

AIR POLLUTION CONTROL DISTRICTS

I. EXECUTIVE SUMMARY

Air Pollution Control programs for stationary sources in California are implemented and enforced by thirty-five local air pollution control and regional air quality management districts. As part of an ongoing effort to characterize enforcement programs at the local level, the California Air Pollution Control Officers Association (CAPCOA) surveyed eleven of its larger member districts.

Enforcement of, and compliance with, air pollution control requirements is undertaken and measured through a variety of activities, approaches, and tools. This report reviews select program elements and data. Overall, the data describe a robust enforcement and compliance assistance program with substantial funding and staff resources that achieve a high degree of compliance with applicable requirements. Compliance assistance and outreach programs proactively prevent violations from occurring, but when violations do occur, robust enforcement actions bring about a prompt return to compliance.

A) Major Program Highlights

The following statistics measure performance of select enforcement and compliance program elements at the eleven largest local air districts over a five-year period (from 2002 through 2006). These districts include within their jurisdictions over 93% of California's residents. As described in greater detail below, these data were gathered through an extensive survey process. They describe a robust and effective enforcement and compliance program for stationary sources of air pollution. Program achievements include:

- Over 510,000 inspections at traditional stationary sources between 2002 and 2006,
- Over 55,000 inspections of Major Permitted Sources (a.k.a. Title V Facilities);
- Facility compliance rate about 95%;
- Over \$130 million in monetary violation settlements;
- More than \$37 million in non-monetary violation settlements;
- Over 185,000 special purpose inspections;
- Nearly 33,000 inspections for asbestos pursuant to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Asbestos;
- More than a 5-fold increase in the number of inspections of portable equipment;
- More than 500 full time employees (FTE) conducting field inspections;
- Over 4,000 days of training for field staff, or approximately 825 training days per year;
- Approximately 25% of total district budgets dedicated to enforcement.

B) What the Reported Data Tells Us

The reported data show that local air districts dedicate substantial resources to enforcement of stationary source requirements, and other special requirements, such as federal standards for hazardous air pollutants. The data also show that the resources are efficiently deployed to produce measurable enforcement and compliance presence, and that this presence results in a high degree of compliance.

C) How the Program Will Use This Information

Each individual air district uses its inspection, enforcement, and compliance statistics to establish future program goals and to guide the prioritization and deployment of resources. Collectively, through CAPCOA, the districts share information about enforcement and compliance to identify broader issues and problems, and to leverage their collective experience. CAPCOA also works collaboratively with the Air Resources Board (ARB) to identify areas for joint program improvement efforts.

D) How Future Compliance Statistics Will Be Gathered and Reported

The data reported here are derived from the CAPCOA survey of 11 air districts. The survey covered fifty-three discrete measures of compliance program performance from each of these districts in each of the five years reviewed, for a total of more than 2,900 data points. These included information on agency resource commitments, compliance rates, repeat violations, civil penalty averages, case disposition, and criminal referrals. The data covered the 5 year period between 2002 and 2006 inclusive. Because each air district collects, stores, and reports compliance using unique technology platform and database design, there is currently no common database to track District level compliance statistics for reporting compiled statewide information. CAPCOA recognizes that having the capacity to readily and timely report statewide air district compliance statistics would be useful for keeping the public informed of statewide air district activities and performance. In order to facilitate such reporting capacity, CAPCOA has embarked on a project to design and develop a compliance statistics database. The project includes the development of a common set of data definitions and the design of a database in which the data would be stored and processed and from which statistics would be reported.

II. THE ENFORCEMENT PROGRAM AT LOCAL AIR DISTRICTS

A) Overview

There are 35 local air pollution control and air quality management districts in California. The earliest local air districts were created in response to urban air pollution problems, notably in the San Francisco Bay Area and in Los Angeles. In 1970, legislation established a local air pollution control or air quality management district in every county in California. State law recognizes multi-county districts that were already in existence, and provides for districts to unify into regional agencies.

Local air districts run monitoring networks to measure pollution in ambient air. They develop plans to attain state and federal ambient standards, and adopt regulations and other measures that implement the plans. Districts issue construction and operating permits or registrations for stationary and portable equipment or activities that emit air pollution, and inspect equipment and activities to ensure compliance with applicable requirements. This permit review includes requirements for new or modified sources of air pollution to use the best pollution control technology for criteria pollutants and a risk-based review of toxic air pollutants.

