

**HOUSE COMMITTEE ON ENVIRONMENTAL REGULATION
TEXAS HOUSE OF REPRESENTATIVES
INTERIM REPORT 2008**

**A REPORT TO THE
HOUSE OF REPRESENTATIVES
81ST TEXAS LEGISLATURE**

**REPRESENTATIVE DENNIS BONNEN
CHAIRMAN**

**COMMITTEE CLERK
MARK MITCHELL**



Committee On
Environmental Regulation

January 13, 2009

Representative Dennis Bonnen
Chairman

P.O. Box 2910
Austin, Texas 78768-2910

The Honorable Tom Craddick
Speaker, Texas House of Representatives
Members of the Texas House of Representatives
Texas State Capitol, Rm. 2W.13
Austin, Texas 78701

Dear Mr. Speaker and Fellow Members:

The Committee on Environmental Regulation of the Eightieth Legislature hereby submits its interim report including recommendations for consideration by the Eighty-first Legislature.

Respectfully submitted,

Handwritten signature of Dennis Bonnen in cursive script.

Chairman Dennis Bonnen

Handwritten signature of Kelly Hancock in cursive script.

Representative Kelly Hancock, Vice-Chair

Handwritten signature of Edmund Kuempel in cursive script.

Representative Edmund Kuempel

Handwritten signature of Joe Driver in cursive script.

Representative Joe Driver

Representative Eddie Lucio, III

Representative Tracy King

Kelly Hancock
Vice-Chairman

Members: Joe Driver, Tracy King, Edmund Kuempel, Eddie Lucio III, G.E. "Buddy" West

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Introduction

At the beginning of the 80th Regular Session in accordance with the House Rules,¹ the Honorable Tom Craddick, Speaker of the Texas House of Representatives, appointed seven members to the House Committee on Environmental Regulation: Dennis Bonnen, Chair; Kelly Hancock, Vice Chair; Joe Driver, Tracy King, Edmund Kuempel, Eddie Lucio, and G.E. "Buddy" West.

Under Rule 3, Sec. 15, the committee has jurisdiction over all issues pertaining to:

- (1) air, land, and water pollution, including the environmental regulation of industrial development;
- (2) the regulation of waste disposal;
- (3) environmental matters that are regulated by the Department of State Health Services or the Texas Commission on Environmental Quality;
- (4) oversight of the Texas Commission on Environmental Quality as it relates to environmental regulation; and
- (5) the following state agencies: the Texas Low-Level Radioactive Waste Disposal Compact Commission and the board of the Texas Environmental Education Partnership Fund.²

Having completed its study of the issues included in the charges assigned by Speaker Craddick, the committee has adopted the following report.

On behalf of the entire committee, the Chairman expresses his deepest sympathies and condolences to the family of Representative Buddy West who passed away on June 25, 2008.

Buddy was a dedicated public servant to the people of the Permian Basin and to the state of Texas. He was a good husband, a good father, a good legislator, and a good friend.

¹ Rule 1, Sec. 15 and Rule 4, Sec. 2 of the Texas House Rules

² *Rules and Precedents of the Texas House, 80th Legislature, 2007*. Texas Legislative Council (Austin, TX: January 2007).

House Committee on Environmental Regulation

Interim Study Charges

1. Work to create and maintain a market-based approach to the application and implementation of Green Chemistry initiatives for the State of Texas.
2. Evaluate capabilities at public and private universities relating to the potential formation of dedicated Green Chemistry programs.
3. Collaborate with businesses to identify current Green Chemistry efforts that are already taking place, as well as what the incentives and disincentives are for businesses to make this shift. Examine and identify the environmental and economic benefits of promoting Green Chemistry initiatives.
4. Examine funding options for a statewide Green Chemistry initiative.
5. Work with the various state agencies such as the General Land Office, the Railroad Commission of Texas, and the Department of Agriculture in order to facilitate the promotion of Green Chemistry practices.
6. Examine the obstacles that must be overcome for Green Chemistry to be effective; identify solutions to such obstacles.
7. Study the Clean Air Act State Implementation Plan (SIP) to determine if:
 - Data is being collected adequately;
 - Recent changes to the SIP are bringing Texas closer to federal Environmental Protection Agency (EPA) requirements; and
 - There are any midcourse corrections necessary to achieve EPA requirements.As background, examine and document the trend in levels of air quality in Texas since 1980.
8. Examine the progress of the Texas Emissions Reduction Plan, the Low-Income Vehicle Repair Assistance, Retrofit, and Accelerated Vehicle Retirement Program and the Texas Environmental Research Consortium.
9. Study the air permitting process to examine, define, or interpret the following:
 - The role of public input in the standard air permitting process;
 - The requirements and interpretation of what constitutes Best Available Control Technology;
 - The requirements for monitoring ambient air in the beginning stages of the permitting process;
 - The requirements for modeling future air pollution in the event that the proposed plant is constructed;

-
- The issue of the cumulative impact of different air pollution sources;
 - The use of permits-by-rule and flexible permits in some cases; and
 - The requirements for permit renewals and the process for granting or denying permit renewals.

10. Examine the penalties and sanctions imposed on vehicle inspection and emissions testing facilities.

11. Monitor the agencies and programs under the committee's jurisdiction.

Green Chemistry Initiatives

Background

Chemistry has driven remarkable advances in many fields including medicine, agriculture, and industry. However, many of the substances that enhance our lives and our communities such as pharmaceuticals and water treatment chemicals are made from substances considered hazardous. Regulatory policy towards the manufacturing process has traditionally focused on cleanup and control of waste or hazardous materials, such as through the issuing of allowable emissions.

An emerging field known as Green Chemistry changes that regulatory perspective. Green Chemistry is one of several Next Generation Environmental Technologies (NGETs) that focus on the redesign at the molecular level of manufacturing and products, "as to reduce or eliminate the use of hazardous materials."³ It does not refer to a specific set of technologies. Rather, it emphasizes the use of more efficient, less toxic materials throughout the manufacturing process with the goal of creating less waste and saving industries money. Put simply, Green Chemistry seeks to end waste at its source, a concept known as primary pollution prevention, rather than finding incremental end-of-pipe solutions.

Among academics and its practitioners, 12 concepts are generally associated with Green Chemistry:

1. Prevention as opposed to reactionary cleanup.
2. The design and adoption of synthetic methods to maximize the use of all processed materials into the final product.
3. Designing methods to produce the least toxic and harmful product to human health and the environment.
4. Designing safer chemicals to minimize toxicity without sacrificing the desired effect.
5. Creating safer solvents and auxiliaries to minimize the use of auxiliary substances.
6. Design for energy efficiency.
7. Use of renewable feedstocks and raw materials whenever practicable.
8. Unnecessary derivation should be minimized; derivation requires additional reagents which causes the generation of additional waste.
9. Catalytic reagents are superior to stoichiometric reagents.
10. Chemical products should be designed to break down into innocuous products at the end of their function.
11. Real-time analysis for pollution prevention.
12. Inherently safer chemistry for accident prevention.⁴

It is extremely important to realize that the application of green technologies and sciences

³ Lempert, Robert J., Parry Norling, Christopher Pernin, Susan Resetar, Sergej Mahnovski. *Next Generation Environmental Technologies: Benefits and Barriers*. RAND's Science and Technology Policy Institute for the Office of Science and Technology Policy (Santa Monica, CA: 2003).

⁴ Anastas, Paul T., John C. Warner. *Green Chemistry: Theory and Practice*. Oxford University Press (Boston, 1998).

benefits both the environment and the bottom line. Environmental benefits include the reduction or elimination of toxic starting materials and by-products, increased use of renewable feedstocks, a reduction in human and environmental exposure, and improved human living conditions. By using Green Chemistry concepts to change the overall design of product manufacturing, businesses could potentially reap economic benefits such as lower feedstock costs, significantly reduced treatment costs, incorporation of most, if not all, substances into the final product, higher conversion rates, shorter reaction times, and lower energy requirements.

Some U.S. industries and companies are already beginning to take advantage of Green Chemistry. For example, Texas-based Dow Chemical has implemented a program known as Waste Reduction Always Pays, which as of 2005 had saved the company \$5 billion over the life of the program. Dow has also reduced solid waste by 1.6 billion pounds and saved 900 million BTUs of energy.⁵

Recommendations to Support Green Chemistry

According to the researchers familiar with the latest developments in field, the economic benefits and associated reduction of regulatory penalties have led to voluntary adoption of Green Chemistry principles. Further, in keeping with longstanding practices, the federal government has taken the lead in providing research funding for these projects.

Federal funds may be made available through legislative initiatives described in the Toxic Substances Control Act of 1976 and the Energy Policy Act of 2005. Additionally, the National Science Foundation (NSF) accounts for about one-fourth of federal support to academic institutions for basic research, and it funds research and education in most fields of science and engineering. It does this through grants and cooperative agreements to more than 2,000 colleges, universities, businesses, informal science organizations, and other research organizations throughout the United States.

Organizations such as the American Chemical Society and NIST's Advanced Technology Program (ATP), which are actively involved with companies in examining the feasibility of environmentally safer technologies, are instrumental in facilitating outside funding for research and development as well as implementation. In utilizing public-private partnerships, programs like ATP are able to work towards accelerating the development of technologies, as well as a higher standard of living, while enabling competition within industry.

At the state level, the Texas Higher Education Coordinating Board (THECB) presently sponsors the "Advanced Technology Program" (ATP), which, using intellectual property originating from Texas universities, aims at facilitating technology transfer in the creation of small businesses.

Texas also has a wealth of private organizations devoted to the development of new research in these areas. For instance, the Welch Foundation is one of the United States' oldest and largest private funding sources for basic chemical research. The Foundation's general policy is to

⁵ Meeting with Dow Chemical and the Texas Chemical Council.

support fundamental chemical research at universities, colleges, or other educational institutions within the state of Texas.

Universities such as Baylor University and the University of Texas have already begun offering courses, programs, and labs corresponding with environmental sciences and technologies. Baylor University has already been involved in examining several different environmental fields with the goal of improving environmental safety by reducing risk. The university's efforts have been predominantly focused on environmental toxicology, chemistry and risk assessment, enabling further efforts and research into wastewater treatment, alternative fuels, drug development, and safety assessment

In cooperation with these university-level efforts, private companies, including Dow, Merck, Pfizer, and Johnson & Johnson, have been generous in creating grants and donating funds to facilitate research and development efforts.

At this time, other states such as California have adopted initiatives to advance Green Chemistry. More often than not, states have combined new incentives with strict, sometimes draconian, regulatory powers and penalties which could ultimately damage their economies. In a heavy manufacturing state such as Texas, the legislature should support tax policies that encourage partnerships between private and public entities, but otherwise, should allow the natural development of this field to take place.

The Clean Air Act State Implementation Project

Background

A State Implementation Program (SIP) is a plan developed by the state to explain how it will meet the air quality standards laid out by the federal Clean Air Act (CAA). The CAA is the legal foundation for the national air pollution control program, and it requires each state to produce and regularly update a SIP. The CAA also requires that a SIP include a description of measures designed to deal with pollution in areas that fail to achieve national ambient air quality standards (NAAQS).

NAAQS are established by the EPA as directed by the Clean Air Act, and they measure six outdoor air pollutants: ground-level ozone/smog (O_3); particulate matter (PM); lead (Pb); nitrogen dioxide (NO_2); carbon monoxide; and sulfur dioxide (SO_2). These are known as "criteria pollutants," and are used as indicators because they can injure health, harm the environment, and cause property damage.

The Environmental Protection Agency (EPA) has the authority under the CAA to establish national air quality standards, to approve or reject SIPs, to replace SIPs with Federal Implementation Plans (FIPs), and to monitor the achievement of goals laid out in SIPs and FIPs. If a state fails to submit a SIP the EPA can impose sanctions or other penalties on the state, including cutting off federal highway funds and setting more stringent pollution offsets for certain emitters.

Trends in Air Quality

Ground level ozone continues to be the most significant air quality issue in Texas. Before beginning any discussion of ozone, we should distinguish between stratospheric ozone and ground-level ozone. Stratospheric ozone forms in the atmosphere when intense sunlight causes oxygen molecules to break up and reform as ozone molecules, changing their composition from O_2 to O_3 . At the very high levels where this ozone exists, it shields the planets from some of the sun's ultraviolet light.

