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SIP Revisions: Dallas-Fort Worth, 1997 Eight-Hour Ozone Moderate Nonattainment Area, Attainment Demonstration and Reasonable Further Progress Demonstration, May 23, 2007

On May 23, 2007, the commission adopted attainment demonstration (AD) and reasonable further progress (RFP) state implementation plan (SIP) revisions for the Dallas-Fort Worth (DFW) 1997 eight-hour ozone nonattainment area. The DFW AD SIP revision was subsequently revised in November 2008, December 2008, and March 2010.

Summary of the SIP Revisions

On May 23, 2007, the commission adopted the DFW AD SIP Revision and the DFW RFP SIP Revision for the 1997 Eight-Hour Ozone Standard. These SIP revisions were required by the U.S. Environmental Protection Agency (EPA) to demonstrate that the DFW moderate nonattainment area would meet the 1997 eight-hour ozone standard by the June 15, 2010, attainment deadline.

The DFW AD SIP Revision was subsequently revised in November 2008 (Contingency Measures Plan SIP Revision), December 2008 (Discrete Emissions Reduction Credits (DERC) Program SIP Revision), and again in March 2010 (Reasonably Available Control Technology (RACT), Rule, Contingency SIP Revision).

The several SIP revisions and supplemental documentation that make up the DFW AD and RFP are listed and further described below.

Elements of the Attainment Demonstration

DFW AD SIP Revision for the 1997 Eight-Hour Ozone Standard

Adoption Date: 05/23/2007

Proposal Date: 12/13/2006

EPA Final Conditional Approval Date: 01/14/2009 (74 FR 1903)

The [DFW AD SIP Revision](#) demonstrated attainment of the 1997 eight-hour ozone standard using photochemical modeling, including reductions from associated 30 Texas Administrative Code (TAC) 117 rules and voluntary mobile emission reductions, and relying on weight of evidence, including corroborative analysis and additional control measures not explicitly accounted for in the photochemical modeling.

On March 21, 2008, the EPA made an adequacy determination for the 2009 Motor Vehicle Emissions Budget (MVEB) contained in the AD ([73 FR 15152](#)). On January 14, 2009, the EPA published final conditional approval of components of the AD, including the May 2007 DFW AD SIP Revision, the April 23, 2008, supplement, and the November 2008 DFW AD SIP Revision (Contingency Measures Plan). The 2009 attainment MVEBs, the Reasonably Available Control Measures (RACM) demonstration, and the failure-to-attain contingency plan were conditionally



approved. The local Voluntary Mobile Source Emission Reduction Plan (VMEP) and Transportation Control Measures (TCMs) were fully approved along with the volatile organic compounds (VOC) RACT demonstrations for the one-hour and 1997 eight-hour ozone standards. The EPA's approval notice also included a statement that all control measures and reductions relied upon to demonstrate attainment have been approved by the EPA.

Supplement to the DFW AD SIP Revision for the 1997 Eight-Hour Ozone Standard

Letter Dated: 04/23/2008

EPA Final Conditional Approval Date: 01/14/2009 ([74 FR 1903](#))

On March 7, 2008, the EPA requested specific clarifications and supplemental information regarding the AD SIP revision. The TCEQ provided the requested information to the EPA on April 23, 2008. On January 14, 2009, the EPA published final conditional approval of the AD SIP Revision, including the [April 2008 supplemental information](#).

DFW AD SIP Revision for the 1997 Eight-Hour Ozone Standard (Contingency Measures Plan)

Adoption Date: 11/05/2008

Proposal Date: 08/06/2008

EPA Final Conditional Approval Date: 01/14/2009 ([74 FR 1903](#))

On July 14, 2008, the EPA proposed conditional approval ([73 FR 40203](#)) of the May 2007 DFW AD SIP Revision, providing that final conditional approval was contingent upon the State of Texas adopting and submitting to the EPA an approvable contingency plan SIP revision for the DFW area. The [Contingency Plan SIP Revision](#) was adopted by the commission on November 5, 2008, and submitted to the EPA on November 15, 2008. The Contingency Plan SIP revision identifies measures to satisfy the EPA's 3% reduction contingency requirement for 2010 for the DFW area, to apply in the event that the DFW area fails to meet the 1997 eight-hour ozone standard by the attainment deadline. On January 14, 2009, the EPA published final conditional approval of this SIP revision.