Districts review the toxic emissions from facilities and the associated impacts on the public, and require facilities that pose significant risks to implement risk reduction plans. Districts also regulate activities like open burning on agricultural or forested lands, and activities that cause a public nuisance. Local districts regulate agricultural sources of air pollution, including livestock operations,

field operations that generate dust, and certain agricultural engines. They also review the air pollution impacts of projects under the California Environmental Quality Act (CEQA). In addition to programs mandated by federal and state law, local air districts develop programs to respond to specific local air pollution problems and concerns. These can include measures to reduce emissions from indirect sources of air pollution, such as residential or commercial development, programs to support development of new, low or zero emission technologies, efforts to address global warming, and work to reduce impacts on communities, especially low-income communities and communities of color. Districts collaborate with local governments, business and the public to reduce transportation-related air pollution through better planning and infrastructure, and voluntary programs to reduce motor vehicle trips. They also implement financial incentive programs to reduce emissions from motor vehicles and heavy-duty diesel engines, lawn mowers, fireplaces, woodstoves, and other sources.

An important, but non-regulatory component of enforcement and compliance programs is the outreach made by the district to the regulated community to the public in general. The goal of outreach is to improve the general and specific knowledge of the people who operate sources that are subject to regulation, and to assist them in complying with their requirements. It also improves the understanding of the general public and allows them to more knowledgeably report concerns about non-compliance. Outreach efforts encompass a number of activities. These include, for example, the distribution of printed materials that address air pollution issues broadly, or specific regulations and how to comply with them; workshops and community meetings; the staffing of public information lines to respond to phone inquiries; the development and maintenance of on-line, electronic information; and individual meetings when appropriate or requested. Data on compliance assistance programs are not included in this reporting, however.

Organizational Structure

Local air districts operate at the direction of their Boards of Directors. The Board at each air district has, at a minimum, county Supervisors of the county or counties within the jurisdiction of the agency. Districts meeting the criteria of the Hauser Act also have representation of cities (by city council members) within their jurisdiction. A few of the larger districts also have members appointed by the governor, legislators, or a mayor. Other than this small number of appointees, all members of district governing boards are locally elected officials.

The Air Pollution Control Officer / Executive Officer of the air district is appointed by the governing board. He or she directs the district staff. The size and organization of air district staff varies considerably across the 35 local air districts. The largest air district has a population exceeding 16 million, and over 800 full time employees. The smallest air district has a population less than 10,000 people, and one employee who also performs other functions (such as acting as the Agricultural Commissioner, for example). The larger air districts have full time legal counsel, and in some cases full time prosecuting attorneys as well. Smaller air districts contract for legal services, typically with counsel for the county or counties within their jurisdiction. Some of the smaller, rural air districts also work with the Circuit Prosecutor Program established by Cal/EPA, and consult with legal counsel at the Air Resources Board or at other air districts if additional, specific legal expertise is needed.

Each local air district also has a hearing board, established pursuant to the Health and Safety Code, with membership appointed by the governing board and restricted to specified areas of expertise. The hearing boards review petitions for variances from local rules and regulations, proposed orders

of abatement in cases of non-compliance, and appeals of permitting decisions made by the Air Pollution Control Officer.

B) Enforcement Program Components

There are several important components in a robust enforcement program. This report focuses on field enforcement activities, namely inspections and investigations. The data are based on a review of enforcement and compliance conducted by CAPCOA. CAPCOA reviewed and compiled enforcement data from 11 local air districts (“the/these districts”) for the years 2002 through 2006. The review focused on the five largest districts in California and six medium size districts. These 11 districts – the Bay Area AQMD, Mojave Desert AQMD, Monterey Bay Unified APCD, Sacramento Metro AQMD, San Diego County APCD, San Joaquin Valley Unified APCD, San Luis Obispo County APCD, Santa Barbara County APCD, South Coast AQMD, Ventura County APCD, and Yolo-Solano AQMD -- represent nearly 93 percent of the population in California -- see Appendix A, Population By Air District. Since air pollution has a direct link to population in terms of causes and impacts, CAPCOA chose to use its limited resources to study only these districts because they best represent local district activity in California in terms of population and air pollution sources. (It should be noted that CAPCOA is currently undertaking a project to include the majority of the 35 air districts in data summaries that will be provided in future reports.)

The 2002-2006 survey covered fifty-three discrete measures of compliance program performance from each of these districts in each of the five years reviewed, for a total of more than 2,900 data points. These included information on agency resource commitments, compliance rates, repeat violations, civil penalty averages, case disposition, and criminal referrals.

