor pressure;
- Sulfur content;
- Lead content;
- Phosphorus content;
- Manganese content;
- Deposit control additives content;
- Benzene content of gasoline;
- Oxygen content of gasoline;
- Total aromatics in gasoline;
- Olefins in gasoline;
- T50 distillation values in gasoline;
- T90 distillation values in gasoline;
- Hydrocarbon content of diesel fuel;
- Sulfur content of diesel fuel; and
- Polynuclear aromatic hydrocarbon content of diesel fuel.

Fuels staff routinely conduct surveillance of potential violators and special investigations in response to complaints and information supplied by the fuels task force, other control agencies, and informants.

Since California's RFG regulations allow manufacturers to use Predictive Model formulations, Designated Alternative Limits (DALs), and certified diesel fuel formulations, CD staff also enforces the accurate reporting by companies using alternative compliance options.

Fuels Samples -- Fiscal Year 98/99

Sample Obtained	2,639.
Analyses Performed	27,536.

Case Report

After inspectors document a violation, the case development staff then handles the case. Case-development staff follows up with further investigation into the cause and severity of the violation, documents the compliance history of the company, and corresponds with the industry and other control agencies to develop a case for referral to the Office of Legal Affairs for settlement or litigation.

During fiscal year 98/99, fuels specification cases were resolved as follows:

Fuels Cases -- Fiscal Year 98/99	
Opening Inventory (7/1/98)	34 Cases
Cases Opened During FY 98/99	38 Cases
Cases Settled in Lieu of Litigation	13 Cases
Cases Closed Without Further Action	8
Cash Penalty Portion of Settlements	$713,000
Environmental Tradeoffs*	$100,000
Total Settlements	$813,000

* Includes a $100,000 provision of fuel to a locomotive study by Texaco.

Fuel Inspection Contracts

Historical Background

In February 1995 the Internal Revenue Service (IRS) asked the Cal/EPA to participate in a project to sample diesel fuel in the tanks of on-road trucks in order to determine whether the vehicles were being illegally fueled by non-taxed diesel fuel. Other agencies were interested, as well. Since 1996, ARB, IRS, the Federal Highway Administration, have been parties to a contract for the ARB to conduct inspections of diesel. Work under the contract ended in January 1999, when funds were exhausted.

Revenue Concerns

Non-taxed diesel fuel is required to be dyed red which is readily apparent when sampled by trained inspectors. The IRS estimated that lost revenue from using such fuel accounts for one billion dollars annually nationwide.

Pollution Concerns

The ARB has a direct interest in this issue because most violators of diesel tax law are also violating state diesel-fuel regulations. Since red-dyed diesel typically does not meet California's on-road diesel fuel standards, its use often violates those standards and exacerbates California's air pollution problem. By participating in the program the ARB is also serving to eliminate non-complying fuel from vehicles on California's highways.

Activities and Results

The inspections, conducted by staff of the Mobile Source and Compliance Divisions, consist of examining the fuel in the vehicle fuel tanks at California Highway Patrol weigh stations. When red dye is found, a Notice of Violation is issued to the driver, a sample is sent to the Air Force Laboratory for analysis, and the IRS follows up with enforcement action and obtains penalties. Many of the red-dyed diesel samples have failed to meet the specifications of California's fuel regulation.

Under the IRS contract, from July 1, 1998, through January 31, 1999, the section expended 208 person-days to inspect 9,775 heavy-duty diesel trucks. Based on these inspections, the section documented 25 potential violations from diesel fuel found in heavy-duty trucks inspected at CHP weigh stations and at other roadside inspection locations.

Board of Equalization Fuel Fingerprinting and Red-Dyed Diesel

Upon expiration of the IRS contract, the state Board of Equalization (BOE) contracted with the ARB to conduct field inspections for red-dyed diesel fuel, red-dye analysis, fuel-fingerprinting analysis, and diesel fuel investigations for the BOE. The Compliance Division, Mobile Source Operations Division, and the Monitoring and Laboratory Division are working together on this project.

Under the contract with the Board of Equalization, the section conducted 25 person-days of truck inspections and thirteen person-days of other inspections, looking for evidence of fuel adulteration. The section's staff analyzed 187 samples of diesel fuel for red dye, indicating use of non-taxed fuel in vehicles on the road. Additionally the section conducted 240 analyses of diesel fuel for "finger-printing," including samples from 144 retail stations.

Source Test Section

Air Pollution Testing Experts...

Program Overview

Compliance with environmental regulations and standards is primarily accomplished through a strong enforcement program. The key element for effective enforcement is a highly visible deterrent capability such as the Source Test Section (STS).

The STS assures compliance of stationary sources by emissions testing, certifying vapor recovery systems, and conducting special technical investigations. The STS also coordinates and provides emergency response capabilities for the ARB.

More specifically, the STS's responsibilities include:

- Compliance source tests of sources as requested by local districts in support of our oversight responsibility and for complaint investigation purposes;
- Special testing and other technical investigations of stationary source compliance, local air quality problems, and public nuisance cases;
- Source tests and certifications of Phase I and Phase II vapor recovery systems at gasoline bulk terminals, bulk plants, and aboveground tank systems;
- Emergency response air monitoring in support of local districts, the State Hazardous Material Incident Contingency Plan, and the Railroad Accident Prevention and Immediate Deployment (RAPID) Force;
- Operation of the division's technical shop providing, maintaining, calibrating, and fabricating sampling equipment, analytical instrumentation, calibration gases, and support apparatus of all kinds for the staff.

Accomplishments

Amazingly, the STS met its fiscal year 98/99 commitments, even though its resources were significantly diverted from compliance testing into vapor recovery research activities during the year. The STS provided invaluable testing assistance to the Monitoring and Laboratory Division in its on-going effort to assess and mitigate the impact of ORVR-equipped vehicles on the State's phase II vapor recovery program. ARB management called on the section to take over the critical, high priority ORVR testing efforts. The section successfully completed this program. Source-testing was also delayed for over a month in early 1999 due to the loss of our large gaseous test van and the subsequent re-configuration of our vapor recovery testing van for gaseous testing. The fiscal year 98/99 commitments for the STS were:

• ***Conduct approximately 80 source tests, giving priority to requests for certification and from local APCDs.***

Source testing is used to determine compliance with emission regulations and to provide information useful for evaluating control equipment efficiency or design, process economics, or process control effectiveness. The source test team extracts samples from a stack or duct and analyzes the samples to determine the levels of particulate matter and gases emitted.

In fiscal year 98/99, the section conducted a total of 80 source tests. Sixty-nine of these tests were for certification of vapor recovery systems, and 11 were compliance tests. Local APCDs requested seven of the compliance tests (a complete listing of all tests is included in the back of this section). STS staff also continues to participate extensively in the San Diego County APCD program audit.

• ***Provide timely response to requests for testing and certification of vapor recovery systems.***

All certification tests requested were conducted within 90 days of the request. Significant vapor recovery system certifications conducted in 1998/99 included the Franzen-Hill Mobile Motor Vehicle Fueler, the Healy vacuum-assist system for aboveground tanks, and the Guardian Containment aboveground tank system.

Hill-Vac Mobile Fueler Certification Effort

In October 1998 and June 1999, Source Test Section staff conducted certification testing on Phase II vapor recovery systems installed on gasoline cargo tank trucks. The process was initiated in April 1998 when the Franzen-Hill Company submitted its application for ARB certification. The work has included the two separate rounds of efficiency testing and numerous iterations concerning the system design and process control. The Mobile Motor Vehicle Fueler (MMVF) must meet requirements that apply to gasoline cargo tank phase I systems as well as those applicable to gasoline dispensing facilities, which are usually stationary sources. To do so requires a unique design and the cooperation of personnel from ARB, California Highway Patrol, Cal/OSHA, the Department of Measurement Standards, the State Fire Marshal, the Franzen-Hill Company and Healy Systems Incorporated, the manufacturer of the Phase II vapor recovery components used on the MMVF. The certification of a generic MMVF phase II Vapor Recovery System is generating interest from air pollution control agencies and industries in California and other states across the country.

In 1995 the South Coast AQMD adopted amendments to Rule 462, Gasoline Transfer and Dispensing, to require that MMVFs with tank capacities greater than 120 gallons install ARB certified phase I and phase II vapor recovery systems by January 1, 1998. However, the District failed to include any increments of progress requiring the MMVF operators to accomplish intermediate steps toward developing, installing and obtaining ARB certification for the MMFV Phase II systems. Accordingly, none of the affected operators had taken any concrete actions to be in compliance with the Rule 462 requirements by January 1, 1998. Consequently, the South Coast AQMD has issued variances that allow limited MMVF operation without phase II vapor recovery systems since January 1998. Since the District wants to end these unanticipated variances and bring all sources into compliance with the MMVF vapor recovery requirements, the District staff have been very aggressive in pushing the ARB to issue the MMVF certification.

Because most MMVF will be custom retrofitted for the Phase II system, ARB staff believe that a complete analysis of all potential installations is necessary before a certification allowing the construction of an unlimited number of mobile fuelers is issued to Franzen-Hill. Because the mobile fueler is subject to the regulations of a multitude of agencies, ARB staff have also attempted to verify that the system manufacturer is aware of and in compliance with all applicable regulatory requirements.

Healy Vacuum-Assist and Guardian Containment Aboveground Tank Vapor Recovery System Certifications

STS conducted extensive tests and drafted executive orders for certification of the Healy 600 ORVR System for aboveground storage tanks and the Guardian Containment Corporation integral phase I and phase II aboveground storage tank system. The CAPCOA Vapor Recovery Committee is reviewing the draft executive orders. Staff worked with committee members to resolve district concerns with enforcement, legal and technical issues.

Emissions Study – ORVR Simulation with Vacuum Assist Vapor Recovery

In the latter half of 1998, Division staff performed a series of tests to evaluate the impact of vehicles equipped with onboard refueling vapor recovery (ORVR) on emissions from vacuum-assist Phase II vapor recovery systems. Phase II vapor-recovery systems, installed at gasoline dispensing facilities throughout California, are designed to capture vapors displaced from the vehicle fuel tank during refueling. ORVR systems, installed in some new vehicles, capture these vapors in an onboard charcoal canister without the aid of Phase II vapor recovery and process them to the engine fuel system during driving.

Testing was performed at two northern California gasoline dispensing facilities: a Gilbarco Vapor Vac vapor recovery system in El Sobrante between July 29, 1998 and August 8, 1998 and a Dresser Industries Wayne Vac in Sacramento between September 8, 1998 and October 9, 1998. The Gilbarco Vapor Vac and Dresser Wayne Vac systems represent approximately 80 percent of vacuum assist systems installed in California. Together, they dispense approximately 55 percent of gasoline purchased within the state.

Currently, ORVR equipped vehicles account for a small fraction of the California vehicle population. The lack of available ORVR vehicles, and the difficulty in distinguishing them from vehicles with conventional fuel systems, made testing of in-service vehicles impractical. Therefore, the vapor recovery system at each test facility was modified to enable conventional vehicles to simulate the interaction of ORVR vehicles with vacuum assist vapor recovery systems.

Testing was divided into two phases: 1) a baseline phase with the test facility configured for normal operation and 2) an ORVR phase performed after

modifying the vapor recovery system to simulate dispensing gasoline to a vehicle fleet with an ORVR population of approximately 40 percent. Vapor recovery system emissions were determined for each test phase by direct measurement at the pressure / vacuum (P/V) valve exhaust and fugitive emission calculations. Additional baseline and ORVR simulation tests were performed at the Wayne Vac facility with the P/V valve removed from the vapor recovery system. Removal of the P/V valve was based on the assumption that all vapor recovery system emissions would occur at the open exhaust of the vent riser. This assumption eliminated fugitive emissions calculations since the vapor recovery system could not achieve the necessary operating pressure.

Test results for the Gilbarco vapor recovery system show that vapor recovery system efficiency loss at the vent exhaust was 4.7 percent for the baseline test and 10.4 percent when the system was subjected to an ORVR simulation rate of 45 percent and an average A/L of 1.16. The decrease in efficiency during ORVR simulation was primarily due to air ingested to the system during simulation. The vapor growth of this air produced an increase in system pressure resulting in increased fugitive emissions.

Baseline test results for the Wayne Vac system show efficiency losses at the vent exhaust of 0.33 percent with the P/V valve installed and 0.31 percent with it removed. Efficiency losses during ORVR simulation were 0.75 percent with the P/V valve installed (at 40 percent ORVR simulation) and 3.44 percent with the P/V valve removed (at 38 percent ORVR simulation). The average A/L ratio for the Wayne Vac System was 0.99.

Drop-Tube Leak Study

During the months of March and April of 1999, Compliance Division staff conducted drop tube leak tests of gasoline service stations' Phase I fill drop tubes. Testing was conducted in the San Diego County APCD, Monterey Bay Unified APCD, Bay Area AQMD, Sacramento Metropolitan AQMD, San Joaquin Valley Unified APCD, and South Coast AQMD. The purpose of the tests was to determine if the drop tubes were in compliance with leak rate criteria listed in the certification requirements for drop tubes.

Two hundred and eighty-three drop tubes were tested at 102 service stations throughout the state. The overall failure rate was 57 percent. The test data surprisingly shows that overfill protection drop tubes had a failure rate of 54 percent, while straight drop tubes had a failure rate of 63 percent. This is surprising in that overfill drop tubes have more potential leak sources than straight drop tubes. One theory of why straight drop tubes leak more than

overfill protection drop tubes is that service station personnel put small pinholes into the straight drop tubes to relieve any pressure that has built up inside the underground storage tank. Station personnel do this in order to get an accurate reading when they stick their tanks for inventory purpose. Stick checking a pressurized tank yields erroneous results.

As part of the drop-tube testing, the rate at which the drop tube leaked was measured. In order for a drop tube to fail our drop tube test, it would have to leak more than 0.38 cubic feet per hour (cfh). The leak rates of the tested drop tubes varied from 0 to 10 cfh. See the body of the test report for a more detailed analysis. At a concentration in the drop tube of 25 percent hydrocarbon (as propane), with the drop tube leaking at the pass-fail mark of 0.38 cfh, the emissions resulting from the leak would be 0.3 lb/day. This calculation also assumes that the leak rate of the drop tube is maintained constant throughout the day.

