

Texas Commission on Environmental Quality

Interoffice Memorandum

To: Commissioners

Date: November 18, 2011

Thru: Bridget Bohac, Chief Clerk
Mark R. Vickery, P.G., Executive Director

From: Susana M. Hildebrand, P.E.
Chief Engineer



Docket No.: 2011-0159-SIP

Subject: Commission Approval for the Adoption of the Dallas-Fort Worth (DFW) Reasonable Further Progress (RFP) State Implementation Plan (SIP) Revision for the 1997 Eight-Hour Ozone Standard
SIP Project No. 2010-023-SIP-NR

Background and reason(s) for the SIP revision:

The Federal Clean Air Act (FCAA) requires states to submit plans that demonstrate progress in reducing emissions for areas that are not attaining the National Ambient Air Quality Standards (NAAQS). On April 30, 2004, the nine-county DFW nonattainment area, which consists of Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant Counties, was designated a moderate nonattainment area for the 1997 eight-hour ozone standard, with a June 15, 2010, attainment deadline. The United States Environmental Protection Agency (EPA) published notice in the *Federal Register* on December 20, 2010, (75 FR 79302) that the area failed to attain the 1997 eight-hour ozone standard by the June 2010 deadline. The notice reclassified the area from a moderate nonattainment area to a serious nonattainment area with an attainment deadline of June 15, 2013. As a result of the reclassification, the commission is required to submit an RFP plan demonstrating that the DFW nonattainment area is continuing to reduce emissions of ozone precursors consistent with the requirements for areas classified as serious nonattainment.

Scope of the SIP revision:

The EPA requires a demonstration of at least 3% per year combined volatile organic compounds (VOC) and nitrogen oxides (NO_x) emissions reductions from the base year to attainment of the standard. The EPA also requires demonstration of an additional 3% reduction in ozone precursors for contingency. This SIP revision provides RFP and contingency demonstrations for the 2011 and 2012 milestone years, updated 2002 emissions inventories for point, area, non-road mobile, and on-road mobile sources, and updated RFP motor vehicle emissions budgets (MVEBs) for each milestone year.

A.) Summary of what the SIP revision will do:

This SIP revision provides a demonstration of the DFW area's continued progress in reducing ozone precursor emissions (NO_x and VOC) in the DFW nonattainment area as well as contingency in the event that the area fails to meet an incremental emissions reduction requirement. This SIP revision provides updated 2002 emissions inventories for point, area, non-road mobile, and on-road mobile sources and updated RFP MVEBs for the 2011 and 2012 milestone years.

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This SIP revision demonstrates FCAA-required RFP and contingency for the 2011 and 2012 milestone years. The RFP demonstrations include reported emissions reductions from the Texas Emissions Reduction Plan (TERP) between 2008 and 2010 as part of the controlled RFP inventory.

B.) Scope required by federal regulations or state statutes:

Since the EPA reclassified the DFW area to a serious nonattainment area, thereby extending the area's attainment date by three years, the Texas Commission on Environmental Quality (TCEQ) must demonstrate RFP for a greater period of time than was previously required and set additional MVEBs for the 2011 and 2012 milestone years.

C.) Additional staff recommendations that are not required by federal rule or state statute:

The proposed DFW RFP SIP revision included on-road mobile source emissions inventories and an RFP analysis based on the MOBILE6.2 model along with preliminary on-road mobile source emissions inventories and a preliminary RFP demonstration based on the EPA's Motor Vehicle Emission Simulator (MOVES) model. The commission solicited comment on which model should be used to develop the on-road mobile source emissions inventories in the adopted version of this SIP revision.

In July 2011, the North Central Texas Council of Governments (NCTCOG) completed final MOVES2010a-based on-road mobile emissions inventories and submitted the data to the TCEQ. Due to positive comments received from the EPA, NCTCOG, the North Texas Clean Air Steering Committee (NTCASC), and the Regional Transportation Council of the NCTCOG concerning the use of MOVES-based on-road mobile emissions inventories, staff recommends that the final MOVES2010a-based emissions inventories be used for all RFP demonstrations, contingencies, and MVEBs adopted as part of the DFW RFP SIP revision.

Statutory authority:

The authority to propose and adopt SIP revisions is derived from the following sections of the Texas Health and Safety Code, Chapter 382, Texas Clean Air Act (TCAA), §382.002, which provides that the policy and purpose of the TCAA is to safeguard the state's air resources from pollution; §382.011, which authorizes the commission to control the quality of the state's air; and §382.012, which authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air. This SIP revision is required by FCAA, §110(a)(1) and implementing rules in 40 Code of Federal Regulations Part 51.

