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TO THE
ARIZONA LEGISLATURE

Performance Audit Division

Performance Audit

Arizona Department of Environmental Quality— Air Quality Division

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Debra K. Davenport
Auditor General

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AUDITOR GENERAL

STATE OF ARIZONA
OFFICE OF THE
AUDITOR GENERAL

WILLIAM THOMSON
DEPUTY AUDITOR GENERAL

September 15, 2004

Members of the Arizona Legislature

The Honorable Janet Napolitano, Governor

Mr. Stephen A. Owens, Director
Arizona Department of Environmental Quality

Transmitted herewith is a report of the Auditor General, A Performance Audit and Sunset Review of the Department of Environmental Quality, Air Quality Division. This report is in response to a November 20, 2002, resolution of the Joint Legislative Audit Committee. The performance audit was conducted as part of the Sunset review process prescribed in Arizona Revised Statutes §41-2951 et seq. I am also transmitting with this report a copy of the Report Highlights for this audit to provide a quick summary for your convenience.

As outlined in its response, the Department agrees with all of the findings and plans to implement the recommendation.

My staff and I will be pleased to discuss or clarify items in the report.

This report will be released to the public on September 16, 2004.

Sincerely,

Debbie Davenport
Auditor General

Enclosure

PROGRAM FACT SHEET

Department of Environmental Quality Air Quality Division

Services:

The Air Quality Division ensures Arizona's air safety and quality by monitoring and analyzing air quality data, regulating sources of air pollution, and working with other state, local, and federal agencies to plan and implement strategies to protect Arizona's future air quality. The Division is divided into the following five areas of responsibility:

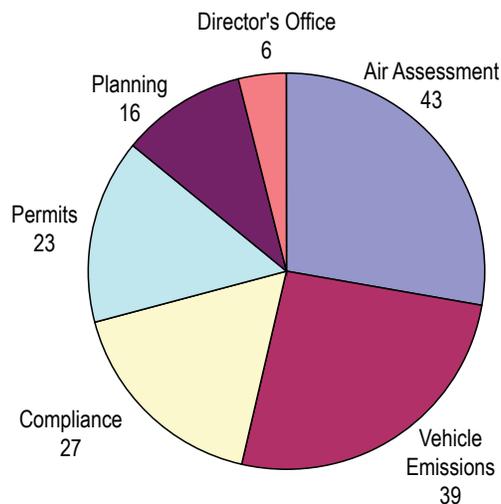
- **Air Assessment Section**—Collects, analyzes, and reports air quality data so that decisions can be made to improve air quality in Arizona.
- **Compliance Section**—Conducts compliance evaluations on facilities permitted by the Division and other air pollution sources covered under division rules, responds to air pollution complaints from the public, and pursues enforcement, if warranted, on those facilities.
- **Permits Section**—Regulates sources of air pollution using a system of permits to ensure that the air pollutants do not cause harm to the public health.
- **Planning Section**—Coordinates regulatory aspects of air quality control, including state-wide plans and Arizona Administrative Code regulations.
- **Vehicle Emissions Section**—Manages the State's vehicle emissions inspection program and provides oversight of the contractor.

Facilities:

The Division's staff are primarily located in the agency's headquarters at 1100 West Washington Street in Phoenix. This is a private lease-to-own facility, costing the Department approximately \$3.5 million annually for 184,200 square feet. The Air Quality Division uses approximately 26,600 square feet of the facility, which includes an air quality analysis laboratory in the first floor of the adjacent parking garage. Additionally, department staff located in the Northern Regional Office in Flagstaff and the Southern Regional office in Tucson perform some division duties. The Northern Regional office is located in a privately owned facility where

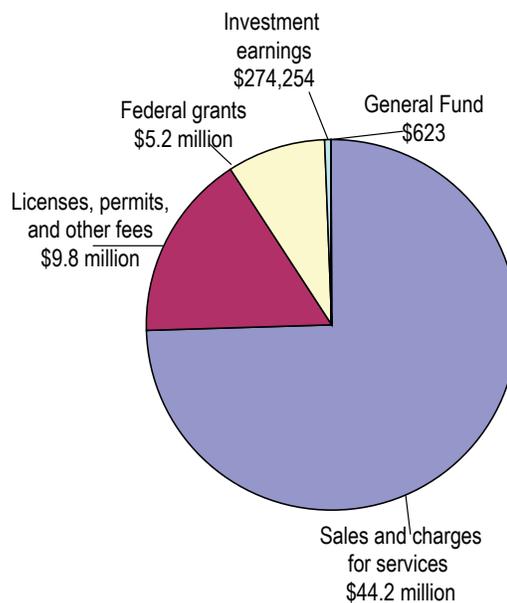
Program staffing:

154 FTE positions, including 28 vacancies (as of May 2004)



Program revenue:

\$59.4 million (fiscal year 2004, actual)



the Department leases 4,600 square feet for \$83,900 annually. The Southern Regional Office is located in 5,700 square feet of a state-owned building that the Department leases from the Department of Administration for \$116,000 annually. The Division also administers the vehicle emissions inspection program from state-owned buildings in Phoenix and Tucson; the Phoenix office has 14,720 square feet with \$74,400 in annual operations and maintenance costs, while the Tucson location costs \$45,300 annually in operations and maintenance for 4,504 square feet.

Equipment:

The Division has specialized equipment, such as air quality monitoring equipment that measures the concentration of various pollutants in air samples or the range of visibility. The Division also pays the Department of Administration a monthly lease fee of approximately \$10,000 for 28 vehicles.

Mission:

To control present and future sources of air pollution to protect the environment and ensure the health and general welfare of the citizens of Arizona.

Program goals:

The Air Quality Division has adopted the Department's four goals:

1. Improve the quality of Arizona's air, land, and water.
2. Enhance relationships with the public, regulated community, and agency partners.
3. Provide leadership on children's environmental health.
4. Provide value to all of Arizona.

Adequacy of performance measures:

The Division's 18 performance measures are adequate for two of these four goals and include measures for outcome, output, efficiency, and quality. However, the remaining two goals addressing external relationships and children's environmental health could benefit from additional performance measures to adequately assess progress in these areas. For example, the Division could add an output measure that reports the number of stakeholder meetings convened by the Division involving representatives from the regulated community and the public.

Source: Auditor General staff compilation of unaudited information from the Department's Web site, Arizona Financial Information System (AFIS) Account Event Transaction File for the year ended June 30, 2004, the Department's Strategic Plan, and other information provided by the Department.

SUMMARY

The Office of the Auditor General has conducted a performance audit of the Department of Environmental Quality, Air Quality Division pursuant to a November 20, 2002, resolution of the Joint Legislative Audit Committee. This audit was conducted as part of the Sunset review process prescribed in Arizona Revised Statutes (A.R.S.) §41-2951 et seq and is the third in a series of four reports, which also included audits of the Water Quality and Waste Programs Divisions. The final report will be an analysis of the 12 statutory Sunset factors.

The Division's mission is to protect Arizona's environment and citizens by controlling sources of air pollution. The Division conducts numerous activities to carry out these responsibilities. For example, it issues permits to facilities and conducts periodic inspections of the facilities' equipment and records to ensure proper operation. Division staff also monitor air quality throughout the State through a network of specialized equipment. The Division also administers the vehicle emissions inspection program in Maricopa and Pima Counties.¹ This audit focused primarily on two aspects of the Division's work in carrying out its mission: the Division's effectiveness in improving the State's overall air quality, and the extent to which regulated facilities comply with rules and laws regarding air pollution.

Division efforts positively impacting Arizona's air quality (see pages 7 through 13)

One of the Division's primary functions is to monitor air quality around the State to determine compliance with national air quality standards set by the federal Environmental Protection Agency (EPA). If an area within the State exceeds these standards, the EPA designates that area as "nonattainment." These nonattainment areas pose potential health risks to citizens because of the elevated air pollution, and the general public and private industry can also be affected economically in these areas.

