REVISIONS TO THE STATE OF TEXAS AIR QUALITY IMPLEMENTATION PLAN CONCERNING TRANSPORT EMISSIONS

LEAD TRANSPORT

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
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LEAD TRANSPORT PLAN FOR THE 2008 LEAD NATIONAL AMBIENT AIR QUALITY STANDARD

PROJECT NUMBER 2011-005-SIP-NR

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EXECUTIVE SUMMARY

This revision to the State Implementation Plan (SIP) for lead transport sets forth how the Texas Commission on Environmental Quality (TCEQ) will meet the Federal Clean Air Act (FCAA), §110(a)(1) requirement for states to submit SIP revisions within three years after the promulgation of new or revised National Ambient Air Quality Standards (NAAQS) to meet the requirements of FCAA, §110(a)(2), including FCAA, §110(a)(2)(D)(i), relating to interstate transport. On October 15, 2008, the United States Environmental Protection Agency (EPA) substantially strengthened the NAAQS for lead. The new standard, set at 0.15 micrograms per cubic meter ($\mu g/m^3$) measured as a rolling three-month average, is ten times more stringent than the previous standard of 1.5 $\mu g/m^3$ measured as a quarterly average. The purpose of this SIP revision is to document that any emissions from sources in Texas do not interfere with attainment or maintenance of the 2008 lead NAAQS in another state.

Section 110(a)(2)(D)(i) also contains a requirement for all states to submit SIP revisions that contain adequate provisions prohibiting emissions that will interfere with measures required to be included in the applicable implementation plan in any other state to prevent significant deterioration of air quality or to protect visibility. The EPA's September 25, 2009, "Guidance on SIP Elements Required Under Sections 110(a)(1) and (2) for the 2006 24-Hour Fine Particle ($PM_{2.5}$) National Ambient Air Quality Standards" indicates that these requirements are satisfied if a state's SIP includes New Source Review (NSR) and Prevention of Significant Deterioration (PSD) programs. This SIP revision includes verification that the PSD and NSR permitting programs are being implemented in Texas. According to the EPA's July 6, 2005, regional haze regulations and guidelines for Best Available Retrofit Technology (BART) determinations, lead is not included as a visibility-impairing pollutant and therefore is not expected to interfere with measures to protect visibility.

The October 15, 2008, final rule for the 2008 lead NAAQS (73 FR 66964) included a requirement for monitors to be placed in areas with sources, such as industrial facilities, that emit 1.0 ton per year (tpy) or more of lead and in urban areas with more than 500,000 people. The EPA may waive the source-oriented monitoring requirements if the monitoring agency demonstrates that emissions from the source would not contribute to maximum air lead concentrations greater than 50% of the revised standard or 0.075 $\mu g/m^3$. On December 14, 2010, the EPA revised the ambient monitoring requirements for measuring lead in the air. The EPA changed the emissions threshold for industrial facilities to 0.5 tpy, reduced from the previous threshold of 1.0 tpy. At the time of proposal, the TCEQ had completed modeling for the five operational facilities that emit 1.0 tpy or more and after proposal completed modeling for the two facilities that emit 0.5 to 1.0 tpy.

There are six facilities in Texas that emit 1.0 tpy or more of lead into the air: the United States Army Fort Hood installation near Killeen (Fort Hood), Oxbow Carbon in Port Arthur (Oxbow), the Red River Army Depot near Texarkana (Red River), the American Smelting and Refining Company facility near Amarillo (ASARCO), the ECS Refining plant in Terrell (ECS), and the Exide Technologies, Incorporated lead battery recycling facility in Frisco (Exide). Two facilities in Texas emit between 0.5 and 1.0 tpy of lead into the air: the International Power Coleto Creek Power Station near Fannin (Coleto Creek) and San Miguel Electric Cooperative, Incorporated in Christine (San Miguel).