Generally, the data reported here concern field inspections and investigations. An inspection entails a visit to the actual facility site, and observation of the equipment during operation. The inspector will review the operation against the requirements listed in the permit and, for sources not required to have a permit, as well as for permitted sources, against the requirements contained in any applicable federal, state, or local air regulation. Depending on the type of operation, and the regulations of the air district with jurisdiction, there may be a small or large number of individual requirements and limitations, and they may apply across the facility, or only to a specified activity or piece of equipment. Requirements and limitations may include direct limits on emissions as measured at a specified point; restrictions on throughput, production, or hours of operation; restrictions on raw materials or fuels used; specifications for temperature, pressure, or other operating parameters; prohibitions against certain actions; requirements to install, operate, and maintain pollution control equipment; requirements to undertake specified mitigation actions; and requirements to measure, record, and/or report emissions or process parameters.

Inspection of a source in the field involves direct verification that all applicable requirements are being met. This may entail observation of emission streams, including visual reading of opacity, measurement of emissions content with various analyzers, and observation of emissions monitoring data. The inspector will also measure or observe the monitoring of specified operating parameters, including mitigation requirements, such as sweeping, watering, and other such actions. He or she may also conduct testing of equipment performance using specified test methods. Visual inspection of equipment and emissions control devices is done to ensure everything is in proper operating order, and that changes have not been made in equipment or operations without agency review and approval. Stockpiles or other storage of feed materials and product are also examined and samples may be taken to verify content. Data review include examination of emissions and parametric monitoring records,

source testing results, operational logs (including production data), mitigation logs, excursion reports, and any other relevant information.

1) Major Permitted Source Inspection

Major Sources are defined under the federal Clean Air Act (CAA). The definition is based on the magnitude of the potential emissions from the source. The emissions threshold at which a source is considered “major” varies according to the attainment status of the air district in which the source is located. In areas that attain the National Ambient Air Quality Standards (NAAQS), or are moderate non-attainment, major sources are those that have the potential to emit at least 100 tons per year of any regulated air pollutant, or 10 tons of any single hazardous air pollutant (HAP), or 25 tons of any combination of HAPs, as defined under the CAA. That threshold is lowered in areas with more significant non-attainment problems, becoming increasingly more restrictive as the non-attainment problem becomes more severe. In areas with extreme non-attainment problems (indicating the most extensive problem), a source is considered major if it has the potential to emit at least 10 tons per year of a regulated air pollutant.

All such major sources are required to hold permits under Title V of the federal CAA. These sources are also subject to extensive monitoring, recordkeeping, and reporting requirements and they are required to submit annual certifications of compliance. Most of these sources have continuous emission or continuous parametric monitors. The local air district issues and enforces the terms of this permit.

This inspection category represents the number of periodic Title V facility compliance determinations conducted in a given period (as required by EPA). One inspection would be assigned for each Title V facility inspection completed. Some of these facilities are inspected quarterly, and a few, such as petroleum refineries, are so large and complex, with tens of thousands of pieces of equipment and/or potential emission points, that inspectors are on-site almost full time because it can take a full year or more to review the entire facility. It should be noted that, in many instances, Title V sources not only have routine compliance inspections but other inspections as well including, equipment breakdown investigations, complaint investigations, witnessing or conducting source tests, continuous emissions monitors (CEMs) review, and reviewing records/Title V reports. If a certain category of equipment is prone to be in non-compliance, it likely will receive additional scrutiny at all applicable sources.

2) Minor Permitted Source Inspection

Minor Permitted Sources are sources that not considered “major” according to the federal definition. Many of these are smaller sources, such as gas stations, drycleaners, and auto body shops. Others are relatively large, in spite of the title “minor” and may include such operations as aggregate mining, combustion equipment, coating operations, printing, and circuit board manufacturing.

Minor sources are not required to have federal Title V permits. They do, however, hold local air permits. Some of these sources have continuous monitoring, however most do not. The recordkeeping and reporting requirements are typically less extensive as well. They may be inspected once a year, or even more frequently than that, but if the emissions are relatively low, their toxic emissions are not significant, and they do not present other issues of concern (such as public nuisance), they may be inspected less than annually.

The designation of “minor” does not necessarily mean the sources are unimportant, however. There are tens of thousands of stationary sources whose emissions are not above “major source” thresholds, but which present a potentially significant risk to human health and the environment because of the toxicity of the pollutants emitted. These include chrome plating operations, sterilizers that use ethylene oxide, drycleaners that use perchloroethylene, gas stations, coating operations with toxic metals in the coating, and internal combustion engines that are fueled with diesel. Not only are the emissions hazardous, the sources are frequently located much closer to residential areas than large industrial sources are, because zoning often permits their operation in business and commercial areas, and even co-located with higher density housing. Because of this, these sources are typically inspected at least once a year. Minor sources with the potential to emit significant or toxic emissions and/or have had a prior history of non-compliance will receive extra scrutiny from districts.