Several significant challenges make improving Arizona's air quality more difficult than it would be in some other states. Arizona's large, rapidly growing population is

¹ Small portions of northern Pinal County and southern Yavapai County are also included in the Maricopa County emissions testing requirements.

accompanied by increases in vehicle traffic and construction, which contribute to air pollution. Arizona's warm temperatures, limited rainfall, and arid topography also contribute to elevated air pollution levels. Further, the State's leading role in the nation's copper industry has resulted in several nonattainment areas for sulfur dioxide, one of the pollutants the EPA regulates.

Despite these challenges, the Division has made strides over the past few years in reducing the State's air pollution. The EPA has redesignated 5 of Arizona's 20 nonattainment areas as being in attainment with national air quality standards, and 10 more are in the process of being redesignated or are eligible for this process. Several division initiatives have contributed to these redesignations, including a vehicle emissions inspection program designed to reduce levels of carbon monoxide and ozone, a program for cleaner burning gasoline in heavily populated areas, and pollution forecasts designed to help reduce travel on days with high air pollution potential. In its *2003–2008 Strategic Plan*, the EPA regional office noted that Arizona has made substantial progress toward cleaner air over the past several years.

Division generally addresses violations by major source facilities within specified time frames (see pages 15 through 20)

Division records indicate that key facilities are generally complying with air pollution standards, and when they do not, the Division generally takes timely enforcement action that soon corrects the problem. Among the more than 700 sources of pollution that the Division currently regulates, 52 facilities have the potential to emit 100 tons or more a year of pollutants such as carbon monoxide. These facilities, called "major source facilities," include power plants, smelters, and cement plants. Compliance work conducted by the Division found that in calendar years 2002 and 2003, two-thirds of the facilities were sufficiently in compliance and no enforcement actions were necessary. Further, when enforcement actions were issued, they were generally for relatively minor issues, such as excessive dust.

When facilities are not complying, they generally are promptly informed and brought into compliance. Department policy requires an internal review of the enforcement action before it is approved by management. Of the 25 notices sent in calendar years 2002 and 2003, 18 were sent within the time frames specified in policy, and only 2 exceeded the time frames by more than 30 days. Developing specific time frames for each step of the enforcement action review and approval process and creating weekly reports on the status of pending cases would help the Division better adhere to its policy for issuing enforcement actions. Once the notices were sent, most

facilities came into compliance within specified time frames. For the 25 notices, 16 were resolved within the specific deadline (generally 30 days) and 2 more were resolved within another 30 days. Division officials indicated that in the remaining instances where facilities exceeded their time frames before coming into compliance, they made sufficient effort so that more stringent regulatory efforts did not need to be taken.

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INTRODUCTION & BACKGROUND

The Office of the Auditor General has conducted a performance audit of the Department of Environmental Quality, Air Quality Division pursuant to a November 20, 2002, resolution of the Joint Legislative Audit Committee. This audit was conducted as part of the Sunset review process prescribed in A.R.S. §41-2951 et seq and is the third in a series of four reports, which also included audits of the Water Quality and Waste Programs Divisions. The final report will be an analysis of the 12 statutory Sunset factors.

Division regulates and protects air quality in Arizona

The Air Quality Division is one of four divisions within the Department of Environmental Quality, in addition to the Waste Programs, Water Quality, and Administrative Services Divisions.¹ The Division's mission is to protect Arizona's environment and citizens by controlling sources of air pollution. It carries out this mission under the federal Clean Air Act, which outlines the nation's air pollution regulations and affirms that state and local governments bear the fundamental responsibility for air pollution control. The Division is responsible for regulating all sources of air pollution in most of the State, although the three most populous counties—Maricopa, Pima, and Pinal—have authority to regulate many facets of air pollution control.² In these counties, the Division retains responsibility for certain large facilities, such as copper smelters, coal-fired electricity plants, and cement plants, as well as mobile and portable sources.³

The Division conducts numerous activities to carry out these responsibilities. It issues permits to facilities, and conducts periodic inspections of the facilities' equipment and records to ensure proper operation. Division staff also monitor air quality throughout the State through a network of specialized equipment, using the data to

The Division's mission is to protect Arizona's environment and citizens by controlling sources of air pollution.

¹ After the completion of audit work, effective August 2, 2004, the Department created a new Tank Programs Division.

² A.R.S. §49-402 specifies which sources of air pollution fall under the Division's original jurisdiction, such as smelters, coal-fired electrical generating stations, and motor vehicles. The Division does not regulate sources of air pollution on tribal lands; these are regulated by the federal Environmental Protection Agency.

³ A.R.S. §49-401.01 defines mobile sources as combustion engines, devices, machines, or equipment that operate during transport and emit air pollution while in motion or at rest, and portable sources as any stationary source capable of being transported and operated in more than one county.

develop regulations and plans to bring the State into attainment with national air quality standards. The Division also administers the vehicle emissions inspection program in Maricopa and Pima Counties.¹

The federal Environmental Protection Agency (EPA) provides oversight of the Division and all local air pollution control agencies, sets health-based air quality standards, and ensures that federal standards and regulations are followed. For instance, the EPA approves all the Division's formal plans to control regulated air pollutants.

Organization and responsibilities

The Air Quality Division is organized into five sections, and is overseen by an administrative unit including the division director, deputy director, and four additional staff. As of May 2004, 28 of the Division's 154 authorized FTE positions were vacant.

- **Air Assessment Section (43 FTE positions, 9 vacancies)**—This section collects, analyzes, and reports air quality data. Specifically, it operates the network of more than 180 air quality monitors at approximately 60 locations, analyzes and performs quality assurance on the collected data, and reports it to the EPA. This section also creates models of air pollution dispersion that project the movement and quantity of specific air pollutants, which other sections in the Division use in their planning work. Special public outreach activities include daily air pollution forecasting and creating various maps, such as locations of air quality monitors, air pollution areas, and areas sensitive to smoke from prescribed burns, for use in public meetings and on the Department's Web site.
- **Compliance Section (27 FTE positions, 2 vacancies)**—This section is responsible for ensuring that facilities permitted by the Division and other air pollution sources covered by division rules are following all applicable regulations, and for taking enforcement actions against violating parties. Staff perform these duties by inspecting regulated sites and reviewing the facilities' technical reports. Inspectors also respond to the public's complaints. If inspectors identify violations, staff members are required to pursue enforcement actions to bring the facilities back into compliance with regulations. Enforcement actions range from issuing an informal Notice of Opportunity to Correct, which allows the operators of a facility a specified number of days to correct a minor deficiency, to filing a civil action, which involves the state Attorney General's Office and can include substantial financial penalties to the violating facility.
- **Permits Section (23 FTE positions, 6 vacancies)**—This section manages air quality permit issuance and renewal to facilities under the Division's jurisdiction. All facilities with the potential to produce regulated air polluting emissions are

The Division operates more than 180 air quality monitors around the State.

¹ Small portions of northern Pinal County and southern Yavapai County are also included in the Maricopa County emissions testing requirements.

required to apply for and receive a permit before beginning operations, and as of July 1, 2004, the Permit section was administering over 700 active permits. Permits are divided into three categories—Class I permits for major source facilities, such as cement plants and copper smelters, which have the potential to emit large quantities of regulated pollutants; Class II permits for minor source facilities and portable sources, such as some asphalt plants and manufacturers, which have lower potential emission levels; and General permits for broad categories of similar facilities, such as dry cleaners and crushed stone plants. Depending on the permit application's complexity and the quantity of the facility's potential emissions, rule requires section staff to review an application and either issue or deny a permit within 1 to 16 months.

