

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

**AGENDA ITEM REQUEST**

for Adoption of State Implementation Plan Revision

**AGENDA REQUESTED:** August 26, 2009

**DATE OF REQUEST:** August 7, 2009

**NAME & NUMBER OF PERSON TO CONTACT REGARDING CHANGES TO THIS REQUEST, IF NEEDED:** Kerry Howard, 239-0556

**CAPTION:** Docket No. 2009-0065-SIP. Consideration of the adoption of a revision to the state implementation plan (SIP) to address a second ten-year maintenance plan regarding the 1978 lead National Ambient Air Quality Standard (NAAQS) for Collin County.

The adopted SIP revision would implement Federal Clean Air Act requirements for a second ten-year maintenance plan for an area redesignated to attainment in 1999 for the 1978 lead NAAQS. Although a revised lead NAAQS took effect January 12, 2009, the original 1978 lead NAAQS remains in effect for Collin County until January 12, 2012. (Jim Price, Amy Browning)



Chief Engineer



Acting Division Director




Agenda Coordinator

Copy to CCC Secretary? NO X YES

# Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

**To:** Commissioners **Date:** August 7, 2009  
**Thru:** LaDonna Castañuela, Chief Clerk  
Mark R. Vickery, P.G., Executive Director  
**From:** Susana M. Hildebrand, P.E., Chief Engineer   
**Docket No.:** 2009-0065-SIP  
**Subject:** Commission Adoption of a Collin County 2<sup>nd</sup> Ten-year Lead Maintenance Plan State Implementation Plan (SIP) Revision  
Project No. 2009-0065-SIP-NR – Collin County 2<sup>nd</sup> Ten-year Lead Maintenance Plan

## Scope of the SIP revision:

Section 175A(b) of the Federal Clean Air Act (FCAA) requires submission of a SIP revision to provide for maintenance of the National Ambient Air Quality Standard (NAAQS) for lead for the second ten-year period following redesignation of the nonattainment area to attainment. This SIP revision fulfills that requirement for the portion of Collin County that was redesignated to attainment of the 1978 lead NAAQS on December 13, 1999.

The maintenance plan must contain: 1) a commitment to monitor ambient air quality to determine whether air quality meets the 1978 lead NAAQS; and 2) a requirement to implement one or more contingency measures if a quarterly average exceeds the 1978 lead NAAQS of 1.5 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) or if emissions exceed a specified value. Exide Technologies' battery recycling plant (Exide) in Collin County is the source subject to emission limitations under the lead maintenance plan. During the period of the first ten-year maintenance plan, Exide voluntarily implemented emission reduction measures that met the intended purpose of the two contingency measures listed in the 1999 maintenance plan. The 2009 maintenance plan contains new contingency measures to meet the requirements of Section 175A(d) of the FCAA.

## Reasons for the SIP revision:

The United States Environmental Protection Agency (EPA) designated a portion of Collin County as nonattainment for the 1978 lead NAAQS on November 6, 1991. The EPA approved the Collin County lead attainment demonstration SIP submission on November 29, 1994. 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 Collin County nonattainment area to attainment for the 1978 lead NAAQS on October 13, 1999, effective December 13, 1999, and approved the ten-year maintenance plan. The 1999 ten-year maintenance plan expires in December 2009.

The EPA published a new NAAQS for lead in the November 12, 2008, issue of the *Federal Register* (73 FR 67043). The effective date for the new standard was January 12, 2009; however, the EPA states that it is retaining the original 1978 lead NAAQS of 1.5  $\mu\text{g}/\text{m}^3$  until one year after the effective date for designations under the 2008 lead NAAQS of 0.15  $\mu\text{g}/\text{m}^3$ . For areas like Collin County that have lead air quality monitoring data, the EPA indicated that it plans to issue area designations that would be effective January 12,

Re: Docket No. 2009-0065-SIP

2011, two years after issuance of the 2008 standard. That schedule could keep the 1978 lead NAAQS in force in Collin County until January 2012.

**Statutory Authority:**

Texas Water Code,

- §5.102, General Powers;
- §5.103, Rules; and
- §5.105, General Policy.

Texas Health and Safety Code,

- §382.002, Policy and Purpose;
- §382.011, General Powers and Duties;
- §382.012, State Air Control Plan;
- §382.014, Emission Inventory;
- §382.016, Monitoring Requirements;
- §382.017, Rules; and
- §382.023(a), Orders.

FCAA,

- §175A, Maintenance Plans (42 U.S.C., 7505a); and
- §110, FCAA (42 U.S.C., 7410).

**Potentially controversial matters:**

None. The facility affected, Exide Technologies, has agreed to the contingency measures.

**Public comment:**

Staff appeared in Frisco at 2:00 p.m. on April 20, 2009, to conduct a public hearing on the second ten-year lead maintenance plan SIP revision for Collin County (and for an agreed order with Exide Technologies). Because no member of the public appeared to make comments on either proposal, staff did not open the public hearing.

During the comment period, which closed on April 24, 2009, the Texas Commission on Environmental Quality received two comment letters from the EPA. EPA addressed primarily the clarification of contingency measure triggers and actions and additional linguistic and technical requests.

**Significant changes from proposal:**

The following changes were made in response to comments received from the EPA:

- The commission added a provision to incorporate the EPA's requirement to implement the contingency measure(s) as expeditiously as practicable, but not later than 24 months after an exceedance is certified by the EPA.
- Section 5.7 of the SIP narrative was clarified to address comments related to the existing monitoring sites and new requirements for the monitoring network.
- A detailed explanation of how the contingency measures would reduce lead emissions was added to Section 5.6 of the SIP narrative.

