

APPENDIX 2

**DEVELOPMENT OF REASONABLE FURTHER PROGRESS POINT SOURCE
EMISSIONS INVENTORIES FOR THE DALLAS-FORT WORTH NONATTAINMENT
AREA**

POINT SOURCE EMISSIONS PROJECTIONS

1.1 UPDATED MILESTONE YEAR INVENTORIES

Updated milestone inventories were developed according to the general requirements described in Section 2.1: *Introduction*. The TCEQ designated the 2012 inventory as the starting point for emission inventory projections for each of the milestone years (2017 and 2018) because 2012 was the year used for the attainment demonstration modeling inventory and it is the most recent year with available point source data.

The 2012 point source inventory data were extracted from STARS on June 5, 2014. The dataset included reported ozone season daily emissions of NO_x and VOC for each site in the DFW area that submitted a 2012 EIQ. On April 1, 2014, the TCEQ specifically requested companies located in the 2008 DFW eight-hour nonattainment area to submit revisions or updates to the 2012 emissions inventory by May 1, 2014. Any revisions to the 2012 emissions inventory received by May 1, 2014, were entered into the STARS database and included in the extract file.

In the development of the 2017 and 2018 milestone year inventories, the TCEQ projected 2012 emissions from major and minor sources separately and then applied available emissions reduction credits to the inventories.

For each future milestone year inventory (2017 and 2018), the TCEQ reviewed both the major and minor sources separately. For major sources, the TCEQ evaluated cement kilns separately from other major sources. Cement kiln NO_x emissions were projected using the 30 TAC Chapter 117 cap, which limits future emissions growth to the cap levels. The 30 TAC Chapter 117 cap provides a conservative estimate of emissions growth; emissions projections using the forecasting methods described for other major sources were below the cap.

Other major source emissions were projected by adding emissions growth allowed under the major modification thresholds to each site's 2012 emissions value. Title V operating permit data were reviewed to identify sites that were major for ozone precursors. For sites identified as major for an ozone precursor in the nine county DFW area, which is currently classified as serious ozone nonattainment for the 1997 eight-hour ozone standard, projected emissions were the sum of the 2012 emissions of that ozone precursor plus the daily average (0.07 tons per day) of the 25-ton per year major modification threshold in serious ozone nonattainment areas. For sites identified as major in Wise County, which is classified as moderate nonattainment, projected emissions were sum of the 2012 emissions plus the daily average (0.11 tons per day) of the 40-ton per year major modification threshold in moderate nonattainment areas.

Future minor source emissions were projected by growth factors for each milestone year. Growth factors for sites associated with oil and gas exploration were derived from area source growth factors for the Barnett Shale. These growth factors reflect recent oil and gas activity in the DFW area and are consistent with area source inventory development methods. Growth factors for other minor source emissions were derived from the Moody's Economy, Inc. factor set updated in 2010. The Moody's Economy, Inc. factors were the most current county-level emissions growth factors available at the time of this inventory development.

No additional controls were applied for the reasons discussed in this paragraph. Overall emissions reductions for all source categories met required RFP targets and therefore, this RFP SIP revision contains no additional controls. Time constraints did not permit a detailed analysis of recent federal rule activities anticipated to be implemented by the milestone years (2017 or 2018), such as New Source Performance Standards Subpart OOOO updates. Due to uncertainty

regarding the Cross-State Air Pollution Rule and its predecessor, the Clean Air Interstate Rule (CAIR), CAIR allowances were not incorporated into emissions projections. Other control strategies with significant effects on point source emissions of ozone precursors, such as 30 TAC Chapter 117 rules, were already in effect in 2011.

Finally, each of the milestone year inventories were adjusted to account for available emissions credits. Emissions credits are banked emissions reductions that may be added back to the airshed in the future through the use of these emissions credits either to modify existing facilities, construct new facilities, or by facilities to demonstrate compliance with emission limit obligations where provided for in commission rules. To account for the possible use of the banked NO_x and VOC emissions, unused Emissions Reduction Credits (ERCs) and Discrete Emissions Reduction credits (DERCs) were applied to the inventories, as discussed below.

Projected ERC use was determined by assuming that the ERCs would be used for offsets in permitting new sources. Therefore, the Nonattainment New Source Review permitting offset ratio for serious nonattainment areas of 1.2 to 1 was applied to the credits. All ERCs listed in the Emissions Banking and Trading database as of March 6, 2014, were applied to each milestone year, including transactions with available information for the period 2008 to 2013 to account for credits taken from the bank and applied to projects that may not have been completed in time for the 2012 inventory.

Projected DERC use was determined by assuming that all available credits would be used over the 2015 to 2018 timespan. The total amount of ozone season DERCs was averaged over the four year period to get a yearly amount. The yearly amount was averaged over the DFW ozone season to obtain a daily contribution. This approach projects the exhaustion of the entire current bank in a four year period; historical DERC use has been much lower (less than 10% of the projected rate) and this is not anticipated to change significantly. The DERC transactions between 2008 and 2014 were not applied as they were used for one-time compliance projects applicable to, and reflected in, emissions for those years only.

Rules controlling ozone precursor emissions from stationary sources, such as 30 TAC Chapter 117 rules, were accounted for in the base year inventory, the 2012 inventory and the milestone year inventories as appropriate (e.g., cement cap). No additional controls were incorporated into the 2017 and 2018 milestone year inventories.