SUMMARY OF BOARD ITEM

ITEM NO. 01-4-2: PUBLIC HEARING TO CONSIDER AN UPDATE ON ARB'S ENFORCEMENT PROGRAM.

STAFF RECOMMENDATION: Informational item.

DISCUSSION: The Air Resources Board maintains a rigorous regulatory program designed for California to meet the air quality standards necessary to provide healthful air for all residents of the state. In order to realize the full benefits of these efforts, the regulations must be effectively implemented.

Effective implementation requires a commitment to compliance assistance and training; and ARB has an extensive compliance assistance and training programs for this purpose. But for those individuals and businesses who – despite these programs – through inadvertence or intention violate air quality laws, rules and regulations, ARB maintains a strong enforcement presence in the regulated community. This presence consists of routine inspections and audits as well as more complex or difficult investigations to identify and correct the noncompliance. Our enforcement activities also include the assessment of administrative, civil and criminal penalties as appropriate to deter violations. Most enforcement cases are resolved through mutual settlements without litigation.

A strong enforcement presence ensures that the maximum air quality benefits of these regulations are realized. It provides a strong incentive to regulated entities to use the compliance assistance tools made available to assist the regulated community; and it ensures that those who comply with the law do not suffer a competitive disadvantage.

The enforcement program focuses on the statutes and rules and regulations for sources directly regulated by the ARB: mobile sources, including emissions standards and related requirements for on- and off-road motor vehicles and nonroad engines, motor vehicle fuels and fu el distribution (e.g., cargo

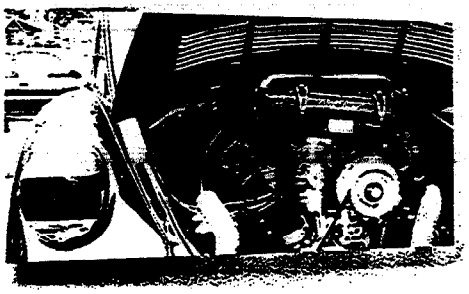
tanks and vapor recovery), and stationary sources such as emissions limits for consumer products and asbestos removal.

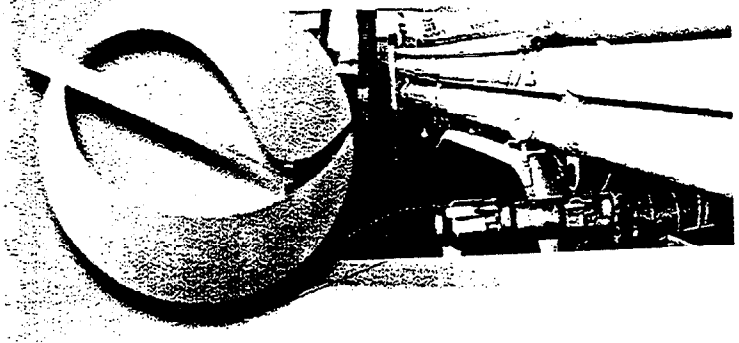
ARB also works closely with the local air pollution control and air quality management districts to ensure proper enforcement of state and local statutes, rules and regulations applicable to stationary sources of air pollution subject to district control.

The ARB has recently directed a considerable portion of its enforcement resources to correct violations in mixed industrial/residential areas (also known as "environmental justice" areas).

California Environmental Protection Agency

AIR RESOURCES BOARD





Compliance & Enforcement Activities

Fiscal Year 1999-2000

California Air Resources Board

Annual Report on Compliance and Enforcement Activities

Fiscal Year 1999-2000

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California Air Resources Board

Annual Report on Compliance and Enforcement Activities

Fiscal Year 1999-2000

Introduction

If cleaning up the air were easy, we'd be there by now. But California is a place whose diverse geography, millions of people, and billions of sources (both mobile and industrial) direct the path to clean air through an intricate maze of environmental, health, social and economic concerns. And that's just to get the laws passed.

Once the regulations are in place, the story continues as we put them into practice. The careful handling and public input necessary to adopt a regulation sets the standard for administering the programs that follow.

The philosophy at the Air Resources Board (ARB, Board) is that the regulated community is willing to comply with our programs. As such, the bulk of our compliance resources is dedicated to outreach, training and other ways of assisting those affected by our programs.

But in the less-than-perfect world, there are those who wittingly or ingenuously, circumvent the law. Not only does this slow down the State's progress toward achieving clean air, but it also, in effect, penalizes those who expend their resources to comply. Therefore, it is necessary for the Board to maintain a watchful eye and an active enforcement program.

Clean air programs and their enforcement fall under the purview of the ARB and thirty-five local air quality districts throughout California. The ARB adopts regulations affecting mobile sources and fuels, and therefore enforces those regulations. The local districts are responsible for non-mobile sources. The ARB assists local districts by performing inspections on these sources and uncovering violations. If a district declines to resolve a violation or requires assistance, the ARB may pursue it and seek

resolution. The ARB's Office of Legal Affairs is involved in the settlement negotiations, litigation or criminal prosecution of all cases undertaken by the Board.

The report that follows describes the compliance and enforcement activities the ARB has undertaken during the past fiscal year (FY 1999-2000 i.e., July 1, 1999 through June 30, 2000) to make sure that our clean air programs are upheld. The report consists of two parts. The first reviews the activities of the Board's Compliance Division. The second examines the Board's approach to assuring compliance with its mobile source regulations, adopted and enforced by the Mobile Source Control Division and Mobile Source Operations Division.

Questions or comments regarding this report may be directed to the appropriate section manager or branch chief, or to Mr. Rod Summerfield, Chief, Mobile Source Operations Division at (626) 450-6152 or Mr. Jim Morgester, Chief, Compliance Division, at (916) 322-6022.

Chapter I

Compliance Division

Air Pollution Compliance Professionals, Protecting the Public Health and Welfare...

Executive Summary

The Compliance Division is the enforcement arm of the ARB. The Compliance Division employs 91 of the ARB's more than 1000 employees. The objective of CD's enforcement program is straightforward -- to reduce excess emissions by enforcing air pollution law, 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, 11,300 service stations dispensing 14 billion gallons of gasoline, 4,000 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 Compliance Division's staff works with some 300 additional compliance personnel from the state's 35 air quality districts, with personnel from other state and local government agencies, and with staff from regulated industries.

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

- Enforce the law firmly and fairly;
- Apply standards consistently;
- Apply penalties commensurate with the nature of the violation;
- Encourage and assist voluntary compliance with education compliance assistance materials;

- Provide a level playing field by increasing the cost of non-compliance;
- Assist local air quality 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) air quality 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 and experience have shown that this three-legged approach improves compliance and is more cost-effective than other approaches, especially self-inspection and certification by sources. Research by the United States Environmental Protection Agency (US EPA) has shown that sources that are inspected more often have a higher compliance rate. In fact, experience in California with vapor recovery at gasoline stations has shown that a 95% 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% and Bay Area AQMD reported 52% compliance rates when relying on self-inspection. Promulgation of new environmental legislation can at times improve air quality and compliance rates. Usually, diligent enforcement of existing rules is more effective than developing additional control measures. Because of these, and other facts, the Compliance 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 recognized by the U.S. General Accounting Office (GAO). In a June 2000 report on enforcement inconsistencies among US EPA regions, the GAO wrote,

"The number one indicator of a good enforcement program is inspection frequency. Inspections are the primary means of detecting violations and evaluating overall facility compliance. ... Penalties play a key role in environmental enforcement by deterring potential violators and ensuring that members of the regulated community cannot gain a competitive advantage by violating environmental regulations."

The Compliance Division's Compliance Assistance and Training programs 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.

In important new developments of FY 1999-2000, the Compliance Division has been developing a program for multi-media inspector training and certification, in cooperation with the California Environmental Protection Agency (Cal/EPA.) The program's staff has experience with the programs of several Cal/EPA agencies. The multi-media inspector training and certification program has begun development of courses, which will be offered for the first time in FY 2000-2001. This program responds to both regulatory need for cooperation and coordination between regulators and to Cal/EPA's statutory responsibility in this area.

During FY 1999-2000, Compliance Division has also been involved in Cal/EPA's responses to statutory requirements to coordinate enforcement programs of its various boards, departments and offices, to ensure effectiveness, consistency and cooperation within Cal/EPA. Compliance Division staff prepared an MOU under which the Strategic Environmental Investigations group will provide investigative services for Cal/EPA's coordination efforts. Compliance Division staff has already conducted coordinated inspections of chrome-plating operations in several air districts, working in cooperation with inspectors from other Cal/EPA agencies, local public health officials and local air districts. Like the multi-media inspector certification program, these efforts respond to both regulatory need and to statutory mandates. The

multi-media inspections of chrome plating operations uncovered widespread violations of regulatory requirements in many environmental media.

In FY 1999-2000, the Compliance Division and the California District Attorneys Association (CDAA) have formed an effective partnership that has greatly enhanced enforcement of environmental law in California, especially air pollution law. The Compliance Division has been instrumental in assisting CDAA to establish and maintain its environmental circuit prosecutor program, and has developed cases that CDAA's circuit prosecutors have successfully prosecuted. Without the Compliance Division 's Strategic Environmental Investigations unit, these cases might have gone undetected for lack of investigative resources at local agencies. Without the CDAA's circuit prosecutors, the cases might have gone unprosecuted for lack of resources in district attorneys' offices in the counties where the violations occurred. Working together, Compliance Division investigators and CDAA circuit prosecutors have filled this gap in the protection of Californians from violations of environmental law. Compliance Division staff has also assisted the CDAA to find and secure funds for the continuation of the circuit prosecutors program. The people of California have benefited greatly from this partnership and the new effectiveness it has brought to prosecution of environmental crimes. The law-abiding business community has benefited by removal of the business advantage enjoyed by unscrupulous businesses evading the requirements of environmental law.

Also noteworthy are the Compliance Division's accomplishments in field inspections and audits, source testing, vapor recovery, training (including the justly acclaimed enforcement symposium), compliance assistance documents, and data management.

None of this could be accomplished without the Compliance Division's staff. 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 Compliance 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 complaint handling to field inspection, and

emergency response, from surveillance to testing and certification, and 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.

Fiscal year 1999-2000 saw five of the Compliance Division's widely respected and well liked employees retire or announce their retirement, with dates during or soon after the close of the fiscal year: Henry Jordan, Stephanie Trenck, David Tribble, Tom Wilson and Harlan Weishahn all left after long and faithful state service. Additionally, Gary Hunter, for several years the head of the Compliance Assistance Program, returned to the Bureau of Automotive Repairs as a Division Chief. All these employees will be missed.

Chapter I of this report summarizes the division's accomplishments for FY 1999-2000. Questions and comments about this chapter should be addressed to the appropriate branch or section managers or to the Division Chief, Mr. James J. Morgester at (916) 322-6022.

Surveillance Branch

Contacts

	Telephone
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 – (vacant)	(916) 327-1525

Certification and Investigation Section

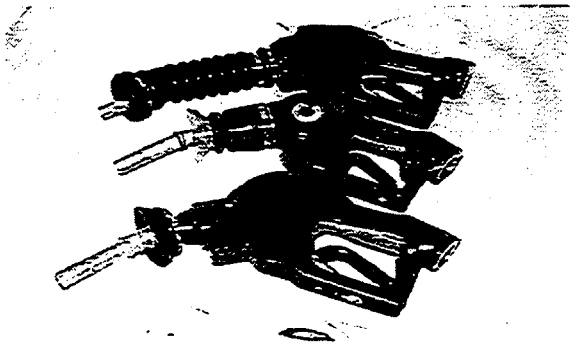
Leading the Nation in Certification...

Introduction

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 and Investigation

Obtaining ARB Approval



The 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.

Vapor Recovery Data, FY 1999-2000

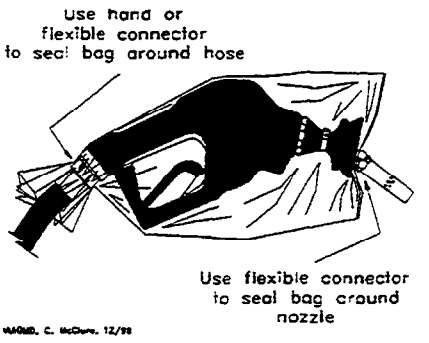
4 Executive Orders issued

27 Additional components submitted for certification

19 Component approvals granted

Improving In-Service Performance

Inspection Tools



The Certification and Investigation Section and local air district staff have cooperated to develop several simple inspection techniques to identify equipment defects. ARB counsel, working cooperatively with district legal staff, recently provided a legal opinion that allows use of these tools for enforcement purposes. These tests include:

- The Ring Test
- The Bag Test for Multi-Nozzle Vacuum Assist Systems (Bay Area AQMD GDF-01)
- The Bag Test for Single-Nozzle Vacuum Assist Systems (Bay Area AQMD GDF-02)
- The Squeeze Bulb Test (Bay Area AQMD GDF-03)

An Advisory has been drafted recommending that the air district inspectors and gasoline station operators increase the various inspection tools for enforcement purposes and increase the frequency of testing for vapor recovery equipment.

Manufacturers to Supply Districts with Maintenance Information

At the districts request, the Certification and Investigation Section is facilitating the distribution of vapor recovery systems installation, operation and maintenance manuals to all service stations to help the

operator keep their systems in compliance. The section made this request of 35 manufacturers. Twenty-five of the manufacturers have responded with manuals.

Re-Evaluation of Certified Equipment

Marconi Commerce Systems Inc.,
(formerly Gilbarco, VaporVac Vacuum Assist Vapor Recovery System)

It was brought to the attention of the Certification and Investigation Section by the local air districts that the increasing population of ORVR or onboard refueling vapor recovery vehicles in the general vehicle population was resulting in excess emissions in the Marconi Commerce Systems Inc., formerly Gilbarco, VaporVac vacuum assist vapor recovery systems. With an A/L ratio of 1.10 +/- 0.10, the system was generating high underground storage tank pressures which in turn, caused excess emissions.

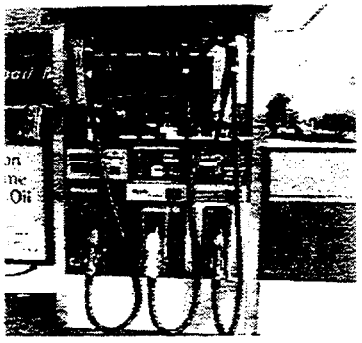
To address these issues, the Marconi Commerce Systems Inc. VaporVac system was tested with three different vacuum-assist nozzles with "min-boots" and internal vapor check valves. Along with these new nozzles, the associated A/L ratios were lowered from 1.10 +/- 0.10 to 1.00 +/- 0.10. An engineering evaluation of these modifications including abbreviated efficiency tests showed that the system was capable of achieving 95% efficiency in the capturing the vapor generated during vehicle refueling.

Subsequently, the Gilbarco VaporVac Executive Order, G-70-150, has been modified to include the Catlow ICVN, the EMCO Wheaton 4505, the Husky 6250 and OPW 12V vacuum assist vapor recovery nozzles and the reduced A/L ratio. In existing stations, the mixing of non-booted and mini-booted nozzles will be allowed as long as every nozzle associated with a given vapor pump is one type or the other and the A/L is adjusted accordingly. All new installations shall be required to use nozzles with mini-boots and the reduced A/L. The requirement for annual A/L testing will also be included.

Balance Systems and Liquid Removal Devices

Field testing data for balance systems supports a liquid removal problem in the balance system vapor hoses with certain hose hanging configurations. The issue has been raised that the location of the liquid pickup is not coinciding with the low point of hose during fueling. The

Certification Section is in the process of evaluating where the low point is normally positioned during fueling.



The Certification and Investigation Section sent letters to the manufacturers of hoses that have liquid removal devices in the hose indicating that ARB is considering the de-certification of some balance hose arrangements that include a drape, which allows liquid to accumulate in the vapor path, and require liquid re-moval devices. The Certification and Investigation Section has met with these manufacturers to discuss this issue. One of the manufacturers has installed a set of new hoses with new liquid removal devices at a test site in Placer County.

Phase I Product and Vapor Adapters

Certifications issued after 1994 have been conditioned so that when two "anti-rotational" design type Phase I product and vapor adapters are certified and available, those currently installed standard adapters may only be used for a period not to exceed four years.

"Anti-rotational" refers to the adapter not being able to be over-tightened or loosened from the Phase I riser. This has been accomplished in two ways: either with an adapter with a base that locks onto the riser and has a rotatable swivel adapter on top (swivel-type Phase I adapter) or with an adapter that locks itself to the riser and cannot be rotated off or over-tightened.

Two different manufacturers have certified "anti-rotational" type product adapters. Effective December 27, 1999, a moratorium is in place, which prevents the installation of new standard Phase I product adapters.

This year two different manufacturers have certified an "anti-rotational" type vapor adapter. Effective May 1, 2000, a moratorium is in place, which prevents the installation of new standard Phase, I vapor adapters. An advisory is being prepared pertaining to the moratorium on standard Phase I product and vapor adapters.

Currently, there are two more manufacturers with swivel-type Phase I adapters on test at test sites in the Sacramento area and the final certification paperwork for a locking clamp "anti-rotational" device is in progress.

Spill Buckets

CAPCOA has expressed concerns regarding the removal of liquid from spill containment boxes with spring actuated drain valves. In particular, these spring-actuated valves will not allow liquid to drain into a storage tank that maintains a positive pressure due to the operation of the vapor recovery system. It has been reported that operators are unable to drain product from the spill containment box without opening the Phase I vapor dry break to relieve pressure in the underground tank. This is unacceptable due to the excess emissions and level of exposure that results.

