Air Quality

Air Quality: Guardian to a Prairie Sky

The Guardian sits atop the Oklahoma State Capitol Building Dome.

Our concern: Over two million cubic miles of Oklahoma's most elusive natural resource. Air. Pure air. We are custodians to the sky. A daunting task for sure. For our skies are not only boundless, they are restless.

Yet we measure. We monitor. We model. We compare today to yesterday. We predict tomorrow because the quality of the air has a personal effect on each citizen who lives and works in our state every day. And we are responsible to them.

Through permitting, inventory, compliance and enforcement, we survey, assess, and evaluate. Through studies and rulemaking, we predict and plan. Through monitoring, we persevere.

Every day we work to better understand Oklahoma's air quality. We seek to promote prosperity without sacrificing character. Our goal is to maintain that little piece of heaven that blankets this fair land. ■

A Distinguished Public Servant Resigns

Gary A. Kilpatrick, who has represented transportation on the Air Quality Council longer than DEQ has been in existence, has resigned his membership to the council. Mr. Kilpatrick retired from Conoco/Phillips in 2003 and stated that a representative who remains active in industry would better serve the council.

Though born in the Texas Panhandle, Mr. Kilpatrick was raised in Bartlesville. He received his Bachelor of Science and Master's Degrees from the University of Oklahoma in 1966 and 1968 and shortly thereafter began his career at Phillips. He served in the United States Navy as a lieutenant assigned to the U.S. Atomic Energy Commission's Division of Naval Reactors and returned to Phillips upon completion of his military service.

First appointed to the Air Quality Council in 1988, he served during the administration of four Oklahoma Governors: Governors Bellmon, Walters, Keating, and Henry. Mr. Kilpatrick has overseen the development of the state's environmental agency, participating in its growth from a division of the Oklahoma State Department of Health to the independent agency it is today.

Gary A. Kilpatrick

The Air Quality Division's stability and growth is a tribute to the continued oversight of distinguished Oklahomans like Mr. Kilpatrick.

We offer him our sincere thanks. ■

Major Changes to Minor Source Permitting

The Environmental Quality Board has approved changes to the Air Quality Division's minor source permits program that raise the total emissions a facility may emit without triggering requirements for permits, fees, and reporting.

Under the amended rules, facilities that emit 40 tons per year or less of each regulated air pollutant qualify for permit exemption. These facilities are also exempt from paying annual operating fees and submitting an annual emissions inventory. However, the Air Quality Director is authorized to request a special emissions inventory when emissions data is required for program planning or compliance with state or federal rules, regulations, or standards.

The new rule includes emission calculation methods to simplify matters for small oil and gas exploration and production facilities and natural gas compressor facilities. Facilities may assume the facility is "permit exempt" without calculating emissions if their total maximum rated horsepower equals 240 or less for all reciprocating internal combustion engines in

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compressor service. There are also provisions for facilities to be considered "permit exempt" based on a low natural gas throughput, rather than calculating emissions from dehydration units and certain other equipment.

Neither "major sources" nor "major stationary sources" are eligible for permit exempt status, nor is a facility that is subject to an emission standard. However, a facility subject only to recordkeeping requirements under one of these federal standards may qualify for the permit exemption.

The new rule not only reduces the regulatory burden on smaller facilities but also allows the division to use its limited permitting and compliance resources more effectively. ■

CLEARING THE AIR:

Air Quality Division Compliance and Enforcement Activities Stress Emission Reductions to Promote Cleaner Air

Two Air Quality Compliance/Enforcement inspectors show up at a factory's office. They are there to conduct a compliance evaluation for the Department of Environmental Quality. During the evaluation they find some violations of the factory's permit and the state rules. So what happens now?

The path forward depends upon the severity of the violations, but the ultimate goal of DEQ is to reduce pollution to make the air cleaner for all Oklahomans and to ensure a level playing field for industries of all sizes. When a violation is discovered, Compliance/Enforcement, along with DEQ's attorneys, develop a case and formulate a course of action.

In the case of a minor violation, the facility may take corrective measures during the evaluation. The resulting reduction in emissions is not easily quantified but is equally as important as those resulting from more formal actions. The public is often not even aware of the benefit of DEQ's actions. Corrective measures can include applying water to a dusty parking lot, or stopping a particular procedure until the wind changes direction to alleviate a dust or odor complaint.

The next step up in the significance of a violation may result in a facility receiving a Notice of Violation or NOV. In most cases, the response to the NOV includes the corrective measures that have been or will be taken to come back into compliance. These measures can result in substantial reductions in pollutants that reach the air. Most companies willingly comply once they are made aware of a violation.

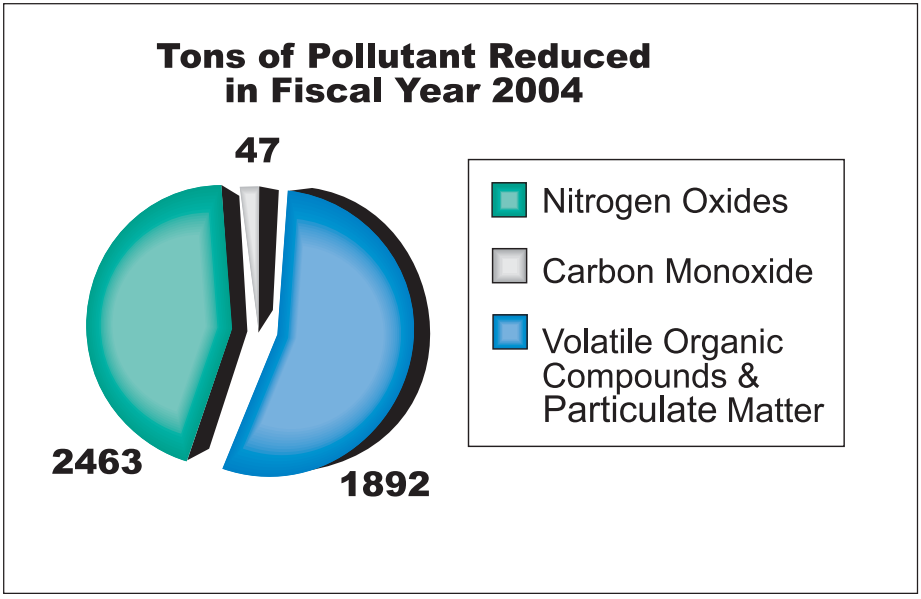
If a violation is particularly severe, resulting in potentially significant harm to human health or the environment, the Air Quality Division will typically meet with the facility to enter into a consent order and to collect a monetary penalty

as a deterrent to the offending party. These penalties are in addition to any corrective measures that may be required by the permit or by a specific rule.