This category would encompass any “complete inspection” conducted of any non-Title V facility that is subject to district permitting or registration requirements i.e., all permitted/registration equipment and all processes subject to source-specific requirements. Typical compliance activities would include annual or recurring inspections; or inspections stemming from a complaint investigation, visible emission observation, or environmental justice-related issue. One inspection would be assigned for each non-Title V permitted facility inspection completed.

3) Non-permitted Source Inspection

Some sources are subject to regulation, but not required to obtain permits. The sources involved here will vary somewhat from district to district. In areas that attain most or all standards and there is not a significant nonattainment problem, small sources may not require permits where they would in areas that have more substantial nonattainment problems. There are also rules that affect many ubiquitous sources that are enforced without permits. These may include such regulations as restrictions on residential wood combustion, limitations on the content of coatings offered for sale, or limitations on idling engines; in some areas, open outdoor burning is regulated but not subject to permits. Some districts require permits/approval to conduct burning of agricultural waste, prescribed burning of forest land, or hazard reduction burning in remote rural areas. The compliance departments work closely with in-house/local/state meteorologists to ensure emissions from such burns are minimized.

Some of these inspections involve reviewing shelf-stock at retail operations, while others may involve driving around looking for smoke on days when burning has been restricted. Some districts will take samples of coatings and other products and have analyzed by a laboratory to ensure they meet rule requirements. Enforcement of anti-idling rules is done in places like ports, outside schools, or at truck stops or job sites. This category includes the “complete inspection” of any source not subject to written permit requirements, but where source specific requirements do apply. This category would also include many area source categories such as open burning, agricultural operations and excavation/demolition sites. One inspection would be assigned for each non-permitted facility inspection completed.

4) Investigation of Upset/Breakdown Reports

Local regulations provide for limited protection from enforcement if emissions limits are exceeded during a qualifying upset/breakdown event. In order to qualify, the emissions have to be the result of a non-routine event, such as the malfunction of a piece of equipment or upset conditions in a process that is outside the control of the operator. The facility operator is required to report the

event within a specified time period and provide a written report documenting the cause of the event and the subsequent actions taken. Coverage, or protection from enforcement, may be approved by the Air Pollution Control Officer (APCO) for up to 96 hours in order to allow for repairs and restoration of normal operating conditions. If the repairs will take longer than 96 hours, further protection can only be granted by the hearing board in the form of a variance.

When upset/breakdown reports are received, districts investigate the cause of the event, to ensure that it was in fact outside of the operator's control, and not the result of an error, negligent actions, or poorly maintained equipment. Other conditions checked by inspectors include whether or not this is a recurring situation and whether this causes a violation of air quality standards or a public nuisance. This category would reflect the number of breakdown investigations undertaken and completed by the 11 districts surveyed. One inspection would be assigned for each breakdown investigation completed, although an investigation may require multiple site visits. Reports of breakdowns are tracked by some districts in databases which allow for tracking to ensure reported events are not recurring.

5) Investigation of Complaints

All air districts have programs to receive, log, and respond to complaints from the public about air pollution problems. Complaints frequently involve objectionable odors, dust, or smoke, but other causes are also seen. The complainant may or may not know where the source of the problem is. Sometimes complaints are reports of health symptoms that the complainant believes are attributed to air pollution from a known or unknown source. Complaints may be lodged about activities or emissions that occurred in the past, in which case an investigation is not possible or can, at best, yield only limited results. In these cases, complainants are instructed to call when the activity, emission, smell, dust, or smoke is actually occurring or present. Some districts have inspectors available twenty-four hours a day to respond to complaints. Others respond after hours only to significant events (that is, where multiple people are impacted or where hazardous emissions are involved), or if a pattern of off-hours complaints indicates off-hours operations requiring inspection or that an offender may be intentionally timing activities to avoid detection.

The air districts, working through CAPCOA and with the ARB, developed and implemented a complaint resolution protocol that sets forth appropriate complaint response procedures and outlines when and how complaints are referred between the districts and ARB. Typically, the district receives the complaint and enters it into a complaint log. The inspector may review permit files to determine if there are likely sources of the problem in the area, as well as complaint logs to see if other similar complaints have been received in the past. If additional information is needed, the inspector may contact the complainant and interview him or her before visiting the site.

The inspector will note the wind direction and speed at the site, and attempt to confirm the complaint (that is, does he or she observe the odor, dust, smoke, or other emission of concern, or note physiological symptoms similar to those reported in the complaint?). When complaints are directed at a specific source, the investigation may largely resemble a stationary source inspection, but specifically involving activities or equipment that would result in the odor, dust, or other emission that is the subject of the complaint. Efforts are also made to rule out other potential sources, and if the complaint did not identify a possible source, the initial investigation will involve attempts to locate one.