Typically a service station has three drop tubes. If each leaked at 0.3 lb/day, the emissions from all three drop tubes would be 0.9 lb/day. A service station that has a throughput of 100,000 gallons/month, and has a certification efficiency of 95 percent (not counting drop tube leaks), yields emissions of about 0.64 lb/day (again assuming the concentrations of vapors returning to the service station are 25 percent hydrocarbon as propane). These emissions may change slightly if the concentration and leak rates are adjusted. The full test report has a chart which allows the reader to assume any concentration and leak rate and get the corresponding emissions.

Coordination and Support of Emergency Response Efforts

Section staff routinely participate in emergency response exercises and coordination/planning meetings conducted by the Office of Emergency Services, the Railroad Accident Prevention and Immediate Deployment Force, the Emergency Response Coordinating Committee, the State Office of Oil Spill Prevention and Response, and the State Emergency Planning Committee.

Significant Emergency Response in 1998/99

Tracy Tire Fire –

At the request of the San Joaquin County and State Office of Emergency Services (OES), Cal/EPA Air Resources Board staff responded to a tire fire located just south of the city of Tracy in San Joaquin County. The Emergency Response Team (ERT) received a request to conduct onsite ambient air

monitoring pollutants in the smoke plume that could possibly impact nearby neighborhoods.

The Royster Tire Recycling Facility is located at 29245 MacArthur Blvd. on approximately 30 acres (the burning tire pit is about 3 acres) and is owned and operated by Mr. S. F. Royster. Two and a half million tires are reportedly involved in the fire at the facility, which continues to burn.

CD staff deployed a crew with Miran 1B real-time infrared portable monitors, and was advised by MLD staff to monitor for CO, total hydrocarbons (THC), and aromatics (as toluene). During the course of the response, two-person teams conducted the monitoring in the area of the tire fire. In addition, MLD's Air Quality Surveillance Branch was directed to deploy battery-powered filter samplers for the measurement of carbon particulate matter. ARB staff was directed by the Incident Commander to complete a survey of the general area around the fire and locate monitoring sites between the fire's smoke plume and any possibly affected residences. ARB staff started monitoring on an around-the-clock basis. Background CO levels ranged from 1 ppm to <1 ppm. Background THC levels ranged from 8 ppm to <1 ppm. Background toluene levels ranged from 4 ppm to <1 ppm. (Detection limit of the instrument is about 1 ppm.) In-plume levels of CO were <1 ppm, hydrocarbons were 9 ppm to <1 ppm, and toluene was 5 ppm to <1 ppm. (Note: The NIOSH recommended exposure limit (REL) for CO is 35 ppm (10-hr av.), and the immediately dangerous to life and health (IDLH) level is 1200 ppm. The NIOSH REL for toluene is 100 ppm, and the IDLH level is 500 ppm.)

The Emergency Response Team continued to perform this monitoring with similar results until the Incident Commander, under advice from Michael Kith, San Joaquin Co. Health Department, released them at about 9 p.m. Sunday, August 9, 1998. The ERT indicated to the Incident Command that they would be ready to return upon request.

MLD's sampling staff was asked to place the filter samplers approximately 0.25 and 1.5 miles from the fire in the downwind (SE) direction of the plume. The filter samplers ran until 11:00 a.m. August 9, 1998. The used filters were picked up and new filters installed for sampling into Monday. The results of this monitoring were 69.3 micrograms/m^3 carbon (0.25 mile downwind, SE from fire) and 7.9 micrograms/m^3 carbon (1.5 miles SE, downwind). In comparison, normal carbon concentrations in the summer are approximately 5-10 micrograms/m^3. Normal wintertime concentrations can be as high as 80 micrograms/m^3. After August 8, total carbon concentrations fell to near normal levels, showing much less impact in the area.

Late in the afternoon of August 11, 1998 Dr. Karen Furst, Director of the San Joaquin County Health Department, contacted Bob Leonard of the CD and requested that the monitoring be renewed. On August 12, 1998 the ERT continued monitoring for CO, toluene and THC in the affected area while the MLD team monitored for Total Carbon (TC) as a surrogate for smoke. Staff continued the gaseous monitoring effort until August 14, 1998 when the Public Health Officer determined that there was no point in monitoring further.

Source Tests Conducted - Fiscal Year 1998/99

Source Name	*Device Tested*	*Results*
ORVR Testing, El Sobrante (Twelve 24-hr days of tests total)	Gilbarco Vapor Vac	ORVR Research
ORVR Testing, Sacramento (Twenty-eight 24-hr days of tests total)	Wayne Vac	ORVR Research
Guardian Containment, Sacramento	AGT Phase II	Certifiable
Guardian Containment, Sacramento	AGT Phase I	Certifiable
Franzen-Hill, Tulare	Mobile Re-fueler w/Healy Phase II VRS (short hose)	Certifiable
Franzen-Hill, Tulare	Mobile Re-fueler w/Healy Phase II VRS (short hose re-test)	Certifiable
E. F. Oxnard, Oxnard	Boiler	Compliance
Procter & Gamble Oxnard	Gas Turbine	Compliance
Procter & Gamble Oxnard	Gas Turbine	Compliance
Corporate Aircraft, Fresno	Bulk Plant	Certifiable
Vintage Petroleum, Ventura	IC Engine	Compliance
Seneca Resources, Santa Paula	IC Engine	Compliance
Seneca Resources, Santa Paula	IC Engine	Compliance
Seneca Resources, Santa Paula	IC Engine	Compliance
Chevron, Montebello	Bulk Terminal	Certifiable

Source Name	*Device Tested*	*Results*
Chevron, Huntington Beach	Bulk Terminal	Certifiable
Cross Petroleum, Redding	Bulk Plant	Certifiable
Equilon, Los Angeles	Bulk Terminal	Certifiable
Equilon, Long Beach	Bulk Terminal	Certifiable
Equilon, Wilmington	Bulk Terminal	Certifiable
Chevron, Van Nuys	Bulk Terminal	Certifiable
Mobil, Vernon	Bulk Terminal	Certifiable
Kinder Morgen, Orange	Bulk Terminal	Certifiable
Anderson Petroleum, Redding	Bulk Plant	Certifiable
Red Triangle Oil, Fresno	Bulk Plant	Certifiable
Mercury Air Group, Fresno	Bulk Plant	Certifiable
R. V. Jensen, Reedley	Bulk Plant	Certifiable
Mercury Air Group, Bakersfield	Bulk Plant	Certifiable
Equilon, San Jose	Bulk Terminal	Certifiable
Dawson Oil, Rocklin	Bulk Plant	Certifiable
Cooper's Petroleum, McKittrick	Bulk Plant	Certifiable
Chevron, Sacramento	Bulk Terminal (temporary thermal oxidizer)	Certifiable
Kelco, San Diego	Gas Turbine	Compliance

Source Name	*Device Tested*	*Results*
Kelco, San Diego	Gas Turbine	Compliance
Encina Waste Water Treatment Plant, Encina	IC Engine	Compliance
Encina Waste Water Treatment Plant, Encina	IC Engine	Compliance
Kinder Morgen, Imperial	Bulk Terminal	Certifiable
Franzen-Hill, Tulare	Mobile Re-fueler w/Healy Phase II VRS (long hose reel)	Certifiable
Franzen-Hill, Tulare	Mobile Re-fueler w/Healy Phase II VRS (long hose reel)	Certifiable
Petro-Lock, Lancaster	Bulk Plant	Certifiable
Southern Cal Edison, Lancaster	Bulk Plant	Certifiable
Walsma Oil, Lancaster	Bulk Plant	Certifiable
The National Training Center, Ft. Irwin	Bulk Plant	Certifiable

Compliance Division Program Assessment and Compliance Data Management Branch

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Program Review Section

Helping Air Districts Improve Enforcement and Permitting Programs through Field Evaluations and Source Inspections...

Program overview

The Program Review Section is primarily responsible for conducting evaluations of air pollution control district programs. Pursuant to the authority granted in section 41500 of the California Health and Safety Code, the Program Review Section has conducted 42 program evaluations since 1984. The purpose of these evaluations is to help the local districts improve their programs so they are better able to reduce air pollution from industrial sources, enabling them to meet mandated state and federal ambient air quality standards. Additionally, this section conducts source inspections and participates in emergency response and special projects. Listed below are Program Review's accomplishments for Fiscal Year 1998/99.

District Program Evaluations

Fiscal year 1998/99 was an especially productive year for the Program Review Section. Three district evaluations were in progress (Antelope Valley, South Coast, and San Diego). As part of these evaluations, Program Review staff inspected source categories ranging from coating operations to fiberglass lay-up operations. The Section conducted inspections during the course of these program evaluations.

Revision of *Criteria for Assessing District Enforcement and Permitting Program Adequacy*

Program Review Staff revised the document titled *Criteria for Assessing District Enforcement and Permitting Program Adequacy*. The *Criteria* is the program performance standard that the Compliance Division uses for evaluating the adequacy of a district's enforcement and permitting program.

The revised document contains a new section titled "ATCM/MACT Criteria"; language on the notice to comply program and appendices that were not included in the previous document. The criteria document was last updated in August 1994. The May 1999 version has been sent to all 35 air districts in California.

Antelope Valley APCD

The Program Review Section of the Compliance Division completed the office and field portions of the Antelope Valley APCD program evaluation which began in July 1998. In all program evaluations, staff conduct file reviews, interviews and field inspections in order to compile data enabling staff to evaluate the District's enforcement and permitting programs. Inspections conducted included all of the District's large aerospace operations, other major sources and several minor sources including gasoline service stations. Staff evaluated the District's program using the *Criteria for Assessing District Enforcement and Permitting Program Adequacy*. Findings and recommendations were published in a final report and transmitted to the District with a request for an Action Plan to implement the recommendations.

South Coast AQMD

Compliance Division staff transmitted a draft program evaluation report titled "An Evaluation of The South Coast Air Quality Management District's Air Pollution Control Program," to the South Coast AQMD. The draft report contains an evaluation of the District's enforcement and permitting programs conducted by the Compliance Division and sections on the Toxic "Hot Spots" and Criteria Emission Inventory Programs conducted by the Stationary Source and Planning & Technical Support Divisions. The evaluation also encompassed the first outside agency field review of the South Coast AQMD's RECLAIM Program. The draft report was sent to the South Coast AQMD for review and comment. District comments have been received and the report will be finalized shortly.

San Diego County APCD

Staff of the Compliance, Stationary Source and Planning & Technical Support Divisions began the office portion of the of San Diego APCD Program Evaluation in January 1999. Besides the office review, Compliance Division staff conducted joint inspections with District personnel of selected rule categories in order to evaluate the District's procedures for conducting inspections and to determine the compliance status of the facilities inspected. Staff will assess the adequacy of the District's enforcement, permitting, criteria emissions inventory and "Hot Spots" programs using the *Criteria* document noted above. Program Review Section staff completed field inspections of over 100 facilities as part of the San Diego County APCD Program Evaluation. Inspectors conducted comprehensive inspections of each

facility, verified the compliance status of each permit unit and looked for unpermitted equipment. Notices of Violation and Notices to Comply were issued for violations documented during each inspection. Staff met with the Air Pollution Control Officer and District management on June 29, 1999 to discuss preliminary findings and inspection results. The draft program evaluation report is being prepared and will be sent to the District for review and comment.

Burn Program and Aerial Surveillance

In order to evaluate the seventh year of implementation of the Rice Straw Burning Reduction Act of 1991, staff conducted overviews of the Sacramento Valley Air Basin agricultural burning programs. Staff visited the offices of Butte, Colusa, Feather River, Glenn, Placer, Sacramento and Yolo/Solano counties in October, 1998 to see how permits are issued, how growers are informed about program changes, and how surveillance activities are conducted. During the months of September and October 1998, staff conducted three surveillance flights over the Sacramento Valley Air Basin to observe growers burning rice straw. District staff accompanied ARB staff on the flights. Seven potential violations were documented. Five violations involved ignition of headfires, one involved ignition after burn hours and one involved burning without a permit and ignition after burn hours. ARB and District staff followed up on violations documented during these flights. Violations observed were referred to the local districts for appropriate enforcement action. Based upon the surveillance flights and the Districts' reports of violations, the ARB has strongly recommended to Sacramento Valley Districts that penalties be increased to remove any economic benefit resulting from illegal burning. Health and Safety Code section 41865 limits the allocation of burned crop residues to 90,000 acres for the Fall season, which ended early, by mid-November, due to rainy weather.

Follow-up to the Beaver Creek report

On October 20, 1998, the Executive Officer, Executive staff, and staff from the Compliance and Planning and Technical Services Divisions met with federal regional foresters and staff from the Stanislaus National Forest to discuss ARB's report on the Beaver Creek burn, conducted during October 1997, by the Stanislaus National Forest. Smoke from the Beaver Creek burn impacted eight California counties and the State of Nevada. Forest Service representatives agreed to work with the ARB and design an MOU to establish a formal working relationship between the ARB and the Forest Service to coordinate respective mandates and goals, and to minimize and manage the smoke emissions from future prescribed burning to protect public health and air quality. We understand an agreement has been reached with the USFS on joint strategies to improve smoke management. This should greatly reduce the chances of another episode like the Beaver Creek fire.

Inspections and Investigations

The Program Review Section is responsible to conduct special investigations and assisting districts in conducting inspections where districts request assistance. Information on the inspections and investigations conducted this year follows.

Modesto Tallow Company Review and Inspection

On August 27, 1998, Program Review staff conducted a review and inspection at the San Joaquin Valley Unified Air Pollution Control District and Modesto Tallow Company. No problems were documented at the facility. Modesto tallow operates a feather/meat/bone-meal/tallow plant in Modesto, producing several grades of tallow and bone meal for sale to the agricultural industry. The facility has been the source of odor complaints for some time. On the day of the inspection, the facility experienced an electrical malfunction in the grinding mill of the meat/bone-meal plant, shutting it down. The feather processing plant, all four scrubbers and the Cleaver Brooks boiler were operating. The facility received an emergency variance until Sept. 18, 1998, so that it could investigate optimization of its odor control scrubbers. Additionally, staff gathered information at the District office on the number of complaints received and investigated, type of investigations done and the number of NOVs issued and settled since 1994.