Modeled lead emissions from Fort Hood and Oxbow each result in ambient concentrations of less than 15% of the level of the 2008 lead NAAQS. Additionally, the September 8, 2005, Defense Base Closure and Realignment Commission report pursuant to Sections 2903 and 2914 of the Defense Base Closure and Realignment Act of 1990 requires the munitions

demilitarization activities at Red River to be relocated to another facility.[1] These demilitarization activities are scheduled to cease by September 30, 2011. The TCEQ has submitted waiver requests for the source-oriented lead monitoring requirements for these three facilities, since emissions from these sources are not expected to contribute to an ambient air concentration of lead greater than 50% of the NAAQS. Source-oriented lead monitors have been installed for ASARCO, Exide, and ECS. Modeling of the five[2] operational facilities indicates that lead emissions do not transport over long distances and will therefore not impact surrounding nonattainment areas, maintenance areas, or states. Modeling for the two facilities that emit between 0.5 and 1.0 tpy was conducted after proposal to determine the need for monitoring. Modeled lead emissions from Coleto Creek and San Miguel each result in ambient concentrations of less than 1% of the level of the 2008 lead NAAQS and indicate that there will be no impact on surrounding states. Fort Hood and Oxbow model results predict levels of less than 15% of the NAAQS. For Exide, ECS, and ASARCO the predicted concentrations dropped to below half the level of the NAAQS within 2 kilometers of the property line. To further validate this modeling, there are currently no lead nonattainment or maintenance areas in any of the four states that border Texas: Louisiana, Oklahoma, Arkansas, and New Mexico.

Texas has only one nonattainment area under the 2008 lead NAAQS. On November 16, 2010, the EPA designated a portion of Collin County, located in Frisco, Texas, as a lead nonattainment area, effective December 31, 2010 (75 FR 71033). This nonattainment area surrounds the Exide lead battery recycling facility. An area surrounding Exide was originally designated nonattainment for the 1978 lead NAAQS on November 6, 1991. On November 29, 1994, the EPA approved the Collin County lead attainment demonstration SIP revision. On August 31, 1999, the governor of Texas submitted to the EPA a request to redesignate the nonattainment portion of Collin County to attainment and to approve a ten-year maintenance plan for the area. The EPA redesignated the area to attainment and approved the ten-year maintenance plan effective December 13, 1999 (64 FR 55421). In 2009, the governor of Texas submitted to the EPA the final ten-year maintenance plan for the 1978 lead NAAQS. This SIP revision included contingency measures set in place to promptly correct any violations of the 1978 lead NAAQS. The attainment demonstration for the 2008 lead NAAQS will be due to the EPA by June 30, 2012.

Based on the control strategies currently in place to reduce lead emissions in the Collin County nonattainment area, modeling that predicts that lead emissions from Texas will not impact surrounding states, and lack of nonattainment or maintenance areas in the four surrounding states, Texas has adequately addressed interstate transport of lead.

[1] "2005 Defense Base Closure and Realignment Commission Report," September 8, 2005, http://www.brac.gov/docs/final/BRACReportcomplete.pdf.

[2] Red River was not modeled, because it will be shut down in 2011.

SECTION V: LEGAL AUTHORITY

A. General

The Texas Commission on Environmental Quality (TCEQ) has the legal authority to implement, maintain, and enforce the National Ambient Air Quality Standards (NAAQS) and to control the quality of the state's air, including maintaining adequate visibility.

The first air pollution control act, known as the Clean Air Act of Texas, was passed by the Texas Legislature in 1965. In 1967, the Clean Air Act of Texas was superseded by a more comprehensive statute, the Texas Clean Air Act (TCAA), found in Article 4477-5, Vernon's Texas Civil Statutes. The legislature amended the TCAA in 1969, 1971, 1973, 1979, 1985, 1987, 1989, 1991, 1993, 1995, 1997, 1999, 2001, 2003, 2005, 2007, 2009, and 2011. In 1989, the TCAA was codified as Chapter 382 of the Texas Health and Safety Code.