**Key points in adoption schedule:**

**Proposal date:** March 11, 2009

**Anticipated adoption date:** August 26, 2009

Commissioners  
Page 3  
August 7, 2009

Re: Docket No. 2009-0065-SIP

**Agency contacts:**

Jim Price, Ph.D., Technical Specialist, 239-1803, Air Quality Division  
Amy Browning, Staff Attorney, 239-0891

**Attachments**

cc: Chief Clerk, 5 copies  
Executive Director's Office  
Susana M. Hildebrand, P.E.  
Daniel Womack  
Kevin Patteson  
Betsy Bird  
Office of General Counsel  
R. Cory Chism  
Jim Price  
Kerry Howard

REVISIONS TO THE STATE IMPLEMENTATION PLAN (SIP)  
FOR THE CONTROL OF LEAD AIR POLLUTION

2009 COLLIN COUNTY MAINTENANCE PLAN FOR LEAD



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
12100 PARK 35 CIRCLE  
AUSTIN, TEXAS 78753

PROJECT NUMBER 2008-020-SIP-NR

August 26, 2009

## EXECUTIVE SUMMARY

The United States Environmental Protection Agency (EPA) designated a portion of Collin County as a lead nonattainment area for the 1978 lead National Ambient Air Quality Standard (NAAQS) on November 6, 1991. The EPA approved the Collin County lead attainment state implementation plan (SIP) submission on November 29, 1994. On August 31, 1999, the Governor of Texas submitted to the EPA a request to redesignate the nonattainment portion of Collin County to attainment for the 1978 lead standard and to approve a ten-year maintenance plan for the area. The EPA redesignated the Collin County nonattainment area to attainment on October 13, 1999, effective December 13, 1999, and approved the ten-year maintenance plan. The 1999 ten-year maintenance plan expires in December 2009.

The EPA published a new NAAQS for lead in the November 12, 2008, issue of the *Federal Register* (73 FR 67043). The effective date for the new standard of 0.15 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) is January 12, 2009; however, the EPA states that it is retaining the 1.5  $\mu\text{g}/\text{m}^3$  NAAQS for lead until one year after the effective date for designations under the new 0.15  $\mu\text{g}/\text{m}^3$  lead NAAQS. For areas like Collin County that have lead air quality monitoring data, the EPA indicated that it plans to issue area designations by January 12, 2011, two years after issuance of the new 0.15  $\mu\text{g}/\text{m}^3$  lead standard. That schedule could keep the 1.5  $\mu\text{g}/\text{m}^3$  1978 lead NAAQS in force in Collin County until January 2012.

Section 175A(b) of the Federal Clean Air Act (FCAA) requires a state to submit a SIP revision for maintaining the primary NAAQS for a second ten-year period following expiration of the first ten-year maintenance plan. This SIP revision is to maintain the 1.5  $\mu\text{g}/\text{m}^3$  1978 NAAQS for lead calculated as a calendar-quarter average after expiration of the 1999 ten-year maintenance plan for Collin County, which expires in December 2009. Under the 1.5  $\mu\text{g}/\text{m}^3$  1978 lead NAAQS, the design value is the highest calendar-quarter average over the last two years. The highest quarterly values for 2007-2008 for the three lead monitors in Collin County are 1.19, 0.29, and 0.15  $\mu\text{g}/\text{m}^3$ . The first two monitors are located on Exide battery recycling plant property. The third monitor is approximately 633 feet north of the plant's property line and is at the edge of a neighborhood.

The maintenance plan must contain: 1) a commitment to monitor ambient air quality to determine whether air quality meets the NAAQS; and 2) a requirement to implement one or more contingency measures if a quarterly average exceeded 1.5  $\mu\text{g}/\text{m}^3$  or emissions exceed a specified value. Exide voluntarily implemented emission reduction measures that meet the intended purpose of the two contingency measures listed in the 1999 maintenance plan. The 2009 maintenance plan contains new contingency measures.

The agreed order in Appendix E makes the new contingency measures contained in this proposed SIP revision legally enforceable.

## TABLE OF CONTENTS

### SECTION VI: CONTROL STRATEGY

- E. LEAD (Revised).
  - 1. 1980 STATE IMPLEMENTATION PLAN FOR THE CONTROL OF LEAD AIR POLLUTION (No change).
    - a. Introduction (No change).
    - b. Strategy for the Attainment of the NAAQS for Lead (No change).
    - c. Rules and Regulations (No change).
    - d. Air Quality Surveillance (No change).
    - e. New Source Review (No change).
    - f. Source Surveillance (No change).
    - g. Compliance Schedules (No change).
    - h. Legal Authority (No change).
    - i. Resources (No change).
    - j. Public Hearings (No change).
  - 2. 1993 LEAD SIP REVISIONS FOR COLLIN COUNTY (No change).
    - a. General (No change).
    - b. Air Quality Analysis (No change).
    - c. Emissions Inventory (No change).
    - d. Attainment Demonstration (No change).
    - e. Control Plans (No change).
    - f. Reasonable Further Progress (No change).
    - g. Legal Authority (No change).
  - 3. 1999 Lead SIP Revisions for The Redesignation And Maintenance Plans (No change).
    - a. Collin County Redesignation and Maintenance Plan (No change).
  - 4. 2009 Collin County Maintenance Plan for Lead(New).
    - a. Collin County Lead Maintenance Plan (New).

## LIST OF FIGURES

<u>Number</u>	<u>Figure Name</u>
Figure 2-1:	The Exide Secondary Lead Smelter in Collin County and the Three Monitors for Lead
Figure 3-1:	The Collin County Lead Nonattainment Area Map from Figure 1 of the Governor's August 31, 1999, Request to Redesignate the Collin County Lead Nonattainment Area to Attainment



## LIST OF TABLES

<u>Number</u>	<u>Table Name</u>
Table 2-1:	Quarterly Average Lead Concentrations

## LIST OF APPENDICES

<u>Appendix</u>	<u>Appendix Name</u>
A	Air Quality Permit Number 1147A
B	Air Quality Permit Number 3048A
C	Federal Operating Permit O-01649
D	2006 Emissions Inventory Information on Lead Point Sources Within 50 km of the Exide Battery Recycling Plant in Collin County
E	Agreed Order Docket No. 2009-0071-MIS

## **CHAPTER 1: GENERAL BACKGROUND**

### **1.1 GENERAL BACKGROUND**

On November 6, 1991, the United States Environmental Protection Agency (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, Inc. (GNB), and now known as Exide Technologies (Exide). The effective date of the nonattainment designation was January 6, 1992. Under the federal guidelines, the Texas Air Control Board (TACB, a predecessor agency to the Texas Commission on Environmental Quality (TCEQ)) responded by submitting a site-specific state implementation plan (SIP) revision to the EPA on June 18, 1993. Under the Federal Clean Air Act (FCAA), the Collin County nonattainment area was required to attain the National Ambient Air Quality Standard (NAAQS) by January 6, 1997.