Tosco Avon Refinery Inspection

Between September 28, and October 9, 1998, staff of the Compliance Division, Program Review Section, and Bay Area AQMD conducted a joint inspection of the Tosco Avon Refinery located in Martinez, California. The purpose of this inspection was to determine the compliance status of this facility. The inspection team focused on three areas: 1) process units; 2) valve, connectors and pump/compressor seal inspections; and 3) floating roof tank inspections. Program Review staff reviewed continuous monitoring records, throughput and usage records to determine compliance with permit conditions for 15 process units. Records review showed the process units to be operating in compliance with their permit conditions; however, the District issued a Notice to Comply to Tosco for not keeping complete logs for one of its boilers. During the course of the fugitive volatile organic compound (VOC) emission inspections, 3,627 valves, connectors and pump/compressor seals were probed for leaks using an Organic Vapor Analyzer. Staff found a total of 49 vapor and two liquid leaks, which were repaired within 24 hours of detection. Notices of Violation were subsequently issued for violations of District Rule 8-18 (Organic Compounds - Valves and Connectors at Petroleum Refinery Complexes). Fifteen external and four internal floating roof petroleum storage tanks were inspected for compliance with Regulation 8, Rule 5 (Storage of Organic Liquids) which specifies the gap criteria for

primary and secondary seals between the floating roofs and their tank walls. All 19 tanks inspected were in compliance at the time of the inspection.

Inspection of Masonite in Ukiah

On October 9, 1998, Program Review staff conducted an inspection and visible emissions check at the Masonite hardboard products facility in Ukiah. This visit was prompted by citizen complaint and was conducted jointly with an inspector from Mendocino County AQMD. Since the only mass manufacturing line now being operated at the plant is the "Presdwood" fiberboard line, this process and the associated wet scrubbers serving it were the focus of our interest. In the Presdwood process, wood chips are ground to a sawdust-like fiber and mixed with binders and other proprietary additives. This mixture is then extruded and cut into thick, moist, wood pulp rectangles, which are pressed, under steam heat, then further processed into fiberboard similar to that of thick pegboard material. No violations were documented.

Weber Creek Quarry in Placerville

During October 1998, Program Review staff and El Dorado County APCD staff conducted weekly visits to Sierra Rock's Weber Creek Quarry in Placerville. The purpose of these unannounced visits was to check for visible emissions of fugitive dust from the serpentine aggregate processing system. Weber Creek Quarry contains a massive serpentine deposit, which becomes the primary final product, in the form of fill rock for substructure drainage and stability. Of concern at this facility is that laced within the serpentine stone matrix are deposits of the chrysotile (fibrous) form of serpentine. This facility is subject to the labeling requirements of aggregate producers whose final products may contain a percentage of asbestos. Violations have been documented and the matter has been referred to the Attorney General for prosecution

Inspection of Halaco Engineering Company

Staff of the Program Review Section in conjunction with the Ventura County Air Pollution Control District, conducted an inspection of the Halaco Engineering Company in Oxnard. Halaco is a foundry that smelts scrap magnesium and aluminum and has been a source of many complaints in the past. No odors or nuisances were detected outside the facility perimeter. However, the facility received a Notice to Comply for building air pollution control equipment (baghouse) without first obtaining an authority to construct. The facility also received a Notice to Supply Information for not having complete records. The final report on the facility compliance status was completed in November 1998.

Butte County Petroleum Distributor Inspections

In November 1998, Program Review and Certification and Investigation staff assisted Butte County AQMD with inspections of three petroleum product distributors: Santa Fe Pacific Pipelines (SFPP)/Kinder Morgan Energy, Western Petroleum Marketing and Jesse Lange Distributing. The purpose of these inspections was to provide the District with information that would enable them to evaluate SFPP/Kinder Morgan's facility-wide Hazardous Air Pollutant (HAP) emissions and to determine the compliance status of these facilities. Inspectors reviewed the hydrocarbon continuous emission monitoring (CEM) records associated with the hydrocarbon vapor combustor and conducted inspections of the petroleum storage tanks, valves and flanges, loading racks and cargo tanks. A review of CEM records since July 1998 showed no exceedances of the 200 ppm hydrocarbon emission limit. Twenty-two petroleum product storage tanks were inspected for compliance with District Rule 215 (Storage of Gasoline Products at Bulk Facilities). Inspectors found two uncovered sampling wells. A fugitive emissions inspection of 257 valve and flanges revealed no vapor leaks but did reveal three liquid leaks. The District issued one Notice to Comply (NTC) for two of the three liquid leaks.

The four loading racks at SFPP/Kinder Morgan Energy were inspected for vapor and liquid leaks and back-pressure to the vapor combustor. Inspectors found one leaking vapor return hose and the back pressure on one of the loading racks exceeded the 18" water column limit of the Certification Procedure for Vapor Recovery Systems at Bulk Terminals (CP-203). The District issued one NTC for the vapor leak found on the loading rack. Twenty-eight cargo tanks were inspected for current ARB Certification for vapor tightness, vapor and liquid leaks. All cargo tanks inspected had current ARB Certification. Inspectors found one liquid leak and three vapor leaks on four cargo tanks. ARB issued four Notices of Violation for the four cargo tank violations.

An inspection of Western Petroleum Marketing revealed no violations of its Permit to Operate. An inspection of Jesse Lange Distributing was not conducted due to underground storage tank removal work; however, inspectors observed a liquid leak from the product reel of a gasoline delivery truck as it refueled vehicles adjacent to the bulk plant. The District issued a Notice of Noncompliance for this liquid leak.

An inspection report containing ARB's inspection findings and recommendations was sent to the District and will enable them to determine SFPP/Kinder Morgan's HAP emissions, evaluate the compliance status of the two facilities inspected and take enforcement action for the outstanding violations.

Nuisance from Idling Train Engines in Colfax

Compliance Division staff investigated a potential public nuisance situation in Colfax, (Placer County), caused by the exhaust from idling diesel locomotive engines. Our investigation was initiated by complaints from a number of local residents who indicated that their quality of life was being adversely affected by the exhaust from locomotive engines idling for extended periods of time. Our investigation revealed that this is indeed a longstanding problem.

We have informed the District that the situation should be resolved through the railroad's voluntary compliance or through enforcement actions. These operations are not exempt from public nuisance regulations or from opacity standards. Staff also provided the Placer County Air District with information from South Coast AQMD's recent enforcement action against Union Pacific Railroad Company for alleged nuisance from idling engines at a location known as the Slover siding. Placer County APCD is now in a better position to exercise its enforcement options.

Sacramento External Floating Roof Tank Inspection:

On May 12-13, 1999, at the request of the Sacramento Metropolitan AQMD, staff of the Program Review Section conducted inspections of five external floating roof tanks located at Kinder Morgan/Santa Fe Pacific Pipelines and Tosco in Sacramento. The tanks were inspected to determine compliance with the conditions of their permits to operate and with District Rule 446, (Storage of Petroleum Products). Staff determined that all of the external floating roofs were operating in compliance with their seal gap criteria. One tank at Kinder Morgan/Santa Fe Pacific Pipelines was operating without its roof drain cover and was issued a Notice To Comply by the District. Inspection results were sent to the District.

Frazee Investigation

Program Review staff conducted an investigation at Frazee Industries in San Diego. The investigation, which also included a site visit on April 22, 1999, was in response to a complaint. The complainant alleged that Frazee Industries is somewhat routinely exceeding its New Source Review manufacturing limits on its dispersing machines even though their finished records may indicate otherwise. The inspection, conducted jointly by ARB and District staff, has indeed revealed this to be the case. Based on our findings, the District issued a Notice of Violation to Frazee Industries for exceeding its mill base production limit on the days selected for review. Due to the nature of the violation and the number of days involved, we regard this as a serious violation of air pollution control laws and have asked the District to take appropriate enforcement action. The complaint investigation report

also discussed some permitting issues raised by the complainant and recommended ways to make the facility permit more enforceable.

Sherwin Williams Investigation and Inspection

Program Review staff conducted an investigation and inspection of Sherwin Williams in San Diego, as a result of information received from the Shelby County Health Department in Tennessee. The information indicated that emissions testing at the Sherwin Williams paint manufacturing plant in Memphis showed that their actual volatile organic compound (VOC) emissions were 300% higher than their predicted emissions. The Shelby County Health Department alleged that the company's Air Pollution Emission Model (APEM), used to estimate their VOC emissions, under-reported their actual emissions. Since the Memphis and San Diego facilities were believed to be using similar processes and to have similar emissions potential, Program Review staff contacted the San Diego County APCD to arrange for an investigation and inspection of the facility.

Staff reviewed the facility's engineering files and interviewed District engineers. District engineers indicated that they did not use Sherwin Williams APEM submitted with their Authority to Construct because it underestimated their VOC emissions. District staff instead used their own emission factors developed from a 1993 emissions test conducted by the District and Frazee Industries, a San Diego based paint manufacturing plant. A joint inspection of the facility by ARB and District staff revealed that the San Diego facility does not manufacture paint, but uses a few vessels to mix paint to produce different colors and manually dispenses it into one gallon cans. Since the San Diego facility mixes about 560 gallons of paint per day and the Memphis plant manufacturers about 24,000 gallons of paint per day, the emission potential of the San Diego facility is much less than the Memphis plant. ARB and District staff observed numerous open paint containers both inside and outside the facility. The District issued a Notice to Comply to Sherwin Williams to correct the open container problem inside the facility and referred the outside storage of open VOC containers to the Department of Environmental Health. An inspection report containing ARB's findings and recommendations was sent to the District.

Finish Master Coatings Case

Acting on a referral from the SJVUAPCD, Compliance Division investigated sales of non-compliant automotive coatings offered for sale at Finish Master stores in SCAQMD, Ventura, BAAQMD and SJVUAPCD. Staff documented sales of 13,123 gallons of non-compliant automotive coatings with excess VOC emissions of 39,824 lbs. over the last three fiscal years (1997-99). The case was transmitted to the Office of Legal Affairs for a coordinated legal settlement.

Compliance Data Management Section

Providing Data and Assistance for Enforcement...

Program overview

The Compliance Data Management Section (CDM) is primarily responsible for collecting, reviewing, processing, and analyzing compliance data and reporting that data to decision makers to help them make more informed decisions concerning compliance with air pollution regulations. This compliance data is generated from a wide range of legislatively mandated programs and activities which include: asbestos; variances from rules; clean fuels; minor violations; program audits; rule reviews; continuous emissions monitoring excesses; major source inspections and violations; and complaint handling. The section also is responsible for the management of computer technology in the Division.

The following pages will detail the section's accomplishments for each program area. Also described within each program are special projects and committee participation.

Asbestos NESHAP

The section administers the National Emission Standard for Hazardous Air Pollutant (NESHAP) for asbestos in the 16 local air districts which have not been delegated authority for that program. In fiscal year 98/99, the asbestos NESHAP program actions included: receiving and entering data on notifications, inspecting asbestos demolition and renovation projects, investigating complaints for violations, and preparing cases.

Two settlements from former cases highlighted this year's asbestos program. One involved a settlement for $750,000 in civil fines and a Stipulated Judgement for Entry of Permanent Injunctive Relief which included a $500,000 cleanup trust that will be forfeited to ARB in case the company fails to meet all the requirements of the stipulation. The other case involved a non-notified demolition project that resulted in the issuance of a Permanent

Injunction to the owner and operator and a $7,000 payment in civil fines and a $500 payment for costs incurred by the District Attorney.

The section conducted a total of 23 NESHAP inspections in non-delegated air pollution control districts. Two of those inspections uncovered possible violations and are being further investigated. There were 228 asbestos NESHAP notifications entered into the national NAR/ACTS database. Additionally, a new Windows-based version of the NARS/ACTS database was installed.

The section organized and conducted two statewide asbestos task force workshops to discuss compliance issues, share enforcement experiences, and to promote effective enforcement of the asbestos NESHAP. Representatives from USEPA, ARB, and the Monterey, Bay Area, San Joaquin, South Coast, San Diego, Sacramento, Mojave, and Santa Barbara air districts attended.

In response to public concern regarding asbestos in serpentine rock, the section conducted inspections of a serpentine rock quarry. Staff also contacted over 200 landscape and rock quarrying facilities and inspected 13 of those facilities for compliance with the asbestos serpentine air toxic control measure (California Code of Regulations sections 93106).

Variance Program

Data Analysis & Entry and Computer Assistance

Variances provide a means for sources which meet specified statutory criteria to operate temporarily in non-compliance while working toward full compliance. CDM's variance program consists of variance review, workshop presentation, technical and legal assistance, variance program audits, and data base management.

Approximately 510 variances were received and reviewed for compliance with Health and Safety Code requirements. These, along with additional data submitted from districts regarding the status of the hearing process, resulted in approximately 1,450 new entries into the variance database. Table CDM-1 shows the number of variances granted, by district.

Table CDM-1

Variances Granted by the Districts for Fiscal Year 1998/1999							
Amador	6	Antelope	3	Bay Area	23	Butte	4
Colusa	1	Imperial	8	Kern	2	Lake	4
Mojave	10	Monterey	15	North Coast	3	Northern Sonoma	2
Northern Sierra	1	Placer	5	Sacramento	8	Santa Barbara	28
South Coast	203	San Diego	94	San Joaquin Central	21	San Joaquin North	7
San Joaquin South	23	Ventura	36	Yolo-Solano	3		

Using data from our variance database, we prepared two data analysis reports for the Stationary Source Division dealing with emissions related variances at specific concentrations. We also submitted to each of the 35 air districts a monthly variance data report containing scheduled, past, current, expired, withdrawn and denied variances as required by our EPA 105 Grant.

Variance Workshops and Variance Program Review

Every year we receive requests to conduct variance workshops to educate hearing board members, district staff and industry representatives about the statutory requirements for approving a variance. This fiscal year we held five variance workshops throughout the state. Total attendance was approximately 125. A mock hearing was introduced this fiscal year and received overwhelming approval from participants. It proved to be an extremely effective learning tool and will continue to be used at all future introductory workshops.