- **Planning Section (16 FTE positions, 3 vacancies)**—This section is primarily responsible for developing the Department's state implementation plans (SIPs) and air quality rules, as well as overseeing several funds created by the Legislature, such as the Air Quality Fee Fund. The SIPs detail how the State plans to achieve compliance with national air quality standards, while the rules govern activities in the State that generate air pollution. Staff in this section also work with county and municipal agencies to create and implement the measures required to achieve reductions in federally regulated air pollutants.
- **Vehicle Emissions Section (39 FTE positions, 8 vacancies)**—This section administers the vehicle emissions inspection program in Maricopa and Pima Counties. While an outside contractor performs the general public's emissions testing, section staff oversee the contractor and inspect all public and private fleet inspection sites. They also research current and new emissions testing methods, evaluate the current program's effectiveness, and respond to the public's inquiries and complaints.

Budget

As detailed in Table 1 (see page 4), the Division received approximately \$59 million in fiscal year 2004. Approximately \$5 million was in federal grants from the EPA, while permits and other fees accounted for an additional \$10 million.

Scope and methodology

This audit focused on the Planning and Compliance sections; specifically, on the Division's effectiveness in improving the State's overall air quality and on the level of

Table 1: Schedule of Revenues and Expenditures¹
Years Ended June 30, 2002, 2003, and 2004
(Unaudited)

	2002	2003	2004
Revenues:			
State General Fund appropriations	\$ 379,665	\$ 128,124	\$ 623
Sales and charges for services ²	15,088,592	37,383,229	44,194,579
Licenses, permits, and other fees	10,066,726	11,648,103	9,774,281
Federal grants	2,874,695	3,152,674	5,173,078
Investment earnings	229,683	219,893	274,254
Total revenues	<u>28,639,361</u>	<u>52,532,023</u>	<u>59,416,815</u>
Expenditures:			
Personal services and related benefits	6,118,784	6,277,293	6,303,342
Professional and outside services ²	17,620,737	28,152,886	29,316,724
Travel	305,157	264,735	219,425
Aid to organizations	3,072,509	3,110,092	3,026,630
Other operating	554,093	691,352	543,189
Equipment	702,588	1,067,214	211,685
Allocated costs ³	2,657,046	2,916,884	3,065,434
Total expenditures	<u>31,030,914</u>	<u>42,480,456</u>	<u>42,686,429</u>
Excess (deficiency) of revenues over (under) expenditures	<u>(2,391,553)</u>	<u>10,051,567</u>	<u>16,730,386</u>
Other financing sources (uses)			
Transfers in ⁴	5,030,929	8,674,554	
Transfers out ⁵	<u>(1,704,645)</u>	<u>(16,998,800)</u>	<u>(16,359,100)</u>
Total other financing sources (uses)	<u>3,326,284</u>	<u>(8,324,246)</u>	<u>(16,359,100)</u>
Excess of revenues and transfers in over expenditures and transfers out	<u>\$ 934,731</u>	<u>\$ 1,727,321</u>	<u>\$ 371,286</u>

¹ This schedule presents revenues and expenditures of the Division's operations. The Department also operates two Regional Offices that incur some air-related expenditures that are not included in this table because the Department does not allocate the Offices' expenditures among the divisions. The Offices conduct water, waste, and air activities and have expenditures of approximately \$4.1 million annually.

² Sales and charges for services include vehicle inspection fees and professional and outside services expenditures of the Division's emission inspection program, which is primarily operated by an independent contractor. Both amounts increased significantly in 2003 and 2004 as a result of a change in the way that inspection fees are remitted by the contractor. Beginning in January 2002, a new contract required the contractor to remit all vehicle inspection fees collected to the Department and the Department to pay the contractor directly for services performed. Prior to this change, the contractor retained all inspection fees and remitted only the Department's portion of fees. In addition, sales and charges for services include fees received in lieu of inspections for vehicles less than 5 years old that are deposited in the Clean Air Fund. These fees were previously collected by the Department of Commerce; however, in 2003 the legislature transferred control of the Fund to the Department, resulting in an increase in sales and charges for the Division's services revenues.

³ Consists of that portion of department-wide overhead expenditures allocated to the Division for administrative personnel, rent, general accounting, telecommunications systems, and risk management costs.

⁴ Consists of transfers from the Clean Air Fund of approximately \$1.5 million in 2002 authorized by Laws 2001, Chapter 371 associated with the Brown Cloud Study, and approximately \$3.5 million from the Clean Air Fund for a subsidy to reduce emission test fees as authorized by Laws 2001, Chapter 236. In addition, the 2003 amount consists of approximately \$8.7 million transferred from the Department of Commerce when the Clean Air Fund was transferred to the Department.

⁵ Includes transfers of approximately \$1.7, \$2.1, and \$2.2 million in 2002, 2003, and 2004, respectively, to the Department of Administration, Department of Transportation, and Department of Weights and Measures for clean air-related programs, such as oxygenated fuels and bus subsidies. In addition, the 2003 amount includes \$14.9 million transferred to the State General Fund, as required by Laws 2002, Chapter 1, and Laws 2003, Chapter 1; and the 2004 amount includes \$11.7 million transferred to the State General Fund, as required by Laws 2003, Chapter 263, and \$2.5 million transferred to the Water Quality Assurance Revolving Fund, as required by Laws 2003, Chapter 262.

Source: Auditor General staff analysis of the Arizona Financial Information System (AFIS) *Accounting Event Transaction File* for the years ended June 30, 2002, 2003, and 2004.

regulated facilities' compliance with state air pollution rules and laws. This report presents two findings and associated recommendations:

- The EPA has recognized the Division's efforts to improve the State's air quality as successful (see Finding 1, pages 7 through 13); and
- The Division generally takes enforcement actions in a timely manner against major source facilities (see Finding 2, pages 15 through 20).

Several methods were used to study the issues addressed in this audit. Methods used in all areas included interviews with division management and staff and other stakeholders, including legislative staff and representatives from the EPA, the Arizona Attorney General's Office, private industry associations, environmental protection organizations, and county pollution control agencies. Auditors also reviewed Arizona Revised Statutes, the Arizona Administrative Code, the Code of Federal Regulations, and the Department's Compliance and Enforcement Handbook.

The following specific methods were used in reviewing each area:

- To determine if the State is in compliance with federal air quality standards, auditors reviewed public notices published in the Federal Register and various documents prepared by the EPA and the Division, including air quality monitoring data from 1995–2003. To research and document the challenges to improving air quality in Arizona, auditors reviewed data from several federal agencies.¹
- To evaluate the Division's compliance and enforcement efforts, auditors obtained and analyzed data from the Division's automated compliance and enforcement data systems on the 52 major source facilities that the Division had permitted as of July 2004. The data was used to identify those major source facilities that had enforcement cases issued to them in calendar years 2002 or 2003. Auditors then conducted a detailed file review of the compliance and enforcement actions that the Division took against these facilities.

This audit was conducted in accordance with government auditing standards.

The Auditor General and her staff express appreciation to the director, division director, and staff of the Department of Environment Quality for their cooperation and assistance throughout the audit.

¹ Reports reviewed include the National Oceanic and Atmospheric Administration's *Comparative Climatic Data* publication; National Oceanic and Atmospheric Administration. Air Resources Laboratory. Environmental Research Laboratories. Office of Oceanic and Atmospheric Research. *Air Stagnation Climatology for the United States*. Silver Spring, MD: April 1999; U.S. Census Bureau. Census 2000 Redistricting Data; U.S. Census Bureau. *Final 2003 Housing Units Authorized by Building Permits*; U.S. Department of Transportation. Bureau of Transportation Statistics. *National Transportation Statistics 2002*. U.S. Geological Survey. *2002 Copper Yearbook*.