Frequently the offending company may have the cash portion of the penalty reduced by performing a "supplemental environmental project" or SEP. To receive a SEP credit, a company typically submits a proposal outlining the projects it will complete, the cost of the projects and the amount of emissions reduction. The DEQ gives the company credit for part or all of the cost of the projects (i.e. SEP cost of $10,000 may equal a credit of $5,000 to $10,000). In this way, a company is paying a cost for non-compliance and the public is benefiting from cleaner air.

SEPs can take many forms. Past SEPs have included planting trees and shrubs, which have an indirect impact on air quality while adding to the aesthetic beauty of an area. Still other SEPs can include money or time given to promoting environmental education programs for schools or clubs. Most often the SEP includes additional pollution control equipment above and beyond what is required. This type of SEP results in a reduction of emissions to the air and has a direct impact on air quality. These reductions are more easily quantified and are included in the chart below.

By enforcing air quality rules and working to reduce emissions, the Compliance/Enforcement Sections continue to have a direct role in improving the quality of the air resources and the quality of life for the people of the great state of Oklahoma. ■



AQD Looks Back: The First Years

The 1990 modifications to the Clean Air Act prompted the Air Quality Division (AQD) to update the State Implementation Plan (SIP). These changes incorporated the Title V permitting requirements, 40 CFR Part 70, into the SIP. Oklahoma Title V permitting requirements can be found in Oklahoma Administrative Code (OAC) 252:100, Subchapter 8.

Subchapter 8 requires new and existing facilities that are major sources to obtain Title V operating permits. Major sources are those facilities with either potential criteria pollutant emissions above 100 tons per year (TPY), or Hazardous Air Pollutant (HAP) emissions above 10 TPY for a single HAP or 25 TPY of a combination of HAPs. As an alternative to obtaining a Title V operating permit, these facilities may obtain a permit with enforceable limits that restrict emissions below the major source levels (referred to in AQD/EPA jargon as a "synthetic minor permit").

The initial round of Title V operating permits did not contain substantive new requirements. The main goals were to consolidate all existing permits and conditions contained within those permits into a single operating permit and to assure that the facilities are operating in compliance with all rules and regulations. A Title V operating permit is effective for five years. Facilities are required to apply for a renewal within at least six months prior to the end of the five-year term of the permit.

Since the AQD expected to receive between 350 and 450 Title V (TV) operating permit applications from existing sources, the division implemented a phased schedule for application submittal, based on the sources' Standard Industrial Classification (SIC) codes. The first applications were due by September 5, 1996, with all applications required by March 6, 1999. The first Title V operating permits were issued in 1997. Therefore, the AQD began receiving and processing Title V renewal applications during 2002. In addition to the initial and renewal permits, the AQD has been processing applications for modifications to Title V facilities.

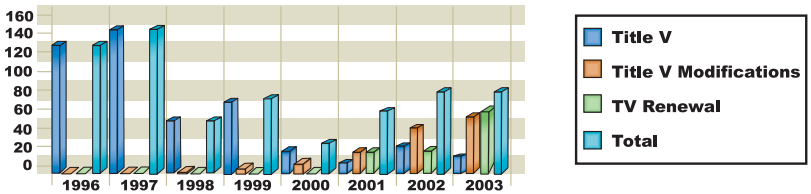


Figure 1: Title V Applications Received

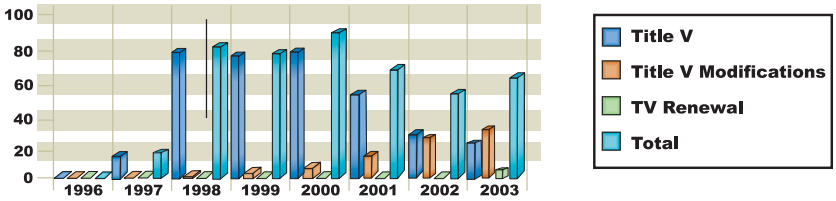


Figure 2: Title V Permits Issued

Figures 1 and 2 (above) depict the total number and types of applications received and the number of permits issued since the initial deadline for the first Title V operating permit applications.

During the initial phase, the AQD received 419 Title V applications. Of these, 46 were either withdrawn or changed to

