

Air Quality in Oklahoma



Introduction

During the past year, DEQ's Air Quality Division (AQD) achieved progress in a number of areas. Streamlining processes to become more efficient remained a high priority. Continued simplification of rules and issuance of additional general operating permits further illustrate this commitment. Although DEQ staff are recognized as leaders in data management and sharing, additional work to improve this process was accomplished during the year. Much of this work is designed to make our data more accessible to other

state and federal agencies as well as the general public. Probably the most notable achievement during the past year was the passage of a fee increase. Working closely with industry and the Air Quality Advisory Council, DEQ demonstrated the need for additional revenue. This allows the Agency to continue efforts to meet the ongoing challenges of probable ozone non-attainment, regional haze and the continued efforts in the monitoring, compliance and permitting areas. 🌍🌱

DEQ Provides Compliance Assistance for New Federal Standards

DEQ continues to make compliance assistance a priority. Identifying, understanding, and complying with new Federal standards is a continuing challenge for Oklahoma's industries. EPA issued a number of National Emission Standards for Hazardous Air Pollutants (NESHAPs) during the past year. In addition, many facilities had compliance and notification deadlines to meet under existing NESHAPs. Many companies find that the complex requirements and technical regulatory language of these "MACT Standards," which are based on the Maximum Achievable Control Technology, place extraordinary demands on their resources.

Where appropriate, DEQ developed forms to help facilities meet reporting requirements, sent information and forms to groups of potentially affected industries, and provided workshops on



relevant subjects and issues. The Agency has also written a number of pertinent articles for inclusion in its bi-monthly newsletter. However, our most frequent and effective assistance has been working one-on-one with individual companies.

As a result of these efforts, Oklahoma's industries

are better equipped to meet the requirements of EPA's MACT Standards. Armed with this information, more facilities have been able to identify whether a standard actually applies to them, and to meet those requirements in the simplest, most cost-effective way available. Increased compliance de-

creases businesses' liability by reducing their exposure to potential enforcement action. It also leads to a direct decrease in emissions of hazardous air pollutants, as facilities add or make changes to air pollution control equipment or implement a pollution prevention option to meet the requirements. 🌍🌱

Greenhouse Gas Emission Inventory

An emission inventory is an accounting of the amount of air pollutants discharged into the atmosphere.

Greenhouse gases refer to a group of chemicals thought to contribute to global warming. Some greenhouse gases

(GHG) occur naturally in the atmosphere, while others result from human activities. A statewide GHG emission inventory is being prepared for Oklahoma.

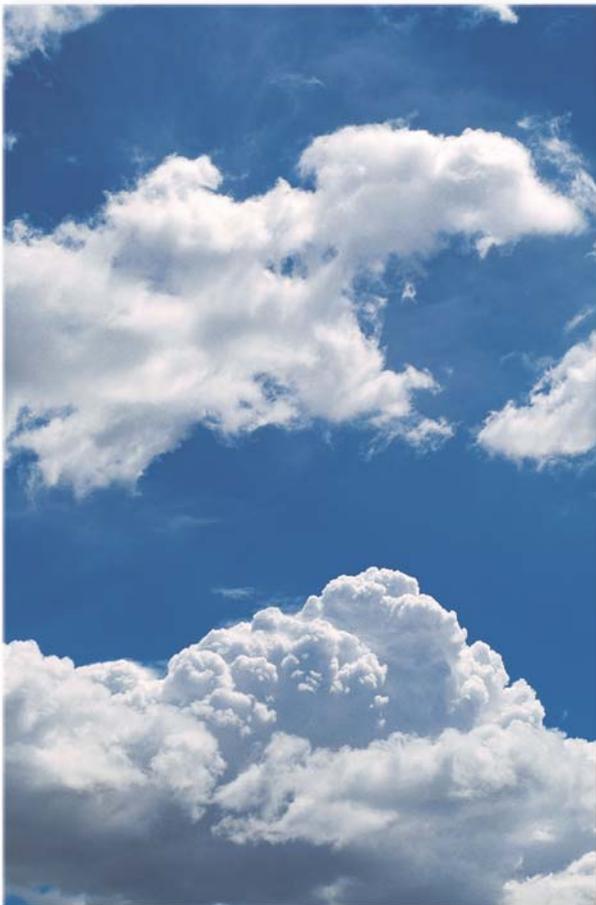
The gases being inventoried include carbon dioxide, methane, nitrous oxide, sulfur hexafluoride and perfluorocarbons. This inventory will identify the major sources of GHG emissions and present annual emissions in 14 sectors (e.g., fossil fuels, waste disposal, industrial processes), by source (e.g., transportation emissions, manure management), and by gas (e.g., carbon dioxide, methane). It will include enough documentation and other data to allow

readers to understand the underlying assumptions and to reconstruct the calculations for each of the estimates included.

This inventory will provide a baseline for comparison of future inventories and progress. It will be used by scientists as inputs to air quality models, by policy makers to develop strategies and programs related to GHG emissions, and by facilities and regulatory agencies to establish compliance records and technologies. This emission inventory will form the foundation for Oklahoma, the nation and the world to address climate change and will be completed in the fall of 2002. 🌍



Pictured above is a hybrid electric vehicle. This type of vehicle helps reduce greenhouse gases by using electric energy when appropriate.



Oklahoma's Air Emissions Reduced by DEQ's Enforcement Actions

Violations of state and federal regulations are a primary focus of concern for the DEQ. Most often violations are discovered through compliance evaluations. Enforcement actions can also be generated from referrals from other sections of Air Quality, citizen complaints, or facility self-disclosure. During fiscal year 2002, 22 percent of compliance evaluations resulted in some type of enforcement activity.