FINDING 1

Division efforts positively impacting Arizona's air quality

Despite difficult challenges, the Division has achieved successes in improving the State's air quality. In working to fulfill its responsibility to monitor Arizona's air quality and ensure that national air quality standards are met, the Division faces several significant challenges, including the State's rapid population growth and accompanying increases in pollution from vehicle traffic. However, the Division has implemented initiatives that have brought air quality in several problem areas of the State into compliance with national standards.

Division monitors and regulates major air pollutants

One of the Division's primary functions is to monitor air quality around the State to determine compliance with state and national air quality standards. According to division staff, it does so by collecting and analyzing air samples at approximately 60 sites located throughout the State.¹ Monitoring is not only required by federal law, but is important to protecting the health of Arizona's citizens. The EPA has set the National Ambient Air Quality Standards (Standards) based on analysis of the health risk to humans from certain air pollutants (see Table 2 on page 8 for a list of these pollutants). These Standards set a limit on the quantity of each pollutant allowed in the air. If an area within Arizona exceeds the Standards for any of these pollutants, the EPA designates it as a nonattainment area. For example, the EPA has designated the Hayden area as nonattainment for exceeding the sulfur dioxide standard because of emissions from the copper smelter located in the area.

If an area is designated as nonattainment, the Division must take corrective action. The Division submits a SIP to the EPA, demonstrating how and when the area will achieve attainment with the Standards.² Once an area has monitoring data that

The EPA sets air quality standards that Arizona must follow.

¹ The Division's efforts are supplemented by air quality monitors operated by Maricopa, Pima, and Pinal Counties, as well as by private industrial facilities.

² While the delegation agreements with Maricopa, Pima, and Pinal Counties detail the counties' authority over many air pollution control components, the development of SIPs is shared between these counties, the Maricopa and Pima Associations of Governments, and the Division. The Division retains responsibility for submitting the SIPs to the EPA for all nonattainment areas in the State.

shows compliance with the Standards for either 2 or 3 consecutive years, depending on the pollutant, the Division must submit another SIP to the EPA that demonstrates how the area will remain in attainment.

There are several real and significant costs associated with being designated a nonattainment area. First, these areas pose a potential health risk to that area's citizens. Second, there are also economic costs for an area to be designated nonattainment. For instance, all newly permitted industrial facilities located in the affected area are required to install and operate more effective and costly pollution control equipment than would otherwise be required, and in some cases would need to demonstrate that every addition they contribute to air pollution is offset by reductions to air pollution in other areas.

Table 2: Air Pollutants Regulated by the EPA's National Ambient Air Quality Standards As of June 2004

Pollutant ¹	Major Source	Health Risk/ Other Impact
Carbon Monoxide (CO)	Vehicle emissions	Cardiovascular and other system damage
Nitrogen Dioxide (NO ₂)	Vehicle emissions	Respiratory damage, decreased visibility
Particulate Matter (PM)	Dust, vehicle emissions	Respiratory damage
Ozone (O ₃)	Vehicle emissions, off-road equipment	Respiratory damage, plant damage
Sulfur Oxides [Sulfur Dioxide (SO ₂)]	Copper smelters	Respiratory difficulties, plant damage, decreased visibility

¹ The EPA also includes lead in these standards, but there are no major sources in Arizona.

Source: Auditor General staff analysis of Godish, Thad. *Air Quality*. Boca Raton: Lewis Publishers, 2004; Comrie, Andrew and Jeremy Diem. "Climatology and forecast modeling of ambient carbon monoxide in Phoenix, Arizona." *Atmospheric Environment*, Dec. 1999. 5023-5036; the Arizona Department of Environmental Quality's *FY'03 Air Quality Report*; EPA Web site: <http://epa.gov/air/criteria.html>.

There can also be direct costs to the public associated with the measures required to achieve attainment with the Standards. For example, motorists in the Phoenix nonattainment area are required to pay for a vehicle emissions test every 2 years and are likely to pay a higher price for gasoline because of special gas blends and vapor recovery equipment designed to reduce air pollution.

Significant challenges exist to improving Arizona's air quality

The Division faces several challenges in its attempts to improve Arizona's air quality and comply with the EPA's Standards, including:

- **Fast-growing population poses varied challenges**—Increased challenges to controlling air pollution accompany a rapidly growing population in an urban environment. According to figures published by the U.S. Census Bureau from the 2000 Census, Arizona and Nevada are the fastest-growing states in the western United States.¹ Similarly, the metropolitan Phoenix area has been growing faster than any other large city in the West besides Las Vegas, Nevada. Rapid population growth impacts air quality through increasing vehicle traffic and construction. Data published on western states by the U.S. Department of Transportation in its *National Transportation Statistics 2002 Report* indicate that in 2002, Arizona was second only to California in volume of roadway traffic in urban areas. Research from multiple sources indicates that there is a strong correlation between vehicle traffic and air pollution, and that vehicle emissions are the largest contributor to several pollutants in Arizona’s air. Additionally, increased construction is associated with the generation of particulate matter pollution from construction site activities, such as clearing land and driving on unpaved roads. Data from the U.S. Census Bureau’s *Final 2003 Housing Units Authorized by Building Permits* tables shows that the Phoenix area issued more residential building permits than any other metropolitan area in the West, exceeding 10,000 more permits than the next highest area.
- **State’s topography and climate create additional challenges**—Another challenge to improving the quality of Arizona’s air is the State’s climatological and topographical characteristics. According to the National Oceanic and Atmospheric Administration’s *Comparative Climatic Data and Air Stagnation Climatology for the United States* reports, Arizona is located in the region of the country with the highest anticyclonic activity (stagnant air), highest temperatures², most sunshine, and least rainfall, all of which are contributing factors to high air pollution. Additionally, the State’s arid landscape generates high levels of coarse particulate matter when disturbed through construction activities and vehicle traffic on unpaved roads. Further, in the Phoenix area particularly, the layout of the metropolitan area surrounded by mountains leads to the creation of inversion weather patterns that keep ground-level pollution from dissipating into the upper atmosphere, resulting in higher levels of carbon monoxide and other pollutants.
- **Copper production has resulted in high sulfur dioxide levels**—Arizona is the largest copper-producing state in the country. According to the U.S. Geological Survey’s *2002 Copper Yearbook*, Arizona produces approximately two-thirds of the nation’s copper. There have been more than 20 copper facilities around the State, and copper smelters emit significant amounts of sulfur dioxide during the refining process. In fact, copper facilities have been the largest emitter of sulfur dioxide in each nonattainment area.

Vehicle emissions are the largest contributor to several air pollutants in Arizona.

¹ In this report, “West” and “western states” include Arizona, California, Colorado, New Mexico, Nevada, and Utah.

² While a few cities in Florida, Hawaii, and Texas have slightly higher average annual temperatures, Arizona’s average temperatures in the summer are the highest in the nation. This is of particular importance for ozone production, as the summer months are the period of highest ozone levels.

The EPA states that Arizona has made substantial progress toward cleaner air.

Division has taken steps to improve air quality

The EPA has formally recognized Arizona's air quality improvements resulting from division initiatives. Specific initiatives have included adopting a vehicle emissions inspection program in the Phoenix and Tucson metropolitan areas and expanding the air quality monitoring networks located around the State. Partly owing to these and other initiatives, the EPA has redesignated several areas within the State as having attained compliance with national air quality standards, and the Division has completed the necessary work for additional areas to be redesignated.