# of Title V Permitting

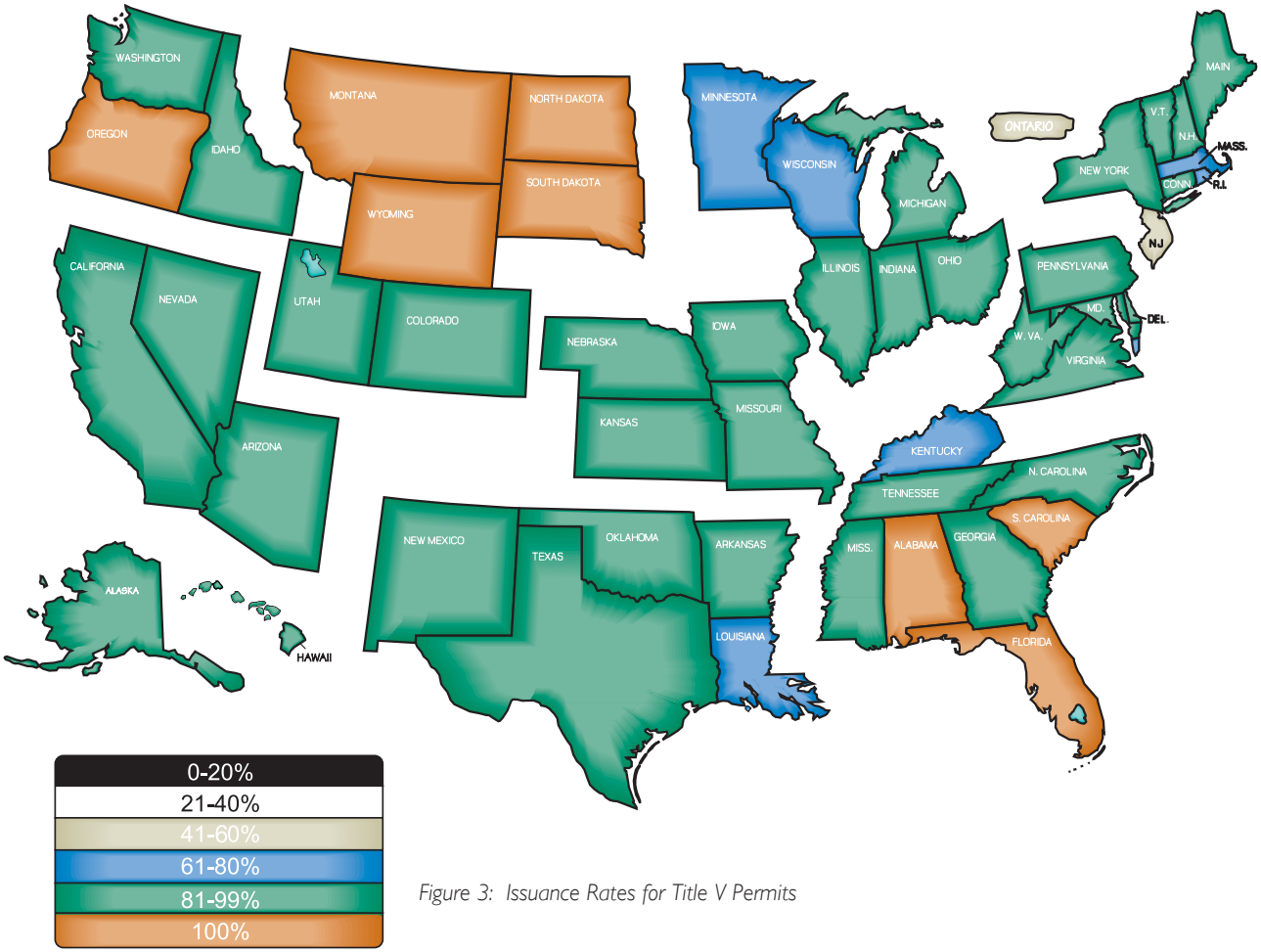


Figure 3: Issuance Rates for Title V Permits

synthetic-minor status, leaving 373 applications to be processed. As of June 4, 2004, 344 have been issued, leaving 29 to be finalized. Several of these are in the final stages of review or are in the comment stage. The AQD expects to issue 19 of these remaining permits by the end of 2004.

Figure 3 (above) is an EPA graphic that describes the Title V issuance rates for all the states as of March 31, 2004.

AQD Major Source Construction Permits

The AQD's permitting program is a two permit system – construction and operating. Construction permits are required for newly proposed facilities and certain proposed projects at existing facilities. Following completion of construction, pertinent permit requirements are carried over into the operating permit when issued.

Continued on next page

The AQD has consistently placed a high priority on construction permit issuance because of the significant company investment in the projects, and the limitations on allowable construction activities prior to permit issuance. The Air Quality rules were originally written so that a higher priority would be placed on the timely issuance of construction permits.

Figures 4 and 5 (below) show the total number of major source construction permits processed, and the average number of days it took to issue these permits. The average number of days includes the 30-day public review, and EPA's 45-day review time. These numbers only represent construction permits for major sources processed under Subchapter 8.

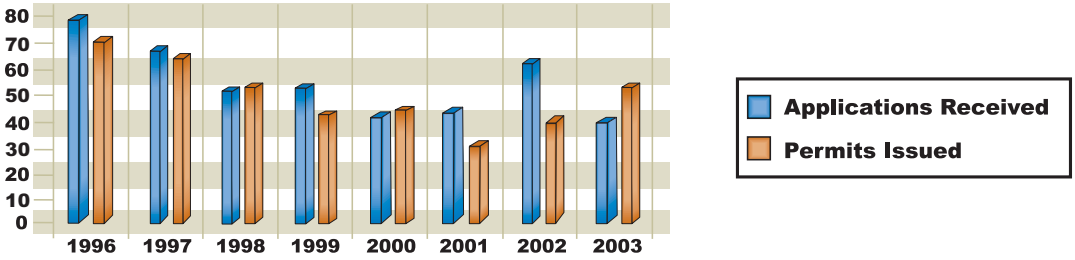


Figure 4: Major Source Construction Permits

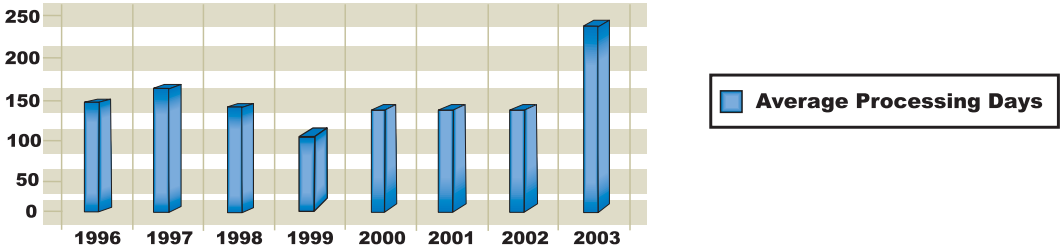


Figure 5: Processing Time for Major Source Construction Permits

"Synthetic Minor" Permits

Many new or expanding facilities which would otherwise be required to apply for a Title V operating permit choose to accept some type of process limit or include additional control equipment to assure they do not exceed the major source thresholds for criteria or hazardous air pollutants. The application is then processed under OAC 252:100 Subchapter 7, and the permit is commonly referred to as a synthetic minor permit. Some of the advantages of receiving a synthetic minor permit versus a Title V permit include simpler compliance demonstrations and reporting requirements. Existing major sources sometimes propose to take limits to obtain a synthetic minor permit. Depending on the situation, a construction permit may be required prior to modifying the operating permit or the change may require only a modification of the operating permit specific conditions.

Each facility that receives a synthetic minor permit rather than a Title V permit represents either an actual reduction in existing pollutant emissions into Oklahoma's air or a limit on emissions at a lower level than would otherwise be allowed.

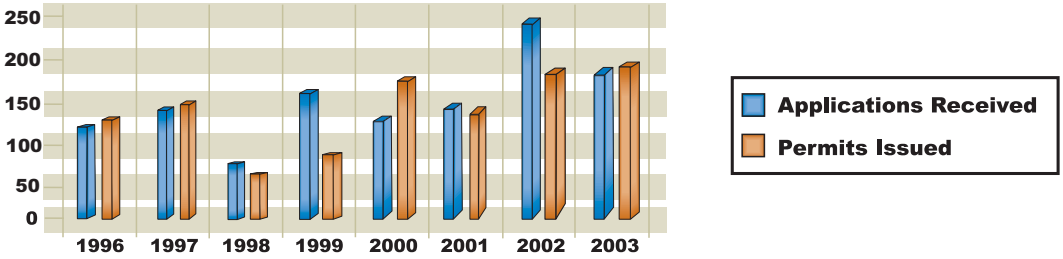


Figure 6: Synthetic Minor Applications and Permits

Figure 6 (above) shows the number of requests for synthetic minor permits (construction and operating) that have been received and processed since the Title V program began.

"True Minor" Permits

Other facilities are referred to as "true minors" since their actual emissions are above the *de minimis* level established under AQD rules, but their potential to emit is below major source thresholds. In general, a *de minimis* facility has actual emissions less than five TPY.

Until recently, all true minor facilities were required to obtain a permit under OAC 252:100, Subchapter 7. On June 11, 2004, Subchapter 7 was changed to include a "permit exempt" category. This category exempts facilities which have actual emissions below 40 TPY and which are not subject to an equipment standard or emissions limit under 40 CFR Parts 60, 61, or 63 from obtaining a permit. (See related article, "Major Changes to Minor Source Permitting" on page 39). Two main factors were considered prior to making this change: 1) the impact of emissions from "true minor" facilities on Oklahoma's air quality, and 2) the level of DEQ resources devoted to "true minor" facilities.