Ground-level ozone is formed by many different sources. One way is when certain substances emitted by trees and other vegetation, soil microorganisms, and lightning react together to form low, background concentrations of ozone. At these levels, both animal and plant life tolerate ozone.

However, legitimate human activities that support modern economies and decent standards-of-living also create ozone that contributes to these naturally occurring sources. Man-made ozone results when nitrogen oxides (NO_x) combine with volatile organic compounds (VOCs) in the presence of sunlight. NO_x comes almost entirely as a by-product of high temperature combustion processes such as car, truck, and boat engines, construction equipment, electrical generation, and natural gas furnaces. VOCs include many organic chemicals that vaporize easily, such as those found in gasoline and solvents. They are emitted from many sources including gasoline stations, petroleum storage tanks, and oil refineries.

Again, it is important to remember that many factors contribute to ground-level ozone formation, and it is very difficult to single out any one source. The concentration of ozone is determined by the presence of the precursor chemicals NOx and VOCs as well as weather and climate factors. Intense sunlight, warm temperatures, stagnant high-pressure weather systems, and low wind speeds can all lead to higher accumulations of ozone.

The ozone in most areas in Texas has decreased over the past 10 years (1997-2007) as demonstrated in the graphics that follow. Figure 1 shows that the eight-hour ozone design values in the Houston-Galveston-Brazoria (HGB) area have decreased from 119 parts per billion (ppb) in 1990 to 96 ppb in 2007, a 19.3 percent decrease over seventeen years.

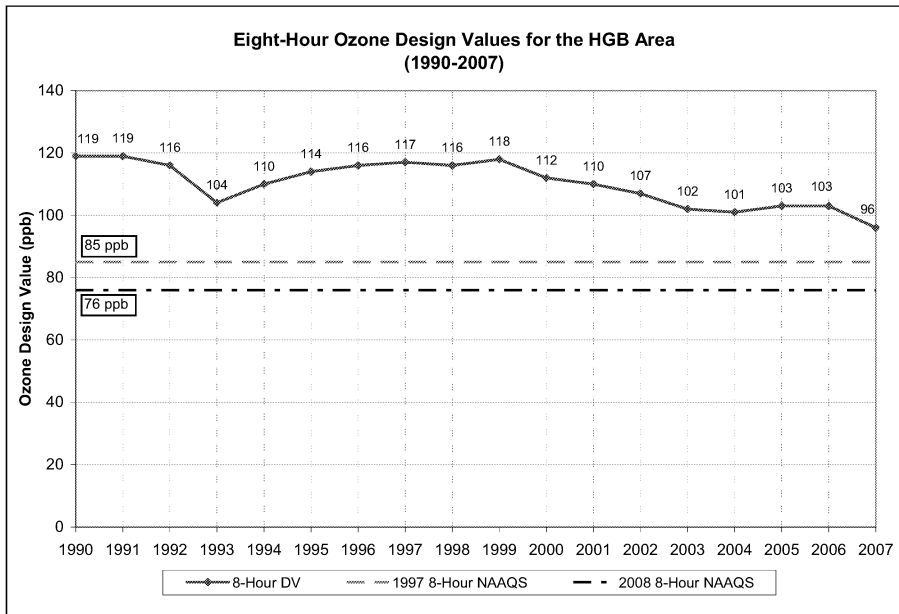


Figure 1: Eight-Hour Ozone Design Values in the HGB Area from 1997 to 2007.

Figure 2: **Eight-Hour Ozone Design Values in the DFW Area from 1997 to 2007** shows that the eight-hour ozone design values in the Dallas-Fort Worth (DFW) area have decreased from 105 ppb on 1990 to 95 ppb in 2007, an 9.5 percent decrease over seventeen years.

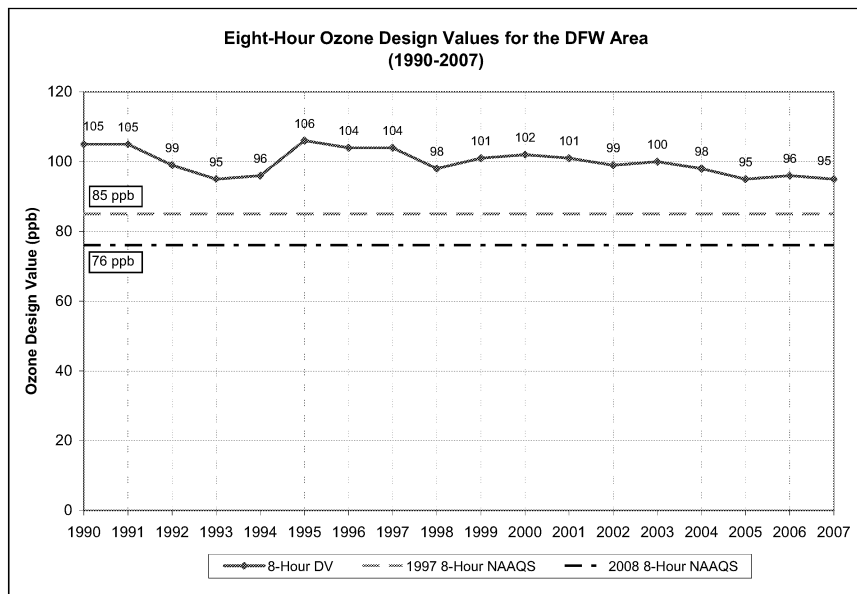


Figure 2: Eight-Hour Ozone Design Values in the DFW Area from 1997 to 2007

Figure 3 shows the eight-hour ozone design values in the Beaumont-Port Arthur (BPA) area have decreased from 100 ppb in 1990 to 83 ppb in 2007, a 17.0 percent decrease over seventeen years. Out of the HGB, DFW, and BPA areas, only the BPA area met the 1997 eight-hour ozone NAAQS in 2007 with a design value of 83 ppb.

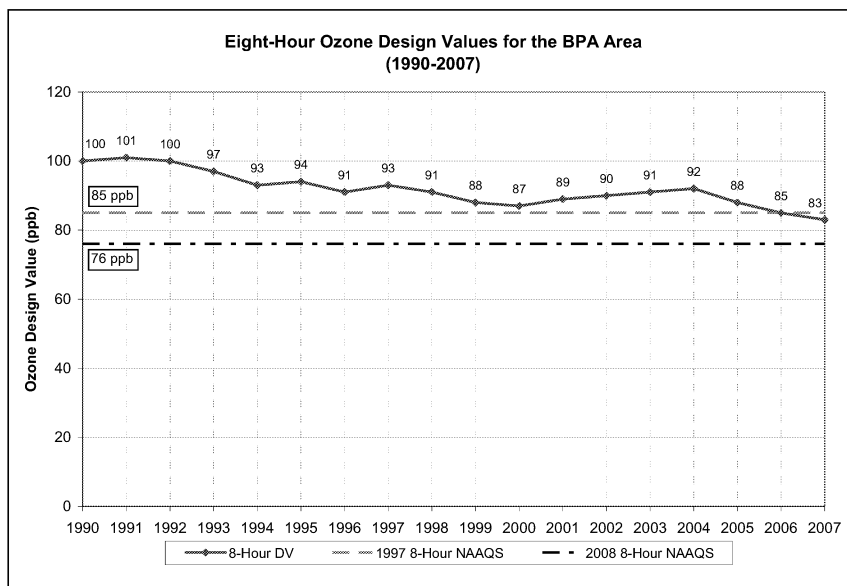


Figure 3: Eight-Hour Ozone Design Values in the BPA Area from 1997 to 2007

New EPA Ozone Standards

On March 12, 2008, the EPA issued a new eight-hour ozone standard of 75 ppb. To exceed this standard the design value of an area must be greater than or equal to 76 ppb. In 2007, eight counties in the HGB and DFW areas were monitoring over the 1997 standard (85 ppb). Those counties include Harris, Brazoria, Tarrant, Denton, Parker, Collin, Dallas, and Johnson. Under the new standard, 14 additional counties in five areas would be in violation in 2007. Those counties include Galveston, Montgomery, Hood, Rockwall, Ellis, Hunt, Kaufman, Gregg, Smith, Harrison, Jefferson, Bexar, Travis, and El Paso which are located in the BPA area, the Tyler-Longview-Marshall (TLM) area, the Austin (AUS) area, the San Antonio (SAN) area, and the El Paso (ELP) area. A total of 22 counties in seven areas of Texas will be in violation of the new standard. The map below shows the affected counties under the previous and proposed standards.

The staff resources that have been needed to develop the air quality plans for three existing nonattainment areas will now be responsible for developing plans for all seven of the above listed areas. In addition, the state implementation plans for each of the seven areas will all be due to EPA at the same time, March 2013. To address this increased workload, the TCEQ is requesting additional staff and funding.

Air Quality Data Collection

To evaluate progress towards air quality goals, the TCEQ collects data from the largest state-run monitoring network in the country. The network has grown over the years as a result of changes in federal air quality standards and the increasing proximity between pollution sources and growing communities.

The TCEQ and its air network partners operate air quality monitors in 57 counties. Of these counties, 39 host ozone monitors, primarily in and around urban areas. The air monitoring network—representing both public and private ownership—encompasses 217 stations. A single station can contain up to 15 instruments, and a single instrument can collect data for as many as 100 pollutants. More than 200 million data points are collected each year from the network.

This broad network includes state-owned sites and stations funded by Harris County and Galveston County; the cities of Houston, Dallas, Fort Worth, El Paso, San Antonio, and Victoria; and councils of governments (COGs) based in Austin, San Antonio, Corpus Christi, South East Texas, and North East Texas. Many of the monitoring stations managed by the COGs in Near Non-Attainment (NNA) areas receive special funding from the Legislature. The network also includes industry-sponsored stations whose data is hosted by the TCEQ, established as part of self-monitoring initiatives, voluntary agreements, and court orders. Some sites are also funded with Supplemental Environmental Projects (SEPs) resulting from enforcement actions. While data from these partners can become part of the TCEQ data set, it is generally not used in determining attainment with air quality standards as it does not meet certain EPA requirements for that purpose. However, it does provide a broader picture of the air quality conditions in

Texas.

The TCEQ's network of stationary sites includes:

- Monitors that take 5-minute average measurements of ozone, nitrogen oxides (NO_x), carbon monoxide (CO), and other compounds, in addition to several meteorological parameters;
- Automated gas chromatographs that separate and identify 48 to 65 Volatile Organic Compounds (VOCs) hourly;
- Canister samplers that are collected every sixth day for analysis of more than 100 air toxics and ozone precursors;
- Automated continuous and non-continuous monitors for particulate matter with aerodynamic size of 2.5 microns (PM_{2.5}) and 10 microns (PM₁₀), such as soot, smoke, and dust.

The table below provides the number of monitors by geographic area and type of pollutant monitored. Since each station can house instrumentation for one or more pollutants, a single station may be counted on multiple rows. The total number of each type of monitor is shown, with the number of TCEQ-owned monitors shown in parenthesis.

Summary of Stationary Air Quality Monitors in Texas⁶

Monitored Substance	Houston	DFW	Central Texas	El Paso	Lower Rio Grande	Other Areas	Total
Ozone	43 (14)	19 (17)	19 (5)	9 (5)	5 (5)	24 (13)	119 (59)
VOCs	39 (32)	16 (16)	3 (2)	9 (9)	9 (9)	30 (23)	106 (91)
NO _x	21 (12)	13 (11)	8 (4)	5 (5)	0	13 (9)	60 (41)
PM ₇	22 (15)	16 (11)	20 (11)	16 (10)	11 (11)	22 (22)	107 (80)
CO	6 (3)	4 (3)	4 (2)	8 (6)	3 (3)	3 (2)	28 (19)
Other	17 (11)	9 (7)	3 (0)	4 (4)	0	37 (15)	60 (37)

Van-based mobile monitoring stations allow TCEQ to monitor air quality upwind and downwind of specific sites. This provides data to support permitting, inspections, enforcement, and voluntary emission reduction efforts.