Division has undertaken several air quality initiatives—The Division has implemented several measures to reduce or manage the State's air pollution. In its *2003–2008 Strategic Plan*, the EPA's regional office noted that Arizona has made substantial progress toward cleaner air over the past several years. Also, in auditors' interviews, EPA regional officials highlighted the following initiatives as having positively impacted Arizona's air quality:

- **Cleaner Burning Gasoline Program**—This program, initiated in 1997, details the various seasonal requirements for gasoline sold in the Maricopa County area. Cleaner burning gasoline is designed to reduce the quantities of several pollutants in vehicle emissions. Data from several sources indicates that motor vehicle emissions are the largest source of air pollution in Maricopa County, and an EPA regional official points to the cleaner burning gasoline program as the single largest measure providing emissions reductions for carbon monoxide and ozone. The EPA approved the most recent modifications in April 2004 authorizing the State to discontinue the use of the environmentally hazardous fuel additive MTBE (methyl tertiary butyl ether), while still requiring other types of cleaner burning gasoline.
- **Vehicle Emissions Inspection and Maintenance Program**—This program is designed to reduce on-road vehicle emissions, which contribute to increased levels of such pollutants as carbon monoxide and ozone, and is operated by the Division and its contractor in the metropolitan Phoenix and Tucson areas. EPA officials rate the program highly, noting it is well-run and expressing confidence in the quality assurance of its data. This program was also highlighted in the National Governors' Association Center for Best Practices 2000 *State Innovations to Reduce Vehicle Emissions* report.
- **Expansion of the visibility and air toxics monitoring networks**—The Division's commitment to go beyond federal requirements for its visibility and air toxics monitoring networks allow it to more readily identify and address sources of the relevant pollutants. Monitoring provides details on areas with high air pollution that the Division uses when creating pollution control measures. An EPA regional official notes that the Division is the most proactive agency in the Southwest for

Visibility monitoring—Visibility impairment is caused by both natural and human activities, and can be expressed in terms of the amount of interference with our range of vision. Monitoring networks are used to precisely measure the degree of impairment.

visibility monitoring and protection. For example, the official pointed out that the Division established a monitoring network in the State's federal wilderness areas, such as the Grand Canyon, that doubled the number of monitoring sites that the federal government required. The Division has also recently created an extensive visibility monitoring network in the Phoenix area that is available for viewing on the Division's Web site. Further, while monitoring for air toxics is not federally mandated, the Department is participating in the Phoenix-area Joint Air Toxics Assessment Project with three Indian tribes and other organizations.

- **Increased air pollution forecasting**—The Division's daily forecasting now includes ozone, particulate matter, and carbon monoxide projections for the Maricopa County area, having expanded from only ozone in October 2003. The Division makes its forecasts available each Sunday through Friday to the public, the EPA, and local employers for use in part as a guide to implementing travel reduction strategies to lessen the creation of air pollution on high pollution days.

Several nonattainment areas redesignated to attainment areas—The EPA has redesignated several of the State's nonattainment areas to attainment status, and the Division is making progress in several more. Once the air quality monitoring data for an area demonstrates compliance with the Standards, the Division submits a SIP to the EPA formally requesting redesignation to attainment status.¹ These SIPs include the pollution control measures used to maintain compliance with the Standards, and the Division typically works with county and municipal entities to create these measures. Since the Standards were implemented following the passage of the federal Clean Air Act Amendments in 1970, Arizona has been designated with 20 separate nonattainment areas, ranging from sulfur dioxide in Ajo to particulate matter in Yuma (see Table 3, and Figure 1 on page 12).

Action has been taken or is pending to move 15 of the 20 nonattainment areas to attainment status. The EPA formally redesignated 5 of the 20 nonattainment areas to attainment status between 2000 and 2004. For example, the most recent EPA action was a final approval to redesignate the Morenci nonattainment area for sulfur dioxide to attainment status on April 26, 2004. The EPA is also in the process of redesignating 3 nonattainment

Table 3: Status of EPA-Designated Areas As of June 2004

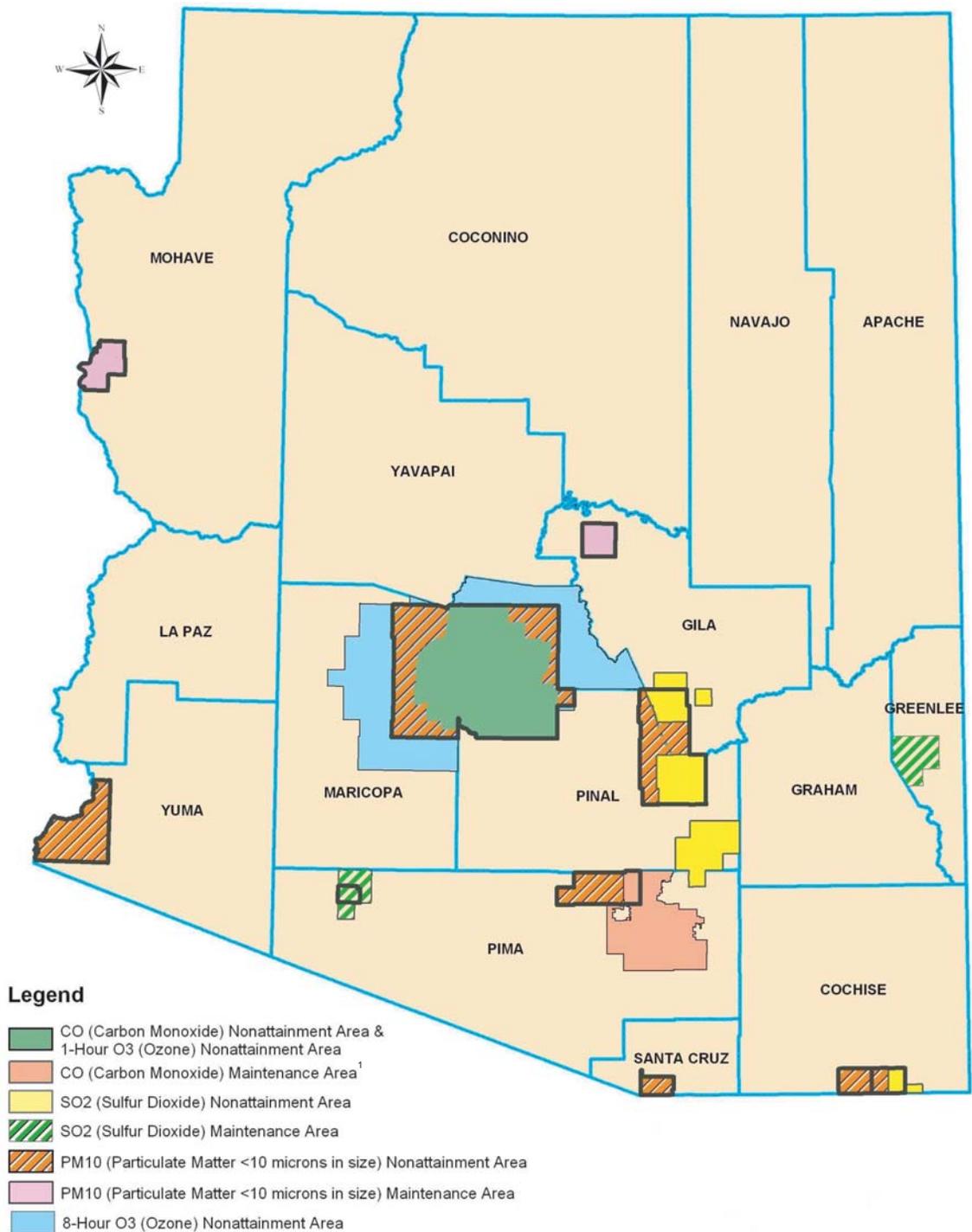
Status	Area	Pollutant
Attainment	Ajo	Sulfur Dioxide
	Bullhead City	Particulate Matter
	Morenci	Sulfur Dioxide
	Payson	Particulate Matter
	Tucson	Carbon Monoxide
Transitional ¹	Ajo	Particulate Matter
	Douglas	Particulate Matter
	Douglas	Sulfur Dioxide
	Hayden	Sulfur Dioxide
	Hayden/Miami	Particulate Matter
	Miami	Sulfur Dioxide
	Phoenix	Ozone/1-hour standard
	Phoenix	Carbon Monoxide
	Rillito	Particulate Matter
	San Manuel	Sulfur Dioxide
Nonattainment	Nogales	Particulate Matter
	Paul Spur	Particulate Matter
	Phoenix	Ozone/8-hour standard
	Phoenix	Particulate Matter
	Yuma	Particulate Matter

¹ The air quality in these areas meets the standards for attainment status, but the EPA and/or the Division needs to complete the redesignation process.