Figure 7 (below) represents the number of true minor AQ permits (construction and operating) that have been applied for and issued since the Title V program began.

As the previous graph shows, DEQ handles a significant number of true minor permit applications. With the addition of the permit exempt category, the AQD can redirect many of the resources currently dedicated to permitting and inspecting these sources to more significant emission sources. Besides the obvious benefits to facilities that are now permit exempt, other facilities may see a slight decrease in processing times for its permits. ■

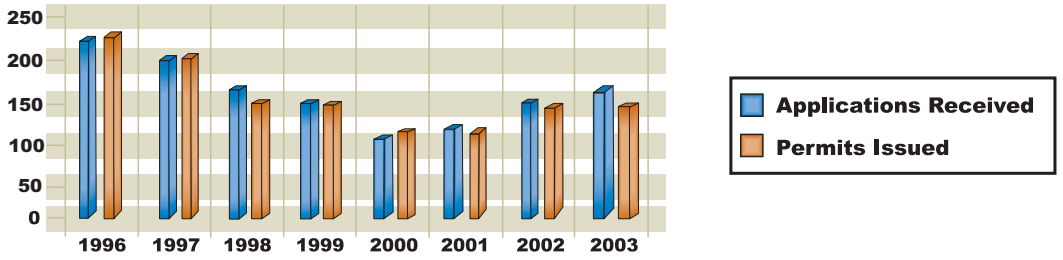


Figure 7: "True Minor" Applications and Permits

Air Quality Division Models Air Quality

The Air Quality Division has continued active participation in two Early Action Compacts to assure continued compliance with the 8-hour ozone standard. The Department of Environmental Quality in cooperation with the Association of Central Oklahoma Governments and the Indian Nation Council of Governments submitted the federally required Clean Air Action Plan for the Oklahoma City and Tulsa areas by the March 31, 2004 deadline. On April 15, 2004 EPA made official designations for the eight-hour ozone standard, designating all of Oklahoma as attainment.

A cornerstone of Oklahoma's Early Action Plan is photochemical modeling that demonstrates that ozone concentrations in the year 2007 will not exceed the standard. Modeling demonstrated attainment of the eight-hour ozone standard in Oklahoma City; however, the modeled attainment test was inconclusive for Tulsa. When 2001-2003 design values were used, modeled attainment tests were good, but when 1998-2000 design values were used, attainment tests were not achieved at two Tulsa monitors.

Model performance is evaluated by comparing predicted concentrations to monitored concentrations for the same time period. The division has prepared a weight of evidence analysis that demonstrates attainment of the 8-hour ozone standard in 2007 throughout the state.

The division continues improving the model in an effort to better understand Oklahoma's ozone situation and to determine the need for and effectiveness of potential control strategies. ■

Air Monitoring Station

Talking to the Neighbors: Regional Air Planning

The Air Quality Division is actively participating in regional planning activities with other state air agencies. Oklahoma has always been a member of both the Central States Air Resource Agencies (CenSARA) and the Central Regional Air Planning Association (CENRAP) in an effort to address regional air pollution concerns in the central United States. These states include Oklahoma, Nebraska, Kansas, Texas, Minnesota, Iowa, Missouri, Arkansas and Louisiana

Participation in CenSARA benefits Oklahoma by providing a forum for sharing air quality data information among member states and enhancing the abilities to identify options that can effectively resolve common issues. Oklahoma has been able to take advantage of training opportunities sponsored by CenSARA, including New Source Review Reform and Emissions Inventory preparation. Oklahoma has also participated in *ad hoc* committees, such as the I-35 Clean Corridor, Mercury Rule and Clean Air Interstate Rule, which have been formed to review issues that affect Oklahoma and other CenSARA states. Working with other states in the organization provides a way for Oklahoma to have a greater voice on the national front when submitting comments to EPA on issues of interest, such as grant guidance and new federal regulations.

CENRAP is an organization of the central states, tribes, federal agencies and other interested parties that identifies regional haze and visibility issues and develops strategies to address them. Oklahoma has been involved in various planning and technical meetings over the past year as the Air Quality Division works toward the submittal of our State Implementation Plan for regional haze. Participation has also provided advanced modeling training to Oklahoma staff which will result in a reduced dependence on contractors to accomplish similar work in the future.

CenSARA member states.

Eddie Terrill, Air Quality Division Director, serves on the Board of Directors of CenSARA and also serves as a member of the Policy Oversight Group (POG) for CENRAP. Beverly Botchlet-Smith, Air Quality Assistant Division Director, serves as the alternate for the POG.

Other Air Quality Division staff members are also serving in leadership roles. Ray Bishop, Environmental Program Manager, Emissions Inventory Section, has been appointed interim Co-Chair for the Monitoring Workgroup; and Lee Warden, Professional Engineer, has been named Co-Chair for the Modeling Workgroup. ■

Air Quality Coordinates ScienceFest 2004

On April 22, 2004 fourth and fifth grade students converged to spend Earth Day at ScienceFest, which was held at the Oklahoma City Zoo. Forty-four hundred Oklahoma students attended the 3rd annual ScienceFest. ScienceFest is a free event dedicated to the promotion of all areas of science. The event featured 28 different interactive, hands-on activities and workshops and concluded with a performance by Billy B! The Natural Science Song and Dance Man. The educational components were administered by 22 different agencies and organizations and covered such topics as air quality, biodiversity, geology, and physics. DEQ participated as a sponsor and as a member of the ScienceFest Steering Committee in addition to providing activity stations and a workshop. The success of this event was largely attributed to the 150 volunteers (50 of whom were from DEQ) that helped with the logistics of the event.

The Air Quality Division (AQD) operated one activity station designed to test your Air Quality IQ using a series of multiple choice questions. The AQD also conducted a workshop entitled Air Qual-

Billy B! Performing for the students at the Zoo Amphitheater.

Students trying to solve an Air Quality Survivor challenge.

ity Survivor. Students were divided into four teams and given unique team names such as Smogafoga. Two students were chosen from each team to race against the other teams while completing an air quality related puzzle or challenge. A brief narrative including information needed to complete the challenge was given prior to each challenge. The winning team of each challenge won the right to place a piece of a final totem puzzle. After a total of six challenges were finished, the totem puzzle was complete and delivered the message "Keep The Air Clean, Choose Wisely."

The Land Protection Division (LPD) provided a worm composting exhibit. Students and teachers were able to see the importance and effectiveness of worm composting. Examples of different stages of worm composting were provided.

The Water Quality Division (WQD) participated in ScienceFest with two activity stations. The first station provided students and teachers the opportunity to learn how water and water pollution travels through the ground and the effects it can have on groundwater and surface water. Plexiglass models were used to represent a "slice of earth" profile that simulates groundwater movement. By adding water and food coloring to the models, WQD staff explained how streams, lakes and aquifers are contaminated by non-point pollution, waste water surface impoundments, sanitary landfills, toxic waste dumps, and underground tanks.