The TCEQ has expanded use of the GasFindIR camera, allowing investigators to view emission

⁶ The areas shown are based on TCEQ regions as follows: Houston = Region 12; Dallas = Region 4; Central TX = Regions 11, 13; El Paso = Region 6; Lower Rio Grande = Regions 15 and 16; and Others = Regions 10, 14, 1, 2, 3, 5, 7, 9.

⁷Lead (Pb) can be analyzed from PM samples.

plumes invisible to the naked eye. The infrared cameras have been dispatched on aerial surveys of industrial sites and are used in on-site inspections.

In the Houston area, a network of more than 50 monitors is capable of triggering e-mail alerts when pollutant concentrations spike so that the TCEQ and its monitoring partners can quickly look for the emissions source. Another development in the Houston area involves the Coast Guard helping to pinpoint emissions from vessels traveling through the Houston ship channel.

For a comprehensive list of stationary air quality monitoring sites that feed data into the Texas Leading Environmental Analysis and Display System (LEADS), go to http://www.tceq.state.tx.us/cgi-bin/compliance/monops/site_info.pl -- the table on this page has multiple options for viewer customization (sorting by city, county, responsible entity, etc.). Additional information including photos, maps, and descriptions of what is monitored at the site are available when you click on the "CAMS" number for each site.

Another informative webpage is located at http://www.tceq.state.tx.us/cgi-bin/compliance/monops/texas_aqi.pl -- this map shows the Air Quality Index (AQI) calculated for various areas of the state using the data in LEADS.

Revisions to the National Ambient Air Quality Standard (NAAQS) for ozone may require deployment of eight to ten additional ozone monitors in areas that do not currently have a monitoring site by 2011. The EPA is repealing a current exemption that allows a Metropolitan Statistical Area (MSA) with a population between 50,000 and 350,000 to avoid ozone monitoring if it doesn't already have a monitor. There are currently 10 MSAs without an ozone monitoring station in this size range: Lubbock, Amarillo, College Station/Bryan, Abilene, Wichita Falls, Texarkana, Odessa, Midland, Sherman/Dennison, and San Angelo.

On October 15, 2008, the EPA revised the NAAQS for lead, lowering the emission standard from 1.5 micrograms per cubic meter of air to 0.15 micrograms per cubic meter of air. EPA also announced that it was making changes to the monitoring network to monitor for lead levels. It is very likely that the rule will go to a federal court and the outcome of that proceeding will not be available by the time this report goes to press. Anticipated revisions to the NAAQS for lead (Pb) may require two new monitors each in San Antonio, Houston, DFW, and Austin, and additional monitors at 22 industrial facilities. Currently, TCEQ monitors for lead in Frisco, East Houston, Brownsville, Laredo and El Paso.

Under the new lead levels, EPA will designate areas as "attainment," "nonattainment," or "unclassifiable" after monitoring data is collected by state and local governments. Any areas classified as "nonattainment" must submit a State Implementation Plan for lead within 18 months. This means that the new SIPs would be due no later than June 2013 and areas would need to regain "attainment" status no later than January 2017.

State Implementation Plan Update for Non-Attainment Areas

Below you will find descriptions of all area SIPs as well as Early Action Compacts and other

parts of the Texas SIP.

Dallas-Fort Worth Area (DFW)

The Dallas-Ft. Worth SIP covers Collin, Dallas, Denton, Tarrant, Ellis, Johnson, Kaufman, Parker, and Rockwall Counties. DFW is classified as a moderate nonattainment area for the 1997 eight-hour ozone standard, with a 2005-2007 eight-hour ozone average of 95 ppb. In June 2007, the TCEQ submitted to EPA the DFW Eight-Hour Ozone Attainment Demonstration (AD) State Implementation Plan (SIP), Reasonable Further Progress (RFP) SIP, and associated rules to reduce emissions of nitrogen oxides (NO_x). The DFW AD SIP, supported by photochemical modeling and weight-of-evidence arguments, demonstrates attainment of the eight-hour ozone standard by June 15, 2010, and includes rule revisions requiring NO_x reductions from Major Industrial, Commercial, and Institutional (ICI) Sources, Minor Sources, Electric Generating Facilities (EGFs), Cement Kilns, and East Texas Combustion Sources.

On July 14, 2008, the EPA published in the Federal Register (73 FR 40203) proposed approval of the NO_x rule revisions affecting cement kilns and stationary sources, and conditional approval of the eight-hour attainment demonstration SIP. EPA-required conditions to be met by Texas for approval of the DFW AD SIP are adoption and submittal of:

- a SIP revision identifying and quantifying the emissions reduction contingency requirement; and
- a rule revision to limit the use of Discrete Emission Reduction Credits (DERCs), beginning in March 2009.

A DFW SIP revision to address the contingency requirement and DERC rule revision were developed by the TCEQ to meet the EPA's conditions and were proposed at the August 6, 2008 agenda. Consideration for adoption of the Contingency Measures Plan portion is scheduled for November 5, 2008. The proposed DERC rule revision is scheduled for commission consideration for adoption on December 10, 2008. EPA final action on the DFW AD SIP is anticipated in December 2008.

On July 14, 2008, the EPA also published in the Federal Register (73 FR 40203) a proposed notice to determine that the DFW one-hour nonattainment area is currently attaining the one-hour ozone NAAQS, based on certified monitored attainment of that standard in 2004-2006.

The TCEQ maintains a website for DFW's SIP at <http://www.tceq.state.tx.us/implementation/air/sip/dfw.html>

Houston-Galveston-Brazoria (HGB)

The Houston-Galveston-Brazoria area is made up of Brazoria, Chambers, Ft. Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties. HGB is classified as a moderate nonattainment for the 1997 eight-hour ozone standard with a 2005-2007 1997 eight-hour design value of 96 ppb. On June 15, 2007, the TCEQ submitted to EPA the HGB Eight-Hour Ozone and RFP SIPs and associated rules. The rules address underreported sources identified through optical imaging cameras, inventory discrepancies, and Texas Low Emission Diesel (TxLED) requirements for certain marine vessels refueling in the eight-county area.

On June 15, 2007, the Governor requested that the EPA reclassify the HGB ozone nonattainment area from moderate (Attainment Date: June 15, 2010) to severe (Attainment Date: as expeditiously as practicable, but not later than 2019). The EPA published a proposal on December 31, 2007, in the Federal Register (72 FR 74252) to grant a request by the Governor of Texas to voluntarily reclassify the HGB ozone nonattainment area from a moderate eight-hour ozone nonattainment area to a severe eight-hour ozone nonattainment area with an attainment date as expeditiously as practicable, but not later than June 15, 2019. The EPA also proposed and took comment on a range of dates from December 15, 2008, to April 15, 2010, for the state to submit a revised SIP addressing the severe ozone nonattainment area requirements of the FCAA. On January 30, 2008, the TCEQ submitted comments to the EPA in support of the reclassification and attainment of the standard as expeditiously as practicable, but not later than June 15, 2019. The TCEQ also provided justification for an April 2010 HGB SIP submittal date.

SIP Web site for HGB: <http://www.tceq.state.tx.us/implementation/air/sip/hgb.html>

Beaumont-Port Arthur (BPA)

The Beaumont-Port Arthur area is made up of Hardin, Jefferson, and Orange Counties. BPA monitored attainment for the 1997 eight-hour ozone standard with a 2005-2007 eight-hour ozone design value of 83 ppb. The TCEQ is developing a marginal area re-designation request and maintenance plan for the BPA area. The proposed plan is scheduled for consideration for adoption on December 10, 2008. This plan is due to the EPA by January 1, 2009.

Because the BPA area did not monitor attainment of the 1997 eight-hour ozone standard in 2004-2006, the three years prior to the June 15, 2007, deadline, the EPA finalized reclassifying the BPA area from “marginal” to “moderate” nonattainment for the 1997 eight-hour ozone standard in the Federal Register (73 FR 14391) on March 18, 2008. The final rule became effective on April 17, 2008. Should the BPA area have a fourth-highest eight-hour ozone value at or above 89 ppb during 2008, a marginal area redesignation request and maintenance plan for the area would no longer be approvable by the EPA. This scenario would require that a moderate area 1997 eight-hour ozone attainment demonstration SIP be submitted to the EPA by January 1, 2009. As of August 31, 2008, the unofficial fourth highest reading was 73 ppb.

SIP Web site for BPA: <http://www.tceq.state.tx.us/implementation/air/sip/bpa.html>

Ozone Early Action Compact (EAC) Areas

San Antonio (SAN)

On March 31, 2004, the Alamo Area Council of Governments submitted a final EAC plan to the TCEQ for incorporation into the SIP. The principles behind EAC's are to plan and implement methods of reducing emissions voluntarily in order to meet the 8-hour standard and to thereby maintain more local control over environmental regulation.

The San Antonio EAC area is made up of Bexar, Comal, Guadalupe, and Wilson Counties. SAN is classified attainment of the 1997 eight-hour ozone standard with a 2005-2007 average of 82

ppb. The EPA designated the SAN area as attainment for the 1997 eight-hour ozone standard in the Federal Register (73 FR 17897) on April 2, 2008. The effective date was April 15, 2008. This means that there are no further ozone SIP requirements for the area as long as it monitors attainment for the 1997 eight-hour ozone standard.

SIP Web site for SAN: <http://www.tceq.state.tx.us/implementation/air/sip/sa.html>

El Paso (ELP)

ELP is classified attainment of the 1997 eight-hour ozone standard with a 2005-2007 average of 79 ppb.

However, El Paso County is currently a moderate carbon monoxide and particulate matter 10 nonattainment area. On February 13, 2008, the TCEQ submitted a SIP revision to request redesignation of the El Paso carbon monoxide (CO) nonattainment area to attainment for the CO NAAQS. The EPA proposed direct final approval of the plan and the associated motor vehicle emissions budget in the Federal Register (73 FR 45162) on August 4, 2008. The proposal will become effective on October 3, 2008, pending any relevant adverse comments.

Analysis of monitoring data shows that El Paso would be in attainment of the PM₁₀ standard if not for natural events, such as dust storms. In response to this analysis, the TCEQ developed a natural-events action plan to flag exceedance days that occur due to natural events. Flagging allows the EPA to discard those days when determining the area's compliance with the PM₁₀ standard. The Commission adopted the natural-events action plan in February 2007, placing the state in a better position to seek El Paso's redesignation to attainment for PM₁₀ and to develop a viable maintenance plan.

ELP SIP Web sites: <http://www.tceq.state.tx.us/implementation/air/sip/nov1991elpaso.html> and <http://www.tceq.state.tx.us/implementation/air/sip/jan2007ep.html>

Austin-San Marcos (AUS)

As is the case in the San Antonio area, the Austin-San Marcos area has submitted an EAC to the TCEQ. AUS is made up of Travis, Williamson, Bastrop, Hays, and Caldwell Counties. AUS is classified attainment of the 1997 eight-hour ozone standard with a 2005-2007 average of 80 ppb. The Austin-Round Rock Eight-Hour Ozone Flex Program Memorandum of Agreement was approved by the TCEQ commission on June 18, 2008, and submitted to the EPA for review.

SIP Web site for AUS: <http://www.tceq.state.tx.us/implementation/air/sip/aus.html>

Northeast Texas (NETX)

Northeast Texas area is made up of Rusk, Smith, Upshur, Gregg, and Harrison Counties. NETX monitored attainment for the 1997 eight-hour ozone standard with a 2005-2007 eight-hour ozone design value of 84 ppb. In 2004, the NETX area signed an Early Action Compact Ozone SIP. The East Texas Combustion Sources rule adopted in May 2007 for the DFW SIP requires NO_x reductions from stationary, gas-fired, reciprocating internal combustion engines in select counties in east Texas including the NETX area.

SIP Web site for NETX: <http://www.tceq.state.tx.us/implementation/air/sip/net.html>

Corpus Christi (CC)

The Corpus Christi area is made up of San Patricio and Nueces Counties. CC monitored attainment for the 1997 eight-hour ozone standard with a 2005-2007 eight-hour ozone design value of 70 ppb. The Corpus Christi Eight-Hour Ozone Flex Program Memorandum of Agreement was approved by the TCEQ commission on June 13, 2007.