Letters were sent to the seven manufactures of this type of equipment requesting evidence or possible alternatives that could be provided proving that these drain valves allow complete evacuation of liquid into a tank under positive pressure without having to open the dry break. All of the manufacturers agreed that the problem exists and have redesigned the spill buckets to drain directly into the drop tube rather than around it, or are recommending using a hand pump to evacuate the liquid.

Enforcement Actions

The Certification and Investigation Section has issued four Reports of Violation (ROVs) for not performing to certification specifications and five ROVs for the installation of noncertified equipment.

ARB/CAPCOA Parts House Testing

At the request of the CAPCOA Vapor Recovery Committee, ARB's Compliance Division developed a program to test pressure vacuum (PV) valves at distributor warehouses. From December 8, 1999 through March 2, 2000 the Certification and Investigation Section in conjunction with the appropriate air quality district visited 24 distributors of PV valves in the following areas: Bay Area Air Quality Management District (AQMD), Sacramento Metropolitan AQMD, San Diego County Air Pollution Control District (APCD), San Joaquin Valley Unified APCD, and South Coast AQMD. Two hundred sixty three (263) new PV valves were tested off the shelf. Of the 263 tested,

there were 67 failures. All testing was performed as described by TP-201.2B, Appendix 1.

Four manufacturers with valves not performing to certification specifications have received a ROV. The results for each manufacturer are listed in the table below.

PV Test Results by Manufacturer

Manufacturer	Number tested	Number failed	Percent failed
EBW	10	10	100
Hazlett	9	5	56
Husky	21	5	24
Morrison	83	38	46
OPW	140	9	6

The four manufacturers receiving ROVs have had office conferences with the ARB. Representatives of EBW and Morrison Brothers have acknowledged major problems with their PV valves and initiated recalls at distributor warehouses. They have also stated that if any of these PV valves are found in use, they will be replaced without charge to the customer. Husky has provided sufficient evidence that their valves that failed were able to pass with a minor adjustment and all valves offered for sale after April 1999 should have been readjusted. After meeting with Hazlett, we determined that the most likely reason for failure is probably due to minor adjustments. After evaluating the failed Hazlett valves, they were found to be within specifications. OPW received a letter describing the test results and our concerns with their valve performance. EBW's and Morrison Brothers' ROVs have been sent to ARB Legal for disposition.

An advisory titled ***Pressure Vent Valve Recalls*** was issued May 15, 2000. The problems with EBW's and Morrison Brothers' PV valves were described and actions available to consumers were delineated. Copies were sent to industry and are available on the Internet at http://www.arb.ca.gov/vapor/.

Analysis, with mounting type taken into consideration, has been performed. With respect to the certification requirements no significant differences were found for threaded vs slip-on valves as a whole.

This information has been shared with the districts. A presentation of the testing process, final results, subsequent actions, and future

inspection/testing activities was given to the CAPCOA Vapor Recovery Committee on May 18, 2000.

Flexible Pipe Violations

The manufacturer, distributor, and installation contractor of a flexible pipe used for vapor recovery lines were each issued a report of violation (ROV) for selling or installing uncertified vapor recovery components. The service station owner acting as the station installation contractor also received an ROV for installing uncertified vapor recovery components. No vapor recovery system has ever been ARB certified with flexible piping. The problem was discovered when the station failed a blockage test.

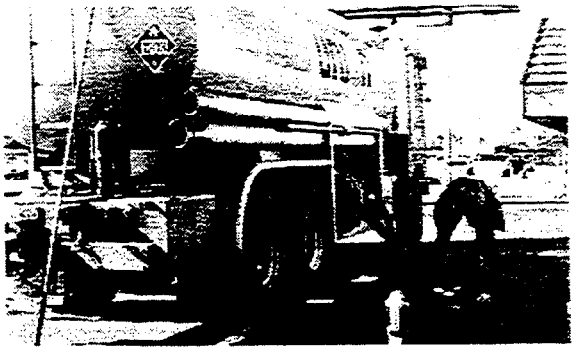
Each of the parties was offered the chance to schedule an office conference to present their side of the case and discuss this situation. The manufacturer and distributor did attend a meeting with Compliance Division but the installation contractor and service station owner declined this opportunity. Each of these four cases is being refereed to ARB Legal for disposition.

Another manufacturer in a similar case was issued an ROV when flexible pipe failed a blockage test. This particular flexible piping is also not certified to be used with vapor recovery systems. This case has not progressed to the office conference.

In response to the discovery of these flexible vapor recovery piping systems, an advisory titled ***Air Resources Board Vent Piping for Vapor Recovery Systems*** was issued May 1, 2000. The advisory states flexible piping is not currently certified by ARB and should not be installed at any gasoline station for the return of vapor from the dispenser to the storage tank. Copies were sent to industry and are available on the Internet at http://www.arb.ca.gov/vapor/.

Vapor Recovery Outreach

The section worked with the Training Section to add three new training programs to our list of classes this year to address the needs of the motor fuel delivery industry. Course 210, developed to reduce

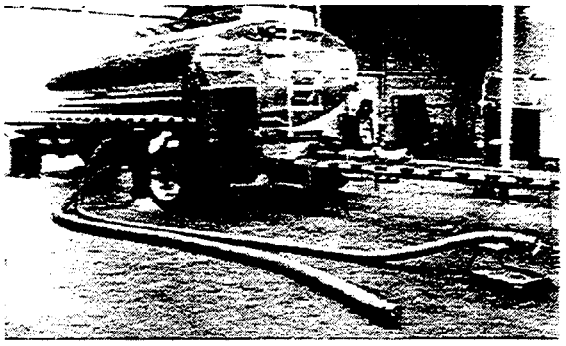


cargo tank emissions due to non-compliance, was presented three times to a total audience of forty-seven. Most of these were truck drivers representing eight wholesalers in the southern state. Others in attendance included their managers and district enforcement personnel. Each presentation began with a classroom explanation of why we pursue vapor recovery emissions. Each ends with the conduct of the leak decay test used by enforcement personnel. Our purpose is to demystify enforcement operations and encourage operators to understand and even conduct the enforcement checks in-house without risk of penalties. We believe we have met with some success in developing industry understanding of our enforcement program and we look forward to future presentations to wholesalers.

On the retail side, new, half-day classes were developed for owners and operators of balance stations and bootless assist systems. There is considerable overlap in the opening portion of courses 265 and 266. We talk briefly about the need for ozone control and how that relates to retail gasoline dispensing facilities. The class materials diverge in the second half as we enter the practical considerations of what the owner or operator can do to reduce emissions and avoid penalties. While considerable time is spent on the district inspector's concerns and inspection methods, the emphasis is on preemptive inspection. Attendees learn techniques for self-inspection and troubleshooting. For instance, balance operators are taught how to raise and extend hanging hardware to drain a liquid blockage. Sometimes these techniques are taught nowhere else. Assist operators are taught how to find a leaky nozzle or a faulty check valve by placing a nozzle in a plastic bag.

During FY 1999-2000, course 265 for balance and course 266 for assist operators were each presented twice. Course 265 is offered in the morning and 266 in the afternoon. Seventy students have seen at least one of these classes. At least three of these students were training officers for major oil companies who will use the course materials for existing company programs. Given that there are more than 11,000 gas stations in California, we look forward to taking the clean air message to many more of them in the coming years.

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 Compliance 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 494 inspections at bulk terminals and loading racks for compliance with vapor recovery standards. In FY 1999-2000, Compliance Division staff tested 317 cargo tanks, issuing 55 Notices of Violation for a compliance rate of 83%. This compliance rate of 83% is an increase from the 77% the prior year. All cases were settled by mutual settlement agreement.

Amnesty Program

For the period from September 1999 to April 2000 an amnesty program was conducted for certain cargo tank vapor recovery leak rate violations. This program was conducted on behalf of the California Trucking Association, California Independent Oil Marketers Association and reflects industry concerns regarding alleged faulty cargo tank vapor recovery equipment.

Whenever a Notice of Violation was issued the violator was given the opportunity to send in the parts of the cargo tank vapor recovery system alleged to be in violation. By doing this the violators would not be subject to the penalty. During this period, there were 29 violations that received no further action, as the violators sent in the faulty parts. All parts were evaluated and found unremarkable and no manufacturing defects were found. The part failures were due to normal wear and routine maintenance was needed.

Enforcement Statistics

In FY 1999-2000 the Compliance Division was responsible for 4613 cargo tank vapor recovery certifications. The staff conducted 494 cargo tank inspections and 317 year-round leak rate tests. There were 55 Notices of Violation issued with a total of $12,000 dollars in penalties collected.

Abrasive Blasting Certification

Certification Requirements

The Health and Safety Code (H&SC) authorizes the ARB to adopt air pollution standards for sandblasting operations under Title 17 of the California Code of Regulations. The Abrasive Blasting Certification program tests products that vendors desire to have certified for use in dry, open outdoor blasting. In order to be certified the product must pass testing designed to demonstrate that the product in question has a large particle size before and after blasting. Products are tested, and certified, throughout the year, but certifications are good for no more than two years and all certifications expire on August 31. Vendors submit material for certification renewal biannually in the spring.

To pass the test, the abrasive must contain not more than 1% by weight of material passing a #70 US standard sieve, or, as an alternative, does not produce visible emissions of more than 20% opacity when blasted in accordance with a specified test method. After blasting, the abrasives must not contain more than 1.8% by weight of material 5 microns or smaller.

Certification Activities

During FY 1999-2000, Executive Order 00-022 was issued certifying 68 products. This spring the section received 79 samples for certification from 43 companies. These products are currently being tested to determine whether they will be certified for use.

Independent Contractors

Independent Contractor Program

The Certification and Investigation Section staff maintains a voluntary approval program for companies that conduct compliance source testing

within the state. Staff checks the personnel, equipment, and testing procedures of the companies to determine if they meet our 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. Staff also investigates complaints lodged about the testing performed by approved contractors.

Demand Remains for the Approval of Independent Contractors

Districts and sources use the list of approved contractors to ensure that their required testing is properly conducted. The staff responds to regular requests from sources, contractors and districts regarding the program and the availability of contractors for testing. Staff has also investigated several companies to ensure that the high level of competence reflected by our approval program is maintained. There are currently over 30 contractors approved for over 350 test methods.

Non-Industrial Wood Waste Burning

Non-Industrial Wood Waste Basics

The H&SC 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 landfills are very difficult to establish 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 these disposal 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 33 approved sites for burning non-industrial woodwaste, in 9 districts throughout the State.

ARB Provides Authorization for Appropriate Burns

ARB must review each request for authorization to burn at a sanitary landfill to ensure that the proposal meets the requirements of the H&SC. 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. Ambient air quality standards must be maintained. If the district board elects to authorize

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 Nonindustrial Woodwaste Burning Sites

District	Burn Site	Conditions and Comments
Calaveras:	Redhill	Burning allowed after 1000 hrs during any month that 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.
Lassen:	Westwood	Burning allowed 12/1 - 5/31
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	Alleghany	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
	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
Siskiyou	Happy Camp	See conditions in Executive Order G-790

District	Burn Site	Conditions and Comments
	McCloud	See G-790
	Tulelake	See G-790
	Yreka	See G-790

Field Enforcement Section

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

Introduction

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 existing 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 statewide inspections of consumer products to enforce administrative requirements and standards for all product categories;
- Conducts red-dyed diesel field inspections and investigations as specified in ARB's contract with the State Board of Equalization.

After violations of the Motor Vehicle Fuels and Consumer Products regulations are documented by inspectors, case development staff evaluates 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 Consumer Products section conducts field inspections 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 to reveal both administrative and volatile

organic compound (VOC) violations. VOC content is determined by using ARB Test Method 310 or formulation records.

The ARB has four consumer products regulations as of February 4, 1998, which are:

- ***Antiperspirants and Deodorants Regulation*** - sets volatile organic compound (VOC) limits for antiperspirant and deodorant products.
- ***Consumer Products Regulation*** - was approved by ARB in three phases and sets VOC limits for 44 categories of consumer products. The most recent amendments to the regulation were approved by the ARB on October 28, 1999, and will become legally effective in October 2000.
- ***Aerosol Coating Products Regulation*** - sets VOC limits for 35 categories of aerosol coating products.
- ***Alternative Control Plan Regulation*** - a voluntary, market-based regulation that provides an alternative way to comply with the VOC limits in the Consumer Products and Aerosol Coating Products Regulations.

The Consumer Products' Hairspray Credit Program Regulation was approved by the ARB on November 13, 1997, and became legally effective on August 24, 1998. In FY 1999-2000, section staff conducted inspections and took samples at 148 locations that sell, distribute or manufacture consumer products subject to air quality regulations. Samples were analyzed for compliance with applicable regulations in all regulated consumer product categories. In all, 313 samples were analyzed for compliance using ARB method 310.

Based on the sampling and analysis results, 13 reports of violation were issued and 9 new enforcement cases were referred to the Office of Legal Affairs for litigation or settlement. Three cases were settled and were five were dropped with no further action.

Consumer Products Settlements		
American Auto Accessories	Air freshener	$550
Soft Sheen	Hair care	$15,500
MEDO Manufacturing	Air freshener	$8,000

Fuels Distributor Certification Program

The motor vehicle fuel distributor program, established by H&SC §43025, requires that all persons who refine, blend, or otherwise produce motor fuel provide to the ARB the location of all records pertaining to the production, purchase and delivery of motor vehicle fuel. These requirements allow the Compliance Division to investigate potential violations of fuel specification requirements.

During FY 1999-2000 the Compliance Division continued to administer the motor vehicle fuels distributor certification program, reviewing applications for certification, and issuing new certificates and renewals to 334 distributors throughout the state.

Motor Fuels Specifications Enforcement

During FY 1999-2000, Compliance Division staff conducted 15 major fuels inspections statewide that included the enforcement of existing diesel regulations and California Reformulated Gasoline (CaRFG) regulations. Parameters enforced by the regulations include:

For gasoline

- Reid vapor pressure;
- Sulfur content;
- Lead content;
- Phosphorus content;
- Manganese content;
- Deposit control additives content;
- Benzene content;
- Oxygen content;
- Total aromatics;
- Olefin content;
- T50 distillation temperature;
- T90 distillation temperature;

For diesel fuel

- Aromatic hydrocarbon content;
- Sulfur content;
- Polynuclear aromatic hydrocarbon content.

Section staff routinely conducts surveillance of potential violators, and also conduct 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, Compliance Division staff also enforces the accurate reporting of companies using alternative compliance options.

Fuels Samples FY 1999-2000

Samples Obtained	2,452
Analyses Performed	22,207

Case Report

After receiving the case, Case-Development staff follows up with further investigation into the cause and severity of the violation. They then document the compliance history of the company, and correspond with the industry and other control agencies to develop the case for referral to the Office of Legal Affairs for settlement or litigation.

During FY 1999-2000, fuels specification cases were resolved as follows:

Fuels Cases FY 1999-2000	
Opening Inventory (7/1/99)	49 Cases
Cases Opened During FY 1999-2000	13 Cases
Cases Settled in Lieu of Litigation	4 Cases
Cases Closed Without Further Action	2
Cash Penalty Portion of Settlements	$ 47,250
Environmental Tradeoffs	$ 0
Total Settlements	$ 47,250

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 with non-taxed diesel fuel. Other agencies were interested in this question as well. From March 1996 to August 1998, the ARB, the IRS, the Federal Highway Administration, and the State Board of Equalization were parties to a contract for the ARB to conduct inspections of diesel fuel.

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 tax revenue from using such fuel for other purposes 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.

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 $180,000 contract with the Board of Equalization, ARB staff inspected 24,454 truck fuel tanks, looking for the presence of red-dyed diesel fuel. Adulterated fuel is of interest to the Board of Equalization for taxation purposes and to the ARB as an indication of possible fuels specification violations. A large number of trucks with red-dyed fuel in their tanks may indicate a fuel-specification violation by some fuel distributor. Of the fuel samples taken, 197 showed the presence of red dye; the Board of Equalization initiated appropriate action based on these findings.

Under the fingerprinting aspect of the contract, ARB inspectors took diesel fuel samples at service stations and refineries. The ARB's fuels laboratory in El Monte analyzed or "fingerprinted" these samples to form a basis for determining if future fuel samples have been adulterated with illegal substances.

Source Test Section

Air Pollution Testing Experts...

Introduction

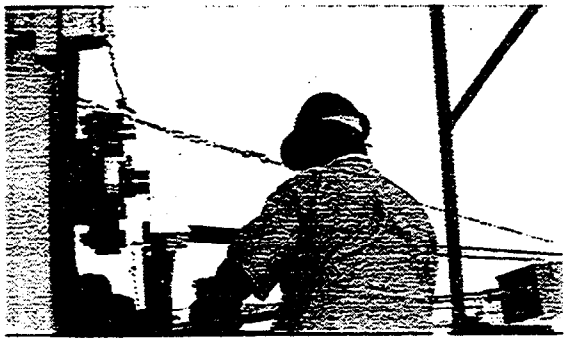
Compliance with environmental regulations and standards is primarily accomplished through a strong enforcement program. The key element for effective enforcement is a highly visible deterrent capability such as the Source Test Section (STS).

The STS assures stationary sources' compliance with air quality requirements 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



During the year, the Source Test Section's resources were often diverted from compliance and certification testing into special enforcement and emissions research investigations, and vapor recovery research activities in support of the ARB's Enhanced Vapor Recovery (EVR) Program. The STS provided significant testing and engineering assistance to the Monitoring and Laboratory Division in its effort to develop and bring to the Board test procedures and certification requirements for the new EVR Program.

In FY 1999-2000, the Source Test Section conducted 77 source tests, giving priority to requests for EVR Program support, vapor recovery system certification and those from local air quality districts.