The second WQD station featured a hands-on activity that demonstrated three properties of water: adhesion, cohesion, and surface tension. Students were provided a water dropper and asked to place as many drops as they could on the face of a penny. The goal was to place the most drops on the penny without breaking the surface tension created by the strong bonds of the water molecules. Students quickly learned that water likes to stick to surfaces (adhesion) and to other water molecules (cohesion). Both students

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and teachers were amazed by how many drops a penny could hold and eagerly tried to beat the highest score of the day – 87 drops!

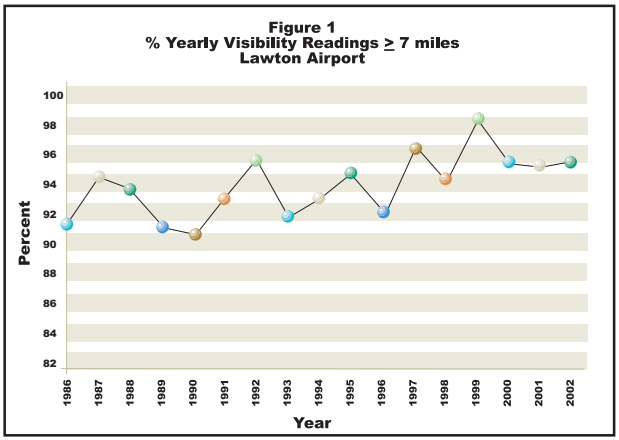
ScienceFest is a unique experience and an excellent opportunity for students and their teachers. It is the only statewide science education event and provides a day of learning plus information to build upon later in the classroom. The DEQ would like to thank all those that helped support and sponsor ScienceFest. With the overwhelming popularity of ScienceFest, we expect this is only the 3rd year of many more to come. ■

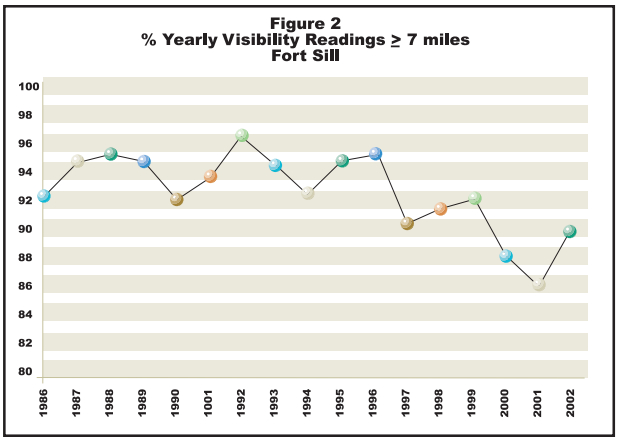
Mike Houts demonstrates the effects of pollution using a ground water model.

Students learn about surface tension by placing water drops on the face of a penny.

Visibility in the Wichita Mountain Wilderness Area

The Wichita Mountain Wilderness Area in Comanche County, Oklahoma is a federal Class I Area under the Clean Air Act. This Class I Area is within the Wichita Mountains National Wildlife Refuge, which is managed by the United States Fish and Wildlife Service. The area consists of North Mountain and Charons Garden Wilderness Areas within the Refuge. The Ft. Sill Military Reservation, an Army training base, is located southeast of the Refuge. The City of Lawton is the closest population center and is located 22 miles southeast of the Refuge.





The Oklahoma Department of Environmental Quality (DEQ) has a long-term strategy to protect visibility from man-made pollution in this Class I Area. A report is submitted to the EPA every three years describing the condition of the visibility in the Wilderness Area. The report assesses the adequacy of preventing an impairment of visibility in the area. In 2003, the Air Quality Division completed the report covering the 1986 through 2002 timeframe.

Visibility for the Wilderness Area was evaluated using 1) DEQ's New Source Review process, 2) consultation with the Federal Land Manager, 3) review of local airport visibility data, meteorological data, and air monitoring data for PM_{10}, $PM_{2.5}$, and O_3, and 4) review of emission inventories and permits of nearby sources. Figure 1 shows visibility at the Lawton airport and Figure 2 represents visibility at Fort Sill.

Meteorological data for the past three years showed that low visibility days at Lawton and Ft. Sill were 96 percent and 90 percent attributable to meteorological conditions, respectively. Both sites consistently reported relative humidity values in excess of 90 percent, precipitation, or both on days when the visibility dropped below seven miles. For days when this was not the case, yet visibility was still low, wind speed and direction along with the location of high-emission facilities were reviewed. No impact from wind speed and wind direction was found on visibility in the area. On some days strong winds would precede an increase in visibility, while on other days impaired visibility would be the result. Ozone monitoring data from days when

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decreased visibility was not attributable to meteorological conditions were reviewed, and ozone levels were not substantial. The emission inventories of sources within 100 km of the Class I Area were reviewed and the PM_{10}, SOx, and NOx emissions were evaluated. There was no visibility impairment in the Wilderness Area attributable to a source or group of sources. DEQ will continue efforts to maintain the wonderful visibility Oklahomans know and enjoy.

This report, in its entirety, can be found on our web site at http://www.deq.state.ok.us/mainlinks/reports.htm. ■

Ponca City Air Toxics Assessment

The Air Quality Division (AQD), in partnership with EPA Region 6, has completed a limited assessment of the air toxic risk in Ponca City, Oklahoma. The project had two complementary goals: to examine the accuracy of the National Air Toxics Assessment (NATA), which had indicated unusually high risk in Kay County, and to build DEQ's capacity to conduct air toxic activities through a partnership and pilot project with EPA. Because air toxics in very low concentrations can affect the environment and public health, and because many of them are carcinogenic, the public has increasingly become concerned about these pollutants. DEQ needs the capability to assess and monitor air toxic concentrations to address those concerns.

The mechanism chosen for the Ponca City assessment was the Regional Air Impact Modeling Initiative (RAIMI) process developed by Region 6. The RAIMI process combines established air emission modeling and risk modeling in a Geographic Information System (GIS) environment. This computerized approach is essential for handling the very large data sets from emission inventories and emission modeling. Based on this process, which DEQ believes is sufficiently conservative and protective, DEQ has concluded there is no significant increased lifetime cancer risk from VOC air toxics in the Ponca City area. This conclusion is valid only for the context of this study.

To help address questions regarding the adequacy of air toxics emissions data, a short-term air toxics monitoring project was conducted. AQD collected 30 canisters for Non-methane Organic Chemical analysis from November 11, 2003 to February 12, 2004. The samples were collected every three days at an existing site in downtown Ponca City (314 West Cleveland). This analysis provided data for 77 substances at below part per billion resolution. None of the substances analyzed was found at levels in excess of AQD's ambient standards.

Complete information on the RAIMI process is available from Region 6, EPA. The complete assessment report and monitoring data spreadsheet are available on the Air Quality web page. ■

Ponca City Assessment area with risk modeling nodes from Scenario 1 shown. Ponca Clty air monitoring sites shown for clarity and perspective.