Highlights of the 1993 SIP revision include an air quality analysis current through the fourth quarter of 1992, a 1992 emissions inventory, dispersion modeling that demonstrated NAAQS attainment for the area, Board Order Number 92-09(k), contingency measures in Board Order Number 93-12, and state new source review provisions for lead sources.

The EPA approved the SIP revision on November 29, 1994 (59 FR 60930). The approval became effective January 30, 1995.

On August 31, 1999, the Governor of Texas submitted to the EPA a request that Collin County be redesignated from a nonattainment to an attainment area and a SIP revision that included a maintenance plan demonstrating how the state would continue to keep lead emissions at acceptable levels. The EPA approved the Governor's request, redesignating the Collin County area to attainment status and approving the maintenance plan on October 13, 1999, effective December 13, 1999 (64 FR 55421).

Section 175A of the Federal Clean Air Act 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. This SIP revision fulfills that requirement.

### **1.2 PUBLIC HEARING AND PUBLIC COMMENTS**

TCEQ staff were present in Frisco on April 20, 2009, at 2:00 p.m. at the City of Frisco, City Council Chambers, 6891 Main Street to hold a public hearing on the proposed second ten-year maintenance plan for Collin County and on the proposed agreed order with Exide. No member of the public wished to present comments on either the maintenance plan or the agreed order, so staff did not open the public hearing.

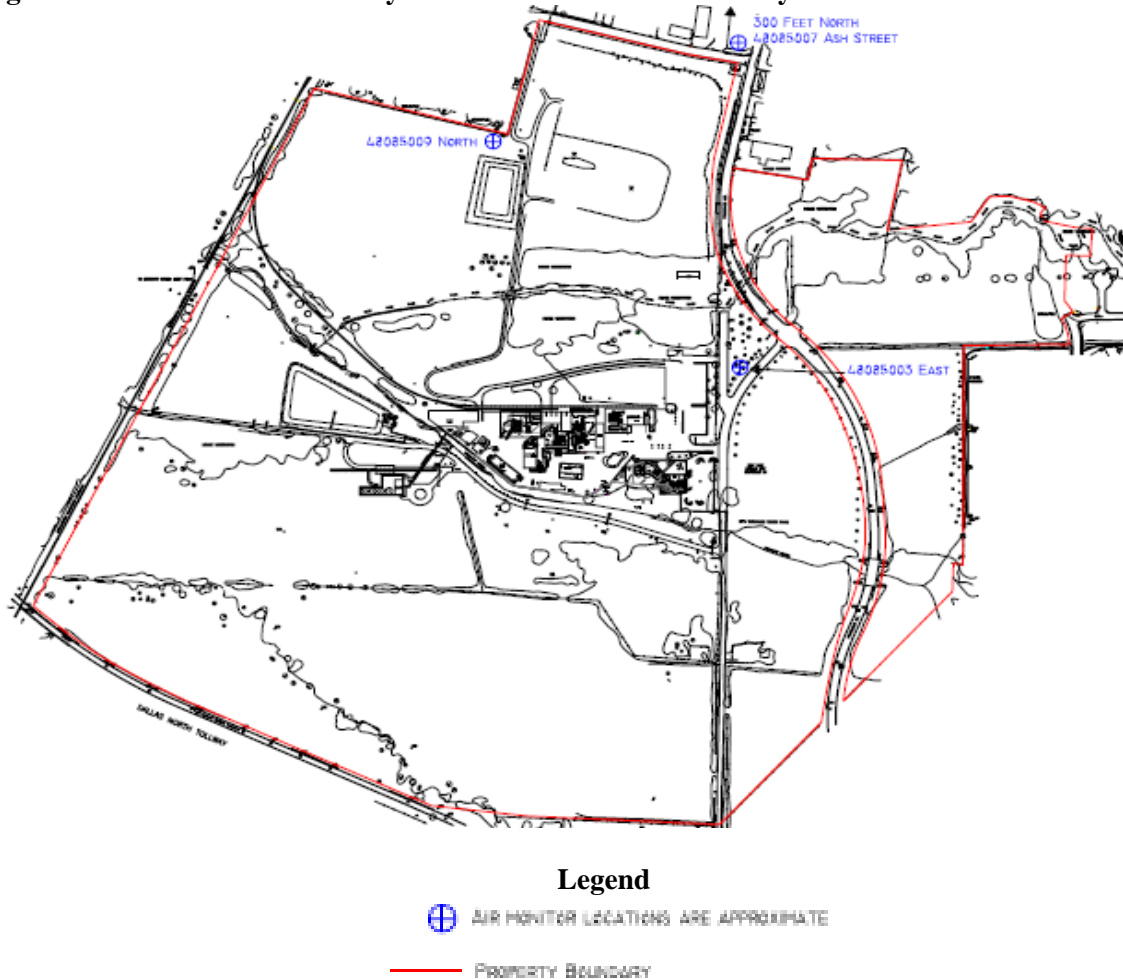
The public comment period was opened on March 16, 2009, and closed on April 24, 2009. The EPA was the only entity to submit comments during the public comment period.