Originally, the TCAA stated that the Texas Air Control Board (TACB) was the state air pollution control agency and was the principal authority in the state on matters relating to the quality of air resources. In 1991, the legislature abolished the TACB effective September 1, 1993, and its powers, duties, responsibilities, and functions were transferred to the Texas Natural Resource Conservation Commission (TNRCC). With the creation of the TNRCC, the authority over air quality is found in both the Texas Water Code and the TCAA. Specifically, the authority of the TNRCC is found in Chapters 5 and 7. Chapter 5, Subchapters A - F, H - J, and L, include the general provisions, organization, and general powers and duties of the TNRCC, and the responsibilities and authority of the executive director. This chapter also authorizes the TNRCC to implement action when emergency conditions arise and to conduct hearings. Chapter 7 gives the TNRCC enforcement authority. In 2001, the 77th Texas Legislature continued the existence of the TNRCC until September 1, 2013, and changed the name of the TNRCC to the Texas Commission on Environmental Quality (TCEQ). In 2009, the 81st Texas Legislature, during a special session, amended section 5.014 of the Texas Water Code, changing the expiration date of the TCEQ to September 1, 2011, unless continued in existence by the Texas Sunset Act. In 2011, the 82nd Texas Legislature continued the existence of the TCEQ until 2023.

The TCAA specifically authorizes the TCEQ to establish the level of quality to be maintained in the state's air and to control the quality of the state's air by preparing and developing a general, comprehensive plan. The TCAA, Subchapters A - D, also authorize the TCEQ to collect information to enable the commission to develop an inventory of emissions; to conduct research and investigations; to enter property and examine records; to prescribe monitoring requirements; to institute enforcement proceedings; to enter into contracts and execute instruments; to formulate rules; to issue orders taking into consideration factors bearing upon health, welfare, social and economic factors, and practicability and reasonableness; to conduct hearings; to establish air quality control regions; to encourage cooperation with citizens' groups and other agencies and political subdivisions of the state as well as with industries and the federal government; and to establish and operate a system of permits for construction or modification of facilities.

Local government authority is found in Subchapter E of the TCAA. Local governments have the same power as the TCEQ to enter property and make inspections. They also may make recommendations to the commission concerning any action of the TCEQ that affects their territorial jurisdiction, may bring enforcement actions, and may execute cooperative agreements with the TCEQ or other local governments. In addition, a city or town may enact and enforce

ordinances for the control and abatement of air pollution not inconsistent with the provisions of the TCAA and the rules or orders of the commission.

Subchapters G and H of the TCAA authorize the TCEQ to establish vehicle inspection and maintenance programs in certain areas of the state, consistent with the requirements of the Federal Clean Air Act; coordinate with federal, state, and local transportation planning agencies to develop and implement transportation programs and measures necessary to attain and maintain the NAAQS; establish gasoline volatility and low emission diesel standards; and fund and authorize participating counties to implement vehicle repair assistance, retrofit, and accelerated vehicle retirement programs.

B. Applicable Law

The following statutes and rules provide necessary authority to adopt and implement the state implementation plan (SIP). The rules listed below have previously been submitted as part of the SIP.

Statutes

All sections of each subchapter are included, unless otherwise noted.

TEXAS HEALTH & SAFETY CODE, Chapter 382	September 1, 2009
TEXAS WATER CODE	September 1, 2009

Chapter 5: Texas Natural Resource Conservation Commission
- Subchapter A: General Provisions
- Subchapter B: Organization of the Texas Natural Resource Conservation Commission
- Subchapter C: Texas Natural Resource Conservation Commission
- Subchapter D: General Powers and Duties of the Commission
- Subchapter E: Administrative Provisions for Commission
- Subchapter F: Executive Director (except §§5.225, 5.226, 5.227, 5.2275,5.231, 5.232, and 5.236)
- Subchapter H: Delegation of Hearings
- Subchapter I: Judicial Review
- Subchapter J: Consolidated Permit Processing
- Subchapter L: Emergency and Temporary Orders (§§5.514, 5.5145, and 5.515 only)
- Subchapter M: Environmental Permitting Procedures (§5.558 only)

Chapter 7: Enforcement
- Subchapter A: General Provisions (§§7.001, 7.002, 7.0025, 7.004, and 7.005 only)
- Subchapter B: Corrective Action and Injunctive Relief (§7.032 only)
- Subchapter C: Administrative Penalties
- Subchapter D: Civil Penalties (except §7.109)
- Subchapter E: Criminal Offenses and Penalties (§§7.177, 7.179-7.183)