Once a facility is identified as a violator, the im-

pact or severity of the violation must be determined. Depending on the violation, different types of enforcement are pursued. A warning letter is issued to those facilities that have violated in such a way as to not cause significant damage to human health or the environment. Continued violation of this type will result in more rigorous enforcement. Those facilities that commit more egregious violations are issued a Notice of Violation

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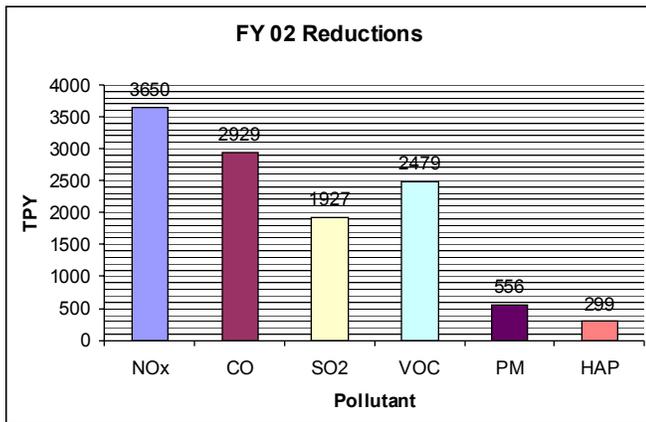
(NOV). Failure to keep the required records, failure to obtain an operating permit, excessive emissions and fugitive dust are examples of violations for which a NOV might be issued. A facility must submit a schedule of remedial actions and a plan of action to return to compliance. In many cases, the enforcement action may

be closed after the actions agreed upon in the plan have been completed. However, based upon EPA guidance some violations are considered to be High Priority Violations (HPV). These are the most serious violations and as such, require that a Consent Order (CO) or an Administrative Compliance Order (ACO) be issued. A CO is issued after

the Department and the violating facility reach an agreement on what will be done to correct the violations and return the facility to compliance. In all HPV cases, a penalty representing the economic benefit the facility gained by operating in non-compliance must be collected. These penalties can be mitigated by the use of Supplemental Environmental Projects (SEP). A fraction of the cost of the SEP is subtracted from the cash penalty the facility is expected to pay. Installation of control equipment above and beyond what is necessary to return the facility to compliance could be considered a SEP.

The Department as-

essed over 18 million dollars in fines for air quality violations during FY 2002. More than 86 percent of the value of the penalties will be accounted for in SEPs rather than fine money. As a result of compliance measures and SEPs, total air emissions in Oklahoma were reduced by almost 10,000 tons annually. A total of 1898.50 tons per year (TPY) of sulfur dioxide (SO₂), 3278.80 TPY of nitrous oxides (NO_x), 2766.20 TPY of carbon monoxide (CO), 876.47 TPY of volatile organic compounds (VOC), 509.40 TPY of particulate matter (PM), and 58.59 TPY of hazardous air pollutants (HAP) were eliminated as a direct result of enforcement activity. 🌍



Shaping the Future of Regional Haze Control

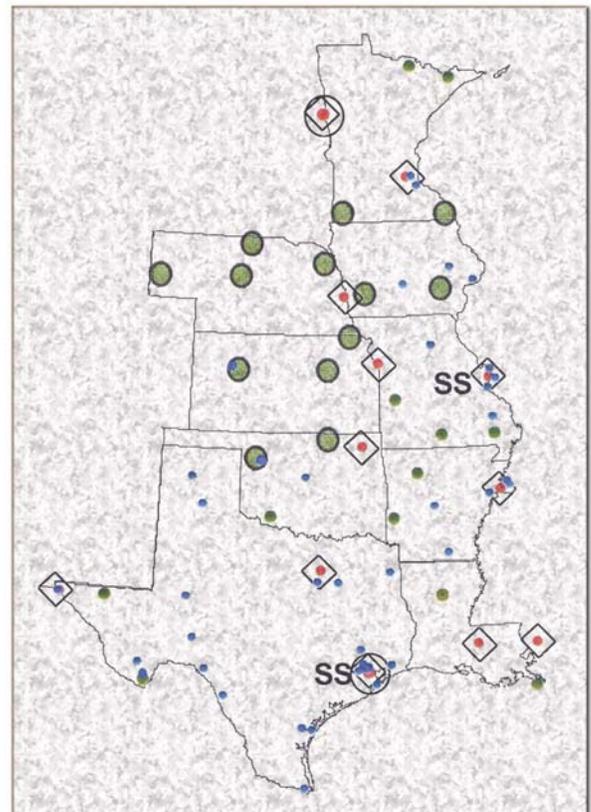
Regional Haze, the reduced visibility caused by the emission of air pollutants located over a wide geographical area, not only decreases the visibility, it also affects the aesthetic value of our most pristine and treasured lands - designated as Federal Class I Areas. The regional planning organization concept arose from the realization that most pollution, including that causing haze, routinely travels across state/tribal and international political boundaries and therefore would best be met by regionally developed solutions. To promote regional

cooperation in developing regional haze solutions, the Environmental Protection Agency (EPA) divided the nation into five regions. Oklahoma falls within the Central States Regional Planning Association (CENRAP).

CENRAP held its first meeting in Oklahoma City in November 1999. Each state and tribe was asked to assign staff to a steering committee that developed a set of by-laws and EPA grant applications, thereby setting the course for future action. The bylaws provided for six standing workgroups that are

MORE ON NEXT PAGE

The map at right shows visibility monitoring sites within the CENRAP region. The large circles with black outlines are new IMPROVE protocol sites added by CENRAP in 2002, smaller circles are IMPROVE or pm2.5 speciation sites. The large squares are trends sites (those enclosed in circles are daily sites) and the two SS symbols designate supersites.



HAZE continued from previous page

comprised of members from states, tribes, industry, EPA and other federal agencies.

Workgroups have made significant progress. Some of the highlights are: added 15

additional visibility-monitoring sites, developed a communications manual, performed significant data analysis, prepared a timeline for action, developed a plan to improve the emissions inven-

tory, and greatly improved communications and cooperation within states and tribes. Other activities include joining with other regional planning organizations in utilizing a common data

archive, funding research level visibility monitoring in the region, and sponsoring an international forum on regional haze all help to shape the future of regional haze control. 🌍

The Big SIP: State Implementation Plan

SIP is an acronym for State Implementation Plan. Each state that implements the Clean Air Act has one. It assures that the state's designated agency develops adequate rules to ensure that National Ambient Air Quality Standards are met. It details the public notices, public hearings, legislative actions and executive approvals required to develop these rules. It shows scientific equivalency for alternative methods of meeting federal standards and turns blanket federal programs into effective state regulation.