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 FY 1999-2000, the Section's staff conducted a total of 77 tests. Thirty-two of these tests were for certification of vapor recovery systems, 19 were compliance tests, 22 were tests in support of special investigations and four tests were in support of EVR Program development. Local air quality districts requested four of the compliance tests (a complete listing of all tests is included in the back of this section).

Vapor recovery system certifications conducted in FY 1999-2000 included the aboveground tank systems manufactured by Containment Solutions, Inc. and the Cretex Company. Several modified "100-car" tests were also conducted on the Gilbarco Vapor Vac System, utilizing nozzles by four manufacturers.

Containment Solutions, Inc. and the Cretex Company AboveGround Tank Vapor Recovery System Certifications

Source Test Section staff performed Phase I and Phase II gasoline vapor recovery certification testing of rectangular and cylindrical aboveground gasoline storage and dispensing systems manufactured by Containment Solutions, Inc. Each test system consisted of a 2000 gallon "Hoover Vault," a carbon steel inner tank encased by four inches of insulation material and a carbon steel outer containment tank.

Source Test Section staff also conducted certification tests of the Cretex Company, Inc. "FuelVault" Aboveground Tank Filling/Dispensing Vapor Recovery System.

The FuelVault aboveground system consists of a balance-type vapor recovery system (with certified Phase I and II components) installed on a steel primary tank encased by six inches of concrete insulation. The tank is an aboveground gasoline storage tank. The general exterior of the tank may be exposed aggregate with a clear epoxy coating or may be painted white or off white. These types of aboveground tank vapor recovery systems are generally used in card lock facilities or for the fueling of fleet vehicles.

Each system was evaluated for Phase II vapor recovery efficiency by performing twenty independent dispensing episodes of approximately 10 gallons each into 55 gallon drums fitted with a passenger vehicle fill pipe. The masses of the gasoline vapor returned to and vented from the aboveground tank were determined, and combined with the vapor mass emitted at the nozzle interface during dispensing to determine Phase II vapor recovery efficiency. Phase I vapor recovery efficiency was determined for each system by transferring gasoline from a cargo tank to the aboveground tank at the conclusion of each Phase II test.

The test results determined that both Containment Solutions aboveground gasoline storage and dispensing systems achieved Phase I and Phase II vapor recovery efficiencies greater than the 95 percent required for certification. The systems are now certified for use by the ARB Executive Order G-70-194.

The Cretex system also successfully met all ARB certification requirements. The FuelVault Aboveground system was issued Executive Order G-70-195.

Emissions Study

Determination of the Hydrocarbon Vapor Mass Emission Factor during Uncontrolled Gasoline Dispensing to Passenger Vehicles

Source Test Section personnel performed field testing to determine the hydrocarbon vapor mass emission factor during uncontrolled gasoline dispensing to passenger vehicles. This emission factor represents the mass of hydrocarbon vapor displaced to the atmosphere from a passenger vehicle fuel tank when dispensing gasoline without Phase II vapor recovery. Testing was performed in December at a Sacramento area facility dispensing winter grade gasoline with an average RVP of 11.6. Due to the preliminary nature of the testing, candidate vehicles were selected by availability as opposed to a matrix comprised of specific vehicle makes, models and years. The test protocol focused on uncontrolled emissions from the vehicle; therefore, emissions from fugitive sources and the underground tank vent riser were not evaluated during this test.

Testing was performed at a single Gilbarco "Vapor Vac" dispenser modified by disconnecting the inlet and exhaust of the vapor return pump from the nozzle and underground storage tank, respectively. This modification resulted in gasoline vapors normally captured by the vapor recovery system during fueling to be displaced from the vehicle fuel tank to the atmosphere. The displaced vapors were captured by a sample sleeve encircling the nozzle / fill pipe interface. Ambient air was drawn through the sleeve at approximately 10 cubic feet per minute (cfm). A fraction of the vapor captured by the sleeve was analyzed for total hydrocarbon concentration, as propane, using flame ionization detector (FID) and non-dispersive infra red (NDIR) continuous gas analyzers.

A total of 41 valid dispensing tests were recorded during the three-day test period. Due to time constraints, the slow responding FID analyzer was used during only the first 21 tests. The average mass emission factor determined by FID for uncontrolled dispensing was 9.44 pounds total hydrocarbons, as propane, per thousand gallons dispensed (lb. THC / kgal). The average mass emission factor determined by NDIR for all forty-one vehicles was 9.66 lb. THC / kgal, and included 4.3 weight percent (0.41 lb./kgal) methane. Statistical comparison of the total hydrocarbon emission factors determined equivalence between the FID and NDIR gas analyzers.

New Phase I and Phase II ("200-Car") Test Methods

To support the Monitoring and Laboratory Division's efforts to develop an "enhanced vapor recovery program," section staff revised the test methods used to determine the emission factor (lbs. of hydrocarbon emitted per thousand gallons of gasoline transferred) for Phase I and Phase II vapor recovery systems at gasoline dispensing facilities. Vapor recovery test procedures TP-201.1A and TP-201.2 were included as part of the Enhanced Vapor Recovery Program which was presented to the governing Board on March 23, 2000.

These test methods were made available to interested parties for a 45-day comment period. They were released in the "Initial Statement of Reasons for the Proposed Amendments to the Vapor Recovery Certification and Test Procedures for Gasoline Loading and Motor Vehicle Gasoline Refueling at Service Stations", dated February 4, 2000. No adverse comments were received regarding the proposed test methods during the 45-day comment period or in testimony before the board. The Board voted to approve the package without any recommended changes to either of the test methods prepared by Source Test Section staff.

Note-worthy aspects of the adopted certification test methods include:

Under the new test procedures the determination of system performance will address the mass of hydrocarbons that may be released from several dozen system components (e.g., nozzle check valves, Phase I fill tube and vapor return line connections, spill bucket drain valves, and pressure-vacuum relief valves installed on tank vents.) Direct measurement is impractical because these fugitive emissions occur at locations that may be unknown and are too numerous and spatially dispersed.

New equipment and procedures are specified for determining the mass emissions from the storage tank vent lines. This significantly improves the sensitivity of measurements at this point, and reduces the potential impact on normal vapor recovery system operation that may occur as a result of the installation and operation of testing apparatus.

The vapor return line has been eliminated as a required test point necessary for determination of compliance with the emission factor certification performance standard. This modification eliminated potential impacts on normal vapor recovery system operation which can include increased vapor return path pressure drop, reduced V/L ratios, increased potential for liquid blockage, positive or negative bias on

system pressure caused by improper operation of the sample extraction and sample return apparatus, and unavoidable bias on measured system performance when ORVR and non-ORVR vehicles are tested in back-to-back fueling episodes. By eliminating the need to install equipment in the vapor return line, it is possible to easily move test apparatus from one dispenser to the next so that all nozzles at the facility can be tested, as opposed to single nozzle testing which was used under the old certification program. This will help to ensure that all nozzles in the station are operating within specified performance specifications during the certification test.

The test procedure has extensive guidance regarding evaluation of the necessity of challenge and failure mode testing. Challenge mode testing is necessary to evaluate the ability of the VRS to meet the emission factor performance standard over the entire range of performance specifications that are to be included in the certification order. Failure mode testing is designed to evaluate the ability of the VRS to meet the emission factor performance standard when the performance of the system is compromised by component or system failures that frequently occur at GDF installations of certified VRS. Adherence to these challenge- and failure-mode testing principles will make the certification test more representative of the entire spectrum of real world operating scenarios. More challenging certification testing will lead to more robust vapor recovery system designs and components.

Additional guidance on the treatment of Phase I related emissions that occur during the Phase II certification testing is contained in the test procedure. The procedure has specific requirements that must be met before Phase I related emissions may be subtracted from the total mass emissions used to determine system performance.

A new test point is specified allowing the determination of actual balance nozzle boot pressure during monitored fueling episodes. This data will allow a more rigorous correlation of system performance with dynamic backpressure, a parameter long utilized to judge the performance of balance-type vapor recovery systems.

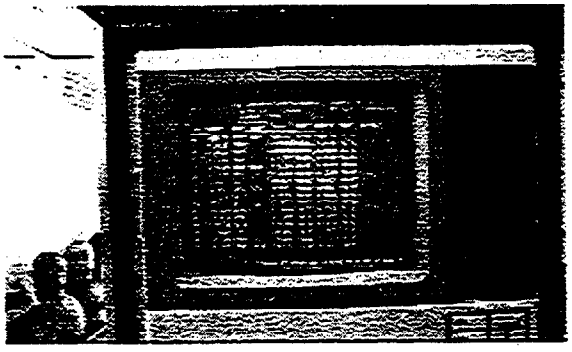
The revised procedures include a discussion of the bias in the test result which results when the nozzle sleeve sampling apparatus fails to capture all emissions at the nozzle fill pipe interface. Adherence to the principles presented in this discussion will ensure that a passing test result absolutely demonstrates that the required emission factor performance standard has been met.

MLD staff is now reviewing new test methods as part of the "15-day Changes" in the Final Statement of Reasons to be submitted to the Office of Administrative Law.

Gilbarco Vapor Vac System Re-Certification

The Source Test Section conducted a special Phase II vapor recovery testing project at the request of the Certification and Investigation Section. The purpose of the testing was to determine whether the Gilbarco Vapor Vac system could obtain adequate vapor collection efficiency at the nozzle/fillpipe interface if the air to liquid ratio (A/L) operating range is reduced from 1.0 to 1.2 to 0.9 to 1.0, and a mini-boot or vapor efficiency guard is added to the bellow-less nozzles previously certified for use with the Gilbarco System. Reducing the A/L ratio results in lower operating system pressures, that in turn should result in decreased fugitive and vent line emissions. Testing was conducted on nozzles made by four different manufacturers, Husky, OPW, Catlow and Emco-Wheaton. The test results showed that these nozzles could still demonstrate a collection efficiency greater than 95% with the reduced A/L ratio on the Gilbarco System. After the Gilbarco System is certified for lower A/L ratios with the mini-boot style nozzles, all bootless nozzles currently installed on Gilbarco Systems will need to be replaced with mini-boot nozzles at the end of the existing nozzles' useful life. Once all nozzles connected to a common vapor pump have been replaced the A/L ratio of the vapor pump will be reduced.

Sustained Superior Performance Award for David Frisk



Source Test Section staff ordered and obtained Video Graphic Recorder computers to use in the source test vans to automate data collection and reduction. Veteran staff member David Frisk, P.E., Air Resources Engineer designed the hardware setup and supervised its construction and installation. He then created the software programs to collect and reduce the data. Emission averages and corrected emission concentrations were then calculated by the computer, saving hours of staff time that had previously been required to reduce the data manually.

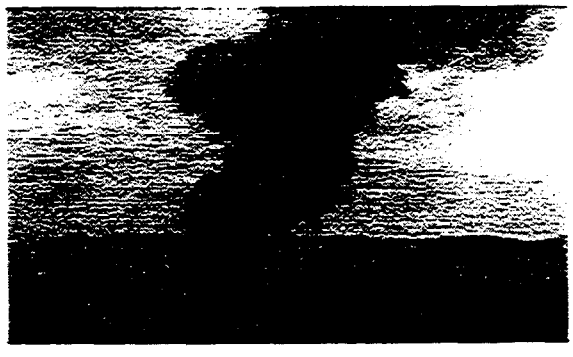
However, the vapor volumes from the vapor return line and vapor vent line were required to calculate mass flow and vapor recovery efficiency for vapor recovery efficiency source tests. The computers were not equipped with the necessary hardware and software instructions to input the volume data that was available from the volume meters. David designed, constructed and created the driver software for a micro-controller to input volume data to the computer using the hardware and software which the computer did have. The computer was then able to provide efficiency data on a real time basis the source tests, which saved additional hours of staff time and allowed evaluation of the system as the test was being conducted.

Coordination and Support of Emergency Response Efforts

Source Test Section staff routinely participates 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 1999/2000

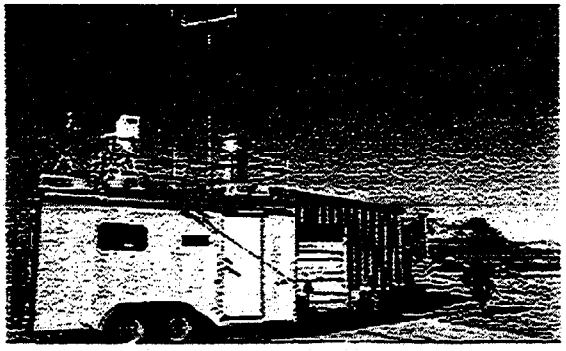
Westley Tire Fire



On September 22, 1999, at the request of the Stanislaus County Department of Environmental Health and the State Office of Emergency Services (OES), ARB staff responded to a tire fire at the Filbin Tire Facility located just west of the town of Westley in Stanislaus County. The ARB Compliance Division Emergency Response Team was requested to assist in this emergency by conducting onsite ambient air monitoring of pollutants in the smoke plume that could possibly impact nearby residents.

Five million tires were reportedly involved in the fire at the facility. The facility supplied tires to fuel the now-closed Modesto Energy cogeneration plant located near the pile.

The ARB Emergency Response Team was immediately activated. Gary Zimmerman and John Marconi of the Source Test Section deployed and coordinated two-person crews with Miran 1B real-time infrared portable analyzers monitoring for CO and total hydrocarbons (THC). The two-person teams were directed by the Incident Command to observe the plume, conduct surveys of the general area around the fire and respond to reported smoke in populated areas. During the course of the response, Miran 1B monitoring in the area of the tire fire was conducted around the clock by these two-person teams working eight-hour shifts. They reported the monitoring results directly to the Incident Command (IC), and monitored around the fire area as directed by the IC. In addition, during off-hours the teams checked the fire site at least once each hour.



In addition, the Monitoring and Laboratory Division (MLD) was asked to set up fixed air monitoring equipment at several sites requested by the Incident Command. The MLD deployed its "Rover" air monitoring station that has extensive monitoring capabilities, including criteria and toxic air pollutants. Additionally, MLD set up fixed air monitoring stations at six sites in several communities as requested by the IC.

Air monitoring results indicated downwind ambient concentrations of carbon monoxide and total hydrocarbons were essentially zero during the fire. A comparison of total carbon and average PM_{10} particulate concentrations during the height of the fire indicated that the smoke had little impact on the particulate levels at the sampling sites. However, there were transient concentration spikes where exposure to ground-level smoke could have caused short-term impacts. Many local residents reported adverse health effects from periodic ground-level impacts by the smoke.

The fire was finally put out on October 27, 1999 by the unprecedented efforts of a contractor to the US EPA. The fire was initially predicted to burn for months or even years, but the US EPA called in an oil-fire-fighting specialist from Texas. Using a new technique of smothering the fire with massive amounts of foam and carefully separating the individual tires with bulldozers, the contractor quelled the fire in less than three weeks.

Source Tests Conducted - FY 1999-2000

Source Name	Device Tested	Results
SDG&E, Encina	Utility Boilers (4)	Compliance
SDG&E, South Bay	Utility Boiler	Compliance
Sony Electronics, San Diego	Thermal Oxidizers (2)	Compliance
Goal Line, San Diego	Gas Turbine	Compliance
ST Services, Stockton	Bulk Terminal	Certifiable
Petro Diamond, Long Beach	Bulk Terminal	Certifiable
Containment Solutions	Aboveground Tank System (Phase II & I)	Certifiable
Jewlery Mart, LA	Building Exhaust (4 tests of ambient air; special investigation support)	N/A
Landfill Energy GTI, Otay Landfill	Thermal Oxidizer	Compliance
Cretex Company	Aboveground Tank System (Phase II & I)	Certifiable
Federal Express, LA	Bulk Plant	Certifiable
SoCo Group, Inc., Perris	Bulk Plant	Certifiable
SoCo Group, Inc., Indio	Bulk Plant	Certifiable
Ralph W. Haupt, Inc., Big Bear City	Bulk Plant	Certifiable
University of San Diego, La Jolla	IC Engines (2)	Compliance
Tosco, Richmond	Bulk Terminal	Failed
Chevron, Sacramento	Bulk Terminal	Certifiable
EVR Research Testing, Sacramento	Gilbarco Vapor Vac Phase II (3 tests for uncontrolled emission factor)	N/A
Royal Petroleum, Santa Rosa	Bulk Plant	Certifiable
Anderson Petroleum, Redding	Bulk Plant (3 systems)	Certifiable
Fisher Oil, Red Bluff	Bulk Plant	Certifiable
Goal Line, San Diego	Gas Turbine	Violation
Duke Energy, Chula Vista	Utility Boiler	Compliance
Tosco, Richmond	Bulk Terminal	Certifiable
Halaco, Ventura	Baghouse (gaseous & particulate matter tests)	Compliance

Source Name	Device Tested	Results
Jewelry Mart, LA	Building Exhaust System (6 tests for Heavy Metals)	N/A
Silvas Oil, Oxnard	Bulk Plant	Certifiable
Hirt System, Pomona	Hirt Incinerator (EVR Program Research)	N/A
Sierra Nevada Brewing Co., Chico	IC Engine (12 tests for PM_{10} Emissions Research for SSD)	N/A
Gilbarco Vapor Vac Phase II System Service Station, Sacramento	Catlow (2 tests), OPW (2 tests), Husky, Emco-Wheaton Nozzles	Certifiable
Home Oil, Anaheim	Bulk Plant	Certifiable
Southern Calif. Edison, N. Orange Co., Fullerton	Bulk Plant	Certifiable
E. F. Kludt & Sons, Lodi	Bulk Plant	Certifiable
A.G. Spanos Jet Center, Stockton	Bulk Plant	Certifiable
C. P. Phelps, Inc., Tulare	Bulk Plant	Certifiable
Texas Industries, Ventura Co.	Baghouse (2) (gaseous & particulate matter tests)	Violation
Westway Terminal, San Pedro	Bulk Terminal	Certifiable

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...