Source: Auditor General staff analysis of U.S. Federal Register Notices, SIPs submitted by the Arizona Department of Environmental Quality, and the Department's Air Quality Reports for fiscal years 2001–2003.

¹ As indicated in A.R.S. §49-406, the Maricopa and Pima metropolitan planning organizations will in some cases prepare these SIPs in conjunction with the Division. In all cases, the Division is responsible for submitting the SIP to the EPA.

Figure 1: EPA-Designated Areas
As of June 2004



¹ "Maintenance Area" is the official designation from the EPA for areas demonstrating attainment with its air-quality standards.

Prepared by the Arizona Department of Environmental Quality, Air Quality Division.

areas to attainment. Further, 7 additional nonattainment areas have demonstrated air quality meeting the Standards, and the EPA will be able to act on these redesignation requests once the Division submits all required documentation.

The air quality in the remaining 5 nonattainment areas does not yet meet the Standards, but the Division continues to take action in these areas:

- The Paul Spur and Yuma particulate matter nonattainment areas have had exceedances only because of high-wind occurrences that caused high levels of pollution. Prior to requesting redesignation to attainment in these cases, the Division needs to submit to the EPA a Natural Events Action Plan (NEAP), which is similar to a SIP. In Yuma, for example, the Division has been working with several local entities to create a NEAP for that area's particulate matter exceedance.
- The particulate matter nonattainment areas in Nogales and Phoenix have not yet demonstrated compliance with the Standards, and the Division has submitted SIPs detailing how compliance will be achieved.
- The final nonattainment area is for the new 8-hour ozone standard in the greater Phoenix area, including portions of Maricopa and Pinal Counties. The Division has until June 2009 to demonstrate compliance with these new standards. According to the Division, additional ozone modeling is needed before determining which, if any, additional pollution control measures will address this problem.

New EPA Standards—The EPA modified its air quality standards in 1997 to include a more stringent restriction on ozone pollution, to be averaged over 8 hours instead of measured hourly only, and a second particulate matter category for this pollutant's smaller, more harmful type. The new ozone standard took effect in June 2004, while the new particulate matter standard will not be fully implemented until November 2004. The EPA has proposed to designate all of Arizona as attainment to the new particulate matter standard.

Recommendations

This finding provides information only. Therefore, no recommendations are presented.

FINDING 2

Division generally addresses violations by major source facilities within specified time frames

The Division generally takes enforcement action against facilities with the greatest potential pollution emissions levels in a timely manner. The Division currently regulates 52 “major source” facilities, such as cement plants and electric generating plants. A review of division records found that the majority of these facilities operate in compliance with air quality laws, and in those instances when the Division identifies violations, it generally takes enforcement action within the time frames prescribed in policy. A few small changes, including specific time frames for each step in the enforcement action review and approval process, would help the Division eliminate the relatively few delays that occur.

Division regulates through inspections, report reviews, and enforcement actions

Because poor air quality affects both the public's and the environment's well-being, the Division regulates sources of air pollution.¹ Potential impacts of poor air quality include health risks such as cancer, birth defects, brain and nerve damage, and long-term injury to the lungs and breathing passages. Additional impacts include environmental damage, such as a thinning protective ozone layer. Further, regional haze reduces visibility and may discourage recreational and other uses of state resources, such as state parks.

The Division regulates facilities by issuing permits, conducting inspections, reviewing the facilities' technical reports, and taking enforcement action against facilities when a violation is identified.² The Division classifies violations as either minor or major.

Potential health risks of poor air include cancer and birth defects.

¹ Although the Department bears primary responsibility for the State's air quality, its regulatory responsibilities are shared with the federal government and Maricopa, Pima, and Pinal Counties' air pollution control agencies.

² Although the agreement between the Department and EPA stipulates major source facilities be inspected biennially, the Division has chosen to inspect the facilities annually.

Division-Regulated Sources

Source—Any building, structure, facility, or installation that may cause or contribute to air pollution or the use of which may eliminate, reduce, or control air pollution emission.

- **Major source**—Any stationary categorical source in an attainment or unclassifiable area with the potential to emit 100 tons per year or more of any conventional air pollutant, such as carbon monoxide, or 250 tons or more per year of any pollutant regulated under the Clean Air Act if the source is not classified as a categorical source.¹ Sources in nonattainment areas may be subject to a lower threshold for conventional pollutants. The severity of the nonattainment area will dictate what emissions level constitutes a major source. As of July 2004, the Division regulated 52 major sources, including cement plants, smelters, and electric generating plants.
- **Minor source**—A source of air pollution that is not a major source. As of July 2004, the Division regulated 682 minor sources, including dry cleaners, mortuaries, cotton gins, and waste water treatment plants.

¹ A categorical source is one of 26 classes of sources including lime plants and primary copper smelters.

- **Minor violations** are those that pose a minimal risk to human health and the environment, such as failure to keep a copy of a complete permit at the facility.
- **Major violations** are those that pose risk to human health and the environment. An example of a major violation is a facility's failure to install, calibrate, operate, or maintain emissions monitoring equipment necessary for monitoring air contaminants.

The Division resolves most violations using informal enforcement actions. For example, for a minor violation, the Division may send the facility a Notice of Opportunity to Correct (NOC), which explains the violation(s) and the action the facility needs to take to verify its return to compliance. However, if the violation is particularly egregious, the Division may take formal enforcement action, such as issuing a consent order, or referring the action to the Attorney General's Office for civil or criminal action.

The enforcement process also requires staff to follow up to ensure the facility corrects the violation(s) and returns to compliance. If a facility has not corrected the violation(s) within a specified time frame, department policy recommends that it escalate the enforcement action. For example, if the Division issued a Notice of Violation (NOV) for the original violation(s), it could escalate the action to a consent order, and then to a referral for civil action. Department policy allows for case-specific deviations from these guidelines with approval from the division director.

Informal Enforcement Actions

- **Notice of Opportunity to Correct (NOC)**—Puts the facility on notice that the Division believes a nonsignificant violation of an environmental law has occurred and should be corrected.
- **Notice of Violation (NOV)**—Puts the facility on notice that the Division believes a significant violation of environmental law has occurred and should be corrected.

Formal Enforcement Actions

- **Administrative Orders**—From the Division
 - Compliance Order*—Unilateral order issued without input from the facility. It is appealable.
 - Consent Order*—Bilateral order issued with the complete written agreement of the facility. It is not appealable.
 - Permit Suspension/Revocation*—Unilateral or bilateral order suspending for a specified period of time or revoking the facility's permit. If issued unilaterally, it can be appealed.
- **Civil Referral**—From the Division to the Attorney General's Office
 - Permanent Injunction/Civil Penalty*
 - Temporary Restraining Order/Preliminary Injunction*
 - Consent Judgment/Consent Decree*—A negotiated settlement of a civil complaint.
- **Criminal Referral**—Authority for prosecution of environmental crimes lies exclusively with the Attorney General's Office, but the Division assists by gathering evidence.

Division can strengthen generally sound program of issuing enforcement actions

While the Division generally issues enforcement actions to major source facilities within its specified time frames, it could still improve. Auditors reviewed the records of all 52 major source facilities to determine how quickly the Division issued a notice of enforcement action when it identified violations. When staff find violations, an NOC or NOV is internally reviewed and approved by management before being sent to the facility. The Department's policy requires the Division to send the notice to the facility within 45 days if the violation is identified through an inspection, or 60 days if identified through a technical report review.