Laid end to end, Oklahoma's Big SIP submission to the Environmental Protection Agency in March 2002 would trail paper from the new Ford Center in downtown Oklahoma City to Lake Hefner - from the Performing Arts Center in downtown Tulsa to the Zoo - from one end of Main Street Lawton to the other. Oklahoma's SIP submission was BIG. Master copy: 8064 pages. Five copies: Do the math. Total: nine miles of end-to-end paper.

But the SIP need not always be so big. This is the

Air Quality Division's first formal submission since 1993. It covered regulations passed from 1994 to July 2001. Though each rule had been submitted individually to EPA for review, the formal process had backlogged to the extent

that the state withheld its formal submittal until all earlier SIP submittals had been processed. Thus, the one and only Big SIP. Next time DEQ hopes to deliver a little SIP via electronic format and save all that paper! 🌍



Pictured left are DEQ employees (Cheryl Bradley & Pat Sullivan) unloading their SIP paperwork one box at a time.

Pictured right is Scott Thomas, Environmental Program Manager, next to completed SIP paperwork.



Pictured left is Bill Deese of EPA Region 6 accepting Oklahoma's submittal.

Power Plant Boom

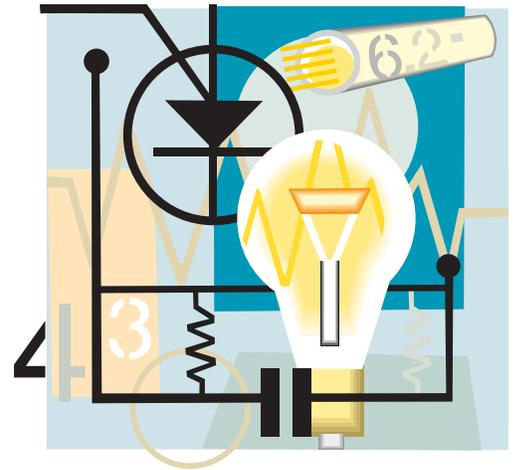
In 1999, the potential for deregulation of the electric power generation industry led to a nation-wide rush by potential operators to permit new facilities. The problems in California and predicted problems in the eastern part of the United States with maintaining a dependable supply of electricity during peak demand times caused severe political pressure on regulating authorities to evaluate the applications quickly and issue permits as fast as possible. Oklahoma began receiving applications in early 1999.

In order to review these complicated applications as quickly and efficiently as possible, the Agency assigned

them to only the most experienced staff. An attempt was also made to reduce any additional permit load on these engineers in order to give them the best opportunity to meet the demands associated with these facilities. Since 1999, the Agency has received applications for the construction of 17 new gas-fired base unit power plants, two new gas-fired peaking unit plants, and the modification of one existing gas-fired base unit power plant and two existing gas-fired peaking units. As of June 11, 2002, 13 construction permits have been issued for base unit power plants, one application has been withdrawn, one permit is in public review and

two applications are in technical review. All four of the peaking unit permits have been issued.

In addition to the three existing facilities that are operational, two new base unit facilities and one peaking unit facility are operational at this time. Five plants have started construction and one plant is being tested prior to starting operation. As shown by the included table, construction of these twenty-one new and



modified existing facilities would increase the generating capacity in Oklahoma by 13,099 megawatts. The map shows the locations of these plants and their relative megawatt capacities. 

Generating Capacity from New Electric Power Plants (MW)



Updated 6/1/02

New Electric Generation

Facility	Permit Status	Fuel	Gen. Cap.MW	Fuel/yr.BCF	Ann. NOxTons/yr.	NOxPer MW
<i>Base Units (Comb.Cycle)</i>						
AECI - CHOUTEAU	Issued	GAS	530	23.7	774	1.5
COGENTRIX- GREEN COUNTRY	Issued	GAS	800	35.8	806	1.0
AEP/PSO - NORTHEASTERN	Issued	GAS	492	22.0	887	1.8
CALPINE - ONETA	Issued	GAS	1,150	51.3	1,256	1.1
NRG MCCLAIN - MCCLAIN ENERGY	Issued	GAS	520	23.2	508	1.0
REDBUD - REDBUD	Issued	GAS	1,220	54.6	628	0.5
THUNDERBIRD - THUNDERBIRD	Issued	GAS	825	36.9	1,359	1.6
KIOWA - KIAMICHI	Issued	GAS	1,200	53.6	1,845	1.5
SmithCoGen - POCOLA	Issued	GAS	1,200	53.6	1,964	1.6
SmithCoGen. - LAWTON	Tech. Rev.	GAS	600	26.8	1,487	2.5
ENER. - WEBBERS FALLS	Issued	GAS	850	38.0	686	0.8
TENASKA - SEMINOLE	Application Withdrawn					
ENERGETIX - GREAT PLAINS LAWTON	Tech. Rev	GAS	600	26.8	661	1.0
DUKE - STEPHENS	Issued	GAS	620	27.7	271	0.4
MUSTANG - MUSTANG	Issued	GAS	310	3.3	308	1.0
MUSTANG - HARRAH	Issued	GAS	310	3.3	308	1.0
ENERGETIX - LAWTON	Issued	GAS	308	3.3	190	0.6
GENOVA - GENOVA	Public Rev	GAS	550	24.5	235	0.4
			12,085	508.4	14,173	1.1
<i>Peaking Units(Simp. Cycle)</i>						
OG&E - HORSESHOE	Issued	GAS	90	0.9	39	0.4
ONEOK - EDMOND	Issued	GAS	320	3.7	735	2.3
KM PWR - PITTSBURG	Issued	GAS	550	5.6	697	1.3
WFEC GENCO - ANADARKO	Issued	GAS	94	1.0	160	1.7
			1,014	10.8	1,631	1.6
			13,099	519.2	15,804	1.2

According to the Energy Information Administration State Energy Data Report 1997 (latest available), Oklahoma Electric Utilities used 129 BCF of gas in 1997. Total Oklahoma usage of natural gas was 560 BCF. Residential usage was 72 BCF.