## CHAPTER 2: ATTAINMENT OF THE STANDARD/AIR QUALITY ANALYSIS

### 2.1 LEAD MONITORING SITES

From 1981 until mid-1999, lead was monitored at a residential location on Hickory Street in Collin County approximately one-half mile northeast of the Exide facility. (The United States Environmental Protection Agency's Air Quality System air monitoring site identification code for this site is 480850001.) Monitoring site 480850007 at 6931 Ash Street replaced the Hickory Street site in mid-1999. During the first ten-year maintenance period (1999 – 2009), the Texas Commission on Environmental Quality has monitored lead at three monitors in Collin County: one ambient air, population-oriented, neighborhood site at 6931 Ash Street (480850007), one site on the Exide smelter property to which the public does not have access near the north property line (480850009), and a second site on the Exide smelter property west of 5<sup>th</sup> Street (480850003). Figure 2-1: *The Exide Secondary Lead Smelter in Collin County and the Three Monitors for Lead* shows the Exide property lines and the current location of monitors 480850007, 480850003, and 480850009. Figure 3-1, *The Collin County Lead Nonattainment Area Map from Figure 1 of the Governor's August 31, 1999, Request to Redesignate the Collin County Lead Nonattainment Area to Attainment* shows the maintenance area boundaries.

**Figure 2-1: The Exide Secondary Lead Smelter in Collin County and the Three Monitors for Lead**



Source of map: Exide Technologies, Frisco, Texas

## 2.2 SUMMARY OF MEASURED LEAD CONCENTRATIONS

The 1978 National Ambient Air Quality Standard (NAAQS) for lead that this plan is to maintain is a quarterly arithmetic average of 1.5 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). For an ambient air quality monitoring site to meet this standard, no calendar quarter lead average for the previous two years may exceed  $1.5 \mu\text{g}/\text{m}^3$ .

The population-oriented, neighborhood ambient air monitor at site 480850001 and the successor neighborhood ambient air monitor at site 480850007 have consistently recorded quarterly average lead levels below 20 percent of the lead NAAQS (i.e.,  $<0.30 \mu\text{g}/\text{m}^3$ ) from 1998 through 2008. The monitor at site 480850009 located on the Exide secondary lead smelter property, to which the public does not have access, has recorded ambient lead concentrations lower than  $1.20 \mu\text{g}/\text{m}^3$  from 1998 through 2008. The monitor at site 480850003, west of 5<sup>th</sup> Street, has recorded ambient air quarterly average lead levels lower than  $0.65 \mu\text{g}/\text{m}^3$  (less than half the value of the 1978 lead NAAQS) from 1998 through 2008. Table 2-1: *Quarterly Average Lead Concentrations* lists the quarterly average lead monitoring data for Collin County from 1998 through 2008.

**Table 2-1: Quarterly Average Lead Concentrations**

Calendar Year	Lead Concentration in Micrograms per Cubic Meter ( $\mu\text{g}/\text{m}^3$ )			
	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter
<b>Site 480850001, 711 Hickory, a Neighborhood Site</b>				
1998	0.03	0.07	0.12	0.02
1999	0.04	0.06	----	----
<b>Site 480850007, 6931 Ash Street, a Neighborhood Site</b>				
1998	----	----	----	----
1999	----	----	0.10	0.22
2000	0.06	0.13	0.13	0.05
2001	0.04	0.06	0.09	0.10
2002	0.08	0.04	0.10	0.11
2003	0.12	0.08	0.13	0.13
2004	0.07	0.12	0.08	0.12
2005	0.15	0.10	0.11	0.21
2006	0.10	0.12	0.14	0.07
2007	0.06	0.06	0.09	0.08
2008	0.15	0.10	0.10	0.14

**Table 2-1: Quarterly Average Lead Concentrations (continued)**

Calendar Year	Lead Concentration in Micrograms per Cubic Meter ( $\mu\text{g}/\text{m}^3$ )			
	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter
<b>Site 480850003 on Exide Property West of 5<sup>th</sup> Street near the Plant Entrance</b>				
1998	0.11	0.27	0.40	0.18
1999	0.25	0.24	0.37	0.63
2000	0.36	0.21	0.37	0.23
2001	0.34	0.15	0.24	0.24
2002	0.19	0.13	0.18	0.17
2003	0.29	0.17	0.30	0.26
2004	0.08	0.15	0.25	0.15
2005	0.24	0.27	0.24	0.35
2006	0.15	0.16	0.28	0.13
2007	0.29	0.17	0.21	0.17
2008	0.22	0.16	0.24	0.22
<b>Site 480850009 on Exide Property next to the North Property Line</b>				
1998	0.36	0.67	0.43	0.16
1999	0.26	0.35	0.45	0.82
2000	0.46	0.54	0.50	0.39
2001	0.21	0.48	0.45	0.66
2002	0.26	0.45	0.48	0.20
2003	0.42	0.48	0.55	0.66
2004	0.31	0.59	0.41	0.39
2005	0.43	0.56	0.45	0.70
2006	0.46	0.77	0.58	0.34
2007	0.63	0.44	0.54	0.46
2008	0.63	1.19	0.65	0.73