SIP Web site for CC: <http://www.tceq.state.tx.us/implementation/air/sip/cc.html>

Victoria (VIC)

In 1995, Victoria County was re-designated in attainment, and the TCEQ required the county to submit a plan showing how it would maintain national clean-air standards. Eight years later in 2003, TCEQ adopted a "subsequent" maintenance plan to show that the area will continue to demonstrate attainment of the one-hour ozone standard. VIC is classified attainment of the 1997 eight-hour ozone standard with a 2005-2007 average of 69 ppb. VIC's 1997 Eight-Hour Ozone Maintenance SIP revision, required by EPA, was adopted by the TCEQ commission on March 7, 2007, and submitted to EPA on March 22, 2007.

SIP Web site for Victoria: <http://www.tceq.state.tx.us/implementation/air/sip/vic.html>

Eight-Hour Ozone and PM2.5 Transport SIP

The Eight-Hour Ozone and PM2.5 Transport SIP revision was submitted to the EPA to fulfill Texas' Federal Clean Air Act 110(a)(2)(D)(i) obligation for the transport of ozone and PM2.5 outside the state. The Eight-Hour Ozone and PM2.5 Transport SIP revision documents existing ozone control strategies and does not include any new requirements. The SIP revision was adopted by the TCEQ commission on April 16, 2008.

Eight-Hour Ozone and PM2.5 Transport SIP Web site:

<http://www.tceq.state.tx.us/implementation/air/sip/transport/transportsip.html>

Regional Haze (RH) SIP

The Best Available Retrofit Technology (BART) rule, adopted by the TCEQ commission on January 10, 2007, is now in place to support the RH SIP revision. The TCEQ conducted modeling to screen out BART source groups with de minimis impact on national parks and other Class 1 areas subject to national regional haze regulations.

A number of sources that appeared to be BART-eligible applied for and obtained legally enforceable reductions in their allowable emissions. After final modeling incorporated these reductions in allowable emissions, Texas was left with no sources subject to BART. Post-BART emissions reductions are estimated to be more than 5,000 tons per year.

The TCEQ commission approved proposal of the RH SIP on December 5, 2007.

Regional Haze SIP Web site: <http://www.tceq.state.tx.us/implementation/air/sip/bart/haze.html>

Section 110(a) SIP Plans for the Eight-Hour Ozone and PM2.5

Texas was issued a finding of failure to submit its infrastructure SIP revision for the eight-hour ozone National Ambient Air Quality Standard on March 27, 2008. A finding of failure to submit for the PM2.5, however, was not issued. This finding of failure to submit starts a two-year federal implementation plan (FIP) clock, but does not start a two-year sanctions clock. Per EPA Region 6, there are no sanctions tied to this finding of failure to submit.

The TCEQ submitted a letter on April 4, 2008, to EPA Region 6 to fulfill the state's infrastructure obligation for eight-hour ozone and PM2.5. The submittal is pending with the EPA.

Clean Air Mercury Rule (CAMR)

On May 18, 2005, the EPA finalized CAMR to permanently cap and reduce mercury emissions from coal-fired power plants throughout the United States for the first time. This rule marked the United States as the first country in the world to regulate mercury emissions from electric generating utilities. The TCEQ approved rulemaking to implement the CAMR trading program for mercury in July 2006. However, on February 8, 2008, the United States D.C. Circuit Court vacated EPA's rule removing coal-fired power plants from the Clean Air Act list of sources of hazardous air pollutants. At the same time, the Court vacated the EPA's CAMR program. Currently, the EPA is reviewing the Court's decisions and evaluating its impacts.

Clean Air Interstate Rule (CAIR)

On May 12, 2005, the EPA finalized CAIR to help states with nonattainment areas for ozone and for particulate matter of less than 2.5 microns (PM2.5) to control nitrogen oxides (NO_x) and sulfur dioxide (SO₂) emissions from new and existing electric generating utilities. The TCEQ approved rulemaking to implement the federal CAIR trading program for NO_x and SO₂ in July 2006 and incorporated the provisions of House Bill 2481, Texas Legislature 79th Session. However, on July 11, 2008, the United States D.C. Circuit vacated the EPA's CAIR program. Currently, the EPA is reviewing the Court's decisions and evaluating its impacts. The appeal date for the Court's ruling has been extended to September 24, 2008

CAIR/CAMR Web site: <http://www.tceq.state.tx.us/implementation/air/sip/caircamr.html>

Mobile Source Challenges

The emissions from on-road and non-road mobile sources comprise approximately 54 percent of the total NO_x emission inventory in the HGB area, 74 percent in the DFW area, 79 percent in the Austin area, and 64 percent in the San Antonio area. The primary responsibility to establish new engine standards for both on-road vehicles and non-road equipment is that of the EPA. While the EPA has been phasing in more stringent standards for several years, the full benefits won't be seen until beyond 2009. This is past the attainment deadline for areas designated moderate for the 1997 ozone standard (June 2010).

Heavy-duty truck engine standards will be fully phased in with the 2010 model year and the final

phase of the Tier 4 emission standards for diesel powered non-road equipment engines will begin in 2012. States are also preempted by federal law from regulating locomotive and marine engines, which contribute approximately 46 percent of the non-road mobile source NO_x emissions in the HGB nonattainment area. The phase in of the new federal Tier 3 and Tier 4 engine standards for locomotives and Category 1 and 2 marine diesel engines will significantly reduce NO_x emissions from these non-road mobile sources beginning in 2009 through 2018.

On-road motor vehicle miles traveled is expected to increase slightly from 2009 to 2012, however, NO_x emissions are expected to decrease significantly from ozone season 2009 estimates due solely to fleet turnover effects as the use of older higher-emitting vehicles is discontinued and newer, lower-emitting vehicles enter the fleet. Fleet turnover in the DFW area by 2012 is estimated to decrease NO_x emissions by approximately 20 tpd from ozone season 2009 estimates. In the Austin area, fleet turnover is expected to account for a decrease of approximately 23 tpd in NO_x over the 2007 - 2012 time period. Fleet turnover in the San Antonio area by 2012 is estimated to decrease NO_x emissions by 34 tpd from 2007. Fleet turnover effects from non-road equipment are less significant due to the extended useful life of equipment in the overall fleet.

TCEQ Emission Reduction Control Measures, 2005 and Later

The following table, *TCEQ Emission Reduction Controls 2005 and Later*, includes multi-regional controls, statewide, and area-specific controls developed in support of the Texas state implementation plan. The table provides a control measure description and outlines the regulatory authority for each of these rules as well as provides the compliance date. Emission reductions are provided, when available.

TCEQ EMISSION REDUCTION CONTROL MEASURES 2005 and LATER			
CONTROL MEASURE DESCRIPTION	REGULATORY AUTHORITY	COMPLIANCE DATE	EMISSION REDUCTIONS
STATEWIDE			
Establish emissions reduction criteria for portable fuel containers sold in Texas.	Chapter 115, Subchapter G, Division 2	January 1, 2006 (Full penetration assumed by January 1, 2013)	10.4 tpd VOC by 2007; 37.3 tpd VOC by 2012
MULTI-REGION AREAS			
The Texas Emissions Reduction Plan (TERP) provides funding for owners and operators of heavy-duty vehicles, non-road equipment, locomotives, marine vessels, and stationary equipment to reduce NO _x emissions. For the fiscal year 2006-2007 biennium, the TERP program funded 1,630 projects involving 3,254 individual vehicles or pieces of equipment, for a total grant amount of \$229,278,515.	Chapter 114, Subchapter K, Division 3	The TERP grants do not have specific compliance dates. Grants are awarded using grant contracts that specify time frames for purchasing and operating the cleaner vehicles, equipment, and/or engines.	Total Reductions: 25.8 tpd NO _x in 2009 DFW: 8.5 tpd NO _x HGB: 12.3 tpd NO _x San Antonio: 1.1 tpd NO _x Austin: 1.5 tpd NO _x BPA: 0.9 tpd NO _x Tyler-Longview: 1.1 tpd NO _x General Land Office: 0.5 tpd NO _x
Texas Low Emission Diesel Fuel (TxLED) Program. All diesel fuel sold or supplied for use in 110 central and eastern Texas Counties met low diesel fuel requirements.	Chapter 114, Subchapter H, Division 2	Phased in from October 31, 2005 to January 31, 2006	Total Reductions: 43.7 tpd NO _x BPA: 1.5 tpd NO _x DFW: 10.7 tpd NO _x HGB: 8.5 tpd NO _x East/Central TX: 23.0 tpd NO _x

TCEQ EMISSION REDUCTION CONTROL MEASURES 2005 and LATER

CONTROL MEASURE DESCRIPTION	REGULATORY AUTHORITY	COMPLIANCE DATE	EMISSION REDUCTIONS
Texas Low Emission Diesel Fuel (TxLED) Program. Expansion of TxLED requirements to DMA and DMX grade marine fuels.	Chapter 114, Subchapter H, Division 2	Phased in from October 1, 2007 to January 1, 2008	HGB: 0.9 tpd NO _x
<p>Inspection and Maintenance Programs requiring two speed idle testing for pre 1996 vehicles and on-board diagnostic testing for 1996 and newer vehicles.</p> <p>Low Income Vehicle Repair Assistance, Retrofit and Accelerated Vehicle Retirement Program (LIRAP). Applies to 16 counties in the HGB, DFW, and Austin areas. From 2005-2007 LIRAP funded 22,189 repairs and 739 replacements.</p>	<p>Chapter 114, Subchapter C, Divisions 1 & 3</p> <p>Chapter 114, Subchapter C, Division 2</p>	<p>Austin: September 1, 2005 El Paso: January 1, 2007</p> <p>LIRAP grants do not have specific compliance dates.</p>	<p>Austin: 3.22 tpd NO_x 3.83 tpd VOC DFW: 19.39 tpd NO_x 16.5 tpd VOC El Paso: 1.80 tpd NO_x 2.20 tpd VOC HGB: 15.02 tpd NO_x 12.66 tpd VOC</p> <p>NA</p>
Require NO _x emission reductions from existing utility electric generation facilities in 31 counties of East and Central Texas.	Chapter 117, Subchapter E, Division 1	May 1, 2003 and May 1, 2005	NA
Reduce NO _x emissions from portland cement kilns in Bexar, Comal, Ellis, Hays, and McLennan Counties.	Chapter 117, Subchapter E, Division 2	May 1, 2003 May 1, 2005	NA

TCEQ EMISSION REDUCTION CONTROL MEASURES 2005 and LATER			
CONTROL MEASURE DESCRIPTION	REGULATORY AUTHORITY	COMPLIANCE DATE	EMISSION REDUCTIONS
East Texas Combustion Rule - Reduce NO _x emissions from stationary, gas-fired rich-burn engines in 33 East Texas attainment counties: Anderson, Brazos, Burleson, Camp, Cass, Cherokee, Freestone, Franklin, Gregg, Grimes, Harrison, Henderson, Hill, Hopkins, Hunt, Lee, Leon, Limestone, Madison, Marion, Morris, Nacogdoches, Navarro, Panola, Rains, Robertson, Rusk, Shelby, Smith, Titus, Upshur, Van Zandt, and Wood Counties.	Chapter 117, Subchapter E, Division 4	March 1, 2010	22.4 tpd NO _x
Require Stage II vapor recovery systems to be on-board refueling vapor recovery compatible.	Chapter 115, Subchapter C, Division 4	April 1, 2005 for new systems April 1, 2007 for existing systems	NA
BEAUMONT-PORT ARTHUR AREA			
Reduce NO _x emissions from boilers and process heaters at major sources.	Chapter 117, Subchapter B, Division 1	May 1, 2005	18.6 tpd NO _x from 2003-2005
Reduce NO _x emissions from electric generation units at major sources.	Chapter 117, Subchapter C, Division 1	May 1, 2005	NA
Lower the exemption level for VOC emissions from batch processes and from shipbuilding and repair operations from 100 tpy to 50 tpy.	Chapter 115, Subchapter B, Division 6 Chapter 115, Subchapter E, Division 2	December 31, 2006	NA