Introduction

The Program Review Section is primarily responsible for conducting evaluations of air quality district programs. Pursuant to the authority granted in H&SC, §41500, 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 rule effectiveness studies, participates in multimedia inspections, conducts air complaint investigations and participates in emergency response. Listed below are Program Review's accomplishments for FY 1999-2000.

District Program Evaluations

Fiscal year 1999-2000 was a productive year for the Program Review Section. The district evaluation for the South Coast AQMD was finalized and the evaluation of the San Diego County APCD neared completion.

South Coast AQMD

Program Review staff finalized the program evaluation entitled "An Evaluation of the South Coast Air Quality Management District's (District) Air Pollution Control Program." The report is primarily based on a review of the District's air pollution control program, conducted from December 1997, through June 1998, by the Compliance, Stationary Source, and Planning and Technical Support staff. Program Review staff evaluated the District's enforcement, and permitting programs, as well as the RECLAIM program.

As part of the review, staff conducted joint inspections of 211 volatile organic compound sources from the following rule categories: Metal Parts and Products; Wood Products Coating; Aerospace Assembly and Component Manufacturing Operations; Metal Container, Closure and Coil Coating Operations and Adhesive Applications. The results of the inspections of 208 dry cleaners, 377 gasoline stations, 17 boilers and 10 gasoline bulk loading terminals are also included in the report.

Program review staff found that compliance rates for the facilities inspected were low (i.e. 66% and 41% violation rate for VOC sources and small boilers respectively) and that compliance rates for several rule categories had been decreasing over the past decade. The District's staff of inspectors had also been reduced over the same time period and District inspectors were required to report to the Diamond Bar office daily, which reduced field presence. Due to these findings the District decided to hire more inspectors and develop a system where inspectors are given sectors and deployed on a geographical basis.

The District's permits for Title V and RECLAIM sources were of good quality, but other permits varied from a detailed version (if recently issued) to the original half-page size format issued years ago. The District also had a large permit backlog and many sources were operating without a permit to operate. Program Review staff recommended that the District hire additional permit engineers to manage its workload and process permits in a timely fashion. Before the audit report was finalized, the District indicated that it planned to hire ten additional permit engineers.

As a part of the evaluation of the RECLAIM program, Program Review staff and District inspectors conducted joint RECLAIM audit inspections of ten facilities. Staff found that the time for settling cases was excessive. The settlement for notices of violation issued between February 1996 and May 1997 ranged from seven to twenty-three months and the average settlement time was twelve months. Inspectors were unable to issue notices of violation and violations had to go through an extensive review by the RECLAIM Administration group and senior District management before issuance. Program Review staff recommended that the District reexamine the role of the RECLAIM Administration group and improve the efficiency and timeliness of RECLAIM audit inspections. Our program evaluation resulted in the District increasing the penalties assessed for RECLAIM violations.

The final report was sent to the District in January 2000, along with a letter asking the District to prepare an action plan describing how and when they will implement the report's recommendations.

San Diego County APCD

Compliance Division staff transmitted a draft report titled "An Evaluation of the San Diego County Air Pollution Control District's Air Pollution Control Program," to the San Diego County APCD. 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 developed by the Stationary Source and Planning & Technical Support Divisions.

The District fell short of ARB's recommended inspection frequency of annual inspections for all sources (at a minimum) and quarterly inspections for large facilities with emissions over 25 tons per year. The District was inspecting small (under ten tons per year) particulate sources only once every three years and small VOC sources only once every two years. Major and toxic air contaminant sources were being inspected annually. Compliance rates were also low for coating-related and industrial sources (74% and 75% facility violation rate respectively).

Program Review staff found that the District was issuing notices to comply instead of notices of violation for unpermitted equipment and gross first-time violations of the District's open container Rule 67.17. The District adopted Rule 6 to discontinue both of these practices.

Program Review staff found that the District's penalty settlements were too low. Ninety-three percent of the 45 non-asbestos related notices of violation reviewed settled for less than $500. The average penalty settlement for the notices of violation reviewed was only $150. Most of the violations reviewed were emission-related and it is ARB's long standing policy that districts settle for penalties of $500 or more for emission-related violations.

During the audit two sources were found to be under variance for seven years or more. The District Hearing Board agreed to rehear the petition for variance for one of the sources that had received a variance every year since 1991.

The District had an adequate system for receiving, logging and relaying complaints during normal office hours; however, staff found that the system for receiving complaints during off-hours, weekends and holidays

needs to be expanded to include on-call District staff. Program review staff recommended that the District implement a formal on-call program when resources become available. The District proposed to develop a written procedure to respond to complaints turned in after hours.

The draft program evaluation report was sent to the San Diego County APCD in September 1999 for review and comment. The District's comments on the draft report were received in March 2000. At the end of the fiscal year the District was making final comments on the executive summary, so the report will be finalized shortly.

Field Studies and Investigations

The Program Review Section is also responsible for conducting investigations, rule effectiveness studies, multi-media inspections and air quality compliant investigations. Information on the field studies and investigations conducted this year follows.

Multi Media Chrome Plating Inspections

Program Review staff conducted three weeks of multi-media chrome plating inspections in the South Coast Air Basin. The purpose of these inspections was to determine the compliance status of each facility with respect to air, water and toxics regulations.

Three teams were formed with a state representative in each team from the Department of Toxic Substances Control, State Water Resources Control Board and ARB. Many local agencies were also involved and were part of the teams. Some of these local representatives included South Coast AQMD, Certified Unified Program Agencies, and Los Angeles and Orange County Sanitation Districts. The US EPA also participated, and a total of 37 facilities were inspected during the study.

Almost **90% of the facilities inspected violated** at least one provision related to regulations governing storage and handling of hazardous waste, release of hexavalent chromium emissions into the air, or requirements related to the storm water permit. Typical hazardous waste violations included storing hazardous waste more than 90 days, storing acids and caustics in the same bermed area, and not labeling hazardous waste containers. Common air violations included failure to provide an initial and ongoing compliance status report, failure to monitor the surface tension of the chrome plating tank, failure to record chemical fume suppressant additions, and exceedances of the surface tension limit

(imposed to reduce the amount of chromium solution which becomes airborne when bubbles burst). Typical storm water violations included not having the Storm Water Pollution Prevention Plan complete or up to date; leaving uncovered trash bins, corroded containers, or equipment outside; and leaving metal shavings on the ground. In addition, approximately 43% of the facilities inspected violated at least one provision of the regulations governing discharge into each environmental medium (i.e. they violated air, water, and hazardous waste regulations).

The inspection teams found that the sources were not averse to the idea of consolidated multi media inspections, but small businesses were concerned with the long duration of the inspections. Inspectors from the teams gained practical knowledge and were in a better position to make referrals to other agencies. Results from the three weeks of field study were compiled and a Cal/EPA first draft report was sent to local agencies for review and comment.

Chrome Plating Rule Effectiveness Study

As part of an ARB field study of chrome plater compliance, Program Review staff conducted inspections at various districts during the fiscal year, including the Sacramento Metropolitan AQMD, San Joaquin Valley Unified APCD, and the San Diego County APCD. These inspections were conducted in cooperation with inspectors at each of the respective districts. The field study was still continuing at the conclusion of FY 1999-2000.

Program Review staff conducted inspections of chrome plating facilities at seven facilities in January 2000 in the Sacramento Metropolitan AQMD; at 21 facilities in April 2000 in the San Joaquin Valley Unified APCD; and at twelve facilities in June 2000 in the San Diego County APCD. Inspections at the Bay Area AQMD and the South Coast AQMD are also planned for the study and will be conducted soon.

Facilities were inspected for compliance with the State Airborne Toxic Control Measure (ATCM) for chrome plating operations. Typical items inspected included amp-hours meters being hard-wired, the chromic acid surface tension, and the amp-hour usage. Samples of chromic acid solution were collected for surface tension analysis when necessary.

Enforcement and Compliance Assurance Grant

The Compliance Division received an award of $225,000 from US EPA for the proposal developed by Program Review staff on the "Effect of Assistance on Compliance with Chrome Plating Rule." ARB's proposal was selected out of 32 pre-proposals received by US EPA's Office of Enforcement and Compliance Assurance for the development and implementation of enhanced performance measures for the State Enforcement and Compliance Assurance Program. The data collected and the resulting analyses will provide the information necessary to support the implementation of new measures developed under the National Performance Measures Strategy for US EPA's enforcement and compliance assurance program.

As part of this study, Program Review staff will conduct inspections at a random, statistically significant sample of approximately 130 chrome plating facilities to determine how permitting, training, and outreach can facilitate compliance and to establish baseline compliance rates. Subsequent inspections (after two years), will enable ARB staff to compare follow-up data with information obtained during previous inspections and thereby determine other data.

Automotive Coatings Task Force

An Automotive Coatings Task Force was created in July 1999 to handle the problem of widespread non-compliant coatings in automotive refinishing operations. The task force represents eighteen different districts. Coatings with excess volatile organic compound (VOC) content have been manufactured, distributed and sold for automotive refinishing in California. Sales of these non-compliant coatings violate the prohibition of sale requirements common to most automotive coating rules. The Task Force approach has provided a unified approach to solving non-compliant coating problems. The Task Force agreed that enforcement action be taken against the manufacturers of these non-compliant coatings. Reports of Violation (ROV) were issued against nine coating manufacturers and ROVs may be issued against two additional manufacturers. Office conferences have been held with manufacturers to receive information on their coatings, to receive requested data, and to discuss the alleged violations. Staff analysis of non-compliant coating sales, excess VOC emissions and mitigation measures undertaken by the manufacturers are being conducted for each case. Each case will be transmitted to ARB's Office of Legal Affairs for consideration for settlement or litigation. The potential excess emissions

from three manufacturers of non-compliant coatings are estimated to be about 216 tons of VOC.

Mendocino County District Attorney Assistance

In November 1999, Program Review staff assisted the Mendocino County District Attorney's Office by conducting a visible emissions evaluation on the Presdwood Entoleter scrubber stacks at Masonite Corporation's Ukiah facility. Staff from the District Attorney's Office had observed the process stacks from U.S. Highway 101 and questioned whether the facility was violating the District's visible emissions rule. Program Review staff observed the stacks using US EPA Method 9 criteria and determined that the emissions were in compliance with the District's rule. No violations were documented.

Fibreform Wood Products Investigation and Inspection

In response to a request for assistance from the Amador County Air Pollution Control District, Program Review staff conducted a file review of Fibreform Wood Products Inc. In October 1999, Program Review, District, and U.S. Environmental Protection Agency investigators conducted a joint compliance inspection of the source.

Fibreform is a company that produces a variety of wood molding products including panels and wood veneers. The source is located near Jackson in an industrial site that was formerly a lumber mill operated by Georgia Pacific. The company moved to this location in October 1997. Formerly, the company was located in Rocklin in Placer County where it had received many complaints and six notices of violation. At its new location, Fibreform had received complaints and five notices of violation.

The file review had illustrated that Fibreform had exceeded Title V toxic emission limits for toluene by 22.9 tons in 1998 and the District issued a notice of violation for the exceedance in July of 1999. The source removed a cyclone system that had been the source of many of the complaints and violations and replaced it with a baghouse in October 1999. No violation notices were issued during the joint inspection. The inspection of Fibreform also showed that their new baghouse was operating in compliance, and that the company was using a new coating that did not contain toluene.

Riverside Chrome Plating Complaint & Investigation

Program Review staff conducted an investigation and joint inspection with Air Toxic Unit staff of the South Coast AQMD of Progressive Custom Wheels in Riverside. The investigation was conducted due to a complaint received by the Riverside County Environmental Crimes Task Force through Cal/EPA. The complaint investigation and inspection revealed that the facility had recently added a third chrome plating tank and had not retested its fiber mist eliminator scrubber system to demonstrate compliance with the 0.1 mg/dscm hexavalent chromium mass emission rate contained in the Air Toxic Control Measure and District Rule 1469. The facility received a Notice to Comply for this procedural violation. The facility scheduled a source test with an approved contractor and the District cleared the Notice to Comply in early December 1999.

Parker Foils Investigation

Program Review and Compliance Data Management staff conducted an investigation of Parker Foils, a hot stamp foil manufacturing facility in Escondido, California with staff of the San Diego County Air Pollution Control District. The purpose of the investigation was to determine (1) reasons for abatement order issuance, (2) reasons for continued violation of their abatement order and (3) the compliance history of the facility. Information pertaining to Parker Foils was obtained through a file review, interviews with District staff and an inspection of the facility. The investigation was conducted in April 2000.

Parker Foils was the source of numerous odor complaints by surrounding businesses. The odor problem appeared to be due to leaks in the ductwork and disrepair of the thermal oxidizer that was installed to control volatile organic compound emissions from the hot-stamp film coater. Although the facility improved the ductwork in response to violations, District enforcement actions had not significantly contributed towards better compliance. ARB staff sent an investigation report to the District, the District's Hearing Board and to the District's County Counsel who obtained a preliminary injunction from the Superior Court of San Diego on June 16, 2000 resulting in closure of the facility.

Graphic Solutions Coatings Investigation

During a review of the San Diego County APCD's Air Pollution Control Program in 1999, ARB staff found that Graphic Solutions, a sign manufacturer, had been granted a variance by the District's Hearing

Board from District Rule 67.3(d)2 – Metal Parts & Products Coating Operation – VOC Standards, every year since 1991 in order to use non-compliant coatings. Compliance Division initiated an investigation to determine why they needed to use non-compliant coatings, the history behind the variance, and if they were complying with the conditions of their variance. Information pertaining to Graphic Solutions sign manufacturing operation was obtained through a file review, interviews with District staff and an inspection of the facility. The District decided to rehear the variance as a result of our investigation and earlier correspondence expressing concern about the need for the variance.

Sierra Pacific Opacity Investigation

In August, Program Review staff conducted an inspection of the Sierra Pacific lumber mill in Lassen County. The facility operates a large wood fired cogeneration boiler served by a multiclone particulate collector and an electrostatic precipitator. Wood scrap from the lumber processing is fed to a hogger where it is ground into chips and transported to the boiler by skiploader. The boiler produces steam for the mill and dryers and drives a turbine, generating electricity that is sold onto the power grid. Staff collected the continuous emission monitor strip charts from a full-year period as well as breakdown/upset reports from the same period. After the strip chart opacity data is assembled into a spreadsheet a compliance analysis will be conducted, excess emissions will be calculated, and enforcement action may be taken.

Burn Program and Aerial Surveillance

In order to evaluate the eighth year of implementation of the Rice Straw Burning Reduction Act of 1991, staff conducted overviews of some of the Sacramento Valley Air Basin agricultural burning programs. In October 1999, 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. Six potential violations were documented. Five violations were for ignition of headfires and one was for having no permit. ARB and District staff followed up on violations documented during these flights. Violations observed were referred to the local districts for appropriate enforcement action. H&SC §41865 limited the allocation of burned crop residues to 90,000 acres for the fall season, which ended in November due to rainy weather.

Compliance Data Management Section

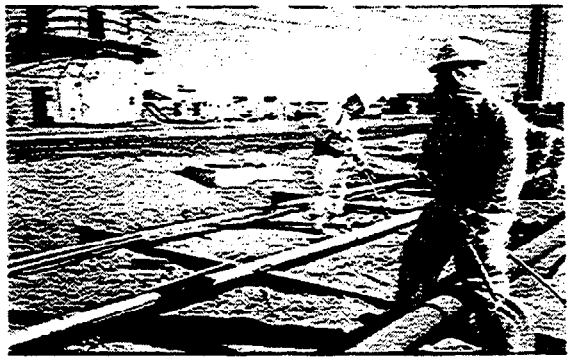
Providing Data and Assistance for Enforcement...

Introduction

The Compliance Data Management Section (CDM) is primarily responsible for collecting, reviewing, processing, and analyzing compliance data. This is accomplished through many different programs including: asbestos; air district variances; clean fuels; minor violations; program audits; rule review; continuous emissions monitoring excesses; major source inspections and violations; and complaint handling. The data is used by decision-makers to help them make informed decisions concerning compliance with air pollution regulations and H&SC requirements. The section is also responsible for the management of computer technology in the Compliance Division.

The following pages will outline the section's accomplishments for each program. Also within each program area are special projects and/or committee participation in which program staff participated.

Asbestos NESHAP



The section administers the National Emission Standard for Hazardous Air Pollutant (NESHAP) for asbestos in the 16 local air districts that have not been delegated authority for that program. In FY 1999-2000, the asbestos NESHAP program actions included: receiving and entering data on demolition/renovation notifications, inspecting asbestos demolition and renovation projects, investigating complaints for violations, issuing notices of violation, and preparing cases.

Six notices of violation were issued for violating the Asbestos NESHAP FY 1999-2000. One case has been referred to the California Circuit prosecutors for possible criminal prosecution. Another case has been referred to the ARB Legal Office for settlement, and the 4 other cases are presently being developed.

A total of 25 NESHAP inspections were conducted in non-delegated air quality districts. There were 222 asbestos NESHAP notifications entered into the national NAR/ACTS database.

Two statewide asbestos task force workshops were organized and conducted to discuss compliance issues, share enforcement experiences, and to promote effective enforcement of the asbestos NESHAP. Representatives from US EPA, ARB, and most of the asbestos NESHAP delegated districts attended.

This section did the case development for the filing of notices of violations to the Weber Creek Quarry, by the US EPA and the State Attorney General's Office in April and July, respectively, of this fiscal year. Staff performed inspections and wrote inspection reports, provided ambient air monitoring data, provided tape surveillance, collected district correspondence and notices of violation, gathered citizen complaints, and provided other case documents to the attorneys.