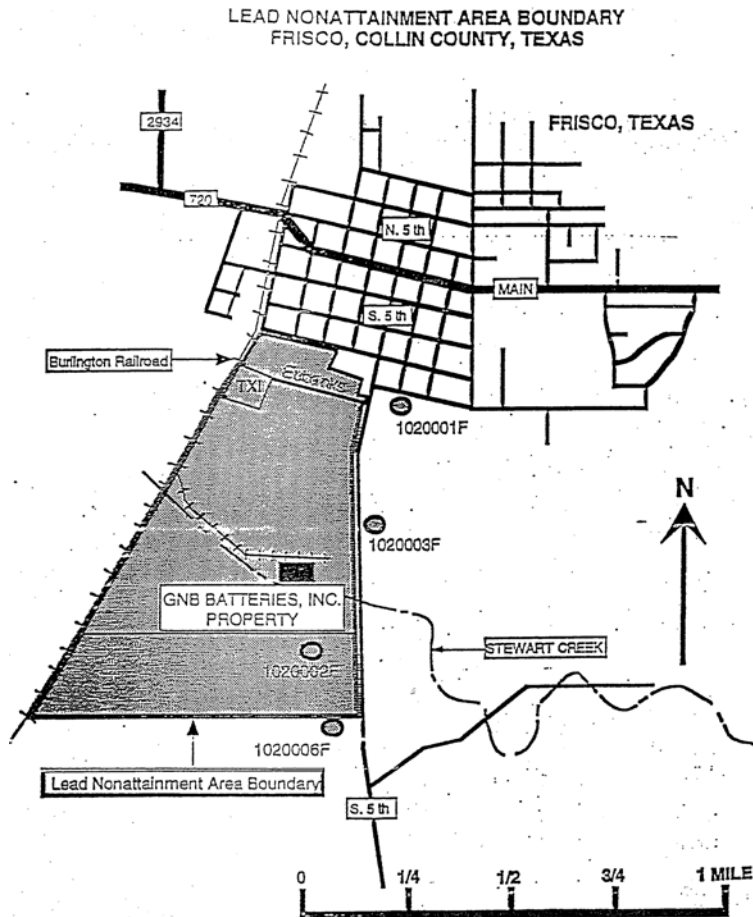
Data sources: 1999 through second quarter 2008: <http://www.epa.gov/air/data/repssst.html?st~TX~Texas>  
 Third and fourth quarter 2008: The TCEQ TAMIS database

### CHAPTER 3: FULLY APPROVED §110(k) SIP FOR THE AREA

Before an area can be redesignated to attainment, the area must have a fully approved state implementation plan (SIP) under §110(k) of the Federal Clean Air Act (FCAA) and all applicable requirements must be satisfied. The Lead SIP for Collin County was submitted to the United States Environmental Protection Agency (EPA) for approval on June 18, 1993. On November 29, 1994, the EPA published the approval of the SIP in the *Federal Register* (59 FR 60905).

On August 31, 1999, the Governor of Texas submitted to the EPA a request that Collin County be redesignated from a nonattainment to an attainment area for lead. The request also included a SIP revision with a maintenance plan demonstrating how the state would continue to keep lead emissions at acceptable levels. The EPA approved the governor's request, redesignating the Collin County area to attainment status and approving the maintenance plan on October 13, 1999, effective December 13, 1999 (64 FR 55421).

**Figure 3-1: The Collin County Lead Nonattainment Area Map from Figure 1 of the Governor's August 31, 1999, Request to Redesignate the Collin County Lead Nonattainment Area to Attainment**



## CHAPTER 4: PERMANENT AND ENFORCEABLE IMPROVEMENT IN AIR QUALITY

As part of the redesignation request, the state was required to show that the improvement in air quality was attributable to reductions that are permanent and enforceable. The 1993 Collin County Lead SIP stated:

“Notices of violation were issued to the facility following violation of the NAAQS in 1989 and 1990 with requirements for implementing additional controls. Special provisions were included in amendments to Permits R-1147A and R-5466D issued to the facility in 1990, and Board Order Number 92-09(k) was signed October 16, 1992, to assure maintenance of the lead NAAQS. The facility has completed the installation of additional emission controls and operating procedures specified in the special provisions and the Agreed Board Order with the exception of the baghouse for the raw material storage building scheduled for installation in 1993.”

The provisions contained in the 1992 agreed order were incorporated into GNB Technologies, Inc.’s, (GNB’s) permits. Additional permit amendments that occurred between 1993 and submission of the 1999 request for redesignation to attainment and first ten-year maintenance plan constitute permanent and enforceable emission reductions.

In 2000, Exide Technologies acquired the GNB plant in Collin County. The state will maintain the permanence of the earlier reductions through Agreed Order Docket No. 2009-0071-MIS, in which Exide agrees to abide by representations made by GNB to continue implementation of the requirements of paragraph 8 in Order 92-09(k) as incorporated into Permits 1147A and 3048A or to implement additional proposed measures or control technologies judged by the executive director to be similarly effective in controlling lead emissions from the plant through Exide’s Permits 1147A, 3048A, and O-01649, and through Texas Commission on Environmental Quality General Rule §101.20(2). This rule requires compliance with any applicable emissions standards for hazardous air pollutants promulgated by the United States Environmental Protection Agency (EPA) pursuant to the Federal Clean Air Act, §112. Specifically, Exide is required to comply with the emissions limits and standard operating procedures for process sources, process fugitive sources, and fugitive dust sources required by 40 Code of Federal Regulations Subpart X, the National Emission Standards for Hazardous Air Pollutants From Secondary Lead Smelters (lead maximum achievable control technology (MACT)). Permits 1145A, 3048A, and O-01649 are attached in Appendices A, B, and C, respectively.

The control measures that Exide must maintain include limitations on the types of batteries Exide may recycle at the plant. In addition, Exide must use hoods and negative pressure systems to capture lead emissions, operate air scrubbers and baghouses, and implement housekeeping practices including the cleaning of floors and driveways and the washing of wheels on vehicles leaving the property.

The following chapter, Chapter 5: *Maintenance Plan*, provides that if emissions or measured air concentrations of lead exceed specific limits, Exide must apply additional control measures to reduce its emissions further.



## CHAPTER 5: MAINTENANCE PLAN

Under §175A. Maintenance Plans of the Federal Clean Air Act (FCAA), the state must submit a revision to the state implementation plan (SIP) to provide for the maintenance of the National Ambient Air Quality Standard (NAAQS) covering the second ten-year period following approval of the area's redesignation to attainment.