Rules

All of the following rules are found in 30 Texas Administrative Code, as of the following latest effective dates:

Chapter 7: Memoranda of Understanding, §§7.110 and 7.119	December 13, 1996 and May 2, 2002
Chapter 19: Electronic Reporting	March 15, 2007

SECTION VI: CONTROL STRATEGY

A. Introduction (No change)
B. Ozone (No change)
C. Particulate Matter (No change)
D. Carbon Monoxide (No change)
E. Lead (No change)
F. Oxides of Nitrogen (No change)
G. Sulfur Dioxide (No change)
H. Conformity with the National Ambient Air Quality Standards (No change)
I. Site Specific (No change)
J. Mobile Sources Strategies (No change)
K. Clean Air Interstate Rule (No change)
L. Transport (Revised)
M. Regional Haze (No change)

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LIST OF ACRONYMS

BART	Best Available Retrofit Technology
EPA	United States Environmental Protection Agency
FCAA	Federal Clean Air Act
FR	Federal Register
IQ	Intelligence Quotient
NAAQS	National Ambient Air Quality Standard
NSR	New Source Review
PSD	Prevention of Significant Deterioration
$PM_{2.5}$	Fine Particulate Matter
SIP	State Implementation Plan
TAC	Texas Administrative Code
TACB	Texas Air Control Board
TCAA	Texas Clean Air Act
TCEQ	Texas Commission on Environmental Quality (commission)
TNRCC	Texas Natural Resource Conservation Commission
tpy	tons per year
$\mu g/m^3$	micrograms per cubic meter

LIST OF APPENDICES

CHAPTER 1: GENERAL

1.1 BACKGROUND

"The History of the Texas State Implementation Plan (SIP)," a comprehensive overview of the SIP revisions submitted to the United States Environmental Protection Agency (EPA) by the State of Texas, is available at the following Web site at:
http://www.tceq.texas.gov/airquality/sip/sipintro.html

1.2 INTRODUCTION

This SIP revision for the transport of lead under the 2008 Lead National Ambient Air Quality Standard (NAAQS) describes how the Texas Commission on Environmental Quality (TCEQ) will meet the requirements of §110(a)(2)(D)(i) Federal Clean Air Act (FCAA), which requires states to submit a SIP that contains adequate provisions that prohibit any source or other type of emissions activity within the state from emitting any air pollutants in amounts that will:

- contribute significantly to nonattainment of the NAAQS for areas in other states;
- interfere with maintenance of the NAAQS by any other state;
- interfere with measures required for any other state to meet an implementation plan related to Prevention of Significant Deterioration; or
- interfere with measures required for any other state to meet the implementation plan related to regional haze and visibility.

Based on the control strategies already in place to reduce lead emissions in the Collin County nonattainment area, modeling that predicts that lead emissions from Texas will not impact surrounding states, and lack of nonattainment or maintenance areas in the four surrounding states, this SIP revision demonstrates that Texas has adequately addressed the FCAA §110(a)(2)(D)(i) requirements.

1.3 HEALTH EFFECTS

On October 15, 2008, the EPA substantially strengthened the NAAQS for lead. The new standard, set at 0.15 micrograms per cubic meter ($\mu g/m^3$) measured as a rolling three-month average, is ten times more stringent than the previous standard of 1.5 $\mu g/m^3$ measured as a quarterly average. According to the EPA, scientific evidence about lead and its potential health effects has expanded dramatically since the EPA issued the initial standard of 1.5 $\mu g/m^3$ in 1978, and more than 6,000 new studies on lead health effects, environmental effects, and lead in the air have been published since 1990. Evidence from health studies shows that adverse effects occur at much lower levels of lead in blood than previously thought.

Lead that is emitted into the air can be inhaled directly or ingested after it settles onto surfaces or soils. However, for the general population, exposure to lead occurs primarily via ingestion through contact with contaminated soils or other surfaces. Once taken into the body, lead distributes throughout the body in the blood and accumulates in the bones. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and the cardiovascular system. Lead exposure also affects the oxygen-carrying capacity of the blood.