Variance Program

The Compliance Data Management's variance program is an essential program for California's regulated community. A variance, which is granted by a local air district variance hearing board, provides a means for sources which meet specified statutory criteria to operate temporarily in non-compliance while working toward full compliance. There are extensive H&SC requirements that must be met before a variance can be granted, and we are charged with ensuring that all these requirements are met by each of the 37 boards in the state. The program consists of: variance review; hearing board review and auditing; workshop and reference material development; board and air district liaison, including technical and legal assistance; and database management.

Data Analysis & Entry and Computer Assistance

Approximately 800 variances were received and reviewed for compliance with H&SC requirements. These, along with additional data

submitted from districts regarding the status of these variances, resulted in approximately 2,500 new entries into the variance database.

Database Development - Special Projects

At this time, staff is currently working on a project with Office of Information Services to develop a Facility Data Management System. The new system will be able to track a source's compliance history and current activities including continuous emissions monitoring excesses (CEM), complaint history, variances, asbestos demolition and renovation, High Priority Violators (HPVs) and source inspections. This information will be useful to inspectors, attorneys, and other enforcement personnel.

Staff has developed a new web-based database application for the Fuel Section. The reports generated will help inspectors out in the field by giving a compliance profile of a gasoline station, refinery, and terminal while on a fuel inspection. It can also generate a report calculating the average value of a fuel parameter such as sulfur during a certain time period.

Variance Workshops and Variance Program Review

Every year we conduct variance workshops to educate hearing board members, district staff and industry representatives about the statutory requirements for granting a variance. In FY 1999-2000, we held three variance workshops -- one for the Bay Area AQMD, one in Monterey, and one for Glenn County APCD. The one in the Bay Area was held at the request of the Chairman of their local Governing Board. Total attendance was approximately 50.

The mock hearing continues to be the most effective training tool and is used at our "basic" course. At the mock hearing, a script for running the hearing is used. Specifically, this script was developed to address the problem of hearing boards not making the six findings at the hearing as required by the H&SC. As a result of the mock hearing and the new script, progress continues to be made.

Another area of increased focus in the workshop area is H&SC §42353. This section requires the board to put emission and other limits on sources on variance to ensure excess emissions are kept to the absolute minimum. Audits have shown compliance with H&SC §42353 as spotty, and several strategies to help board members in this area are under development.

It is anticipated that a "mini-workshop" will be developed which will focus on the problem areas mentioned above. Many board members (e.g., doctors, lawyers, engineers) do not attend workshops because of busy schedules. A mini-workshop may alleviate this problem, because it can be taken to a regularly scheduled board hearing which board members must take time out to attend.

Variance document review resulted in two sources being inspected in the San Diego area. A pattern was identified in which a series of variances was issued to a source for non-compliant coatings. Staff along with an inspector from the Program Assessment Section conducted an inspection of the source. Our investigation report recommended that the Board re-hear based on information obtained during the investigation that compliant coatings may be available. Another investigation into violations of an abatement order assisted in the process of closing a public nuisance in the San Diego area. During these investigations, staff consulted with county counsel and district field investigation staff as necessary.

Staff attended variance and abatement order hearings and reviewed various hearing audio tapes to determine compliance with H&SC requirements. A disturbing trend of not making findings at the hearing but including them in written orders has been discovered. Plans for increased and more visible oversight in this area are being developed for FY 2000-2001.

In addition, variances were reviewed on a daily basis for compliance with H&SC requirements. This resulted in numerous "deficiency" letters being sent to several districts (Antelope Valley, Mojave, Northern Sonoma, Placer and San Diego County APCD). These letters outlined H&SC requirements for which their orders did not comply. Action included re-hearings and amendments to the original orders. Working with district staff and boards to help them understand what is required in written variance orders has resulted in progress in this area.

Variance Program staff also participated in several Monterey Regional Environmental Task Force meetings held in San Jose.

Minor Violation Report to the Legislature

The ARB has adopted a minor violation regulation that became effective on May 7, 1999. The regulation applies to areas for which ARB is the primary enforcement authority: motor vehicle fuels content, consumer

products, and cargo tanks. This was a result of the enactment of Senate Bill 2937 (1996) which added H&SC §39150 - §39153.

Health & Safety Code §39153 required 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 was due by January 1, 2000. Compliance Division staff sent out surveys and developed monthly reporting forms for air district use in order to gather the data necessary from each district to prepare the report.

Major findings of the report included: As of the date of the report, a total of 26 air districts had adopted a minor violation regulation and were presently implementing a minor violation program. At that time, most of the other nine districts were developing regulations. AB 2937 established no deadline for adopting a minor violation and program. Other findings included how many notices to comply (NTCs) had been issued by local districts (as of the report date, 5,300 NTCs had been issued) and whether the intent of the legislation had been met (83% of districts returning a survey said 'yes'). Further details can be found in the report titled "Report to the California Legislature on Implementation of California's Minor Violation Program".

The report was presented to the governing Board at the November 18, 1999 board meeting. The Board unanimously approved the report by adopting Resolution Number 99-37.

Data Management Review

Butte County APCD was partially audited for the period 1995 through 1999. This smaller rural district has three major source power plants equipped with continuous emissions monitors and over 400 other minor sources. The audit covered CEM exceedance reporting, source inspections, reporting major source inspections and violations to AIRS and legal action. Findings include:

- The power plants already report CEM exceedances well within two hours of discovery. The district intends to improve compliance effectiveness with prompt office investigations.
- Based on review of representative samples, inspection rates for 1999 were higher than previous years but not yet meeting ARB's 100% guideline for 25+ TPY sources. However, for some individual enforcement cases with public complaints, the district inspected the same facility vigorously.
- In legal action, the district showed significant improvement in 1999, reducing no further action on notices of violation to 15%.
- Penalty reductions were often deep which the district justified as suiting its rural economy.
- For 1999, a total of 109 NOVs were issued and a total of $9,500 in penalties were collected.

The final report recommended:

Continuous Emission Monitoring

- improve tracking for CEM enforcement;
- provide a copy to ARB of a quarterly excess emission report from Louisiana Pacific;

Inspections

- increase annual inspections for 25+ TPY facilities;
- have some AIRS inspection data corrected;

Legal Action

- resolve violations within 90 days;
- revise penalties upward;

The audit report with complete findings and recommendations is available upon request from the Compliance Data Management Section.

Complaint Handling

In FY 1999-2000, CDM staff processed 116 complaints related to stationary sources. In addition, 291 smoking vehicle complaints and 105

inquiries regarding various programs or problems were handled by the complaint line staff. A total of 512 complaints and inquiries were processed during the fiscal year. Eleven of these complaints resulted in special investigations by other Compliance Division staff.

Rule Review

Review of air district rules is essential for consistency statewide. Rules are reviewed to ensure enforceability, stringency and compliance with both state and federal regulations. The rules are reviewed for complete and accurate definitions, presence of test methods, sufficient recordkeeping, appropriate averaging periods, clarity, performance standards etc. Staff reviewed 325 rules in three different stages: draft; proposed; and adopted. About 81 of these rules required written comments.

Staff also participated in inter-agency multi-media task force and scoping meetings on Challenges and Alternatives to Environmental Regulation Enforcement and Pollution Prevention.

Clean Fuels Reporting - Data Management

CDM receives, reviews, and processes the Predictive Model (PM) Alternative Formulation and Designated Alternative Limit (DAL) Notifications submitted by gasoline producers and importers in California for compliance with the California Reformulated Gasoline Regulations. The staff has processed over 5,000 notifications this year. The staff developed and implemented a database that uses a computer model to verify that the gasoline formulation information submitted by the producers and importers complies with the gasoline regulations. Staff also tracks the content of the gasoline of those producers and importers that have chosen to average its fuel content; issues monthly summary reports to each producer and importer to verify the accuracy of the notifications and to reconcile the batch status and averaging account; and prepares special reports for Compliance Division case development.

CDM staff also maintains and updates the computer system (PACE) used for tracking and evaluating these notifications.

CDM has provided PM and DAL data to the SSD and the California Energy Commission who prepared the RFG Phase 3 amendments.

Computer Management and Upgrades

Without efficient computer administration, the Compliance Division would come to a standstill. The Compliance Data Management's computer support addresses all of CD's computer concerns, including planning, procuring, configuring, training, troubleshooting, upgrading, and retiring software and hardware. The Compliance Data Management Section strives to ensure that the Compliance Division remains consistent with US EPA and ARB computer guidelines, while responding to staff needs effectively using today's technologies to produce a superior product. The Compliance Data Management Section is preparing for the move to the CAL/EPA building. The Compliance Data Management Section is currently evaluating the effectiveness of and Compliance Division's need for Windows 98. Throughout the year CDM continually provides technical support to all Compliance Division 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. FY 1999-2000, 17 districts reported 1,090 excesses to CDM. Owen Brockway and Integrated Environmental Systems in the Bay Area and North American Chemical in Mojave Desert are still reporting the biggest number of excesses. The Compliance Data Management Section updated CEM reports for all reporting districts listed below.

Amador	52
Bay Area	218
Butte	29
Colusa	17
Great Basin	15
Imperial	12
Kern	151
Lake	17
Mojave	125
Monterey	55
North Coast	21
Placer	28

Santa Barbara	72
San Joaquin	152
San Luis Obispo	56
Shasta	26
Ventura	32
Yolo-Solano	12

A number of districts, including Antelope, Calaveras, El Dorado, Feather River, Kern, Lassen, Mendocino, Northern Sierra, Sacramento, San Diego, Siskiyou, South Coast, Tehama and Tuolumne do not report their industrial excesses, as detected by CEM.

The Compliance Division is now in the process of auditing Sierra Pacific Corp. located in Lassen County. Sierra-Pacific has been in violation for at least one year. Due to the Lassen County APCD's failure to report excess emissions, ARB was not aware Sierra Pacific was sending tons of excess emissions into the atmosphere.

During the past year the Compliance Division has brought some districts into compliance regarding the reporting excess emissions through mini-audits.

Compliance Database Maintenance

The section manages databases including US 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 US EPA Enforcement Actions (US EPA Actions). Using these databases, the section can compile compliance profiles on facilities or other sources. These compliance profiles are used by the Compliance Division, Cal/EPA, air districts, and other divisions within the ARB.

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

High Priority Violator Program

For the federal High Priority Violator (HPV) program, staff reports major source violations to US EPA from 27 non-grantee districts in California. Reporting entails reviewing Notices of Violations (NOVs) and entering identified major source violations in the federal Aerometric Information Retrieval System (AIRS) database. The US EPA continues to refine data reporting this year and changes are in the works to standardize reporting nationwide and eliminate errors.

We received 63% of NOV logs from the 27 non-grantee districts in FY 1999-2000, and reviewed over 200 NOVs. All of these NOVs were transmitted to US EPA Region 9 for record keeping. As shown on the table below, a total of 15 HPVs were reported from California's non-grantee districts. A summary of the list of the violators during the fiscal year is on the following table. AIRS violation reports reflecting new and/or updated HPVs were prepared and sent to US EPA Region 9 and the affected non-grantee districts every month during the past fiscal year.

High Priority Violations in FY 1999-2000

District	Number	Facility	Number
Amador	1	Wheelabrator Martell Inc	1
Butte	2	Pacific Oroville Power	1
		Santa Fe Pacific Pipelines	1
Kern	1	California Portland Cement Co	1
Mojave Desert	7	AFG Industries Inc	1
		IMC Chemicals Inc	2
		Mountain High Ski Resort	1
		Southdown Black Mountain Quarry	1
		Southdown Victorville Plant	1
		US Army, National Training Center	1
Yolo-Solano	4	MM Yolo Power Llc Co	1
		UNOCAL Chemicals Division	2
		Woodland Biomass Power Ltd.	1

Custom violation history reports derived from AIRS data continue to be sought after for numerous research purposes including crafting legislation, prosecution investigations and California Integrated Waste Board studies.

Training and Compliance Assistance Branch

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Compliance Assistance Section and Strategic Environmental Investigation Group

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

Introduction

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), which is one of the responsibilities of the Compliance Assistance Section.

The CAP assists both regulated businesses and enforcement agencies with air quality issues. The CAP identifies compliance issues, explains environmental regulations, 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. The investigators assigned to the SEI Group identify, investigate, and develop cases against those who disregard environmental law and prepare those cases for appropriate legal action.

CAP Accomplishments

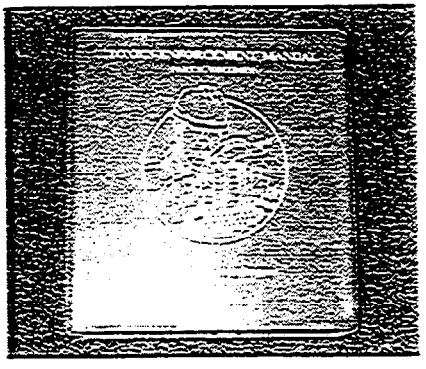
Publications

The Compliance Assistance Program (CAP) produces educational and compliance based materials in three formats: Technical Manuals, Handbooks, and Brochures. To create these publications, CAP personnel routinely work with government agencies, private industries, and the local air quality districts to help ensure equal application of the law -- in other words, to create a "level playing field".

Fiscal year 1999-2000 was again a successful year for the program with 24,783 documents shipped to stakeholders in California, the 49 other states, and several foreign countries. The actual breakdown was 22,267 handbooks & pamphlets, and 2,516 technical manuals. In addition, the CAP continues to produce new technical manuals and handbooks and revise older ones. Specifically, noteworthy accomplishments for this period include:

Technical Manuals	Handbooks
Polyester Resin/Fiberglass	Gasoline Cargo Tanks Update
Gasoline Cargo Tanks Update	Vapor Recovery Update
Vapor Recovery Update	Consumer Products Update
Ambient Air Monitoring	Woodburning Update
Toxics Enforcement, Part A	Backyard Burning (Draft)
Chrome Plating Toxic Control (Draft)	Asbestos Demolition & Renovation

One of the major tasks in FY 1999-2000 was the development of the Toxics Enforcement Manual, Part A. This significant accomplishment contains information on the history of the development and evolution of the California and federal air-toxic programs affecting California industry and the policies, regulations, and enforcement of those programs currently in effect.



With these new additions, the CAP has 28 handbooks and pamphlets and 33 technical manuals currently in print. Since 1987 the CAP has sent

over 37,409 technical manuals and 727,916 handbooks and pamphlets to customers to help improve 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 between.

Special Projects

It should be noted that the Compliance Assistance Section also accomplished several special projects for the Compliance Division, including, but not limited to:

- Assistance to Vapor Recovery Section
- Combined Annual Enforcement Report
- Ozone Generator Report
- Cal/EPA Special Projects
- California District Attorney Association Special Projects
- US EPA/CA Specialized Training Institute Assistance
- ARB March of Dimes Campaign

Future Plans

For the upcoming year, the section is planning an ambitious agenda. New or revised manuals/handbooks include:

- Source Test Observations
- Dry Cleaning
- Hot Mix Asphalt
- Oil Refining
- Electrostatic Precipitators
- Automotive Consumer Products

In addition the CAP expects to complete part or all of the following projects:

- Entering Vapor Recovery Executive Orders into database
- Updating district survey process for improved customer response
- Improving CAP's internet site
- Placing existing manuals on the internet
- "Multi-media-izing" new manuals to include sound, moving process diagrams, movies and more, and making them available electronically

SEI Accomplishments

Investigations

Environmental criminal enforcement continues to be one of the fastest growing areas in environmental protection. Criminal enforcement is an effective tool to help assure compliance within the regulated community. The mission of the Strategic Environmental Investigation (SEI) Group is to promote and protect the public health by vigorously and diligently investigating and assisting in prosecuting those who willfully and knowingly depart from accepted national, state, or local standards.

To accomplish this mission, the SEI Group has provided investigative and case development services to many organizations including:

- ARB Office of Legal Affairs
- Cal/EPA
- Other Cal/EPA Agencies
- State Attorney General
- Several District Attorney Offices
- California District Attorney Association
- US Department of Justice
- US EPA Criminal Investigation Division

These commitments kept the newly formed SEI Unit extremely active during its first year of existence. During FY 1999-2000, 73 investigations were initiated or completed. Violators have paid approximately $245,600 in penalties and settlement fees. The cases can be broken down as follows:

Cases Currently under Investigation (20)

- An international case involving the importation and sale of counterfeit consumer products with extremely high Volatile Organic Compounds (VOCs)
- False certification of equipment, tanks, and air emissions
- Citizens exposed to hazardous materials
- Reckless handling of hazardous materials
- Grand theft
- Production and sale of non-ARB certified vehicles

Cases Referred to ARB Legal (11)

The issues involved with these cases are:

- Importation of non-certified vehicles
- Sale of non-certified vehicles
- Tampering with emission control systems
- Confidential investigations

Cases Referred to Other Agencies (15)

Some of the issues involved with these cases include:

- Licensing violations
- Leaking underground storage tanks
- Improper asbestos disposal
- Reckless handling of hazardous materials
- Improper disposal of hazardous materials

Closed Cases (27)

These investigations included the following issues:

- Illegal dumping of hazardous materials
- Illegal removal and disposal of asbestos
- Use and sale of non-California certified vehicles
- Tampering with emission control systems
- Toxic air contaminants

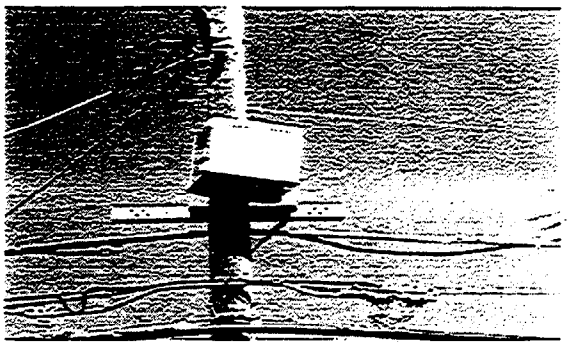
In October 1999, a circuit prosecutor with the California District Attorneys Association entered into a settlement agreement with Dennis Painter, President of SPD Markets of Nevada City. The Strategic Environmental Investigation Unit investigated allegations that SPD Market and removed approx. 21000 sq. ft of asbestos tile from their store on Zion St. in Nevada City, using a contractor not licensed for asbestos demolition and removal, and, importantly, without environmental safeguards required by state and federal environmental law. The President of SPD pled guilty to a Misdemeanor violation 6505.5 of the Labor Code and paid $6750.00 to the court in fines. SPD Markets pled guilty to a violation of section 17200 of the Business and Professions Code and agreed to pay $200,000 in fines, penalties and investigation costs. Tom Barney of TRB Enterprises of Grass Valley, named in a separate case arising from this investigation, also settled, agreeing to pay a fine of $100.00. This case is one of several examples of the success of the partnership between the Compliance Division and the CDAA's circuit prosecutors. Other cases are pending settlement or trial and yet others are still under investigation by the SEI unit.