### 5.1 ATTAINMENT EMISSIONS INVENTORY

As part of the program to comply with the 1978 lead NAAQS, the Texas Air Control Board (TACB) compiled emissions inventory data for the Collin County lead nonattainment area. The 1992 lead emissions inventory for Collin County consisted of a review of the lead stationary source emissions from the facilities located within the nonattainment area. The only facility that produced lead emissions within the nonattainment area was GNB Technologies, Inc., (GNB), which in 1993 emitted a total of 4.27 tons per year (tpy) of lead. The 1993 Lead SIP contained an attainment demonstration using dispersion modeling simulation of quarterly lead impacts in Collin County, Texas, and was based on 4.27 tpy of lead emissions. Off-property emissions data was derived from a 50 kilometer (km) radius search in the TACB Point Source Data Base. The modeling was performed using the latest version of Industrial Source Complex (ISC2) (ISCLT2-92273) five years of meteorological data (1985-1989) to determine the maximum quarterly average lead impact. Therefore, based on the 1993 attainment demonstration, the maximum attainment area inventory necessary to attain and maintain the 1.5 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) lead NAAQS is 4.27 tpy.

Exide's 2005 lead emissions inventory total was 0.7278 tpy. Exide's 2006 lead emissions inventory total was 0.7033 tpy, and its 2007 total was 1.9093 tpy. The next largest point source of lead within 50 km of the Exide plant had 2006 lead emissions of 0.0300 tpy, which is less than 5 percent of Exide's annual emissions. The total 2006 lead emissions from all sources (other than Exide) within 50 km of the Exide plant was 0.0602 tpy, which is less than 10 percent of Exide's emissions. Appendix D includes a table showing the 2006 inventoried lead point source emissions from sources within 50 km of the Collin County Exide battery recycling plant and a map showing the locations of these sources.

The reported annual Exide lead emissions in the emissions inventory show that Exide continues to have lead emissions under the level of the attainment emissions inventory. The lead emissions inventory totals for Exide plus all other point sources within 50 km of the Exide battery recycling plant remain a fraction of the Exide attainment inventory emission of 4.27 tons per year.

### 5.2 MAINTENANCE DEMONSTRATION

The United States Environmental Protection Agency's (EPA) 1992 guidance states, "a State can generally demonstrate maintenance of the NAAQS by either showing that future emissions of a pollutant or its precursors will not exceed the level of the attainment inventory or by modeling to show that the future mix of sources and emission rates will not cause a violation of the NAAQS."

Because the Collin County lead maintenance area is site-specific, that is, the SIP is a site-specific SIP for the Exide facility, the maintenance demonstration method will be ambient monitoring combined with Exide's existing state new source review (NSR) permits and compliance with emissions limits and standard operating procedures for process sources, process fugitive sources, and fugitive dust sources from the lead maximum achievable control technology (MACT) standard. Enforceable emissions limits established in the maximum allowable emissions rate tables (MAERTs) of Exide's NSR permits will ensure that the 1978 lead NAAQS is maintained. Any changes to Exide's MAERT emissions limits must be authorized through an amendment to Permits 1147A and/or 3048A, or a new permit issued under 30

TAC Chapter 116, supported by air dispersion modeling that demonstrates that such an increase will not cause a violation of the 1978 lead NAAQS. Exide received renewals of Permits 1147A and 3048A in 2006. Exide also holds Title V operating permit O-01649. Further, Exide's compliance with emissions limits and standard operating procedures for process sources, process fugitive sources, and fugitive dust sources from the lead MACT will help ensure lead emissions remain below the 4.27 tpy attainment year inventory.

### **5.3 1999 CONTINGENCY PLAN**

Section 175A of the FCAA requires each maintenance plan to contain contingency provisions that will promptly correct any violations of the NAAQS that occur after an area has been redesignated to attainment. In accordance with EPA guidance implementing the requirements of §175A, contingency plans are not required to be fully adopted and take effect without further action by the state but, rather, should ensure that contingency measures are expeditiously adopted when triggered. The contingency plan must also be an enforceable part of the SIP and should identify the measures to be adopted, a schedule and procedure for adoption and implementation, and a specific time constraint on action to be taken by the state. Additionally, the plan should identify specific indicators or triggers that will be used to determine when the contingency measures are to be implemented. The intent of the indicators and triggers is to allow the state to take early action to remedy an actual or potential violation of the lead NAAQS.

#### **5.3.1 Contingency Measures in the 1999 Plan**

Because the contingency measures contained in Agreed Order 93-12 had already been implemented before submission of the first ten-year maintenance plan, the 1999 first ten-year maintenance SIP revision included two new contingency measures. They were:

“A new wheel washing facility will be installed to reduce fugitive emissions by reducing tracking in the yard area. The emissions reductions estimated to occur from implementation of this measure are 27 pounds of lead per year.”

“A scale and automatic tuyere punching device will be installed at the blast furnace to increase the feed and flux control and reduce fugitive lead emissions around the blast furnace. The emissions reductions estimated to occur from implementation of this measure are expected to be in excess of 30 pounds of lead per year.”

In 2004, Exide installed the current version of a manual wheel wash station at the west entrance/exit of the raw materials storage building. All vehicles exiting this door must have the wheels washed at this station. All trucks offloading inside the facility must have the wheels washed in the truck wash located at the facility's waste water treatment location. Additionally, the company has added a regenerative air vacuum sweeper with wash water brushes, which the company uses to sweep the yard.

The company has added a “bucket” scale to the front-end loader used to charge the blast furnace. Furnace operators use this scale to measure and control the quantity of flux and feed charged. The company evaluated an automated tuyere “punching” device and found it not to be viable because it was unreliable and slow. In its place, Exide has installed a “spring-loaded” sliding tuyere cover plate on each tuyere to replace covers that had to be unbolted and rebolted to each tuyere for each punching operation. The manual system is more effective than the automated system for reducing the time that the tuyeres are open. The decreased time the tuyeres are open produces a concomitant reduction in fugitive emissions.

#### **5.4 INDICATORS FOR TRIGGERING CONTINGENCY MEASURE IMPLEMENTATION**

For the purposes of the second ten-year Collin County maintenance plan SIP revision, there will be two trigger levels to determine if contingency measures need to be implemented. The ambient air quarterly lead averages measured near the facility will serve as the primary indicator. A second indicator will be Exide's annual emissions inventory submission to the TCEQ. The quarterly measured averages will be taken from the TCEQ ambient air monitoring database. Estimated emissions will be determined using Exide's annual emissions inventory submittal.