The lead effects most commonly encountered in current populations are neurological effects in children and cardiovascular effects (e.g., high blood pressure and heart disease) in adults. Children are at a relatively higher risk of exposure to lead when compared to adults. The risk of exposure is higher because children tend to put their hands and other objects which may contain

lead into their mouths (e.g., lead-based paint chips from older homes). Children also have a higher risk of adverse effects because their brains are still developing. Infants and young children are especially sensitive to low levels of lead, which may contribute to behavioral problems, learning deficits, and lowered intelligence quotient (IQ).

1.4 PUBLIC HEARING AND COMMENT INFORMATION

The commission offered a public hearing for the proposed SIP revision on May 17, 2011, at 10:00 a.m. at the TCEQ Headquarters in Austin. A question and answer session was held 30 minutes prior to the meeting. The hearing was not officially opened, because no party indicated a desire to give comment.

The public comment period opened on April 22, 2011, and closed on May 23, 2011. Written comments were accepted via mail, fax, or through the eComments system. A summary of the comment and the TCEQ response is provided as part of this SIP revision in the *Response to Comments*.

Copies of the proposed SIP revision and its appendices can be obtained from the TCEQ Web site at: http://www.tceq.texas.gov/airquality/sip/criteria-pollutants/sip-lead.

1.5 SOCIAL AND ECONOMIC CONSIDERATIONS

Because rulemaking is not a part of this SIP revision, there are no changes that would have an impact on society or the economy.

1.6 FISCAL AND MANPOWER RESOURCES

The TCEQ has determined that its fiscal and manpower resources are adequate and will not be adversely affected through the implementation of this plan.

1.7 COORDINATION WITH LOCAL AGENCIES

The TCEQ has determined that there will be no assignment to local agencies. However, pre-existing assignments to local agencies regarding various enforcement activities remain in effect and could be utilized if enforcement activities are delegated to the TCEQ from the EPA.

1.8 ORGANIZATIONS RESPONSIBLE FOR DEVELOPMENT, IMPLEMENTATION, AND ENFORCEMENT

The TCEQ is the agency delegated authority by the Texas Legislature regarding the protection of air quality in the State of Texas. Other local government entities have limited authority regarding air quality matters in the State of Texas.

1.9 DATA AVAILABILITY

The TCEQ affirms that it will retain all data used in the preparation of this SIP revision. All supporting documents and data are publicly available via the TCEQ Web site at: http://www.tceq.texas.gov/airquality/sip or are available from the TCEQ upon request.

CHAPTER 2: REQUIRED CONTROL STRATEGY ELEMENTS

2.1 BACKGROUND

There are currently six facilities in Texas that emit 1.0 ton per year (tpy) or more of lead. They are the United States Army Fort Hood installation near Killeen (Fort Hood), Oxbow Carbon in Port Arthur (Oxbow), the Red River Army Depot near Texarkana (Red River), the American Smelting and Refining Company facility near Amarillo (ASARCO), the ECS Refining plant in Terrell (ECS), and the Exide Technologies, Incorporated lead battery recycling facility in Frisco (Exide). Dispersion modeling of lead emissions from the five operational facilities (the Red River Army Depot was not modeled because it will be shut down in 2011) indicates that lead does not transport over long distances and will therefore not impact the four surrounding states: Louisiana, Arkansas, New Mexico, and Oklahoma. There are currently no lead nonattainment or maintenance areas in any of these four states.

Texas has only one nonattainment area under the 2008 Lead National Ambient Air Quality Standard (NAAQS). On November 16, 2010, the United States Environmental Protection Agency (EPA) designated a portion of Collin County, located in Frisco, Texas, as a lead nonattainment area, effective December 31, 2010 (75 FR 71033). This nonattainment area surrounds the Exide lead battery recycling facility. An area surrounding Exide is currently a maintenance area under the 1978 Lead NAAQS. Control measures are in place under this maintenance plan. The attainment demonstration for the 2008 Lead NAAQS is due to the EPA by June 30, 2012, and will include additional control measures, if necessary, to meet the attainment deadline of December 31, 2015.