As illustrated in Table 4 (see page 18), the Division issued 25 informal enforcement actions to these facilities in calendar years 2002 and 2003.¹ In all, 18 of the 25

The Division generally issues enforcement actions to major source facilities in a timely manner.

¹ The Division escalated 4 of the 25 informal enforcement actions issued in calendar years 2002 and 2003 for civil action by the Attorney General's Office. Although the violations in two of the actions were resolved prior to the referral, the Division still escalated them for the purpose of assessing penalties, which can only be done through civil action.

Table 4: Air Quality Division
Timelines of Issuing Informal Enforcement Actions To Major Source Facilities
Calendar Years 2002 and 2003

Year	Type	Total Issued	Number Issued According to Policy		
			Within Time Frame	Exceeded by 1 to 30 Days	Exceeded by More Than 30 Days
2002	NOC	1	1	-	-
	NOV	<u>7</u>	<u>4</u>	<u>2</u>	<u>1</u>
	Total	<u>8</u>	<u>5</u>	<u>2</u>	<u>1</u>
2003	NOC	6	4	1	1
	NOV	<u>11</u>	<u>9</u>	<u>2</u>	-
	Total	<u>17</u>	<u>13</u>	<u>3</u>	<u>1</u>

NOC = Notice of Opportunity to Correct
NOV = Notice of Violation

Source: Auditor General staff analysis of the Division's Inspections, Compliance, and Enforcement (ICE) database, Arizona Aerometric Information System (AZAIRS) database, and facility files.

informal actions (72 percent) were issued within policy time frames. Five (20 percent) exceeded their time frame by 1 to 30 days, while 2 actions (8 percent) were issued more than 30 days after the date specified by policy.

Although the Division has generally issued enforcement actions in a timely manner, as of August 2004, the Division noted that it has not completed the review of two NOV's originally recommended by staff in September and November of 2003. Division staff indicated the delays in issuing these two enforcement actions resulting from technical report reviews were due, in part, to the notices sitting on one reviewer's desk for several months and the need to revise the wording once the reviews had been completed. While the Department has guidelines specifying who must review and approve an enforcement action before it is issued, it does not specify individual time frames for completing these tasks. Therefore, the Division should consider developing specific time frames for each step in the review and approval process. Additionally, the Division should consider creating a report of all pending enforcement cases to alert both the manager and staff of their status, and division management should ensure that these reports are reviewed weekly. Division management indicated that such a report would be helpful and they plan to develop it.

Violations are not widespread and are generally resolved quickly

Most major source facilities comply with air quality laws. Auditors found that in calendar years 2002 and 2003, the Division issued enforcement actions to only one-third of the 52 major source facilities. Further, of the 17 facilities that had enforcement actions issued to them, 12 were issued only one action, and many of these were for relatively minor violations, such as excessive dust.

In 2002 and 2003, only one-third of major source facilities had enforcement actions.

When the Division identifies violations, major source facilities generally resolve them in a timely fashion. This timeliness takes two forms:

- First, the Division generally gives facilities a relatively short period of time to comply. According to department policy, a facility receiving an NOC should return to compliance within 180 days, and a facility receiving an NOV should return to compliance within 120 days.¹ However, the Division can and usually does direct facilities to correct violations in a shorter time frame. Auditors reviewed all 25 enforcement actions issued to major source facilities in calendar years 2002 and 2003 and found that the Division directed the facilities to come into compliance in 7 to 120 days, with the most frequent time frame being 30 days.
- Second, most facilities comply with the Division's time frames. As shown in Table 5 (see page 20), the majority of violations identified in calendar years 2002 and 2003 were corrected within the Division's deadlines. Specifically, facilities resolved violations in 16 of the 25 enforcement actions (64 percent) within the specified deadlines, with another 2 (8 percent) exceeding their time frame by 30 or fewer days. Four actions are still open and have exceeded their designated time frames. However, the Division is actively working with the facilities to resolve two of the actions, and has requested assistance from the Attorney General's Office to resolve the remaining two actions.

Most major source facilities correct violations within deadlines.

The Division determined that it was not necessary to escalate enforcement action for the five actions where the facilities exceeded their time frames but eventually came into compliance because the facilities actively worked to resolve the violations. For example, in the case of the facility that exceeded its designated time frame by 181 days, the delay was due to the fact that the facility had to submit an approved planning document that could only be done after completing a particular performance test. Once the facility completed the test, it completed and provided the planning document to the Division.

¹ According to department policy, once a facility has missed the "return to compliance" time frames set in the NOV, the Division will contact the facility to discuss their options for demonstrating compliance. Policy calls for the staff to state that one of three options must occur within the next 45 days or a compliance order will be issued: 1) send proof to the Division that the facility has returned to compliance, 2) take appropriate steps to return to compliance within the next 45 days and then notify the Division, or 3) enter into a consent order where an extension can be negotiated between both parties.

Table 5: Air Quality Division
 Status of Enforcement Actions Issued To Major Source Facilities
 Calendar Years 2002 and 2003

Year	Type	Total Issued	Complied Within Designated Time Frame	Complied, but Exceeded Designated Time Frame ¹	Still Open and Exceeding Designated Time Frame ²
2002	NOC	1	1	-	-
	NOV	<u>7</u>	<u>7</u>	-	-
	Total	<u>8</u>	<u>8</u>		
2003	NOC	6	4	1	1
	NOV	<u>11</u>	<u>4</u>	<u>4</u>	<u>3</u>
	Total	<u>17</u>	<u>8</u>	<u>5</u>	<u>4</u>

NOC = Notice of Opportunity to Correct
 NOV = Notice of Violation

¹ The number of calendar days by which the facilities exceeded their designated time frames were 2, 23, 56, 109, and 181.

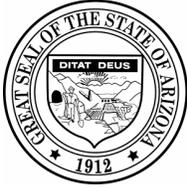
² Of the four actions still open, two were referred to the Attorney General's Office for civil action. Resolution of the third action is dependent on additional performance testing, which was delayed due to weather. The reporting violations in the fourth action have been remedied, but the facility must still provide a plan for ensuring that similar violations do not occur in the future.

Source: Auditor General staff analysis of the Division's Inspections, Compliance, and Enforcement (ICE) database, Arizona Aerometric Information Retrieval System (AZAIRS) database, and facility files.

Recommendation

1. To help ensure facilities with violations are notified within the required time frames, the Division should consider:
 - a. Setting in policy specific time frames for each step in the enforcement action review and approval process.
 - b. Creating a report of all pending enforcement cases to alert both the manager and staff of their status; division management should ensure that these reports are reviewed weekly.

AGENCY RESPONSE



Janet Napolitano
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

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Stephen A. Owens
Director

September 13, 2004

Ms. Debra K. Davenport, CPA
Auditor General
2810 North 44th Street, Suite 410
Phoenix, AZ 85018

Re: Performance Audit and Sunset Review—Air Quality Division

Dear Ms. Davenport:

The Arizona Department of Environmental Quality appreciates the opportunity to respond to the Air Quality Division (the Division) performance audit report. The report is a useful assessment of the Division's efforts to improve air quality throughout Arizona and to ensure compliance by major sources of air pollution. We thank the Office of the Auditor General for its effective communication throughout the audit process.

As the audit report reflects, the Division's mission is "to control present and future sources of air pollution to protect the environment and ensure the health and general welfare of the citizens of Arizona." The Division achieves its mission through monitoring air quality throughout Arizona, issuing permits to industrial sources of air pollution, inspecting those facilities and taking action to bring facilities into compliance, among other initiatives and responsibilities. We have continued to improve air quality in much of Arizona despite significant reductions to the Department's and the Division's budget and personnel.