#### **5.5 TRIGGER LEVELS**

Contingency measure implementation will be triggered by either of the following conditions. Each is a conservative approach to ensure any monitored violation is addressed:

**5.5.1** The  $1.5 \mu\text{g}/\text{m}^3$  quarterly arithmetic average 1978 lead NAAQS is exceeded at an ambient air quality monitoring site impacted by lead emissions from the Exide facility.

**5.5.2** The company's annual emissions inventory for lead exceeds the 4.27 tons per year attainment inventory, unless such an increase has been authorized through: (a) an amendment to Permits 1147A and/or 3048A and/or a new permit has been issued pursuant to 30 TAC Chapter 116; and (b) air dispersion modeling demonstrates that such an increase will not cause an exceedance of the lead NAAQS.

#### **5.6 CONTINGENCY MEASURES FOR THE 2009 MAINTENANCE PLAN**

If, at any time during the period of the maintenance plan, trigger level conditions 5.5.1 or 5.5.2 occur, the following contingency measures will be evaluated and implemented as appropriate:

**5.6.1** Automation of the scale and feed for the reverberatory furnace. Automation of the scale and feed to the reverberatory furnace will provide a consistent feed rate to the furnace. A consistent feed rate will eliminate slug feeding, which can cause the furnace to shift from negative to positive pressure and then back again to negative pressure. The negative pressure is necessary to maintain continuous flow of furnace emissions to the emission controls. The furnace's shifting to positive pressure can cause an upset condition that produces fugitive emissions from the furnace and the plant.

**5.6.2** Installation of water misting dust suppression system beyond the system already required by permit 1147A. Use of a water system causes more particles containing lead to fall to the floor, from which they are collected during routine sweeping and vacuuming operations. Water mist dust suppression has been implemented in some areas of the plant, and it has been shown to reduce lead concentrations inside the plant based on OSHA personnel monitor sampling. The reduction in lead concentrations inside the plant reduces the concentration of lead in air that escapes the plant's negative pressure air capture and bag house systems and become fugitive emissions. Installing and operating additional misting systems within the plant would further reduce fugitive emissions from the plant as well as reducing the lead particle loading going to the negative pressure and bag house system, thereby also reducing stack emissions from that bag house.

**5.6.3** An alternative measure(s) proposed by Exide. The emissions reductions from the alternative measure(s) shall be, at a minimum, equivalent to those in 5.6.1 or 5.6.2. Any alternative contingency measure(s) proposed by Exide must be approved by the executive director of the TCEQ prior to implementation.

**5.6.4** Once a contingency indicator has been triggered, the executive director of the TCEQ shall notify Exide within 30 days of the discovery of the condition that the contingency measures listed must be evaluated and that at least one of the measures must be implemented. Within 60 days of such notification,

Exide will inform the TCEQ which specified or alternative contingency measure(s) will be implemented. Exide will complete the implementation of the selected contingency measure within 180 days of Exide's notification to the executive director of the TCEQ or within 180 days of the executive director's approval of an equivalent alternative measure. Exide must complete implementation of the selected contingency measure as expeditiously as practicable but not later than 24 months following the date that the EPA certifies the monitoring data that contains an exceedance of the 1978 lead NAAQS.

## **5.7 MONITORING NETWORK**

The current monitoring network consists of three ambient air monitors, one off-site ambient air receptor monitor and two monitors on the Exide lead smelter property. The TCEQ will continue to operate these three monitors through the period of the 1999 ten-year maintenance plan, which ends December 13, 2009.

Since Exide has installed a physical barrier to prevent public access to the Exide property to the west of 5<sup>th</sup> Street/Parkwood, air monitoring site 480850003 is no longer considered an ambient air monitor. Monitor site 480850009 is also not an ambient air monitor for the same reason. Monitor site 480850007 at 6931 Ash Street is an ambient air monitor. The TCEQ will continue operating this monitor to determine whether ambient air lead concentrations over the 1978 lead NAAQS trigger contingency measure requirements in this second ten-year maintenance plan and to monitor for attainment/nonattainment of the 2008 lead NAAQS.

The November 12, 2008, federal rule establishing the 2008 lead NAAQS (73 FR 67029) requires a maximum impact ambient air lead monitor to determine attainment status of the 2008 lead NAAQS. The commission has negotiated a lead monitoring network plan for Collin County with the EPA to continue monitoring at the Ash Street monitoring site No. 480850007 and to establish and operate a new source-oriented, maximum impact lead monitoring site. The TCEQ will work with the EPA to determine a mutually acceptable location for the lead monitoring site to meet the maximum impact monitor requirement, and the TCEQ will move an existing monitor from Exide property to this new site. In addition to site 480850007, this new lead monitoring site will also provide lead air quality data that would trigger the contingency measure implementation requirements of this second ten-year maintenance plan if the quarterly lead average at the site exceeded the 1978 lead NAAQS.

If Exide fails to maintain the physical barrier to prevent public access to the Exide property to the west of 5<sup>th</sup> Street/Parkwood, the TCEQ will work with the EPA to determine whether changes in the monitoring network are necessary.

## **5.8 VERIFICATION OF CONTINUED ATTAINMENT**

The State of Texas has the legal authority necessary to implement the control strategy for lead under the following provisions of Texas Water Code (TWC): §5.102, General Powers, §5.103, Rules, and §5.105, General Policy, and under the following provisions of Texas Clean Air Act: §382.002 Policy and Purpose, §382.011 General Powers and Duties, §382.012, State Air Control Plan, §382.014 Emission Inventory, §382.023 Orders, §382.024 Factors in Issuing Orders and Determinations, and §382.051 Permitting Authority of Commission; Rules.