Texas has existing control strategies in place in Collin County and modeling that indicates that lead emissions from the six statewide sources that emit 1.0 tpy or more will not transport to surrounding states. Therefore, interstate transport of lead emissions in Texas has been adequately addressed.

2.2 CONTROL STRATEGY OVERVIEW

Federal Clean Air Act (FCAA) §110(a)(2)(D)(i) requires states to submit a state implementation plan (SIP) revision that contains adequate provisions to prohibit any source or other type of emissions activity within the state from emitting any air pollutants in amounts that will:

- contribute significantly to nonattainment of the NAAQS for areas in other states;
- interfere with maintenance of the NAAQS in any other state;
- interfere with measures for any other state required to meet an implementation plan related to Prevention of Significant Deterioration (PSD); or
- interfere with measures required for any other state to meet the implementation plan related to regional haze and visibility.

2.2.1 Significant Contribution to Nonattainment and Interference with Maintenance Elements

2.2.1.1 Dispersion Modeling

The October 15, 2008, final rule for the lead NAAQS included a requirement for monitors to be placed in areas with sources such as industrial facilities that emit 1.0 tpy or more of lead and in urban areas with more than 500,000 people. The EPA may waive the source-oriented monitoring requirements if the monitoring agency demonstrates that emissions from the source would not contribute to maximum air lead concentrations greater than 50% of the revised standard, or 0.075 micrograms per cubic meter (µg/m^3). On December 14, 2010, the EPA

revised the ambient monitoring requirements for measuring lead in the air. The EPA changed the emissions threshold for industrial facilities to 0.5 tpy, reduced from the previous threshold of 1.0 tpy. At the time of proposal, the Texas Commission on Environmental Quality (TCEQ) had completed modeling for the five operational facilities that emit 1.0 tpy or more and after proposal completed modeling for the two facilities that emit between 0.5 tpy and 1.0 tpy to determine the need for monitoring near those facilities.

Six facilities in Texas emit 1.0 tpy or more of lead into the air: Fort Hood, Oxbow, Red River, ASARCO, ECS, and Exide. Two facilities in Texas emit between 0.5 tpy and 1.0 tpy of lead into the air: the International Power Coleto Creek Power Station near Fannin (Coleto Creek) and San Miguel Electric Cooperative, Incorporated in Christine (San Miguel). Modeled lead emissions from Fort Hood and Oxbow result in predicted concentrations of less than 15% of the 2008 lead NAAQS. Additionally, the September 8, 2005, Defense Base Closure and Realignment Commission report pursuant to Sections 2903 and 2914 of the Defense Base Closure and Realignment Act of 1990 requires the munitions demilitarization activities at Red River to be relocated to another facility. These demilitarization activities are scheduled to cease by September 30, 2011. The TCEQ has submitted waiver requests for the source-oriented lead monitoring requirements for these three facilities since emissions from these sources are not expected to contribute to an ambient air concentration of lead greater than 50% of the NAAQS. Source-oriented lead monitors have been installed for ASARCO, Exide, and ECS. Modeling of the five[3] operational facilities indicates that lead emissions from sources at those facilities do not transport over long distances and will therefore not impact surrounding states. Fort Hood and Oxbow model results predict levels of less than 15% of the NAAQS. For Exide, ECS, and ASARCO the predicted concentrations dropped to below half the level of the NAAQS within 2 kilometers of the property line. Modeling for the two facilities that emit between 0.5 and 1.0 tpy was conducted after proposal to determine the need for monitoring. Modeled lead emissions from Coleto Creek and San Miguel each result in ambient concentrations of less than 1% of the level of the 2008 lead NAAQS, and indicate that there will be no impact on surrounding states.