Included this year was the first joint workshop with the Bay Area AQMD and the SCAQMD hearing boards. These two districts are responsible for approximately 70% of the variances granted in California, and share a need for in-depth discussion and problem solving on complex variance issues (i.e., environmental justice, handling the media and/or unruly crowds, how to handle confidential data at public hearings, etc.). Smaller districts generally do not share an interest in these advanced topics. At the request of the Chairman of the SCAQMD variance hearing board, staff developed and hosted a special session specific to their needs. The workshop was so successful that both districts requested that it become an annual event.

CDM staff joined the program review team analyzing the variance program of three districts (Antelope, South Coast and San Diego APCDs). A report listing findings and recommendations for each district was prepared for inclusion in a general program evaluation report.

Also, staff attended various hearings and reviewed various hearing audio tapes at the request of local air pollution control district staff and Compliance Division management (e.g., Amador County and Bay Area AQMD). Variance staff also reviewed over 40 district rules concerning variances and district notice to comply regulations and wrote a Y2K advisory that was posted on ARB's website. In addition, numerous variances were reviewed on a daily basis for compliance with legal requirements.

CDM staff has been gathering the data necessary to implement a condition clearinghouse database that will be used to assist hearing board members and district personnel when placing conditions on various sources under variance. At our workshops and in our audit reports, CDM staff emphasize the importance of limiting emissions that are emitted from a source while under variance. A need was established for a clearinghouse maintained by ARB, that could provide information to hearing boards and district staff about conditions that have been placed on similar sources in the State under similar circumstances. The database will contain conditions specific to the type of equipment under variance.

Minor Violation Regulation

ARB and local air districts were recently required to adopt rules defining a minor violation and providing guidelines for issuing a notice to comply. This was a result of enactment of Senate Bill 2937 (1996), which added sections 39150 - 39153 to the Health and Safety Code.

CD's final regulation package for ARB's Minor Violation Program was prepared, submitted to the Office of Administrative Law (OAL), and approved. As a result, ARB's Notice to Comply (NTC) regulation became effective May 7, 1999.

Health and Safety Code section 39153 also requires a legislative report to be prepared by ARB, outlining implementation of the minor violation program by both the local air districts and the ARB. This report is due by January 1, 2000. CD staff sent out a survey and developed monthly reporting forms for air district use in order to gather the data necessary from each district to prepare the report. The report is also on calendar for an October 1999 presentation to the Board.

A database to track district and ARB issued Notice to Comply (NTC) citations has been developed to collect data for the legislative report. The database contains information on the contents of the districts' rules, whether they have adopted a rule and when, and NTCs and/or related NOVs issued each month since adoption of the rule. Comments received as a result of the survey are also included.

AIRS Data Management Reviews

CDM staff conducted AIRS data management reviews in the Great Basin, Yolo/Solano, Tehama and Butte County Air Pollution Control Districts in this fiscal year. While our focus was on a review of compliance-related data, staff also did an abbreviated "quick look" qualitative review of a district's enforcement and legal action programs. Data was analyzed from district and ARB records and a report was generated with findings and recommendations in each area. The goal of the program is to determine compliance with federal, state and local district requirements, identify areas of concern within the air district, and provide quality assurance for our enforcement data.

Complaint Handling

In fiscal year 98/99, CDM staff processed 113 complaints related to stationary sources. In addition, 285 smoking vehicle complaints and 84 inquiries regarding various programs or problems were handled by the complaint line staff. A total of 482 complaints and inquiries were processed during the fiscal year. Seven of these complaints resulted in special investigations by other Compliance Division staff.

Rule Review

Review of air district rules is essential for ensuring enforceability and consistency statewide. Rule review staff reviewed approximately 365 rules in different stages (draft for workshop, draft, proposed, and adoption). About a third of these reviews required a written comment.

Rule review staff participated in a rule improvement group that finalized the "Identification Performance Standard and Emerging Technologies For Stationary Sources" document. Rule Review staff compiled a statewide municipal solid waste/landfill compliance status report/survey for the Integrated Waste Management Board.

Computer Management and Upgrades

Without efficient computer administration, Compliance Division would come to a standstill. CDM's computer support addresses all of CD's computer concerns, including planning, procuring, configuring, training, troubleshooting, upgrading, and retiring software and hardware. CDM strives to ensure that the Compliance Division remains consistent with EPA and ARB computer guidelines, while responding to staff needs effectively using today's technologies to produce a superior product. CDM staff upgraded over 90 computers to Windows 95, added three new servers, and incorporated Microsoft NT as the database server's operating system.

CDM is currently evaluating the effectiveness of and CD's need for Windows 98. Throughout the year CDM continually provides technical support to all CD staff.

Continuous Emission Monitoring Reporting

CDM receives emissions violation data from districts that have sources subject to H&SC 42706. This section requires that CEM sources report any violation of emissions standards to the districts within 96 hours and the districts must report the violation to ARB within 5 days. Recently, staff has converted this data collection and monitoring process from hard copy to a computer database. For fiscal year 98/99, 16 districts reported 1,035 excesses. Owen Brockway and Integrated Environmental Systems in the Bay Area and North American Chemical in Mojave Desert reported the biggest number of excesses. CDM has completed Amador County's CEM report. The biggest source in Amador County which exceeded their permit limits is Wheelabrator Martell. It is interesting that the South Coast AQMD reported no excesses.

Reported CEM Excesses -- Fiscal Year 98/99
By District

Amador	55
Bay Area	210
Butte	32
Calaveras	26
Colusa	18
Kern	156
Imperial	14
Lake	15
Mojave	121
Monterey	58
North Coast	23
Santa Barbara	76
San Joaquin	157
Shasta	24
Siskiyou	23
Ventura	27

Clean Fuels Reporting – Data Management

CDM conducts compliance tracking and reporting to meet the California Reformulated Gasoline Regulations. The staff has processed over 8,000 clean fuel reports from refineries, sent monthly reports to refineries on the Predictive Model DAL, and distributed over 24 clean fuels reports to ARB

staff for enforcement purposes. CDM staff also maintains, troubleshoots, and updates the computer system (PACE) that tracks and reports the data from the refineries.

CDM staff developed and implemented a fuels database, which contains fuel parameter information regarding service stations, terminals and refineries. Staff has generated two special reports relating to specific fuel parameters.

Compliance Database Maintenance

The section manages databases including EPA source inspection and significant violator information, continuous emissions monitoring excesses (CEMs), sources on variance from local district rules (Variances), asbestos demolition and renovation (NARS/ACTS), clean fuel reports (PACE), review of local air district rules (Rules), complaint history (Complaints), and EPA Enforcement Actions (EPA Actions). Using these databases, the section can compile compliance profiles on facilities or other sources. These compliance profiles are useful to inspectors, attorneys, and other enforcement personnel. The compliance profiles are used by the Compliance Division, Cal/EPA, air districts, and other divisions within the ARB.

CDM staff also participated as a member of the ARB Facility Data Management System Implementation Team and attended approximately 6 meetings. This team is working toward combining databases in Technical Service, Stationary Source and the Compliance Division into one "facility" database.

Significant Violator/High Priority Violation Program

The section manages the Significant Violator (SV) or High Priority Violator (HPV) program under the U.S. EPA Section 105 Grant. Under the grant, staff manages the federal reporting of major source violations for 27 non-grantee districts in California. Management consists of review of districts' Notices of Violation (NOVs) and reporting identified major source violations in the federal Aerometric Information Retrieval System (AIRS) database. This year marks a transition in the definition of a federally reportable violation at a major source from the more general SV to specific HPV criteria.

With this change in violation classification, the section has taken an active and constructive role in developing and implementing HPV policy at the federal, inter-state and district levels, working with agencies or associations such as EPA, CAPCOA and STAPPA/ALAPCO, and briefing our legal office. Staff

also attended the National AIRS/HPV conference. The section continues to provide technical guidance and assistance on the new HPV policy to non-grantee districts.

At the level of implementation, the section received and reviewed over 400 NOVs for potential SV or HPV classification or any other exceptional characteristics such as sizeable penalty settlement. A total of 68 SVs and HPVs were reported to EPA from California's non-grantee districts. Of these, 31 violations actually occurred during fiscal year 98/99. The remainder occurred earlier. Approximately 70% of the non-grantee districts reported. The section prepares AIRS Violation Reports reflecting new or updated SVs or HPVs and sends them to EPA Region 9 and the affected non-grantee districts monthly. A summary of this data and a list of the violators reported during fiscal year 98/99 are on the following tables.

Significant Violations and High Priority Violations in FY 98/99

(sorted by district and facility)

District	*Facility*	*FY 98/99*
Amador	Ampine	1
	North American Refractories	4
	Wheelabrator Martell	2
Imperial	Imperial Irrigation District	2
	Imperial Valley Resource Recovery	1
Kern	Calaveras Cement	1
Mojave	AFG Industries	5
	IMC Chemical	7
	Mitsubishi Cement	1
	Mountain High Ski Resort	1
	Omya California	1
	TXI Riverside	1
	US Army National Training Center	2
	US Marines Yermo Logistics Center	2

These tables include some violations which occurred prior to fiscal year 98/99 and were reported to EPA during fiscal year 98/99 due either to lengthy settlement or to discovery during a recent audit (e.g., 14 violations from Kern County APCD).

Compliance Division Training and Compliance Assistance Branch

Key Personnel

	Phone:
Chief – Mary Boyer	**916-322-6037**
Compliance Assistance Section Manager – R. C. Smith	**916-322-3937**
Compliance Training Section Manager – Victor Espinosa	**916-322-3976**

Compliance Assistance Section and Strategic Environmental Investigation Group

Providing Education, Business Assistance, Surveillance, and Investigative Services Throughout the State...

Program overview

Compliance with environmental regulations and standards can be accomplished through a strong enforcement program and by providing active compliance assistance for the regulated community. One key element for effective compliance outreach is the Compliance Assistance Program (CAP).

The CAP assists both regulated businesses and enforcement agencies in better understanding air quality regulations. The CAP identifies compliance issues, develops practical, rule-specific publications, and promotes self-regulation for emission reductions and greater source compliance. By using CAP publications to improve maintenance and conduct routine self-inspections, emission sources can continually remain in compliance.

There are times, however, when environmental laws are willfully and knowingly violated. In these cases outreach programs often prove ineffective. For these reasons, the Strategic Environmental Investigation (SEI) Group was established in the section in fiscal year 98/99. The investigators assigned to the SEI Group identify, investigate, and develop cases against those who disregard environmental law and prepare those cases for the appropriate legal action.

CAP Accomplishments

In fiscal year 98/99, CAP exceeded its original commitments. Those were:

- Complete 3-5 publications.
- Update 1-3 publications.
- Complete publications in draft at the beginning of the fiscal year.

Actual accomplishments were as follows:

- Printed Circuit Board Technical Manual
- Toxic Enforcement Technical Manual, Vol. 1, Part B –
  - Chapter 1 - Aerospace Coatings Operations Guideline Document
  - Chapter 2 - Gasoline Distribution Operations Guideline Document
  - Chapter 3 - Wood Furniture Manufacturing Guideline Document
- Notice to Comply Policy and Procedures Manual -- DRAFT
- Polyester Resin Fiberglass Technical Manual -- DRAFT
- Wood Products Coatings Handbook -- English Version
- Wood Products Coatings Handbook -- Spanish Version

In fiscal year 98/99, a large portion of the CAP workload was devoted to developing the Toxics Enforcement Manual. The Toxics Enforcement Manual, Part B, will eventually contain approximately 80 Guideline Documents Chapters on federal EPA NESHAP regulations that relate to toxic sources in California. Part A of the same manual, currently in progress, will contain more generalized information on various aspects of California's and the federal EPA's toxic programs.

The fiscal year 98/99 CAP survey, conducted in June 1999, gathered input from California Air Pollution Control Districts and California and EPA enforcement managers. This year, the survey included 21 new toxics categories for comment. Responses showed a high interest in burning, reporting requirements, groundwater clean-up, PERC dry cleaning and printing and publishing operations. This information will help determine which new or updated publications will need to be developed in the next year. CAP documents shipped during fiscal year 98/99 totaled 30,647 with the breakdown being 27,663 handbooks & pamphlets, and 2,984 technical manuals. Currently, the CAP has 27 handbooks and pamphlets in print and 31 technical manuals. Since the CAP was established in 1988, there have been over 34,890 technical manuals and 694,560 handbooks and pamphlets sent to our stakeholders in California, to the other 49 states, and a dozen foreign countries to help improve their regulatory and compliance efforts. These highly acclaimed documents have proven to be extremely useful to regulators from federal, state, and local agencies as well as owners, CEOs, engineers, and operators from businesses, including small one-person operations, large Fortune 500 companies, and those in-between.

An additional duty within CAP was the development and maintenance of several databases. These databases are the primary tools used in the Compliance Division to track and report pertinent information. The databases include:

- SEI Enforcement Database – Tracks SEI investigations and litigation.
- NTC Database – Used to create reports to the legislature on the new Notice to Comply Program.
- Fuels Database – Tracks and insures that all fuels in California meet the required specification.
- Vapor Recovery Database – Used to develop statistics for the ARB/CAPCOA Vapor Recovery Test report.
- Complaint Database – Tracks all air pollution complaints made to the air complaint hotline.
- CEM Database – Tracks all CEM violations throughout the state.

SEI Accomplishments

Environmental criminal enforcement is one of the fastest growing areas in environmental protection. While civil and administrative efforts are primarily remedial, the purpose of criminal enforcement is to punish and deter. In other words, criminal enforcement can effectively improve the behavior of the regulated community. Recognizing this, the Air Resources Board recently organized the Strategic Environmental Investigations (SEI) Group. The mission of the SEI Group is to promote and protect the public health by vigorously and diligently investigating and assisting in prosecuting the most egregious and most complex cases, with a focus on those who willfully and knowingly depart from accepted national, state, or local standards. At the end of the fiscal year, over 20 cases were being investigated. The group also conducted 17 surveillance/enforcement support projects with various state and federal agencies in fiscal year 98/99.