TCEQ EMISSION REDUCTION CONTROL MEASURES 2005 and LATER			
CONTROL MEASURE DESCRIPTION	REGULATORY AUTHORITY	COMPLIANCE DATE	EMISSION REDUCTIONS
DALLAS-FORT WORTH AREA			
Extend the control, monitoring, testing, recordkeeping, and reporting requirements for motor vehicle fuel dispensing facilities (Stage I only) to Ellis, Johnson, Kaufman, Parker, and Rockwall Counties.	Chapter 115, Subchapter C, Division 2	June 15, 2007	1.99 tpd VOC
Reduce NO _x emissions from internal combustion engines (5% Increment of Progress SIP).	Chapter 117, Subchapter B, Division 4	June 15, 2007	1.87 tpd NO _x
Reduce NO _x emissions from major industrial, commercial, and institutional sources in the DFW eight-hour ozone nonattainment area	Chapter 117, Subchapter B, Division 4	March 1, 2009 March 1, 2010	8.88 tpd NO _x Additional reductions anticipated from previously uncounted engines
Reduce NO _x emissions from stationary internal combustion engines at industrial, commercial, and institutional sources in the DFW eight-hour ozone nonattainment area	Chapter 117, Subchapter D, Division 2	March 1, 2009 March 1, 2010	2.9 tpd NO _x Additional reductions anticipated from previously uncounted engines
Reduce NO _x emissions from electric generating facilities in the DFW eight-hour ozone nonattainment area	Chapter 117, Subchapter C, Division 4	March 1, 2009	0.4 tpd NO _x
Reduce NO _x emissions from Portland cement kilns in Ellis County.	Chapter 117, Subchapter E, Division 2	March 1, 2009	9.7 tpd NO _x
Extend the control, monitoring, testing, recordkeeping, and reporting requirements for surface coating processes to Ellis, Johnson, Kaufman, Parker, and Rockwall Counties.	Chapter 115, Subchapter E, Division 2	June 15, 2007	1.02 tpd VOC

TCEQ EMISSION REDUCTION CONTROL MEASURES 2005 and LATER			
CONTROL MEASURE DESCRIPTION	REGULATORY AUTHORITY	COMPLIANCE DATE	EMISSION REDUCTIONS
DFW VOC RACT - Extend General VOC Source RACT requirements to Ellis, Johnson, Kaufman, Parker, and Rockwall Counties	Chapter 115 Subchapter B, Divisions 1 - 4	March 1, 2009	NA
DFW VOC RACT - Extend VOC Transfer RACT requirements to Ellis, Johnson, Kaufman, Parker, and Rockwall Counties	Chapter 115 Subchapter C, Divisions 1 & 3	March 1, 2009	NA
DFW VOC RACT - Extend Petroleum Refining, Natural Gas Processing, and Petrochemical Process RACT requirements to Ellis, Johnson, Kaufman, Parker, and Rockwall Counties	Chapter 115 Subchapter D, Divisions 1 & 3	March 1, 2009	NA
DFW VOC RACT - Extend Solvent Using Process RACT requirements to Ellis, Johnson, Kaufman, Parker, and Rockwall Counties	Chapter 115 Subchapter C, Divisions 1, 3, & 4	March 1, 2009	NA
DFW VOC RACT - Extend Miscellaneous Industrial Source RACT requirements to Ellis, Johnson, Kaufman, Parker, and Rockwall Counties	Chapter 115 Subchapter C, Divisions 1 & 2	March 1, 2009	NA
Delta Airlines Ground Support Equipment Agreed Order. Ground Support Equipment reductions.	April 2000 DFW SIP Revision	Final step-down by December 31, 2005	0.87 tpd NO _x
Southwest-Love Field Ground Support Equipment Agreed Order. Ground Support Equipment reductions.	April 2000 DFW SIP Revision	December 31, 2005	0.668 tpd NO _x
HOUSTON-GALVESTON-BRAZORIA AREA			

TCEQ EMISSION REDUCTION CONTROL MEASURES 2005 and LATER

CONTROL MEASURE DESCRIPTION	REGULATORY AUTHORITY	COMPLIANCE DATE	EMISSION REDUCTIONS
NO _x reductions from major sources, minor sources, and electric generation facilities in the HGB area have been achieved from the Mass Emission Cap and Trade program from 2005 to 2007 with the final control period occurring in 2007.	Chapter 101, Subchapter H, Division 3 Chapter 117, Subchapter B, Division 3 Chapter 117, Subchapter D, Division 1	Final MECT step-downs occur in 2005, 2006, and 2007	493.7 tpd NO _x
Agreed Order with Continental to reduce NO _x emissions from ground support equipment at the Bush International Airport.	December 2000 HGB SIP Revision	December 31, 2005	2.712 tpd NO _x
Memorandum of Agreement with EPA, H-GAC, and Texas Waterway Operators Association to reduce NO _x emissions from tugboat/towing vessels.	December 2000 HGB SIP Revision	January 1, 2007	1.1 tpd NO _x
Agreed Order with Southwest Airlines to reduce NO _x emissions from ground support equipment at the Houston-Hobby Airport.	December 2000 HGB SIP Revision	December 31, 2005	0.564 tpd NO _x from 2003-2005
Monitoring and recordkeeping requirements for flares, process vents, and cooling towers in HRVOC service.	Chapter 115, Subchapter H, Division 1 & 2	December 31, 2005	NA
Independent third-party audits of the HRVOC fugitive emissions monitoring program.	Chapter 115, Subchapter H, Division 3	December 31, 2005	NA
NO _x reductions from minor sources that are not subject to the cap and trade program.	Chapter 117, Subchapter D, Division 1	March 31, 2005	NA

TCEQ EMISSION REDUCTION CONTROL MEASURES 2005 and LATER			
CONTROL MEASURE DESCRIPTION	REGULATORY AUTHORITY	COMPLIANCE DATE	EMISSION REDUCTIONS
Establish HRVOC site-wide emissions cap and trade program.	Chapter 101, Subchapter H, Division 6 Chapter 115, Subchapter H, Divisions 1 & 2	January 1, 2007, is the start of the first control period	NA
Reduce VOC emissions from storage and degassing operations.	Chapter 115, Subchapter B, Division 1 Chapter 115, Subchapter F, Division 3	January 1, 2009	NA
AUSTIN AREA			
Reduce VOC emissions by amending regulations for degreasing processes.	Chapter 115, Subchapter E, Division 1	December 31, 2005	5.55 tpd VOC
Reduce VOC emissions by amending regulations for Stage I Vapor Recovery.	Chapter 115, Subchapter C, Division 2	December 31, 2005	4.88 tpd VOC
Reduce VOC emissions by amending regulations for cutback asphalt.	Chapter 115, Subchapter F, Division 1	December 31, 2005	1.03 tpd VOC
Idling Reduction Memorandums of Agreement. Reduce emissions from idling vehicles.	Chapter 114, Subchapter J, Division 2	August 2005	NA
SAN ANTONIO AREA			

TCEQ EMISSION REDUCTION CONTROL MEASURES 2005 and LATER

CONTROL MEASURE DESCRIPTION	REGULATORY AUTHORITY	COMPLIANCE DATE	EMISSION REDUCTIONS
Reduce VOC emissions by amending regulations for Stage I Vapor Recovery.	Chapter 115, Subchapter C, Division 2	December 31, 2005	5.81 tpd VOC
Reduce VOC emissions by amending regulations for degreasing processes.	Chapter 115, Subchapter E, Division 1	December 31, 2005	NA

**The Texas Emissions Reduction Plan,
The Low-Income Vehicle Repair Assistance, Retrofit, and
Accelerated Vehicle Retirement Program,
and The Texas Environmental Research Consortium**

Texas Emissions Reduction Plan (TERP)

The TERP was established by the 77th Texas Legislature in 2001, through enactment of Senate Bill (SB) 5. The goals of the TERP, as set forth in SB 5, are to:

- Ensure that the air in this state is safe to breathe and meets minimum federal standards established under the federal Clean Air Act (Section 7407, Title 42, United States Code); and
- Adequately fund research and development that will make the state a leader in new technologies that can solve the state's environmental problems while creating new business and industry in the state.

Under the TERP, the TCEQ provides voluntary financial incentives for the replacement or upgrade of heavy-duty vehicles, non-road equipment, locomotives, marine vessels, and stationary equipment. The projects must result in at least a 25 percent reduction in emissions of nitrogen oxides (NO_x). Projects may be funded in one or more of the 41 counties in the state designated as nonattainment for federal ground-level ozone standards or otherwise identified as near-nonattainment.

From FY 2001 through FY 2007, the TERP program funded 3,062 grants totaling \$504,388,397.96 projected to reduce NO_x emissions of 122,736.8741 at a cost per ton of \$4,109. These emissions reductions represent 56.3767 tons per day.

For the 2008-2009 biennium, the funding appropriation from the TERP Fund was \$337,843,188. The Legislature further allocated the funds through the Appropriations Act as follows:

- \$297,144,243 for the Diesel Emissions Reduction Programs, including \$3,750,000 in each fiscal year to the Texas Clean School Bus Program;
- The commission allocated an additional \$4,385,770 for projects in the nonattainment and near-nonattainment areas consistent with the types of projects funded under the Texas Clean School Bus Program;
- \$36,090,111 for grant funding for the NTRD Program;
- \$4,508,834 to administer the Emissions Reduction Incentive Programs; and
- \$250,000 each fiscal year to administer the NTRD Program.

As of September 24, 2008, the TCEQ has approved 1,802 projects to be funded from FY 2008-2009 appropriations. These grants are either awarded or pending contracts for \$208,482,713.69 with projected reductions in NO_x of 28,234.4060 tons at a cost per ton of \$7,384. The emissions reductions represent 15.0592 tons per day.

If all of the pending grant awards are accepted and executed, the funding over the life of the program, FY 2001 through FY 2009, will include 4,844 grants for \$712,871,111.65, with NO_x reductions of 150,971.2801 tons at a cost per ton of \$4,722. The emissions reductions would represent 71.4359 tons per day.

In addition, the TCEQ has approved grants to 51 school districts in Texas under the Texas Clean School Bus Program to install retrofit devices that will reduce the exposure of school children to

harmful particulate matter from diesel exhaust. These grants total \$4.8 million.

The TCEQ will solicit additional applications for these programs in the Fall of 2008 and expects to award all of the remaining appropriated TERP funds.

In FY 2008, the TCEQ conducted significantly more outreach activities than in the past. These activities included joint efforts with the U.S. Environmental Protection Agency Region 6 (EPA), North Central Texas Council of Governments, City of Dallas, and other regional and local governments in the Dallas-Fort Worth Area.

The TCEQ spent \$148,933 on external outreach activities, not including staff expenses, travel, and publications (brochures and flyers) published through regular processes.

The main outreach efforts in FY 2008 included:

- Workshops
 - The TCEQ hosted 11 workshops in the eligible areas during January and February 2008 with a total attendance of 516 individuals.
- Application Assistance Events:
 - Ten assistance sessions were held in the Dallas-Fort Worth Area and were hosted/conducted by NCTCOG, City of Dallas, TCEQ regional staff, and TCEQ TERP staff.
 - Three assistance sessions were also completed by TCEQ staff in Houston and San Antonio. Approximately 30 individuals attended these sessions.
 - Daily assistance desks were open in different locations in the DFW area by the City of Dallas, NCTCOG, EPA, and TCEQ regional staff. Applicants called the TERP 800 line to schedule appointments for assistance.
 - Walk-in assistance centers were also provided by TCEQ, EPA, NCTCOG, and City of Dallas, with over 400 applicants being provided assistance.
- Marketing and Outreach
 - Billboards were developed and displayed in six different locations within the eligible counties. (Dallas, Houston, Austin, and San Antonio).
 - Radio Ads were developed in English and Spanish and aired in Dallas, Austin, and the San Antonio areas.
 - TERP print advertisements were developed and printed in the Dallas, Houston, Austin, and San Antonio Business Journals and in the monthly publication of Fleet Equipment.
- Letters and Phone Calls
 - Letters were sent jointly by EPA and TCEQ to local public officials in the DFW area and a special workshop was held for local government staff.
 - Follow-up letters were sent by TCEQ, EPA, and City of Dallas
 - The TCEQ sent letters to major fleet owners and large companies in all of the areas.
 - The EPA coordinated phone calls to potential applicants in the DFW area

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- TERP Hotlines
 - The TERP 800 line was upgraded so that callers in the DFW area would be transferred to a help desk at the EPA offices. EPA hired additional staff to handle the calls. The DFW help desk staff answered basic questions and scheduled appointments for the assistance sessions and assistance desks in the DFW area.
 - TERP central office staff also answered over 5,062 hotline calls.
 - News Releases
 - The TCEQ and EPA worked with local broadcast and print media to send out press and news releases.
 - Brochures
 - Brochures and posters were developed in English and Spanish and distributed. Recipients included Dealers, Vendors, Associations, Chambers of Commerce, TxDOT Registered Heavy-Duty Vehicles, and TxDOT Prequalified Contractors.