The finding that lead does not transport over long distances is supported by the EPA in the December 14, 2010, "Revisions to Lead Ambient Air Monitoring Requirements." In that final rule, the EPA indicated when selecting airports for an airport monitoring study, "We selected a maximum distance to ambient air from the location of maximum emissions of 150 meters because the available information indicates that ambient lead concentrations drop off quickly with distance, and it is less likely that an exceedance of the lead NAAQS will occur at greater distances."[4] To further validate this finding, there are currently no lead nonattainment or maintenance areas in any of the four states surrounding Texas: Louisiana, Oklahoma, Arkansas, and New Mexico. Details of the dispersion modeling conducted by the TCEQ can be found in Appendix A: *Lead Modeling Analyses*.

2.2.1.2 Monitoring Sites

The TCEQ lead monitoring network currently includes 15 lead monitors in Amarillo, El Paso, Frisco, Terrell, Houston, Laredo, and Brownsville. These sites are listed in Appendix B: *TCEQ Lead Monitoring Network*. This list includes the EPA-required source-oriented monitors for lead sources that emit 1.0 tpy or more, except for those for which the TCEQ has submitted waiver requests. Changes to the lead monitoring requirements published by the EPA in the

[3] Red River was not modeled, because it will be shut down in 2011.

[4] EPA, "Revisions to Lead Ambient Air Monitoring Requirements," December 14, 2010, http://www.epa.gov/air/lead/pdfs/PbRevision-ForPublication.pdf

Federal Register on December 27, 2010, require source-oriented lead monitors for industrial sources that emit 0.5 tpy or more and operation of one lead monitor at each site that is part of the multi-pollutant site network known as the National Core Monitoring Network. After proposal of this SIP revision, modeling for the two sources that emit between 0.5 and 1.0 tpy was conducted by the TCEQ, and modeled emissions results for both facilities showed ambient concentrations of less than 1% of the level of the 2008 lead NAAQS. Waiver requests for both sources will be submitted in July 2011 as Appendix A to the *TCEQ 2011 Annual Ambient Air Monitoring Network Review*. The final rule also requires lead monitors to be installed at Stinson Municipal Airport in Bexar County and Northwest Regional Airport in Denton County for a one-year airport monitoring study. The new monitors are required to be operational no later than December 27, 2011.

2.2.2 Collin County SIP Revisions

2.2.2.1 1993 Lead SIP

On November 6, 1991, the EPA published the notice of nonattainment designation for lead in the *Federal Register* (56 FR 56694) for the portion of Collin County that essentially encompassed the plant boundaries of the Gould National Battery, Incorporated facility, later known as GNB Technologies, Incorporated (GNB), and now known as Exide Technologies, Incorporated (Exide). The effective date of the nonattainment designation was January 6, 1992. Under the federal guidelines, the Texas Air Control Board, a predecessor agency to the TCEQ, responded by submitting a site-specific SIP revision to the EPA on June 18, 1993. Under the FCAA, the Collin County nonattainment area was required to attain the 1978 lead NAAQS by January 6, 1997.

The 1993 SIP revision includes an air quality analysis through the fourth quarter of 1992, a 1992 emissions inventory, dispersion modeling that demonstrated NAAQS attainment for the area, control measures in Board Order Number 92-09(k), contingency measures in Board Order Number 93-12, and state New Source Review (NSR) provisions for lead sources. The EPA approved the SIP revision on November 29, 1994 (59 FR 60930). The approval became effective January 30, 1995.

2.2.2.2 1999 Redesignation Request and Maintenance Plan

On August 31, 1999, Texas submitted to the EPA a request that Collin County be redesignated from a nonattainment to an attainment area and a maintenance plan that meets FCAA §175A requirements. The maintenance plan contained an agreed order with GNB (now Exide), making emissions reductions that had occurred since 1993 permanent and enforceable. The permanence of these reductions was to be maintained through permit restrictions, emissions limits, and standard operating procedures for controlling emissions from process sources, process fugitive sources, and fugitive dust sources from National Emissions Standards for Hazardous Air Pollutants mandated maximum achievable control technology for secondary lead smelters.