Tampering Detection Certification (TDC)

During an observation of a random roadside inspection of motor vehicles, one of the CHP officers expressed that he had frequently seen what he believed to be tampering with emission control systems. However, peace officers were reluctant to write citations because they were unsure when tampering had occurred. To address this need we proposed the Tampering Detection Certification (TDC) program for Peace Officers. The TDC program will be a cooperative project with hands-on P.O.S.T. (Peace Officer Standards and Training) certified training at the CHP and other peace officer academies in California and clearance of citations by the Bureau of Automotive Repair (BAR) through the smog check program. The new training will include an air

quality overview, basic emission control operation, illegal after-market parts, and hands-on tampering inspections.

In May, agreement was reached to offer the TDC program. Training materials for the classes are currently under development.

The program will help identify and reduce off-cycle excess automotive emissions that may not be caught in the routine smog check because operators often re-connect emission control devices before the smog check or obtain fraudulent inspections. Statewide, the TDC program has the potential of reducing HC and NO_x emissions by 15 to 60 tons per day.

Compliance Training Section

Training Air Pollution Professionals Throughout the Nation...

Program overview

The Compliance Training Section (CTS) provides a valuable service to the Division, to ARB, to Cal/EPA, CAPCOA and to the State. Continued growth of the training program over the years reflects the value of this program. The ARB has received many awards for the excellent work performed by CTS staff. The U.S. EPA has provided significant grants to ARB for the creation and expansion of CTS programs. The training program continues to meet Cal/EPA's program commitments.

To determine training needs, the section surveys the many different agencies in the state each year. The range of courses scheduled for each year is based on the survey results and reflects the reported needs of most local air agencies in California. In addition, other agencies and industries may request special programs. CTS provides this training as resources allow. In this manner, CTS has gained the support and respect of many California agencies, as well as many of California's industry leaders.

In Fiscal Year 98/99 the Section provided a total of 8,575 student-days of training and 210 total classes or multi-day programs. These numbers represent a combination of individual classes and multi-day programs taught in California and throughout the rest of the country by CTS and National Council on Aging (NCOA) trainers.

Student-days of training is a common measure of a training program's success. High attendance numbers can mean that people like the program while low numbers may indicate problems. However, class attendance figures (student-days) and the total number of classes taught do not, by themselves,

provide a complete picture of the success of the training program. For example, a single multi-day program that is well attended, like the Cross-Media Enforcement Symposium, can skew the numbers. Therefore, evaluating success based solely upon attendance numbers can be misleading.

Table 1. Programs and Attendance

Classes and Programs	*# of Training Days*	*Average # of Students*	*Student -Days*
Air Academy (5-day)	**30**	**36**	**1080**
FOE (3-day)	**21**	**40**	**840**
VEE Recertification	**40**	**28.2**	**1127**
100 Series (California) (5-day)	**10**	**31.2**	**315**
100 Series (National) (5-day)	**60**	**23.6**	**1417**
200 Series (California)	**59**	**19.2**	**1131**
200 Series (National)	**64**	**22.2**	**1419**
300 Series	**8**	**24.1**	**193**
Dry Cleaner ATCM	**5**	**14.4**	**72**
Task Force Training	**10**	**18.3**	**183**
Border Enforcement (2-day)	**4**	**23.5**	**94**
Enforcement Symposium (3.5-day)	**3.5**	**201**	**704**
Overall Totals	**314.5**	**27.3**	**8575**
California Totals	**190.5**	**30.1**	**5739**
National Totals	**124**	**23**	**2836**

FOE and VE Recertifications

The Fundamentals of Enforcement (FOE) course was taught seven times in fiscal year 98/99. This three-day course presents a basic overview of air pollution related topics and is a prerequisite to certifying as a visible emission evaluator (VEE). It is interesting to note that of the 280 students that attended (840 student days), 50% of them were from industry – continuing the trend of last year. This can be attributed to the increased use of self-compliance by industry and an increase in environmental awareness.

In addition to the FOE, the section conducted forty VEE recertification classes, with 1127 inspectors, engineers, consultants, and industry personnel certifying.

Air Academy

The Air Academy, ARB's all-employee training program, had a successful second year of distributing the best available information to all Board employees through direct contact with staff and management. Custom-designed to increase efficiency and knowledge, this technical training program is taught by approximately 40 highly qualified instructors from each of the Board's 10 divisions. They share the most current and up-to-date information in their specific areas of air pollution control, and this educational training augments the technical competency of staff.

Throughout the two week sessions, the students receive instructional material which fills two large binders. They are involved with interactive lectures, computer slide presentations, field trips and site visits. With the continuation of the same format, materials, and in-house instructors, there is no doubt the class will continue to be a popular training resource.

Requests for the training have been made by groups outside the Board, and they have expressed an interest in sending staff here. It is also interesting that air pollution control districts view it as a means of providing information for their staff on the role of ARB. Cal/EPA agencies have stated that they view it as an opportunity to provide cross-media training to their employees and may use it as a proto-type for future educational programs. The 1998/99 sessions have provided training to 168 Board employees.

100 Series Training Courses

In fiscal year 98/99, the section held the 5-day 100 Series program twice in California for a total of 315 student days. This represents nearly an 80% increase in the number of student days from fiscal year 97/98 and is a demonstration of continued strong interest in our first level of training courses.

Under the National Program twelve sessions were completed for a total of 1417 student-days of instruction. In fiscal year 98/99, nine sessions were completed for an approximate total of 972 student-days. Thus, the demand for the 100 Series out-of-state has increased this fiscal year. It is important to note that in the National Program, the 100 Series serves as a lead-in for the 200 Series, which remained in demand during fiscal year 98/99. A complete breakdown of attendance data for both programs is shown in Table 1.

Additional improvements were initiated in course videos for the 100 Series during fiscal year 98/1999. Production is in the final stages for new version of "Inspector Safety." The new version along with the updated lesson plan will be incorporated into the existing program in fiscal year 99/2000. Staff is also

looking into enhancing some of the courses through the use of multi-media presentations.

Advanced Compliance Training Courses

This portion of the report summarizes the fiscal year 98/99 200/300 Series Compliance Training course activity. This data includes all 200/300 classes except Symposium, Border Enforcement, and Task Force.

During fiscal year 98/99, class size increased while courses accomplished decreased slightly. CTS completed fifty-nine 200 Series classes during fiscal year 98/99, which is 24% above CTS's goal of 48 classes set at the beginning of the year. The total student-days were 1,396 or 24 students per class. In the previous fiscal year, 61 classes were presented for 1067 student-days or 17.5 students per class. These numbers show that while the number of classes accomplished decreased slightly in fiscal year 98/99, the average students per class increased enough to have an increase in student days of 31%. The popularity of the program was again confirmed by the addition of 11 "special request" classes that were not scheduled in the annual course catalog. In addition to the courses in California, ARB staff taught 13 classes out-of-state under the National Program.

For the National Program 64 courses were accomplished for a total of 1,419 student-days or 22.2 students per class. In the previous fiscal year, 66 classes were accomplished for a total of 1,464 student-days or 22.2 students per class. The numbers show a leveling of the program over the last two fiscal years. The most popular National courses were those that dealt with source testing and monitoring, with Continuous Emission Monitors (#221), Principles of Ambient Air Monitoring (#222) and Observing Source Tests (#244) ranking as the top three. In addition to the above, National Program staff taught one class in California.

In summary, the 200/300 series trainers had an outstanding year. Output was consistent with last year's increase, and course quality is continuously improving as the staff upgrades and computerizes lesson plans. These improvements have been reflected in overwhelmingly positive student course evaluations. Even more impressive is that these improvements occurred in spite of the increased demand for staff time on other projects such as Border Training, Task Force Training, Vapor Recovery, Enforcement Symposium, and many others.

The demand for the 200/300 classes is expected to remain robust during the next fiscal year. Several new courses are being prepared while others are being rewritten to reflect new or revised CAP manuals. In addition, improvements in district hiring because of favorable economic conditions will also increase demand. The 200/300 staff remains committed to meeting

customer needs by providing top-notch professional environmental training wherever it is required.

200/300 Series Statistical Analysis

Parameter	*In state FY 97/98*	*In state FY 98/99*	*Percent Change*	*Out of State FY 97/98*	*Out of State FY 98/99*	*Percent Change*
Classes Scheduled	**74**	**72**	**-2%**	**66**	**64**	**-3%**
Classes Taught	**61**	**59**	**-3.3%**	**66**	**64**	**-3%**
Student Days	**1067**	**1131**	**+6%**	**1464**	**1417**	**-3%**
Average Attendance	**17.5**	**24**	**+37%**	**22.2**	**22.2**	**0**
Industry Attendance	**83(7.8%)**	**117(10%)**	**+41%**	***	***	***

*** Data not available

200/300 Series Courses FY 98/99 Combined Total	
Classes offered:	**123**
# of Students days:	**2,548**
Average per class:	**18.8**

Cross Media Enforcement Symposium

With a kick-off speech from Cal/EPA's new Secretary, Winston H. Hickox, the 21st Annual Enforcement Symposium Cross-Media Training was held in San Diego, California, May 25-28, 1999. According to this year's evaluations, the participants were impressed with the high production standards and quality of the audio-visual presentation created by the Compliance Division's Training Section and the knowledge and professionalism of the speakers. Comments from the participants included: "I was impressed with the outstanding use of multi-media technology to present the topics," and "Obviously a lot of effort was put into the production of the video, presentations and handouts. The speakers were very professional." Approximately 200 participants, speakers, and staff were in attendance. Speakers represented Cal/EPA Agencies, prominent law firms throughout

throughout California. Circuit Environmental Prosecutors from California were also in attendance. Participants represented all of the Cal/EPA Agencies, the Department of Fish and Game, and U.S. EPA. Local environmental agencies from throughout the state were also in attendance, representing all media (i.e. air, pesticides, toxics, waste, and water). The FBI, CHP, Sacramento County Sheriff, Environmental Crimes Task Force members from throughout the state, HazMat Units, and representatives from the Department of Defense were also in attendance.

Participants learned the latest environmental enforcement methods and tactics. In addition, they learned to identify cross-media violations and determine whether the violations could be considered administrative, civil, or criminal offenses. These violations were discussed in detail by the speakers and in breakout groups. A mock case was prepared by the Compliance Division Training Section with input from the various Cal/EPA Agencies. A video, "The Van Gogh Case" was also created by the Compliance Division Training Section using the case scenario. The video was shown and a mock proceeding was presented using the symposium participants as the "actors." A deposition, witness examination, and an actual jury determination were acted out during these mock proceedings.

Other topics discussed at this four day event included: "Compliance Strategy and Philosophy," "Role of the Circuit Prosecutors," "Mistakes Regulators Make," and "Lab and Fraud Services."

Once again, based on this year's course evaluations, the 21st Annual Enforcement Symposium Cross-Media Training was a huge success. Moreover, the Symposium is one of the items Cal/EPA submits to the legislature as proof that they are meeting their goals and to justify further funding.

Environmental Crimes at The Border

CTS was asked by the Border Environmental Crimes Task Force Committee to develop a class and a video focusing on environmental crimes at the border. The program presents a series of hypothetical situations involving environmental crimes at or near the U.S. border with Mexico. The objective was to create in law enforcement a general awareness of environmental crimes and to give the patrol officers information on air, hazardous waste, and pesticide situations and to show them how they can take active and necessary steps to stop environmental crimes through "heads up" enforcement.

Sponsored by the United States Environmental Protection Agency (U.S. EPA) – Region 9, the U.S. EPA – Washington, D.C., and the Western States Project, the video was completed in fiscal year 97/98. CTS staff prepared a lesson plan to assist the individual agency instructors in training their own

employees. The training package includes a copy of the 1½ hour video, a CD-ROM, and a lesson plan. The training is certified by the Peace Officer Standards and Training Commission for presentation to California peace officers as part of their official continuing education. It is offered to trainers from all California police agencies. They can modify the lesson plan to reflect their specific jurisdictions.

Two training sessions were held in fiscal year 98/99. The first was held on September 1-2 in Sacramento and the second on September 29-30 in Arizona; a third is still to be arranged. Both classes were tremendous successes and were greatly appreciated by all the participants including U.S. Customs agents, the FBI, City and County Sheriff, and the CHP.

Multi-Media Task Force Training

Fiscal Year 98/99 was an important year for the Task Force training course. The second year of any new program will often tell if the program will "stick" and be useful in the future.

Multi-media task force workshop courses #360, 360.1, and 360.2, all derivations of previous Enforcement Symposium cases, were presented 10 times in fiscal year 98/99 with a total of 183 student days of training. This represents an approximate 50% decrease from fiscal year 97/98. Normally, such a decrease would cause alarm. However, the first year a course is presented typically has higher numbers and following years tend to drop off. Also, there was a transition in audience between fiscal years 97/98 and 98/99 from Regional Task Forces to County Based Task Forces. Since Regional Task Forces draw from multiple counties, these groups generally have a larger audience.

Several success stories have begun with this training during the fiscal year. In the North Coast Counties four training sessions were held, all constituting the "kick-off" meetings for the respective task forces. After each of these sessions, the group was energized and significant cases were begun. In fact, in cooperation with the task forces, ARB Compliance Division has provided surveillance equipment and expertise for several investigations that were begun with this training.

Due the success of the program thus far, all task force training courses will continue to be in demand for fiscal year 99/2000. The numbers are expected to be similar to fiscal year 98/99 levels.

Finally, the materials from the 1999 Cross Media Enforcement Symposium can and will be used to create additional Course #360 classes for future task force training.

PERC Dry Cleaning ATCM Recertification

Beginning in April of 1996, dry cleaners, using perchloroethylene (PERC), were required by law to receive training on how to comply with the Air Toxic Control Measure (ATCM) for Perchloroethylene Dry cleaners. This certification training was created and implemented by CTS in fiscal year 95/96.

For fiscal year 98/99, CTS designed a recertification course for PERC dry cleaners. Significant time and effort was devoted to researching the needs of the program and creating a product that would increase the compliance rates with the ATCM. The finished product is a complete lesson plan that ARB certified trainers will use to certify/recertify dry cleaners throughout the state.