## **CHAPTER 6: AGREED ORDER**

To make the contingency measures in the second ten-year maintenance plan legally enforceable, the commission has adopted Agreed Order Docket No. 2009-0071-MIS, which is attached as Appendix E, as a part of the state implementation plan for lead.

**Response to Comments Received Regarding the  
2009 Collin County Maintenance Plan for Lead and  
An Agreed Order with Exide Technologies, Inc.  
Proposed March 11, 2009  
Adopted August 26, 2009**

Commission staff appeared in Frisco at 2:00 p.m. on April 20, 2009, to conduct a public hearing on the proposals. Since no member of the public appeared to make comments on either proposal, the commission did not open the public hearing. During the comment period, which closed on April 24, 2009, the commission received two comment letters, both from the United States Environmental Protection Agency (EPA).

***RESPONSE TO COMMENTS***

The EPA suggests quantification or further explanation of the expected benefits that would result from implementing each contingency measure listed in Section 5.6 of the plan. The EPA states that it would like to ensure that the listed measures, if implemented, contain emission reductions sufficient to result quickly in a positive change in air quality.

**The commission has provided further explanation of the expected benefits that would result from implementing each contingency measure listed in Section 5.6 of the plan.**

**The first of the two listed contingency measures is “5.6.1 Automation of the scale and feed for the reverberatory furnace.” Automation of the scale and feed to the reverberatory furnace will provide a consistent feed rate to the furnace. A consistent feed rate will eliminate slug feeding, which can cause the furnace to shift from negative to positive pressure and then back again to negative pressure. The negative pressure is necessary to maintain continuous flow of furnace emissions to the emission controls. The furnace’s shifting to positive pressure can cause an upset condition that produces fugitive emissions from the furnace and the plant.**

**The second of two listed contingency measures is “5.6.2 Installation of water misting dust suppression system beyond the system already required by permit 1147A.” Use of a water system causes more particles containing lead to fall to the floor, from which they are collected during routine sweeping and vacuuming operations. Water mist dust suppression has been implemented in some areas of the plant, and it has been shown to reduce lead concentrations inside the plant based on OSHA personnel monitor sampling. The reduction in lead concentrations inside the plant reduces the concentration of lead in air that escapes the plant’s negative pressure air capture and bag house systems and become fugitive emissions. Installing and operating additional misting systems within the plant would further reduce fugitive emissions from the plant as well as reducing the lead particle loading going to the negative pressure and bag house system, thereby also reducing stack emissions from that bag house.**

The EPA states that Sub-Section 5.5.1 should be reworded to state that an exceedance of the 1978 National Ambient Air Quality Standard (NAAQS) for lead at any air monitor impacted by lead emissions from the Exide Technologies, Inc. (Exide) facility triggers the contingency measure requirement.

**The commission agrees that an exceedance of the 1978 lead NAAQS at any monitor impacted by emissions from the Exide facility should trigger the contingency measure requirement. The commission has included language in Sub-Section 5.5.1 of the plan to**

**make it clear that any such exceedance will trigger the contingency measure requirement in the plan.**

The EPA comments that the public has access to the area surrounding one of the lead monitors on the Exide plant property, so it should be considered an ambient air quality monitor. The Air Quality System (AQS) site ID for this monitor is 48-085-0003.

**The commission agrees that Exide has not historically had a fence or other physical barrier in place to restrict public access to the facility area near this monitor.**

**Exide has informed the commission that it recently installed a physical barrier.**

The EPA comments that the Air Quality System has been revised to provide lead quarterly average data to four decimal places ( $x.xxxx \mu\text{g}/\text{m}^3$ ). EPA recommends updating the lead quarterly average data in Table 2.1 of the maintenance plan to display more decimal places.

**The commission disagrees with the EPA's recommendation. The 2008 lead standard requires individual measurements to be reported to three decimal places (73 FR 67055, November 12, 2008) and three-month averages to be rounded to two decimal places (73 FR 67057) for comparison to the lead standard. The purpose of the maintenance plan table of quarterly averages is to show that the averages at the three monitors did not exceed the  $1.5 \mu\text{g}/\text{m}^3$  standard. The commission has also reviewed the quarterly average listings in the EPA's "AirData Web site," which provides the public access to annual summaries of data in the EPA's AQS database. The AirData summaries report the quarterly lead averages to two decimal places.**

The EPA states that the agreed order with Exide must be submitted to the EPA for approval as part of the SIP revision for this lead maintenance plan because the maintenance demonstration relies on the agreed order.

**The commission agrees with the EPA's comment. The agreed order with Exide is being submitted to the EPA as part of the Collin County lead maintenance plan.**

The EPA comments that the plan must be clear that a violation triggers the contingency measures requirement and a timeline for implementing measures is needed.

**The commission agrees with the comment. The commission has clarified Sections 5.4, 5.5, and 5.6 to address potential violations of the 1978 NAAQS and the timing to implement any contingency measure.**

The EPA comments that the plan must ensure that all tasks required by the contingency plan will be adopted and implemented as expeditiously as practicable, but not later than 24 months following the date that the EPA certifies the monitoring data that contains an exceedance of the 1978 lead NAAQS. The EPA interprets the proposed second ten-year maintenance plan as not requiring implementation by a certain amount of time because the time for the executive director to approve an alternate contingency measure is not specified.

**The commission has added a provision to incorporate the EPA's requirement to implement the contingency as expeditiously as practicable, but not later than 24 months following the date that the EPA certifies the monitoring data that contains an exceedance of the 1978 lead NAAQS.**

The EPA comments that the lead monitoring network commitment as stated in the proposed second ten-year maintenance plan is not acceptable.

**The commission has negotiated with the EPA a lead monitoring network plan for Collin County to continue monitoring at the Ash Street monitoring site No. 480450007 and to establish and operate a new source-oriented, maximum impact lead monitoring site required by federal monitoring rules for the 2008 lead NAAQS. The adopted lead maintenance plan clarifies the commitment to operate monitors in accordance with the latest monitoring plan.**