Emergency Response

It is imperative that investigators be on the incident scene as soon as possible to collect evidence. The nature of the emergency itself or the efforts to bring the disaster under control can quickly destroy crucial, fragile links that can determine how the incident occurred. The SEI Unit responded to several emergencies including:

- The Westley Tire Fire
- The cargo jet crash at Mather Airfield, Sacramento
- The Oroville Wildlife/Industrial Fire

Surveillance



The prosecution of criminal cases requires solid evidence showing the willful violation of the law. Video recording is a tool often used to identify and assist in the conviction of violators. To meet this need the SEI team has developed self-contained video recording systems for covert surveillance that can monitor several locations simultaneously.

During FY 1999-2000 surveillance was provided for sixteen cases. Some examples are:

- Emission of dust clouds from crushing serpentine rock containing asbestos
- Illegal vehicle fuels
- Sale of non-ARB certified vehicles
- Gray market car importing
- Discharge of hazardous materials to storm drains
- Dumping liquid wastes into waterways
- Illegal disposal of hazardous waste

Many of these cases involved more than air violations. Often, other environmental media are affected. Therefore, in addition to supporting the ARB Compliance and Mobile Source Operations Divisions, special case surveillance service is provided to other Cal/EPA agencies, local air districts, and other environmental enforcement agents.

For example, during the fiscal year, surveillance assistance was provided to the Department of Toxic Substances Control (DTSC) on several occasions. This surveillance was instrumental in confirming the dumping of chrome plating and other industrial wastes into the sewer system as well as the illegal disposal of hazardous materials. A North Coast environmental task force received surveillance help when dust emissions were found to have settled on and poisoned a lake and

waterway. Additionally, surveillance assistance was provided to the United States Environmental Protection Agency (US EPA), Sacramento County HazMat, and the Santa Rosa Police Department.

Compliance Training Section

Training Environmental Professionals throughout the Nation...

Introduction

Fiscal year 1999-2000 has seen Compliance Training Section (CTS) busier than ever. The Compliance Training Section provided a total of 187 classes or multi-day training programs representing 7237 student-days of training. Numbers like these, while tremendous and in line with previous years, do not represent the entirety of what CTS does and what CTS is about. Moreover, these numbers do not reflect new and innovative programs CTS has in development. Typically, new programs account for a large percentage of the workload and in FY 1999-2000 this was no different. These numbers represent the culmination of many hours of work by all members of the group.

Being busy hasn't reduced the level of quality. The Compliance Training Section continues to provide high quality training while at the same time responding to the changing needs of California agencies and industry. The Compliance Training Section provides a valuable service to the Compliance Division, to ARB, to Cal/EPA, to the State and US EPA. Continued growth of the training program over the years reflects the value to this agency. The ARB has received many awards for the excellent work performed by CTS staff. The US EPA has provided significant amounts of grant money to ARB for the creation and expansion of CTS programs. The Compliance Training Section accomplishments continue to be used to meet Cal/EPA's program commitments.

There are many ways to dissect attendance information gathered from the various training programs offered by CTS. For instance, you can gauge the success of your program by simply looking at the total number of classes completed. This method is adequate for setting annual performance goals, but is myopic in terms of total staff workload.

Alternatively, you can calculate the total number of days of training that were provided. This is very useful for getting a representation of how busy trainers are.

Programs and Attendance

Air Academy (10-day)	36	810
FOE (3-day)	7	738
VEE Recertification	39	1159
100 Series (California) (5-day)	3	385
100 Series (National) (5-day)	5	670
200 Series (California)	60	1085
200 Series (National)	53	1147
Enforcement Symposium (3.5-day)	1	808
Dry Cleaner (ATCM)	12	161
Border Enforcement	1	28
Other 300 Series Courses	3	246
Overall Totals	187 (262.5 days)	7237
California Totals	129 (184.5 days)	5420
National Totals	58 (78 days)	1817

CTS has chosen a third method, namely student days, to determine the effectiveness of meeting training goals. Student days, simply put, are calculated by multiplying the number of students in a particular class by the number of days the class is given. That means that if one student attends all five days of a five-day course, CTS has provided five student days of training. Also, if the attendance for a single day course is 30 students, CTS has provided 30 student days of training. This method, while still not perfect, allows program coordinators to see not only how busy trainers are, but also to see the size of the audience that is being served.

Aside from overall attendance, CTS emphasizes program development. This means the development of new courses and programs as well as the retooling of existing courses and programs. In fact, the success or failure of the program is dependent upon CTS staff's ability to maintain and improve courses that have been taught for years in order to keep them current and informative while at the same time bringing new

material and courses of interest to environmental professionals. Thus, CTS has been able to provide valuable instruction for environmental professionals at all levels of experience.

The courses scheduled for the upcoming year reflect the specific needs of most local agencies in California. In addition, many special training programs are requested by other agencies and industries yearly and are provided by CTS 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 providing enforcement training and regulatory support for their staff.

FOE and VE Re-Certifications

The Fundamentals of Enforcement (FOE) training program is designed to educate environmental professionals on the enforcement of air pollution regulations and is the ARB's prerequisite course to becoming visible emission evaluation (VEE) certified in accordance with US EPA Reference Method 9. This three-day course consists of 1-½ days of classroom overview of air pollution related topics and 1-½ days of actual practice and field test leading to VEE certification. Certification is valid for 6 months and required of most district enforcement staff.

The FOE is regularly scheduled four times per year, however, due to extreme high demand, the FOE program was taught a total of seven times throughout California during FY 1999-2000. A total of 246 industry and agency personnel (738 student training days) received training to become certified visible emission evaluators.

VEE is one of the most cost-effective enforcement tools for regulators and the single most valuable self-inspection tool for industry. The Compliance Division offers both day and a unique night VEE re-certification. In addition to the FOE, 39 VEE re-certification classes were conducted with a total of 1,117 inspectors, engineers, consultants, and industry personnel re-certifying.

Additionally, at the request of the Canadian government, CTS provided staff to operate the VEE generator for environmental staff in British Columbia.

Air Academy

The Air Academy, the training program for all ARB employees, continues to distribute 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 Boards 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 that 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 remain a popular training resource.

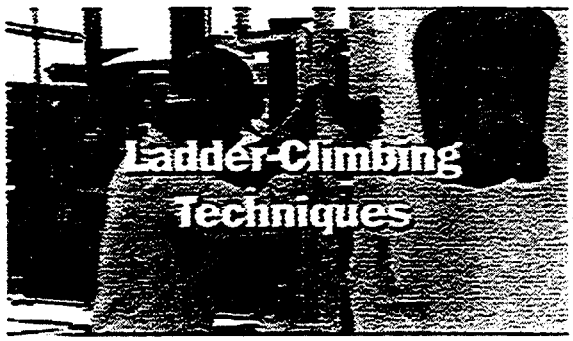
Requests for the training have been made by groups outside the Board, and they have expressed an interest in sending staff here. It is also interesting that air quality districts view it as a means of providing information for their staff on the role of ARB. Cal/EPA agencies have stated that they view it as an opportunity to provide cross-media training to their employees and may use it as a prototype for future educational programs. Three 10-day programs were held in Sacramento and El Monte. 162 employees completed the two-week course in 1999. Over the last three years, a total of 542 Sacramento/El Monte employees have participated in the Air Academy since its inception in February of 1997.

100 Series

Three 100-Series programs were conducted in California in FY 1999-2000. Inspectors from California, Arizona and Nevada as well as a number of representatives from regulated industries and the military attended the two regularly scheduled 5-day sessions in Southern California and Sacramento. An additional special program was conducted for students in the University of Southern California Department of Environmental Studies. This gave University

students considering environmental careers the opportunity to hear about the "real world" of air pollution and environmental compliance. Overall attendance for the three programs increased 22% from last fiscal year to 385 training-days.

National Program



Working with the core program of 15 courses, staff continued to make the presentations more relevant and dynamic. Staff completed and incorporated into the program the new video for "Inspector Safety," which has garnered very positive reviews from students. To supplement the videos used as the backbone of the 100-Series courses, staff created and upgraded electronic slide presentations for 10 of the courses, giving instructors additional tools to provide high-quality training.

200/300 Series Courses

Once an inspector or regulatory/enforcement professional has completed his/her "Basic Training," the next level of training provided by CTS falls in the 200/300 Series category. These courses are generally more focused than the 100 Series courses and have a higher level of technical information. Moreover, the 200 Series courses include actual "Hands On" experience in the form of field inspections as part of the training, while the 300 Series courses provide workshop environments and in many cases legal certification.

Fiscal year 1999-2000 saw increases in every measure used to interpret the success of the program. For example, CTS scheduled 75 in-state courses in FY 1999-2000, an increase of one course from FY 1998-1999. Classes accomplished also rose by one. Total student days and average class attendance also increased modestly. (See analysis below) Perhaps the most important increase came in industry attendance, which more than doubled, from 83 in FY 1998-1999 to 192 in FY 1999-2000. This is important since these students represent "paying" customers, which help offset agency costs and help legitimize CTS's program as an industry assistance program.

For the National Program 58 courses were accomplished for a total of 1143 student-days or 19.7 students per class. The student average also dropped slightly due to the small number of regulatory staff of several states scheduled this fiscal year. The most popular National courses were among the newer course offerings that CTS has with Observing Sources Tests (#224), Industrial Boilers (#273), and Landfill Gas Control (#285) ranking as the top three. In addition to the above, the National Program presented a two-day NSR/PSD workshops in Sacramento and then Santa Barbara. This course should be very popular in FY 2000-2001.

In summary, the 200/300 trainers had an outstanding year. Output was up 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 NSR/PSD, Dry Cleaning ATCM, Tampering and Detection, 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 Compliance Assistance material. 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

Classes Accomplished	59	60*	66	58
Student Days	1067	1133	1464	1143
Average Attendance	17.5	19	22.2	19.7
Industry Attendance	83 (7.8%)	192 (17%)	***	3 (.3%)

* CTS goal for classes accomplished was 46

200/300 Series FY 1999-2000 Combined Total

- Classes scheduled: 136
- Classes accomplished: 11
- # of students: 2276

Average per class: 19.3

Note: Data is based on State fiscal year (State fiscal year ends on June 30 while federal fiscal year ends September 30).

Cal/EPA Inspector Certification Program

The Cal/EPA Inspector Certification Program is the newest program added to the Compliance Training Section. It was created to implement AB 1102 (1999) that requires the Secretary for Environmental Protection to "develop a program to ensure that all the boards, departments, offices, and other agencies that implement Cal/EPA's laws and regulations "take consistent, effective, and coordinated compliance and enforcement actions."

The Cal/EPA Inspector Certification Program is currently slated as two-week training course with subject areas that include:

- Inspection preparation
- Observations and Interviewing Skills
- Documenting Violations
- Enforcement Actions
- Cal/EPA's Laws and Regulations
- Cal/EPA Programs

Because the program will impact inspectors from all Cal/EPA boards and departments as well as local implementing agencies, the Cal/EPA Inspector Certification Taskforce was assembled to ensure that the concerns of each board, department, and local agency would be addressed by the program. Participants include:

- Cal/EPA
- ARB

- Department of Pesticide Regulation
- Department of Toxic Substances Control
- Integrated Waste Management Board
- State Water Resources Control Board
- Cal/CUPA Forum
- California Conference of Directors of Environmental Health
- California Air Pollution Control Officers Association
- County Agricultural Commissioners and Sealers Association

Since November of 1999, Program staff worked hard creating the foundation of the program. During this past year staff researched existing/available/past inspector and investigator training programs and courses that may have pertinent material; assessed and audited applicable Cal/EPA Board and Department training courses; developed minimum standards for inspector training program; and developed a draft curriculum. This training will be available to approximately 1,500 inspection and compliance staff from all Cal/EPA Boards, Departments and Offices and local implementing agencies across California in the first quarter of 2001.

Cross Media Enforcement Symposium

Deborah Barnes, Deputy Secretary for Law Enforcement & Counsel, Cal/EPA presented the opening remarks for the 22nd Annual Environmental Cross-Media Enforcement Symposium in San Diego, CA the week of May 23, 2000. Ms. Barnes was sworn in as Deputy Secretary on May 9, 2000. This was a unique experience for the various Cal/EPA participants to meet Ms. Barnes.

Participants learned the latest enforcement methods and tactics and how to identify cross media violations. The violations were discussed in detail by the speakers and in breakout groups. The Compliance Division Training Section creates a mock case and a 30-minute video with input from our sister Cal/EPA Agencies. Sessions on Settlement Conference, Deposition, General and Expert Witness Examination, and the Jury Deliberation process allowed participants to see mock proceedings with students playing the roles of inspectors, witnesses and jurors while

experienced environmental lawyers demonstrated common strategies to represent defendants and discredit evidence.

Other topics discussed included: the Role of the Circuit Prosecutor; High Tech Crimes; Regulators and Law Enforcement Working Together; and an actual case study dealing with World Oil.

The symposium had 231 participants and speakers representing the Cal/EPA agencies (air, water, toxic, waste and pesticides); the air quality districts; local enforcement authorities; certified unified program agencies and designated county agencies; regional water quality control boards; county agricultural commissioners; environmental crimes task force members; law enforcement personnel; hazardous materials personnel; circuit prosecutors; city, district, U.S. and private attorneys; industry personnel, military personnel and environmental regulators were in attendance.

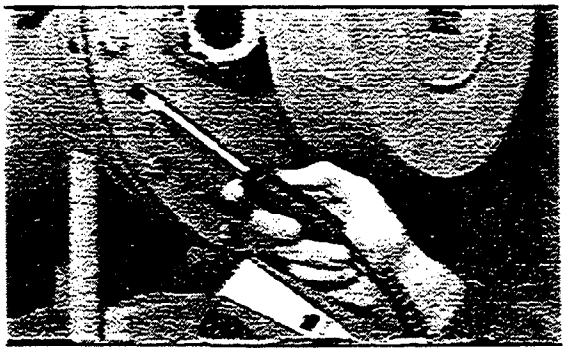
This year's evaluations show the participants were impressed with the high quality of audio-visual technology created by the Compliance Division's Training Section and the knowledge and professionalism of the speakers. Some of the comments received from the participants were: "Speakers were excellent presenters, the mock proceedings were very enlightening."

"Amazed at how excellent the PowerPoint presentations were and how valuable all of the class sessions were." "Case studies presented were excellent, the overall organization of the Symposium, ARB staff did a wonderful job."

This year's course was certified for Continuing Education Units, Minimum Continuing Legal Education Units and Peace Officer Standards and Training certification.

Pechloroethylene Dry Cleaning ATCM

In 1996 CTS unveiled a training program that offered certification to dry cleaners in the state of California that use the solvent perchloroethylene (PERC) to dry clean clothes. This certification was and is required by the

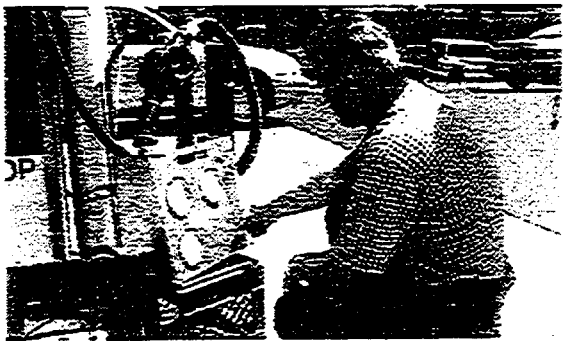


"Airborne Toxic Control Measure (ATCM) for Perchloroethylene Dry Cleaners" and was designed to help dry cleaners understand the requirements of the regulation that they would have to adhere to. This certification program has been operating well since 1996 and has been considered very successful by regulators and industry alike.

Since the regulation stipulates that this certification is only valid for three years from the date of instruction, in 1999 CTS was again enlisted to help produce a recertification program that would keep dry cleaners in compliance while at the same time address the problem areas of the regulation for dry cleaners. As in 1996 CTS created a stellar training program and has additionally implemented "Train the Trainer" sessions for over 50 private industry instructors. This endeavor was an unexpected addition to the workload of the group and its success to date is testament to CTS's commitment to high-quality instruction.