Once a source is located, the inspector will review the operation to determine if it involves the violation of any applicable rules, regulations, or permit conditions. Even if there is not a specific requirement limiting the activity, there is a general prohibition against creating a public nuisance.

When investigation of a public nuisance or other air quality violation is triggered by a complaint, the inspector documents the results of the investigation, and reports back to the complainants if requested.

This category includes all complaints assigned to and investigated by field staff. One inspection would be assigned for each complaint investigation completed, even though the investigation may involve multiple site inspections.

6) Verification of Compliance with Variance Terms and Abatement Orders

When the hearing board issues a variance from a requirement, the source is generally subject to alternative limitations and required to document progress towards returning to compliance with the otherwise applicable requirement(s). Similarly, when an order of abatement is imposed, it contains requirements to document progress towards compliance, typically at intervals or based on completion of specified actions (such as the ordering of control equipment, followed by installation, testing, and certification of compliance). There may be alternative production limits that apply in either case, or limitations of hours of operation, either generally reduced, or restricted to avoid exposing sensitive receptors (e.g., not operating during school hours to avoid exposing children).

These inspections typically resemble a routine stationary source inspection. This category would include all activities associated with determining compliance with a variance or stipulated/contested abatement orders, including any applicable increments of progress.

7) Inspection of Portable Equipment

The ARB registers and regulates portable engines and equipment, under its Portable Equipment Registration Program (PERP). These engines operate for limited periods of time at any single site and may operate more frequently at multiple sites over long distances. Program requirements are enforced by local air districts. Initially, the program was voluntary, the enforcement provisions difficult to apply, and the program was under-funded. Statutory and regulatory changes in 2006 significantly enhanced the enforcement provisions and funding, and the program is now mandatory for any equipment that is not covered by a valid permit or registration with the air district it is operated within.

Under the revised program, engines and equipment are assigned to a “home district” and routine inspections are required once every three years. Inspections are also conducted to locate unregistered equipment and to verify proper operation in the field. Certain types of equipment are also subject to enhanced notification and inspection provisions.

This category reflects all pieces of equipment inspected in accordance with the PERP, as specified by ARB. Unlike the other categories above, these inspections are conducted and counted consistent with the reporting format specified by ARB.

8) Inspections Pursuant to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Asbestos and the Air Toxic Control Measure for Naturally Occurring Asbestos

The US EPA promulgates regulations under Section 112 of the federal CAA called National Emission Standards for Hazardous Air Pollutants (NESHAPs). They were historically directed at a specific pollutant, although regulations adopted after 1990 generally affect a source category and all

of the hazardous pollutants emitted by those sources. Implementation and enforcement of these rules is delegated by US EPA either to the local air districts or to the ARB.

The NESHAP for Asbestos regulates the renovation or demolition of structures where asbestos is present, including notification, testing, containment, and disposal. In California, 16 air districts have accepted delegation of the program (remaining areas are delegated to ARB). Inspections are conducted in response to complaints and to verify proper asbestos removal and containment procedures during the renovation or demolition activities.

In addition, the ARB has established an Air Toxic Control Measure (ATCM) for Naturally Occurring Asbestos (NOA) that governs construction and mining in soils where NOA may be found. The ATCM specifies testing of the soil and requires enhanced dust mitigation plans where asbestos is present. It also prohibits the use of asbestos containing materials for purposes where exposure could occur (for example, NOA-containing gravel on roadways, paths, or parking areas unless it is fully enclosed within concrete or under pavement). Inspections are done to review testing records and verify implementation of mitigation measures. Areas of known NOA may be surveyed periodically for signs of activity such as residential housing construction. If activity is occurring, an on-site investigation occurs.

This inspection category reflects both NESHAP inspections of renovation/demolitions for those delegated districts as well as ATCM inspections for naturally occurring asbestos.

9) Conducting and Observing Source Tests

As used here, the term “source test” refers to a formal measurement of source emissions (or the content of fuels, raw materials, or product) using methods established by ARB or US EPA, or in some cases, an air district. Some districts have staff that perform a variety of source tests. Other air districts require source tests to be performed by third parties (or in some cases by the source), and observe the conduct of the tests.

This category would include situations where field staff are either conducting field testing using portable equipment or observing source tests conducted by a third party.

C) Program Metrics

Program Metrics

Air districts use a variety of tools and methods to measure and verify compliance. Each tool provides an important measure of compliance, but also has certain weaknesses. The robustness of the compliance program depends on the coordinated use of all of the available tools. By the same token, a complete evaluation of compliance programs must, necessarily, consider the use of all of these tools together. These include annual emissions and compliance reports that are submitted by facilities under permit; data from continuous emissions monitors (CEMs); direct measurement of emissions according to specified protocols (source tests); inspections of sources in the field (periodic and targeted); air monitoring; response to, and investigation and resolution of complaints; and review of data from other agencies or entities.