DFW AD SIP Revision for the 1997 Eight-Hour Ozone Standard (DERC Program)

Adoption Date: 12/10/2008

Proposal Date: 08/06/2008

The condition stipulated by the EPA for final approval of the May 2007 DFW AD SIP Revision was that the TCEQ adopt and submit rule and SIP revisions to implement an enforceable mechanism to limit the use of DERCs in the DFW area by March 1, 2009. The [DERC Program SIP Revision](#) incorporated rulemaking that would amend 30 TAC Chapter 101, Subchapter H, Division 4, Discrete Emission Credit Banking and Trading rules to set a limit on DERC use for the DFW area.

DFW RACT Update, 30 TAC Chapter 117 Rule Revision Noninterference Demonstration, and Modified Failure-to-Attain Contingency Plan SIP Revision

Adoption Date: 03/10/2010

Proposal Date: 09/23/2009

On March 10, 2010, the commission adopted the DFW RACT Update, 30 TAC Chapter 117 Rule Revision Noninterference Demonstration, and Modified Failure-to-Attain Contingency Plan SIP Revision. The [RACT Update SIP Revision](#) incorporates several actions adopted by the TCEQ, and supplements the 1997 eight-hour ozone AD by demonstrating that the revised Chapter 117 rule does not interfere with the DFW AD SIP Revision.



On May 21, 2010, a notice was published in the *Texas Register* ([35 TexReg 4268](#)) regarding the implementation of contingency measures in 30 TAC Chapter 115, Control of Air Pollution from Volatile Organic Compounds, for the DFW 1997 eight-hour ozone nonattainment area.

Elements of the Reasonable Further Progress Demonstration

DFW RFP SIP Revision for the 1997 Eight-Hour Ozone Standard

Adoption Date: 05/23/2007

Proposal Date: 12/13/2006

EPA Approval Date: 10/07/2008 ([73 FR 58475](#))

The [DFW RFP SIP revision](#) demonstrated that the RFP 15% reduction requirement would be met for the analysis period of 2002 through 2008. Demonstration of RFP is based on the guidelines set forth in the EPA Phase II Eight-Hour Ozone Implementation Rule (published in the November 29, 2005, *Federal Register*, Vol. 70, No. 228) (40 CFR §51.910) specifying how the eight-hour ozone nonattainment areas must demonstrate RFP. On October 7, 2008, the EPA approved the RFP demonstration, the updated MVEBs, and the revised 2002 base year emissions inventory submitted in the RFP SIP Revision.

SIP Narratives and Appendices

Files linked from this page are in Portable Document Format ([PDF](#)).

Adopted DFW AD SIP Revision for the 1997 Eight-Hour Ozone Standard (2006-013-SIP-NR)

- [Complete DFW AD SIP Revision, including Response to Comments](#)
- Appendices
 - [Appendix A: Emissions Inventories Used in Episode Modeling](#)
 - [Appendix B: Emissions Inventory Development](#)
 - [Appendix C: Spatial Plots of the daily maximum eight-hour ozone in the DFW 4 km domain using CAMx 4.03 \(left\), CAMx 4.31 \(center\), and CAMx 4.40 beta \(right\) for each episode day](#)
 - [Appendix D: DFW Future Case \(2009\) Sensitivity Tests](#)
 - [Appendix E: 1999 Base Case/Baseline Run Log](#)
 - [Appendix F: Transportation Control Measures for the DFW Eight-Hour SIP](#)
 - [Appendix G: DFW Nonattainment Area Ozone Conceptual Model](#)
 - [Appendix H: NCTCOG Final Submittal of On-Road and Non-Road Emissions Benefit](#)
 - [Appendix I: Assessment of NO_x Emissions Reduction Strategies for Cement Kilns—Ellis County, Final Report \(July 14, 2006\)](#)
 - [Appendix J: Reasonably Available Control Technology Analysis](#)
 - [Appendix K: Information Sources Used in the Emission Control Strategy Development Process](#)
 - [Appendix L: Emission Reduction Control Strategies, Environ Final Report](#)
 - [Appendix M: RACM Analysis of Area and Point Source Emission Control Measures](#)