Texas Commission on Environmental Quality
Texas Emissions Reduction Plan (TERP)
Grants Awarded FY 2001 through FY 2007 (by Area)
September 16, 2008

AREA	NUMBER OF PROJECTS	NUMBER OF ACTIVITIES	TOTAL NO _x REDUCED (TONS)	GRANT AMOUNT	COST PER TON	TONS PER DAY OF NO _x REDUCED
Austin	202	471	4015.3796	\$22,612,392.04	\$5,631.45	2.4329
Beaumont/Port Arthur	59	202	4392.2732	\$18,822,342.60	\$4,285.33	2.7107
Corpus Christi	22	85	1095.2394	\$5,344,830.55	\$4,880.06	0.6887
Dallas/Fort Worth	1090	2656	42651.0806	\$163,925,460.49	\$3,843.41	17.9614
El Paso	137	172	696.6289	\$3,183,977.08	\$4,570.55	0.4075
Houston/Galveston/Brazoria	1293	3386	58922.6667	\$238,331,999.10	\$4,044.83	26.9494
San Antonio	198	412	7130.0546	\$30,459,448.87	\$4,271.98	3.0943
Tyler/Longview	51	121	3075.0991	\$16,089,107.89	\$5,232.06	1.6960
Victoria	9	13	91.7853	\$618,839.36	\$6,742.25	0.0548
Unknown (TBD)	1	1	666.6667	\$5,000,000.00	\$7,500.00	0.3810
	3062	7,519	122736.8741	\$504,388,397.96	\$4,109.51	56.3767

* Third-Party Grant to Texas General Land Office for Natural Gas Initiative Program, funding not yet reported as assigned to specific purchases.

Texas Commission on Environmental Quality
Texas Emissions Reduction Plan (TERP)
Emissions Reduction Incentive Grants Awarded and/or Pending Fy 2008-2009 (by Area)
September 17, 2008

AREA	NUMBER OF PROJECTS	NUMBER OF ACTIVITIES	TOTAL NO _x REDUCED (TONS)	GRANT AMOUNT	COST PER TON	TONS PER DAY OF NO _x REDUCED
Austin	73	163	1018.2549	\$8,776,886.24	\$8,619.54	0.5854
Beaumont/Port Arthur	25	98	2358.2404	\$12,809,764.97	\$5,431.92	0.8192
Dallas/Fort Worth	482	842	7719.0398	\$52,038,246.32	\$6,741.54	3.7414
Houston/Galveston/Brazoria	381	762	5715.7328	\$41,891,155.97	\$7,329.10	3.2472
San Antonio	87	199	1253.3504	\$10,763,479.11	\$8,587.77	0.7275
Tyler/Longview	25	93	2138.8152	\$13,304,037.31	\$6,220.28	1.3234
	1073	2,157	20203.4335	\$139,583,569.92	\$6,908.90	10.4440

Texas Commission on Environmental Quality
Texas Emissions Reduction Plan (TERP)
Rebate Grants Awarded and/or Pending FY 2008-2009 (by Area)
September 17, 2008

AREA	NUMBER OF PROJECTS	NUMBER OF ACTIVITIES	TOTAL NO _x REDUCED (TONS)	GRANT AMOUNT	COST PER TON	TONS PER DAY OF NO _x REDUCED
Austin	59	59	468.5690	\$4,596,882.31	\$9,810.47	0.2678
Beaumont/Port Arthur	4	4	88.0353	\$868,134.38	\$9,861.20	0.0503
Dallas/Fort Worth	140	140	1158.1509	\$11,225,144.58	\$9,692.30	0.6618
Houston/Galveston/Brazoria	207	207	1445.8380	\$13,783,888.41	\$9,533.49	0.8262
San Antonio	103	103	670.6957	\$6,381,838.71	\$9,515.25	0.3833
Tyler/Longview	11	11	110.5136	\$1,043,255.38	\$9,440.06	0.0632
	524	524	3,941.8026	\$37,899,143.77	\$9,614.67	2.2525

Texas Commission on Environmental Quality
Texas Emissions Reduction Plan (TERP)
Third-Party Grants Awarded and/or Pending FY 2008-2009 (by Area)
September 17, 2008

AREA	NUMBER OF PROJECTS	NUMBER OF ACTIVITIES	TOTAL NO _x REDUCED (TONS)	GRANT AMOUNT	COST PER TON	TONS PER DAY OF NO _x REDUCED
Austin	4	4	6.5132	\$49,230.00	\$7,558.50	0.0037
Dallas/Fort Worth ¹	140	141	1553.9465	\$11,948,635.00	\$7,689.22	0.9106
Houston/Galveston/Brazoria ²	44	45	753.8619	\$5,683,450.00	\$7,539.11	0.4340
San Antonio	8	8	13.4502	\$108,620.00	\$8,075.72	0.0079
Tyler/Longview	3	3	4.6001	\$34,080.00	\$7,408.53	0.0026
Unknown (TBD) ³	1	2	1756.798	\$13,175,985.00	\$7,500.00	1.0039
	200	203	4,089.1699	\$31,000,000.00	\$7,581.00	2.3627

¹ Includes Third-Party Grant to North Central Texas Council of Governments where funding not yet reported as assigned to specific purchases.

² Includes Third-Party Grant to Houston Galveston Area Council where funding not yet reported as assigned to specific purchases.

³ Third-Party Grants to Railroad Commission of Texas for Propane Equipment Initiative Program, funding not yet reported as assigned to specific purchases.

Low Income Vehicle Repair, Retrofit and Accelerated Vehicle Retirement Program (LIRAP)

With passage of SB 12 in the 80th Legislature, the Low Income Vehicle Repair, Retrofit and Accelerated Vehicle Retirement program (LIRAP), also known as the AirCheckTexas Drive a Clean Machine program, was modified to attract more participants. This program provides repair or replacement financial assistance to eligible owners of vehicles that have failed an emissions test or have a qualifying gasoline powered vehicle that is 10 years old or older. An applicant's income must be at or below 300% of the federal poverty level to be eligible. The program provides eligible owners with vouchers in the amounts of \$3,000 for a car or truck or \$3,500 if a hybrid vehicle is purchased. The replacement car must be the current model or up to three model years old. A replacement truck must be a current model and up to two model years old. A hybrid vehicle must be the current model year or preceding model year. All replacement vehicles must meet Federal Tier 2 Bin 5 emissions standards or cleaner. The program also provides for \$600 in repair assistance for eligible motorists that have failed an emissions test.

The AirCheckTexas Drive a Clean Machine program is available in counties that conduct annual vehicle emissions testing and elect to participate. The Drive a Clean Machine program currently operates in the Houston-Galveston-Brazoria area, Dallas-Fort Worth area and Austin area. These areas include Brazoria, Collin, Dallas, Denton, Ellis, Fort Bend, Galveston, Harris, Johnson, Kaufman, Montgomery, Parker, Rockwall, Tarrant, Travis and Williamson counties.

Appropriations for LIRAP repair and replacement assistance program for fiscal year 2008 and 2009 is \$90,000,000, an increase from \$8 million the previous biennium.

In 2008 Fiscal year, \$45 million was distribution in the following manner:

- \$210,000 TCEQ administration
- \$39,703,500 Repair/replacement
- \$4,411,500 Program administration
- \$675,000 Outreach activities (brochures, billboards, post cards, etc.)

For the 2009 Fiscal year, the agency expects to distribute the \$45 million in the following manner:

- \$210,000 TCEQ administration
- \$40,311,000 Repair/replacement
- \$4,479,000 Program administration

The amount of the funds for the counties was determined by taking the sum of the total number of On-Board Diagnostic (OBD) stickers issued in the Dallas and Houston program areas, and all of the stickers issued in the Travis and Williamson Counties, then dividing the number of stickers issued for each county by the sum. The percentage result was then multiplied by the total amount to get the allocation for each county.

FY 08 Allocation of LIRAP Funds – as of 08/28/08

PROGRAM AREA	AVAILABLE FOR REPAIR/REPLACEMENT	ADMINISTRATION	EXPENDITURES*
DFW	\$19,213,724.70	\$2,134,858.30	\$24,342,671.10
HGB	\$16,449,477.77	\$1,827,725.75	\$19,690,568.56
TRAVIS	\$ 2,964,208.06	\$ 329,289.78	\$ 1,526,068.49
WILLIAMSON	\$ 1,076,635.47	\$ 119,626.16	\$ 572,023.22

* Expenditures totals may exceed allocation amounts due to carry forward of FY '07 funds

REPAIRS AND REPLACEMENTS

As reported by the program administrators from December 2007 to June 30, 2008

PROGRAM AREA	# OF REPAIRS	# OF REPLACEMENTS
DFW	989	5,044
HGB	1,252	3,706
TRAVIS	90	216
WILLIAMSON	37	130
TOTAL	2,368	9,096

The main outreach efforts in FY 2008 included:

- Workshops
 - The TCEQ attended dealer workshops hosted by the program areas.
 - The TCEQ also hosted dismantler workshops.
- Marketing and Outreach
 - Billboards were developed and displayed in the program areas.
 - Post cards were distributed to 330,000 vehicle owners.
 - Brochures and posters were developed in English and Spanish and distributed to inspection stations, auto dealers, and the general public.
 - Pay check inserts, fact sheets, posters, and brochures were developed and made available for participants to download.
 - Videos were developed and distributed to auto dealers and lending institutions.
 - Ads were posted in 2 auto trader magazines.
- LIRAP 800 Line
 - The LIRAP 800 line was set up so that callers would be directed to the appropriate program area.
- Web Site Development
 - The TCEQ developed a new Web site, which links to the program areas and applications. The site includes eligibility information, along with participating dealers, dismantlers, and recyclers.
- New Releases
 - The TCEQ issued several news releases.
 - Press conferences were held in the program areas.

New Technology Research and Development Program

The New Technology Research and Development Program (NTRD) provides financial incentives through the issuance of state funded grants to encourage and support research, development, and commercialization of technologies that will reduce air pollution in Texas. House Bill 37 (78th Legislature, Third Special Session) transferred the functions of the former Texas Council on Environmental Technology and the NTRD program to the TCEQ. The TCEQ managed the program during the FY04/05 Biennium. House Bill 2481 (79th Texas Legislature) in 2005 transferred the administration of the NTRD program to a non-profit organization based in Houston with the funding for the program to be provided through a contract with the TCEQ. The Texas Environmental Research Consortium (TERC) was selected for this purpose. TERC's Research Management Organization (RMO), the Houston Advanced Research Center (HARC), manages the program under contract with TERC. Senate Bill 12 (79th Texas Legislature) authorized the TCEQ to provide NTRD funds to a university in Houston to establish and operate a diesel testing center to test technologies that might qualify for NTRD subgrants. The University of Houston (UH) was selected for this purpose.

As of September 2007 all 64 of the TCEQ managed NTRD grants have closed out. TCEQ continues to monitor the ongoing commercialization and disposition requirements on a quarterly basis for approximately a third of the 64 TCEQ awarded contracts, as well as managing the current contracts with TERC and UH.

TERC

TERC has continued to solicit grants through several Requests for Grant Applications (RFGAs), both targeted and comprehensive.

HARC continues to manage grants awarded during the FY06-07 biennium. Due to a late start most of the FY06 grants will not conclude until FY09.