Revised 6/3/02



DEQ Assists Facilities to Meet Air Toxics Control Deadlines

The Federal Clean Air Act (CAA) of 1990 requires EPA to identify industrial or “source” categories that emit one or more of the listed 188 air toxic pollutants. For major sources within each source category, CAA requires EPA to develop national standards that restrict emissions to levels consistent with the lowest emitting (also called best-performing) plants. These air toxics control standards are based on what is referred to as “Maximum Achievable Control Technology (MACT).” Major sources are those sources that emit ten tons per year (TPY) or more of a single air toxic or 25 TPY or more of a combination of air toxics. The Clean Air Act also requires EPA to issue air toxic control standards over a 10-year schedule. If EPA misses a regulatory deadline by 18 months, Section 112(j) of the Clean Air Act requires affected industrial sources of air toxics to revise their operating permits to contain air toxic emission limits equivalent to the limits that EPA should have established. When EPA subsequently issues a delayed national air toxics emission standard, the source must eventually revise its permit, as necessary, to incorporate the emission standard. Because this provision was supposed to force EPA to meet the regulatory deadlines, it has become known as the MACT Hammer Provision.

In February 2002, EPA revised its rules to create a two-part air toxics control permit application process. Part 1 air toxic control permit applications were due by May 15, 2002 from all major sources in source categories for which EPA had failed to issue national emissions control standards. The Agency developed a Part 1 application form and made it available for use by all potentially affected facilities. The Air Quality Division received 162 Part 1 applications by the deadline and will use them in conjunction with the Part 2 applications that are due by May 15, 2004, to develop case-by-case MACT determinations where appropriate.



By creating a usable Part 1 application form and making it available to potentially affected facilities, DEQ was able to assist many facilities in meeting the application deadline. The second part of each application may not need to be submitted because

EPA expects to promulgate all remaining national air toxic emissions standards before any facility would be required to submit the Part 2 application for its air toxic operating permit. 🛠️



DEQ Regulated Lead-Based Paint Activities Triple

With new federal requirements becoming effective this year, Oklahoma contractors are eagerly seeking certification by DEQ as a lead-based paint (LBP) inspector, risk assessor, worker, supervisor and/or project designer. The number of regulated LBP activities, including inspections, hazard screens, abatements and clearing test-



ing, being performed in Oklahoma has more than tripled since FY 2000. Certified LBP professionals report their LBP detection and reduction activities to DEQ each quarter. With

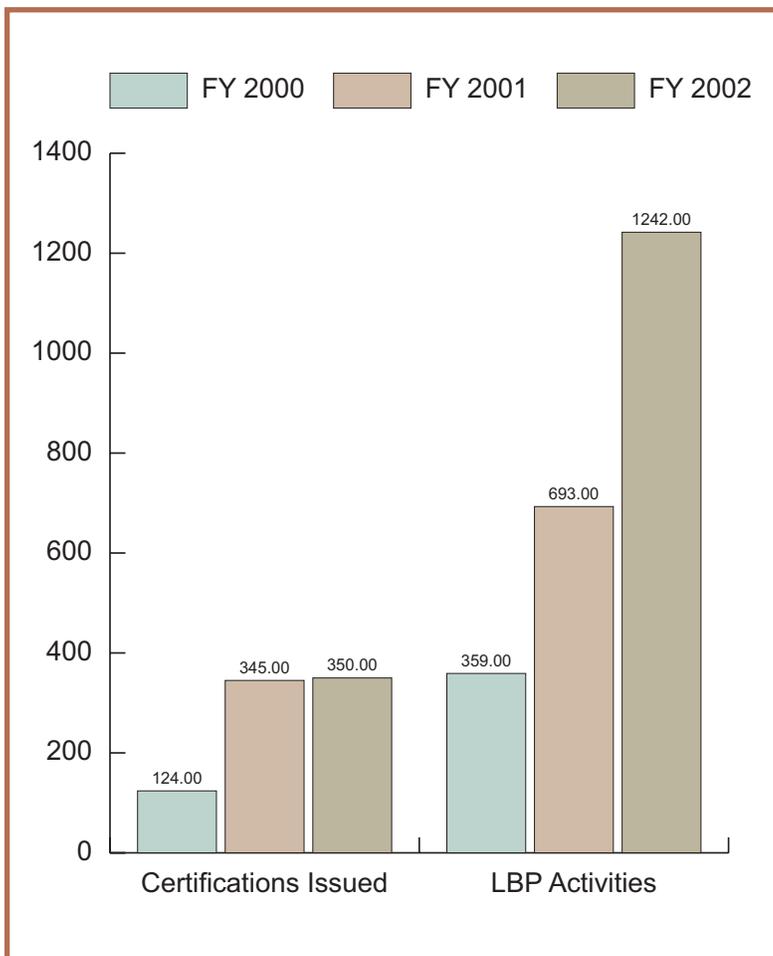
all of these new customers, the LBP Program staff faced the task of continuing to issue certifications and answer industry inquiries in a timely manner, while the number of staff performing these services has not increased.

All LBP certification applications undergo a thorough review process to ensure that all requirements are met. To maintain quality services, the certification process was

streamlined to enable LBP staff to process and issue certifications during periods of heavy application intake. The streamlined process included standardizing certification letters with mail merge

fields from the contractors' database, so the "work" of issuing certifications would be automated as much as possible. Likewise, all LBP service data from the quarterly reports is entered into a database and used to check compliance before certifications are renewed.