Additional Programs

3-Day GDF Vapor Recovery Class



The three-day class on vapor recovery for gasoline dispensing facilities has long been one of Compliance Division's most popular offerings. Course 340 is intended for air district inspectors. It reviews the strategy and tactics of VOC control in motor fuel transfer operations. It examines the variety of equipment available and demonstrates the specific source test and inspection procedures. Because of the broad scope of the lesson plan and the weight of emissions at stake, 340 is regularly attended by permit engineers and private sector contractors as well as the targeted inspector audience.

During FY 1999-2000there was one scheduled presentation of course 340. In addition there were two presentations in Seattle at the expense of local industry and for the benefit of industry and air quality districts. As a result, net attendance for the year included one dozen Californians, sixty Washingtonians, about one third of whom were government employees, half a dozen Texans and an assorted dozen from such places as Nevada, Pennsylvania, and the U.S. Navy.

In the past year the Board adopted a number of modifications to the VR equipment certification program that will have far-reaching consequences for all facets of vapor recovery including enforcement. As a result demand for course 340 is on the rise as a source of updates on this and other events in vapor recovery.

NSR/PSD Case Development Workshop

The Compliance Training Section staff, in collaboration with US EPA, several local districts, and the California District Attorney's Association, developed and presented two sessions of a new course, #325 New Source Review/Prevention of Significant Deterioration Case Development. The goal of this training was to provide local inspectors, permit writers, and regulatory personnel with practical information and tools to assess compliance with NSR/PSD rules and to assist them in pursuing legal action when violations occur. The 2-day course relied on a team of presenters – all experienced federal, state, and local air and law enforcement experts – to "demystify" the complexities of NSR and PSD, presenting concepts and terminology in the context of real-world examples and classroom exercises. A total of 48 persons attended the February 2-3 session in Sacramento and the February 8-9 session in Santa Barbara.

Special Course: Stationary Engines Fundamentals, Certification, and Testing for ARB Staff

With emissions from diesel engines becoming a major focus of the agency, more and more ARB staff are involved in various regulatory and test programs for stationary engines. To assist staff in their efforts to control emissions from these engines, SSD management requested that CTS coordinate the development and delivery of a one-day training course covering the basics of reciprocating engine operation and emissions controls, new engine certification procedures, and emissions testing from in-use engines. On June 14, after several months of collaboration, staff and management from Compliance Training, SSD, RD, MLD, and a distributor of emissions monitoring instruments delivered this training. The Compliance Training Section staff created an agenda and presented a modified version of the existing 200-Series course on Stationary Reciprocating Engines to cover engine fundamentals and emissions controls. New engine certification and source testing of engines was covered by presenters from RD and MLD. A distributor of a popular type of portable emissions monitor, used by some districts for field screening, gave a short presentation to wrap up the day. Thirty-

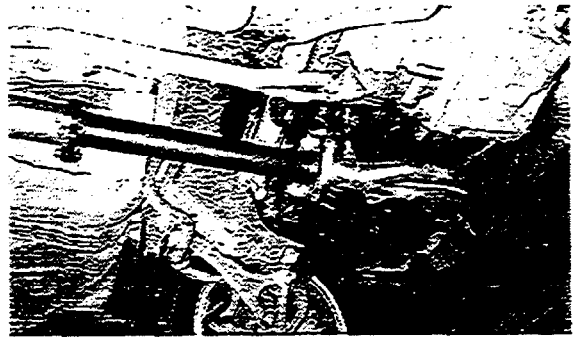
seven (37) staff attended some or all of the course, depending on their level of knowledge.

Fugitive Emissions Operator Training Program

During FY 1999-2000, CTS staff did much of the groundwork to prepare a training course for fugitive hydrocarbon emissions monitoring personnel, again at the request of SSD. The goal of the course is to present uniform and consistent screening methodologies to personnel who monitor VOC component emissions at refineries, marketing terminals, and oil and gas production facilities statewide, based on guidelines published by the California Air Pollution Control Officers Association (CAPCOA) and ARB/SSD. It is hoped that fugitive VOC emissions screening data gathered by trained operators will be more accurate and consistent, thereby providing some assurance that emissions inventories generated from this data will be more trustworthy. The course will also satisfy one of the requirements for operator certification at air quality districts with regulations requiring such certification. Delivery of the course will start September 2000 and will continue as long as there is interest from operators and districts. Estimates are that several hundred operators statewide will be interested in attending.

Tampering Detection Certification

You have just been issued a citation of Vehicle Code Section 27156(b). The section states: "No person shall operate or leave standing upon any highway any motor vehicle...unless the motor vehicle is equipped with the required motor vehicle pollution control device..."



Tampering surveys conducted by the US EPA show that, nationwide, 4% of the vehicles have had their catalytic converters removed. Recent random roadside inspections in California show that about 1% of the catalytic converters are removed. There are about 20 million affected vehicles in California. This means, using California and US EPA data, that 200,000 to 800,000 vehicles in California have had their catalytic

converter removed in violation of state and federal tampering laws. These vehicles are considered to be "gross polluters". Gross polluters can emit more than a ton of pollutants each year.

The ARB, in conjunction with the Bureau of Automotive Repair, local law enforcement, and the California Highway Patrol, has developed a POST-certified training program for law enforcement personnel on how to detect vehicular tampering. The training program entails an 8-minute training video, lecture, and an on-hands vehicle inspection using vehicles whose emission control equipment has been removed.

Smoke Management Training Workshop

This workshop was developed at the request of the Interagency Air & Smoke Council (IASC), consisting of 200 people from local, state, and federal air regulators and state, federal and private-industry land managers. The Workshop focussed on meteorology, prescribed burning, and smoke management with an emphasis on smoke dispersion in complex terrain. The speakers also addressed Title 17 and it's changes from the March Board meeting.

Three Workshops have been scheduled for the year 2000. Two have been held in northern California – Fortuna and Ione. 65 students attended the Fortuna training and 50 students attended the course in Ione. A third Workshop will be held in Yosemite in November. Post-Workshop evaluations reflected the success of the Workshops. Participants appreciated interaction with the speakers and the binders of educational and informational materials.

Environmental Crimes at the Border

In 1999, the CTS was asked by the Border Environmental Crimes Task Force to develop a class and 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.

During FY 1999-2000 the Border program was taken to Yuma, Arizona. The audience of 28 included representatives from U.S. Customs, the FBI, City and County Sheriff Departments, and State Police. Overall, the training was a tremendous success.

Video Productions

CTS produced three different video projects in support of ARB's continuing goals to provide California and the nation with top rated training material for environmental compliance related issues.

The first video completed was a health and safety video for the Uniform Air Quality Training Program entitled, "Inspector Safety." Students participating in the Series 100 course have viewed this video on a number of occasions. Overall, the video has garnered very positive reviews from both students and instructors from the various environmental agencies for which we provide training.

The second video staff completed was the video, "The Unexpected" written and produced by CTS for the 22nd Annual Cal/EPA Cross-Media Enforcement Training Symposium, held again this year in San Diego. The video was based on an all-new training scenario created by staff, the 25 minute docudrama brings alive a hypothetical investigation by a county environmental task force, revealing multiple violations in all environmental media: air, water, pesticide, solid-waste, and toxics.

The final video produced by CTS was entitled, "PERC Dry Cleaning ATCM, Environmental Training Video." This video was created to increase the instructional value of the dry cleaning certification courses as well as to ease the technological requirements of using the original materials.

In addition, CTS also prepared presentations for management speeches at public forums. These included speeches to the California District Attorneys Association, Westley Tire Fire town hall meeting, and presentations to STAPPA/ALAPCO, CAPCOA, and the ARB itself.

Summary

The Compliance Training Section continues to provide quality training while responding to ever changing enforcement needs. If the focus of

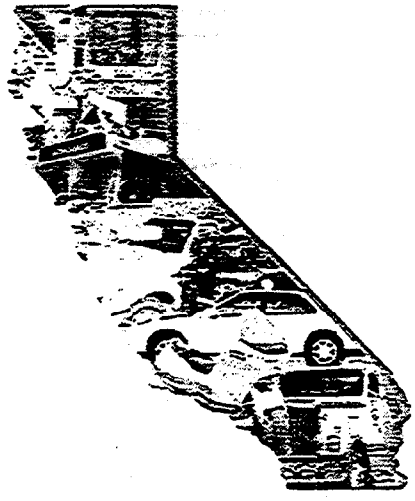
the current CTS program does not change significantly in the near future, the total training numbers will easily exceed current levels. In addition, CTS continues to provide support to the Compliance Division in many ways other than training by completing a variety of assignments in a fast and efficient manner. In spite of recent reductions in staff and resources, CTS continues to meet or exceed all goals. In order to improve the programs, the section is increasing its marketing efforts in selected areas to increase attendance where past numbers suggest an unmet market need. Where needed, CTS staff is constantly updating, upgrading, and adding new materials to existing courses. To ensure the success of the training program, adjustments have already been made and others will be made as need arises.

Chapter II

Mobile Source Compliance and Enforcement Activities

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

Introduction



California has a vast number and variety of mobile sources that together contribute over half of the emissions that create the state's air quality problem. The ARB is responsible for controlling emissions from these sources.

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.

"Traditional" mobile sources (i.e., on-road cars, trucks and buses) have, with each generation, become increasingly cleaner, and the air quality clearly reflects this progress. However, there is still a problem, particularly with the fine particles associated with on- and off-road mobile sources. To address this, it has been necessary for the ARB to extend its mobile-source regulations to control other sources, such as recreational vehicles, marine pleasure craft, lawnmowers, and off-road heavy-duty diesel engines.

The regulations governing the emission standards for mobile sources in California are developed by the ARB's Mobile Source Control Division (MSCD), and adopted by the ARB's governing Board. However, regulations tell only half the story. What remains is to make sure that the standards set in the regulations are upheld throughout the life of the mobile source in question. This is the province of the ARB's Mobile Source Operations Division (MSOD).

The prime focus of the MSOD's efforts is 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 and engine enforcement, dealership and fleet anti-tampering inspections, California emissions warranty repairs, and On-Board Diagnostics II (OBD II) system testing. (Note that the Advanced Engineering Section of the MSCD administers OBD II compliance programs.)

While most manufacturers, distributors and fleets voluntarily comply with the ARB's regulations, on occasion, an enforcement action is required to correct a violation. The ARB's Office of Legal Affairs works cooperatively with division staff to develop and settle cases in lieu of litigation. 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.

Chapter II of the report reviews the Board's strategies for ensuring that mobile sources in California comply with the regulated standards, and reports the ARB's FY 1999-2000 mobile source enforcement actions and settlements.

New Vehicles and Engines

Contacts

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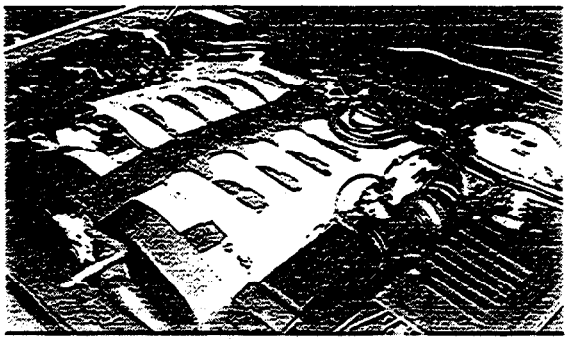
New Vehicle/Engine Audit Section Manager – Maggie Wilkinson	(626) 575-7040
Aftermarket Parts Section Manager – Rose Castro	(626) 575-6685

Certification

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. 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 data from demonstration and durability tests on vehicles

and/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 ARB 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 that allows for 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.

For the 2000 model year, there were 1,296 Executive Orders issued in the following classifications:

Passenger Cars, Light-Duty Trucks, Medium-Duty Vehicles	327
On-Road Heavy-Duty	119
On-Road Motorcycles	134
Small Off-Road Engines	411
Off-Highway Recreational Vehicles (All-Terrain Vehicles, Off-Road Motorcycle, Golf Cart)	128
Off-Road Heavy-Duty	177

New Vehicle/Engine Audits

Ensuring Compliance at the Time of Production...

Program Overview

While the Certification Section ensures compliance prior to production, the primary goal of the New Vehicle/Engine Audit Section (NVEAS) is to make certain that California-certified engine families comply with the applicable emission standards at the time of production. Catching a violation early can prevent or limit the sale and use of non-complying vehicles and engines in California and their associated air quality impact.

Emission test data to verify compliance of production line vehicles and engines is collected by the NVEAS in two ways:

1. manufacturer audit testing and reporting of emission test results for vehicles/engines selected from the end of their assembly line;

2. ARB conducting compliance testing of new vehicles and engines.

The NVEAS review process for each engine family includes: verifying that calculations are done correctly, that emission averages meet certification standards, that sampling requirements are met, and that failing vehicles and engines are repaired and meet standards before released to California.

This evaluation process culminates in quarterly NVEAS staff reports summarizing the production and emission averages for California-certified engine families. When a manufacturer has a non-compliant engine family, NVEAS staff works with the

manufacturers to ensure appropriate corrective action is taken and where an emission failure occurs, that non-compliant vehicles or engines are recalled or repaired in the field.

Another means of verifying that production vehicles and engines meet standards is ARB's compliance testing program (Title 13 testing) which is conducted at ARB's Haagen Smit Laboratory (HSL) or at contractor facilities. ARB compliance testing compliments the manufacturer quality audit program by providing a means by which to verify manufacturers' audit test results and to ensure that applicable standards are met. The NVEAS staff selects an engine family based on the audit data and other information about the family. After notifying the manufacturer, ARB randomly selects vehicles or engines from California distribution centers or from the manufacturer's production facilities. The selected vehicles or engines are delivered to ARB and are tested using the same procedures used for certification and manufacturer audit testing. If the average of the sample fails to meet standards, the manufacturer is required to implement corrective action and recall any affected vehicles or engines.

The H&SC §43211, §43212 and §43016 provide up to $5,000 per action for emission standard violations, $50 per vehicle for emission standard test procedure violations, and up to $500 for each vehicle or engine in violation of emission control requirements, respectively. Additionally, H&SC §43105 outlines procedures for recall of motor vehicles that fail California's emission standards.

Program Activities This Year

The requirement for manufacturers to conduct and report audit testing applied to three areas of new vehicle/engine production for FY 1999-2000:

- light and medium-duty motor vehicle manufacturing;
- small off-road engine (SORE) manufacturing;
- off-road heavy-duty diesel engine (HDDE) manufacturing.

During this fiscal year, the NVEAS reviewed the quarterly reports from 63 on- and off-road vehicle and engine manufacturers who provided test results for 630 engine families. Quarterly NVEAS staff reports were prepared for each program area summarizing production and the compliance status of each engine family. All engine families with

production volumes large enough to have a valid sample met the applicable emission standards.

In the past, an average of ten new motor vehicle engine families has been tested at the HSL facility each year as a part of the Title 13 compliance testing program. Due to the renovation of several test cells in the HSL and the need to have analyzers capable of evaluating lower emission levels from new vehicles, no Title 13 compliance testing was done FY 1999-2000. The testing facilities at HSL are expected to be available in September 2000 to resume motor vehicle compliance testing.

Because the HSL does not have a small engine dynamometer, NVEAS has not been able to conduct SORE Title 13 compliance testing. In September 1999, NVEAS staff began working on a Title 13 project to test small off-road engines at a contractor laboratory, California Environmental Engineering (CEE) in Orange County. The NVEAS staff, in conjunction with the Mobile Source Enforcement Section staff visited four manufacturer facilities in the Milwaukee area during November 1999 and selected engines for compliance testing. These engines were shipped to CEE. While visiting factories and test facilities NVEAS staff had an opportunity to inspect manufacturer facilities and to review their testing procedures. Staff was able to provide guidance and compliance assistance to the manufacturers in a number of areas related to sampling and test procedures.

The testing project at CEE was not successful. California Environmental Engineering was not able to operate their test cell to meet ARB testing requirements prior to the termination of our in-use testing contract with them. The NVEAS staff is exploring other options for using contractor facilities to conduct SORE compliance testing this coming year. They plan to visit other SORE manufacturer production and test facilities to provide compliance assistance and to select engines for testing.

Implementing New Regulations

During this fiscal year, a number of regulatory changes have occurred that effect the NVEAS audit-testing program. For the 2001 model year (MY) light and medium-duty motor vehicle program, manufacturers are no longer required to conduct new vehicle assembly line emission testing. Additional in-use vehicle testing is required instead. As part of the phase-in of these changes, manufacturers were allowed, for the 2000 MY, to certify to the new regulations, and therefore omit assembly line

testing. Eleven of the 27 certifying manufacturers for the 2000 MY chose this alternative for a total of 99 engine families.

Regulatory changes have also been adopted for the SORE program for the 2000 MY. While production line quality audit testing is still required, manufacturers now have a choice of using one percent sampling with compliance based on the average of the results or the cumulative sum sampling/statistical method to evaluate their results. The NVEAS staff has made a considerable effort to provide manufacturers with compliance assistance in implementing the amended regulations.

In FY 1999-2000, new regulations for outboard spark-ignition marine engines have also been implemented. For production line testing, these regulations are similar to the SORE regulations, allowing manufacturers to choose between cumulative sum sampling and the one-percent sampling/evaluation methods. Compliance assistance to this industry has included providing manufacturers with guidance regarding sampling plans, alternate test procedures and reporting requirements.

The NVEAS staff is responsible for implementing quarterly reporting requirements for off-road motorcycle and all-terrain-vehicle manufacturers.

FY 1999-2000 Enforcement Actions and Settlements

Manufacturer:	Confidential (small off-road engines)
Violation:	Failing engine families have allowed non-complying engines to be sold in California. Not using correct mixing chamber for certification and audit tests.
Settlement:	Manufacturer is implementing their quality control plan. Other aspects under negotiation.
Manufacturer:	Confidential (small off-road engines)
Violation:	Shipped engines to California prior to receiving executive orders for seven engine families.
Settlement:	Case sent to legal to negotiate a settlement.