University of Houston

Facilities upgrade and expansion work is underway with major construction set to begin Fall 08 and all construction slated for completion by late Summer 2009. UH has been working with an engineering design firm to plan the upgrades and order all necessary equipment. UH will be using their remaining grant funds, after the facility upgrade costs, to fund testing and R&D to familiarize staff and students with the new equipment and build UH's reputation in the field. Testing and R&D projects will be approved and supervised by TCEQ and may occur in parallel with the facilities upgrade work whenever feasible. TCEQ has authorized the testing and R&D work to continue through FY10.

The Air Permitting Process in Texas

The Role of Public Input in the Standard Air Permitting Process

Standard Permit Description

A standard permit provides an expedited preconstruction authorization process that may be used for a specific type of facility that complies with the standard permit requirements and that is not prohibited by some other state or federal permitting statute or regulation. Air quality standard permits are authorized under Title 30 Texas Administrative Code (TAC) Chapter 116, Subchapter F for the following types of facilities:

Air Quality Standard Permits	Latest Effective Date
Air Quality Pollution Control Projects	February 1, 2006
Animal Carcass Incinerators	January 16, 2006
Boilers	November 3, 2006
Concrete Batch Plants	July 10, 2003
Concrete Batch Plants with Enhanced Controls	August 16, 2004
Electric Generating Units	May 16, 2007
Municipal Solid Waste Landfills	September 1, 2006
Oil and Gas Facilities	September 4, 2000
Permanent Hot Mix Asphalt Plants	July 10, 2003
Permanent Rock and Concrete Crushers	July 31, 2008
Sawmills	February 6, 2008
Temporary Hot Mix Asphalt Plants	July 10, 2003
Temporary Rock Crushers	July 31, 2008

Standard permits are usually developed for facilities which are numerous and very similar in function and design. To allocate resources to more complex permitting projects, specific facility types are evaluated, through best available control technology (BACT) and health effects/impacts reviews, to determine whether the operations can be authorized under a standard permit rather than through a case-by-case permit review. Standard permits have also been developed in response to legislation. A recent example is the Standard Permit for Concrete Batch Plants with Enhanced Controls.

Public Input Process

Upon development of a draft standard permit, the TCEQ will generally hold a stakeholder meeting to receive input on the draft standard permit terms. Stakeholder meetings are open to the public. They are announced on the TCEQ Web site and an email notification is sent to interested parties. Stakeholder meetings are generally held in Austin. Additional stakeholder meetings may also be held in other cities if the standard permit will affect entities that are concentrated in certain areas of the state. Comments are received from stakeholders and the draft standard permit may be revised accordingly.

Once the draft permit is finalized, notice of the formal comment period and announcement of a public meeting to be held in a specific city is published in the *Texas Register* and in the daily newspaper of the largest general circulation in Austin, Dallas, and Houston. The notice may be published in additional newspapers if the executive director determines that it is necessary. A

press release is also issued and state and local officials may be notified by email. The notice will invite written comments by the public and the public notice period is a minimum of 30 days. Announcement of the formal comment period is also published on the TCEQ Web site and the public may access the draft standard permit on the Web site. The public meeting provides an additional opportunity for the public to provide oral or written comments.

If public comments are provided, a formal response to comments is developed. The response is mailed to each commenter and is provided on the TCEQ Web site with the final permit. Notice of the final action is published in the *Texas Register*.

The process for amending or revoking a standard permit is similar. The stakeholder process is the same and the formal comment process differs slightly. Notice of the action will be published in the *Texas Register* and in daily newspapers of largest circulation in Austin, Dallas, and Houston. Written notice is also provided to entities that have registered under the standard permit.

The division often receives comments from industry representatives. The division has also received comments from individuals, environmental groups, local air pollution control agencies, and the U. S. Environmental Protection Agency (EPA) on certain standard permits. Although the EPA has submitted general comments on recent rule amendments, this has not been the trend for standard permits.

Given the public participation process in developing a standard permit, individual registrants under most standard permits are not subject to notice and comment or contested case hearing procedures with the following exceptions:

- Concrete batch plants requires notice and a contested case hearing;
- Concrete batch plants with enhanced controls)requires a notice and comment period and a public meeting; and
- Permanent concrete and rock crushers and animal carcass incinerators provide a notice and comment period for individual registrations.

Statutory/Regulatory Authority

Standard permits are authorized by the Texas Clean Air Act (TCAA)⁸, § 382.05195, and by 30 TAC Chapter 116, Subchapter F. The statute allows the commission to issue standard permits for similar facilities if the commission finds that the permit would be enforceable, that compliance can be adequately monitored, and that the facilities will use effective control technology, or BACT, as defined by TCAA § 382.0518.9

⁸ The Texas Clean Air Act (TCAA) is in the Texas Health and Safety Code Chapter 382. Citations to sections are expressed as sections of the TCAA

⁹ Note that TCAA § 382.057 allows for an exemption to the requirements of 382.0518 for changes to a facility that will not make a significant contribution to the atmosphere. Additionally, 30 TAC §116.602(b) provides that grandfathered facilities whose applications for a standard permit were filed before September 1, 2001 do not have to meet BACT. The ability to avail oneself of this provision has obviously passed.

Federal and State Public Notice Authority

Notice and comment procedures for the TCEQ's various air permits are found in 30 TAC Chapter 39, Subchapters H and K and 30 TAC Chapter 55, Subchapters B and E. The commission's authority to require notice and publication, and to provide for comment procedures, are in TCAA § 382.05195, and 30 TAC Chapter 116. Since none of the standard permits are part of the state implementation plan (SIP), and only two are pending approval to become part of the SIP, there are no federal notice requirements.

Also see attached table that provides information on state and federal notice requirements for air permits.

Best Available Control Technology (BACT)

Statutory/Regulatory Authority

TCAA § 382.0518(b) provides:

The commission *shall* grant within a reasonable time a permit or permit amendment to construct or modify a facility if, from the information available to the commission, including information presented at any hearing held under Section 382.056(k), the commission finds: (1) the proposed facility for which a permit, permit amendment, or a special permit is sought will use at least the *best available control technology*, considering the technical practicability and economic reasonableness of reducing or eliminating the emissions resulting from the facility; and (2) no indication that the emissions from the facility will contravene the intent of this chapter, including protection of the public's health and physical property.

The few exceptions to this requirement are facilities with *de minimis* emissions, facilities that qualify for permit-by-rule (PBR) authorizations, facilities which require another standard such as the Maximum Achievable Control Technology (MACT) standards under federal law, or facilities that qualify for the grandfather provision at TCAA § 382.0518(g).¹⁰ The Commission's BACT definition in 30 TAC § 116.10(3) mirrors the TCAA: "BACT with consideration given to the technical practicability and the economic reasonableness of reducing or eliminating emissions from the facility."

The Federal Clean Air Act also requires BACT for federal permits. Part C of the FCAA established the Prevention of Significant Deterioration of Air Quality (PSD) program to protect the air quality of attainment areas.¹¹ FCAA § 165 requires that the states apply BACT to major emitting facilities located in attainment areas. FCAA § 169 defines BACT as:

[A]n emission limitation based on the maximum degree of reduction of each pollutant subject to regulation under this Act emitted from or which results from any major emitting facility, which the permitting authority, on a case-by-case basis, taking into

¹⁰ TCAA §§ 382.051, 382.05101, and 382.0518.

¹¹ 42 U.S.C. § 7470.

account energy, environmental, and economic impacts and other costs, determines is achievable for such facility through application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each such pollutant. In no event shall application of "best available control technology" result in emissions of any pollutants which will exceed the emissions allowed by any applicable standard established pursuant to section 111 or 112 of this Act. Emissions from any source utilizing clean fuels, or any other means, to comply with this paragraph shall not be allowed to increase above levels that would have been required under this paragraph as it existed prior to enactment of the Clean Air Act Amendments of 1990.12

Monitoring Ambient Air in the Beginning Stages of the Permitting Process

State Review

Ambient air monitoring (measurements of air pollutants in outdoor air) is rarely required as part of the state's minor new source review (NSR), state property line, or air toxics permit review. Monitoring could be required for reasons such as demonstrating that air dispersion modeling results are too conservative or not representative or to verify that controls or best management practices have resolved a compliance issue.

Statutory/Regulatory Authority

The TCEQ's statutory authority to require monitoring is found in TCAA, §§ 382.011, 382.021, and 382.0518(b) and (d). The TCEQ's rules about monitoring requirements found in 30 TAC §§ 101.8, 101.14, 112.3, 112.4, 112.31, 112.32, and 30 TAC Chapter 116.

Federal Review

Ambient air monitoring may be required as part of the NSR permitting process for PSD permits. This process is followed for new major sources or a major source making a major modification in an attainment area.

Statutory/Regulatory Authority

FCAA, Title I - Air Pollution Prevention and Control, Part C - PSD of Air Quality through EPA's 40 CFR § 51.166 and TCEQ's 30 TAC Chapter 116.

Modeling Future Air Pollution from Proposed Plant Construction

Background

The TCEQ may require air dispersion modeling as part of the air permitting process for new or modified sources of air emissions for both federal and state air permit applications. If modeling is required, it is conducted before permit issuance using worst case operating parameters and metrological conditions to predict future air pollution from the permitted facilities. For modifications, modeling may include existing facilities and activities that are not being modified.

12 42 U.S.C. § 7479.

For federal review, off-property sources may be included in the analysis as required.

Statutory/Regulatory Authority

FCAA, Title I - Air Pollution Prevention and Control, Part C - PSD of Air Quality through EPA's 40 CFR § 51.166, TCAA § 382.0518(b)(2) and TCEQ's 30 TAC Chapter 116.

Cumulative Impact of Different Air Pollution Sources

Background

Under TCAA § 382.003 "source" means a point of origin of air contaminants, and "facility" means a discrete or identifiable structure, device, item, equipment, or enclosure that constitutes or contains a stationary source, including appurtenances other than emission control equipment. Under TCAA § 382.0518, the TCEQ grants permits for new or modified facilities at a site. The TCEQ does not have authority to permit emissions from mobile sources of air contaminants. Under the Texas Water Code (TWC) § 5.130, the TCEQ shall develop and implement policies to protect the public from cumulative risks in areas of concentrated operations.

Air Toxics Review

Cumulative impacts are considered as part of the TCEQ's toxicology reviews. TCAA § 382.0518 specifically mandates the TCEQ to conduct air permit reviews of all new and modified facilities to ensure that the operation of a proposed facility will not cause or contribute to a condition of air pollution. Air permit reviews typically involve evaluations of BACT and predicted air concentrations related to proposed emissions from the new or modified facility. The TCAA authorizes the prevention and remedy of air pollution based on effects and interference from contaminants present in the atmosphere, i.e., direct effects. Therefore, during the air permitting process, the TCEQ does not set air emission limits to restrict, or perform analysis to determine, the impacts emissions may have, by themselves or in combination with other contaminants or pathways, after being deposited on land or water or incorporated into the food chain.

The TCEQ has developed effects screening levels (ESLs) to be used in the agency's air permitting process to help ensure that authorized emissions of air contaminants do not cause or contribute to a condition of air pollution. The ESLs are developed to prevent adverse effects potentially associated with cumulative exposures. To help meet this objective, short-term and long-term ESLs are developed to evaluate short-term and long-term emissions, respectively. Short-term ESLs protect against short-term health effects, nuisance odor conditions, and vegetation effects. They also consider that ambient exposure is dependent on meteorology and source emission patterns, and that peak exposure could occur several times per day. Long-term ESLs protect against chronic health effects and vegetation effects.

ESLs are used in the air permitting process to assess the protectiveness of substance-specific emission rate limits for facilities undergoing air permit reviews. Evaluations of modeled worst-case ground-level air concentrations are conducted to determine the potential for adverse effects to occur due to the operation of a proposed facility. They are comparison levels, not ambient air standards. If predicted airborne levels of a chemical exceed its ESL, adverse health or welfare effects would not necessarily be expected to result, but a more in-depth review would be

triggered.

National Ambient Air Quality Standards Review

In addition to the air toxics review, cumulative impacts analysis of emissions of a pollutant with a national ambient air quality standard may be required as part of the NSR permitting process. This process considers emissions from stationary sources at a site as well as emissions from sources off site to demonstrate that the standards will be met.