This streamlined process provided additional assurance that certifications are issued without errors. The streamlined process also allows staff to issue certifications as quickly as possible. Expediting the certification process has provided added convenience and economic benefit to our customers who need these certifications to offer and perform LBP services and abatement work. ☺



DEQ Moves Closer to the Goal of Air Permit Consolidation

The purpose of the Title V Operating Permit program is to consolidate all air permits at each major facility into one current document that can be updated as needed. The initial deadline for all existing facilities to submit applications for their Title V permits ended March 6, 1999. Since that time the Air Quality Division has attempted to issue these complicated permits as quickly as possible and EPA has pushed all states to make this task a high priority. Also, since Title V permits expire five years after issuance, the permits that were issued in 1997 are due for renewal in 2002. There are currently 27 facilities in this classification. In 2003, 81 renewals will be due and

in 2004, 80 will be due. Additionally, there are currently 46 applications for amendments to existing Title V permits submitted to DEQ for review. Overall, there are 145 Title V permit applications pending review by the permitting staff.

During the past year, DEQ moved closer to the goal of issuing all initial Title V permits. By March 6, 1999, DEQ had received 372 applications and by June 2002 the permit staff had issued 306 of them as Title V operating permits and ten were in the public comment period just prior to issuance. The staff expects to have issued 358 (96%) of these original applications by the end of

2002. The remaining 14 facilities are the most challenging and those permits will take a little longer to issue. This group includes military installations, refineries, aerospace facilities, and other similarly complicated sources. The renewals for this year are subject to a general permit that is in final staff review and will be issued soon. Of the 47 modifications that have been issued to date, 18 were issued in the first half of 2002.

By concentrating as much manpower as possible to the Title V program, the permit section has been able to reduce the application backlog significantly during the past year. The table below is a summary of the Title V permitting status as of June 2002. The totals are based on a calendar year basis and not on a fiscal year basis. The map on the previous page shows the level of nationwide issuance of the Title V permits. 🗺️

Oklahoma Air Quality PERMIT REPORT June 11, 2002

Title V

Total Received:	539
Total Issued:	362
In Process:	145
Total Issued in 2002:	30
Total in Public Review:	16
Projected Issued in 2002:	80
Total Issued by End 2002:	410
Synthetic Minors Issued 2001:	114

PSD

In Process:	12
Issued in 2002:	5

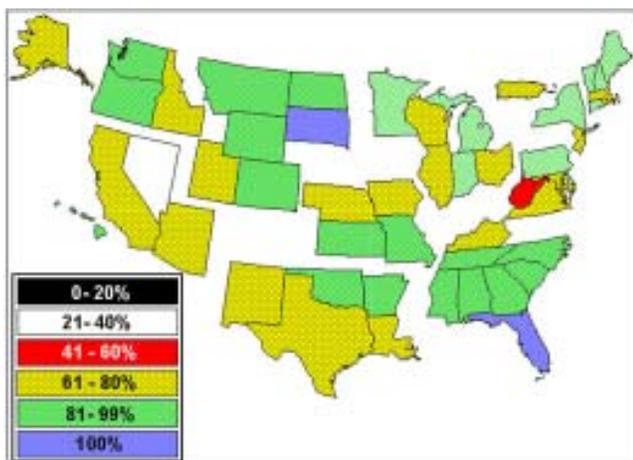
Non-NSR/TV

In Process:	182
Total Issued in 2001:	159

Grand Totals

Total Applications in Process:	335
Total Permits Issued in 2002:	194

Percentage of Title V permits Issued



Introduction: Preparing Data Systems to Tackle Air Quality Issues

The agency continues to face increasingly complex challenges related to data systems. Nationally, worthwhile efforts to share quality information about air pollution with the general public have required re-engineering of most data reporting systems. While this “simple” effort may seem easy, the devil is in the details – especially when dealing with the strict world of computers and data sharing. Efforts at every level have been devoted to en-

sureing that accurate, reliable data is shared with the public. The cornerstone of the Air Quality Division's (AQD) success is the TEAM database which subsequently served as the model for the agency. TEAM was developed by AQD staff and continues to undergo improvements and user-defined modifications. The following points illustrate DEQ's diligence in preparing AQD data systems to tackle air quality issues. 🌍

- Electronic Emission Inventory Submittal
- Emissions Inventory Changes Incorporated into TEAM
- Implementation of Re-engineered Air Quality Subsystem
- Direct Submittal of Asbestos Data
- Excess Emissions Improvements

Electronic Emission Inventory Submittal

The annual emissions inventory of air pollutants from Oklahoma's industrial facilities requires more than twenty thousand sheets of paper to be sent, received, and processed by Agency staff. Facilities are required to complete the forms and submit them back to the Air Quality Division. AQD staff must then process thousands of forms and enter the data submitted into the TEAM database. This method is a very complex and archaic process requiring excessive quantities of paper, months of data entry, vast area for data storage capacity and thousands of staff hours annually. In addition, the process contains numerous steps where potential errors can be made and is often confusing to industry personnel.

To simplify the process, save thousands of man-hours, and make the process less error-prone, a system was developed to allow electronic submittal of emissions inventory data. It was decided that 2001 would be the developmental year and the process would be available for the first time in 2002. Six facilities volunteered in 2001 to assist in evaluating the process and suggest improvements to facilitate its acceptance and utilization by industry. The trial runs were completed in the summer and

Point	Point Name	Status	UTM Horz	UTM Vert	Latitude	Longitude
1	9930 Electric Generation Unit #1 - Boiler	Idle	620.614	3925.59	0	0

Stack	Stack Description	Height	Diameter	Temp.	Flow	Plume
1	9930 Electric Generation Unit #1 - Boiler	250	10.5	305	134115	0

Proc	SCC	Process Description	Units
1	9930	1010060100 External Combustion Boilers - Electric Generation	Million Cubic Feet Burned
Hourly	0.022	Annual	248.8
Hours/Y	649	H/D	0
D/W	0	Confidential?	No
Sulfur	0	ASH	0
MMBTU	1037		

Plut	Plut CAS	Pollutant Description	CAS	Control Equip.	Etc.	Rpt Amt.	Allowed	Method
1	9930	* Carbon Monoxide	630-08-0	1	2	0	5	9999 AP-42 f
1	9930	* Nitrogen Oxides - NOx		1	2	0	85.9	9999 Special
1	9930	* PM10 (Particulate Matter <10 microns)		1	2	0	0.6	17.9 AP-42 f
1	9930	* Sulfur Oxides - SOx		1	2	0	0.1	9999 Special
1	9930	* Volatile Organics - VDC		1	2	0	0.2	9999 AP-42 f

Above is a sample screen from the Electric Emissions Inventory computer program.

fall of 2001, clearing the way for electronic submittal of emissions inventory data in 2002.