Thus far, the training offered has been very well received, with extremely positive reviews from both local government and industry. During fiscal year 99/2000, the recertification is expected to be offered up to a dozen times in less urban areas of the State.

Additional Programs

ARB's Vapor Recovery program went into high gear this fiscal year and CTS was there to help. Two staff instructors were assigned to fill in and help the program meet legislative and regulatory guidelines. These CTS staff members provided training and field experience that greatly aided the vapor recovery program. The section has also dedicated a trainer to providing vapor recovery instruction for the next fiscal year, and will continue to provide support for the rest of the Division's programs.

Part II. Mobile Source Compliance and Enforcement Activities – FY 98/99

Ensuring Clean Vehicles and Engines from Production to Retirement...

Program Overview

The Air Resources Board (ARB) is responsible for controlling emissions from mobile sources in California. California has an enormous number of mobile sources, which together contribute to over half of the emissions that create to the state's air quality problem. Therefore, it is critical that the Air Resources Board ensure that these sources and their engines comply with California's emissions standards not only when they are new, but throughout their useful life.

On-road mobile sources have been controlled in California since 1966, when automobile manufacturers were first required to include emission control equipment in the design and production of their engines. More recently, California's Low-Emission Vehicle Program (adopted in 1990), has resulted in the development of clean fuels and more advanced emission control technologies.

Most recently, the ARB has extended its mobile-source controls to include non-traditional categories of off-road and non-road sources, including recreational vehicles, small utility engines, diesel engines and equipment, gasoline engines and equipment, marine pleasure craft, and off-road aftermarket parts (parts that are not installed at the factory.). In fiscal year 98/99, the Board adopted new regulations that target two new categories of mobile sources (large spark-ignition engines for industrial applications, and spark-ignition marine engines in personal watercraft and outboard marine vessels.)

The ARB has two divisions that work together to control emissions from mobile sources. The ARB's Mobile Source Control Division (MSCD) is responsible for developing regulations that establish emission standards for on-road, off-road and non-road categories of mobile sources. The ARB's Mobile Source Operations Division (MSOD) ensures that these emission standards are met throughout every phase of a vehicle's life.

This is no easy task. Currently there are over 26 million vehicles registered in California. During 1998 alone, approximately 2 million new on-road vehicles were delivered for sale in California. Add to these numbers the millions of regulated off-road vehicles and non-road engines (e.g., personal watercraft, lawnmowers) sold annually in California, and the new categories that come on-line each year, and the enormity and crucial nature of the mobile source control program is apparent.

Current Compliance Programs

The MSOD's enforcement efforts focus primarily on manufacturer compliance and compliance assistance. This includes programs for new and in-use on-road vehicles, new small and heavy-duty off-road/non-road engines, aftermarket parts, heavy-duty diesel trucks and buses, illegal vehicle enforcement, dealership and fleet anti-tampering inspections, California emissions warranty repairs, and On-Board Diagnostics (OBD) II system testing.

On occasion, an enforcement action is required, and the ARB's Office of Legal Affairs works cooperatively with division staff to develop and settle cases in lieu of litigation. A successful compliance program must be backed by fair and effective enforcement. If attempts to reach a settlement are unsuccessful, the ARB's Office of Legal Affairs will, in many cases with the Attorney General's Office or a local District Attorney, pursue a violator through the litigation process. While this benefits air quality, it also levels the field for those in the regulated community that work hard to comply.

The following sections present in detail the seven sections within MSOD and one section in MSCD that are responsible for administering these compliance and enforcement programs. Where it applies, information on compliance and enforcement authority and fiscal year 98/99 enforcement actions and settlements has been included.

Mobile Source Operations Division Certification Branch

Key Personnel

	Phone:
Chief – (vacant 11/8/99)	626-450-6150
Certification Section Manager – Duc Nguyen	626-575-6844
In-Use Compliance Section Manager – John Urkov	626-575-6814
Aftermarket Parts Section Manager – Rose Castro	626-575-6685

Certification Section

Ensuring Compliance
Prior to Production...

Program Overview

All of the new vehicles and most engines (engine families) that enter commerce in California must be certified by the ARB as meeting California's exhaust and evaporative emissions standards, including durability requirements. To ensure that these requirements are met prior to sale in California, the Certification process is the first line in ARB's mobile source Compliance/Enforcement Program.

The Certification Section evaluates manufacturers' certification applications for new on-road and off-road vehicles (and engines used in these vehicles), and non-road engines to ensure compliance with California's emission standards and other requirements. In addition to the numeric emissions limitations or standards for exhaust and evaporative emissions, other requirements include:

- Useful life durability and deterioration demonstration;
- Emissions compliance demonstration;
- California warranty;
- Emissions labeling;
- Fuel fillpipe specifications;
- On-board diagnostics; and
- High altitude compliance.

The manufacturers provide an application package for each engine family that includes test data from demonstration and durability vehicles or engines along with all of the applicable engineering support data for the emission control systems. Working closely with the vehicle and engine manufacturers,

this package is reviewed by an ARB certification engineer for each of the requirements outlined above. If an engine family meets all of the requirements, the MSOD issues the engine family an executive order allowing the sale of vehicles and engines in California.

All of this information is maintained in a database to support policy and regulatory development, to respond to public inquiries, and to provide enforcement assistance to other ARB groups.

In-Use Compliance Section

Ensuring Durable Emission Control Systems...

Program Overview

One of the most difficult tasks facing the ARB is to ensure that California - certified engine families comply with applicable emission standards throughout their useful life. Over the last fifteen years, the In-Use Compliance program has been instrumental in encouraging manufacturers to build durable emission control systems.

The In-Use Compliance Section conducts in-use testing of consumer-owned vehicles at an ARB-contracted laboratory, covering approximately 40 engine families each year. The engine family group selection is based on a number of factors, including input from the ARB's certification and quality audit data. The ARB provides the contractor with a list of vehicles that are included in the selected engine family group, and the contractor sends letters to the vehicle owners requesting their participation in the program. The owners are offered incentives that include monetary compensation and the use of a rental vehicle during the time the owner's vehicle is being tested. The first five responses that meet the following procurement criteria are selected for testing:

- Proper engine family;
- Properly maintained;
- Have between 30,000 miles and 75 percent of certified-useful life mileage (usually 75,000 miles);
- Had no major repairs or accidents.

Under ARB oversight, and in the presence of the manufacturer's representative(s), the five selected vehicles undergo restorative maintenance which includes: checking the vehicle on-board diagnostic computer for any stored fault codes, checking for obvious signs of tampering, and adjusting all parameters to the manufacturer's factory specifications. The fully prepared vehicles are tested using the Federal Test Procedure for exhaust and evaporative emissions. The vehicles, on average, must comply with the applicable in-use emission standards for the appropriate model, and contain no defective emission-related components.

If an engine family fails the testing, or if three or more vehicles in an engine family contain a defective emission-related component, the In-Use Compliance Section notifies the manufacturer of the non-compliance and begins negotiations for remedial action. Since 1983 the ARB has successfully negotiated with the manufacturer corrective actions that included a recall of the affected vehicles in all but two cases. Where the manufacturer does not agree to corrective actions, ARB may order a recall, and where appropriate, civil penalties (or settlements in lieu of civil penalties). All recall campaigns are monitored by the ARB and are tied to the Department of Motor Vehicles registration process. Any vehicles included in the recall campaign that are not repaired, are blocked from renewing their registration until the recall repairs are completed.

When the program began in 1983, almost 100 percent of the tested engine families failed. Since 1992, the number of recalls has continued to decrease each year. Table I, below, lists the in-use testing statistics for calendar years 1990 through 1999. The number of recalls each year includes those initiated both by the manufacturer and by ARB.

For a manufacturer, an in-use recall can be very costly in terms of both money and customer relations. To avoid this, manufacturers are continuing to build more durable emission control systems, which translates into long term air quality benefits.

Based on the success of the light-duty in-use test program, the In-Use Compliance Section started a similar in-use test program for medium-duty engines in 1998. The ARB selected the top selling medium-duty engines sold in California, and the manufacturer is responsible for procuring and testing five representative engines. The testing is conducted on an engine dynamometer under the supervision of ARB staff. The same corrective action and recall provisions from the light-duty program are applied to the medium-duty engine program. General Motors is scheduled for testing in November 1999.

Table I

IN-USE VEHICLE TESTING AND RECALLS (1990-1998)

Year	Number of Engine Families Tested	Number of Recalls	Number of Vehicles Recalled	*Settlements in Lieu of Civil Penalties
1990	32	22	271,973	
1991	30	13	286,711	$10,300,000**
1992	17	31	480,560	$4,750,000***
1993	46	24	156,368	
1994	45	24	149,795	
1995	42	14	111,546	adjudication****
1996	40	12	130,218	adjudication****
1997	35	11	121,683	
1998	38	16	139,104	
1999	36	22	65,000	
TOTAL	361	189	1,912,959	

*Civil penalties must be imposed by a court of competent jurisdiction. Where possible, the ARB settles cases without litigation, collecting settlements in lieu of civil penalties.

**Manufacturer:	Ford Motor Company
Reason:	Excessive emissions levels due to failing catalysts on over 100,000 vehicles
Total Value:	$10,300,000
Settlement Features:	$ 200,000 - Air Pollution Control Fund
	$ 900,000 – Fund in-use compliance testing
	$9,000,000 - Nine electric & hybrid electric vehicles (includes R&D)
	$ 200,000 - Studies related to electric vehicle use and marketability

***Manufacturer:	Mitsubishi
Reason:	Excessive emissions levels on approximately 45,000 vehicles
Total Value:	$4,750,000
Settlement Features:	$ 100,000 - Air Pollution Control Fund
	$ 450,000 - Fund in-use compliance testing
	$4,200,000 - Six electric and hybrid vehicles (includes R&D)

****Adjudication	[4.3 and 5.7 liter light-duty trucks (potential recalls involving 80,668 vehicles)]

The In-Use Compliance Section also maintains the California Emissions Warranty Information Reporting database. On a quarterly basis, each light-duty manufacturer is required to report to the ARB on the types and frequency of emissions related repairs by their franchised dealerships. When the failure rate of an emissions control component or system exceeds four percent, the manufacturer may be required to provide a corrective action plan

and possible recall for all affected vehicles. However, the vehicle manufacturers will often initiate their own service campaign to correct the problem before the four percent threshold is exceeded. The ARB closely monitors these reports and audits dealer repair records to verify the emissions repair reporting. During 1999, this program initiated seven emissions-related recall campaigns resulting in the repair of some 65,000 vehicles.

1998/99 Enforcement Actions and Settlements:

Manufacturer:	(Confidential*)
Violation:	4.3 liter truck engine family failed in-use testing with no corrective action
Settlement:	Currently in adjudication

* name of manufacturer to remain confidential until final settlement is reached.

Aftermarket Parts Section

Ensuring Clean Vehicles and Engines through Certification of Aftermarket Parts and Retrofits...

Program Overview

California law (Vehicle Code §27156 and §38391 and HSC §43006) and the Federal Clean Air Act prohibit any modifications that would degrade or reduce the function of a vehicle's original emissions control system. However, if properly designed, many aftermarket parts do not increase vehicle emissions, and these laws also provide a mechanism for the ARB to exempt or certify aftermarket parts or retrofit systems that the manufacturers have proven do not increase vehicle emissions.

The Aftermarket Parts Section evaluates applications submitted by aftermarket manufacturers to ensure that their devices do not reduce the effectiveness of the original emission control systems. All of the aftermarket parts sold in California fall into one of three groups:

Replacement Parts

Replacement parts are made by aftermarket manufacturers to replace an original equipment manufacturer (OEM) part. These parts are legal for sale in California if they are functionally identical to the part they are replacing. An example of an aftermarket replacement part is a replacement exhaust gas recirculation (EGR) valve. The function of the aftermarket EGR valve is identical to the OEM factory part, however there may be a substantial cost saving over the OEM factory part.

Exempted Parts

Exempted parts are add-on or modified parts that have been evaluated by an ARB engineer and have been determined to not increase vehicle emissions for a specific application. The part must also be completely compatible with

any OBD systems. If the data demonstrates these facts, the manufacturer is granted an exemption to VC 27156 for the specific application. This exemption is formalized as an executive order, and allows the modification to be installed on specific emission controlled vehicles. Every executive order is assigned a unique identification number that the manufacturer must provide as an under-hood label or decal. A list of exempted parts is also made available to the Bureau of Automotive Repair to ensure that vehicles do not falsely fail the visual anti-tampering portion of Smog Check.

Competition Use Only

Competition or racing parts may be sold in California even though they have not been proven by their manufacturers not to increase vehicle emissions. These parts are not legal for use on any pollution-controlled vehicle in California, and they are required to be labeled as such when they are offered for sale. These parts may only be used on closed course racing or competition vehicles, or on off-road vehicles manufactured prior to the ARB's introduction of off-road emissions standards.

The Aftermarket Parts Section also certifies retrofit systems for sale in California. The criteria for certification includes demonstrating durability and emissions levels at or below the applicable standards throughout the useful life, compatibility with OBD I and OBD II systems, manufacturer and installer warranty, ARB installation inspection, and in-use compliance testing. An example of a currently certified retrofit system is a natural gas fuel conversion kit.

In addition to evaluating aftermarket parts, the section issues experimental permits which allow the operation of experimental vehicles in California which may not meet California's emissions standards. These permits are often requested by manufacturers to evaluate new emissions control technology over unique environmental conditions such as California's Death Valley. The applicant, usually a major vehicle manufacturer, needs to demonstrate the need to use a non-complying vehicle in California. If the need is justified, the section will issue a one year permit for specific vehicles identified by their Vehicle Identification Number (VIN). At the completion of the test program, the permitted vehicles are required to meet the applicable California emission standards or be removed from the state.

During the 1998/99 fiscal year, the Aftermarket Parts Section noted a marked increase in the number of applications received for review. During this period, 203 applications for review were received, and 135 executive orders and 40 Experimental Permits were issued.