Reports: As a condition of their operating permits, and as a requirement of many regulations, sources of air pollution submit periodic emissions and compliance reports to their local air district. In almost all cases these reports are submitted annually, in some cases (such as very large sources) they are submitted as frequently as quarterly and in other cases, the reports are made biennially or even

triennially. In the case of the regional credit market program, the largest sources must report emissions electronically to the district on a daily basis. Periodic emissions reports detail criteria and toxic pollutants emitted by the source over a specific period of time. The emissions may be directly measured by emissions monitors, calculated from data from parametric monitors or through mass balance, or estimated from approved emission factors. Compliance reports include statements of overall compliance with applicable requirements, as well as specific reports on the performance of required activities, such as replacement of equipment, compliance with operational restrictions, and performance of maintenance and housekeeping.

Continuous Monitors: Sources of air pollution may also have some sort of continuous compliance monitoring. The majority of the largest sources and some of the smaller sources are equipped with CEMs or parametric monitoring systems. Where CEMs are used, such as power plants and refineries, the equipment measures the concentration of certain pollutants in the exhaust streams as they pass through an outlet to the atmosphere. As the name implies, these monitors operate continuously, twenty-four hours per day, 365 days per year. In some cases, this data is reported directly to the district; in other cases it is summarized and provided in periodic reports. In addition to CEMs, there are continuous monitors of other compliance parameters (such as temperature or pressure) that indicate that source or abatement equipment is operating properly. In some cases this information is supplemental to CEMs data; in other cases, this is in lieu of CEMs data.

Source Testing: Some sources are required to have third party testing firms perform tests on equipment at the site to determine actual in-use emissions from equipment that is not equipped with continuous monitors. Air districts can also require a source test be done to demonstrate compliance at any time, and some districts have a source testing team that can arrive at a site, unannounced, to conduct tests.

Field Inspections: Districts maintain trained staff to conduct inspections of sources in the field. Field inspectors are certified to assess visible emissions (i.e., smoke) from exhaust points, and trained to review in-field operations. A typical inspection begins with a review of applicable requirements, including the permit conditions. At the site, the inspector observes the operation of all pollution-emitting equipment and activities and looks for visible emissions and for compliance with operational standards. The inspector ensures that all emissions control devices are operating properly, reviews data logs to verify emissions limits are being met and operational and maintenance activities are performed as required. The inspector also looks for any new equipment or activities that have not been permitted, and to verify that required replacements have actually occurred. After completing the field review of compliance, the inspector writes an inspection report that becomes part of the source's permanent compliance record; reports for some sources are also submitted to ARB and EPA.

Complaints: Air districts respond to complaints from the public about unusual odors, smoke, dust, or operation at times or locations that are not permitted. ARB and the air districts have a mutually agreed upon protocol for responding to complaints. When a complaint is received, a field inspector is dispatched to the site to interview the complainant, attempt to verify the complaint, and identify the source responsible. After completing the investigation, the inspector prepares a report and follows up with the complainant (if requested). If a considerable number of persons are impacted and complain, the situation may be deemed a public nuisance.

Air Monitoring: Air districts operate networks of air monitoring equipment that measure criteria and toxic pollutants in ambient air. Although not typically considered in the enforcement and compliance program, data from these monitors may be used by inspectors in response to complaints, for example, in determining wind direction with respect to an odor complaint; or in regard to conditions related to outdoor burning, in districts where such burning is allowed. Many of these monitors are regional in scale, but some give a very good indication of air quality in the near vicinity to the monitor. Regional scale monitors show large and long term trends in air quality of a region. Although this is not a good metric for determining compliance by an individual source, clean air in a region or clear trends towards clean air would not be possible without effective regulations and good overall compliance. Some monitors are sited in such a way that they detect short term variations in pollutants near the monitor. Examples of this include an urban monitor showing unusually high concentrations of perchloroethylene that field investigation ultimately attributed to non-compliance by a drycleaner located a block from the monitor, and spikes in hydrogen sulfide that investigation ultimately linked to failure of control equipment at a power plant a mile upwind. By themselves, ambient air monitors do not demonstrate source compliance; however, they supplement other available information and can confirm trends or show isolated non-compliance. Some districts utilize portable ambient monitors that are not regional in scale to measure particulate matter downwind of sources who may be causing a public nuisance.