Air Monitoring Update 2003

The Air Quality Monitoring Section is assigned with the usually unseen and sometimes monotonous task of gathering the data describing the concentrations of the criteria pollutants contained in the air over our state. Some of the duties performed include setup, dismantling, and relocating of air monitoring sites; calling ozone alert days; and daily reporting of the Air Quality Index. By far the biggest duty is maintaining the equipment located at the air monitoring sites. The data is used not only to determine compliance with the National Ambient Air Quality Standards(NAAQS), but also to give the public access to the data in near-real time. This allows Oklahomans to make better informed decisions to protect themselves when the air pollution levels rise to near or above the NAAQS.

During 2003, the Air Quality Monitoring Section gathered and analyzed ozone data from the 17 ozone monitoring sites. Eight of these sites are considered permanent and have collected data for several years. These are used to establish data trends and determine compliance with the NAAQS. The other ozone monitoring sites are designated as Special Purpose Monitors and are used to enhance the ozone mapping program and study interstate ozone transport. The locations of the ozone monitoring sites during 2003 can be seen on the accompanying map. Three Special Purpose sites moved between the 2002 and 2003 ozone seasons which run between April and October. The Lake Waurika site was moved to Walters, the Lake Murray site was moved to Healdton, and the Kingston site was moved to Tishomingo.

Weather monitoring equipment was installed at three of the ozone monitoring sites during 2003. The Goldsby, Choctaw, and Yukon monitors now have temperature probes, wind speed and direction sensors, and solar radiation sensors. The data gathered by these sensors will be used to study ozone formation and movement.

The monitoring site in McAlester was redesigned in 2003. The ozone monitor along with the $PM_{2.5}$ and PM_{10} monitors were moved from the McAlester Airport building to a portable building with an adjacent wooden deck. This is still located on airport property, but the monitors are now more easily accessible.

The data continues to indicate that the ozone levels have decreased from previous years. Statewide, the ozone monitors recorded eight-hour average ozone concentrations greater than the ozone NAAQS of .08 parts per million on 27 different days in 2000, on 15 days in 2001, and on only 13 days in 2002 and 2003. Skiatook, the only site that exceeded the NAAQS for the three-year period 2000 to 2002, did not exceed the NAAQS in 2003.

The eight-hour ozone NAAQS is met when the average of the annual fourth highest maximum eight-hour average ozone concentrations, measured at each ozone monitoring site, is less than or equal to .08 ppm average over a rolling three-year period. The National Ambient Air Quality Standards are designed to protect public health. EPA determines the standards such that most people will have no ill health effects

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OKLAHOMA OZONE 2003

Highest 1-Hour Averages as of 10/2/03

(PPM)

Site	2001 1st	2001 2nd	2001 3rd	2002 1st	2002 2nd	2002 3rd	2003 1st	2003 2nd	2003 3rd
Lake Waurika (671) Site Closed*	0.105 25-Jun	0.104 23-Jul	0.096 25-Jul	0.089 21-May	0.089 18-Jun	0.088 13-Mar			
Walters (680) New Site**							0.094 9-Sep	0.089 11-Aug	0.088 8-Aug
Lake Murray (296) Site Closed*	0.105 18-Jun	0.100 11-Jul	0.098 12-Jun	0.110 13-Sep	0.098 28-Sep	0.095 15-May			
Healdton (297) New Site**							0.099 19-May	0.091 9-Sep	0.090 17-Sep
Keystone (177) Site Closed*	0.131 26-Jul	0.120 4-Aug	0.115 5-Aug	0.115 8-Aug	0.107 10-Sep	0.104 6-Aug			
Mannford (144) New Site**							0.129 22-Aug	0.108 5-Sep	0.099 8-Aug
Kingston (312) Site Closed*	0.102 15-Aug	0.096 8-Aug	0.087 12-Jun	0.104 13-Sep	0.098 30-Sep	0.088 29-Sep			
Tishomingo (323) New Site**							0.097 9-Jun	0.090 14-Jul	0.084 17-Sep
Lynn Lane (178)	0.101 4-Aug	0.090 27-Aug	0.089 10-Aug	0.101 10-Jul	0.095 10-Sep	0.094 24-Jul	0.103 22-Aug	0.100 12-Apr	0.099 21-Jul
Tulsa (1127)	0.103 7-Aug	0.102 3-Aug	0.096 10-Jul	0.110 27-Jun	0.105 9-Aug	0.094 8-Aug	0.112 5-Aug	0.111 21-Jul	0.107 24-Aug
Skiatook (137)	0.109 3-Aug	0.107 27-Jul	0.102 7-Aug	0.119 27-Jun	0.108 9-Aug	0.102 30-Jul	0.103 21-Jul	0.098 25-Aug	0.096 24-Aug
Glenpool (174)	0.105 10-Aug	0.092 6-Aug	0.091 4-Aug	0.109 23-Jul	0.108 10-Sep	0.105 24-Jul	0.115 29-Jul	0.107 19-Jun	0.105 29-May
Edmond (037)	0.097 19-Jun	0.097 6-Aug	0.095 17-Aug	0.089 8-Jul	0.086 23-Jun	0.086 10-Aug	0.100 7-Aug	0.093 24-Aug	0.091 29-May
OKC (033)	0.099 10-Aug	0.093 19-Jun	0.089 7-Aug	0.105 10-Aug	0.091 23-Jul	0.089 15-May	0.115 7-Aug	0.097 10-Aug	0.093 1-Jul
Moore (049)	0.107 10-Aug	0.094 19-Jun	0.094 22-Jun	0.097 10-Aug	0.093 15-May	0.082 13-Mar	0.106 30-May	0.096 29-Jul	0.088 6-Aug
Goldsby (073)	0.094 19-Jun	0.092 18-Jun	0.092 10-Aug	0.107 10-Aug	0.087 15-May	0.084 24-Jun	0.093 29-Jul	0.091 6-Aug	0.089 5-Aug
Choctaw (096)	0.072 1-Oct	0.069 7-Nov	0.068 2-Oct	0.091 10-Aug	0.086 13-Mar	0.085 15-May	0.094 7-Aug	0.090 24-Aug	0.089 30-May
Yukon (101)				0.109 30-May	0.107 10-Aug	0.095 23-Jul	0.098 5-Sep	0.096 11-Aug	0.093 9-Aug
Lawton (647)	0.111 31-Jul	0.094 23-Jul	0.092 25-Jun	0.088 7-Aug	0.085 21-May	0.085 18-Jun	0.096 9-Sep	0.092 11-Aug	0.088 8-Sep
McAlester (415)				0.086 10-Sep	0.086 13-Sep	0.081 8-Aug	0.084 24-Aug	0.083 12-Apr	0.080 11-Apr
Seiling (860)				0.080 28-Aug	0.076 31-Aug	0.075 30-Aug	0.087 7-Aug	0.085 9-Sep	0.083 22-Aug

* Sites closed December 2002.
**Sites opened Spring 2003.

when the standards are met. The 2003 DEQ eight-hour average ozone concentrations for all sites can be seen on the accompanying chart.