Mobile Source Operations Division
Inspection Audit and Testing Branch

Key Personnel

	Phone:
Chief – John Gunderson	**626-575-6791**
Vehicle Engine Audit Section Manager – Maggie Wilkinson	**626-575-7040**

New Vehicle/Engine Audit Section

Ensuring Compliance at the Time of Production...

Program Overview

While the Certification Section ensures that vehicles are designed to comply with applicable engineering standards prior to production, the main focus of the New Vehicle/Engine Audit Section is to ensure that these vehicles comply with the ARB's certification standards at the time of production. This is a critical point in the compliance process, because catching a violation early can prevent or limit the sale and use of non-complying vehicles and engines in California and their associated impacts on air quality.

Currently, manufacturers who certify light-duty and medium-duty motor vehicles or off-road engines for sale in California are required to implement a quality audit testing program. For manufacturers of passenger cars, light trucks, and medium-duty vehicles, this program includes a requirement that they randomly test a statistically relevant portion of their California-certified production using the Federal Test Procedure. Additionally, they must functionally test the emissions control and OBD II systems for all vehicles that may legally be sold in California. Manufacturers of off-road heavy-duty diesel or small off-road engines are required to implement a similar assembly-line audit program, using an engine dynamometer test.

The data from the quality audit testing is provided to the ARB on a quarterly basis. During fiscal year 98/99, the New Vehicle/Engine Audit Section reviewed the quarterly reports of eighty-five on-road and off-road engine manufacturers, representing testing results for seven hundred and fifty engine families. The audit section review process includes: verifying compliance with the certification standards, verifying that the sampling requirements are met, and monitoring failing vehicle and engine repairs. This process culminates in ARB quarterly reports summarizing the production and emission averages for each manufacturer and their specific engine families.

When a manufacturer has an engine family that fails to meet the applicable emission standards for a quarter, audit section staff works with the manufacturers to ensure that appropriate corrective action is taken and where possible, that failing vehicles or engines are recalled or repaired in the field.

In conjunction with the vehicle and engine assembly-line audit activities, the section conducts compliance testing at the ARB's Haagen-Smit Laboratory (HSL) or at contractor facilities. This testing complements the quality audit review by verifying the manufacturers' audit test results. The audit section selects an engine family based on the audit data and other input and randomly selects five vehicles from the selected manufacturer's distribution center or at the manufacturer's production facilities. The selected vehicles or engines are sealed to prevent any alteration, and are delivered to ARB for testing, using the same procedures that are used for certification and manufacturer audit testing. The manufacturer usually has one or more representatives on site during the testing process.

If the sample fails, the manufacturer is required to implement a corrective action and recall any affected vehicles or engines. An average of ten new passenger and light truck engine families are tested each year. However, due to the renovation of several test cells at the HSL and the need for precise measuring equipment to evaluate the emission levels from low emission vehicles, no testing was done in fiscal year 98/99.

Although regulatory authority exists to compliance test all engine families and groups subject to audit, our current test facilities at HSL only allow testing of light and medium-duty vehicles. Audit section staff plans to use contractor facilities for conducting compliance testing for small off-road engines this coming year and the facilities at HSL will be available to resume motor vehicle testing.

The ARB also has authority to visit manufacturers' factories and test facilities to verify their audit and test procedures. The section, in conjunction with the Mobile Source Enforcement Section (MSES), plans to resume these visits for automobile and truck plants. Additionally, as manufacturers of small off-road engines are new to the regulatory program, and ARB has not had an opportunity to evaluate their testing and audit procedures, the New Vehicle/Engine Audit Section will, with the MSES, add visits to these sites to their activities.

1998/99 Enforcement Actions and Settlements:

Manufacturer:	(Confidential))
Violation:	poor quality audit allowed non-complying engines to be sold in California
Settlement:	Implementing a quality control plan. Other aspects are under negotiation
Manufacturer:	(Confidential)
Violation:	Failure to audit test one 1998 California-certified engine family
Settlement:	Settlement under negotiation
Manufacturer:	Caterpillar (off-road HDD engines)
Violation:	Failure to test when production for 2 engine families went over 150 heavy-duty off-road diesel engines
Settlement:	Do make up testing of 1999 model year product and demonstrate to ARB that they have implemented an effective system to monitor for 150 CA engine family production
Manufacturer:	(Confidential)
Violation:	Engine family exceeding NOx standard for the year. Engine family certified below the 175 HP level – was also under-sampled for QA testing for the year. Significant number of engines delivered to CA. [Title 13, Section 2427(b)(5) & (10)]
Settlement:	Letter will be sent regarding the violation and to require that the California emission labels be removed from these engines
Manufacturer:	(Confidential)
Violation:	Under-sampling during QA testing for HDD engine families certified with less than175 HP [Title 13, Section 2427(b)(5)]
Settlement:	Letter will be sent regarding the violations, requesting that they improve their program to monitor California production volumes
Manufacturer:	(Confidential)
Violation:	Failure to report for all quarters and annual report; reports submitted do not contain all of the required information, and California-certified engine families are not included in the reports
Settlement:	Letter was sent describing violation and requesting corrected reports within 30 days

1998/99 Enforcement Actions and Settlements:
(Continued)

Manufacturer:	(Confidential)
Violation:	Failure to submit 1996 CY report, the 1997 report does not include the total US production numbers and the 1998 report was sent by e-mail (hard copy is needed)
Settlement:	Letter was sent describing violation and requesting that information be submitted within 30 days

Mobile Source Operations Division
Mobile Source Enforcement Branch

Key Personnel

	Phone:
Mobile Source Enforcement Branch Chief – Paul E. Jacobs	**916-322-7061**
Northern Heavy-Duty Diesel Section Manager – Donald J. Chernich	**916-322-7620**
Southern Heavy-Duty Diesel Section Manager – Darryl P. Gaslan	**626-450-6155**
Mobile Source Enforcement Section Manager – Gregory H. Binder	**626-575-6843**

Heavy-Duty Diesel Sections (Northern and Southern)

Ensuring Clean Heavy-Duty Diesel Vehicles through Roadside and Fleet Inspections...

Program Overview

The ARB, in cooperation with the California Highway Patrol (CHP), is testing heavy-duty trucks and buses for excessive smoke and tampering. Every heavy-duty vehicle traveling in California, including those registered in other states and foreign countries, is subject to inspection and testing. Although heavy-duty vehicles comprise only two percent of California's fleet, they produce about thirty percent of the oxides of nitrogen and sixty-five percent of the particulate emissions attributed to motor vehicles.

The roadside Heavy-Duty Vehicle Inspection Program (HDVIP), and its companion fleet Periodic Smoke Inspection Program (PSIP), both operate to reduce excessive emissions from in-use heavy-duty vehicles. Under these programs, heavy-duty vehicles are subject to smoke opacity testing and tampering inspections at CHP weigh stations, random roadside locations, California/Mexico ports-of-entry, and at over (14,000) fleets statewide. Currently, the ARB has (20) field staff operating these programs in northern and southern California.

To conduct a smoke inspection, ARB staff selects a vehicle for the test and directs it into a special inspection lane where the wheels are chocked for safety. The driver is instructed to rapidly depress the accelerator several times in neutral until maximum governed speed is reached. This process cleans out any residual soot build-up prior to the test and ensures that the engine is in proper mechanical order. The inspector records the engine's RPM at idle and at its maximum governed speed, and proceeds with the Society of Automotive Engineers (SAE) J1667 Snap-Acceleration Test. A

smoke sensing meter is positioned just above, or a probe is placed just inside, the vehicle's exhaust stack. While the driver rapidly accelerates the engine in neutral, the meter or probe measures the opacity of the smoke being emitted. This process is repeated three times and the opacity readings are averaged. The inspector records the engine data, and completes the test by performing a visual inspection for signs of tampering. All 1991 and newer engines must not exceed 40 percent smoke opacity, and all pre-1991 engines must not exceed 55 percent smoke opacity. The penalties for excessive smoke emissions are graduated as follows:

Notice of Violation

For pre-1991 vehicles that have smoke opacities between fifty-five percent and 70 percent with no citations in the past twelve months, a Notice of Violation (NOV) is issued. The NOV is similar to a "fix it ticket" because it has no penalties attached if repairs and proof of correction are provided to the ARB within forty-five days. Only one NOV may be issued during a twelve-month period, and failure to provide timely proof of correction will convert the NOV to a citation.

First Level Citation

For pre-1991 engines with seventy percent or greater smoke opacity and 1991 and newer engines with greater than 40 percent opacity, and no citations in the past twelve months, a first level citation is issued. The penalty is $300 if repairs and proof of correction are provided to the ARB within forty-five days. After 45 days, the penalty increases to $800.

Second Level Citation

The penalty for any further violations within a twelve-month period is $1,800. In addition, proof of correction must be provided in order to clear the citation. In extreme cases, the CHP may take a vehicle out of service for an outstanding citation.

Appeal of Citation

A cited vehicle owner may appeal the citation through a hearing with ARB's Administrative Law judge in the Administrative Hearing Office, at (916) 327-2032.

Roadside Smoke-Inspection Statistics -- Fiscal Year 98/99		
Number of vehicles inspected	21,635	
Number of citations issued	1,404	
Number of NOVs issued	381	
Total number of violations	1,785	(8.3% failure rate)
Penalties assessed	$ 428,700	
Penalties received	$ 334,392	(78% collection rate)

(Note: The ARB now has a formal program to collect delinquent penalties.)

The PSIP is the ARB's companion to the roadside program to ensure that all of California's heavy-duty vehicle fleets are properly maintained and are operating with the lowest possible emissions. All California based fleets of two or more heavy-duty vehicles are required to perform annual smoke and anti-tampering inspections. The same opacity requirements of the HDVIP apply to the PSIP. All testing must conform to the SAE J1667 snap-acceleration procedure, and any vehicles that do not pass the test must be repaired and re-tested. Fleet owners are not required to inspect vehicles that are powered by new (not rebuilt) engines that are less than four years old. To ensure compliance, the ARB will randomly audit fleets' maintenance and inspection records, and audit test a representative sample of their vehicles. These enforcement audits will commence on October 1, 1999. ARB has completed approximately 25 pre-enforcement visits to assist fleets in their efforts to comply with the PSIP.

The ARB, in partnership with California's community colleges, has developed a training program to assist the regulated industry in its compliance efforts. This program, the California Council on Diesel Education and Technology (CCDET), offers low-cost instruction on the smoke inspection program regulations, the correct application of the SAE J1667 test protocol, and some smoke-related engine maintenance practices. There are currently five participating community colleges throughout California, and two more have applied to become members.

Mobile Source Enforcement Section

Ensuring Clean Vehicles and Engines through Field Investigations...

Program Overview

The Mobile Source Enforcement Section (MSES) is responsible for preventing the illegal sale and use of non-California certified vehicles and engines, and illegal aftermarket parts in California. The Section also conducts inspections at new and used car dealerships and commercial fleets to ensure that the vehicles being used or offered for sale are equipped with the required emissions control systems. The investigations and enforcement actions against these violators ensure that the ARB's clean vehicle and engine requirements achieve their maximum air quality benefits.

The MSES staff is available to the mobile source compliance sections within both the Mobile Source Operations Division and the Mobile Source Control Division when enforcement assistance is required. The MSES also conducts joint operations with the newly-formed "Strategic Environmental Investigations Unit" in the Compliance Division. The chart below shows the number of combined anti-tampering and illegal vehicle/engine cases for fiscal year 98/99.

The ARB's illegal vehicle and engine enforcement program uses a variety of sources to trigger investigations. These sources include direct inspections, information from other agencies, and information and tips from the public and businesses community. One of the primary inputs for illegal vehicle cases is the Notification of Noncompliance (NoN). The ARB receives a NoN from Smog Check stations statewide for every federal vehicle with under 7,500 miles that passes a Smog Check. If the NoN is issued to a dealer or fleet, an ARB Field Representative will inspect the vehicle(s) and

determine if it is illegal under Health and Safety Code (HSC) §43150 - §43154. Working with the field investigation staff, and often with other local, state and federal agencies, an engineer develops the case, prepares a case report for referral to the ARB Office of Legal Affairs (Legal), and works with the Legal staff to negotiate a settlement or litigate the case. Violators are subject to civil penalties of up to $5000 for each violation of HSC §43151, §43152, and §43153. Under these statutes, enforcement actions are also initiated against fleets, such as car rental companies, that negligently or intentionally use new federal vehicles within California.

The MSES staff also works with the Aftermarket Parts Section to prevent the sale and use of illegal emissions-related parts that may adversely effect a vehicle's exhaust or evaporative emissions. These parts include fuel delivery systems, exhaust headers, computer PROM chips, and other performance enhancing components that may effect emissions.

The MSES conducts an ongoing program of anti-tampering inspections at car dealerships and commercial fleets. Under HSC §43012 and §43008.6, used car dealers and fleets are routinely inspected for emissions control tampering. When the dealer and fleet program began over twelve years ago, almost every dealer and fleet inspected had multiple violations. Since then, the number of violations has steadily decreased, due in part to continued inspection efforts, support from the Independent Automobile Dealers Association, and newer-model computer-controlled vehicles that are less likely to be tampered. Although the majority of dealers and fleets are very diligent about ensuring emissions compliance, there are still some dealers and fleets that continue to sell, offer for sale, and use vehicles with tampered emission controls.

Over the last fiscal year, the MSES's inspection methods have been adapted to focus its resources on the dealers and fleets that continue to have compliance problems. Previously the field staff would typically inspect (5-10) vehicles at each location for maximum statewide coverage; however, the focus is now on problem dealers and fleets, and inspections are made of every subject vehicle on the premises. A typical inspection includes a complete visual check of the required emission control systems. Any violations are categorized as tampering (deliberate removal/disconnection of emission controls), or nonconforming (worn or defective emission controls). All violators are issued a Notice to Correct (dealers) or a Notice of Violation (fleets) that require proof of repair prior to sale or use of the vehicle(s). Tampered vehicles also require a smog certificate along with penalties (in lieu of litigation) based on the number of tampered vehicles found and any previous violations, with a maximum penalty of $500 per vehicle. All case settlements are processed by MSES staff, however delinquent cases are

referred to ARB Legal for small claims filing, with the original inspector presenting the case to the court.