Under the 1997 eight-hour ozone standard, the DFW area is required to meet the mandates of the FCAA, §172(c)(2) and §182(c)(2)(B) and RFP requirements established under Phase II of the EPA's implementation rule for the 1997 eight-hour ozone NAAQS (70 FR 71615).

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Effect on the:

A.) Regulated community:

This SIP revision demonstrates that the DFW area meets all reasonable further progress requirements through existing regulations intended to reduce ozone precursor emissions; therefore, this plan calls for no additional impact on the regulated community. This RFP SIP revision sets MVEBs for 2011 and 2012. Local transportation planning organizations use the MVEB to demonstrate that projected emissions from transportation plans, programs, and projects do not exceed the budget, as required by the federal transportation conformity rule.

B.) Public:

The general public in the DFW and surrounding areas will benefit from reduced ground-level ozone concentrations due to reduced emissions of ozone precursors documented in this RFP SIP revision.

C.) Agency programs:

This RFP SIP revision has no new impact on agency programs.

Stakeholder meetings:

A stakeholder meeting for this RFP SIP revision and the DFW Attainment Demonstration SIP Revision for the 1997 Eight-Hour Ozone Nonattainment Area (Project Number 2010-022-SIP-NR) was held on June 24, 2010, from 7:00 to 9:00 p.m. at the City of Arlington Municipal Building. Stakeholders expressed their concerns about area air quality as it relates to human and environmental health, industrial emissions (particularly Barnett Shale natural gas drilling emissions), and proposed control strategies. Stakeholders did not discuss specific methods used in this RFP SIP revision.

Public comment:

Public hearings for the proposed RFP SIP revision were held on July 14, 2011, at 10:00 a.m. and 6:30 p.m., at the Arlington City Council Chambers in Arlington, Texas; and on July 22, 2011, at 2:00 p.m., at the TCEQ headquarters in Austin, Texas. Question and answer sessions were held 30 minutes prior to the hearings. There were four oral comments received concerning the DFW RFP SIP revision.

The public comment period opened on June 24, 2011, and closed on August 8, 2011. Written comments were accepted via mail, fax, and through the eComments system. There were 357 written comments received. The comments received covered topics such as the NO_x substitution methodology; the use of TERP reductions; proposed MVEBs; the use of the MOVES model for adoption; and public availability of emissions inventory information.

Many commenters, including the EPA, disagreed with the method used to substitute RFP surplus NO_x emissions reductions for RFP VOC emissions reduction shortfalls, and the EPA suggested revising the NO_x substitution methodology for adoption. The EPA

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supported the use of TERP reductions to demonstrate RFP. The NCTCOG suggested that the RFP MVEB for 2012 include a safety margin. The EPA, NTCASC, and the Regional Transportation Council of the NCTCOG supported incorporation of the MOVES model into the adopted RFP SIP revision. The NTCASC commented that to ensure a successful RFP demonstration, the TCEQ should formalize as rules a number of oil and gas industry best practices and strengthen the VOC storage tank rule (Rule Project No. 2010-025-115-EN) included in the RFP SIP proposal. A comment from COPPs for Clean Air, KIDS for Clean Air, and three individuals stated that previous revisions allowed the public to review emissions inventory input data while this SIP revision did not.

Significant changes from proposal:

The DFW RFP SIP revision uses the EPA's MOVES2010a model to develop on-road mobile source emissions inventories. The EPA officially released the MOVES model on March 2, 2010, as a replacement to MOBILE6.2 for SIP applications. A revised version, MOVES2010a, was provided by the EPA on September 23, 2010¹. It was not feasible at the time the SIP was proposed to include SIP-quality MOVES2010a-based on-road mobile emissions inventories; however, the proposed DFW RFP SIP revision did include an RFP analysis using the MOBILE6.2-based on-road mobile emissions inventories that were originally developed for the DFW RFP SIP revision as well as an RFP analysis using approximate MOVES2010-based on-road mobile emissions inventories developed by the TCEQ. The proposed DFW RFP SIP revision also discussed the possible use of the MOVES model for the adopted DFW RFP SIP revision and solicited public comment on the included MOBILE- and MOVES-based analyses.