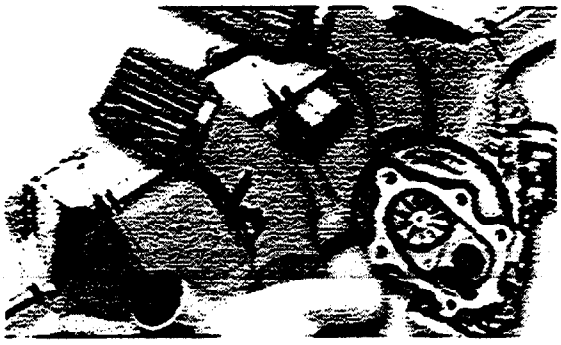
Manufacturer:	Confidential (on-road motorcycles)
Violation:	Delivered 139 motorcycles to dealers in California from one engine family prior to receiving an executive order.
Settlement:	Case sent to MSOD Enforcement Section for settlement.

Manufacturer:	Caterpillar (off-road heavy-duty diesel engines)
Violation:	Failure to test when one engine family had produced more than 150 for the model year.
Settlement:	Caterpillar did one test in 4th quarter of '99 and two more in February 2000 using 2000 model year engines of the same configuration. Caterpillar agreed to sample and test this engine family and the two that exceeded 150 engines in 1998 during the production year.

Aftermarket Parts

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

Program Overview



California law (Vehicle Code §27156 and §38391 and H&SC §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 affect vehicle emissions. The laws noted above 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 replace. An example of an aftermarket replacement part is a replacement exhaust gas re-circulation (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 ARB 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 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 to not increase vehicle emissions. These parts are not legal for use on any pollution-controlled vehicle in California, and they must 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.

Retrofit Systems

The Aftermarket Parts Section also certifies retrofit systems for sale in California. The criteria for certification includes a demonstration of 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 retrofit system that is currently certified is a natural gas fuel conversion kit.

Experimental Permits

In addition to evaluating aftermarket parts, the section issues experimental permits that allow the operation of experimental vehicles in California that may not meet California's emissions standards. These permits are often requested by manufacturers to evaluate new emissions control technology in 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 FY 1999-2000, the Aftermarket Parts Section received 190 applications for review; 171 of these applications were add-on and modified parts seeking VC 27156 exemptions, while 19 applications were for certification of retrofit systems. A total of 104 executive orders and 52 Experimental Permits were issued.

FY 1999-2000 Enforcement Actions and Settlements:

Manufacturer:	Confidential*
Violation:	Advertising, selling, offering for sale and installation of illegal parts.
Settlement:	Referred to the Attorney General's (AG's) Office on 2/28. Currently working with AG's Office in preparing the complaint and preliminary injunction.
Manufacturer:	Confidential
Violation:	Fraudulent claims on emission reduction and fuel economy benefits
Settlement:	Currently generating test data to support District Attorney's case against the company.

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

In-Use Vehicle Programs

Contacts

	Telephone
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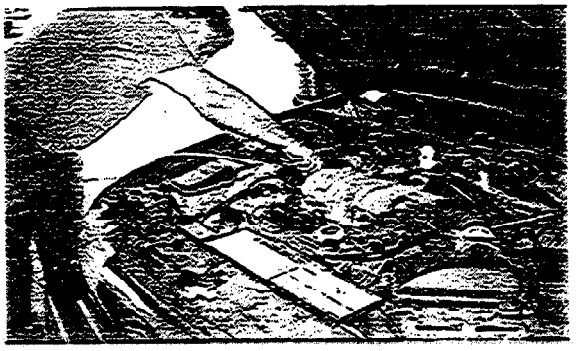
In-Use Testing Section Manager – (vacant)	(626) 575-6814

In-Use Testing

Ensuring Durable Emission Control Systems...

Program Overview



In order to guarantee that California-certified engine families comply with applicable emission standards throughout their useful lives the ARB must ensure that manufacturers build durable emission control systems. The In-Use Testing Section conducts testing of consumer-owned vehicles at an ARB-contracted laboratory.

Light-Duty Vehicle In-Use Testing

Approximately 40 engine families are selected for testing each year, 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, 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 throughout the testing period. Vehicles that meet the following procurement criteria are selected for testing:

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

Under ARB oversight, and in the presence of the manufacturer's representative(s), the selected vehicles undergo restorative maintenance which includes: checking the vehicle on-board diagnostic computer for any stored fault codes, checking for signs of tampering, and adjusting all parameters to the manufacturer's factory specifications. The prepared vehicles are tested for exhaust and evaporative emissions, using the Federal Test Procedure. The vehicles tested must comply, on average, 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 Testing Section notifies the manufacturer of the non-compliance and begins negotiations for remedial action. 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 January 1, 1990 through June 30, 2000. 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.

Medium-Duty Vehicle In-Use Testing

Based on the success of the light-duty in-use test program, the In-Use Testing Section started a similar in-use test program for medium-duty engines in 1998. The ARB selected the top selling medium-duty engine families sold in California for testing. The manufacturers were responsible for procuring and testing five representative engines. The testing was 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.

In-Use Vehicle Testing and Recalls
(January 1, 1990-June 30, 2000)

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	
1996	40	12	130,218	
1997	35	11	121,683	
1998	38	16	139,104	
1999	36	22	65,000	
2000	22	19	101,254	
[illegible]	[illegible]	[illegible]	[illegible]	

*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 (1991)
Reason: Excessive emissions levels due to failing catalysts on over 100,000 vehicles

Settlement Features:

Air Pollution Control Fund	$ 200,000
Fund in-use compliance testing	$ 900,000
Nine electric & hybrid electric vehicles (includes R&D)	$ 9,000,000
Studies related to electric vehicle use and marketability	$ 200,000
Total Value	**$10,300,000**

***Manufacturer: Mitsubishi (1992)
Reason: Excessive emissions levels on approximately 45,000 vehicles

Settlement Features:

Air Pollution Control Fund	$ 100,000
Fund in-use compliance testing	$ 450,000
Six electric & hybrid electric vehicles (includes R&D)	$ 4,200,000
Studies related to electric vehicle use and marketability	$ 200,000
Total Value	**$4,750,000**

California Emissions Warranty Information Reporting Database

The In-Use Testing 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 noted 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 possibly recall 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 FY 1999-2000, this program initiated seven emissions-related recall campaigns resulting in the repair of some 100,000 vehicles. Since the program began in 1990, ninety-nine recalls have been implemented, involving approximately 1.8 million vehicles.

Mobile Source Enforcement

Contacts

	Telephone:
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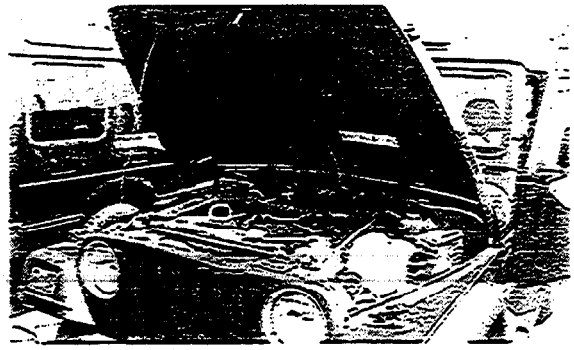
Mobile Source Enforcement Section Manager – Gregory H. Binder	(626) 575-6843
Northern Heavy-Duty Diesel Section Manager – Donald J. Chernich	(916) 322-7620
Southern Heavy-Duty Diesel Section Manager – Darryl P. Gaslan	(626) 450-6155

Mobile Source Enforcement

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 group 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. Investigations and enforcement actions, as necessary, against these violators ensure that the ARB's clean vehicle and engine requirements achieve their maximum air quality benefits. The chart below shows the number of combined anti-tampering and illegal vehicle/engine cases for FY 1999-2000.

Mobile Source Investigations - FY 1999-2000

Number of Cases*			Number of Vehicles		
Illegal	Anti-Tampering	Total	Illegal	Anti-Tampering	Total
134	2	136	274	2	276

*(Collections from these cases in excess of $100,000)

The MSES staff is available to the mobile source compliance staff within both the Mobile Source Operations Division and the Mobile Source Control Division when enforcement assistance is required. In addition, the MSES conducts joint operations with the Strategic Environmental Investigations Unit that is housed within the Compliance Division.

Notices of Noncompliance

The ARB's illegal vehicle and engine enforcement program relies on a variety of sources to trigger investigations, including 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 throughout the state for every federal vehicle (i.e., a vehicle that is not certified to California standards) 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).

Working with the field investigation staff, and often with other local, state and federal agencies, staff 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. If necessary, the case will be litigated. Violators are subject to civil penalties of up to $5000 for each contravention. Enforcement actions may also be initiated against fleets, such as car rental companies, that negligently or intentionally use new federal vehicles within California.

Aftermarket Parts Investigations

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.

Dealers and Commercial Fleets

Used car dealers and commercial fleets are routinely inspected to detect emissions control tampering. When the dealer and fleet program began over twelve years ago, almost every dealer and fleet inspected had multiple violations. Subsequently, 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 focus has been changed to concentrate on the dealers and fleets that continue to have compliance problems. Previously, the field staff would typically inspect (5-10) vehicles at each location; however, with the focus now on problem dealers and fleets, 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. The Mobile Source Enforcement Section staff processes all case settlements, and delinquent cases are referred to ARB Legal for small claims court filing. The citing inspector presents 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 have resulted in a very high rate of vehicle repair -- a primary air quality goal.

Off-Road and Non-Road Cases

Over the last fiscal year, the enforcement of off-road and non-road cases has evolved to include investigations and 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 1999-2000 Enforcement Actions and Settlements

Manufacturer:	Nissan Diesel Limited
Violation:	Sold (31) new non-CA-certified heavy-duty diesel truck engines

Settlement:	$23,250 ($750/vehicle); all vehicles certified 50-state.
Manufacturer:	Volvo Cars of North America (VCNA)
Violation:	Sold (26) new non-CA-certified vehicles
Settlement:	$104,000 ($78,000 to the Air Pollution Control Fund and $26,000 for a Supplemental Environmental Project); additionally, VCNA repurchased each of those 26 vehicles and removed them from California; those vehicles were replaced with CA-certified cars.
Manufacturer:	Confidential
Violation:	Sold (40+) generators with new non-CA certified engines
Settlement:	Currently being negotiated
Company:	Confidential
Violation:	Sold at least (5) and titled (81) new grey-market Mexican cars in CA
Settlement:	Case referred to the CA Attorney General
Manufacturer	Confidential
Violation:	Multiple emission label violations
Settlement:	$150,000 settlement with specific corrective actions pending
Company:	Confidential
Violation:	Illegal intra-state rental of (200+) non-CA-certified vehicles
Settlement:	Currently under investigation with the Los Angeles County D.A.'s office.
Manufacturer:	Confidential
Violation:	Illegal sales of off-road motorcycles/ATVs and Harley clones that do not meet CA emission standards
Settlement:	Currently under investigation
Manufacturer:	Confidential
Violation:	Stockpiling and under-reporting audit testing of 1999 model year hand-held equipment
Settlement:	Currently under investigation
Manufacturer:	Confidential
Violation:	Illegal sales of non-CA-certified lawn mowers by two manufacturers
Settlement:	Currently under investigation

Manufacturer:	Confidential
Violation:	(375 vehicles involved) Manufacturer offered this engine only as CA or federal. Several secondary manufacturers ordered the 50-state option but were provided federal engines.
Settlement:	Implementing corrective action (all 375 have been retrofitted to meet CA emissions standards), $1.5 million settlement offer pending.
Manufacturer:	Confidential
Violation:	Sold 29 illegal non-California certified hover lawn mowers
Settlement:	Currently under investigation
Manufacturer/ Company:	El Dorado Bus Sales
Violation:	Secondary manufacturer sold eleven (11) non-CA-certified Ford 6.8L vehicles to California businesses.
Settlement:	Total of $27,500 settlement from El Dorado Bus Sales ($17,500), Creative Bus Sales (5,000), and Alamo Leasing ($5,000). All vehicles were retrofit by Ford to meet California emissions standards.
Company:	Marriott Hotel
Violation:	Purchased and used two illegal non-CA certified vehicles
Settlement:	$5,000; vehicles removed from California
Company:	ARB, Inc.
Violation:	Leased four illegal non-CA-certified vehicles
Settlement:	$8,000; vehicles removed from California
Manufacturer:	Confidential
Violation:	Sale of 2 non-CA-certified para-transit vehicles
Settlement:	$8,000 settlement pending, vehicles have been replaced with CA-certified vehicles
Manufacturer:	Confidential
Violation:	Sold 3 (plus multiple dealer transactions) non-CA-certified vehicles
Settlement:	$55,000; with specific corrections, pending
Manufacturer:	Ryder Transportation
Violation:	Offered for sale two illegal non-CA certified vehicles
Settlement:	$5,000; vehicles removed from California

Manufacturer:	Confidential
Violation:	Multiple emission mislabeling violations (covering 2 model lines)
Settlement:	pending
Manufacturer:	Simon Motors*
Violation:	Offered for sale one illegal non-CA certified vehicle
Settlement:	$5,000
Company:	Marin Chevrolet-Oldsmobile
Violation:	Offered for sale two illegal non-CA certified vehicles
Settlement:	$7,500; one vehicle sold, one vehicle removed from California

*There are many other cases for $5K or less that are pending settlement.

Heavy-Duty Diesel Smoke Enforcement

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

Program Overview

The ARB, in cooperation with the California Highway Patrol (CHP), tests heavy-duty trucks and buses for excessive smoke and emission-control 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 on-road 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 more than 14,000 fleet locations, statewide. Currently, the ARB has 21 field staff operating these programs in northern and southern California.

Roadside Smoke Inspections

To conduct a smoke inspection, ARB staff selects a vehicle for testing and directs it into a special inspection lane where the wheels are

chocked for safety and the vehicle's transmission is placed in neutral. The driver is instructed to rapidly depress the accelerator several times until the engine's 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, 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 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 and are noted below.

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 – FY 1999-2000		
Number of vehicles inspected	21,039	
Number of citations issued	1,009	
Number of NOVs issued	362	
Total number of violations	1,371	(6.5% failure rate)
Penalties assessed	$ 307,200	
Penalties received	$ 312,000	(101.6% collection rate*)

*It is assumed, in terms of penalties assessed, that first-level citations will be resolved within a 45-day period, and therefore subject to a $300 penalty. Those citations that are not resolved within this period must submit $800. The collection rate reflects this.

(Note: The ARB now has a formal program to collect delinquent penalties. During this reporting period, approximately $35,000 was collected under this program.)

Fleet Inspections

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 to operate 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 randomly audits fleets' maintenance and inspection records, and audit tests a representative sample of their vehicles. These audits commenced on October 1, 1999. During FY 1999-2000, ARB completed 2,210 audits, and found a 49.7% full-compliance rate. Of those non-compliant fleets, 90% are in partial compliance, and 10% recalcitrant. The Heavy-Duty Diesel staff conducted enforcement audits on two of the recalcitrant fleets, wherein they were issued citations for non-compliant vehicles. Both fleets have shown improvement.

California Council on Diesel Education and Technology

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 six participating community colleges throughout California.

On-Board Diagnostics

Contacts

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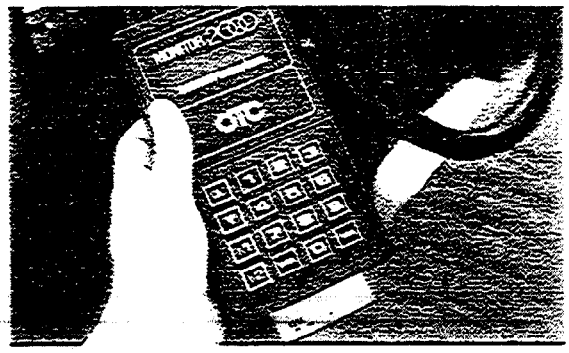
On-Board Diagnostics

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.

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 FY 1999-2000.)

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.

1999/00 Enforcement Actions and Settlements:

Manufacturer:	Confidential
Violation:	1997-1999 OBD II system deficiencies
Settlement:	Voluntary recall
Status:	Final
Manufacturer:	Confidential
Violation:	1998-1999 OBD II system deficiencies
Settlement:	Under negotiation
Status:	Pending
Manufacturer:	Confidential
Violation:	1998 OBD II system deficiencies
Settlement:	Under negotiation
Status:	Pending
Manufacturer:	Confidential
Violation:	1998-1999 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

OBD II Field Test Vehicles FY 1999-2000

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

2000	Jeep	Cherokee	—	RDY560	2R9619
1999	Ford	Escort	XFMXV02.0VGC	3WGP086	2R9619
2000	Subaru	Legacy	YFJXV02.5JEH	18593DIST	2R9619
2000	Mitsubishi	Montero Sport	YMTXT03.5GNG	207DIST	2R9619
2000	Mazda	MVP	YTKXT02.52FM	4HBC524	2R9619
2000	VW	Golf	XVWXV02.0227	11976DIST	2R9619
1999	Ford	Explorer	XFMXT04.02GC	4DAP065	2R9619
2000	Olds	Intrigue	YGMXV03.5064	4CIF581	2R9619
1998	Mitsubishi	Eclipse	WDSXV02.4G3G	3XPL237	2R9619
1998	Dodge	Ram1500	WCRXA0318H11	5S52025	2R9619
1998	Mitsubishi	Galant	WDSXEV02.4G1G	3WGP086	2R9619
2000	Jeep	Cherokee Classic	YCRXT0242230	4HES187	2R9619
2000	Jeep	Cherokee Classic	YCRXT0242230	4HES557	2R9619