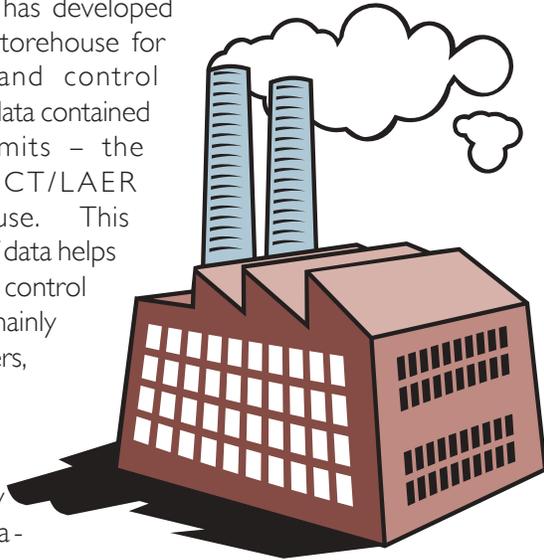
Twenty-six facilities opted to provide electronic data during the spring of 2002, allowing for a large-scale process evaluation and problem identification. The program was well received by industry and the depart-

ment was encouraged to continue the program in 2003 with a more streamlined and error free system. Facilities will be given three options to submit data in 2003: 1) the old fashioned paper method, 2) receiving software by compact disk or e-mail, then completing and sending inventories back by e-mail or internet, or 3) printing

forms from the DEQ web site or compact disk, completing and e-mailing inventories back to the AQD Emissions Inventory Section. Training workshops are planned for December 2002 and January 2003 to instruct industry personnel and clarify their understanding of the new electronic process. 🌍

Cost Effective & Technically Feasible Air Pollution Control

EPA has developed a national storehouse for technical and control equipment data contained in air permits – the RACT/BACT/LAER Clearinghouse. This collection of data helps air pollution control personnel, mainly permit writers, make consistent control technology determinations



tions for pollution control devices, based on similar facilities around the nation.

In Oklahoma, major sources proposing to emit over threshold limits of regulated pollutants require Prevention of Significant Deterioration (PSD) permits. All PSD permits require determinations for the Best Available Control Technology (BACT). BACT determinations are the most effective and economical means for a company to implement air

pollution control measures.

EPA required that all states provide information dating back ten years for certain control technology determinations. Since that time, data from all initial and most modified PSD and major source permits have been provided to the clearinghouse. This allows Oklahoma to play an active role in promoting the use of cost-effective, readily available pollution control devices that help clean up the air.

DEQ Implements Improved Reporting on Facilities' Compliance Status

In order to develop a clearer and more accurate "picture" of each facility's compliance status, EPA re-engineered state reporting requirements with the Compliance Monitoring Strategy (CMS). The CMS broke down a typical full facility inspection into component parts: Full Compliance Evaluation (FCE) and Partial Compliance Evaluation (PCE). An FCE

is complete only after a compliance officer has made a complete review of all applicable regulations at a facility, reviewed all submitted reports, and completed a facility inspection. A PCE may include the review of reports, a site visit, opacity readings, etc.

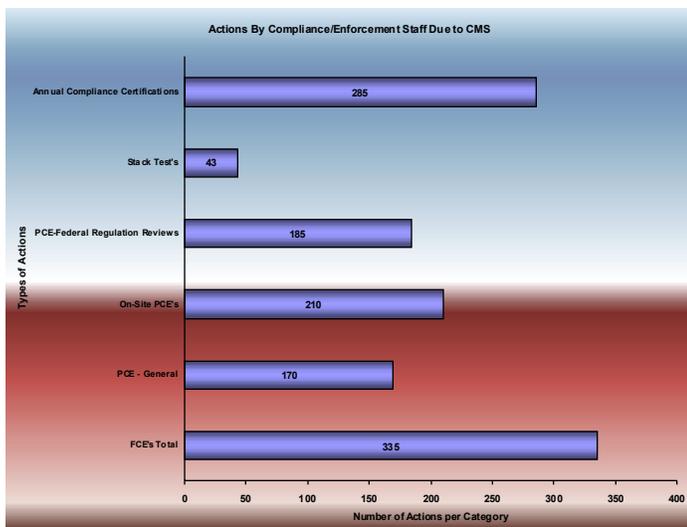
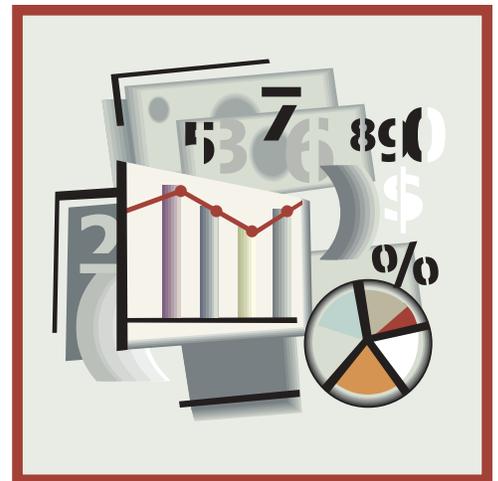
With the CMS implementation, the AQD staff received training on the new require-

ments, how to complete these actions, and the changes necessary to TEAM database. To assist with this documentation and to make this available for all AQD staff to review, TEAM was expanded. If one staff member is

assigned to complete an FCE, and another is assigned to make an initial evaluation of a submitted report, the FCE staff has only to review the memorandum written by the staff that reviewed the submitted report. This results in a higher level of communication between staff and management.