The DEQ Particulate Matter ($PM_{2.5}$) network also had some major changes during the year. After gathering data from the network for three years, the de-

2003 OKLAHOMA OZONE
Highest 8 Hour Averages as 10/2/03
(PPM)

Site 00 4th 01 4th 02 4th	1st (date)	2nd (date)	3rd (date)	4th (date)	00-02 Avg* 4th Highs	01-03 Avg* 4th Highs
Walters (680) (new)	0.087 9-Sep	0.082 8-Aug	0.078 24-Jul	0.077 11-Aug		
Healdton (297) (new)	0.085 19-May	0.084 9-Sep	0.083 17-Sep	0.081 8-Aug		
Tishomingo (323) (new)	0.087 9-Jun	0.078 17-Sep	0.075 14-Jul	0.070 6-Aug		
Mannford (144) (new)	0.090 22-Aug	0.087 12-Apr	0.083 5-Sep	0.081 8-Aug		
Lynn Lane (178) (new) 0.078 0.080	0.089 12-Apr	0.089 30-May	0.089 22-Aug	0.084 31-Jul		
Tulsa (1127) 0.083 0.081 0.080	0.094 21-Jul	0.085 24-Aug	0.081 22-Aug	0.080 5-Aug	0.081	0.080
Skiatook (137) 0.096 0.084 0.083	0.094 21-Jul	0.088 12-Apr	0.085 25-Aug	0.083 31-Jul	0.087	0.083
Glenpool (174) 0.081 0.077 0.082	0.091 19-Jun	0.088 29-Jul	0.087 22-Aug	0.086 23-Aug	0.080	0.081
Edmond (037) 0.086 0.082 0.078	0.088 7-Aug	0.082 9-Jun	0.082 31-Jul	0.082 24-Aug	0.082	0.080
OKC (033) 0.080 0.078 0.080	0.093 7-Aug	0.082 31-Jul	0.080 8-Aug	0.080 10-Aug	0.079	0.079
Moore (049) 0.079 0.079 0.075	0.086 29-Jul	0.082 30-May	0.077 6-Aug	0.076 24-Aug	0.077	0.076
Goldsby (073) 0.081 0.080 0.078	0.086 29-Jul	0.082 5-Aug	0.080 6-Aug	0.077 31-Jul	0.079	0.078
Choctaw (096) (new) 0.063 0.078	0.085 7-Aug	0.082 9-Jun	0.079 24-Aug	0.078 30-May		
Yukon (101) (new) 0.058 0.081	0.081 9-Aug	0.079 8-Aug	0.078 19-Jun	0.078 7-Aug		
Lawton (647) 0.085 0.078 0.076	0.086 9-Sep	0.080 8-Aug	0.080 11-Aug	0.078 6-Aug	0.079	0.077
McAlester (415) (new) (new) 0.076	0.079 12-Apr	0.079 24-Aug	0.076 11-Apr	0.076 27-Apr		
Seiling (860) (new) (new) 0.069	0.079 9-Sep	0.078 7-Aug	0.077 31-Jul	0.077 8-Aug		

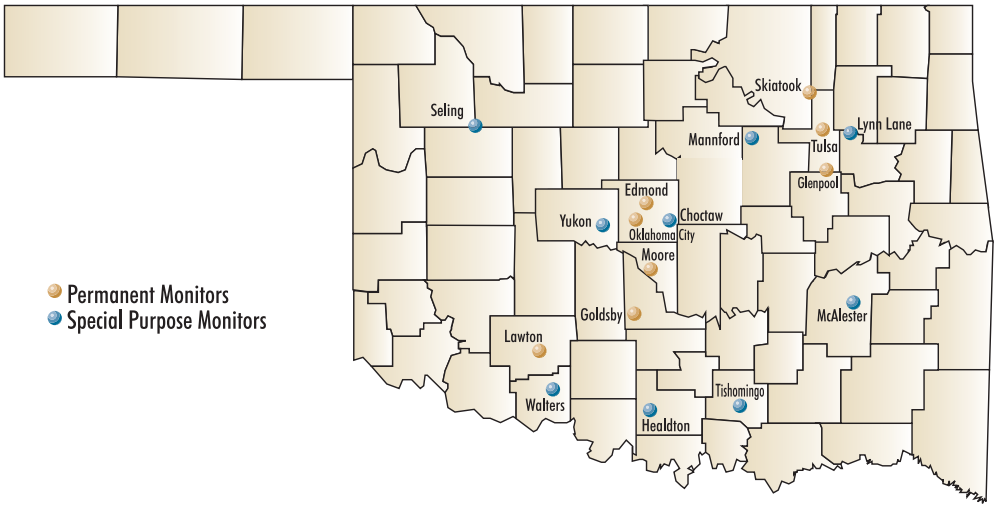
*0.085 or greater indicates exceedance of the NAAQS

cision was made to downsize the network due to the low concentrations of $PM_{2.5}$ observed, the redundancy of the data observed from some of the urban sites, and the size and manpower-intensive nature of the existing Federal Reference Method (FRM) network. The 2003 $PM_{2.5}$ network can be seen on the accompanying chart.

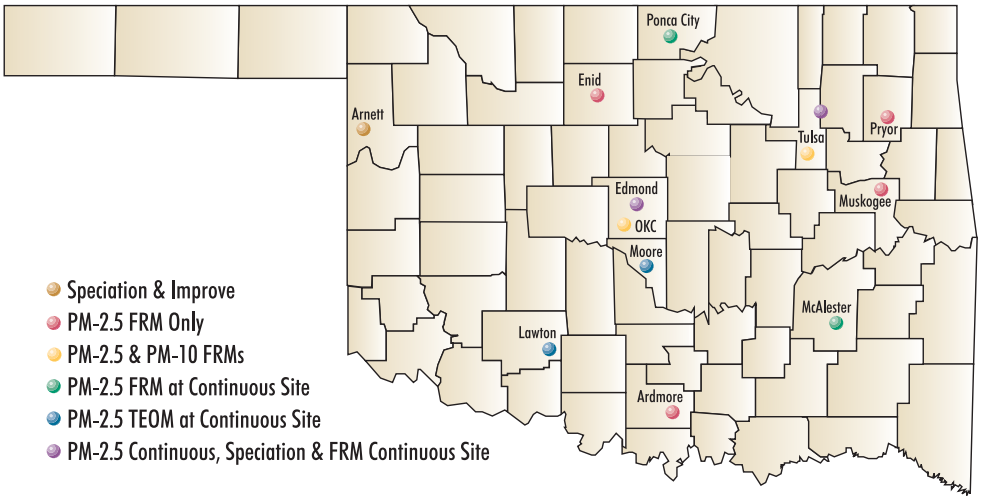
All sites are in compliance with the $PM_{2.5}$ National Ambient Air Quality Standard. The Pryor and Muskogee monitoring sites have recorded the high-