Data Review: Air districts coordinate with each other to review compliance issues across sectors (such as gasoline dispensing), and with other regulatory agencies to review their inventories (where information is readily available and relevant) as a means of cross-checking air-related information. For example, hazardous waste manifests can verify solvent disposal and sanitation district sewer monitoring or interagency inspection reports may bring to light air quality regulation violations.

Data Characteristics

As stated above, the data reported here are derived from the CAPCOA survey of 11 air districts covering 93% of California's population. The survey covered fifty-three discrete measures of compliance program performance from each of these districts in each of five years, 2002 through 2006, for a total of more than 2,900 data points. These included information on agency resource commitments, compliance rates, repeat violations, civil penalty averages, case disposition, and criminal referrals.

Select Program Inputs

The survey shows that local districts devote substantial resources to program enforcement efforts. As summarized in Table 1, below, nearly 25 percent of the annual budget for these agencies is devoted to enforcement, and the funds dedicated have increased from \$55,911,667 in 2002 to \$62,766,708 in 2006. Unfortunately, because budgets are constrained and labor costs have risen sharply in recent years (especially in regards to health insurance, workers compensation, and retirement liability), the overall increase in enforcement budgets has not been sufficient to sustain staffing levels. It should be noted here that the data included in these tables reflects only those positions conducting in-field compliance verification. Typically, other staff members at a district contribute to the review of compliance as well as enforcement actions. These other positions supporting compliance and enforcement may include engineers, specialists, source-test personnel, laboratory personnel, and legal and administrative staff.

Select Enforcement Resource Commitments at 11 Local Air Districts					
Year	2002	2003	2004	2005	2006
Total Agency Budgets	\$225,284,490	\$231,662,030	\$248,781,560	\$259,231,141	\$267,238,772
Enforcement Budget	\$55,911,667	\$57,983,390	\$61,277,241	\$61,219,323	\$62,766,708
Funded Positions for Field Enforcement	515.0	514.0	522.0	517.0	512.0

Select Program Outputs

The following field inspection statistics were reported for the 11 air districts:

Activity	2002	2003	2004	2005	2006	TOTALS
Major Permitted Source Inspections	11,183	9,777	9,764	11,876	13,020	55,620
Minor Permitted Source Inspections.	80,723	84,141	82,228	84,672	82,580	414,344
Non-Permitted Source Inspections	8,833	7,669	8,567	9,717	8,147	42,933
Breakdown Investigations	1,777	1,821	2,280	2,253	2,253	10,384
Complaint Investigations	17,286	16,804	16,592	16,225	14,842	81,749
Variance/Increments of Progress	319	369	377	666	421	2,152
CARB Registered Equipment	79	323	418	619	687	2,126
Asbestos Inspections	6,297	7,009	6,653	6,749	5,588	32,296
Number of Source Tests	2,323	2,502	2,764	2,522	2,568	12,679

The following violation statistics were reported for the 11 air districts:

Activity	2002	2003	2004	2005	2006	TOTALS
Number of Violations Found for Facilities	5,580	4,576	4,380	5,203	4,213	23,952
Number Settled	4,527	4,996	3,795	4,880	4,511	22,709
Cash Value of Violations Settled	\$9,921,852	\$8,123,396	\$15,895,935	\$71,777,534	\$24,834,097	\$130,552,814
Non-Cash Settlement Value	\$2,891,429	\$2,802,245	\$1,538,550	\$28,414,620	\$1,667,600	\$37,314,444

Select Program Outcomes

Based on the above data, the survey finds an overall facility compliance rate over 95%.

III. WHAT ARE WE GOING TO DO: FUTURE DIRECTIONS

The air districts are continually updating methodologies, policies, and procedures in order to make the best use of available resources. Specific program improvement activities are determined by each individual district under the direction of its governing board. The air districts do, however, collaborate through CAPCOA to identify source categories for coordinated enforcement efforts. Examples of these include vapor recovery at retail service stations, stationary internal combustion engines, and portable equipment. In addition, the CAPCOA has recently embarked on a process to share approaches and resources for information management and security.

CAPCOA is in the process of conducting a major project to design and develop a compliance statistics database. The project includes the development of a common set of data definitions and the design of a database in which the data would be stored and processed and from which statistics would be reported. Once completed, it is expected that compliance data from the majority of the 35 air districts could be readily assembled on an annual basis for future reports.

Other specific projects are delineated below:

A) Vapor Recovery

CAPCOA has a standing committee devoted to vapor recovery program issues, including enforcement. The committee meets regularly with ARB staff to review draft executive orders, assess field compliance rates, and discuss program improvement opportunities. CAPCOA is currently working with ARB to identify appropriate enforcement protocols for stations equipped with In-Station Diagnostics for enhanced vapor recovery systems.