Although MSES continues to spot check all dealerships and fleets to help ensure continuing compliance, the intensive inspection efforts toward the problem dealers are resulting in a very high rate of vehicle repair -- a primary air quality goal.

Over the last fiscal year, the enforcement of off-road and non-road cases has steadily increased. The MSES staff has investigated and developed enforcement cases for violations involving lawn mower and utility engines, off-road motorcycles, and large diesel (175+ bhp) portable generators. With the ARB's regulatory authority expanding to include more off-road categories, such as watercraft engines and large spark ignition engines, these enforcement efforts will continue to expand to ensure the compliance of these new categories.

FY	Number of Cases			Number of Vehicles		
	Illegal	Anti-Tampering	**Total**	Illegal	Anti-Tampering	**Total**
1998/ 1999	73	24	**97**	114	80	**194**

Fiscal Year 98/99 Enforcement Actions and Settlements:

Manufacturer/ Company: (Confidential)
Violation: Sold (12) new non-CA certified trucks
Settlement: Currently being negotiated

Manufacturer/ Company: Volvo Cars of North Amercia (VCNA)
Violation: Sold (26) new non-CA-certified vehicles
Settlement: $113,000 settlement pending; additionally, VCNA repurchased each of those 26 vehicles and removed them from California; those vehicles were replaced with CA-certified cars

Manufacturer/ Company: (Confidential)
Violation: Sold (10) generators with new non-CA certified engines
Settlement: Currently being negotiated

Manufacturer/ Company:	(Confidential)
Violation:	Sold at least (5) and titled (81) new grey-market Mexican cars in CA
Settlement:	Case is being referred to the CA Attorney General

Manufacturer/ Company:	(Confidential)
Violation:	Multiple emission label violations
Settlement:	Implementing corrective action, and a settlement is pending

Manufacturer/ Company:	(Confidential)
Violation:	Illegal intra-state rental of (200) non-CA certified vehicles
Settlement:	Currently being negotiated

Manufacturer/ Company:	(Confidential)
Violation:	Illegal sales of motorcycles that do not meet California emission standards
Settlement:	Currently under investigation

Mobile Source Control Division
Engineering Studies Branch

Key Personnel

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Advanced Engineering Section

Ensuring Clean Vehicles through On-Board Diagnostics II...

Program Overview

The Advanced Engineering Section, under the ARB's Mobile Source Control Division, developed the regulations for California's On-Board Diagnostics II (OBD II) system requirements. The OBD II systems have been incorporated into the computers of new cars and trucks since 1996 to monitor emissions control components and systems that will affect emissions if they malfunction. The OBD II systems monitor virtually every component that can affect the emissions performance of the vehicle. If a problem is detected, the OBD II system illuminates the "Check Engine" or other warning lamp to alert the driver of a possible emissions control malfunction. The ODB II system also stores important information about the detected malfunction so that a repair technician can accurately identify and fix the problem.

The Advanced Engineering Section staff has worked closely with motor vehicle manufacturers during the implementation of OBD II monitoring systems. The transition from regulations to fully functional and reliable mass- produced OBD II systems has been successful in large part due to the engineering expertise and manufacturer support provided by the ARB's Advanced Engineering Section.

Now that OBD II systems are a part of new cars and trucks, the section is focusing their expertise on field testing each manufacturer's OBD II systems. The section operates a field test program to determine if each manufacturer's OBD II system performs as it should. (See chart at the end of this section for a list of the vehicles that have been included in the field test program during fiscal year 98/99.)

The field test program has discovered problems with several manufacturers' OBD II systems. If the problems are unintentional, staff will work closely with the manufacturer to resolve the issues. However, several enforcement actions have been initiated due to intentional efforts by manufacturers to defeat or avoid one or more of the OBD II monitoring functions. In addition to the cases listed below, several other cases are pending. This program will continue as a real world audit of manufacturers' production vehicle OBD II systems.

The Advanced Engineering Section has also begun emissions testing vehicles that have illuminated the "Check Engine" light during in-use operation. The purpose of this testing is to verify that the OBDII system is identifying emission-related in-use malfunctions correctly, and before emission levels exceed the applicable standards by more than the design thresholds. Various rental agencies provide the ARB with vehicles that have been returned by customers with the "Check Engine" light on, in exchange for repairing the source of the malfunction. The results of these tests will be used to evaluate the effectiveness of OBDII as an I/M tool as required by the Federal Advisory Committee.

1998/99 Enforcement Actions and Settlements:

Manufacturer:	Honda
Violation:	OBD II system deficiencies affecting 1995-1997 OBD II equipped vehicles
Settlement:	ARB Legal settlement includes: $6,000,000 fine - divided into $3.5 million in supplemental environmental projects and $2.5 million to Air Pollution Control Fund
Status:	Final

Manufacturer:	Saab
Violation:	1998 OBD II system deficiencies
Settlement:	$9,925 to the Air Pollution Control Fund
Status:	Final

Manufacturer:	Mazda
Violation:	1998 OBD II system deficiencies
Settlement:	$70,950 to the Air Pollution Control Fund
Status:	Final

1998/99 Enforcement Actions and Settlements:
(Continued)

Manufacturer: Jaguar
Violation: 1995-1997 OBD II system deficiencies
Settlement: $30,050 to the Air Pollution Control Fund
Status: Final

Manufacturer: (Confidential)
Violation: 1998-1999 OBD II system deficiencies
Settlement: Under negotiation
Status: Pending

Manufacturer: (Confidential)
Violation: 1997-1998 OBD II system deficiencies
Settlement: Under negotiation
Status: Pending

Manufacturer: (Confidential)
Violation: 1995-1997 OBD II system deficiencies
Settlement: Under negotiation
Status: Pending

Manufacturer: (Confidential)
Violation: 1995-1997 OBD II system deficiencies
Settlement: Under negotiation
Status: Pending

Manufacturer: (Confidential)
Violation: 1996-1998 OBD II system deficiencies
Settlement: Ordered recall and fines
Status: Pending outcome of ALJ litigation and Board recommendation

Manufacturer: (Confidential)
Violation: 1995-1997 OBD II system deficiencies
Settlement: Under negotiation
Status: Open

Manufacturer: (Confidential)
Violation: 1995-1998 OBD II system deficiencies
Settlement: Under negotiation
Status: Open

OBD II Field Test Vehicles

Fiscal Year 98/99

(Note: The manufacturers and ARB employees have provided some of these vehicles, however most are rental vehicles to ensure non-biased testing.)

YEAR	MAKE	MODEL	COLOR	LICENSE	PROJECT	VEH NO.	AGENCY	IN	OUT	LAST TEST	MILE-AGE IN	MILE-AGE OUT
1998	DODGE	INTREPID 4DR.	WHITE	4AHU240	2R9619	42	ENTER-PRISE	9/9/98	11/10/98	11/4/98	16767	20046
1998	MITS.	GALANTES 4DR.	TAN MET.	3WGP086	2R9619	43	ENTER-PRISE	9/16/98	8/6/99	7/21/99	17244	33419
1998	DODGE	P/U RAM 1500 SLT	WHITE	5S52025	2R9619	44	ENTER-PRISE	9/30/98	7/29/99	7/28/99	16032	25018
1998	DODGE	P/U RAM 1500 SLT	RED	5N88002	2R9619	45	ENTER-PRISE	10/27/98	10/28/98	10/27/98	16150	16153
1999	JEEP	CHER-OKEE 4X4	GOLD	4BXA996	2R9619	46	ENTER-PRISE	11/13/98	2/3/99	2/2/99	2894	6340
1998	JEEP	CHER-OKEE 4X4	WHITE	4AGB312	2R9619	47	ENTER-PRISE	11/17/98	2/3/99	2/2/99	14942	18504
1998	FORD	MUS-TANG CONV.	WHITE	4BCE406	2R9619	48	ENTER-PRISE	11/17/98	2/9/99	2/8/99	17587	22320
1998	FORD	WINDSTAR GL	SILVER	3XKF365	2R9619	49	ENTER-PRISE	11/18/98	2/10/99	2/9/99	25485	32403
1998	FORD	EXPLORER XLT	GREEN	4AEF200	2R9619	50	ENTER-PRISE	11/20/98	2/9/99	2/8/99	16581	22672
1998	FORD	EXPEDITION 4X4	SILVER	3XPU151	2R9619	51	ENTER-PRISE	11/25/98	2/9/99	2/8/99	27064	32114
1998	MER-CURY	GRAND MARQUIS	SILVER	4BIN177	2R9619	53	ENTER-PRISE	3/10/99			13216	
1998	NIS-SAN	ALTIMA 4DR.	GOLD	42M882 MI	2R9619	54	NISSAN MFG.	3/22/99			11904	
1999	MER-CEDES	SL500 CONV.	SILVER	DIST 5506	2R9619	55	M. BENZ MFG.	5/6/99	5/27/99	5/26/99	4485	5683
2000	SUB-ARU	S/W OUT-BACK	WHITE	DIST. 18593	2R9619	56	SUBARU MFG.	6/21/99	8/6/99	7/21/99	771	2469
1998	PON-TIAC	SUNFIRE 4DR.	RED	3VHX924	2R9803	8	ENTER-PRISE	6/5/98	6/9/98	NOT TESTED	10368	10371
1998	HYUN-DAI	ACCENT GL 4DR.	RED	3XQJ868	2R9803	8	ENTER-PRISE	8/19/98	9/3/98	9/2/98	16499	16763
1997	FORD	ASPIRE 3DR.	GREEN	3VQU340	2R9803	9	ENTER-PRISE	9/8/98	10/5/98	10/2/98	20694	21133
1998	HON-DA	CIVIC HX 2DR.	RED	4BXP704	2R9803	10	ENTER-PRISE	10/6/98	10/6/98	10/15/98	557	719
1997	HON-DA	ACCORD LX 4DR.	WHITE	3WDR693	2R9803	11	ENTER-PRISE	10/20/98	10/22/98	10/21/98	23190	23311

1997	DODGE	INTREPID 4DR.	RED MET.	3VFT383	2R9803	12	ENTER-PRISE	10/22/98	11/13/98	11/12/98	23390	24595
1998	FORD	CONTOUR GL 4DR.	WHITE	3WEM241	2R9803	13	ENTER-PRISE	11/3/98	111/6/98	11/4/98	29772	29800
1997	DODGE	INTREPID 4DR.	RED	3UQU263	2R9803	14	ENTER-PRISE	11/6/98	11/24/98	11/24/98	287119	28826
1996	TOY-OTA	CORO-LLA 4DR.	BLACK	3RYV833	2R9803	15	THRIFTY RSMD.	11/12/98	11/24/98	11/20/98	25862	25972
1998	GMC	JIMMY SLS 4X4	WHITE	4BJE317	2R9803	16	ENTER-PRISE	11/12/98	11/24/98	11/24/98	3905	3975
1999	CHEVY	LUMINA 4DR.	SILVER	4BGS607	2R9803	17	ENTER-PRISE	12/17/98	12/23/98	12/23/98	671	738
1998	MITSU-BISHI	ECLIPSE GS CONV	RED	3XPL237	2R9803	18	ENTER-PRISE	1/5/98	2/18/99	2/17/99	11539	?
1998	CHEVY	MALIBU 4DR.	BROWN	4AGC995	2R9803	19	ENTER-PRISE	2/9/99	2/11/99	2/10/99	12774	12801
1999	DODGE	INTREPID 4DR.	GOLD	4BJE354	2R9803	20	ENTER-PRISE	3/19/99	4/13/99	4/12/99	14760	14847
1998	GMC	JIMMY SLS 4X4	GOLD	4BJE308	2R9803	21	ENTER-PRISE	4/13/99	4/21/99	4/20/99	9218	9281
1999	BUICK	REGAL LS 4DR.	SILVER	4BJE780	2R9803	22	ENTER-PRISE	4/29/99	5/18/99	5/17/99	11824	11974
1998	VOLKS	BEETLE	SILVER	DIST. 11976	2R9804	1	VOLKS MFG.	3/9/98	5/9/98	3/24/98	1522	4549
1998	VOLVO	S/W V90	PLUM	DEW 974	2R9804	2	VOLVO MFG.	6/5/98	11/19/98	9/15/98	21956	23457
1999	POR-SCHE	911 CAR-RERA	BLACK	16403 DIST.	2R9804	3	PORSCHE MFG.	10/20/98	11/3/98	10/30/98	10351	11286
1999	MITS.	DIA-MANTE LS 4DR.	PURPLE	47M 191	2R9804	4	MITS. MFG.	11/13/98			10241	
1998	MER-CURY	GRAND MARQUIS	SILVER	4BIN177	2R9902	1	ENTER-PRISE	4/6/99			20943	
1998	NIS-SAN	ALTIMA GXE 4DR.	WHITE	3XAZ564	2R9902	2	ENTER-PRISE	4/14/99			28736	
1996	TOY-OTA	CAMRY (4CYL)			1Q9801	A	EM-PLOYEE					
1996	TOY-OTA	RAV4			1Q9801	B	EM-PLOYEE R					
1997	TOY-OTA	4-RUNNER (6CYL)			1Q9801	C	EM-PLOYEE					
1997	TOY-OTA	4-RUNNER (4CYL)			1Q9801	D	EM-PLOYEE					
1997	TOY-OTA	AVALON			1Q9801	E	EM-PLOYEE					
1997	TOY-OTA	ES300			1Q9801	F	EM-PLOYEE					
1997	TOY-OTA	CAMRY (4CYL)			1Q9801	G	EMPLOY EE					

1998	TOY-OTA	COR-OLLA			1Q9801	H	EMPLOY EE					
1998	TOY-OTA	COR-OLLA			1Q9801	I	EMPLOY-EE					
1998	TOY-OTA	COR-OLLA			1Q9801	J	EMPLOY-EE					
1998	NIS-SAN	MAXIMA			1Q9801	K	CEE					
1998	DODGE	INTREPID			1Q9801	L	CEE					
1998	CHEVY	BLAZER			1Q9801	M	CEE					
1998	JEEP	GRAND CHER-OKEE			1Q9801	N	CEE					
1998	VOLVO	S70			1Q9801	O	CEE					