Continued on next page

Oklahoma DEQ Ozone Monitoring Network



2003 Oklahoma DEQ PM 2.5 Monitoring Network



est concentrations of $PM_{2.5}$. Currently, four sites have continuous monitors. They are located in Lawton, Oklahoma City, and Tulsa and are used to determine the Air Quality Index. Several more of the continuous monitors will come on line in the near future. They will give the network better statewide coverage and provide data to the public in a more timely fashion. These data are available in near real-time while data collected using the manual methods may not be analyzed or available for several weeks. Additionally, the continuous methods are much less labor-intensive. The data will be submitted to EPA's AIR NOW system which will provide PM-2.5 maps similar to the ozone maps currently available. The data will also be submitted to the EPA's Air Quality System (AQS) database where it can be accessed by the public. ■

Changes in Emissions Inventory Reporting

In the spring of 2004, Governor Henry signed House Bill 1876 into law, effective April 13, 2004 and codified at 27A O.S. §. This legislation states, in part, that facilities categorized as "de minimis" and/or "permit exempt" will not be required to pay annual operating fees, and would not be required to submit an annual emission inventory. DEQ is authorized to request inventories from these sources when emission-related data is necessary for program planning or compliance with state or federal rules, regulations, standards, or requirements.

This law also provides that an emission inventory shall contain certification by a responsible official of the truth, accuracy, and completeness of the document. With on-line access and submittal of an emission inventory, an electronic submittal and an automated e-mail reply will serve as the certification statement and electronic signature.

Other requirements in filing emission inventories have not changed.

- Owners or operators of any facility that is a source of air emissions must submit a complete emission inventory annually, and facilities registered under a permit by rule are required to submit an emission inventory for that facility once every five years.
- The inventory must cover operations during the last year of each five-year period.
- Inventories are due prior to March 1 each year and cover operations for the previous calendar year.

The Consolidated Emission Reporting Rule (CERR, 40 CFR 51) consolidates the emission inventory reporting into one national inventory and allows DEQ to compile emission trends for specific industry source categories. For point sources, data is gathered at the facility,

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The Collard lizard is the official state reptile.

point, and process level. DEQ is also required to inventory area and mobile source emissions on a state-wide basis for each three-year cycle inventory.

In compliance with the CERR and the National Emissions Inventory (NEI) for criteria and hazardous air pollutants, the Emissions Inventory Section is requiring new data elements to be reported. Some of these new data elements include:

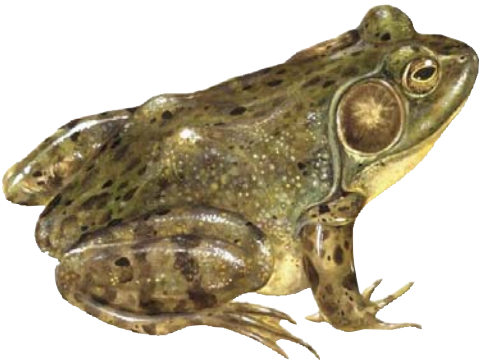
- Seasonal and daily operating parameters – utilized to separate reported annual activity and emissions to seasonal activity and emissions in order to compile emissions for an average day in a specific season (e.g. ozone season)
- Emission factor and estimation methodology – used to verify reported emissions and to assist in the development of new factors and estimation methods
- Material – throughput of raw materials consumed, produced, or existing in the formation of the pollutant
- Inventory emissions of PM2.5 and the precursor ammonia (NH3) – PM2.5 is both a NAAQS pollutant and a major contributor to visibility impairment

The Emissions Inventory Section is preparing the air emissions inventory data files for electronic transfer to the EPA. Work has begun on an internet web application to allow companies to access and enter its annual emissions data as a substitute for the paper version of the annual Emissions Inventory. Final electronic submittal and automated e-mail reply will serve as the company's certification statement. This web application will require a unique user identification and password, but will not require the installation of any additional software.

Automated collecting and reporting of emission inventory data continues to be a primary goal of the Emissions Inventory Section. This will reduce burden on the regulated community and staff, increase efficiency and effectiveness of data validation, and further assure that data quality objectives are being met. Accurate data is essential for modeling, statistical studies, and investigations and for the State Implementation Plan (SIP). Increasing the level of quality control will also increase confidence in the accuracy and completeness of the emission inventory data.

With a more comprehensive emissions inventory program, DEQ can identify and define elements of emission inventories to meet SIP requirements for complying with the eight-hour ozone NAAQS, the revised PM NAAQS, and the regional haze regulations. Measuring progress in reducing emissions, setting a baseline for future planning, support of possible future trading programs and providing answers to the public's request for information are priorities of the Emissions Inventory Section. ■

The Bull Frog is the official state amphibian.



DEQ Provides Assistance to Quapaw Tribe Environmental Program

In 2003, the Quapaw Tribe of Oklahoma assumed full operational control of an air monitoring site in Ottawa County. The Quapaw Environmental Protection Office operates a full range of ambient air quality monitoring equipment to measure 'criteria' pollutants (those identified by EPA as being especially significant to the health of the public).

At the request of tribal environmental personnel, DEQ Air Quality Division's Quality Assurance staff are providing support to this monitoring project by conducting third-party audits of the equipment. This effort helps to assure the Tribe and other stakeholders that the data collected are of good quality and accurately reflect pollutant levels in the area. ■

Quapaw Environmental Protection Office

Asbestos Program: Regional Office at Tulsa

The DEQ Regional Office at Tulsa regulates asbestos activities in 38 eastern Oklahoma counties. The authority to implement and enforce the requirements covered by the National Emission Standards was delegated to DEQ by EPA. Approximately 300 pre-abatement, preparatory, active abatement, post abatement, non-notifier, self-initiated, public or contractor requested, follow-up, and complaint related inspections or investigations are conducted each year. Additionally, the office may collect suspect materials to be analyzed for asbestos. These services are provided to the public at no charge.

The office also reviews and follows up on approximately 300-500 written notifications concerning demolitions or renovations of buildings which are received from contractors as required by federal law. When violations of the federal or state asbestos regulations are uncovered, the office issues notices of warning, deficiencies, and violations. If problems are not corrected, other steps may be taken which could include criminal proceedings.

Complaints are handled as a priority because asbestos is a known carcinogen when inhaled. This is also the reason we are very proactive anytime asbestos removal is contemplated by a building owner. The regional office provides asbestos training at the Tulsa Community College as part of its "Environmental Assessment" continuing education program. When time permits, the office works with local communities and the public, as well as private institutions, to provide guidance to help solve their environmental or workplace asbestos problems. ■

Asbestos Abatement in Progress