The plan also included contingency measures that had been included in the 1993 attainment demonstration and that GNB had already implemented. For example, the company added a supplemental ventilation baghouse to its metallurgical furnace operation, enclosed areas that had previously not been enclosed and improved maintenance and operating procedures. The plan also included new contingency measures, their associated triggers, and a description of the monitoring network that would be used to determine when an exceedance of the lead NAAQS occurred for the purpose of triggering contingency measure notification during the ten-year maintenance period. The contingency measures would require GNB to (1) install a new wheel washing facility; (2) install a scale and automatic tuyere punching device at the blast furnace;

and (3) install an alternative measure that will provide, at a minimum, emissions reductions equivalent to those listed previously.

The EPA approved the redesignation request and maintenance plan on October 13, 1999, effective December 13, 1999 (64 FR 55421).

2.2.2.3 2009 Second Ten-Year Maintenance Plan

FCAA §175A requires submission of an additional SIP revision to provide for maintenance of the 1978 NAAQS for lead for the second ten-year period following redesignation of the nonattainment area to attainment. On August 26, 2009, the commission approved this maintenance plan for the Collin County area. The 2009 maintenance plan included new contingency measures set in place to promptly correct any violations of the 1978 lead NAAQS. The contingency measures would require Exide to (1) automate the scale and feed for the reverberatory furnace; (2) expand the existing water misting dust suppression system; and (3) utilize an alternative measure that will provide, at a minimum, emissions reductions equivalent to those listed previously. The contingency measures were made legally enforceable under an agreed order adopted concurrently with the maintenance plan.

2.2.2.4 Nonattainment Designation Under the 2008 Lead NAAQS

Texas has one nonattainment area under the 2008 lead NAAQS. On November 16, 2010, the EPA designated an area surrounding the Exide lead recycling facility in Collin County, Texas as a lead nonattainment area. The attainment demonstration for the 2008 lead NAAQS is due to the EPA by June 30, 2012, and will include control measures necessary to meet the attainment deadline of December 31, 2015.

2.2.3 Prevention of Significant Deterioration and Nonattainment New Source Review Elements

FCAA §110(a)(2)(D)(i)(II) contains a requirement for states to submit SIP revisions that contain adequate provisions to prohibit any source or type of emissions activity within the state from emitting air pollutants in amounts that will interfere with another state's SIP measures for preventing significant deterioration of air quality. The EPA's September 25, 2009, "Guidance on SIP Elements Required Under Sections 110(a)(1) and (2) for the 2006 24-Hour Fine Particle ($PM_{2.5}$) National Ambient Air Quality Standards" indicates that these requirements are satisfied if a state's SIP includes NSR and PSD programs.

All major sources in Texas are subject to PSD and nonattainment NSR permitting programs, implemented in 30 Texas Administrative Code (TAC) Chapter 116. Major sources are defined in 30 TAC §116.12(17) in relation to the federal classification of an area for nonattainment permitting and by reference to 40 Code of Federal Regulations §51.166 for PSD.

2.2.4 Protection of Visibility Element

Section 110(a)(2)(D)(i)(II) also contains a requirement for all states to submit SIPs that contain adequate provisions prohibiting "... any source or other type of emission activity within the state from emitting any air pollutant in amounts which will interfere with measures required to be included in the applicable implementation plan for any other state .... to protect visibility." On July 6, 2005, the EPA published regional haze regulations and guidelines for Best Available Retrofit Technology (BART) determinations in the *Federal Register*. The BART guidelines include the following list of visibility-impairing pollutants: sulfur dioxide, nitrogen oxides, particulate matter, volatile organic compounds, and ammonia. Lead is not included as a visibility-impairing pollutant and therefore is not expected to interfere with measures to protect visibility in any other state.

CHAPTER 3: FUTURE REVISIONS TO THE NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS)

Federal Clean Air Act (FCAA), §110(a)(1) requires states to submit state implementation plans within three years after the promulgation of new or revised NAAQS to meet the requirements of FCAA, §110(a)(2), including FCAA, §110(a)(2)(D)(i), relating to interstate transport. Therefore, if the NAAQS are revised in the future, the Texas Commission on Environmental Quality will need to take the adequate steps relating to the interstate transport of air pollution.