Supplement to the DFW AD SIP Revision for the 1997 Eight-Hour Ozone Standard

- Letter to the EPA dated April 23, 2008

Adopted DFW AD SIP Revision for the 1997 Eight-Hour Ozone Standard (Contingency Measures Plan) (2008-016A-SIP-NR)

- Complete DFW AD SIP Revision (Contingency Measures Plan)
- Executive Summary Memo

Adopted DFW AD SIP Revision for the 1997 Eight-Hour Ozone Standard (DERC Program) (2008-016-SIP-NR)

- Complete DFW AD SIP Revision (DERC Program)
- Executive Summary Memo

Adopted DFW RACT Update, 30 TAC Chapter 117 Rule Revision Noninterference Demonstration, and Modified Failure-To-Attain Contingency Plan SIP Revision (2009-021-SIP-NR)

- Complete DFW RACT, Rule, and Contingency SIP Revision, including Appendices
- Executive Summary Memo

Adopted DFW RFP SIP Revision for the 1997 Eight-Hour Ozone Standard (2006-031-SIP-NR)

- Complete DFW RFP SIP, including Response to Comments
- Appendices
 - Appendix 1: DFW RFP Demonstration Calculations Spreadsheet Four Core Counties (QuattroPro Spreadsheet)
 - Appendix 2: DFW RFP Demonstration Calculations spreadsheet Five New Counties (QuattroPro Spreadsheet)
 - Appendix 3: Point Source Inventory Projection Methodology
 - Appendix 4: Development of DFW RFP On-Road Mobile Source Emissions Inventories (Zip file)
 - Appendix 5: Rate of Further Progress Analysis for Non-Road Sources

Associated Rules

Development of the Control Strategy and Related Rules

The TCEQ considered a wide variety of [point](#), [area](#), [non-road mobile](#), and [on-road mobile source](#) control strategies to implement in order to attain the 1997 eight-hour ozone standard in the DFW area. The following rule concepts were developed to support the DFW AD SIP Revision:

- RACT update for VOC
- East Texas combustion sources
- DFW minor sources
- DFW cement kilns
- DFW Nitrogen Oxides (NO_x) Major Sources and Utilities



TCEQ staff solicited informal stakeholder comments on the proposed NO_x emission specifications and control technologies during June 20–21, 2006, stakeholder meetings. Informal comments received by September 15, 2006, were reviewed and summarized in the [Response to Stakeholder Comments](#).

The TCEQ also worked in conjunction with the North Central Texas Council of Governments to develop an additional control strategy catalog for the DFW area.

VOC Control Measures

- The VOC rules for Stage I vapor recovery and for surface coating processes were adopted by the commission in April 2005.
- The remaining applicable VOC rules to meet RACT requirements were adopted on November 15, 2006.
- Revisions to 30 TAC Chapter 115 for the control of VOC emissions from offset lithographic printing sources ([Rule Project No. 2008-019-115-EN](#)) were adopted March 10, 2010.

NO_x Control Measures

- The 30 TAC Chapter 117 rules developed to support the DFW AD SIP revision ([Rule Project No. 2006-034-117EN](#)) were adopted on May 23, 2007. The rules reduce NO_x emissions from major industrial, commercial, and institutional sources, minor sources, electric-generating facilities, cement kilns, and East Texas combustion sources.
- Revisions to 30 TAC Chapter 101 ([Rule Project No. 2008-011-101-EN](#)) adopted December 10, 2008, were also developed in support of the AD. These rules, applicable to the DERC Banking and Trading Program, provide an enforceable mechanism for the state to apportion and limit the use of DERCs in the DFW area.