The Department recently has made significant achievements in air quality initiatives and improvements. For example, in 2003, the Department received the annual Clean Air Award from the American Lung Association of Arizona in recognition of the Department's successes in improving air quality in Arizona. Additionally, throughout 2003, the Department worked constructively with stakeholders and the U.S. Environmental Protection Agency (EPA) to designate the boundaries for the Phoenix area eight hour ground-level ozone nonattainment area within the northeastern portion of Maricopa County and a very small portion of northern Pinal County. The Department's effective effort avoided imposition of EPA's presumptive boundary, which would have placed the entirety of both Maricopa County and Pinal County in the new non-attainment area.

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The Department also is proud of our Children's Environmental Health Project (Project), which focuses on reducing environmental risks to children's health in Arizona, including particularly the effect of air quality on childhood asthma and other respiratory illnesses. The Department is working with the Arizona Department of Health Services to assess the extent to which specific environmental factors are related to asthma events. In the summer of 2003, nearly a year in advance of the federal imposition of the standard, we began forecasting and widely reporting a new eight hour ground-level ozone standard, which is more protective of children's health. Children are at risk from exposure to harmful ozone because they are active outside, playing and exercising, and the Department's ozone forecasts allow parents and caregivers to adjust outdoor activities accordingly. The Department, in cooperation with Maricopa County, provides daily forecasts of ozone, particulate matter, and carbon monoxide levels, and announces appropriate health advisories on our web site.

Further, as part of the Project, in August of this year, the Department, in cooperation with several school districts in Arizona, launched an innovative pilot program to reduce children's exposure to harmful diesel emissions from buses idling near schools. Key elements of the pilot program include having drivers turn off buses upon arrival at a school and not restart the engine until the bus is ready to depart. Diesel emissions can aggravate respiratory illnesses, such as asthma, and have been linked to lung and heart disease. One of the components of diesel emissions, carbon monoxide, also can reduce alertness and learning capacity in children.

In addition, the Department employs a Hazardous Air Response Team (HART) to provide air quality monitoring and forecasting during emergency situations. HART uses a mobile air quality monitoring van, as well as portable monitoring devices, to collect air quality information necessary to develop public health advisories when smoke or other emissions threaten public health. HART has monitored smoke from several major fires in Arizona, including the Rodeo-Chediski fire in 2002, the Aspen fire in 2003, and the Willow and Nuttall fires in 2004. Also, in November 2003, HART monitored potentially hazardous air emissions from a chlorine spill at a chemical facility in Glendale.

As the audit report recognizes, Arizona is committed to improving visibility levels by reducing haze in the state's urban areas, national parks and wilderness areas and has taken a leadership role on these issues in the Southwest. Indeed, in 2003 Governor Napolitano became Co-chair of the Western Regional Air Partnership (WRAP), a collaborative effort of state and tribal governments and various federal agencies to implement the recommendations of the Grand Canyon Visibility Transport Commission and to develop the technical and policy tools needed by western states and tribes to comply with the EPA's regional haze regulations. With Governor Napolitano as the WRAP Co-chair, the Department is playing an even greater role in the effort to improve visibility and air quality in Arizona and other western states.

The Department also is implementing several special air quality studies in sister cities along the U.S.-Mexico border. A study of Nogales, Arizona and Nogales, Sonora is completed and the study of Douglas, Arizona and Agua Prieta, Sonora is in the final stages. In 2005 we will begin a major study of air quality in the area of Yuma, Somerton and San Luis, Arizona and San Luis Rio Colorado, Sonora. By assessing the current air quality problems, these studies will allow communities to identify and implement appropriate remedial measures and thereby benefit children and others living in these border communities.

FINDING 1: DIVISION EFFORTS POSITIVELY IMPACTING ARIZONA'S AIR QUALITY

As the audit report indicates, in spite of Arizona's rapid population growth and challenges associated with our state's climate and terrain, 15 of the 20 areas of the state once designated as not meeting air quality standards now enjoy healthful air quality. In addition to the efforts discussed in the audit report, the Department continues to work with local and regional agencies in the metropolitan Phoenix area to reduce particulate pollution, as well as meeting the new, more stringent eight-hour standard for ozone.

Moreover, in Yuma, we have submitted to EPA a Natural Events Action Plan to control particulate pollution and are working closely with local governments and other stakeholders to develop a new plan to show how the area will continue to meet the standard for particulate matter.

FINDING 2: DIVISION GENERALLY ADDRESSES VIOLATIONS BY MAJOR SOURCE FACILITIES WITHIN SPECIFIED TIME FRAMES

Assuring compliance with environmental laws is a priority for the Department. The Division has made many improvements to its enforcement process in recent years. For example, the Division has created for all major source facilities detailed inspection checklists, which identify every applicable air quality standard or requirement for each facility. The Division also recently employed new comprehensive complaint and enforcement tracking databases to ensure complaint responses and enforcement actions progress adequately.

The Division addresses violations quickly and effectively. This includes the imposition of appropriate penalties to deter future violations. In 2001, for example, ADEQ collected the largest state-only air quality penalty in the United States for violations at the North Star Steel facility in Mohave County, valued at \$7.75 million. Most recently in fiscal years 2003 and 2004, the Department assessed \$501,180 in penalties for air quality violations, including Valley Refining for operation of a refinery without a permit (\$75,180), APS Cholla power plant for burning unauthorized liquid wastes (\$200,000) and Cyprus Sierrita for operation without a proper permit (\$140,000).

Ms. Debra Davenport

September 13, 2004

Page 4 of 4

RECOMMENDATION

1. To help ensure facilities with violations are notified within the required 45 days, the Division should consider:
 - a. Setting in policy specific time frames for each step in the enforcement action review and approval process.
 - b. Creating a report of all pending enforcement cases to alert both the manager and inspector of its status: division management should ensure that these reports are reviewed weekly.

The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

Thank you for the opportunity to respond to the performance audit and Sunset review for the Air Quality Division.

Sincerely,

Stephen A. Owens
Director

Performance Audit Division reports issued within the last 12 months

02-07	Arizona Health Care Cost Containment System—Medical Services Contracting	03-05	Department of Economic Security—Child Protective Services—Foster Care Placement Stability and Foster Parent Communication
02-08	Arizona Health Care Cost Containment System—Quality of Care	03-06	Arizona Board of Appraisal
02-09	Arizona Health Care Cost Containment System—Sunset Factors	03-07	Arizona Board for Charter Schools
02-10	Department of Economic Security—Division of Children, Youth and Families, Child Protective Services	03-08	Arizona Department of Commerce
02-11	Department of Health Services—Health Start Program	03-09	Department of Economic Security—Division of Children, Youth and Families Child Protective Services—Caseloads and Training
02-12	HB2003 Children's Behavioral Health Services Monies	04-L1	Letter Report—Arizona Board of Medical Examiners
02-13	Department of Health Services—Office of Long Term Care	04-L2	Letter Report—Gila County Transportation Excise Tax
03-L1	Competitive Electric Metering, Meter Reading, and Billing and Collections	04-01	Arizona Tourism and Sports Authority
03-01	Government Information Technology Agency—State-wide Technology Contracting Issues	04-02	Department of Economic Security—Welfare Programs
03-02	Registrar of Contractors	04-03	Behavioral Health Services' HB2003 Funding for Adults with Serious Mental Illness
03-03	Water Infrastructure Finance Authority	04-04	Department of Emergency and Military Affairs and State Emergency Council
03-04	State Board of Funeral Directors and Embalmers	04-05	Department of Environmental Quality—Water Quality Division
		04-06	Department of Environmental Quality—Waste Programs Division

Future Performance Audit Division reports

Arizona Department of Transportation—Motor Vehicle Division—State Revenue Collection Functions