The overall result has brought facility compliance into a tighter focus, implementing it as an integral part of the CMS. This enables the inspectors to perform a more complete evaluation of the facility and the

facility's air emissions. The adoption of this new strategy also allowed for a higher level of accountability while streamlining the inspection process to ensure better public service. This new strategy has allowed the inspectors and section managers an opportunity to quantify the work performed that otherwise would not be counted toward goals. To this end, Oklahoma is one of the very few states in the US that is currently reporting all of the original proposed elements to the EPA.



Compliance Monitoring Strategy Actions by AQD Staff

Implementation of Re-engineered Air Quality System (AQS)

Late in 2001, the national database for ambient air quality data, known as the Aerometric Information and Retrieval System, Air Quality Subsystem (AIRS/AQS) was upgraded. This change created the potential for vast improvements in air quality data management on the national scale, but there were many challenges to

overcome. This fact was exacerbated by the very tight implementation schedule that had been established by EPA's Office of Environmental Information (OEI) and Information Transfer and Program Integration Division (ITPID). DEQ was in the forefront of this process. The agency took the lead in

implementation. The Air Quality Division worked closely with DEQ's Information Technology staff to overcome firewall and connection issues, and to ensure that adequate software and hardware were in place. As a result of these efforts, the flow of air quality

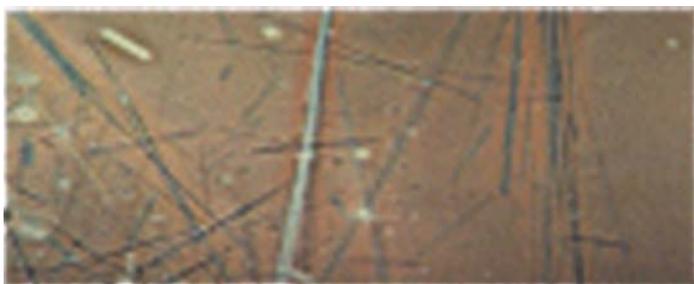


data from DEQ to the national database was maintained with minimal disruptions. 

Direct Submittal of Asbestos Data

Management of asbestos-related data was a tortuous affair, due in large part to the uniqueness of the program and the way asbestos data management developed within DEQ and EPA. Agency staff members working with asbestos data first entered the information into the local Asbestos TEAM database, a stand-alone, dedicated database application. Because there was no mechanism for extracting data from Asbestos

TEAM and submitting it to the national database, staff members were then required to manually reenter the information into the Aerometric Information Retrieval System, Air Facilities Subsystem (AIRS/AFS). EPA staff then extracted required asbestos data from AIRS/AFS to import into the National Asbestos Reg-



Asbestos fibers can take different forms, but each poses a health hazard if inhaled or ingested.



istry System (NARS), its ultimate destination. This process was difficult to manage and the multiple entry increased the possibility of errors.

In consultation with EPA

Region 6, NARS data managers, and DEQ staff, Asbestos TEAM was modified. Ancillary computer applications were created to improve the data management process. These applications extract asbestos data and format it for direct NARS input and produce reports required by EPA.

The result was to eliminate the need for duplication of effort in data entry which produced a cleaner data management system. DEQ began submitting asbestos data directly to NARS in January 2002. 

Improvements in Excess Emissions Reporting



If an emission of a regulated pollutant exceeds permitted levels, an excess emissions report is required. Working with an industry workgroup, this rule was amended to make it more understandable. Although most facilities attempted to comply with the new rules, most didn't thoroughly understand what was required.

Several steps were taken to further eliminate confusion. To better explain the requirement and answer questions, a conference was held on March 15, 2002, in cooperation with the Environmental Federation

of Oklahoma (EFO).

The rule requires the facility to send a brief description of the excess emission within 24 hours of the event.

Additionally, within ten

business days, the facility must provide signed, written documentation of the event. The use of an approved excess emission form was required. This form, which can now be downloaded from the DEQ web page, allows for a more uniform reporting format. Excess emissions data is input to the AQD database and readily available for examination by an

inspector. Future plans include fully electronic submittal of these reports, including electronic signature.

The efforts to clarify this regulatory requirement to the regulated community resulted in improved comprehension of the rule and therefore more complete submittal of the information required. The use of the standardized form has al-

lowed for uniformity in reporting. The EFO presentation, which can also be found on the DEQ website, has been useful as a reference tool in answering questions for those who are new to the process. Overall, great strides have been made in improving understanding of the rule and achieving compliance regarding excess emissions. 🌐

Introduction: Monitoring Issues

As with all media programs, the national efforts to promote public awareness of environmental issues caused numerous changes in reporting mechanisms for monitored air pollution. There are many websites and phone recordings that relay the latest information about air pollution. The Air Quality Index is forecast daily for

Oklahoma City, Tulsa and Lawton through the diligent efforts of the AQD staff. From methods to perform portable emissions analysis to spreading the word about new national air monitoring strategies, the awareness of monitored air pollution is a positive outcome. 🌐

Spreading the Word about Air Pollution

The agency continues to improve its ozone mapping capabilities with the addition of two ozone monitoring sites. The data collected from the new sites as well as the rest of the state monitoring sites are available to the public through the DEQ web site (www.deq.state.ok.us). The ozone maps are available through the AIRNOW website (www.epa.gov/airnow). Sites in Seiling and McAlester are the latest additions to DEQ's ambient ozone monitoring network. They are scheduled to be on-line in July of 2002. The data collected will "fill in the

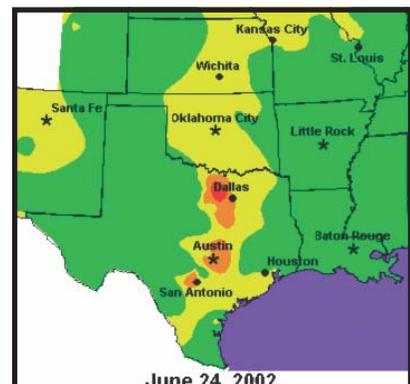
gaps" in the northwest and southeast parts of the state and will enable the maps to better represent ozone formation and transport across Oklahoma.