In July 2011, the NCTCOG completed final MOVES2010a-based on-road mobile source emissions inventories and submitted the data to the TCEQ. Those inventories were incorporated into the RFP analysis, from which a supplemental document was developed and made public. The comment period was extended to allow the public ample time to comment on the final RFP analysis, and the MOVES2010a-based on-road mobile source emissions inventories were fully incorporated into the DFW RFP SIP revision for adoption.

Based on a comment from the EPA, the DFW RFP SIP revision also contains a revised method for substituting RFP surplus NO_x emissions reductions for RFP shortfalls in VOC emissions reductions. The proposed RFP SIP revision relied on a ton-for-ton transfer of NO_x for VOC emissions reductions; however, the EPA disagreed with that method and advised that the TCEQ adhere to NO_x substitution guidance to offset VOC shortfalls with surplus NO_x. Based on that comment, the DFW RFP SIP revision was modified from ton-for-ton-based NO_x substitution to percent-based NO_x substitution.

The DFW RFP SIP revision demonstrates that both the 2011 and 2012 RFP milestone year target level emissions reductions requirements will be achieved. In addition, the RFP SIP

¹ Page 8 of the policy guidance (<http://www.epa.gov/otaq/models/moves/420b09046.pdf>) released with the MOVES2010 version of the model states that "as required by Clean Air Act section 172(c)(3) and EPA's regulation at 40 CFR 51.112(a), states must use the latest planning assumptions available at the time that the SIP is developed..."

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revision demonstrates that the contingency requirement, which reserves 3% emissions reductions to be used in the event that the area does not meet a milestone year requirement, is met for both years. Final calculations indicate that the VOC storage tank rule is not needed to demonstrate reasonable further progress toward attainment of the 1997 eight-hour ozone standard; therefore, the rule has been removed from the DFW RFP demonstration.

Potential controversial concerns and legislative interest:

For the proposed DFW RFP SIP revision, on-road mobile source emissions inventories were developed using the EPA's MOBILE6.2 model; however, preliminary on-road mobile emissions inventories based on the latest version of the EPA's MOVES model, MOVES2010a, were also included. Preliminary MOVES2010a-based inventories were included in the proposal because the TCEQ took comment on using on-road emissions inventories based on MOVES2010a in the adopted DFW RFP SIP revision. Link-based MOVES2010a inventory values were not available at the time this RFP SIP revision was proposed, so the MOVES2010a-based inventories included at proposal were considered preliminary.

For adoption, the RFP SIP revision relies on final, MOVES2010a-based on-road mobile source emissions inventories which were completed and submitted by the NCTCOG in July 2011. The final inventories are link-based, which is required if MVEBs are set by the values. To address potential concerns over adequate public notice and comment on the final MOVES2010a-based information, a supplemental document was developed and made available to the public. The comment period was extended to allow the public time to comment on the final RFP analysis. While steps were taken to address potential concerns, it is possible that individuals could object to the use of emissions inventories based on two different models between proposal and adoption.

The DFW RFP SIP revision uses reported TERP emissions reductions to demonstrate RFP. Rather than relying on projected TERP emissions reductions, this plan uses actual reported TERP emissions reductions from projects reporting from 2008 through 2010. The direct use of TERP emissions reductions in a SIP revision may be of interest to local and state elected officials and stakeholder groups.

Final calculations indicate that the VOC storage tank rule (Rule Project No. 2010-025-115-EN) is not needed to demonstrate reasonable further progress toward attainment of the 1997 eight-hour ozone standard; therefore, the rule has been removed from the DFW RFP SIP revision for adoption. Numerous stakeholders provided comments requesting that this rule be applied with a lower applicability threshold in the DFW RFP SIP revision to address concerns over oil and gas emissions rather than using NO_x substitution.

Does this SIP revision affect any current policies or require development of new policies?

No

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What are the consequences if this SIP revision does not go forward? Are there alternatives to the SIP revision?

The commission could choose to not comply with requirements to submit this RFP SIP revision to the EPA. If the RFP SIP revision is not submitted by January 19, 2012, the EPA could issue a finding of failure to submit, requiring that the commission submit the required SIP revision within a specified time period, and imposing sanctions on the state. No later than two years after the EPA makes a finding of failure to submit, the EPA must promulgate a Federal Implementation Plan (FIP) if the state has not submitted and the EPA has not approved the required SIP revision. Sanctions could include transportation funding restrictions, grant withholdings, and 200% emissions offsets requirements for new construction and major modifications of stationary sources in the DFW area. The EPA would be required to impose such sanctions and implement a FIP until a replacement SIP for the area is approved.

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