State Property-Line Standards Review

In addition to the air toxics review, cumulative impacts analysis of emissions of sulfur compounds with a state property-line standard may be required. Since the state standard is based on a net ground-level concentration, this evaluation only considers emissions from stationary sources at a site to demonstrate that standards will be met.

Statutory/Regulatory Authority

FCAA, Title I - Air Pollution Prevention and Control, Part C - PSD of Air Quality through EPA's 40 CFR 51.166, TCAA § 382.0518(b)(2), Texas Water Code § 5.130 - Consideration of Cumulative Risk, TCEQ's rules in 30 TAC Chapter 112 and Chapter 116.

Permits by Rule (PBR) and Flexible Permits

PBR Description

If the operation emits less than 250 tons per year (tpy) of carbon monoxide or nitrogen oxides; or less than 25 tpy of total particulate matter, sulfur dioxide, total volatile organic compounds; or 25 tpy of any other air contaminant except carbon dioxide, water, nitrogen, methane, ethane, hydrogen, and oxygen then the operation may qualify for PBR requirements, contained in 30 TAC Chapter 106. There are approximately 120 individual PBRs which may be claimed. The facility must meet all the established PBR requirements to claim a PBR.

Brief Process Description

The facility or source must meet the general requirements for claiming a PBR. These requirements can be found at 30 TAC § 106.4. Also, the facility or source shall meet the conditions of the individual PBR claimed. Some specific PBRs require the submittal of a registration, and a registration fee is required for all. If the PBR does not require site approval from the TCEQ, construction (or the activity) can begin once the registration packet is mailed to the TCEQ. If the PBR requires site approval from the TCEQ, the owner/operator can not begin construction until they receive an approval in writing from the TCEQ.

Statutory/Regulatory Authority

PBRs are authorized by TCAA § 382.05196 and 30 TAC Chapter 106. The statute provides that the commission may adopt PBRs for types of facilities that are determined will not make a significant contribution of air contaminants to the atmosphere. The commission has defined the terms and conditions for PBRs in 30 TAC Chapter 106.

Flexible Permit Description

A flexible permit allows an owner/operator more flexibility in managing the operations by staying under an overall emissions cap or individual emission limitation. The applicant is allowed to structure the flexible permit to best serve its needs.

Title 30 TAC Chapter 116, Subchapter G allows an operator to use a flexible permit to manage operations by establishing a facility emissions cap. Certain physical or operational changes made under this subchapter may not require prior notification. The flexible permit provides an alternative to, but does not completely replace, traditional permitting where operations are restricted to permit representations. This permitting program provides greater flexibility that can be afforded to well-controlled facilities. Some existing sources could become well controlled by adding additional controls and/or modifying operating procedures resulting in emission reductions. The flexible permit allows the flexibility to make process changes in response to market opportunities. The state would benefit from the increased number of facilities permitted with lower overall emission rates and improved controls.

A person may obtain a flexible permit for a facility, group of facilities, or account before making any operational changes, as an alternative to a NSR permit under 30 TAC § 116.110. Only one flexible permit may be issued at a site, and a flexible permit may not cover sources at more than one account site. Once a flexible permit has been issued, new facilities and modifications to existing facilities may be authorized through an amendment to the flexible permit.

Flexible permits differ from permits issued under 30 TAC Chapter 116, Subchapter B primarily by adding flexibility features through the use of emission caps, control technology, and other operational flexibility to achieve emission reductions. The flexible permit program uses BACT to establish the emission caps for a permit.

Statutory/Regulatory authority

Flexible permits are part of the TCEQ's permitting program, authorized by TCAA, §§ 382.051, 382.0511, 382.0512, 382.0513, 382.0518, and by 30 TAC Chapter 116, Subchapter G.

Permit Renewals and the Process for Granting or Denying Permit Renewals

Permit Renewal Process

Air permit holders must apply for renewal of their state permits on a periodic basis. Any permit issued or renewed on or after December 1, 1991 is subject to renewal every 10 years after the date of issuance. Permit renewals also provide an opportunity to consolidate authorizations for a site. Permit renewal applications are reviewed and approved by the TCEQ.

The TCAA § 382.055 and 30 TAC Chapter 116 require that the TCEQ provide written notice to the holder of any permit that the permit is scheduled for renewal. This notice is provided by certified or registered U. S. mail. The notice specifies the procedure for filing and the information to be included in the application. The application shall be completed by the holder of the permit and returned to the TCEQ at least six months, but no earlier than 18 months prior to the expiration date of the permit.

New permit conditions are not imposed during renewals unless they are economically reasonable and technically feasible, considering the age of the facility and its effects on the surrounding area. The TCEQ only imposes more stringent requirements on permit renewals when it is found that the new requirements are necessary to avoid a condition of air pollution or to assure compliance with federal and state air quality requirements. Conversely, less stringent requirements are not imposed unless the TCEQ determines that the new requirements will meet §§ 382.0518 and 382.0541.

All applications undergo an administrative review and must be administratively complete before a formal technical review of the application begins. Once an application is determined to be administratively complete, a public notice (Notice of Intent to Obtain a Permit) will be authorized by the TCEQ, which must be published by the applicant within 30 days as required by law.

The TCEQ either renews the permit, or issues a report explaining the decision to deny the permit renewal within 180 days of filing of the renewal application. A denial report includes the TCEQ's basis for denying the renewal and a schedule that the applicant must follow in order to meet the TCEQ's requirements. If the applicant fails to meet the requirements set forth in the schedule the permit is rendered ineffective on the date specified in the schedule, unless the applicant can show in a contested case hearing why the permit should not expire immediately.

Based on TCAA § 382.056(g), when a permit is renewed without an increase in its allowed emissions, the TCEQ may not seek further public comment or provide for a contested case hearing on the permit, even if timely requests for hearing are received. If, however, the applicant has a compliance history that falls within the lowest classification, then TCAA §382.056(o) does allow a contested case hearing to be held.

Statutory/Regulatory Authority

Authority for the commission to renew an air quality permit is found in TCAA § 382.055. The following provisions govern the conditions for renewal of a permit, and address the question of when or if a public hearing may be held for a permit renewal.

TCAA § 382.055(e) states that the commission shall impose as a condition for renewal of a preconstruction permit only those requirements the commission determines to be economically reasonable and technically practicable considering the age of the facility and the effect of its emissions on the surrounding area. The commission may not impose requirements more stringent than those of the existing permit unless the commission determines that the requirements are necessary to avoid a condition of air pollution or to ensure compliance with otherwise applicable federal or state air quality control requirements. The commission may not impose requirements less stringent than those of the existing permit unless the commission determines that a proposed change will meet the requirements of Sections 382.0518 and 382.0541.

TCAA § 382.056(g) states that the commission may not seek further public comment or hold a public hearing under the procedures provided in § 382.056(i)-(n) in response to a request for a

public hearing on an amendment, modification, or renewal that would not result in an increase in allowable emissions and would not result in the emission of an air contaminant not previously emitted.

TCAA § 382.056(o) states that notwithstanding other provisions of this chapter, the commission may hold a hearing on a permit amendment, modification, or renewal if the commission determines that the application involves a facility for which the applicant's compliance history is in the lowest classification under Sections 5.753 and 5.554, Texas Water Code, and rules adopted and procedures developed under those sections.

**TCEQ'S COMPARISON OF FEDERAL AND STATE
PUBLIC PARTICIPATION REQUIREMENTS
FOR NEW SOURCE REVIEW AIR QUALITY PERMIT APPLICATIONS¹³**

	FEDERAL	STATE
1	<i>No comparable requirement.</i>	<p>Notice of Application (NORI), which includes the display style notice in the newspaper.</p> <p>Includes opportunity to (a) provide comment on the application and (b) request (1) a public meeting and/or (2) a contested case hearing (CCH). Note: some applications are not subject to CCH under statute or rule, and those notices include opportunity to request a notice and comment hearing.</p> <p>NORI is newspaper notice, with alternative language newspaper publication required in certain cases.</p> <p>NORI includes language of how a person can request to be on a mailing list for information about the application, or for other applications.</p> <p>Tex. Health & Safety Code § 382.056</p>
2	<p>Mail notice to applicant, EPA, local air pollution agencies, local officials, regional planning agencies, Federal Land Managers (FLM) and affected states.</p> <p>40 CFR §§ 51.161(d) and 51.166(q)</p>	<p>Mail notice to the applicant, persons on a mailing list, early commenters and hearing requestor, the state senator and representative of the area in which the facility will be located, EPA and local air pollution agencies.</p> <p>TCEQ rules do not address mailed notice for FLMs or affected states.</p> <p>Tex. Health & Safety Code § 382.0516</p>
3	<i>No comparable requirement.</i>	<p>Sign posting during NORI notice period (15 or 30 days).</p> <p>Tex. Health & Safety Code § 382.056</p>
4	Copy of the application, draft permit and preliminary decision in a public place in the area affected.	Copy of the application in a public place. Also, a copy of the draft permit and preliminary decision in a public place for applications subject to NAPD (see #5).

¹³ These are generally presented in sequential order.

	40 CFR §§ 51.161(b) and 51.166(q)	Tex. Health & Safety Code § 382.056
5	<p>Notice of (a) Air Quality Analysis (AQA) and (b) preliminary decision on application in a newspaper. For PSD, notice of amount of increment consumption. Notice shall be provided by the reviewing authority.</p> <p>Applies to: all applications, except for actions for which the state has demonstrated are (a) environmentally insignificant, or (b) too great an administrative burden for full notice.</p> <p>40 CFR §§ 51.160, 51.161 and 51.166(q)</p>	<p>Notice of availability of (a) draft permit and (b) preliminary decision (NAPD), which includes the display style notice in the newspaper. Notice shall be provided by permit applicants.</p> <p>Alternative language requirements apply.</p> <p>Applies to: applications for all new major sources and major modifications triggering federal program permits (PSD, Nonattainment and 112(g)), and all applications for which a CCH request was timely filed in response to NORI.</p> <p>Tex. Health & Safety Code § 382.056</p>
6	<p>Thirty (30) day opportunity to comment on AQA and preliminary decision.</p> <p>40 CFR §§ 51.161(b) and 51.166(q)</p>	<p>Opportunity to comment on draft permit and preliminary decision is part of the NAPD.</p> <p>Tex. Health & Safety Code § 382.056</p>
7		<p>Public meeting held if (a) requested by a legislator or (b) the ED finds that there is significant public interest. The meeting is bifurcated into a Q&A session, followed by taking of public comment (for which a written response is provided).</p> <p>See note 1 below.</p> <p>Tex. Health & Safety Code § 382.056</p>
8	<p>Opportunity to request a public hearing (this is a notice and comment style hearing at which the agency takes formal comment on the AQA/draft permit and later provides a written response).</p> <p>See note 1 below.</p> <p>40 CFR §§ 51.161(b) and 51.166(q)</p>	
9	<p>Consideration of public comment and make comments available for public inspection.</p> <p>40 CFR § 51.166(q)</p>	<p>Consideration of public comment; make comments available for public inspection; prepare a written response to timely comments; and provide to commenters.</p> <p>Tex. Health & Safety Code § 382.056</p>
10	<i>No comparable requirement.</i>	Opportunity to request a CCH if NAPD is published.

		Tex. Health & Safety Code § 382.056
11	<i>No comparable requirement.</i>	Opportunity to request CCH in response to RTC if the application is already contested. Tex. Health & Safety Code § 382.056

Note regarding public meetings and hearings: The TCEQ’s opportunities for requesting a public meeting and a contested case hearing (CCH) (see #1, 5, 7, 8, 10 and 11 above) are similar, but these are not equivalent to EPA’s requirement for notice and comment hearing (# 8). Although anyone can request a CCH, only affected persons can be granted or be parties in a CCH, after complying with requirements to timely request and demonstrate affectedness. The only prerequisite for requesting a TCEQ public meeting or an EPA notice and comment style public hearing is a timely request.

Although TCEQ’s public meetings are commonly held about the same time that the draft permit is available and the NAPD is published, there is no rule that requires that the meeting be held at that particular time. Sometimes meetings are held earlier in the application review period. (See #7 above).

The second half of TCEQ’s public meetings, when held after notice of draft permit, are comparable to EPA’s notice and comment hearing.

The CCH has no federal counterpart.