The agency has also been working with the Oklahoma Climatological Survey to develop additional local ozone maps for the Lawton, Oklahoma City, and Tulsa areas. These maps will provide more detail than the AIRNOW maps and should be available in the summer of 2002. The website containing maps is on line and contains not only interesting air quality information

but also pertinent weather information. It is available at www.mesonet.org/ozone.

Summary statistics of Oklahoma's air pollution data are submitted to and are available through EPA's Aerometric Information Retrieval System (AIRS). This is a web based data repository, which can be accessed by the public. The Air Quality Subsystem (AQS) of AIRS is the database, which contains all quality assured ambient monitoring data. Sharing air pollution information, whether actual concentrations or modeled predictions, better al-

lows the citizens to conduct daily activities in their best interest and the best interest of the environment. 🌐



New National Monitoring Strategy

The national air monitoring strategy continues to evolve as trends show decreasing pollutant levels (e.g. lead) and as knowledge grows concerning pollutant concentrations and public health (e.g. ozone, fine particulates and air toxics). DEQ is currently involved in the planning stages of the next set of changes to the national air monitoring strategy.

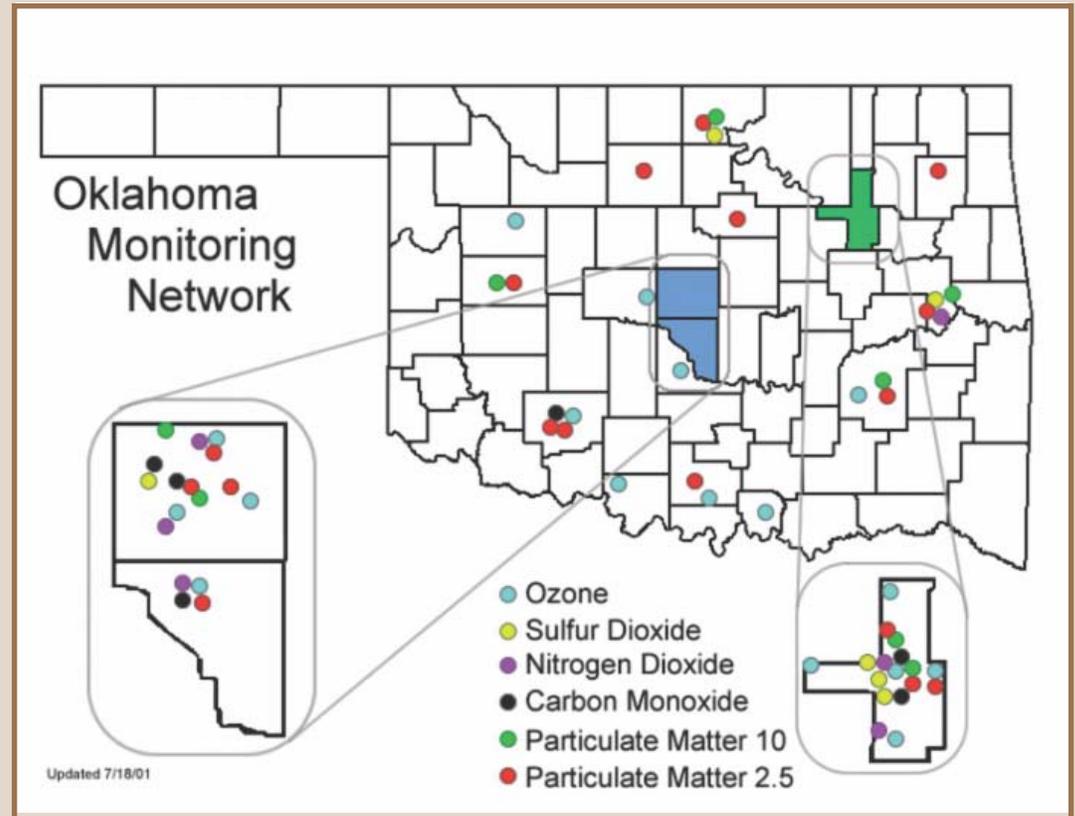
DEQ personnel have attended meetings with representatives from national and regional air pollution control agencies to share ideas about the current monitoring situation and how the monitoring system could be changed. The objective is to make the best use of limited air quality monitoring resources.

The outcome of these efforts will be a more scientifically defensible network that more accurately assesses ambient air quality. Some of the things being considered in the new strategy are the pollutants monitored and the location of the monitoring

sites. Preliminary discussions regarding DEQ's air monitoring network indicate: 1) the PM-2.5 network needs to be downsized due to redundancy and low concentrations between sites; 2) the PM-2.5 network needs to

use continuous monitors instead of manual non-continuous monitors to make possible the real-time mapping of PM-2.5; 3) the ozone network needs to be increased to enhance the mapping capabilities; 4) the carbon mon-

oxide network can be downsized due to redundancy and low recorded concentrations; and 5) the nitrogen oxides network can be downsized due to redundancy and low recorded concentrations. 🌍



Portable Emissions Analysis



Above is a portable emission analyzer.

As air quality permitting has evolved, the tools for gathering and analyzing data have improved. The use of portable emissions analyzers to test compliance with the permitted limits is one very useful and common tool. As a compliance monitoring tool, the portable analyzers fill the needs of both the industry and the regulators. However, all users were not following a valid testing protocol that presented a true picture of the actual opera-

tions of the equipment being tested.

The agency found that a comprehensive protocol needed to be developed to provide a more standardized way to perform the tests. A protocol was developed for the portable emissions analyzers and is now in the final stages before implementation. The Agency received a great deal of input from all concerned parties and has presented the findings to the industry for comment.

The outcome of this standardized protocol should improve our ability to have more accurate point source emissions data. Such data are important components in development strategies to continue attainment. As reported emissions are evaluated, more accurate estimates can be made and more accurate modeling performed. In turn, better assessment of near non-attainment areas can be made. 🌍

Land Protection in Oklahoma