B) Stationary Internal Combustion Engines

As part of the ARB Diesel Risk Reduction Program, a number of Air Toxic Control Measures have been established, affecting tens of thousands of stationary engines, including emergency standby and agricultural engines. The CAPCOA Enforcement Managers Committee and Engineering Managers Committee have jointly reviewed the new requirements and prepared summaries and support materials to assist member districts. There is some overlap between some of the regulations, and CAPCOA has worked, and continues to work, with ARB staff to determine appropriate interpretations and applications of ambiguous or overlapping requirements.

C) Portable Equipment

The CAPCOA Enforcement Managers Committee and Engineering Managers Committee have jointly reviewed the revised PERP requirements, including the requirements of the new ATCM for portable equipment, and prepared summaries and support materials to assist member districts. In addition, districts have committed to increase staff resources devoted to field inspection and enforcement of the PERP as new fees are collected by ARB and distributed to the districts. It is anticipated that the next three years will see a continuing increase in the number of PERP inspections.

IV. PROGRAM LIMITATIONS

Enforcement programs are necessarily limited by available resources including staff and budget constraints. Increasingly, air districts are collaborating through CAPCOA to share approaches and resources to improve enforcement and compliance efforts.

The PERP is a prime example of a program area where poor compliance and insufficient enforcement were identified, and are now being addressed. By sponsoring legislation and working with ARB on rule amendments, CAPCOA enhanced the underlying enforcement provisions and provided a platform for enhanced program funding through fees. Implementation of the revised program is only beginning, because of delays in the review by the Office of Administrative Law (OAL), time needed to make administrative changes at the state level, and time for fees and other program elements to be phased in with the registration cycle. New inspection fees are now being distributed, but it will likely be three years before they are fully implemented.

As previously mentioned, however, CAPCOA committees are engaged in improving enforcement of, and compliance with, PERP requirements. As funding increases, additional staff resources will be devoted to field efforts for this program, and improved outcomes are anticipated.

V. APPENDICES

The data and conclusions contained in this report were collected by CAPCOA as part of an ongoing effort to characterize local enforcement programs. A more comprehensive discussion will be released by CAPCOA at a later date, when the study is completed. Inquiries about the study with respect to the data reported herein, or the efforts for future data, should be directed to CAPCOA. Inquiries about enforcement programs or actions at individual districts should be directed to the district of interest.

Information about CAPCOA can be found at www.capcoa.org or by contacting Mel Zeldin, Executive Director of CAPCOA, at (916) 441-5700 or melz@capcoa.org.

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APPENDIX A

POPULATION BY AIR DISTRICT

District	2007 Population
Amador County APCD	37,863
Antelope Valley AQMD	324,910
Bay Area AQMD	7,151,022
Butte County AQMD	220,769
Calaveras County APCD	45,980
Colusa County APCD	21,848
El Dorado County AQMD	179,969
Feather River AQMD	168,892
Glenn County APCD	29,286
Great Basin Unified APCD	32,939
Imperial County APCD	177,820
Kern County APCD	139,592
Lake County AQMD	64,069
Lassen County APCD	35,763
Mariposa County APCD	18,297
Mendocino	90,051
Modoc County APCD	9,727
Mojave Desert AQMD	480,426
Monterey Bay Unified APCD	754,253
North Coast Unified AQMD	175,989
Northern Sierra AQMD	123,165
Northern Sonoma County APCD	59,938
Placer County APCD	338,750
Sacramento Metropolitan AQMD	1,427,885
San Diego County APCD	3,161,477
San Joaquin Valley APCD	3,835,229
San Luis Obispo County APCD	270,046
Santa Barbara County APCD	429,109
Shasta County AQMD	182,470
Siskiyou County APCD	46,017
South Coast AQMD	16,834,907
Tehama County APCD	62,466
Tuolumne County APCD	56,470
Ventura County APCD	830,343
Yolo-Solano AQMD	330,756

APPENDIX B
LIST OF ACRONYMS

Acronym	Full Name
APCD	Air Pollution Control District
APCO	Air Pollution Control Officer
AQMD	Air Quality Management District
ARB	Air Resources Board
ATCM	Air Toxic Control Measure
CAPCOA	California Air Pollution Control Officers Association
CAA	Clean Air Act
CEMs	Continuous Emission Monitors
CEQA	California Environmental Quality Act
EPA	Environmental Protection Agency
FTE	Full Time Employee
HAP	Hazardous Air Pollutant
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOA	Naturally Occurring Asbestos
OAL	Office of Administrative Law
PERP	Portable Equipment Registration Program

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